This document comprises a registration document (the "**Registration Document**") relating to Oxford Nanopore Technologies Limited (the "**Company**" and, together with its subsidiaries, the "**Group**") prepared in accordance with the Prospectus Regulation Rules of the Financial Conduct Authority of the United Kingdom (the "**FCA**") made under section 73A of the Financial Services and Markets Act 2000 (the "**FSMA**"). This Registration Document has been prepared to provide information with regard to the Company and has been approved by the FCA (as competent authority under Regulation (EU) 2017/1129 as it forms part of retained EU law as defined in the EU (Withdrawal) Act 2018 (the "**EUWA 2018**") (the "**UK Prospectus Regulation**")) in accordance with section 87A of FSMA and has been made available to the public as required by Rule 3.2 of the Prospectus Regulation Rules. The FCA only approves this Registration Document as meeting the standards of completeness, comprehensibility and consistency imposed by the UK Prospectus Regulation, and such approval should not be considered as an endorsement of the company that is the subject of this Registration Document.

The Company and the directors of the Company, whose names appear on page 37 of this Registration Document (the "**Directors**"), accept responsibility for the information contained in this Registration Document. To the best of the knowledge of the Company and the Directors, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect its import.

This Registration Document should be read in its entirety. See Part 1 *(Risk Factors)* for a discussion of certain risks relating to the Group.

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**OXFORD NANOPORE TECHNOLOGIES LIMITED**

(*Incorporated under the Companies Act 1985 and registered in England and Wales with registered number 05386273*)

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This Registration Document may be combined with a securities note and a summary to form a prospectus in accordance with the Prospectus Regulation Rules. A prospectus is required before an issuer can offer transferable securities to the public or request the admission of transferable securities to trading on a regulated market. However, this Registration Document, where not combined with a securities note and a summary to form a prospectus, does not constitute an offer or invitation to sell or issue, or a solicitation of an offer or invitation to purchase or subscribe for, any securities in the Company in any jurisdiction, nor shall this Registration Document alone (or any part of it), or the fact of its distribution, form the basis of, or be relied upon in connection with, or act as any inducement to enter into, any contract or commitment whatsoever with respect to any offer or otherwise.

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The contents of this Registration Document are not to be construed as legal, financial or tax advice. Each recipient of this Registration Document should consult their or its own legal, financial or tax adviser for advice.

Capitalised terms have the meanings ascribed to them in Part 11 *(Definitions)*.

Information contained on the Group's website is not incorporated into and does not form part of this Registration Document.

The date of this Registration Document is 9 September 2021.

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# Part 1. Risk Factors

*The Group is subject to a number of risks. The occurrence of any of the events discussed below could materially adversely affect the Group's business, financial condition and/or results of operations. The risks and uncertainties described below represent the risks that the Directors believe to be material to the Company, the Group and/or the industry and macroeconomic environment in which the Group operates as at the date of this Registration Document. However, these risks and uncertainties are not the only ones facing the Group. Additional risks not currently known to the Directors, or which the Directors currently deem immaterial, may individually or cumulatively also have a material adverse effect on the Group's business, or the Group's prospects, financial condition and/or results of operations.*

***Risks relating to the Group's business, growth strategy and operations***

1. **The Group has incurred net losses and experienced negative cash flow since its incorporation and anticipates future losses and negative cash flow as it continues to implement its growth strategy**

The Group has incurred net losses in every financial year since its incorporation in 2005, including operating losses of £62.2 million, £80.9 million and £73.1 million for FY18, FY19 and FY20, respectively, as it has been investing in innovation, intellectual property ("**IP**"), operational and commercial infrastructure and growth. In continuing its growth strategy, the Directors expect to continue to invest in the Group's technology, the development of existing products and an innovative product range, and other initiatives targeted at accelerating revenue growth and customer traction. Such investments may include ongoing research and development ("**R&D**") and investment in IP; expansion of commercial teams including in sales, marketing, customer service and support, digital and business development; commercial strategies that support the Group's ability to continue to offer accessible technology to a broad range of users; further investment in scaling-up manufacturing operations and the surrounding supply chain; and expansion of core functions that support rapid growth, especially where the expansion of the Group's business into new geographical markets requires additional teams (such as in human resources ("**HR**"), finance, legal and/or other corporate functions). As a result of these projected investments, the Directors expect to continue to incur net losses and experience negative cash flow from operations over the next few years. This could increase the Group's vulnerability to general adverse economic and industry conditions, limit its ability to react to changes in the Group's business and the industry in which it operates and place it at a disadvantage to its competitors.

The Group's ability to achieve (and, if achieved, sustain) profitability beyond the medium term is based on numerous factors (some of which are beyond its control), including its ability to attract new customers, grow revenue, increase market penetration, expand the market for its products, and successfully develop its current and future product pipeline, as well as the outcome of any current and future litigation. If the Group's revenues from its operations do not sufficiently increase to offset its ongoing expenditures, or if the Group's expenditures exceed its current expectations, it may not achieve (and, if achieved, sustain) profitability.

2. **The Group may not be able to successfully implement and achieve its growth strategy**

The Directors believe future growth is important to the ongoing success of the Group. The Group's future growth is dependent on its ability to increase penetration in existing markets, including sales to customers who have invested significantly in legacy competitor technology, and to expand the market for on-site real-time sequencing.

The Group's growth strategy contemplates significant investments and initiatives designed to continue the growth of its revenue (including through increasing its market share and the reshaping of the global life sciences market) and expansion into and creation of new application areas that were not previously possible with legacy technologies. In the short-to-medium term, the Group aims to focus on life science research customers; as such, the Directors expect the Group's near-term growth to be significantly dependent upon revenue generated from the sale of PromethION Flow Cells to users who are using nanopore sequencing for novel discoveries and large-scale human genomics studies. The degree of this dependency could decline in the medium term if the Group generates recurring revenue from a long tail of mid frequency users and achieves increased adoption of its products. In the long term, the Group also aims to expand into future segments of the applied market where users are performing tests with an actionable outcome that may be performed in a regulated environment. This may include clinical diagnostics, environmental and/or food related applications. In the long term, the Group also aims to pursue new markets that may be driven by further innovation or the development of applications of its

technology, including expanding beyond DNA/RNA sequencing to the analysis of proteins, small molecules or other analytes.

The expansion of the Group's business will depend to a significant extent on its development of products, workflows, manufacturing capacity, distribution channels and commercialisation opportunities as well as new partnerships or acquisitions. However, in seeking to achieve its growth strategy, the Group may encounter various challenges and risks. For example:

- New market opportunities may not develop as quickly as the Group expects, or at all.
- Developing and launching new products and innovating, supporting and improving its existing and growing portfolio of products have, to date, required the Group to incur greater costs in hiring and retaining R&D, sales, marketing and support, software, manufacturing, distribution and quality assurance personnel. In particular, certain new markets may require dedicated sales force or sales personnel with different experience or background than those the Group currently employs. Identifying, recruiting and training additional qualified personnel will require significant time, expense and attention and the Group may face challenges in integrating and managing an increasingly dispersed employee base.
- The Group may encounter issues with the design or quality of its products, the forecasting of customer demand or manufacturing and supply costs, or product supplies (particularly electronics industry components, including application-specific integrated circuits ("**ASICs**") and related connectors), which may be limited, interrupted or fail to satisfy the Group's requirements (including as to quality, quantity and price). Such issues may result from factors beyond the Group's control.
- The Group's investments in R&D may not provide the anticipated benefits or may expose the Group to additional risks, for example, due to poor implementation or unexpected outcomes of new functionalities. In addition, the Group is pursuing and may in the future pursue certain large-scale human genomics projects, the results of which are important factors in the Group's forecasts of its business, financial condition, results of operations and prospects. The results of these large-scale human genomics projects are, however, significantly dependent on factors beyond the Group's control, such as the ability to collect samples and the availability of government funding, as well as the performance of automation features/vendors, data infrastructure and bioinformatics vendors. Any performance failure by, or inefficiency in, for example, such automation features or bioinformatics vendors could cause the results of the human genomics projects to fall short of expectations.
- The Directors expect that the Group's longer-term revenue growth strategy will be achieved by, among other things, investing in R&D to improve production processes and the anticipated decline over time in the Group's costs of production as a result of greater automation, which would enable the Group to lower its product prices and attract a wider customer base, while seeking to improve the quality and performance of its products (such as by improving the accuracy, read length and increasing the data output of its flow cells). The Group may fail to achieve anticipated reductions in production costs in a timely manner, at anticipated levels, or at all, or fail to achieve quality and performance improvements.
- The Group's ability to expand into new segments of the applied market depends upon several factors in respect of the Group's products, including functionality, competitive pricing, adequate quality testing, its ability to integrate with existing and emerging technologies and overall market acceptance. It is also dependent on whether the Group is able to successfully compete against competitors willing to exploit their dominant market position and to drive market expansion by persuading customers that molecular methods offer benefits, where those users may previously have been using non-molecular methods to answer biological questions. New technologies, techniques or products developed by competitors could emerge that might offer better combinations of price and performance, and/or better address customer requirements as compared to the Group's current or future products. Regulatory requirements applicable to the applied market may also delay or impede the Group's expansion into new segments of the applied market. For example, the Group will be required to obtain additional regulatory approvals or clearances or otherwise comply with sector-specific legislation before manufacturing and selling certain of its products in new segments of the applied market; in particular, the manufacturing, labelling, advertising, promotion and distribution of medical diagnostic devices is subject to extensive regulation that can vary significantly across different countries. The regulatory approval process can be lengthy, expensive and uncertain, and even if a product is approved, the approval may limit the indicated uses for the product, may otherwise limit the Group's ability to promote, sell and distribute the product, may require post-marketing studies and/or impose other post-marketing obligations.

- The Group may face aggressive counter-marketing efforts on the part of its competitors, including efforts based on misleading claims, which may adversely affect the Group's ability to commercialise its products.
- The Group's ability to commercialise disruptive technologies may be limited by resistance from large, centralised laboratories and their suppliers, which may have made substantial investments in existing technologies and which, in some cases, can exercise significant market influence or dominance.
- The Group's potential markets are still evolving, and its estimates as to the size of those markets and potential for growth may not be accurate. As a result, the potential markets for the Group's products may be smaller than expected, or the Group may underinvest in markets which subsequently prove to be larger than expected.
- The Group may fail to accurately assess its potential markets, including the longer-term needs of those markets and customers, and its ability to introduce innovative products at the right price point. Accurately identifying market trends and customer needs is challenging and the Group relies on third-party information (including research, forecasts and other surveys in relevant markets) to support its internal assumptions and business decisions. Such third-party information has not been independently verified, may be based on a limited sample size, may fail to accurately reflect market opportunities, threats or complexities, or may otherwise prove to be inaccurate. As a result, the potential market for the Group's products may be smaller than expected.
- The Group may incur higher than expected expenditures and may be unable to realise the anticipated benefits of such expenditures, within anticipated timelines or at all. The Group may also have reduced amounts of cash available for use towards other initiatives.
- The Group has built a strong relationship with a community of core users, who provide a source of feedback, collaboration and advocacy, and who frequently innovate on the Group's platform to develop analysis tools or methods. Any factors that adversely affect the Group's relationships with such core users may impact the Group's ability to commercialise its products. For example, further expansion into new markets (or segments of an existing market) may entail competition with the Group's customers. Failure to achieve market acceptance in a new segment of the applied market or even success in achieving market acceptance in a new segment of the applied market could have a material adverse effect on the Group's reputation among its existing core user community and could erode the Group's relationship with that community. There can be no assurance that a failure to achieve market acceptance in a new segment of the applied market will not cause the Group to lose many of the benefits of the positive collaborative relationship it has established so far with its existing core user community.
- The practice of adding provisions in certain government tenders requiring domestic manufacture of products may become more common in jurisdictions other than the United Kingdom. This could nullify any technological advantage which the Group holds, resulting in slower growth.
- In addition to traditional competitive pressures, the Group also faces competition from, and may have difficulty generating sales to, certain customers in the global life science research market, such as large academic, institutional and research centres that have made significant capital investments in competitor technology and who see the Group's products as jeopardising their business model, making any substitution to the Group's products difficult and/or cost-inefficient.
- The Group's customer community has taken advantage of the novel properties of the Group's technology, and increasingly has adopted the Group's latest tools and upgrades to deliver enhanced performance metrics, particularly in respect of data outputs and accuracy. If the Group fails to propagate (by making available new kits and/or through training on use of the same) the recent improvements in accuracy and data output to those who need it in its broader user community and/or fails to communicate real-life examples of users generating high accuracy performance, the Group's results of operations may be adversely affected. The Group's growth and profitability rely in part upon its ability to design and manufacture updates to its flow cells, software (including bioinformatics tools) and kits that support the Group's core sequencing devices within targeted time frames, as well as to effectively prioritise between complementary product development paths (such as offering cloud-based data-processing functions as compared to on-device information processing), and also on its ability to provide customers with recycling options with respect to its flow cells. If the delivery of such updates is delayed or halted for any reason, such as due to technological failure or industrial action, design or production issues, or if unforeseen trends in the digital usage profile of the Group's principal target

markets render the Group's choice of a product development path outdated, these could adversely affect the performance of the Group's sequencing products.

- Increased market adoption of the Group's products by customers may depend, among other things, on the availability of automated sample preparation, more powerful computer processing and informatics tools, some of which may be developed by third parties. For example, the Group benefits from the development of technology in related industries, such as cloud computing, artificial intelligence, machine learning, and electronics. If these technologies stagnate with no available alternatives, the Group's ability to innovate and commercialise its innovations in a timely or cost-effective manner may be adversely impacted.

The Group's current and future growth is expected to place significant strains on its management, operational and manufacturing systems and processes, infrastructure, financial systems and internal controls and other aspects of its business, including the need to invest in recruiting and training additional personnel with relevant expertise, and to expand the scope of the Group's current IT and business information systems beyond current levels. If the Group fails to manage such risks successfully (including due to a failure to apply best practices), this could have a material adverse effect on the Group's business, financial condition, results of operations and prospects. The Directors expect that as the Group's business continues to grow, it will become necessary to implement more complex organisational management structures. As a result, the Group may find it increasingly difficult to maintain the benefits of its innovation and collaboration-driven entrepreneurial corporate culture, including its ability to quickly develop and launch new and innovative products to date. To effectively manage its growth, the Group must continue to improve its operational and manufacturing systems and processes, its financial systems and internal controls and other aspects of its business and continue to effectively expand, train and manage its personnel.

In implementing its growth strategy, the Group must effectively manage an increasing number of revenue streams, as well as new business opportunities and relationships, whilst maintaining existing relationships and product and service quality, and increasing manufacturing capacity. The implementation of the Group's growth strategy is also expected to expose the Group to additional competitive and operational complexities.

Should the Group fail to achieve further growth, encounter setbacks in its ongoing expansion, or fail to successfully manage its expanding operations due to the factors mentioned or otherwise, this could have a material adverse effect on its business, financial condition, results of operations and prospects.

To date, the Group has been financed by equity subscriptions from its investors and revenue from the sales of its products, and its historical growth may not be indicative of future performance. Any additional equity financing may be dilutive to holders of Ordinary Shares and any debt financing, if available, may require restrictions to be placed on the Group's future financing and operating activities.

3. **If the Group fails to maintain its brand and reputation, its business, results of operations and prospects may be materially adversely affected**

The Group's brand and reputation are central to the Group's business and prospects, including the future success of its products and services, as well as the relationships it currently maintains and intends to develop with suppliers, academic and governmental institutions and regulators. Any failure to maintain the strength of the Group's brand or reputation, or any perception that the Group's brand or reputation are not maintained, at the level expected by the Group's customers, suppliers or other third parties, could adversely affect the Group's business, financial condition, results of operations and prospects, and impair its ability to attract and retain employees. Any negative information or commentary relating to the Group and its products, whether accurate or not, may be widely disseminated on social networking platforms, which could amplify any adverse effect on the reputation of the Group.

Issues that may undermine the Group's brand and reputation include issues with the design, quality or functionality of the Group's products (including errors, defects or sub-performance), the Group's failure to maintain high-quality customer service, disruptions or other issues associated with the delivery of products to the Group's customers in a safe and timely manner, difficulties in performing contractual delivery commitments or causing distributors to fail to perform their contractual delivery commitments as a result of export control or export licensing restrictions, a failure (or perceived failure) in the Group's environmental, social and corporate governance ("**ESG**") strategy, and failure (or allegations or perceptions of failure) by the Group, its distributors or suppliers to deal appropriately with legal and regulatory requirements (including applicable anti-bribery and anti-corruption, anti-facilitation of tax evasion, data protection and environmental laws and regulations and export control or trade compliance and other trading practices).

This is particularly the case given the increasing global focus on national interests, ethical business and ESG practices, with such issues increasingly influencing investor perception and customer behaviour.

The Group's customers rely on its service teams and online content for help with a variety of issues, including how to use the Group's products effectively. As the Group's business grows, it may be required to significantly increase its customer service support teams (whether in-house or through the engagement of third-party providers), including to meet customers' needs globally at scale. This could increase the Group's costs and adversely impact the quality of customer experience if third parties are unable to provide equivalent levels of customer service. Growth in the number of customers may also place additional pressure on the Group's customer service function. In certain geographies where the Group relies on third-party distributors, it also relies on those distributors to provide customer service and, if such service is inadequate, the Group's reputation and business may suffer.

The Group may also suffer reputational harm or suffer negative publicity because of internal misconduct and errors, or the actions of end users of its products. For example, directors, employees, or external consultants may abscond with proprietary data, use know-how to compete with the Group or carry out their duties in an inappropriate or fraudulent manner. These risks may be exacerbated, and are harder to control, in light of the remote working environment which is increasingly prevalent, as well as the increased use of digital products and reliance on IT systems. If an end user makes an error or uses any of the Group's products for a purpose or in a way that is contrary to its intended use, such product (or the Group's products in general) may be associated with a lower accuracy rate and/or data output level than the rate and/or level published by the Group (based on its own controlled testing conditions). An end user might also use life science research tools in a manner that breaches the Group's terms of use and is ineffective, unethical or causes injury. Any perceived inaccuracies, difficulties using, or defects in, the Group's diagnostic tests or devices (even where caused by customer error) may lead to negative publicity and damage to its reputation, particularly among its customers and end-users.

If the Group fails, or its third party distributors or suppliers fail, or are perceived to have failed, to adequately manage any issues that give rise to reputational risk, this could lead to further adverse publicity and have a material adverse effect on the Group's business and prospects.

4. **The Group is dependent on a relatively small number of significant customers for a substantial proportion of its revenues, and the loss of a significant customer or a significant reduction in purchase volume from any such customer could have a material adverse effect on the Group's business, financial condition and results of operations**

A limited number of significant customers have historically accounted for a substantial portion of the Group's revenue (for further details, see "Customer concentration" in section 2.2 of Part 7 *(Operating and Financial Review)*. Despite anticipated growth in the Group's wider customer base in the future, such growth may not be fast and/or significant enough in the near term to reduce the proportion of LSRT revenue generated by the Group's largest customers. In addition, in connection with COVID-19 testing (as opposed to COVID-19 surveillance), a small number of the Group's major customers have engaged with the Group for the purposes of one-off projects or initiatives, or on a trial basis, with no assurance of recurring business and revenue. For example, in 2020, the UK Department of Health and Social Care (the "**DHSC**") engaged the Group for the one-time purchase of certain SARS-CoV-2 COVID-19 test kits. The DHSC accounted for 42% of the Group's revenue in FY20 (but 0% in each of FY18 and FY19, respectively). In April 2021, the DHSC determined that they no longer had a requirement for the Group's test kits and purported to terminate its contract before taking all of the test kits ordered.

Further, an increasing portion of the Group's revenue relates to government customers purchasing the Group's products in order to pursue pathogen genomic surveillance programmes. These programmes, which are typically conducted by government agencies or institutions, are generally dependent on public funding. Given COVID-19, governments have increased funding in respect of pathogenic surveillance programmes as a tool to research and control the pandemic. There can be no assurance that governments will continue to increase or maintain their current funding levels in respect of pathogen genomic surveillance programmes in the future, particularly in light of the continuing recovery from the COVID-19 pandemic.

The Group expects that a large proportion of its revenue will continue to be derived from a relatively small number of customers which are very active users typically engaged in large-scale human genomics studies. The Group operates a transparent, volume-driven pricing scheme; however, these customers may have a degree of bargaining power which could affect broader contractual terms and, in turn, could adversely impact the Group's margins.

If the Group ceases to do business with a significant customer (determined by either the Group or that customer) or if the levels of sales of the Group's products to a significant customer materially decrease (including if sales to a significant government customer in order for it to pursue pathogen genomic surveillance programmes materially decrease, such as by reason of any decrease in or renegotiation of orders previously placed), or if the Group's contracts are re-negotiated in such a way as to adversely impact pricing and/or its margins, the Group's business, prospects, results of operations and financial condition may be materially adversely affected.

In addition, the Group may have a large amount of outstanding receivables with a significant customer at any one time. If there were an adverse change in the creditworthiness of such a significant customer, or if it were, for example, to file for bankruptcy protection, the Group could be prevented from collecting its receivables, which would adversely affect the Group's business prospects, financial condition and results of operations.

5. **The Group's results of operations have in the past fluctuated significantly and may continue to fluctuate significantly in the future**

The Group has a limited operating history and has experienced rapid growth over a relatively short period of time in an industry undergoing rapid change. The Group's products, manufacturing processes, supply chains and sales channels are continuing to evolve. Consequently, the Group's results of operations have fluctuated and can be expected to continue to do so. Fluctuations can be exacerbated by changes in the level of demand for the Group's products, the Group's ability to increase penetration in its existing markets and expand into new markets, the outcomes of, and related rulings in, any litigation and administrative proceedings in which the Group may be involved, the success of new products or product enhancements by the Group and the introduction of other new products or product enhancements by its competitors. Further, the general volatility in the life science tools market and the life sciences and genomics sectors, seasonality, interruptions in population genomics projects or funding, and the ongoing effects of the COVID-19 pandemic or any future pandemic, may cause fluctuations in the Group's results of operations. Moreover, the Group's sales cycle is inherently unpredictable and sometimes lengthy, which makes it difficult to forecast revenue and may increase the magnitude of quarterly or annual fluctuations in the Group's operating results. In addition, if the Group fails to convert its backlogged orders into revenue, this could have a material adverse effect on its results of operations.

The variability and unpredictability of the Group's results could also result in it failing to meet the expectations of industry or financial analysts or investors for any particular period and the Group's past results may not be an indication of its future performance.

6. **The Group may incur significant costs in maintaining an effective system of internal controls and, should the Group fail to maintain proper and effective internal controls, its ability to produce accurate financial statements on a timely basis could be impaired**

Ensuring that the Group has adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be re-evaluated frequently. The Group's executive team is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of financial statements. Testing and maintaining internal controls can divert management's attention from other matters that are important to the operation of the Group's business. The Directors anticipate management will be required to devote substantial time to new compliance initiatives and corporate governance practices, including maintaining an effective system of internal controls over financial reporting, which could divert their attention from the Group's business and achieving its growth strategy.

Should the Company pursue a listing of its Ordinary Shares on a stock exchange in the future, the Directors expect the Group to incur increased costs associated with operating as a publicly listed company, such as ensuring effective internal controls over financial reporting suitable for a publicly listed company.

7. **In preparing its financial statements, the Group uses estimates and assumptions that may differ from actual results, and new accounting pronouncements or guidance may require the Group to change the way in which it accounts for its operations and activities**

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and contingent liabilities as at the date of the financial statements and the reported amounts of revenues and expenses during a reporting period. Management evaluates critical estimates and judgments, including, among

others, those related to revenue recognition, including: (a) the allocation of the total contract price to individual performance obligations based on their standalone selling prices for contract bundles which include the lease or purchase of a PromethION or GridION sequencing device (because these particular sequencing devices are not sold separately and therefore do not have a directly observable standalone selling price); and (b) accounting for share-based compensation. Critical estimates and assumptions are based on historical experience, management's view of trends in the marketplace, and various other factors believed to be reasonable under the circumstances. If actual results differ from these estimates as a result of unexpected conditions or events occurring that cause management to re-evaluate assumptions, there could be a material adverse effect on the Group's reported results.

Standard-setting bodies that have jurisdiction over the form and content of the Group's financial statements regularly evaluate accounting standards and from time to time issue pronouncements and interpretations of pronouncements that impact the preparation of financial statements. These pronouncements and interpretations of pronouncements may have the effect of requiring the Group to change its accounting policies, including how it accounts for revenues and/or expenses, which could have a material adverse effect on reported results.

8. **The Group relies on information technology ("IT") systems to conduct its operations and it could be materially adversely affected by significant disruptions in its IT systems, cyber attacks or data security breaches**

The Group relies on IT systems to conduct its operations. This includes on-premises, co-located and third-party data centres and platforms (including the Group's ERP-system, which is provided by third parties as "software as a service"). Some of these systems are necessary to conduct the Group's R&D and operations, including to process, encrypt, transmit and store electronic information and sensitive or confidential data, and to manage or support a variety of business processes and activities, including keeping financial records, fulfilling customer orders, maintaining corporate records, and communicating with staff and external parties.

The Group relies on a system developed in-house for R&D. Maintaining this system to keep it secure and operational may become increasingly expensive and migrating to a third-party solution could be time consuming and expensive and could delay development of new products or product enhancements. The Group also collects and stores sensitive data in IT networks (including third-party servers such as AWS, Microsoft Dynamics, Microsoft 365, and Salesforce or applications by means of "cloud computing"), such as IP, proprietary business information (including personally identifiable information of the Group's employees, and information made available by its customers using its EPI2ME platform).

The Group's systems, data (wherever stored), software or networks, and those of third parties, are vulnerable to security breaches (whether deliberate or unintentional), including unauthorised access from within the Group or by third parties (for the purpose of misappropriating financial assets, IP or sensitive information, or otherwise), computer viruses or other malicious code and other cyber threats that could corrupt data, cause operational disruption or otherwise have an adverse security impact. The Group and third parties may be unable to anticipate evolving technologies used to effect security breaches or prevent attacks by hackers or breaches due to employee error or malfeasance, in a timely manner, or at all. Cyber-attacks, in particular, including so-called ransomware attacks, have become far more prevalent in the past few years, leading potentially to the manipulation and/or theft of confidential and proprietary business and personal information, or loss of access to, or destruction of, data on the Group's systems, as well as interruptions or malfunctions in the Group's or third parties' operations.

If customers do not adequately secure the networks in which a PromethION or GridION is installed, third parties may be able to interfere with the performance of such devices and/or extract data generated from the use of such devices. Any such incident may damage the Group's reputation and/or give rise to claims for damages, and the Group's investment in strengthening the security of the devices themselves may be ineffective.

The Group is regularly subjected to attempted attacks on its IT networks, and incidents have increased since 30 March 2021, when the Company first indicated publicly that it was exploring strategic options, including a potential initial public offering ("**IPO**"), in line with greater publicity and press interest in recent months in the Group, and interest could increase with the publication of this Registration Document. Measures taken by the Group to guard against any such attacks may prove inadequate. To date there has only been a single successful phishing attack, which resulted in limited access to an email account of a junior marketing assistant which was detected within one hour of the compromise. In response to this attack, the Group suspended all email accounts, forced password changes and used its information security contractors to undertake a forensic examination of the attack and its impact. This revealed that

the attacker gained access to some low-level information, but nothing containing sensitive or proprietary information, and that the intent of the attack was to use the account to gather further targets for phishing attacks. If a similar attack were to be more successful in the future, the Group, its employees, customers, suppliers, partners or other individuals would be at risk of suffering materially including as a result of public disclosure and/or the loss or misuse of confidential, proprietary or personal information. As a result, the Group could be exposed to related litigation, liability and/or regulatory investigation, fines and sanctions (particularly as a result of the increasing regulatory focus on promoting the protection of customer/ client information and the integrity of IT systems) that are either not insured against or not fully covered through the Group's insurance policies. The Group may also experience operational disruption, losses in customers, employees or suppliers, as well as reputational harm, competitive disadvantage (including as a result of unauthorised access to trade secrets and IP) and sometimes physical damage. Any such attacks and breaches could also adversely affect the Group's ability to process transactions, which could result in the Group incurring significant losses of revenue, as well as significant additional costs to modify its protective measures or to investigate and remediate vulnerabilities.

9. **The loss of senior executives or one or more of the Group's key employees, and the failure to recruit, train and retrain highly qualified personnel could adversely affect the Group's business, financial condition and results of operations**

The Group's future success depends to a large extent on the experience and knowledge of the Executive Directors, its executive team and other key employees, and loss of the services of one or more of such persons could adversely affect the Group's business. The Group does not purchase key man life insurance.

The Group's success also depends on its ability to attract, train, motivate and retain key personnel, including its R&D, technical and manufacturing personnel. In addition, the continued development of new pores, chemistries, ASICs, devices, kits, processes and complementary software tools, requires the Group to attract and retain personnel with training and experience in highly competitive fields (including personnel with expertise in membrane proteins, molecular biology, chemistry, physical sciences, analogue and digital electronic design, medical device engineering, computer science, data science, bioinformatics and machine learning). The Group may not be able to continue attracting similarly qualified and skilled individuals to join its staff and senior management or to retain its current personnel. In particular, the differences between levels of remuneration in the UK relative to the countries in which certain of the Group's competitors operate, such as the US, may make it more difficult for the Group to attract and retain talent. Further, the specialised skills the Group requires, particularly as part of its R&D function, are difficult and time consuming to acquire and, as a result, such skills are in short supply and may be more expensive to employ. New hires also require significant training and may take significant time to settle into a new environment and achieve their full productivity in the workplace. Further, the UK's withdrawal from the EU (referred to as "**Brexit**") has resulted in a reduction in freedom of movement between the UK and the EU which could impair the Group's ability to hire new personnel from the EU. If the Group fails to maintain its innovation and collaboration-driven entrepreneurial corporate culture, the Group may find it more challenging to attract and retain talent.

From a HR perspective, the Group could also be adversely affected by local market dynamics. For example, employees in China are more likely than their counterparts elsewhere to seek career advancement through a lateral move to another company instead of obtaining promotions within the same company over the longer term. If the Group loses a number of qualified employees to its competitors, new entrants or otherwise, is unable to attract, retain and motivate the additional highly skilled employees required for the Group's activities, or is required to pay substantially higher wages in order to attract and retain the highly qualified and skilled personnel it needs, this could delay or curtail the successful implementation of the Group's strategic objectives and/or result in significant costs being incurred. This could, in turn, have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

HR risk is heightened in the event of a departure of the Group's Chief Executive Officer, Chief Business Development Officer (who is also the Group's co-founder), Chief Technology Officer, Chief Financial Officer, or key employees, consultants, suppliers and/or advisers with specialist scientific and technical skills that the Group requires for its product development.

***Risks relating to the Group's industry and macroeconomic environment***

10. **The Group operates in a highly competitive industry and if it is unable to compete effectively, its business, financial condition, results of operations and prospects may be materially adversely affected**

The Group encounters competitive pressures in practically all markets in which it operates. The Group faces competition from competitors with significant market power, offering products and/or services that are similar to and which compete with, the Group's products, certain of whom focus on specific regions, customers and/or product segments. Competitors range from smaller companies, who may be able to respond to customers' specific needs more quickly, to large multinational companies who provide a full suite of products to research labs and may have greater financial, marketing, operational and R&D resources than that of the Group. The Group's competitors may have greater name recognition, more substantial IP portfolios, longer operating histories, significantly greater financial, technical, research and/or other resources, more experience in new product development, larger and more established manufacturing capabilities and marketing, sales and support functions, and/or more established distribution channels to deliver products to customers than the Group does. These companies may also be able to commercialise new, competing or potentially competing technologies, products and/or services and respond more quickly and effectively than the Group can to new or changing circumstances, opportunities, technologies, standards or customer requirements.

Many of the Group's competitors are present in multiple markets internationally and compete with the Group on a global rather than regional or single-market basis. Some of the Group's global competitors adopt localised tactics to compete with the Group in particular markets. In some markets, local styles or forms of competition may arise. For example, there can be potential for technology protectionism in countries that aspire to develop a DNA/RNA sequencing industry of their own. In China, this technology protectionism is commonly known as *"guochanhua"*, which can be translated as "nationalised production". This is the practice among Chinese government agencies of inserting into procurement bid documentation a requirement only to procure equipment that has been originally produced in China, which may not be satisfied by products that are merely assembled in China from key components manufactured offshore and imported for local assembly. Since 2020, Chinese government agencies have been including this requirement in requests for proposal documentation in the gene sequencing field. The practice of adding a *guochanhua* requirement on government funded purchases may become more common. This could have a material adverse effect on the Group's business in cases where comparable domestic and imported technology platforms, with equivalent technical features, exist and are sold in a similar price range. This could also nullify any technological advantage which the Group holds, resulting in a material adverse effect on the Group's business in China. The Group's business may also be adversely affected if similar requirements are adopted in other markets around the world.

If the Group is unable to respond to the pace of competition set by its competitors, for example by failing to manufacture and distribute products that appeal to customer preferences relative to its competitors, or by designing and manufacturing products inefficiently relative to competitors such that the Group's pricing is uncompetitive, or by failing to sufficiently innovate and advance its technology such that the Group's products and technology are perceived to be obsolete relative to the products and technology of its competitors, the Group's business, financial condition, results of operations and prospects may be materially adversely affected.

Increased competition may also result in pricing pressures, which could adversely affect the Group's sales, profitability or market share. In addition, consolidation trends in the biotechnology and diagnostics industries may result in the Group's current or potential competitors attempting to use their consolidated resources to better position themselves in the market, including through long-term agreements, by pricing their products at a discount or bundling them with other products and/or services.

In addition to traditional competitive pressures, the Group also faces competition from, and may have difficulty generating sales to, certain customers in the global life science research market, such as large academic, institutional and research centres who have made significant capital investments in competitor technology and who may view the Group's products as jeopardising their business model, making any substitution for the Group's products difficult and/or cost-inefficient.

11. **Rapidly changing technology in the global life science research market could make the products the Group is developing obsolete unless the Group continues to innovate and compete effectively with leading and emerging technology companies**

The global life science research market is characterised by rapid and significant technological changes, frequent new product introductions and enhancements and evolving market standards, any of which or a combination of which could offer better performance, potentially at a lower price, or better address customer requirements as compared to the products the Group currently offers or may in the future offer.

The Group's success depends on its ability to continue delivering improvements to its products, as well as its ability to develop and introduce new products, in each case, to address the evolving needs of the Group's customers on a timely and cost-effective basis. The Group's success also depends on its ability to pursue new market opportunities that develop as a result of technological and scientific advances. Such opportunities may fall outside the scope of the Group's current expertise or in areas where demand is unproven, and new products and services developed by the Group may not adequately perform or gain market acceptance. The typical development cycle of new life science products can be lengthy and complicated, and may require new scientific discoveries or advancements and complex technology and engineering. Such developments may involve external suppliers and service providers, making the management of development projects complex and subject to risks and uncertainties regarding timing, manufacturing and supply costs, timely delivery of required components or services and satisfactory technical performance of such components or assembled products. If the Group does not successfully manage new product development processes, or if development work is not performed in line with the Group's expectations as to timing or cost, this may adversely affect the Group's ability to bring products to market and have a material adverse effect on its business, prospects, financial condition and results of operations.

12. **The Group's business currently depends significantly on R&D spend by academic institutions, a reduction in which could limit demand for its products and adversely affect its business results and operations**

A majority of the Group's customers are currently academic institutions, many of which depend on government funding. These academic institutions, as well as many other customers generally, rely on research funding from various government and international agencies (including the UK Medical Research Council, the US National Science Foundation and the US National Institute of Health). In the near term, the Directors expect that a significant portion of the Group's revenue will continue to be derived from sales of its products to customers whose activities depend on government funding. As a result, in the near term, the demand for the Group's products may materially depend on the R&D budgets of these customers, which are impacted by factors beyond the Group's control, such as:

- decreases in government funding of R&D (in general, or towards life science in particular);
- changes in programmes that provide funding to research laboratories and institutions (including changes in the amount of funds allocated to different areas of research or changes that directly or indirectly increase the length of the funding process);
- macroeconomic and geopolitical conditions, including the health and public safety climate;
- opinions of the utility of new products or services in a particular field of research;
- citation of new products or services in published research;
- changes in the regulatory environment;
- differences in budgetary cycles;
- the efficacy and availability of competing products;
- market-driven pressures to consolidate operations and reduce costs; and
- market acceptance of disruptive technologies, such as the Group's technologies.

It is possible that the various government and international agencies that provide grants and other funding may be subject to stringent budgetary constraints that could result in reduced spending and allocations, which could jeopardise the ability of academic institutions to purchase the Group's products.

A decrease or delay in research funding available to the Group's customer communities, whether in academic, government or industrial research settings on which the Group depends could cause the Group's existing and/or future customers to reduce or delay purchases of the Group's products, which

could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

Significant revenue is generated as a result of government investment in pathogen genomic surveillance programmes, and the Group is committed to continuing to impact future public health by supporting networks of distributed pathogen sequencing that may provide rapid insights in novel viruses or drug resistant pathogens. As a result of COVID-19, governments have increased funding in respect of pathogen genomic surveillance programmes as a tool to research and control the pandemic, and the Directors expect funding may increase further following the recent commitment to future pandemic preparedness using pathogen genomic surveillance at the G7 summit. However, there can be no assurance that governments will continue to increase or maintain their current funding levels in respect of pathogen genomic surveillance programmes in the future, particularly considering any recovery from the COVID-19 pandemic. If the Group's revenue from government customers purchasing the Group's products to pursue pathogen genomic surveillance programmes materially decreases, the Group's business, prospects, financial condition and results of operations may be materially adversely affected.

13. **The Group may in the future pursue strategic partnerships, acquisitions and investment opportunities, which may prove unsuccessful or divert its resources, result in operating difficulties and otherwise disrupt the Group's operations.**

The Group may pursue a variety of strategic partnerships, acquisitions and investment opportunities and may make significant acquisitions in the future. This may include selectively partnering with, investing in or acquiring products and/or companies that complement or enhance its existing business and offerings as well as those that are strategically beneficial to the Group's long-term goals, including opportunities that help broaden its customer base and expand its product and service offerings. Subject to the articles of association of the Company and any applicable law, Ordinary Shareholders may not have the opportunity to vote on or approve future acquisitions.

The Group may not be able to identify acquisition or investment opportunities that meet its strategic objectives, or, to the extent such opportunities are identified, the Group may not be able to negotiate terms with respect to the acquisition or investment that are acceptable to it or on terms that are commercially favourable, including as a result of competition from other companies in relation to such opportunities and the Group's limited experience in identifying and executing acquisition or investment opportunities. The Group may incur substantial expenses and devote significant management time and resources in seeking to complete acquisitions which may not come to fruition.

In addition, the process of acquiring and integrating another company or technology could create unforeseen operating difficulties and expenditures and involves a number of risks, such as:

- diversion of management time and focus from operating the business;
- use of resources as part of the initial target scoping, due diligence and integration processes that are needed in other areas of the business;
- implementation or remediation of controls, procedures and policies of the acquired company in order to align them to the standards of, and achieve uniformity with, those applied by the Group more widely;
- potential delays and difficulties in integrating the systems and manufacturing processes of the acquired operations with those of the Group, and the potential diversion of resources from the ongoing development of the Group's existing business in addition to the opportunity cost of trying to achieve certain technical synergies from integrating an acquisition which may result in the diversion of key employees from the achievement of other synergies;
- difficulties in co-ordination of product, R&D, manufacturing, and selling and marketing functions, including difficulties and additional expenses associated with supporting legacy services and products and hosting infrastructure of the acquired company and difficulty converting the customers, distributors and suppliers of the acquired company onto the Group's contract terms;
- disparities in the revenues, licensing, royalties, support or professional services model of the acquired company;
- difficulties in retention and integration of employees from the acquired company including difficulties relating to differing corporate cultures as well as integration and re-restructuring costs, both one-off and ongoing;
- a failure in due diligence prior to acquisition, leading to unforeseen costs or liabilities;

- adverse effects on, and disruptions to, the Group's existing business relationships with customers, distributors, manufacturers or suppliers;
- adverse tax consequences and potential write-offs or impairment charges related to the acquired business;
- foreign ownership restrictions;
- regulatory risks, including the risk that such acquisition or investment attracts scrutiny from competition authorities;
- litigation or other claims arising out of the acquisition, including environmental liabilities related to entities that the Group has acquired or divested as part of, or following, the acquisition;
- the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;
- a failure to generate expected margins or cash flows, or to realise the anticipated benefits of any acquisition, including expected operational, revenue, technical and other synergies or other benefits within anticipated timeframes or at all; and
- integrating financial systems and internal controls, and managing financing arrangements, across an enlarged Group.

In addition, the Group's assessments and assumptions regarding acquisition targets may prove to be incorrect, and actual results may differ significantly from expectations. A significant portion of the purchase price of acquisitions may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually and could therefore have a material effect on the Group's financial position. If the Group's acquisitions or investments do not yield expected returns, it may be required to take charges or impairments to its operating results based on this impairment assessment process, which could adversely affect the Group's business, financial condition, results of operations and prospects.

Moreover, acquisitions or investments in jurisdictions other than the ones the Group currently operates in may pose a greater risk, and would subject the Group to market practices, as well as other regulatory and tax requirements, that differ from those it is currently familiar with, which may in turn expose the Group to unanticipated risks.

Any of the above risks associated with potential acquisitions or investments could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

14. **The medium- and long-term impacts of Brexit are not yet known and the Group could be adversely affected by Brexit**

There continues to be uncertainty regarding the consequences of Brexit. Although the United Kingdom entered into a trade and cooperation agreement with the European Union on 24 December 2020 (the "**UK-EU TCA**") that provides for, among other things, the free movement of goods between the United Kingdom and the European Union, continued legal uncertainty and potentially divergent national laws and regulations in relation to areas not specifically addressed in the UK-EU TCA may continue to affect trade and other interactions between the UK and the EU and may adversely affect economic or market conditions in the United Kingdom, Europe or globally, which could contribute to instability in global financial and foreign exchange markets, including volatility in the value of the pound sterling, the Group's reporting currency, or the euro, which could negatively affect its revenues and import costs of raw materials and the broader economic environment on which the Group's business depends.

The Group's operations span a number of jurisdictions, including the UK and the EU. While the Group's headquarters and its production facilities are based in the UK, the Group's sales to customers in the EU accounted for 11.2% of total revenue in FY 2020. Therefore, any impact on its ability to continue selling its products in the EU and the terms on which it makes such sales, including the imposition of import duties, could have a significant adverse effect on its sales and profitability.

Despite its establishment of Netherlands-based logistics capabilities, the Group has experienced delays in the delivery of its products from the UK to customers in the EU and an increase in associated delivery costs. The Directors may decide to make further investments in logistics and/or manufacturing in the EU in the medium-to-long term, which could have a material adverse effect on the Group's profitability.

Restrictions on the free movement of goods (including as a result of customers duties, import tariffs or other restrictions on trade) could also have a material adverse effect on the Group's supply chains and,

consequently, on the Group's production schedule and costs.

In addition, the Group may face challenges retaining or attracting the same numbers of EU staff following Brexit, which could severely disrupt its business and growth. The Group may also face challenges attracting scientific talent; in particular if the conditions for EU nationals to be eligible to work in the United Kingdom become, or are perceived to become, more onerous.

Further, the macroeconomic effects of Brexit on the Group, its customers and suppliers are unknown including, in particular, whether customers and suppliers will reduce international cross-border sales and/or purchases in whole or in part, and whether the UK and/or EU may experience a recession owing, in whole or in part, to the UK-EU TCA not providing sufficient incentive and/or certainty to businesses. Any changes in law or regulation as a result of Brexit that have a negative impact on the Group or increase the Group's costs, and any adverse economic conditions arising from the effects of Brexit, could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

***Risks relating to intellectual property***

15. **Failure to obtain, maintain and enforce the Group's patents and other IP rights could substantially harm the Group**

The Group's ability to add and create value and, therefore, its success, depends, in large part, on its ability to obtain, maintain and enforce a combination of patents, trademarks, copyrights, trade secrets and proprietary knowledge, and to impose confidentiality procedures and contractual and other restrictions, in all cases so as to establish and protect its proprietary IP rights. If the Group fails to obtain and maintain sufficient IP protection for its current and future products and technologies, or is unable to enforce such IP protections against third parties, its ability to exploit those products and technologies and the competitiveness of those products and technologies, could be adversely affected.

The Group has an extensive portfolio of more than 2,000 issued and pending patents and almost 900 trademarks, trademark applications and registered designs (as of the Latest Practicable Date), which are owned or in-licensed by the Group (see section 10 (*Intellectual property)* of Part 4 *(Business and Industry)* for additional detail). In particular, the Group's business is materially dependent on certain IP in-licensed from third parties including Harvard University, the University of California (Santa Cruz), McMaster University, the Vlaams Instituut voor Biotechnologie and Xbrane Biopharma. In the future, the Group may also seek patent protection for any new products or processes that it develops arising from its R&D activities. The Group will be able to protect its proprietary rights from unauthorised use by third parties only to the extent that its proprietary technologies and future products are covered by valid and enforceable patents or are effectively maintained as trade secrets. Pending or future patent applications may be unsuccessful, and the Group may be subject to lengthy and expensive processes to obtain such patents, which might ultimately not be successful. The Group may fail to identify patentable aspects of its R&D output or fail to take the necessary steps to seek patent protection before it is too late to obtain such protection. Furthermore, the Group may not identify all potentially relevant prior art relating to the Group's issued and pending patents which could be used to invalidate an issued patent or prevent a pending patent application from being issued as a patent. In addition, the Group's existing patents, and any future patents it obtains, may not be sufficiently broad to cover the Group's products and technologies or prevent others from using the Group's technologies or from developing competing products and technologies.

Third parties, including the Group's competitors, may seek to apply for and obtain patents or claim the protection of other IP rights that will prevent, limit or interfere with the Group's ability to manufacture, use and sell its products, either in select territories or in international markets generally. Third parties may also challenge the validity, enforceability or scope of the Group's owned and in-licensed patents and patent applications, which may result in such patents and patent applications being narrowed or invalidated. Furthermore, monitoring and preventing unauthorised use of the Group's IP is difficult and costly, especially in international markets. As such, the Group's IP rights could be challenged, invalidated, circumvented or misappropriated, or such IP may prove to be insufficient to provide the Group with a competitive advantage. Even the existence of a successful patent registration may not prevent competitors from violating the Group's IP rights to their advantage. As the Group's products achieve more widespread use internationally, third parties may attempt to develop and sell counterfeit versions of the Group's products, flow cells and consumables. Such violations could go unnoticed or undetected for significant periods of time and counterfeit products may become widely available before the Group is able to enjoin their sale, which could have a material adverse effect on the competitiveness of the Group's products, particularly if such counterfeit products are offered more cheaply. Third parties may misappropriate the Group's trademarks and logos and affix them to products of their own having entirely different performance

specifications or relying on different technologies. End users that receive a counterfeit product could find that such products generate inaccurate data that causes end users' experiments or projects to fail or suffer damage to their other devices.

The foregoing risks are particularly pronounced in China, which is one of the Group's key markets. Although China has a legal and institutional framework for IP protection, the Group may face challenges with the practical enforcement of IP in China, particularly in cases of counterfeit products. The Group's ability to enforce its IP rights in China could be subject to significant delays, including due to burdensome requirements to present particular information or detailed evidence before the investigatory or enforcement authorities will take action; or due to delays in the court system (such as in accepting IP cases, enforcing judgments and issuing orders protecting IP rights).

Any of the foregoing could adversely affect the Group's business, reputation, prospects, financial condition and results of operations.

The patent position of life science companies such as the Group can be uncertain and depends on complex legal and factual questions. In particular, industry participants, including the Group, may not be aware of issued or previously filed patent applications belonging to third parties that mature into issued patents that cover some aspect of its products or their use. As patent applications in most jurisdictions are confidential for a period of time after filing, and in some jurisdictions may remain so until issued (for example, patent applications in the European Union, the US and many foreign jurisdictions are typically not published until 18 months after filing, and publications in the scientific literature often lag behind actual discoveries), the Group cannot be certain that others have not filed patents that may cover the Group's products or technologies. Therefore, the Group cannot be certain whether it or its licensors were the first to make the inventions claimed in licensed patents or pending patent applications, or that it or its licensors were the first to file for patent protection of such inventions. Furthermore, if third parties filed such patent applications before 16 March 2013, an interference proceeding in the US can be initiated by the United States Patent and Trademark Office or a third party to determine who was the first to invent any of the subject matter covered by the patent claims of the Group's owned or in-licensed patent applications. In addition, because patent litigation is complex and the outcome inherently uncertain, the Group's belief that its products do not infringe third-party patents of which it is aware or that such third-party patents are invalid and unenforceable may judicially be determined to be incorrect.

In addition, patents have a limited life span. In the US, China and Europe, the natural expiration of a patent is generally 20 years after it is filed. While various extensions may be available, the life of a patent and the protection it affords are limited.

The Group also relies on trade secrets and other unpatented proprietary information to protect its products and technologies. In particular, where the Group's products and technologies only benefit from unregistered IP rights (such as copyright or know-how), there will be limited protection against competitors independently developing, or having independently developed, technology comparable to that employed by the Group. Third parties could seek to create alternative technologies that perform similar functions but remain technically distinct from the Group's patented technology, so as to circumvent the Group's owned and in-licensed patents and patent applications.

The Group develops a number of software tools which contain “open source” software and the Group distributes such software tools to third parties under the terms of an “open source” licence, such that details of how these tools operate are freely available to the public on Internet sites such as GitHub and licensees may modify and/or distribute such tools to other third parties under the terms of the licence. Whilst the Group benefits from this exposure and from crowd-sourced development, this could enable third parties (including competitors) to use such software to accelerate their creation of copycat products and seek to create IP that “looks-ahead” by extending functionality that the Group may also be developing (or may already have developed but has not yet released), thus constraining the Group's ability to benefit from such R&D in the future. The Group's proprietary software products do not incorporate open source software in ways which would require the Group to disclose the source code of its proprietary software, grant licences for the purposes of marking derivative works, or to make such software available for no or limited consideration. The Group monitors the use of open source software in its products to avoid any uses by third parties in such a manner, however there can be no assurance that such efforts have been or will be successful.

The Group routinely enters into collaborative arrangements for the development and commercialisation of its products and technologies. In connection with these arrangements, the Group shares certain of its proprietary knowledge with its collaborative partners. Although enforcement of the Group's patents, other proprietary rights and contractual covenants are intended to protect the Group from misuse by such

partners or other third parties, the Group may be unable (as a legal or practical matter) to prevent its partners from developing products that are similar or functionally equivalent to the Group's products.

The Group seeks to protect its proprietary and in-licensed technology and processes, in part, by entering into confidentiality agreements with its employees, consultants, outside scientific advisers, manufacturers, and other contractors and collaborators. However, these parties might intentionally or inadvertently disclose the Group's trade secret information to competitors.

The Group enters into IP assignment agreements with those of its employees who are involved in the creation of IP. The Group also enters into IP assignment agreements with third parties including consultants, collaborators and service providers, where appropriate, to ensure that any IP rights created by the third party are owned by or accessible to the Group to the fullest extent possible. However, third parties involved in the creation of such IP may seek to claim rights over IP developed by the Group and/or disputes may arise as to the proprietary rights to IP that has been developed by the Group with their assistance. Similarly, while the Group's standard terms and conditions include grant-back licences or assignments or rights in derivative works of or improvements to the Group's products, customers may assert that those provisions are inapplicable or were never properly accepted by them. Litigation may be required to defend against these and other claims challenging inventorship or ownership of any IP rights created by or for the Group. Remedies that are available to the Group in the event of a counterparty's breach of any such agreements may be inadequate (such as a result of unauthorised use or disclosure of information where the Group's trade secrets become known to its competitors). In addition, if the Group fails to defend such claims, in addition to paying monetary damages, the Group may lose material IP rights, such as exclusive ownership of, or the right to use, valuable IP. Such an outcome could have a material adverse effect on the Group's business. Enforcing a claim against a third party is also likely to be expensive, time consuming and unpredictable, and could have a material adverse effect on the Group's results of operations.

The Group regularly receives confidential information from customers and business partners, and it faces the risk that such counterparties may assert that the Group's independent development of similar technology is in breach of confidentiality agreements. Defending such claims may be expensive and may not always be successful. Moreover, the Group may be unable to prevent its partners or other third parties from independently developing proprietary information and technology that is significantly similar to the Group's proprietary information and/or technology.

Laws concerning the protection of IP rights in the jurisdictions in which the Group has operations and/or their interpretation may change over time. Changes in law or jurisprudence could limit the Group's ability to obtain new IP that may be important for its business. The Group cannot predict the effect that any such changes would have on the operations of the Group or on its ability to protect its current and future products and technologies.

16. **The Group enjoys only limited geographical protection with respect to certain patents and may face other difficulties in certain jurisdictions, which may diminish the value of IP in those jurisdictions**

Filing, prosecuting and defending patents relating to all the Group's products and technologies throughout the world would be prohibitively expensive. The Group has therefore not filed for patent protection in all national and regional jurisdictions where such protection is available. In addition, the Group may decide to abandon national and regional patent applications before they have been granted. Given that the grant proceeding of each national and regional patent is an independent proceeding, the Group is exposed to the risk that applications in certain jurisdictions may be refused by registration authorities while granted by others. It is also common that depending on the country, the scope of patent protection may vary for the same product or technology.

Competitors may use the Group's technologies in jurisdictions where it has not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where the Group has patent protection but where enforcement is more difficult. The legal systems of certain countries, particularly certain developing countries, do not favour the enforcement of patents and other IP protection, particularly those relating to biotechnology, which could make it difficult for the Group to stop infringement of its patents or marketing of competing products in violation of its proprietary rights generally.

Many countries have compulsory licensing laws under which a patent owner may be compelled to grant licences to third parties. In addition, many countries limit the enforceability of patents against government agencies or government contractors. In such countries, the patent owner may have limited remedies, which could materially diminish the value of such patents. In particular, some of the Group's in-licensed patented technology was developed with US federal government funding, which may grant the US federal

government certain rights in any resulting patents, including a non-exclusive licence authorising the government to use the invention for non-commercial purposes.

Failure by the Group to establish and maintain its IP rights could have a material adverse effect on the Group's business, prospects, financial condition and results of operations.

17. **The Group has in the past, and may in the future, incur substantial costs because of litigation or other proceedings relating to IP rights, and it may be unable to protect its own IP rights to, or as a result be unable to commercialise, its products**

As is the case generally in the industry, the Group's success depends significantly on its non-infringement of IP rights of third parties, and its ability to protect its own IP rights from infringement by third parties. Third parties have asserted in the past and may in the future assert that the Group's products and technologies infringe such third party's IP rights that they have obtained or may in the future obtain. For example, Pacific Biosciences of California, Inc. ("**PacBio**")**,** one of the Group's competitors, brought an action against the Group for patent infringement in 2017, in a case that ultimately held that the asserted claims were invalid for lack of enablement. In addition, Illumina, Inc. ("**Illumina**"), another competitor of the Group, also sued the Group for patent infringement, in a case where a favourable settlement for the Group was ultimately reached with Illumina (further detail of these past actions is included in section 10 *(Intellectual property)* of Part 4 *(Business and industry)*). In the future there may be other claims that the Group or its manufacturing or commercialisation partners are using inventions covered by third party patent rights, or that the Group or such partners are infringing, misappropriating or otherwise violating other IP rights, and those making such claims may take legal action to stop the Group or third parties on whom the Group relies for the manufacture of its products, from engaging in its ordinary course operations and activities, including manufacturing or selling the affected products until such third-party IP rights have expired or the Group or its partners have obtained a licence. Such licences may not be available on acceptable terms, or at all. Even if the Group or its partners were able to obtain a licence, the rights may be non-exclusive, which could result in the Group's competitors gaining access to the same IP rights. There is also a risk that litigation counterparties will attempt to impugn the integrity of the Group and/or its management when involved in IP litigation. As previously and widely reported in the press, in 2012 the US District Court for the Northern District of California found that submissions filed by Abbott Laboratories with the US Patent and Trademark Office ("**USPTO**") in connection with the prosecution of US Patent 5,820,551 failed to note that Abbott Laboratories had, in briefs filed previously with the European Patent Office ("**EPO**"), asserted a position the Court found to be inconsistent with a position then being advanced by Abbott Laboratories in its USPTO submissions. The Court found that, in light of this inconsistency, the then in-house patent counsel for Abbott Laboratories and Dr Gordon Sanghera (now the Group's Chief Executive Officer) had engaged in inequitable conduct (a term of art in US patent law) by not addressing the position previously asserted in the EPO briefs in the subsequent submissions filed by Abbott Laboratories. Dr Sanghera was not a defendant in that case and no penalties or other sanctions were imposed on him personally. In addition, any successful third-party challenge to the Group's patents could result in the unenforceability or invalidity of such patents and may adversely affect the Group's business and operations.

Numerous patents and patent applications owned by third parties exist in the fields in which the Group and its partners are developing and may develop products and technologies. The scope of such third-party patents and applications is subject to interpretation by the courts, and the interpretation is not always uniform. If the Group were to be sued for patent infringement or breach of a patent licence, it would need to demonstrate that its products, technologies or methods do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid or unenforceable. The Group may be unable to do so, which could in turn result in it being required to pay substantial damages, royalties and/or an account of profits made from the infringement, indemnify the Group's partners for their damages, and/or redesign its infringing product or obtain one or more licences from third parties (which may be impossible or require the Group to incur significant costs and time in doing so). Damages may be increased and include legal fees if the Group is found to have infringed such rights wilfully. Further, if a patent infringement suit is brought against the Group, its research, development, manufacturing or sales activities relating to the product or product candidate that is the subject of the suit may be delayed, materially affected or terminated by the grant of an injunction against the Group or a decision by the Group to design around the claims at issue.

The Group has in-licensed certain patents and patent applications from third parties and may enter into additional licensing agreements in the future. The Group pays royalties under some of its patent licence agreements. Calculation of these royalties can be uncertain and depends on complex legal and factual questions regarding the scope of claims and whether the Group's products would infringe such claims but for the licence. The Group's judgments in calculating such royalties may be challenged and an error in such judgments may result in a loss of a licence that could have a material adverse effect on the Group's ability

to manufacture or commercialise one or more products in one or more jurisdictions. If there is any conflict, dispute, disagreement or issue of non-performance between the Group and its licensing partners regarding any of the Group's other rights and obligations under the licence agreements, the Group may become liable to pay damages, and the Group's licensing partner may have a right to terminate the affected licence. The Group's and its partners' ability to utilise the affected IP in their products and technologies, and the Group's ability to enter into collaboration or marketing agreements for an affected product may also be adversely affected.

In addition to the risk of third party legal challenges, the Group may be required to file infringement claims to counter infringement or unauthorised use of its patents and/or other IP rights by third parties. In an infringement proceeding, there can be no assurance that a satisfactory result will be achieved for the Group and a court may decide that a patent or other IP right of the Group is invalid, unenforceable, and/or has not been infringed. Monitoring and preventing unauthorised use of the Group's IP is difficult and costly, especially in international markets, and can consume significant time and resources, even if the Group is ultimately successful in stopping the infringement of its IP rights. There is also the risk that, even if the validity of these patents is upheld and infringement of these patents found, the court will refuse to enjoin the other party on the grounds that it is in the public interest to permit the infringing activity.

The Directors cannot predict when the Group may need to initiate litigation or claims, or defend against litigation or claims initiated by third parties against any member of the Group, which may be costly and time-consuming. An adverse result in any litigation (including defence proceedings) could put one or more of the Group's IP rights at risk of being invalidated or interpreted narrowly and could put any outstanding patent applications at risk of not issuing, as well as giving rise to an obligation on the Group to pay the third party's costs and damages. In addition, litigation diverts the attention of management and technical personnel involved in R&D. Any of these events could have a material adverse effect on the Group's business, prospects, financial condition and results of operations.

During the course of any patent or other IP litigation, there could be public announcements of the results of hearings, rulings on motions, and other interim proceedings in the litigation. If market analysts or investors perceive these announcements to be detrimental to the Group, the perceived value of the Group's products, technologies, research programmes or IP could be diminished.

18. **The Group depends on certain IP that is licensed to it by third parties. Any loss of its rights to such IP could prevent it from manufacturing and commercialising its products and harm its R&D programme**

The Group's business is materially dependent on certain IP in-licensed from third parties including Harvard University, the University of California (Santa Cruz), McMaster University, the Vlaams Instituut voor Biotechnologie and Xbrane Biopharma. The Group may also need to in-licence other technologies from third parties to commercialise future products. It may also need to negotiate licences to patents and patent applications after launching new products. The Group's business may be adversely affected if the technologies, patents or patent applications are unavailable for licence or if it is unable to obtain licences on acceptable terms. Even if a licence can be obtained on acceptable terms, the rights may be non-exclusive, which would potentially give the Group's competitors access to the same IP rights.

In addition, if the Group fails to comply with the terms of any licences, the Group may lose access to its rights, in whole or in part, under these agreements, and may have to negotiate new or reinstated agreements with less favourable terms. Any such event may cause the Group to experience significant delays and costs in the manufacture and distribution of its existing products, as well as its R&D activities and ability to launch new products or product improvements. The Group may fail to obtain any replacement in-license at a reasonable cost or on reasonable terms, if at all, which may require changes to its products and/or which could impede its ability to manufacture or commercialise its products in certain jurisdictions.

***Risks relating to supply chains, manufacturing and distribution***

19. **The Group relies on a limited number of key suppliers for components or raw materials (such as ASICs, reagents and oligos), which are crucial to the manufacturing and assembly of the Group's products**

The Group's products are complex and involve several unique customised components and materials, many of which have been developed and produced solely for the Group and tailored to its specifications. This includes the ASIC chip and wafer components contained within the MinION Flow Cell, as well as the sensor within the PromethION Flow Cell, which all require precision manufacturing. As these are manufactured by semiconductor fabricators, they are subject to shortages of capacity within that industry.

Although the Group seeks multiple sources for key components where it is practicable to do so, given the nature of such customised components, they tend to be sourced from a limited number of specialist suppliers and, in limited cases, single sources. The Group also sources materials for its sample preparation kits, such as oligos and reagents, from a limited number of specialist suppliers who supply manufacturers within the global life science research market. The Group's business may be materially adversely affected if supplies of such components are limited or interrupted, especially with respect to the Group's single source third-party manufacturing and supply collaborators, if they fail to meet a satisfactory quality, or if they cease to be available at acceptable prices. Any replacement of the Group's manufacturers or specialist suppliers could require significant effort and expertise because there may be a limited number of qualified replacements or, in some cases, none.

For the Group's current and future single source third-party manufacturing and supply collaborators, the Group may be unable to negotiate binding agreements with them and/or may have difficulty finding replacement manufacturers or specialist suppliers to support the Group's development and commercial activities at commercially reasonable terms in the event that their services to the Group becomes interrupted for any reason. The Group does not always have arrangements in place for an alternative or second source supply for its single source vendors in the event they cease to provide their products or services to the Group or do not provide sufficient quantities to the Group on a timely basis. If the Group is required to purchase these materials or components from alternative sources, it could take a year or longer to qualify the alternative sources. Substantial lead-times for ASICs (which may, in certain circumstances, be in excess of a year), make it difficult to match purchasing requirements with anticipated demand for the Group's products. The operations of the Group's third-party manufacturing partners and suppliers could also be disrupted by conditions unrelated to the Group's business or operations or that are beyond its control, including international trade restrictions, the impact of Brexit and conditions related to COVID-19 and other disease outbreaks.

If the Group is unable to secure a sufficient supply of key materials or components on a timely basis, or if such materials or components do not meet the Group's expectations or specifications for quality and functionality, the Group's operations and manufacturing will be materially adversely affected, the Group could be unable to meet customer demand and its business and results of operations may be materially adversely affected.

Beyond customised items, the global electronic component market is experiencing unprecedented demand and disrupted supply chains. The Group's instruments and flow cells include a broad range of electronic components which, if affected, will impact the Group's ability to produce to plan and scale manufacturing. For example, the GridION, PromethION and MinION Mk1C include Nvidia graphics processing units ("**GPUs**") and solid-state drives, the supply of which are both constrained. Delays in the delivery of, or unavailability of, such parts, may constrain the Group's growth strategy and result in significant costs and delays in trying to find alternative suppliers. Further, in such circumstances, other customers may need to use separate computers with Nvidia GPUs for quick and accurate base calling, which may impact on consumers' ability to use the Group's products to their full potential if they do not have access to such computers, and this may in turn adversely affect customer demand for the Group's products. In addition, if the Group is unable to reduce its manufacturing costs and establish and maintain reliable, high-volume manufacturing suppliers as it scales its operations, the Group's business, operations, financial conditions and prospects could be materially adversely affected.

20. **The Group's growth and profitability rely in part upon its ability to design and manufacture updates to its flow cells, software and kits that support the Group's core sequencing devices and could be subject to risks of interruptions or delays in deploying such updates**

The Group's growth and profitability rely in part upon its ability to design and deliver updates to its flow cells, software (including bioinformatics tools) and kits, which support the Group's core sequencing devices within targeted time frames and enable effective prioritisation as between complementary product development paths, such as whether to offer cloud-based data processing functions as compared to on-device information processing. If the delivery of such updates is delayed or halted for any reason (such as due to technological failure or industrial action, design or production issues), or if unforeseen trends in the digital usage profile of the Group's principal target markets render the Group's choice of a product development path outdated, this could have a material adverse effect on the performance of the Group's sequencing products. As a consequence, the Group may fail to meet customers' expectations and demands with respect to the quality and functionality of its products, which could result in a decline in product adoption by the Group's existing customers or hinder the development of new customer relationships and have a material adverse effect on the Group's business, reputation, financial condition and results of operations.

21. **If the Group's manufacturing facilities or third-party manufacturers' facilities become unavailable, inoperable or financially unviable, including due to factors beyond its or their control, the manufacturing and distribution of the Group's products could be materially interrupted**

The Group's products are manufactured or assembled either at the Group's manufacturing facilities located in the MinION Building in Oxfordshire or within the Group's laboratories and facilities within the Oxford Science Park or, in the case of certain components of the Group's products, including the ASIC chips and wafers for the MinION Flow Cell, at the Group's third-party manufacturers' facilities.

The manufacture of the Group's products is highly exacting and complex, and problems may arise during manufacturing for a variety of reasons, including equipment malfunction, failure to follow specific protocols or defective materials and components. In addition, notwithstanding the Group's compliance with regulatory requirements and its disaster avoidance protocols, accidents can happen. For example, in July 2015 the Group experienced an incident involving chemical segregation and disposal, which resulted in contamination of a laboratory. The employee involved suffered minor burns and was discharged from hospital the same day. A report pursuant to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 was submitted to the Health and Safety Executive. No civil claim was made by the employee against the Group in relation to the incident and no proceedings were initiated by the Health and Safety Executive or other relevant authority. If the Group's manufacturing facilities were to become permanently or temporarily unusable, including due to contamination, fires, floods, power loss, telecommunications failures, physical intrusions or cybersecurity breaches, acts of war or terrorism, strikes, pandemics or other events or disruptions, the manufacturing and distribution of its products could be materially interrupted.

In addition, if the manufacturing facilities of third parties on whom the Group relies become unavailable for any reason, the Group would need to secure alternative manufacturing facilities with the necessary capabilities or move such manufacturing processes in-house. This could require substantial lead times and (particularly if moving manufacturing in-house) substantial capital investment. Moreover, such migration may not be possible given the specialised processes currently performed at the third-party manufacturers' facilities.

Although the Group possesses insurance for damage to its property and disruption of its business, this insurance may not be sufficient to cover all of its potential losses in the event of disruption to its manufacturing facilities or those of third parties, and any such insurance may not continue to be available to the Group on acceptable terms, or at all.

22. **The Group may be unable to successfully develop, manufacture and/or commercialise its current and pipeline products in a timely manner, at an acceptable cost or with consistent quality.**

The market for the Group's products is characterised by rapid technological advances. The Group's success therefore depends on its ability to develop and bring to the market current, new and improved products in a timely manner. The Group is constantly developing new products and innovating to improve ease-of-use, performance or other features of its existing products. The Group frequently announces the launch or upgrade of such products and enhancements to its products and services before they have been fully developed or tested. The Group uses a product phase labelling system to manage user expectations. Should the Group fail to manage customer expectations, including because it is unable to develop, improve, manufacture and/or commercialise its current and pipeline products on a cost-effective and timely basis, or at all, or to continue to provide adequate support for its existing products, this could have a material adverse effect on the Group's business, reputation, results of operations and financial condition.

The overall market acceptance and commercial success of the Group's products depends on a number of factors, including the functionality, timely completion and delivery, competitive pricing, adequate testing, quality, performance, reliability and integration with existing and emerging technologies of the Group's devices and consumables (including flow cells and sample preparation kits), the Group's ability to forecast and effectively address and manage customer preferences and product demand, the success of the Group's sales and marketing efforts, purchase commitments and inventory levels, and effective management of manufacturing and supply costs. Any new solution that the Group develops may not be introduced in a timely or cost-effective manner, may contain errors, vulnerabilities or bugs, and might not achieve the market acceptance necessary to generate significant revenue. Should the Group face delays in, or discover unexpected defects in, its devices or consumables during their further development

or manufacturing, including any delays or defects in software development or product functionality, the timing and success of the continued rollout and development of the Group's products may be significantly impacted. This could have a material adverse effect on the Group's revenue and profitability.

In particular, the performance of the Group's consumables is critical to customers' successful utilisation of the Group's devices and the Group's success, and any defects or performance issues with the consumables would adversely affect the Group's revenue and profitability. For FY20 and HY21, 60% and 66%, respectively, of the Group's LSRT revenue was generated from the sale of consumables. While the Group has designed consumables specifically for use on its devices, it may need to develop and manufacture other customised consumables for its pipeline products, the production of which has in the past been and may in the future be below desired levels or subject to manufacturing delays, product quality defects and other issues.

The development of the Group's products is complex and costly. Should the Group experience issues with the design or quality of its products, this may have a material adverse effect on the Group's brand, business, financial condition and results of operations, and could result in the loss of certifications such as those from the International Organization for Standardization ("**ISO**") and the CE mark in respect of the Group's LamPORE assay ("**LamPORE**") test. The loss of product certifications may result in customers choosing not to purchase the Group's products and the Group's ability to develop products approved for clinical or regulated uses could be significantly impaired. Unanticipated issues with the Group's products could divert substantial resources away from existing and pipeline products, and could substantially increase the Group's costs. If the Group encounters development challenges or discovers errors in its products late in the product development cycle, the Group may be forced to delay product shipments or the scaling of manufacturing or supply. In particular, if the continued rollout of the Group's current and pipeline products is delayed, is not successful or is less successful than anticipated, then the Group may not be able to achieve an acceptable return, if any, on its substantial R&D efforts, and the Group's business may be materially adversely affected. The expenses or losses associated with delayed or unsuccessful product development or lack of market acceptance of the Group's existing and pipeline products, could materially adversely affect the Group's business, operations, financial condition and prospects.

The Group may face increased competition if new technologies, techniques or products emerge that offer better combinations of price and performance or better address customer requirements as compared to the Group's current or future products. The Group's success depends on its ability to anticipate changes in technology and customer requirements and if its competitors respond more quickly and effectively to new or changing opportunities, technologies, standards or customer requirements, this could have a material adverse effect on the Group's business and profitability. In addition, the typical development cycle of new life sciences products can be lengthy and complicated, and may require new scientific discoveries or advancements and complex technology and engineering, or may require complex management of external suppliers and service providers. The significant lead time involved in bringing a new product to market requires the Group to make a number of assumptions and estimates regarding the commercial feasibility of any new product. As such, the Group may introduce a new product that uses technologies or methods of analysis that have been rendered outdated by the time of launch, addresses a market that no longer exists or is smaller than previously thought, or otherwise is not competitive at the time of launch.

If the Group is unable to successfully develop, manufacture and/or commercialise its current and pipeline products in a cost-effective and timely manner, or if any products developed or launched are unsuccessful and fail to gain sufficient market acceptance, the Group may incur significant expenses or losses that cannot be recovered and which could have a material adverse effect on its business, prospects, results of operations and financial condition. The Group's R&D efforts may also not result in the benefits that it anticipates.

23. **The Group's products are highly complex and could have unknown defects or errors, which may give rise to claims against the Group or divert application of the Group's resources from other purposes**

The Group's products are highly complex and may develop or contain undetected defects or errors, including as a result of minor changes in processes used by suppliers or changes in environmental conditions, which may give rise to claims against the Group or divert application of the Group's resources from other purposes and, in turn, slow growth and/or reduce margins. The Group's customers have previously experienced and may continue to experience reliability issues with the Group's flow cells. Despite testing and stringent quality control processes, defects or errors may arise in the Group's products, which could result in a failure to obtain, maintain or increase market acceptance of such products, diversion of development resources, reputational harm and increased warranty, service and maintenance costs.

Several of the Group's products are dependent on the properties of components manufactured by its suppliers, which are outside of the Group's control, and which may not be measurable or reasonably measurable other than through their indirect impact on system performance. For example, salts used to make buffers in sequencing kits and flow cells are required to be 'HPLC or Ultrapure' grade to guarantee low levels of impurities. The Group relies on verified suppliers.

New products, or enhancements to the Group's existing products in particular may contain undetected errors or performance problems that are discovered only after delivery to customers. If the Group's products have reliability or other quality issues or require unexpected levels of support in the future, the market acceptance and utilisation of the products may not grow to levels sufficient to support the Group's costs and its reputation and business could be adversely affected. Low utilisation rates of the Group's products could also cause its revenue and gross margins to be adversely affected. Defects or errors in the Group's products may also discourage customers from purchasing its products. The costs incurred in correcting any defects or errors may be substantial and could materially adversely affect the Group's operating margins. If the Group's service and support costs increase, its business and operations may be materially adversely affected.

In addition, such defects or errors have required the Group to provide replacement products to customers at no additional charge in the past which may increase the Group's costs and materially adversely affect its operating margins. For example, in 2020 the Group identified an issue with its PromethION Flow Cells that affected shelf life and data output and which was subsequently determined to have been attributable to a change in a process employed by a supplier of a component. As a result, the Group provided replacement flow cells free of charge to affected customers. Events such as these, particularly during early phases of product roll-out, can adversely affect the Group's margins. Other similar issues in respect of the Group's products could have a material adverse effect on its profitability. In addition, defects or errors in the Group's products could lead to product liability claims against the Group, which could be costly and time-consuming to defend and result in substantial damages. Although the Group has product liability insurance, any such product liability insurance may not protect its business from the financial impact of a product liability claim or the costs of providing replacement products. Moreover, the Group may not be able to obtain adequate and/or additional insurance coverage on acceptable terms or at reasonable cost, when needed, and any insurance that the Group has or obtains will be subject to deductibles and coverage limits.

24. **Enhanced trade tariffs, import and export restrictions, foreign regulations and/or other trade barriers may have a material adverse effect on the Group's business**

The Group operates a global business with sales to customers in more than 100 countries. The Group intends to continue to expand its international operations as part of its growth strategy. A significant proportion of the Group's revenue is generated from the sale of its products outside the UK, particularly within the EU, the US and Asia Pacific. In FY20, LSRT revenue generated outside the UK constituted 92% of the Group's overall LSRT revenue (see section 2.7 *(Foreign exchange movements)* of Part 7 *(Operating and Financial Review)* for information as to the Group's LSRT revenue by geography). The Group sells its products directly, and works with distributors, in the North American, European, Australian and Japanese markets and also works primarily or solely with distributors in certain countries and regions (including China, Russia, Turkey, India, South Korea and parts of Africa) to enhance its own presence or as an alternative to having local operations.

Certain jurisdictions impose restrictions on exports of technology originating from within their borders. These restrictions can take the form of foreign trade policies, economic sanctions, treaties, government regulations and tariffs. They can prohibit the export of the Group's products to particular individuals, enterprises or locations, or for certain prescribed purposes. They can also require that an export licence be obtained before the Group may export its products to a particular individual, enterprise or location. The Group's business may be adversely impacted by such restrictions, particularly in the UK, the US and the EU.

As examples of the foregoing restrictions:

- the Group is prohibited from exporting its products without a licence to particular individuals, institutions or locations which have been determined by the Export Control Joint Unit of the UK to be affiliated with the military in their respective jurisdictions because certain of the Group's products could be used to detect biological materials, including weapons of mass destruction;
- in the US, the Group is subject to export controls, including the trade sanctions regime enforced by the Office of Foreign Assets Control and other similar laws and regulations, and may not export its products to destinations within certain jurisdictions if the products contain US-origin components that are subject

to such export controls; and

- in the UK and the EU, the Group is subject to export and import restrictions set out in the UK-EU TCA.

Under the Group's current export control policy, the Group checks each new customer (and is in the process of establishing a check for each new order for customers located in China and Russia) against applicable embargoes and sanctions pursuant to UK sanctions and export control legislation and US sanctions programmes. The Group's current policy requires it to await a positive result from each check before shipping a product to the proposed end user. The timing of the results of these checks are beyond the control of the Group – such as when the Group requests that the UK Export Control Joint Unit consider an inquiry as to whether the export control restrictions apply to a particular situation or end user – and can take much longer than expected to complete. There can be no assurances that these detailed checks of each new customer and each new order will not result in substantial impairment of the Group's business in the affected markets. For instance, the detailed checks could result in significant shipment delays to the many end users whose purchases are supported by local government funding, and could cause the Group to fail to perform its contractual delivery commitments. This could also cause the Group's distributors to fail to perform their own contractual delivery commitments to their direct customers, usually the end users subject to these detailed checks. Ultimately, the process of checking each new customer and each new order could cause the Group to be unable to deliver its products in an efficient or prompt manner. This could, in turn, cause the purchase of the Group's products to be less attractive to its ultimate end users in comparison to competitor products, in circumstances where the export controls and internal export control policies applicable to that competitor may be less onerous. In addition, the expiration of export licences, or even of clearances confirming that no export licence is needed, could disrupt shipments of flow cells and other consumables to end users at critical junctures in their research timetables and impair the viability of their experiments or research. There can be no assurance that a negative market perception will not develop as a result of end users experiencing complications and difficulties in doing business with the Group. There can be no assurances that this perception will not have a material adverse effect on the Group's business, financial condition and results of operations.

In addition, in the case of UK sanctions and export control legislation and US sanctions programmes, it may not be practically possible for the Group to confirm with complete certainty that any particular customer has no connection to the military or no intention to direct a device towards prohibited purposes, as certain relevant information may be beyond its reach. The Group may fail to detect possible military connections or identify possible dual-use applications to which a Group device may be directed. If a shipment is made to a customer who has an unforeseen military connection or purpose, such shipment could result in material penalties to the Group and/or damage to its reputation. Compliance with UK sanctions and export control legislation and US sanctions programmes is time consuming, expensive and prone to human error. Efforts to comply could slow the expansion of the Group's business in certain markets, including key markets and could have a material adverse effect on the results of the Group's business, results of operations, financial condition and prospects.

The UK-EU TCA provides a framework for UK businesses to trade with the EU on a tariff-free and quota-free basis provided that they meet the 'rules of origin' requirements. The Group currently anticipates that most of its components imported from the EU and all of its products exported to the EU will meet these requirements and will develop related origin determination, calculation, certification and record-keeping processes. Therefore, while the Group does not currently expect to be subject to additional tariffs on products imported from, or exported to, the EU, any failure by the Group to comply with the relevant rules of origin restrictions under the UK-EU TCA (or any incorrect classification of its products for the purposes of these restrictions) could result in its existing or new products becoming subject to additional tariffs. Given the unprecedented nature of the UK-EU TCA, and that its application in practice remains in a relatively early stage, the Group may experience practical challenges in relation to EU-UK trading activities and delays importing into the EU experienced to date may continue.

Other jurisdictions, such as China and Russia, may also impose restrictions of their own, which can take the form of import restrictions, tariffs on imports, import licensing requirements or other trade protection measures on the importation, sale, shipment or other transfer of finished products, components or software. Growth in the Group's business may be slowed and the Group's results of operations and financial condition may be adversely impacted by any new or revised import restrictions, tariffs on imports, import licensing requirements or other trade protection measures on the importation, sale, shipment or other transfer of finished products, components or software imposed by China, Russia or other jurisdictions or regions. In particular, regulations in Russia limit the Group's ability to obtain licences to certain technology developed by customers or collaborators while using the Group's products.

The Group could in the future become subject to additional tax, costs or other regulatory changes and/or

restrictions arising from changes in applicable law, interpretation of such laws, or changes in the manner in which the Group operates its business. Any of the foregoing could raise the Group's costs, restrict access to components or materials used in the Group's products, restrict the Group's sale of products and/or otherwise adversely affect the Group's sales, which could have a material adverse effect on the Group's business, financial condition and results of operations. Further, the continued threats of tariffs, trade restrictions and trade barriers could have a generally disruptive impact on the global economy and, therefore, negatively impact the Group's sales.

25. **The Group's inability to complete acquisitions, or to meet any conditions to which it may become subject, as a consequence of any CFIUS or UK government action or review, could adversely impact its growth or disrupt its operations.**

*United States*

The Group is deemed a "foreign person" under the regulations governing foreign investment in the United States and, as such, acquisitions of, or investments in, US businesses or foreign businesses with US subsidiaries that the Group may wish to pursue may be subject to review by the Committee on Foreign Investment in the United States ("**CFIUS**"). The scope of CFIUS review was recently expanded by the Foreign Investment Risk Review Modernization Act of 2018 ("**FIRRMA**") to include certain non-passive, non-controlling investments (including certain investments in entities that hold or process personal information about US nationals), certain acquisitions of real estate (even with no underlying US business), transactions designed or intended to evade or circumvent CFIUS jurisdiction and transactions resulting in a "change in the rights" of a foreign person in a US business if that change could result in either control of the business or a covered non-controlling investment. If a particular proposed acquisition or investment falls within CFIUS's jurisdiction, the Group may be required to make a mandatory filing, submit the proposed transaction to CFIUS review on a voluntary basis, or proceed with the transaction without submitting to CFIUS review and risk intervention by CFIUS prior to or subsequent to completing the transaction.

CFIUS may decide to block or delay an acquisition or investment by the Group, impose conditions with respect to such acquisition or investment or order the Group to divest all or a portion of a US business that it may acquire without having obtained CFIUS approval. This may prevent the Group from pursuing certain acquisitions or investments that it believes would otherwise have benefitted it and its shareholders. The Group's inability to complete acquisitions, or any conditions to which it may become subject, could adversely impact its growth or disrupt its operations.

In addition, among other things, FIRRMA authorises CFIUS to prescribe regulations varying the definition of a "foreign person" in different contexts, which could result in less favourable treatment for investments and acquisitions by investors and acquirors from countries that have been designated as being of "special concern." If such future regulations impose additional burdens on acquisition and investment activities involving the UK and UK- investor-controlled entities, the Group may no longer be able to consummate transactions falling within CFIUS's jurisdiction that might otherwise have benefitted it and its shareholders. Any CFIUS action or review could cause the Group to become unable to complete an acquisition, or to satisfy any conditions to which the closing of the acquisition may be subject. This could disrupt the Group's operations and have a material adverse effect on its business strategy, growth, results of operations and financial condition.

*United Kingdom*

Acquisitions or investments by, or in, the Group may also be subject to review by the UK government pursuant to the UK's National Security and Investment Act (the "**NSIA**"). The NSIA lays out a regime for the UK government to review transactions involving entities and assets, including on national security grounds, replacing the existing regime under the Enterprise Act 2002. The NSIA applies to certain investments in UK companies and: (a) requires investors and businesses to notify the Investment Security Unit within the Department for Business, Energy and Industry Strategy about certain types of transactions in designated sensitive sectors (in which case a mandatory approval regime will apply); (b) creates a voluntary notification system for certain types of transactions in all other sectors where the parties consider that their transaction may raise national security concerns; (c) enables the UK government to 'call in' transactions or other events in the wider economy to undertake a national security assessment; and (d) empowers the UK government to apply remedies (including blocking a transaction) and establishes a sanctions regime for non-compliance.

Any mandatory or voluntary notification of a transaction involving the Group, any decision by the UK government to 'call in' any transaction involving the Group, or any action by the UK government to impose

such remedies as it considers necessary in respect of any transaction involving the Group may prevent the Group from pursuing certain acquisitions or investments that it believes would otherwise have benefitted it and its shareholders. The Group's inability to complete acquisitions or investments in the United States or the United Kingdom, or any conditions or remedies imposed by the UK government on an acquisition or investment in which the Group is interested in pursuing could disrupt the Group's operations and have a material adverse effect on its business prospects, results of operations or financial condition.

26. **Doing business internationally and commercialising products outside of the UK creates operational, regulatory, foreign exchange and financial risks for the Group**

The Group's business and strategy have been internationally-oriented from the outset, and the Group maintains a global presence which is a key part of its commercial success. As at 30 June 2021 this included 690 full- and part-time employees in the UK, EU, the US, Asia Pacific and China (including 577 in the UK). As at 30 June 2021 the Group worked with distributors in China, Japan, Russia, Turkey, India, the Gulf, South Korea and parts of Africa to serve customers in more than 100 countries across the globe.

Although the Group is domiciled in the United Kingdom, international revenues account for a substantial part of its revenues. In FY20, 92% of the Group's life science research tools revenue was generated from sales to customers located outside the UK. The Directors believe that a significant portion of the Group's future revenue will continue to be derived from global markets. In particular, the majority of the Group's revenues in the LSRT segment are, and are expected to continue to be, denominated in US dollars, and the Group's costs are, and are expected to be, primarily denominated in sterling. Although the Group incurs costs in local currencies in certain markets (such as sterling and euros), it receives the majority of its LSRT revenues from those markets in US dollars. Changes in currency exchange rates could therefore have a significant effect on the Group's results of operations and financial condition, including: (a) increasing the cost of non-UK R&D expenses, the cost of labour and the cost of sourced product components outside the UK (in the case of a weakening of sterling); (b) decreasing the value of the Group's revenues denominated in other currencies (in the case of a strengthening of sterling); (c) distorting the value of non-sterling transactions and cash deposits; and (d) affecting commercial pricing and profit margins of the Group's products. These effects can have an adverse impact on the Group's results of operations and financial condition and may also make it more difficult for investors to understand the relative strengths or weaknesses of the Group's underlying business on a period-over-period comparative basis.

International operations entail a variety of risks not present in operations concentrated in a single jurisdiction, including:

- reduced protection for IP rights in some countries and practical difficulties of enforcing IP and contractual rights in certain jurisdictions, such as in China and Russia;
- trade restrictions, including on the importation, exportation, re-exportation, sale, shipment or other transfer of programming, technology, components and/or services to foreign persons;
- difficulties in obtaining export licences or in overcoming other trade barriers and restrictions resulting in delays;
- changes in social, political and economic conditions (including diplomatic and trade relationships), in particular in China and Russia and in respect of any deterioration in diplomatic and trade relationships between the UK and/or US and these countries; for example, initiatives undertaken by the UK and/or US (such as the Department of Justice's China Initiative, which reflects the strategic priority of countering Chinese national security threats) may result in retaliatory measures or policies being implemented against UK and/or US companies seeking to sell products in China;
- being subject to a range of laws and regulations applicable beyond the UK, including with respect to transportation of products and components for products abroad, consumer protection, data protection and privacy, cybersecurity, data security and network security, human genomic resources, anti-corruption and anti-bribery, anti-facilitation of tax evasion, antitrust and competition, tax, export and import restrictions and licensing requirements, medical device registration requirements, regulations governing clinical applications and laboratory developed testing, tariffs, economic sanctions, embargoes and other protective measures, employment laws, government approvals, permits and licences, any of which may differ from jurisdiction to jurisdiction, be inconsistent across jurisdictions, or be directly contradictory;
- challenges in staffing and managing foreign operations, for instance in markets such as China where the relevant segment of the labour market is characterised by a high degree of mobility and turnover among employees;

- the potential need for localised software, documentation and post-sales support;
- challenges in respect of logistics services (including transportation delays and reliance on a small number of logistics services providers);
- disruptions to global trade and travel due to disease outbreaks (including COVID-19);
- a deterioration of political relations between the UK, the US, the EU, China and Russia, which could have a material adverse effect on the Group's sales and operations in these jurisdictions, and disruptions to global trade and travel more broadly resulting from these tensions or specific geopolitical incidents or developments, which could include retaliatory tariffs and other trade restrictions, civil unrest, military clashes or wars;
- increased financial accounting and reporting burdens and complexities, including application of accounting rules in jurisdictions having generally accepted accounting principles which differ from those which prevail in the UK or the US;
- commercial risks arising from the Group's reliance on distributors, including their impact on lengthening payment terms and reducing the Group's contact with its end users, as well as dependence on their accounting and operational practices which can give rise to complications for the Group's accounting records; and
- regulatory and compliance risks that relate to auditing and maintaining accurate information and control over sales and distributors' activities that may fall within the scope of applicable anti-bribery and anti-corruption legislation.

Failure by the Group or its distributors to comply with laws and regulations applicable to business operations in foreign jurisdictions may subject the Group to significant liabilities and consequences. The introduction of new regulations or changes to existing regulations to which the Group is subject could make it more expensive for the Group to conduct its business and require the Group to make significant expenditure or modify its business practices to comply with existing or future laws and regulations, which may affect its business, results of operations, financial condition and business prospects.

Moreover, international operations means the Group is subject to export or import control requirements in the UK, pursuant to which HMRC may issue civil penalties and fines, in addition to referring cases to the Crown Prosecution Service for potential criminal prosecution. The Group is also subject to the UK's Bribery Act 2010, which (among other things) prohibits commercial bribery and makes it a crime for companies to fail to prevent bribery, and parts of the Group are subject to similar anti-bribery laws in respect of its activities in other countries (such as the Foreign Corrupt Practices Act of 1977 (as amended) in the US, the Anti-Unfair Competition Law and Criminal Law (each, as amended) in China, and economic sanctions programmes administered by the United Nations, the EU and the Office of Foreign Assets Control in the US). The Group is subject to US economic sanction regulations that prohibit the shipment of certain products to countries, governments and persons targeted by US sanctions, breach of which could result in penalties, including fines and/or denial of certain export privileges.

The laws to which the Group is subject are complex and far-reaching in nature and the Group faces increasing risks as it continues to expand its operations globally (including via joint ventures, distributors, suppliers, and local agents). In certain jurisdictions, particular industry sectors, including some that are likely to include significant end users of the Group's products, may be more prone to corruption, and engaging in certain business and market practices may be considered permissible (or at least penalties may not apply or may not be enforced) and may customarily be expected of industry participants, yet engaging in these same practices may nonetheless subject the Group to penalties and other sanctions under the laws of other jurisdictions to which the Group may be subject, such as the laws of the UK, the EU or the US. Failure to comply with anti-bribery, anti-corruption, anti-facilitation of tax evasion, international trade controls and/or other laws and regulations may subject the Group, its officers, and/or employees to claims, criminal sanctions, fines and/or other penalties (such as denial of export privileges, injunctions, asset seizures, debarment from government contracts (and termination of existing contracts) and revocation or restrictions being imposed on existing licences) in the UK and other countries, as well as prohibitions on the conduct of the Group's business and its ability to offer its products in such countries. Any of the foregoing may have a material adverse effect on the Group's business, reputation, ability to attract and retain employees, financial condition and/or results of operations.

Although the Group has policies and procedures in place designed to promote compliance with laws and regulations, which are continually reviewed as the Group expands its operations in existing and new jurisdictions, the Group's employees, partners or agents may act in contravention of its policies and procedures, or violate applicable laws or regulations. In particular, the Group's significant reliance on

distributors to sell its products necessitates a high degree of vigilance in maintaining its anti-corruption and bribery policy, as distributors could be deemed the Group's agents and the Group could be held responsible for their actions.

Conducting operations on an international scale also requires close coordination of activities across multiple jurisdictions, time zones and great distances, making communication difficult and requiring the expenditure of material management resources. If the Group fails to coordinate and manage these activities effectively, the Group may not pursue its objectives consistently, and its business, financial condition or results of operations could be materially adversely affected.

27. **The Group could become subject to additional regulation and greater exposure to liability based on the usage of its products.**

With the exception of the LamPORE product, the Group's products are not intended to be used for the diagnosis, treatment or prevention of disease. However, as the Group continues to expand its product line and the applications and uses of its existing products into new fields, certain of its current or future products could become subject to regulation. For example, sales of devices for diagnostic purposes may subject the Group to additional healthcare regulation and enforcement by the applicable government agencies. The resulting regulatory approval processes or clearances may be expensive, time-consuming and uncertain, and the Group's failure to obtain or comply with such approvals and clearances could have an adverse effect on its business, financial condition and results of operations.

With the exception of the LamPORE product, which has a CE mark, the Group's products are either labelled as "For Research Use Only" or "Oxford Nanopore Technologies' products are not intended for use for health assessment or to diagnose, treat, mitigate, cure or prevent any disease or condition." If its products are used, or could be used, for the diagnosis of disease, the regulatory requirements related to marketing, selling and supporting such products could change or be uncertain, even if such use by the Group's customers is without the Group's consent. The Group's products could become subject to government regulation as medical devices by the US Food and Drug Administration or other domestic and international regulatory agencies even if it does not elect to seek regulatory clearance or approval to market its products for diagnostic purposes either as result of changes in regulations or of acts or omissions of the Group's customers or distributors in violation of its terms and conditions, which could increase the Group's costs and impede or delay its commercialisation efforts, thereby materially adversely affecting its business and results of operations. Regulations in China require that a device or procedure which is used for clinical or diagnostic purposes must be registered as a medical device with the National Medical Products Administration (the "**NMPA**"). The NMPA's medical device registration process is a relatively stringent and demanding process, requiring the conduct of new and extensive clinical trials as well as comparative analysis against existing technologies. The NMPA's medical device registration rules impose significant regulatory burdens on foreign medical device manufacturers who intend to import a finished medical device manufactured overseas into the Chinese market. These burdens could encourage the foreign manufacturer to consider instead engaging local manufacturers to register a proposed final medical device in their own name and import key components from the foreign manufacturer for assembly within China into the final device. There can be no assurance that the Group will, if and when it determines to pursue opportunities in the market for clinical and diagnostic devices in China, pursue any particular approach over another. The Group may pursue opportunities in the market for clinical and diagnostic devices in China using entirely different approaches or business models from those that it uses to pursue the equivalent opportunities in other markets or jurisdictions. The Group may, in part due to regulatory restrictions or complications, pursue opportunities in the market for clinical and diagnostic devices in China using a business model that confers advantages to the local manufacturer that the Group may have kept for itself in other markets or jurisdictions, such as control over the selection of which medical devices will be developed, control over the registration of the medical device, ownership of IP in the medical device, and ownership and control of the branding under which the device will be marketed and distributed.

Use of the Group's products in clinical or diagnostic devices or procedures could also expose the Group to greater risk of tort liability. For example, use of the Group's products by its customers as part of *in vitro* diagnostic (IVD) protocols that are ineffective or result in injury could result in products liability/tort litigation, regulatory fines and damage to the Group's reputation. Customers using clinical or diagnostic devices or procedures that involve a Group product could act with negligence, gross negligence or wilful misconduct and thereby cause harm beyond the control of the Group. Affected patients could assert legal claims against these customers, potentially in substantial amounts. In some key jurisdictions, in particular the United States, plaintiffs in these cases have a tendency to include a wide range of parties beyond the users of devices themselves, such as the designer, manufacturer or distributor of the relevant medical devices, as co-defendants to such legal claims. There can be no assurance that the Group or any of its

members will not be named as defendants to a substantial claim related to medical malpractice or tort liability, or that they will not incur substantial cost or liability on such a claim or in defending against it, even in cases where the claim appears to lack merit. Such a claim, and any liability, costs or expenses arising in relation to it, could have a material adverse effect on the Group's business, prospects, results of operations and financial condition.

The Group perceives and intends its products to be disruptive in their respective markets. As such, the use of the Group's products for clinical purposes or as diagnostic devices has the potential to displace existing clinical or diagnostic procedures. Significant competitors of the Group, and their end users, may have made substantial investments in existing clinical or diagnostic procedures and the related devices and infrastructure that would be displaced with the use of the Group's products, such as polymerase chain reaction ("**PCR**") testing, and would stand to lose these investments if the Group's products succeed in displacing the existing procedures. Such competitors and their end users are therefore likely to resist the adoption of the Group's products for clinical purposes or as diagnostic devices. This resistance could take the form of statements which are untrue or only partially true, such as disparaging statements about the accuracy of the data generated by the Group's products. There can be no assurance that the adoption of the Group's products for clinical purposes or as diagnostic devices will succeed in the face of such resistance and competition.

28. **The Group and its distributors rely significantly on third-party logistics service providers, and any significant disruption to, or material increase in the cost of, such services, may disrupt the Group's operations, result in increased costs and adversely affect profitability**

The Group and its distributors rely on a relatively limited number of third-party logistics service providers to deliver a significant proportion of the Group's products to its customers. If these providers or any other provider were to experience a major work stoppage, preventing the Group's products from being delivered on time (or at all), or causing the Group to incur additional transportation and delivery costs that it decides to pass on to customers, the Group's business, reputation, and customer relationships could be adversely affected. To the extent that the Group is unable (or chooses not to) pass on any increased costs to its customers, the Group's profitability and results of operations may be adversely affected.

The performance by these service providers or any other provider that the Group and its distributors may rely on, could also be materially adversely affected, or even fundamentally prevented, by events beyond their control, including wars or other politically-driven events (such as embargoes or blockades), natural disasters (such as typhoons or floods), accidents that may result in the sudden and unexpected unavailability of key logistical facilities (such as the Suez or Panama Canals or important airports), or pandemics. Moreover, certain of the Group's products require maintenance of environmental conditions and have a limited useful life, exacerbating the risk to the Group of an interruption in logistics. To the extent that the Group is unable to (or chooses not to) pass on any of the resulting increased costs to its customers, the Group's profitability and results of operations may be adversely affected.

If the Group were unable to find alternative service providers that provide adequately comparable services on a timely basis or at comparable cost, or make adjustments in its delivery network, its business and profitability could be adversely affected.

29. **The Group's strategic maintenance of high inventory levels requires it to commit substantial working capital, which the Group may find difficult to reduce**

To mitigate the risk that components or raw materials that the Group purchases become unavailable or are found to be defective, the Group typically retains high levels of inventory. This requires the Group to commit substantial working capital, which limits the Group's ability to fund other initiatives, including R&D and capital expenditures. As a consequence of the Group's high inventory levels, any failure by the Group to accurately forecast customer demand and its operating requirements places the Group at a heightened risk of inventory obsolescence, a decline in inventory values, and significant inventory write-downs or write-offs. Certain of the Group's products, such as its flow cells and sample preparation kits have a limited storage life and may therefore be particularly susceptible to inventory write-offs as a result of failures in the Group's inventory management processes.

When introducing new or improved products, the Group also faces risks associated with effectively managing inventory levels to ensure adequate supply. This includes having to project and accurately predict customer requirements and demand, which are inherently uncertain. For example, the Group may strategically enter into non-cancellable commitments with its vendors to purchase components or materials for its products, including new or improved products, in advance of anticipated customer demand, so as to take advantage of favourable pricing, address concerns about the future availability of supplies or

accumulate additional inventory of final products to mitigate the risk of delayed shipments to customers. In particular, the Group has been required to make large orders of ASIC chips to mitigate the risk associated with growing lead times (which may, in certain circumstances, be in excess of one year) and limited sources of supply. Failure to accurately predict customer requirements and demand could result in excess product, component and raw material inventory, which may be significant and which may become obsolete. The costs incurred by the Group in purchasing such inventory, and any write-offs incurred by the Group, could have a material adverse effect on its results of operations and financial condition.

***Risks relating to personal data, environmental, tax and other regulatory matters***

30. **The Group collects, processes, stores, shares, discloses and uses personal information and other data, which subjects it (and may in the future subject it) to various legal obligations related to privacy and security, and the Group's actual or perceived failure to comply with such obligations could harm its business**

In the ordinary course of its business, the Group currently, and in the future is expected to, collect, store, transfer, use or process (including via email, physical transfer and cloud-based services): (a) IP, proprietary business information or other commercial data (including order data as well as telemetry data concerning technical information on sequencing runs performed by customers); (b) certain personally identifiable information in respect of employees and customers (including names and email addresses); and (c) under specific and approved circumstances (such as academic collaborations), Human Genomic Data (as defined below), in each case owned or controlled by the Group and/or other parties, and some of which may be sensitive or proprietary in nature.

The Group is subject to contractual obligations and UK, EU, Chinese and US federal and state laws and regulations imposing obligations on how the Group collects, stores, processes, secures and shares personal information. These obligations may increase over time. As the Group's business grows, it may also increasingly become subject to various other laws and regulations, as well as contractual obligations, relating to data protection, privacy and security in the jurisdictions in which it operates. The regulatory environment related to data protection, privacy and security is extensive, with risk of changing requirements becoming applicable to the Group's business, and enforcement practices are likely to remain uncertain for the foreseeable future. These laws and regulations may be interpreted and applied differently over time and from jurisdiction to jurisdiction, and it is possible that they will be interpreted and applied in ways that may have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

*Human genomic data*

Human genomic data comprises personal data relating to the inherited or acquired genetic characteristics of an individual resulting from an analysis of a biological sample from the individual in question ("**Human Genomic Data**"). While the Directors believe the ability of the Group's products to enable sequencing locally as opposed to in large, centralised sequencing centres, reduces the risk of unauthorised use or disclosure of Human Genomic Data while in transit or stored in centralised databases, there is unavoidable risk arising from compliance with differing data security legislation and regulations regarding the collection, use and transfer of Human Genomic Data.

Under the terms and conditions of sale attaching to the Group's products, any data generated by or through a customer's use of a Group product (whether that product has been sold to or leased by the customer) that constitutes Human Genomic Data is owned and controlled by the customer alone. The Group typically has access solely to (and retains all title in) non-biological information or metadata, comprising information about the product's performance and operating conditions that is used by the Group for the purpose of monitoring and improving the performance of its products and identifying public health trends.

However, customers using the Group's EPI2ME cloud-based service may upload pseudonymised Human Genomic Data generated to a cloud-based platform, which can be used for data analysis and data storage. The customer is responsible for ensuring that such Human Genomic Data is collected with informed consent and is pseudonymised prior to being uploaded. The Group encrypts all data processed or stored using EPI2ME. While only a minority of the Group's customers currently use this service, and while any Human Genomic Data remains at all times owned and controlled by the customer, any breach by the Group's customers of these requirements could lead to adverse consequences, such as complaints by affected persons and/or investigation and action by the Information Commissioner's Office and/or other regulators. Even if the Group were not deemed primarily responsible for such a breach under UK or EU data protection law (on the basis that it is acting only as a processor and has not itself breached the law),

there is a risk that it may be jointly and severally liable to a data subject who has suffered damage as a result of a breach of data protection law by a customer and/or could also suffer adverse publicity and reputational harm. There may also be implications under the data protection laws of other jurisdictions in which the Group operates, including regulatory penalties.

To comply with applicable Chinese laws and regulations governing the handling of human genetic resources and data privacy, including the Biosecurity Law and regulations governing population health information (which prohibit the transfer of information derived from analysis of human genetic samples to recipients who are or are controlled by foreign entities or to destinations outside of China, and which require population health information to be maintained on servers located within China), as well as the Data Security Law, Cybersecurity Law, and the Personal Information Protection Law (which is expected to come into effect on 1 November 2021 and will require the consent of personal information subjects to the transfer of their personal information to third parties and prospectively also to locations outside of China), the Group has posted a copy of its EPI2ME software platform to operate on a collection of servers and services located in China that is hosted by Amazon Web Services' Chinese affiliate and its business partner, Sinnet. The Group is therefore able to operate a separate non-EU EPI2ME platform for domestic upload of data by Chinese customers and will investigate and consider possibilities for extending the licensing of this posting to enable it to offer additional functionalities to Chinese customers. These Chinese regulations may limit the availability of certain data analysis features in China or to certain types of customers in China, and therefore slow adoption of the Group's products in China. Similarly, the availability of high-speed internet in China may further limit the usefulness of certain of the Group's data analysis tools, which may require changes in distribution models.

The Group is also exposed to changes to laws or interpretation of laws regarding collection, use, storage and transfer of Human Genomic Data or non-human biological data that would limit its customers' R&D and/or ability to operate across the world.

*Personal data (other than Human Genomic Data)*

The most sensitive personal data held by the Group is in relation to its employees and includes payroll data, bank data and other personal information (such as home addresses, information pertaining to employees' family members, national insurance/social security numbers, passport numbers and images, and educational and employment history). Such data is loaded into the HCM systems (Oracle) and elements of this dataset are shared with payroll providers. These records may also include special category data including criminal record checks. Personal data held by the Group on its customers (other than Human Genomic Data, discussed above) is considered less sensitive in nature.

The Group is required to comply with strict data protection and privacy legislation in the jurisdictions in which it operates, including: (a) the General Data Protection Regulation in the European Union ("**EU GDPR**"); (b) the EU GDPR as it forms part of retained EU law as defined in the EUWA 2018 ("**UK GDPR**") and the Data Protection Act 2018 ("**DPA**") in the UK; (c) the Data Security Law, Cybersecurity Law and Personal Information Protection Law (expected to come into effect on 1 November 2021) in China; and (d) the Health Insurance Portability and Accountability Act ("**HIPAA**") and various US state laws.

While the Group strives to comply with applicable data protection and privacy laws, its policies and contractual obligations relating to privacy and data protection, determining whether protected information has been handled in compliance with all applicable laws and contractual obligations can require complex factual and legal analyses and may be subject to changing interpretation. In particular, following the ruling of the Court of Justice of the European Union in *Case C-311/18 - Data Protection Commissioner v Facebook Ireland Ltd and Maximillian Schrems* in July 2020, which held the EU-US privacy shield to be invalid, the position in relation to how international transfers of personal data from the EU to the US will be implemented in the future is unclear. The Group continues to review its data protection policies in line with changing guidance on the correct practices for international transfers of personal data from UK and EU supervisory authorities. For example, in June 2021, the European Commission adopted an adequacy decision under the EU GDPR for a period of four years in respect of the UK, allowing the continued free flow of personal data between the EU and the UK following Brexit.

In addition, following Brexit, the data collected and processed by the Group is subject to regulation by a different regulator in the UK than in the EU. Although following the end of the Brexit transition period the UK's data protection laws and regulations have not changed, it is possible that applicable privacy and data protection laws and regulations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another or may conflict with other rules or the Group's practices. That concern is particularly relevant for the EU GDPR, given that different EU member state regulators may differ as to its

interpretation and their approach to enforcement, and for any future EU e-privacy regulation that replaces the existing European Directive 2002/58/EC, which is currently being negotiated.

Following the effective date of the EU GDPR, other jurisdictions, such as the State of California and the Commonwealth of Virginia, have promulgated data privacy regulations. Other states in the United States are considering data privacy legislation (and federal legislation might also emerge), and other countries have adopted, or are considering, data privacy laws. Each set of rules could apply different standards and could impose different obligations, and as a global business the Group would need the resources to comply with all of them.

Regulators may conclude that the Group or its third-party service providers are not fully compliant with their obligations under applicable laws, particularly in respect of data protection and privacy laws that are principles-based in nature and do not contain a series of prescriptive rules. If the Group, or any of its third-party service providers, is unable to effectively implement measures required as a result of new regulations or changes to existing regulations, or ensure compliance by the Group with applicable regulatory requirements (including in relation to privacy and data protection), the Group could be subject to fines, penalties and reputational harm, which could have a material adverse effect on its business, operating results and financial condition. The Group's business, including its ability to operate and expand internationally, may also be adversely affected if legislation or regulations are adopted, interpreted or implemented in a manner that is inconsistent with its current business practices and that require changes to these practices.

Moreover, in line with many organisations, the Group is continually improving and updating its IT systems through upgrades and migrations to meet business and customer needs as well as security challenges. For example, the Group's internally developed manufacturing-developed system, Sawtooth, has undergone significant architecture improvements over the last 18 months to improve resilience and availability. The next tranche of improvements for Sawtooth are aimed at supporting different types of manufacturing processes and complete location independence. The process of migrating the Group's legacy systems could disrupt its ability to process information quickly and in accordance with applicable law and regulations. The Group is also reliant on certain manual processes for collecting and processing data, and any failures in these processes as a result of human error could result in the Group breaching application data protection requirements.

31. **Ethical, legal, privacy, data protection and social concerns or governmental restrictions surrounding the use of genetic information could reduce demand for the Group's technology**

The Group's products may be used to provide genetic information about humans and other living organisms. The information obtained from the Group's products could be used in a variety of applications which may have underlying ethical, legal, privacy, data protection and social concerns, including the genetic engineering or modification of DNA or testing for genetic predisposition for certain medical conditions. Misuse or an overreach regarding collection and use of Human Genomic Data may dampen interest in, and opportunities for, genome sequencing. Negative public reactions to any such misuses or overreaches could give rise to the emergence and development of new ethical frameworks that may impose new concerns on some of the possible uses of the information that can be generated from the Group's products. There can be no assurance that such new concerns will not gain widespread acceptance among relevant or influential communities such as the Group's community of core users or the international scientific community, or that they will not have an adverse effect on interest in genome sequencing and the use of the Group's products. If genome sequencing falls out of favour as an approach for genomic research, the utility and market acceptance of the Group's products could be adversely impacted. Governmental authorities could, for safety, social or other purposes, place limits on or otherwise regulate the use of genetic testing, including in the form of legislative or regulatory restrictions or prohibitions. Such concerns or governmental restrictions could limit the use of the Group's products, and government restrictions may be costly and burdensome to comply with. Actual or perceived violations of any such restrictions may lead to the imposition of substantial fines and penalties, remediation costs, claims and litigation, regulatory investigations and proceedings, and other liability, which could have a material adverse effect on the Group's business, financial condition and results of operations.

32. **The Group's operations involve the use of hazardous materials and failure to comply with relevant environmental, health and safety laws may adversely affect its business, results of operations and financial condition**

The Group's R&D and manufacturing activities involve the use of hazardous materials, including

chemicals, biological materials, solvents and radioisotope materials ("**hazardous materials**"). Accordingly, the Group is subject to laws, regulations and permits relating to environmental, health and safety matters, including, among others, those governing the use, storage, handling, exposure to and disposal of solvents and other hazardous materials and wastes, the health and safety of its employees, and the shipment, labelling, collection, treatment and disposal of non-hazardous and hazardous waste appropriately managed by internal staff and approved waste contractors.

If the Group were found to have failed to handle hazardous materials with care and/or to have violated environmental, health and safety laws and regulations (in respect of past or future activities), as a result of human error (including failure to understand applicable laws and regulations), accident, equipment failure or otherwise, it may be subject to investigations, substantial fines and penalties, remediation costs, property damage and personal injury claims, suspension of production or product sales, loss of permits or a cessation of operations. Any of these events could have a material adverse effect on the Group's business, financial condition, results of operations and prospects.

The Directors expect that the Group's operations will be affected by new environmental, health and safety laws and regulations on an ongoing basis, or more stringent enforcement of existing laws and regulations, which may result in the Group incurring additional costs, and subject the Group to the risk of more stringent consequences associated with violations. The Group may also be required to change the formulation of its products or manufacturing processes, which could have a material adverse effect on the Group's business, financial condition, results of operations or prospects, including as a result of the significant time and costs associated with validating alternative formulations or processes, which may ultimately be unsuccessful. The Directors also believe that certain of the Group's third-party suppliers, such as its suppliers of hazardous materials, are subject to equivalent risks which could materially adversely affect the Group's business, results of operations and financial condition, for example if suppliers pass onto the Group the additional costs they incur to comply with new environmental, health and safety laws and regulations.

33. **Applicable tax laws and regulations, and the cost of compliance with existing or new tax laws and regulations, may adversely affect the Group's business, financial condition and results of operations**

The tax laws of various jurisdictions to which the Group is subject are complex and their application can be subject to diverging and sometimes conflicting interpretations by taxpayers, tax advisers and tax authorities, and judgment is often required in determining the Group's provisions for tax liabilities.

The Group could be subject to audit, enquiry or investigation by, or involved in a dispute with, a tax authority, as a result of which tax authorities may seek to assess additional taxes on the Group and/or impose interest and penalties. Any successful challenge by a tax authority could result in additional tax, interest and/or penalties being payable and could increase the worldwide effective tax rates of the Group.

Additionally, the tax laws, rules or regulations (including their interpretation by relevant authorities) in any jurisdictions where the Group operates, is tax resident or has a taxable presence such as a branch or permanent establishment (or in any other jurisdiction, such as where employees, executives, customers or suppliers are located) are complex and are subject to change. This includes the levels of taxation to which the Group is subject and the tax reliefs from which it benefits.

The Group's future effective tax rates, as well as the tax burden on the Group's revenue, could be adversely affected by changes in rules regarding tax presence in certain jurisdictions, changes in the ability to offset net operating losses against profits, and changes in the ability to capitalise investments.

Any of the risks identified above could adversely affect the business, financial condition, results of operations and prospects of the Group.

In particular, the Group's business and results of operations may be adversely affected by increases in the rate of VAT, business rates or other applicable taxes and tariffs in countries where it does business or countries relevant to its suppliers and/or customers. If the Group is unable to pass on such additional costs to its customers fully, or at all, this may adversely affect the Group's operating margins. However, even if the Group is able to pass on such costs to its customers, this may have a material adverse effect on demand for the Group's products and, therefore, its revenue. The level of VAT, business rates or other applicable tariffs can be changed at very short notice.

The Group expects to benefit from a reduced rate of UK corporation tax in respect of relevant IP income under the UK patent box regime, which is expected to be material to the Group. Any changes to, reduction in benefit or withdrawal of, the UK patent box regime in respect of the Group may adversely affect the

Group's business, financial condition and results of operations.

Changes in corporate tax rates can affect the value of deferred tax assets and deferred tax liabilities, and the value of the Group's deferred tax assets could be affected by the Group's profitability as well as other factors that affect underlying assumptions. As at the end of FY20, the Group recognised a deferred tax asset in the US of £1.4 million, and had an unrecognised deferred tax asset in the UK of £81 million. The deferred tax asset in the UK was not recognised due to uncertainty regarding the timing of future UK taxable profits.

The Group has historically benefited from significant R&D tax credits, amounting to £8.6 million, £9 million and £10.9 million in FY18, FY19 and FY20, respectively. As of 1 January 2021, the Group no longer qualifies for R&D tax relief available to small and medium sized enterprises in the UK due to its headcount, balance sheet and revenue exceeding the eligibility thresholds. However, the Directors expect that the Group will qualify for R&D tax relief available to large companies.

# Part 2. Presentation of Financial and Other Information

## 1. Historical financial information

The Group's financial year runs from 1 January to 31 December.

The Group's consolidated historical financial information included in Sections B and C of Part 8 *(Historical Financial Information)* of this Registration Document (the "**Historical Financial Information**") has been prepared in accordance with the UK Prospectus Regulation and the International Financial Reporting Standards as adopted for use in the European Union ("**IFRS**") and, in the case of the consolidated historical financial information for FY18, FY19 and FY20 included in Section B, has been audited in accordance with the applicable International Standards on Auditing (UK) issued by the Financial Reporting Council ("**ISA**").

The consolidated historical financial information for FY18, FY19 and FY20 is reported on in the accountants' report issued by Deloitte LLP included in Section A of Part 8 *(Historical Financial Information)*, which was prepared in accordance with the Standards for Investment Reporting issued by the Financial Reporting Council. The condensed consolidated financial information for HY20 and HY21, which is included in Section C of Part 8 *(Historical Financial Information)* of this Registration Document has not been audited.

The basis of preparation and significant accounting policies for the Historical Financial Information are set out within Note 3 of Section B and Note 2 of Section C of Part 8 *(Historical Financial Information)*. References in this Registration Document to FY18, FY19 and FY20 are to the financial years ended 31 December 2018, 31 December 2019 and 31 December 2020, respectively, and references to HY20 and HY21 are to the six months ended 30 June 2020 and 30 June 2021, respectively.

The Historical Financial Information was not prepared in accordance with generally accepted accounting principles in the United States ("**US GAAP**") and was not audited in accordance with auditing standards generally accepted in the United States ("**US GAAS**") or auditing standards of the Public Company Accounting Oversight Board (United States) ("**PCAOB**"). There are differences between US GAAP and IFRS as well as differences between ISA and US GAAS / PCAOB auditing standards. As a result, the results of operations and financial condition derived from the Historical Financial Information may differ from the results of operations and financial condition that would be derived from consolidated financial statements prepared in accordance with US GAAP.

The financial information contained in this Registration Document does not amount to statutory accounts within the meaning of section 434(3) of the Companies Act 2006.

## 2. Non-IFRS financial measures

### 2.1 Overview

This Registration Document contains various financial measures and ratios that are not presented in accordance with IAS, IFRS, US GAAP, SEC requirements or any other generally accepted accounting principles and which vary from the measures used by others in the Group's industry, including similarly titled measures used by others (collectively, the "**Non-IFRS Financial Measures**"). Such Non-IFRS Financial Measures include:

- EBITDA; and
- Adjusted EBITDA.

These Non-IFRS Financial Measures are defined in paragraph 3.2 *(Non-IFRS Financial Measures)* of Part 7 *(Operating and Financial Review)*.

The Group includes these Non-IFRS Financial Measures in this Registration Document because the Directors believe that the Non-IFRS Financial Measures provide supplemental measures of performance and profitability, which the Group uses for evaluating its business performance and understanding certain significant items, which contribute to a better understanding of the Group's trading performance. Furthermore, the Directors believe that these Non-IFRS Financial Measures are widely used by certain investors, securities analysts and other interested parties as supplemental measures of performance and profitability.

EBITDA and Adjusted EBITDA are the measures used by management to assess the trading performance of the Group's business. Nonetheless EBITDA and Adjusted EBITDA have limitations as analytical tools, including the following:

- they do not reflect the Group's cash expenditures or future requirements for capital expenditure or contractual commitments;
- they do not reflect changes in, or cash requirements for, the Group's working capital needs;
- they do not reflect interest expense, or the cash requirements necessary to service interest or principal payments, on the Group's debt;
- although depreciation and amortisation are non-cash charges, the assets being depreciated and amortised will often have to be replaced in the future, and EBITDA and Adjusted EBITDA do not reflect any cash requirements for such replacements; and
- they exclude certain tax payments that may represent a reduction in cash available to the Group.

Compliance with SEC requirements could require the Group to make changes to the presentation of this information.

The Directors believe that the presentation of Non-IFRS Financial Measures in this Registration Document complies with the European Securities and Markets Authority ("**ESMA**") Guidelines on Alternative Performance Measures (dated 5 October 2015), and related ESMA Questions and Answers.

There are no generally accepted principles governing the calculation of Non-IFRS Financial Measures and the criteria upon which these measures are based can vary from company to company. Non-IFRS Financial Measures, by themselves, do not provide a sufficient basis to compare the Group's performance with that of other companies and should not be considered in isolation or as alternatives to revenue, profit before tax or cash flow from operating, investing and financing activities, as derived in accordance with IFRS or any other financial or performance measure derived in accordance with IFRS, and should not be considered as being indicative of operating performance or as a measure of the Group's profitability or liquidity. Non-IFRS Financial Measures should be considered only in addition to, and not as a substitute for or superior to, financial information prepared in accordance with IFRS included elsewhere in this Registration Document. Non-IFRS Financial Measures are not intended to be indicative of the Group's future results. Prospective investors are cautioned not to place undue reliance on the Non-IFRS Financial Measures and are advised to review them in conjunction with the Historical Financial Information included elsewhere in this Registration Document.

For a reconciliation of appropriate measures derived in accordance with IFRS to the applicable Non-IFRS Financial Measures, see paragraph 3.2 *(Non-IFRS Financial Measures)* of Part 7 *(Operating and Financial Review)*.

### 2.2 Key performance indicators

In evaluating the Group's results of operations, the Directors refer in parts of this Registration Document to various key performance indicators relating to the performance of the Group's business. Save where indicated, these measures have been extracted from the Group's management reporting systems but have not been audited or reviewed by external auditors, consultants, independent experts or other third parties. In addition to the Group's IFRS results of operations discussed in section 5 *(Results of operations)* of Part 7 *(Operating and Financial Review)*, and the Non-IFRS Financial Measures set out in paragraph 2.1 *(Overview)* of this Part 2 (*Presentation of Financial and Other Information)*, the following key performance indicators are used to evaluate the Group's performance:

- LSRT revenue growth;
- LSRT gross profit margin;
- number of publications; and
- staff attrition rates.

These key performance indicators are defined and set out in paragraph 3.1 *(Key performance indicators)* of Part 7 *(Operating and Financial Review)*.

These measures may not be comparable with similarly titled indicators presented by others in the Group's industry. These measures are not a measurement of performance or liquidity under IFRS and should not be considered in isolation or as a substitute for, or superior to, any IFRS measures of performance included in the Historical Financial Information.

## 3. Exchange rate and currency information

Unless otherwise indicated, all references in this Registration Document to "sterling", "pounds sterling", "GBP", "£" are to the lawful currency of the United Kingdom, references to "US dollars", "dollars", "US$"

or "$" are to the lawful currency of the United States of America, and references to "euro" or "€" are to the currency introduced at the start of the third stage of the European Economic and Monetary Union pursuant to the Treaty establishing the European Community, as amended.

The following tables set out, for the periods set out below, the high, low, average and period end Bloomberg Generic Composite Rate expressed as US dollars per £1.00 and euros per £1.00. The Bloomberg Generic Composite Rate is a "best market" calculation, in which, at any point in time, the bid rate is equal to the highest bid rate of all contributing bank indications and the ask rate is set to the lowest ask rate offered by these banks. The Bloomberg Generic Composite Rate is a mid-value rate between the applied highest bid rate and the lowest ask rate. The average rate for a period means the average of the final Bloomberg Generic Composite Rates on each business day during that period. The rates may differ from the actual rates used in the preparation of the consolidated financial statements and other financial information appearing in this Registration Document. Fluctuations in the exchange rate between the pound sterling, the US dollar and euro, respectively, in the past are not necessarily indicative of fluctuations that may occur in the future. The Company makes no representation that the US dollar and euro amounts referred to below could be or could have been converted into pounds sterling at any particular rate indicated or any other rate. For a discussion of the impact of the exchange rate fluctuations on the Group's results of operations, see Part 7 *(Operating and Financial Review).*

The Bloomberg Generic Composite Rates of US dollar and euro to pounds sterling on the Latest Practicable Date was $1.3837 per £1.00 and €1.1642 per £1.00.

| | US dollars per £1.00 | | | |
|---|---|---|---|---|
| **Full Year** | **High** | **Low** | **Average** | **Period end** |
| 2018 | 1.4339 | 1.2487 | 1.3350 | 1.2754 |
| 2019 | 1.3338 | 1.2033 | 1.2768 | 1.3257 |
| 2020 | 1.3670 | 1.1485 | 1.2840 | 1.3670 |
| 2021 (until the Latest Practicable Date) | 1.4212 | 1.3518 | 1.3866 | 1.3837 |

| | euros per £1.00 | | | |
|---|---|---|---|---|
| **Full Year** | **High** | **Low** | **Average** | **Period end** |
| 2018 | 1.1582 | 1.1009 | 1.1304 | 1.1122 |
| 2019 | 1.1992 | 1.0742 | 1.1406 | 1.1825 |
| 2020 | 1.2046 | 1.0643 | 1.1251 | 1.1185 |
| 2021 (until the Latest Practicable Date) | 1.1814 | 1.1040 | 1.1572 | 1.1642 |

Unless otherwise indicated, all monetary amounts in this Registration Document are expressed in pounds sterling.

## 4. Rounding

Certain numerical figures included in this Registration Document have been rounded. Therefore, discrepancies in tables between totals and the sums of the amounts listed may occur due to such rounding. Percentages in tables have been rounded and accordingly may not add up to 100%. In addition, certain figures set out in this Registration Document reflect calculations based upon the underlying information before rounding and, accordingly, may not conform exactly to the percentages that would be derived if the relevant calculations were based upon the rounded numbers.

## 5. Market and industry data

Unless the source is otherwise stated, the market and industry data in this Registration Document constitute the Directors' estimates, using underlying data from independent third parties. Such data includes market research, consultant surveys, publicly available information, reports of governmental agencies and industry publications and surveys (including publications and data compiled by DeciBio Consulting and Health Advances), as well as discussions with suppliers and other market participants.

DeciBio Consulting, a precision medicine strategy consulting and market intelligence firm whose registered address is 10203 Santa Monica Blvd. #400, Los Angeles, CA 90067, United States, has prepared, at the request of the Company for the purposes of this Registration Document, the information in the DeciBio Report. DeciBio Consulting has no material interest in the Company.

Health Advances, a healthcare industry strategy consulting firm whose registered address is 275 Grove Street, Suite 1-300, Newton, MA 02466, United States, has prepared, at the request of the Company for the purposes of this Registration Document, the information in the Health Advances Report. Health

Advances has no material interest in the Company.

The Company confirms that all third party data contained in this Registration Document has been accurately reproduced and, so far as the Company is aware and able to ascertain from information published by that third party, no facts have been omitted that would render the reproduced information inaccurate or misleading.

Where third party information has been used in this Registration Document, the source of such information has been identified. While industry surveys, publications, consultant surveys and forecasts generally state that the information contained therein has been obtained from sources believed to be reliable, the accuracy and completeness of such information is not guaranteed. The Company has not independently verified any of the data obtained from third party sources (whether identified in this Registration Document by source or used as a basis for the Directors' beliefs and estimates), or any of the assumptions underlying such data.

## 6. Forward-looking statements

This Registration Document includes statements that are, or may be deemed to be, "forward-looking statements". These forward-looking statements involve known and unknown risks and uncertainties, many of which are beyond the Group's control and all of which are based on the Directors' current beliefs and expectations about future events. Forward-looking statements are sometimes identified by the use of forward-looking terminology such as "believes", "expects", "may", "will", "could", "should", "shall", "risk", "intends", "estimates", "aims", "plans", "predicts", "continues", "assumes", "positioned", "anticipates" or "targets" or the negative thereof, other variations thereon or comparable terminology. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this Registration Document and include statements regarding the intentions, beliefs or current expectations of the Directors or the Company concerning, among other things, the future results of operations, financial condition, prospects, growth, strategies and dividend policy of the Group and the industries in which it operates. In particular, the statements under the headings "Risk Factors", "Business and Industry" and "Operating and Financial Review" regarding the Company's strategy, targets and other future events or prospects are forward-looking statements.

These forward-looking statements and other statements contained in this Registration Document regarding matters that are not historical facts involve predictions. No assurance can be given that such future results will be achieved; actual events or results may differ materially as a result of risks and uncertainties facing the Group. Such risks and uncertainties could cause actual results to vary materially from the future results indicated, expressed or implied, in such forward-looking statements.

Such forward-looking statements contained in this Registration Document speak only as of the date of this Registration Document. The Company, the Directors, the Company's advisers, DeciBio Consulting and Health Advances expressly disclaim any obligation or undertaking to update these forward-looking statements contained in this Registration Document to reflect any change in their expectations or any change in events, conditions, or circumstances on which such statements are based unless required to do so by applicable law, the Prospectus Regulation Rules, the Listing Rules, the Market Abuse Regulation or the Disclosure Guidance and Transparency Rules of the FCA, as appropriate.

## Part 3. Directors, Registered Office and Advisers

| | |
|---|---|
| **Directors** | Peter Allen *(Chair)*<br>Dr Gurdial (Gordon) Sanghera *(Chief Executive Officer)*<br>Clive Brown *(Chief Technology Officer)*<br>Timothy Cowper *(Chief Financial Officer)*<br>Dr James (Spike) Willcocks *(Chief Business Development Officer)*<br>Alan Aubrey *(Non-Executive Director)*<br>Wendy Becker *(Non-Executive Director)*<br>Dr Guy Harmelin *(Non-Executive Director)*<br>Adrian Hennah *(Non-Executive Director)*<br>John O'Higgins *(Non-Executive Director)*<br>Sarah Gordon Wild *(Non-Executive Director)* |
| **Company Secretary** | Hannah Coote |
| **Registered office** | Gosling Building<br>Edmund Halley Road<br>Oxford Science Park<br>Oxford OX4 4DQ |
| **Legal advisers to the Company as to English law** | Slaughter and May<br>One Bunhill Row<br>London EC1Y 8YY |
| **Legal advisers to the Company as to US law** | Paul, Weiss, Rifkind, Wharton & Garrison LLP<br>Alder Castle<br>10 Noble Street<br>London EC2V 7JU |
| **Auditors and Reporting Accountants** | Deloitte LLP<br>1 New Street Square<br>London EC4A 3HQ |

# Part 4. Business and Industry

**The Group's long-term vision is to enable the analysis of anything, by anyone, anywhere.**

**Headquartered in the UK, the Group has developed and commercialised a new technology platform, using nanopore-based sensing for the analysis of a range of types of molecules. Its first products are designed to deliver accessible, rapid, data-rich, DNA/RNA analysis and are used in scientific applications including biomedical/cancer research and plant, animal, pathogen and environmental analyses. The Group's innovation capabilities are deployed towards continuous improvement of its current technology, as well as development of the platform for the analysis of other types of molecules, for example, proteins. The Group has customers in more than 100 countries and has established commercial and manufacturing operations to drive and enable its current rapid growth.**

**The Group's approach is to make molecular analysis simpler, faster, dynamic, scalable and more accessible, accompanied by providing more comprehensive, richer biological data. This is designed to provide solutions for a broad range of potential applications in substantial markets, and to deliver a positive impact on society.**

## 1. Overview

The Group was founded in 2005 as a spin-out from the University of Oxford by Dr Gordon Sanghera, Dr Spike Willcocks and Professor Hagan Bayley (currently Professor of Chemical Biology at the University of Oxford). In its foundational years, the Group established collaborations with a number of key academic institutions including Harvard University and the University of California (Santa Cruz). Leveraging these relationships, in-house innovation led by the Group's Chief Technology Officer, Clive Brown, enabled the development and commercialisation in 2015 of the Group's platform technology for molecular sensing using nanometre-scale channels, 'nanopores'. The technology platform is a confluence of novel chemistry, single-molecule biology and state-of-the-art electronics coupled to sophisticated analysis aided by machine learning. The Group has also developed a highly innovative manufacturing process that enables the low-cost, high-volume production of its platform as well as a global-scale commercial infrastructure that reaches customers in more than 100 countries. The Group's approach – to make molecular analysis simpler, faster, dynamic, scalable and more accessible, as well as providing richer biological data than legacy systems – is designed to provide solutions for a broad range of possible applications in markets of substantial potential size, and to deliver a positive impact on society.

Since its foundation, the Group has been continuously improving its technology, and the Directors believe it is highly competitive in the current market, offering high performance and differentiated benefits to customers. The Directors also believe that the time is right to invest to drive ambitious growth. The Group has established substantial operational infrastructure to prepare for such growth, including the opening of a new high-tech UK-based manufacturing facility in mid-2019 and the investment in its commercial, innovation and operational functions. The Directors believe such investments have been a key driver for revenue growth, from £32.5m in FY18, to £52.1m in FY19, and to £113.9m in FY20.

**Platform for the analysis of a range of types of molecules** The Group's nanopore-based sensing platform is a new generation of high-speed bioelectronic technology that enables direct, label-free (i.e. without the need for the chemical addition of a detection molecule), precise sensing of individual molecules. The technology can analyse a range of types of molecules which include larger biological molecules and polymers (such as proteins and polynucleic acids e.g. DNA/RNA) or, smaller biological molecules (such as metabolites). More information on nanopore-based sensing can be found in section 4 *(The Group's platform sensing technology)* below.

**DNA/RNA first** The Group's first products adapt this bioelectronic platform technology to determine the sequence of the biological polymers deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). These nucleic acids are present in every living thing, representing the 'source code' of those organisms, and the expression of that code respectively. Understanding these molecules can help answer critical questions about living (or previously living) organisms, including their identity, whether they are healthy or diseased, the nature of a disease, and if and how they are changing.

**Market** The current DNA/RNA sequencing market is estimated to be worth $5.7 billion, with a compound annual growth rate ("**CAGR**") of 18% between 2020 and 2023 (source: DeciBio Report, 2021 estimate of revenues for devices and consumables to manufacturers, excluding services). This market can be divided into: (a) users who are performing human or biomedical scientific research ($1.2 billion); (b) scientific research on non-human organisms such as plants, pathogens or animals ($0.9 billion); (c) users in clinical

labs performing regulated tests that are used in patient care decisions ($1.6 billion); and (d) molecular diagnostics ($0.4 billion) (source: DeciBio Report, 2020 estimate of revenues for devices and consumables to manufacturers, excluding services). The Group's nanopore-based sensing platform has the potential to expand the DNA/RNA sequencing market to a range of uses (such as in health, agriculture, food and other sectors), where the market opportunity expands to tens of billions of US dollars, including broader opportunities in the applied market and multi-omics (source: Health Advances Report; Allied Market Research Reports). It is the Group's belief that its highly differentiated technology can not only penetrate these markets, but reshape and expand them as well as create entirely new markets.

**Opportunity** Despite recent expansion of the DNA/RNA sequencing market, the traditional devices that have dominated this market for the last decade have been "mainframe-like" in their design and use. These traditional platforms typically rely on complex and expensive chemicals as part of the cyclical labelling reaction known as sequencing by synthesis ("**SBS**"), often coupled with the use of complex and expensive optical systems which collect images at each step of the detection process, that then require subsequent analysis in order to produce sequencing data. As a result of these technological limitations, traditional SBS devices: (a) are typically expensive (from tens of thousands of US dollars to as much as $1 million for an instrument); (b) have a limit on the length of DNA molecule that can be measured; (c) prevent users from analysing sequence data until the end of a run (which could last several days) due to standard workflows; (d) require users to batch samples to achieve cost-effective biological insights for smaller sequencing experiments, creating inefficiencies for labs; and (e) require substantial extraneous infrastructure to scale to high-throughput formats, further increasing set-up costs and ongoing overheads. The Group believes that the cost, complexity and other drawbacks described for SBS sequencing systems has hampered the availability of sequencing to much of the scientific community as well as broader potential users.

**Oxford Nanopore technology, for unmet needs** In contrast, the Group's technology is based on high-speed electronics rather than optics, and performs rapid, direct, label-free, nanopore-based detection of individual molecules without the need for labelling chemistries. In addition, when applied to DNA/RNA analysis, the Group's technology enables the measurement of polynucleic acids of a range of lengths in real time (from short to ultra-long), representing a significant advance over SBS methods that use cyclical chemistries with correlated restrictive range in length of nucleic acid that can be measured. As such, the Group's products provide a unique combination of features that the Group believes are highly differentiated in the market and address unmet needs. These features provide benefits to the customer, including the ability to: (a) stream and analyse data in real time, resulting in faster biological insights and the ability to perform dynamic experiments that can be adjusted in real time; (b) provide richer biological data (e.g. a greater range of genetic variants, more extensive genome coverage, direct detection of nucleobase modifications), which is comprehensive and accurate, when compared to traditional short-read platforms; and (c) scale to both miniature/portable device formats and ultra-high throughput device formats. The Directors believe that the Group's DNA/RNA sequencing technology is highly competitive in the current market and is well-positioned for accelerated commercialisation.

**Differentiated commercial model** The design of the Group's products, combined with its vision for broad deployment, has enabled the Group to establish a highly differentiated commercial model. Customers are offered 'starter packs' of consumables which come with the provision of the device at no extra cost, removing the need to purchase or rent equipment in order to start using the technology. After consuming the initial purchase of consumables, customers may continue to buy DNA/RNA sequencing consumables under a transparent (i.e. publicly available) volume-based discount structure.

The Group's first product was launched with a community-led, peer-to-peer advocated approach where customers could explore the features and benefits of nanopore-based DNA/RNA sequencing; through this process a user community was gradually built with experience of the Group's technology. Over recent years the Group has grown its sales, marketing and support functions that directly commercialise its products to its user community in more than 100 countries whilst maintaining this community-orientated engagement. This is complemented by distributors in certain territories and markets, and the Group has the choice of a range of go-to-market strategies for future growth.

The Group has invested in a sophisticated e-commerce function that supports self-service by customers, as well as offering transparent, volume-stratified pricing structures, to enable and support commercial access for a broad range of scientists. Combined with easy 'plug and play' setup of the technology, this allows the Group to service a broad range of customers with efficient commercial and technology support teams. This contrasts with traditional sequencing technologies whose devices require high levels of capital investment and infrastructure, which is a high barrier to entry and has an impact on requirements for sales and support teams of traditional sequencing technology providers.

The breadth of research applications is important not only for the current markets – largely in scientific

research – but also when considering the applied market and its potential future segments. The Group provides permissive access to its platform under the terms and conditions of sale attaching to its products, which encourages application development in collaboration between the Group and members of the broad user community. The Group is therefore well placed to be able to collaborate with users to maximise the commercial opportunity from broad applicability of its platform in a diverse array of markets and use cases.

**Market approach** The Group first entered the DNA/RNA sequencing market in 2014, with an early version of its technology that offered a novel combination of features not present in other technologies, such as the ability to sequence long fragments of DNA (giving richer biological data and characterising more of the genome), portability (for onsite sequencing in the lab or the field), direct detection of DNA molecules (for richer data including DNA modifications) and real-time data streaming (for rapid insights and dynamic workflows). Released to a broad community in the MinION Access Programme ("**MAP**"), scientists used nanopore-based sequencing in innovative ways that was not possible with other platforms, such as performing on-site oceanic environmental analyses, rapidly understanding outbreaks of salmonella or Ebola, completing bacterial genomes and even DNA sequencing on the International Space Station. Over recent years, the Group has driven substantial improvements in the performance and range of its technology, which has the ability to generate increasingly large volumes of comprehensive, high-accuracy data, at a competitive cost. Alongside the novel benefits previously mentioned, this is also driving the adoption of the technology in more traditional areas of the sequencing market, for example, high-throughput human genomics, pathogen analysis and clinical research.

**Sequencing technology** The Group's nanopore-based sequencing chemistry is integrated into consumable flow cells which include arrays ranging from tens to thousands of electronic sensing channels. The Group initially launched the MinION Flow Cell, which can run up to 512 channels, and has subsequently launched the lower output 126 channel Flongle and the higher output 2,675 channel PromethION Flow Cells. The ability to up-scale and down-scale the number of channels using substantially the same platform provides the Group with the ability to target different customers efficiently.


*The Group's flow cells. Prices vary according to package selected; the price refers to the lowest price per flow cell.*
***See Part 10 (Technical Glossary)*

Users may deploy a range of different devices with these flow cells, which are designed to support any level of sequencing experiment, from go-anywhere, on-demand small analyses to ultra-high output projects, such as human population-scale sequencing. Using modular device formats for on-demand sequencing, the Group's platform offers unique flexibility not present in competing products in the market.


*The Group's sequencing devices. The MinION Mk1C, GridION and PromethION devices incorporate integrated compute. PromethION 2 is in development.*
**See Part 10 (Technical Glossary)*

The Group's product range enables the whole analysis process, from sample preparation to sequence data acquisition and analysis. The DNA/RNA sequencing flow cells are coupled to a range of sample preparation consumable kits and also software to run the devices (MinKNOW) and to perform sequence data analysis (EPI2ME).

**Innovation and continuous improvement** As well as producing a DNA/RNA sequencing platform with a differentiated set of features in the market, the Group has, through its internal R&D programmes, delivered continuous improvement in respect of the more traditional capabilities of data output and platform accuracy. The majority of these improvements are delivered via the consumable flow cells, sequencing

kits, or through software releases, enabling the Group to deliver upgrades to its users rapidly, without the need to provide new devices.

The Group follows a process of making its latest updates available firstly to a small group of 'developer' users who test and help the Group to refine such releases, then secondly to a restricted but broader group of 'early access' users for application of the release across a wide range of user scenarios. This is followed by a formal release to the whole customer community. Following a formal release, the product or feature may be continuously iterated, and more mature products or features will be labelled as 'fully released'. The Directors believe this approach facilitates rapid release of novel devices, upgrades or improvements and provides clarity of expectation for customers, and allows the Group to work closely with the user community in identifying desired product features and improving its products. Continuous improvements have been delivered in:

- **Data output:** The volume of sequencing data that can be produced from a single MinION Flow Cell has increased approximately 100-fold since its first introduction in 2014. This has enabled a broader potential application base for the technology. It has also made the technology highly competitive with traditional technologies on a cost-per-base or cost-per-sample basis, whilst providing richer data, for that cost, to users.
- **Comprehensive, accurate analysis:** The Group's technology provides a broad range of biological insights into DNA/RNA, due to its ability to sequence long fragments of DNA/RNA and to sequence the native DNA/RNA directly. This ability can provide richer biological data compared to traditional SBS products. The accuracy with which an individual strand of DNA/RNA can be determined in a single pass measurement ("**Raw-Read Accuracy**") by the Group's technology has improved from approximately 80% in July 2014 to customers achieving over 99% today, and Raw-Read Accuracy of 99.8% is possible with the latest chemistries that are currently being released.
- **Other improvements and innovations** are anticipated to include the release of new kits or protocols to expand applications, as well as the release of new flow cell device formats to expand the repertoire of user types. In regards to the long-term pipeline, the Group has established programmes designed to deliver substantial step-changes to its platforms in the medium- to long-term (being the next 36-60 months), including a pipeline of new bioelectronic innovations. The Group anticipates these will deliver new generations of MinION/GridION, Flongle and PromethION formats that provide scalability in manufacturing, with the potential to both substantially reduce the cost of sequencing to the Group's customers and increase the Group's margins. In high-output formats, the Group is developing a next generation 'Voltage Chip' which has the potential to provide a pathway to a less than $100 human genome, and the potential to sequence a human genome in a few hours using a single flow cell. The Group has also made significant progress in adapting the DNA/RNA sequencing platform for protein and peptide sensing and sequencing which, if successful, will enable the Group to aggressively enter and compete in the proteomics market.

**Current uses** The Group serves customers in more than 100 countries. Scientists are currently using the Group's DNA/RNA sequencing technology for a range of purposes, including to analyse human, cancer, plant, microbial/pathogen, food or environmental samples. These analyses can be critical to answering important questions and elucidating actionable insights in human health, cancer, infectious disease, crop diversity, food safety, defence and security and/or environment applications. The majority of current customers are using the Group's platform for research purposes and, to date, more than 2,100 scientific publications (including pre-prints) reflect the breadth of its use cases. Additionally, the use of nanopore-based sequencing to gain actionable insights in non-research contexts (i.e. the applied market) is increasing and, over time, the Group expects this part of its business to grow substantially.

**Intellectual property** At the heart of the Group's business and strategy is innovation, as the Group continues to build its technology through extensive internal R&D complemented by external collaborations with 29 academic institutions. The Group's IP portfolio covers key technologies required for nanopore-based sensing and potential future generations of nanopore types and alternate sensing technologies. The Group owns or in-licences more than 2,000 patents and applications including 800 generated internally across more than 260 patent families. The Group's products include technologies covered by multiple patent families and significant technology know-how such that expiration of any particular patent is not anticipated to be material.

**Vision and values** The Group's long-term vision is to enable the analysis of anything, by anyone, anywhere, so that its technology has the greatest possible positive impact on society.

The Group aims to make technology that can be easily used by a wide range of customers, and that is easily distributed in any location or economic environment, with pricing models that seek to achieve

greater inclusivity. Many global challenges today involve the need to understand biology. These challenges include improving human health, ensuring food security and agricultural productivity, and protecting the environment and biodiversity. The Group believes that its technology has a role to play in addressing these global challenges.

The Group also believes that its platform has the potential, in the long term, to enable the "Internet of Living Things". As the technology develops, a large number of autonomous nanopore-based sensing devices could be deployed across surveillance and supply chain networks in sectors such as healthcare, water, agriculture and the environment. These embedded devices could, in real time, provide insights into novel or seasonal viruses, drug-resistant pathogens, water quality, food-borne pathogens or the biodiversity of ecosystems. This "Internet of Living Things" could enable the Group's technology to radically transform the use of biological data in high-impact areas such as improving health, optimising agriculture and supporting biodiversity.

## 2. Key strengths

### 2.1 The Group's technology platform, and products in DNA/RNA sequencing, offer a unique combination of features in the market that meet previously unmet needs

***Advantages of the nanopore-based sensing platform***

The sensing platform that the Group has developed is based on high-speed electronics combined with nanopore sensors; as such it has the advantage of being more scalable and available at a lower cost compared to traditional platforms such as those used by SBS sequencing systems. Through modification of the nanopore sensing mechanisms, the platform has the potential to be adapted for a range of molecular analyses, each with specific advantages.

The Group's products are designed for DNA/RNA sequencing.

***Advantages of nanopore-based DNA/RNA sequencing***

The Group's technology provides a unique combination of features that the Group believes is highly competitive in the life science tools market. In addition, the Group believes that its technology has the ability to reshape how DNA/RNA sequencing is performed, in a way analogous to the transition from landlines to smartphones, or from black and white film photography to digital colour images.

These technology features include the following, and each enables a range of technical benefits to users of sequencing technologies, as detailed below:

#### (A) Fast sequencing, with data available in real time for rapid insights

- High-speed electronic sensors capture data in real time and allow streaming of signals from complete nucleic acid molecules, meaning analysis can occur during the course of the experiment and data is available within minutes of starting a sequencing run, opening up possibilities for very rapid insights.
- The ability to perform real-time analysis unlocks dynamic analysis techniques: 'adaptive sampling' can be used for real-time selection of genomic regions of interest, rather than selecting those regions using complex and time-consuming sample preparation techniques.
- With DNA passing through the nanopore and being sequenced at more than 400 bases per second, an array of 512 nanopores on the MinION Flow Cell can sequence more than 12 million bases a minute at full capacity, and PromethION 48, with up to 2,675 channels per flow cell, can deliver 64 million bases a minute at full capacity. Importantly, the time taken to measure one molecule of DNA/RNA is very short compared to the total time that a flow cell can run for, meaning that time to result directly correlates to the number of nanopores used to analyse a sample.
- Multiple samples can be processed sequentially on a flow cell in a cost-effective manner, meaning that batch-based processing of a large number of samples is no longer needed when using the Group's devices, and nanopore-based sequencing can be designed to be run to 'fit' the experiment of interest.
- In contrast, traditional SBS cluster-based sequencing has a chemistry time of minutes per cycle to measure one base, and scaling of clusters depends on large complex cameras, resulting in fixed run times, with fixed read lengths and fixed outputs that correlate to consumable cost, which can last from several hours to days. Furthermore, the requirement to attach the sample's DNA to a flow cell surface drives the need for customers to batch many samples together in the same flow cell at the same time,

creating complexities in workflow and inefficiencies in large-scale processing.

- Further, standard workflows on traditional SBS technologies require the user to wait until the end of a fixed 'run' to obtain a batch of data for subsequent analysis. If runs last many hours or days, this can mean that the time taken to obtain the insight is longer than may be desired.

(B) **Ability to scale, from miniature and portable device and consumable formats to ultra-high output**

- Nanopore-based sequencing can be miniature, or larger for more power. The Group has designed a product range that is suitable for a broad range of users, reflecting the long-term goal of enabling analysis by anyone, anywhere. In contrast, traditional SBS technologies can be restricted by the requirement to use optical technology in product design, which can include very expensive, large and complicated devices that are typically deployed in capital-rich centralised settings.
- For example, the MinION is the world's only pocket-sized, portable sequencer. It is easy-to-use and low cost at $1,000 for a starter pack. It is suitable for use in the field or the lab, and accessible to scientists in traditional or resource-limited settings. It is also used within laboratories that wish to use their own sequencing technology rather than send samples to a central service provider, or users who wish to run samples on-demand at a lower cost per experiment; this has reshaped how customers use sequencing. The MinION's portability has allowed it to be used in a number of novel environments, including environmental analyses in Antarctica, real-time, near-patient sequencing during brain surgery, in fighting wildlife crime, and on a bus travelling in Brazil to perform Zika surveillance.
- At the larger end of the scale, the PromethION device, while retaining a desktop format, has the ability to deliver terabases of sequence data due to parallelisation of nanopore-based sequencing.

  More information about the Group's products can be found in section 5 (*Oxford Nanopore products*).

(C) **The ability to deliver biologically rich data**

Nanopore-based sequencing enables the provision of biologically rich data; a more comprehensive view of the genome that characterises a broader range of genetic variation than traditional SBS technologies. This is possible due to:

- **The ability to directly sequence a range of lengths of DNA/RNA molecules, from short fragments to ultra-long fragments** millions of bases long. Sequencing long fragments in one read allows the user to gain richer biological data by elucidating larger variants, phasing (the assignment of DNA sequence to maternal or paternal chromosomes) and easier assembly of whole genomes. In contrast, traditional SBS technologies are typically restricted to sequencing short fragments of approximately 150 to 300 bases, which can limit biological insights. This is shown in the diagram below.

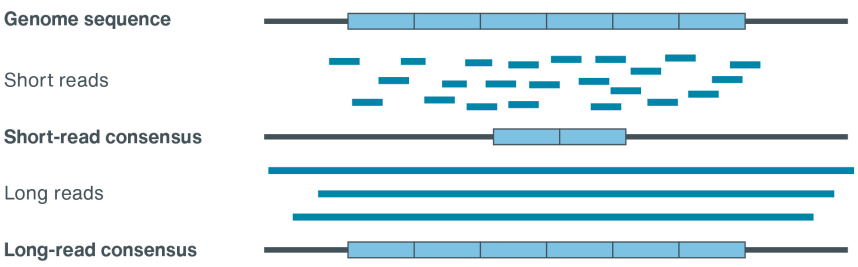



Figure: Long and ultra-long nanopore sequencing reads are more likely to span a structural variant and/or repetitive region (blue boxes), providing much simpler analysis and more accurate and complete genome assemblies.

One SBS-based sequencing technology adopted by one of the Group's competitors can sequence beyond approximately 300 bases to approximately tens of kilobases. In contrast, the longest fragment sequenced using nanopore sequencing is currently more than four million bases.

The cost of nanopore-based DNA/RNA sequencing is not correlated to read length (as a range of molecule lengths can be measured), nor to the time that a sample is measured for, nor to the quality of

an individual base read.

- **Direct analysis of the native DNA/RNA molecule**. This enables analysis of epigenetic modifications (e.g. DNA/RNA methylation) of the target molecule during the experiment. Without the requirement for additional sample preparation, a less biased view of the DNA/RNA is possible. The understanding of epigenetics is key to many aspects of biology, including the understanding of cancer. In contrast, traditional SBS technologies typically require an additional, costly and complex sample preparation step in order to characterise methylation and other nucleotide modifications. This adds potential cost, complexity, errors and time to the overall workflow for users.

  For more information about the scientific insights that nanopore-based sequencing can deliver, please refer to section 12 (*Scientific benefits of the Group's technology*).

### 2.2 The Group's focus on innovation drives competitive products with novel features, in order to gain commercial traction and expand potential markets

The Group's investment in innovation is a core strategy and key strength, and is designed to support the long-term goal of enabling the analysis of anything, by anyone, anywhere. Innovation is embedded throughout the entire product cycle from inception, development, scale-up and the execution of the Group's commercial strategy. The Group invests in innovation to:

- **Drive continuous improvement in the performance, output, accuracy and usability** of its DNA/RNA sequencing technology, with a goal of penetrating existing markets, enabling the reshaping of existing markets and the creation of new markets. For example, the Group has been able to improve Raw-Read Accuracy from around 80% in 2014, to 92% in 2019, and to 99.8% in May 2021 using the latest algorithms and chemistries. The data output that can be achieved by users from a single MinION Flow Cell has increased approximately 100-fold since it was initially introduced in 2014, making the product more cost effective and driving utility in broader applications.
- **Broaden the range of applications** that can be performed with the Group's DNA/RNA sequencing technology, by providing application-specific kits, protocols or analysis pathways to meet user needs.
- **Develop new devices/technologies** that address a broader range of user needs. These include the ability to scale up or down using the Group's novel electronic nanopore array formats, and other innovation programmes.

  Further information on the Group's approach to innovation is detailed in section 8 (*Innovation and the R&D function*).

### 2.3 The Group's manufacturing capabilities have been established to support rapid growth, with a core manufacturing innovation drive

The Group has invested in manufacturing-specific innovation and automation that can ensure that production volumes can be scaled rapidly when required. In 2019, the Group opened the MinION Building in Oxfordshire, UK, a high-tech manufacturing facility designed to scale the Group's production capacity. The MinION Building is designed to enable modular expansion that will allow the Group to ultimately scale flow cell production to almost one million per year – achieving an almost tenfold increase in the Group's capacity since 2016. The manufacturing process has been designed to allow incremental, rapid scale-up, with low capital and personnel cost to match the Group's growth trajectory.

Further information on the Group's manufacturing capabilities is detailed in section 11 *(Manufacturing and distribution)* below.

### 2.4 The Group's differentiated approach to commercialisation is designed to achieve rapid and long-term growth with its innovative products

The Group has developed a highly differentiated commercial model, in order to ensure early adoption of its products in the market, and to build on that by expanding into existing markets and reshaping or expanding those markets.

The Group's pricing strategies are designed to drive accessibility and broad use. Products are designed to allow users to easily access the platform, at low cost. Customers are offered 'starter packs' of consumables which come with the provision of the device at no extra cost, removing the need to purchase or rent equipment in order to start using the technology. After consuming the initial purchase of consumables, customers may continue to buy DNA/RNA sequencing consumables under a transparent (i.e. publicly available) volume-based discount structure. The Group's commercial model is therefore based around a

strategy of driving growth through the increased use of consumables by customers on the Group's devices. This approach is unique and highly differentiated from the existing traditional providers.

As a bioelectronics-based platform, the Group is able to provide differentiated commercial models that allow for:

(A) **The ability to price products in a way that is accessible to a broad range of scientists**

Due to its electronics design, the Group is able to offer low-cost starter packs that can be purchased online and easily shipped to users for their immediate use. This contrasts with more complex processes for traditional SBS technologies.

(B) **The ability to continuously drive performance upgrades with little disruption to the user**

Most of the upgrades the Group delivers are on the flow cells, sample preparation kits, remote upgrades to the devices or data analysis methods. These upgrades, which can be achieved with little disruption to the user, have driven significant improvements in data yields, creating cost efficiencies for users and accuracy enhancements such that when nanopore-based sequencing is used with the latest tools, it offers not only competitive performance when compared to traditional SBS-based technologies, but in many cases richer data that is capable of being analysed more rapidly, and in a more convenient setting or easier workflow.

(C) **The ability to access markets through a choice of routes**

The Group currently commercialises its DNA/RNA sequencing technology to a global user base, using a combination of direct sales and support, e-commerce and digital marketing and support, and relationships with distributors. As the Group evolves, a range of options for commercialisation remain available to drive growth.

Further information on the Group's approach to commercialisation is detailed in section 14 (*The Group's approach to commercialisation*).

2.5 **The Group's people and culture have been established around core values that drive innovation and impact**

The Group has always aimed to recruit the brightest and the best talent across a range of disciplines from R&D to its commercial teams. Focusing on a clearly defined set of core values, the workforce is aligned in the delivery of high-impact technology to the greatest range of users and to the rapid, sustainable growth of the Group.

## 3. The Group's key strategies

The Group deploys an ambitious, long-term growth strategy that combines innovation, manufacturing and commercial operational strategies. These strategies are designed to drive the business by expanding its market share, growing existing markets and by creating entirely new markets – all by offering innovative, differentiated technology and using a differentiated business model.

Since its foundation, the Group has invested in the development of a platform sensing technology that has the potential to be adapted for a range of markets. This strategy was adopted with the view of allowing the Group's technology to have the broadest possible impact in the long term.

The Group uses the following core strategies to address the current LSRT market and prepare for future market opportunities:

- innovation and R&D to create new, differentiated products and to continuously improve their performance and usability. This is described in more detail in section 8 (*Innovation and the R&D function*);
- commercial strategies that are designed to drive uptake and utilisation of the technology, which catalyse change and growth in the market to reflect the technology features that the Group offers but competitors do not. This is described in more detail in section 14 (*The Group's approach to commercialisation*); and
- delivering effective and innovative manufacturing, commercial and operational scale-up that is able to meet increasing demand from users. This is described in more detail in section 11 (*Manufacturing and distribution*).

## 4. The Group's platform sensing technology

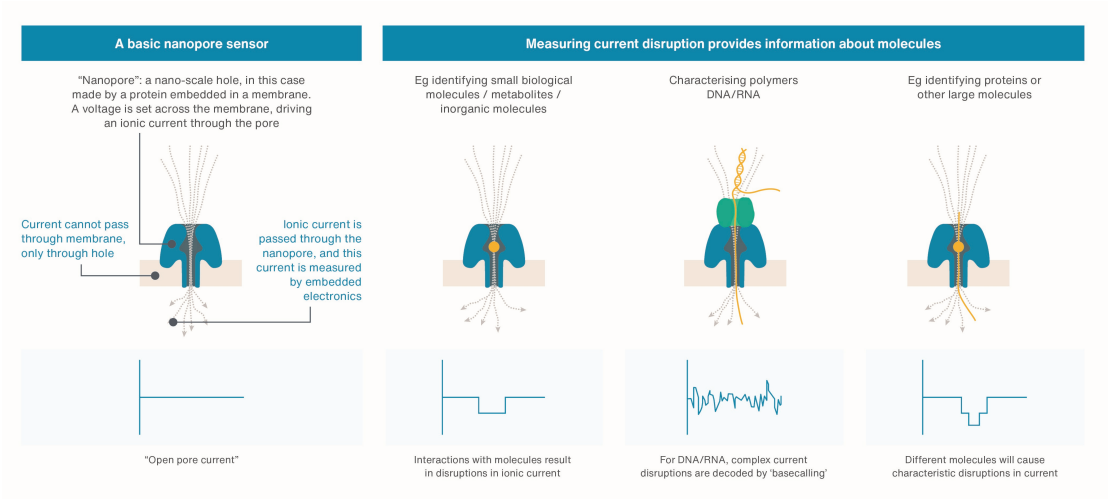
Nanopores are tiny holes, a few nanometres in diameter.

They occur naturally in biology as proteins embedded in cell membranes, providing a channel through the membrane. The Group has exploited the natural characteristics of protein nanopores and coupled them with the latest in high-speed, miniaturised electronics to develop versatile platforms capable of sensing many different types of molecules, including DNA, RNA, proteins and small molecules.

### 4.1 Nanopore-based sensing

Nanopore-based sensing is the detection of a molecule coming into contact with, or transiently blocking, the nanopore. To sense the molecule, the nanopore is set in a membrane so that an ionic current can pass only through the nanopore when a voltage is applied across the membrane. A perturbation in that flow of ions can be measured when the molecule of interest interacts with the nanopore.

A nanopore may be used to identify a target analyte as depicted below.




If an analyte passes through or near the pore, this event creates a characteristic disruption in current. Measurement of that current makes it possible to identify the molecule in question. For example, this system can be used to distinguish between the five standard DNA/RNA bases, and also modified bases. It can also be used to identify peptides, proteins and small molecules.

### 4.2 Nanopore-based DNA/RNA sequencing

For DNA/RNA sequencing, the Group uses a so-called 'strand sequencing' method, in which intact DNA/RNA strands are processed by the nanopores and analysed in real time. The platform provides users with the ability to analyse native molecules without the need for any amplification, thus avoiding the introduction of bias and loss of valuable information, such as nucleotide modifications. The nanopore sequences the DNA/RNA fragments presented to it, enabling the user to generate very long reads in excess of four million bases (4 Mb), enabling, for example, characterisation of complex variants and easier genome assembly.

The speed at which the DNA or RNA moves through the pore is controlled by the inclusion of a motor protein, provided on an adapter, contained in the Group's sample preparation kits. The adapter is attached to the sample, and this is captured by the nanopore that is embedded in the membrane. The motor protein, acting as a ratchet, moves the strand through the nanopore. The speed of the motor can be controlled: the faster it runs, the more data is yielded per nanopore per second.

### 4.3 Technology: Sensor array and custom electronics are built into consumable flow cells or flow cell adapters

The Group has developed proprietary electronics that currently allow as many as 2,675 nanopore sensing processes to be controlled and measured simultaneously in real time on a single flow cell, or 128,400 nanopore sensing processes on a single device (the PromethION 48) running 48 flow cells in parallel.

The key elements are the Group's proprietary electronic sensor array, in which single nanopores are embedded in membranes deposited on microwell structures, and a bespoke ASIC which measures the ionic current flow through individual nanopores in the sensor array chip concurrently, in an individually

addressable manner. The Group continues to innovate to drive increases in data outputs; for example, an R&D programme is currently focused on developing a 'Voltage Chip' that is targeting hundreds of thousands of channels on a single flow cell.

This system of nanopores, membranes, sensor array and ASIC is built into consumable flow cells, of which there are currently three types:

- Flongle Flow Cell: with 126 electronic measuring channels. Note the ASIC for Flongle is built into a Flongle Adapter that plugs into the MinION and GridION devices.
- MinION/GridION Flow Cell: with 512 electronic measuring channels.
- PromethION Flow Cell: with 2,675 electronic measuring channels.

### 4.4 Technology: Devices to run flow cells

As the Group's sensing measurements are based on electronics rather than optics, the Group's technology can be easily scaled to meet the requirements of each experiment, by using smaller or larger devices and taking advantage of designs where users can choose to use a single flow cell or multiple flow cells at the time of their choosing.

The technology has been miniaturised in the portable MinION device as well as the benchtop instruments GridION and PromethION, which allows users to adjust throughput and sample numbers according to need. The full product range is described in section 5 (*Oxford Nanopore products*).

## 5. Oxford Nanopore products

The platform is shipped to users in four key product types. These are: sample preparation kits and devices, flow cells, sequencing devices and software, as described below.

### 5.1 Sample preparation: kits and devices

Users of the Group's technology have extracted DNA/RNA from varied sample types such as plant material, a range of animal and human tissue types including cells, blood and tumours, and environmental samples. They may wish to perform a diverse array of experimental techniques that may include targeted sequencing, whole-genome sequencing, RNA analysis and metagenomics. Additionally, users may need field deployable solutions or high output libraries for production-scale sequencing.

To enable these diverse user needs, the Group sells a wide range of proprietary sample preparation kits. These are predominantly able to support a range of potential experiments; however application-specific kits, such as those designed to sequence SARS-CoV-2 or 16S (a highly conserved gene, the sequence of which supports taxonomic classification of bacteria and archaea), are also available. In the future, bespoke proprietary kits may be developed and commercialised.

The Group's kits are currently categorised into:

- **Native DNA preparation kits:** Ligation Sequencing Kit, designed for highest output with a preparation time of 60 minutes, is compatible with a broad range of upstream workflows. The Rapid Sequencing Kit enables preparation of libraries in 10 minutes and the Ultra-Long DNA Sequencing Kit enables the preparation of long molecules (including megabase-long reads) for nanopore sequencing.
- **Amplification kits:** Including the PCR and Rapid PCR sequencing kits allow for low sample inputs on whole-genome libraries and also support targeted amplification applications.
- **RNA kits:** The Direct RNA Kit enables direct sequencing of RNA molecules preserving nucleotide modifications. The PCR-cDNA Sequencing Kit delivers full-length transcript analysis with high-throughput for expression analysis. The Group also offers Direct cDNA Kits for full-length transcripts.
- **Targeted sequencing kits:** The Cas9 Sequencing Kit enables PCR-free enrichment of long targeted regions preserving base modifications and long-read information. The 16S Barcoding Kit delivers taxonomic classification of bacteria and archaea.

Multiplexing options are also provided by the Group to enable users to run multiple samples simultaneously on one flow cell. Available in sets of 12, 24 or 96, these molecular tags enable a lower price per sample. Multiplexing can be paired with the Wash Kit, which enables the re-use of flow cells after short sequencing runs.

Many life science reagents require shipping at specific temperatures. To avoid this logistic complexity and support broad accessibility, the Group invests in designing chemistry that is robust to ambient

temperatures and freeze-thaw cycles. With the Field Sequencing Kit, this robustness is further enhanced with chemistry that is stable at ambient temperatures for a long time.

Most of the Group's kits are automation-friendly, enabling high-throughput applications. Automation is also a design consideration for any new kits. The Group develops and sells VolTRAX, a USB-powered portable sample preparation device designed to automate the sample preparation process. The Group intends to further develop the functionality of VolTRAX, to offer a greater range of preparation methods at a competitive cost.

All library preparation kits and methods are compatible with all of the Group's flow cells and sequencing devices. They are regularly updated as novel improvements in enzymes and nanopore-based sequencing chemistries are discovered. These improvements can increase output, accuracy, and robustness of the product.

### 5.2 Consumable flow cells

Users prepare their samples using the library preparation kits sold by the Group, and add their prepared sample to the flow cell for sequencing. Flow cells can be operated on the Group's devices, a range of which are available, designed to service a range of user needs, from small on-demand experiments to ultra-high sample throughput projects.

Flow cells contain proprietary nanopores embedded in membranes on an electronic sensor array which is interfaced with systems for data acquisition. These arrays are scaled from hundreds to thousands of channels. Their architecture enables nanopores to be sequencing in parallel and users select the flow cell type according to the data output required.

The Group offers three types of consumable flow cell:

- Flongle: with 126 electronic channels enabling a theoretical maximum output ("**TMO**") (see Part 10 *(Technical Glossary)*) of 2.8 Gb;
- MinION/GridION: with 512 electronic channels enabling a TMO of 50 Gb; and
- PromethION: with 2,675 electronic channels enabling a TMO of 290 Gb, offering the lowest price per base for nanopore-based sequencing.

All flow cells run the same sequencing chemistries and may be considered different size formats of the same platform. Under the terms and conditions of sale attaching to the Group's products, title in the flow cells is not transferred when customers purchase them. Following their use, the Group aims to support a circular economy for MinION/GridION and PromethION Flow Cells by collecting used flow cells from customers and re-processing the sensing electronics so that they can be used again. This contributes to sustainability targets but also supports competitive pricing. Users are provided with flow cell return packs to support maximum returns, and for larger accounts the Group proactively manages the return of flow cells.

The Group provides continuous improvements to its consumable flow cells including novel flow cells, membrane materials and production methods that increase output, accuracy, and robustness. In line with the Group's agile approach to product development and release discussed in section 9 *(Platform development)* below, the Group continuously develops new nanopores, or new iterations of existing generations of nanopores. The introduction of the 'R10' nanopore into early access use in March 2019 is an example of a new nanopore development, while examples of continuous iterations include the 'R10.3' nanopore designed to improve on 'R10' that was fully released in early 2020 and the 'R9.4.1' nanopore that improved on the 'R9'. The Group expects further iterations and improvements on its nanopore technology in the future.

### 5.3 DNA/RNA sequencing devices

The Group offers a range of nanopore-based sequencing devices to run its three flow cell formats. The device range is designed to provide solutions for a broad range of users, who may prefer high-throughput installations or rapid, on-demand, low-cost sequencing set ups. All devices can run the same nanopore-based sequencing chemistries, enabling users to scale their applications according to their needs.


*The Group's sequencing devices. The MinION Mk1C, GridION and PromethION devices incorporate integrated compute. PromethION 2 is in development.*
**See Part 10 (Technical Glossary)*

(A) **MinION**

The MinION is a portable sequencer, available in two formats: the pocket-sized MinION Mk1B, weighing approximately 100g and typically used with a laptop or other computer, and the MinION Mk1C, an all-in-one nanopore-based sequencer with touch screen, GPU, pre-installed operating and analysis software and connectivity for self-contained, portable sequencing. The MinION can run one MinION Flow Cell, with a TMO of 50 Gb per run, or one Flongle Flow Cell via a Flongle adapter.

The MinION is designed to be a sequencer for lab or field use, for researchers to take control of their sequencing experiments. It is designed to be accessible, with a low access cost from $1,000, and can be easily shipped to customers to support their workflows. Given its high TMO, the MinION can be deployed for a broad range of sequencing experiments and is often the starting point for new users.

(B) **GridION**

The GridION is a flexible, self-contained benchtop device capable of running and analysing up to five MinION or Flongle Flow Cells (or combinations of them) at the same time. With a TMO of 250 Gb using MinION Flow Cells, the GridION includes powerful on-board data processing, analysis and storage hardware, minimising additional IT requirements. The GridION is often chosen by customers who have experience using MinION but need a simple way to scale their sequencing due to a requirement for a larger amount of data or samples. The GridION can be used by service providers to provide nanopore-based sequencing as a service to their customers.

(C) **Flongle**

The Flongle is an adapter that can be used in MinION or GridION devices to attach a Flongle Flow Cell. It provides lower cost single-use consumable flow cells that may be chosen for on-demand, lower-throughput single experiments or tests. Designed to provide users with low-cost analyses and with a TMO of 2.8 Gb, the Directors believe that the Flongle is the lowest-priced flow cell on the market of any sequencing technology.

(D) **PromethION 24**

The PromethION 24 is a powerful benchtop nanopore-based sequencer, which can respond to the needs of multiple users on-demand to deliver multi-sample or multi-experiment sequencing to high coverage, utilising on-board GPUs for powerful analyses. It has 24 positions available to run a PromethION Flow Cell. Each of these flow cells enables the generation of large volumes of nanopore-based sequencing data, which combined has a TMO of 7 Tb per run. The device's flexibility, output and sample throughput also makes it ideal for service providers, enabling them to run samples as they arrive without the need to batch.

(E) **PromethION 48**

The PromethION 48 employs all the same benefits as the PromethION 24, but with 48 positions available. It is the most powerful benchtop nanopore-based sequencer in the Group's range, capable of running multiple experiments on-demand to deliver production-scale sequencing. With a TMO of up to 14 Tb if all flow cells are run, the PromethION 48 is typically used for projects where a large number of samples and/ or large genomes are required, for example population-scale human genomic or transcriptome projects.

## 5.4 Software

### (A) 'Run software' for the devices

The Group provides its 'run software', MinKNOW, under an annual licence to users. MinKNOW carries out several core tasks, including data acquisition, real-time analysis and feedback, local basecalling, and data streaming. It also provides device control, including selecting the run parameters, sample identification and tracking, and ensuring that the platform chemistry is performing correctly to run the samples. MinKNOW provides users with a choice of file formats: FAST5 (HDF5) files and/or FASTQ files. FAST5 files contain raw signal data that can be used for re-basecalling should users wish to re-analyse their raw data with improved or different analysis tools, or a variety of other raw signal analyses.

### (B) Basecalling

Basecalling is the process of decoding the raw signal to determine the identity and order of bases on the DNA/RNA molecule. This is performed using sophisticated machine learning algorithms; the Group has continuously improved these algorithms, or 'tools' over the years, contributing to continuous performance improvement. A choice of basecalling tools is available to users, some of which are fully supported and some of which are available to smaller user groups while they are being developed.

The latest basecallers have been shown to produce Raw-Read Accuracy of more than 98% with current nanopore-based sequencing kits, or more than 99% with the latest 'Q20+' sequencing kits that are being released to more customers in 2021. 99.8% single-molecule accuracy is possible using Duplex data, enabled with the latest Q20+ chemistry; this compares to a Raw-Read Accuracy of approximately 92% in 2019, demonstrating the power of updating analysis methods and sequencing chemistries.

### (C) Onward analysis

Onward analysis includes a variety of analyses that may be performed with the sequence data generated by the basecaller. This may include biological analyses, for example, assembly of a genome from individual 'reads', the characterisation of certain genetic variants from that data, or they may be designed to generate a specific insight, for example determining the presence of a certain pathogen or cancer-associated variants.

The user community has developed and released a variety of bioinformatics tools that enable a range of such analyses. Typically, when developed by research scientists and bioinformaticians these tools are released into open access.

The Group also offers software called EPI2ME, and EPI2ME Labs, to users to support their onwards analysis. EPI2ME is a cloud-based data analysis platform, offering easy access to several workflows for end-to-end analysis of nanopore data in real time. An intuitive graphical interface facilitates the interpretation of individual or multiple barcoded samples. EPI2ME Labs is an innovative bioinformatics solution, designed to assist users in developing their skills and confidence in the analysis of their nanopore-based sequencing data. Tutorials included provide best practice examples of how to analyse and explore nanopore-based sequencing data, using both open-source software and the Group's own research tools. EPI2ME Labs is a notebook environment; a notebook is a reproducible document that integrates computer commands, graphical and tabular results, and accompanying text. The Group may charge for certain onward analyses in the future.

**Regulated devices** For those customers who wish to 'lock down' their workflows, the Group offers a 'Q-Line' range of devices, which provides ISO 9001:2015 certified products. Q-Line systems are often chosen by users wishing to run nanopore-based sequencing in more regulated environments, or where certain quality standards must be met.

## 6. Pipeline products

The nanopore platform has immense headroom in scale, price, performance, application and format, enabling access to broader markets or creating new ones. The Group invests in ambitious long-term innovation programmes that are designed to further the adoption and utilisation of the current technology, but also to expand the available opportunities by offering new features to customers.

These programmes are designed to develop ease-of-use, low-cost, portable analysis tools, with the potential to be adopted at scale in a range of configurations from distributed networks to large, centralised infrastructure.

Key sequencing pipeline products currently include the following. R&D programmes may be accelerated or re-directed at any time.

***Short term: Focus on maximising current technologies***

- *Sample preparation*
  - **Novel sample preparation kits:** The Group continues to invest in a pipeline of preparation kits that can enable broader applications of nanopore-based sequencing. For example, the Group intends to mature user/community methods into fully supported protocols that enable the sequencing of single-cell libraries on the Group's devices
  - **Automation:** The Group continues to deploy current sample preparation methods on commercially available automation platforms for large-scale production sequencing and in the applied market.
  - **VolTRAX:** The Group continues to develop an automated sample preparation device that is designed to enable complex library preparation to be run by a broad range of users in a range of environments at small to medium scale.
- *Sensing*
  - **Performance enhancements:**
    - The Group is currently in the process of releasing Q20+ kits and the Duplex method that are designed to enable high single-molecule accuracies (approximately 99.8%) in the field.
    - Upgrades of PromethION 24 and 48 hardware are designed to enable the highest output devices on the market, combined with delivering the highest accuracy nanopore data.
  - **PromethION 2:** The Group is developing a device designed to run up to two PromethION Flow Cells at once, with integrated computing. The Group intends to offer an additional format, P2 solo, without integrated computing, for use with user-supplied computing.
- *Analysis*
  - **Machine learning and artificial intelligence**: The Group is investing heavily in continued method improvements for their algorithms and analysis pipelines to deliver improvements in performance.

***Medium term: Next Generation pipeline programmes***

- *Sample preparation*
  - **Ubik**: The Group is developing a basic consumable device to enable low-cost DNA/RNA extraction and preparation in any environment at low cost.
- *Sensing*
  - **Polymer arrays**: The Group continues to invest in a design and manufacturing innovation programme to enable very low-cost consumables by replacing electronic materials with more cost-efficient polymers. This would, for example, be compatible with the portable MinION Mk1C and is designed to drive broader adoption in more price sensitive industries such as food safety or consumer health.
  - **Peptides and proteins**: The Group is actively developing peptide/protein sensing and sequencing methods that could utilise existing devices and flow cells with novel sensing components.
  - **Next Generation platforms:** Based on novel ASIC programmes, product formats including small formats designed for use with mobile phones (SmidgION) and higher sample-number/low throughput desktop formats (Plongle) are in development in the medium-to-long term pipeline.
- *Analysis*
  - **Algorithm innovation:** The Group intends to continue to investigate ways of using nanopore-based sensing for protein sensing and analysis, and further develop exploration of novel measurements such as nucleobase modifications in RNA.

***Long term: Supporting a vision of enabling the analysis of anything, by anyone, anywhere***

- **Future nanopore-based sensing applications**: Alongside protein sequencing/sensing, nanopores can be deployed for other small molecule detection; possibilities for adapting the platform in this way are currently being explored.

- **VolTRAX-integrated platforms**: Development of nanopore sensors integrated with existing automated sample preparation technology is designed to enable 'walk-away' applications that automate sample to answer workflows. These developments are expected in the medium-to-long term.
- **Voltage Chip**: The Group is developing a new generation of sequencing chip that it believes will dramatically reduce the silicon footprint of nanopore sequencing, towards low-cost miniaturised high-throughput sequencing. The Group is targeting innovations where flow cells would price with a long term goal of a sub-$100 human genome.

Metrichor Limited ("**Metrichor**"), a subsidiary company, established to develop vertically integrated solutions for sample to answer analyses for future consumer or translational applications. The environment being developed will enable the Group, and its partners, to harness the power of real-time data analysis provided by the nanopore technology and couple this with large-scale data projects. The platform is currently being scaled and validated for a variety of use cases.

## 7. The Group's market opportunities

### 7.1 Overview

Nanopore-based sensing may be used to elucidate information about molecules that include: large biological molecules, such as proteins or polynucleic acids (DNA/RNA), or small molecules (small biological molecules that may regulate biological processes, for example metabolites or drugs).

The uses of the Group's DNA/RNA sequencing products can be broadly divided into the research and applied markets. However, there is overlap and interconnectivity between those customers using sequencing for the purposes of research to understand biology, customers using sequencing to develop services or products based on sequencing, and customers developing molecular tests. Hence, the following separate markets are described for guidance purposes only.

#### (A) Sequencing: Global LSRT market

This market consists of users of the technology who are using the platform to understand biology or to develop methods that may ultimately be developed further to be used as routine tests. This market is substantial and currently represents the majority of the Group's customer base. The Group aims to drive growth in customers within the LSRT market and anticipates that it will continue to represent the majority of its customer base and revenue in the near term.

The Group currently considers large-scale human genomics, including population-scale sequencing (the sequencing of large cohorts of human genomes often in national programmes) and genomic epidemiology (the sequencing of pathogens for the purposes of public health) to be part of the global LSRT market. The Directors believe that the Group's DNA/RNA sequencing technology is disruptive and will expand the global market for LSRT.

#### (B) Sequencing: Applied market

The applied market refers to the market where users are performing routine, end-to-end tests or analyses with an actionable outcome. This may include consumer tests, *in vitro* diagnostics, food safety, environmental and water testing or other agricultural analyses. The Directors believe that the customers within this market represent a significant future additional customer base and revenue for the Group in the medium-to-long term and intend to start to expand the Group's offering in the applied market. At present, the Group's sales into this market have primarily consisted of sales of the CE-marked LamPORE test used for the detection of the SARS-CoV-2 virus that causes COVID-19, which has demonstrated equivalence to RT-PCR testing.

The Group has set up a subsidiary company, Oxford Nanopore Diagnostics Limited ("**OND**"), to accelerate the commercial adoption of other tests. As the Group's technology matures, the Group intends to pursue additional substantial opportunities to develop products that address unmet needs in the applied market, which may include healthcare, agriculture, food, industrial or environmental analysis or education.

### 7.2 Global LSRT market

Researchers in government, academic, charitable, private or industrial institutions deploy their funding to run scientific research programmes that investigate the potential role of DNA/RNA in living organisms. In the case of scientific research in industrial settings, the research may be 'translational' – that is, being performed with the specific purpose of moving closer to routine tests in health, food, agriculture or other

situations. In these cases, tests may be developed that are deployed in a research phase before maturing for fuller utilisation.

While a range of tools may be used by biological researchers in their broad life science research, DNA/RNA sequencing is increasingly a method of choice. In 2020, according to the DeciBio Report, an estimated $2.2 billion was spent on sequencing devices and consumables for life science research, and an additional $2 billion was spent on sequencing devices and consumables for clinical analyses that influenced patient care. This overall manufacturers' sequencing market (which excludes service-related revenues) is expected to reach an estimated $5.7 billion in 2021 and grow at a CAGR of 18% between 2020-2023 (source: DeciBio Report).

Beyond DNA/RNA sequencing, there are additional market opportunities for the Group's platform for performing analysis of other molecules. In particular, the Group is developing its platform for the electronic analysis of proteins. The proteomics market is substantial, with an estimated size of $21 billion in 2019 (source: Allied Market Research Proteomics Market Report). The platform may also be potentially adapted for the analysis of small molecules; one estimate of the size of the metabolites and metabolomics market currently stands at $3.3 billion by 2023 (source: Allied Market Research Metabolomics Market Report).

### 7.3 Segments of the global LSRT market

The sequencing market for research purposes may be divided in a number of different ways, which are outlined below. The Group believes that given the performance of its sequencing technology, the novel features that it provides and the expansion of its manufacturing and commercial infrastructure, the Group has a significant value proposition in each segment of the market, with the potential to reshape each segment by making new types of analysis possible, for more users.

#### (A) Segmentation by types of sequencing analysis

Across the segments of the global LSRT market, a range of types of sequencing analyses may be performed in order to answer researchers' biological questions. Each type of analysis may be performed by scientists in a range of communities. The Group's technology supports all these types of sequencing analyses and provides specific benefits when compared against traditional SBS technologies.

An understanding of segmentation by types of sequencing analysis has important commercial utility for the Group as strategies can be designed to support users' abilities to perform these types of sequencing, for example the provision of protocols, training and support, as well as in product and application development.

The range of sequencing analyses performed in the global LSRT market include:

- **Whole-genome sequencing:** which involves sequencing the entire genetic code of an organism, typically to understand broad genetic variation. The ability to sequence native DNA, and to sequence long fragments, means that whole-genome analysis with nanopore sequencing can provide a more comprehensive view of the genome than traditional sequencing technologies. This type of sequencing accounted for approximately $458 million of revenues within the life science research section of the sequencing market in 2020 (source: DecBio Report);
- **Targeted sequencing:** which involves sequencing specific parts of the genome to characterise specific regions of interest, such as cancer-associated genes or other variants associated with disease. Methods such as adaptive sampling (real-time targeting of specific regions of interest) provide the ability to perform targeted sequencing in novel and effective ways. This accounted for approximately $926 million of revenues within the life science research section of the sequencing market in 2020 (source: DecBio Report);
- **Transcriptomics:** which involves sequencing the expression of the genome in the form of RNA, which has traditionally been converted to cDNA (but with nanopore sequencing can be sequenced directly), giving an insight into active cellular functions at a specific point in time. This includes the rapidly growing fields of single-cell transcriptomics and spatial transcriptomics, where the activity of genes are examined at the level of a single cell, or in a process that maps where gene activity is taking place within a tissue. This accounted for approximately $566 million of revenues within the life science research section of the sequencing market in 2020 (source: DecBio Report);
- **Metagenomics:** which involves sequencing to understand the genomic composition of a complex mixed sample, for example the composition of microbial species in a sample, a mixed sample taken from a human source such as sputum, or a mixed environmental sample such as seawater. The real-

time nature of nanopore sequencing combined with the ability to sequence long fragments, means that the Group's technology is very well suited to rapid metagenomic analyses. This accounted for approximately $64 million of revenues within the life science research section of the sequencing market in 2020 (source: DecBio Report); and

- **Epigenetics:** which involves sequencing in order to specifically characterise modifications of standard DNA, which may have specific biological effects especially in cancer. Nanopore-based sequencing can interpret methylation data in real time during sequencing, and unlike other technologies it can perform direct RNA analysis, in doing so capturing RNA modifications directly. This is not broken out as a separate market segment as epigenetic information can be gathered during other types of sequencing experiment. However the Group believes the potential growth of epigenetic analysis may be substantial, as obtaining this information has been difficult with traditional technologies, but is of significant biological importance.

In addition to these broad techniques, there is a range of more detailed biological analyses that can be performed using nanopore sequencing. These investigations include: (a) Assembly; (b) Chromatin Conformation; (c) Fusion Transcripts; (d) Gene Expression; (e) Single-Cell Transcriptomics; (f) Single Nucleotide Variants and Phasing; (g) Species Identification; and (h) Structural Variants. Further detail on each of these investigations is provided in Part 10 *(Technical Glossary).*

(B) **Segmentation by use case**

An alternative way of segmenting the sequencing market is by understanding the purpose for which the user is performing sequencing. This understanding has important commercial utility for the Group as commercial strategies can be designed to address these specific purposes.

(a) **Genomics research: understanding biology**

Scientific researchers may be pursuing a number of goals in their genomics research, including: defining a reference genome (e.g. genome, transcriptome, methylome); comparing genomes, to look for genetic causes of phenotypes, or evolutionary relationships; detecting and identifying organisms, such as those causing a disease; or counting the quantities of specific sequences in a sample (for instance, a set of RNAs which may indicate that a person may have some kind of disease, such as cancer).

(i) **Human biomedical science (including cancer research)**

Researchers in human biomedical science may be using sequencing information to investigate the fundamental structure and function of the genome, or the biology of diseases including cancer, neurological conditions, cardiovascular disease or diabetes and metabolic diseases. Often these research programmes will be tied to wider goals or projects that aim to translate the research into healthcare environments so that the research findings may have a tangible impact on human health.

Such research is undertaken with the view of, among other objectives: improving the fundamental understanding of genomics, to support further scientific exploration; facilitating the discovery of new connections between genetic variants and diseases, within academic projects, biopharma, or in population-scale genomics programmes; characterising more deeply the causality of a genetic contribution to disease in order to identify potential new drug treatments (this could lead to developing analysis methods that, if developed into diagnostic tests, could support better health outcomes through more precise treatment strategies or better prognosis of a condition); and/or helping scientists to understand whether some sub-populations of patients may respond better to, or experience fewer side effects from, a new therapeutic, through the increased integration into clinical trials of the sequencing of individual patients, or in the case of cancer, of tumour tissue or blood cancer specimens.

(ii) **Plant or animal genomes**

Researchers use sequence data to develop a greater understanding of plant or animal genomes. This may have a goal of improving crop, plant or livestock efficiency, managing biodiversity or contributing to human biomedical science.

(iii) **Pathogen (harmful bacteria, fungi or viruses) genomes**

Researchers use sequence data to develop a greater understanding of pathogen genomes,

with a goal of understanding the identity, evolution, drug resistance properties and transmission of pathogens in humans, animals, and also plants/crops.

(iv) **Environmental genomics**

Researchers use sequence data to develop a greater understanding of biodiversity or how the microbiological composition (microbiome) of water, soil or ice may be changing, or to understand the impact of climate change.

For more information on the Group's value propositions in these areas, and examples of customer use, please see section 13 (*Benefits of the Group's technology in specific markets, and examples of those use cases*).

(b) **High-throughput human genomics (including population genomics)**

Across the world, research programmes are sequencing cohorts of human genomes in order to understand the genetic causes of certain diseases, with the onward goal of improving their management. Programmes may sequence tens, hundreds or thousands of genomes to seek this information. In addition, many governments are setting up programmes to understand the genomics of their populations at large-scale. Typically these programmes are established with a view to integrating these discoveries and the establishment of improved genomics infrastructure to improve health outcomes of those populations.

An analysis in 2019 estimated that over 60 million patients would be sequenced in the five year period from 2019 – and found that since 2013, over $4 billion had been committed by governments to various national genomics programmes.[1] These estimates do not include China or the UAE, where substantial programmes also exist.

Generally, high-throughput human genome programmes start with a period of genomic discovery through large-scale sequencing of samples from that population, sometimes through sourcing samples through collaborations with the medical research community, charitable or advocacy groups, or in the case of population genomics, as part of broader biobank programmes. These programmes drive the need for sequence data, but they also support the ongoing development of countries' ecosystems to be able to integrate genomic data into potential future management of patient care.

For more information on the Group's value propositions in these areas, and examples of customer use, please see section 13 (*Benefits of the Group's technology in specific markets, and examples of those use cases*).

(c) **Public health and genomic epidemiology**

Sequencing can be used to understand the identity of pathogens, their transmission, whether they are resistant to certain antimicrobial drugs, and how those pathogens are changing. While this use of sequencing has gained greater prominence during the COVID-19 pandemic, these techniques have been used by scientists and public health teams for many years across a range of viral, bacterial and fungal pathogens. Genomic epidemiology is considered an effective practice in the potential future surveillance of potential pathogens including for drug-resistant infections.

During the COVID-19 pandemic, governments developed genomic surveillance networks as an emergency response, but are increasingly seeking to establish longer-term capacity in this area. The global risks associated with dense populations and zoonotic disease – where pathogens 'jump species' as in avian or swine flu – remain very real. In addition, there is a rising threat of anti-microbial resistance ("**AMR**") in many pathogens as a result of over-prescription of AMR medicines in both humans and animals. The 2014 O'Neill Report[2] noted that AMR has the potential to kill more people than cancer by 2050 if not controlled. The scientific and public health community has noted that there is a need to deploy genomic techniques to understand and control the spread of drug resistance in pathogens, and develop appropriate counterstrategies.

The relationship between public health – considered by the Group to be categorised as 'research' – and more clinical infectious disease applications are close, including potential similarities and overlap in use cases that would benefit from sequencing pathogens in hospital-acquired infectious and communicable disease.

For more information on the Group's value propositions in these areas, and examples of customer

[1] Stark, Z. et al., Integrating Genomics into Healthcare: A Global Responsibility, *PubMed Central*, 2019, 104(1), 13 – 20.

[2] Review on Antimicrobial Resistance chaired by Jim O'Neill and supported by the Wellcome Trust and the UK Government, "Antimicrobial Resistance:

use, please see section 13 (*Benefits of the Group's technology in specific markets, and examples of those use cases*).

(d) **Clinical and translational research (clinical genomics)**

Researchers in clinical laboratories may develop sequencing-based assays (tests) where the data has implications on patient care.

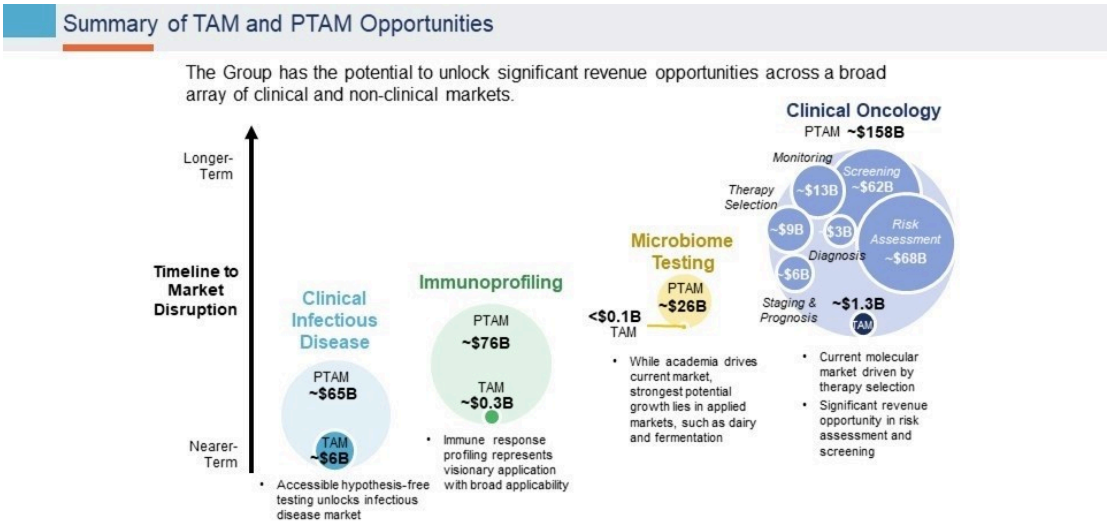
This is dependent on the regulatory structures and requirements of each particular jurisdiction; in many countries an assay can be performed on a research platform and specific regulations apply to the laboratories who create and offer these services.

For more information on the Group's value propositions in these areas, and examples of customer use, please see section 13 (*Benefits of the Group's technology in specific markets, and examples of those use cases*).

## 7.4 Applied market

While life science researchers will typically share their findings with their peers in the research community by publishing manuscripts or datasets, there are many applications for which sequencing data can, or may potentially in the future, be used to generate an actionable insight. The Group defines this as the applied market. Regulation of products in the applied market varies according to local legislation and field of application; however, multiple routes to market are available for deployment of nanopore-based sequencing for use in either clinical or non-clinical applied market settings.

An analysis by Health Advances explored the existing penetration of molecular methods and the broader opportunities for applied market testing in four specific applied market scenarios. The diagram below shows the total addressable market ("**TAM**") – the current estimated spend on molecular methods in this area – and the potential total addressable market ("**PTAM**") should all testing opportunities be addressed by a molecular method such as sequencing (source: Health Advances Report). It is the Group's thesis that a fast, accessible, near-sample technology such as nanopore-based sequencing has the potential to address unmet needs in these markets and therefore to expand and create new markets.




Note: Clinical infectious disease includes targeted molecular diagnostics and metagenomics testing. Immunoprofiling includes HLA typing for transplant, HLA typing for non-transplant applications, and immune response profiling. Microbiome testing includes human-associated microbiome test in biomedical research and direct-to-consumer testing as well as applied markets such as soil, dairy, and fermentation. Clinical oncology includes testing across the diagnostic continuum, from risk assessment to therapy selection and monitoring across all solid tumor and hematological indications, including liquid biopsy and solid tissue sample types. Microbiome reflects global market.

Source: Health Advances model and analysis, extracted from and subject to the terms of the Health Advances Report, which should be read in its entirety.

In many cases sequencing data for an applied use may be performed in a regulated environment, or may be a test that in itself is regulated by appropriate health or food authorities.

While the majority of the Group's customers are from the life science research communities, a small number of customers use nanopore-based sequencing for applied market testing. The Directors believe that the applied market represents substantial potential future opportunities. These applications often require a more significant resource commitment to bring to market and the Group is currently in the process of building teams to address this market, for example the establishment of a subsidiary company, OND.

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Tackling a Crisis for the Health and Wealth of Nations", December 2014.

**Potential segments of the broad applied market may include:**

- **Healthcare-related applications:** sequence data can provide information about the nature of a disease, and this information can be used to understand the disease and influence the treatment pathway. Sequence data may then be incorporated into diagnostic products across many areas of healthcare including oncology, infectious disease, immunology, reproductive health, microbiome and rare disease management;
- **Agriculture and farming:** sequence data can provide analyses that drive decisions in areas including livestock management/animal husbandry, crop management and productivity, and in aquaculture. This may include information about crop yields or responses to environment, or it may be other areas of management, for example, examining the marine microbiome in order to manage fish or seafood stocks;
- **Food safety and provenance:** sequence data can provide information to ensure that food processing and production systems are not contaminated with food-borne pathogens, and that ingredients are authentic;
- **Water:** sequence data can provide information to understand the microbial composition of wastewater during treatment, ensuring the safety of water for human consumption and monitoring of environmental water quality and composition;
- **Supply chain surveillance:** sequence data can provide distributed analyses across a supply chain that effectively allows for the real-time, end-to-end biological surveillance of that system – this may include food, water, environment or public health, which overlaps with the categories above;
- **Consumer genomics:** sequencing is already used in ancestry, pet and other consumer applications; this is generally a nascent set of markets relying on users to send samples to centralised laboratories. Many broad opportunities may exist for market expansion with a rapid, low-cost sequencing technology;
- **Microbiome:** sequencing can be used as a tool to characterise or survey soil, water, fermentation, bioprocessing or health-related microbiomes in the mouth, skin or gastrointestinal tract; and
- **Education:** sequencing in undergraduate or high school environments can be used as a tool to teach biology, data analysis and experimental design.

## 8. Innovation and the R&D function

The Group's R&D function operates both independently and in collaboration with external academic institutions. In-house research teams are complemented by active collaborations and IP licensing arrangements with 29 academic institutions. Between the Group's foundation in 2005 and 2008, the Group established a range of exclusive licensing agreements and collaborations with the world's leading researchers in nanopore sensing, including Harvard University and the University of California (Santa Cruz). To date, the Group has expanded its agreements and collaborations to also include Boston University, Brown University, Cambridge University, Illinois University, Stanford University, Texas A&M University, VIB and Vrije Universiteit Brussel, KU Leuven, University College London, University of Michigan, University of Massachusetts and The Ohio State University.

These external research collaborations cover a range of topics on nanopore-based sensing, from projects including the development of novel types of nanopore, methods to use nanopores for protein analysis, and the development of solid-state nanopores including graphene.

The technology platform facilitates the design of disruptive products and furthers the Group's ambitious vision of enabling the analysis of anything, by anyone, anywhere. Internally, the R&D teams work on fundamental research for novel sensing applications, membrane chemistry, sequencing chemistry, nanopores, enzymes, algorithms, software electronics and arrays to deliver future platforms and improvements on current products. The interdisciplinary nature of the platform lends itself to making use of industry breakthroughs such as machine learning, computing or protein engineering which can be rapidly implemented to deliver performance enhancements. Products are continually improved through sustained innovation by implementing incremental improvements or adding features requested by the user community. The Group's innovation engine extends from fundamental research into manufacturing and process development where methods are devised and developed to manufacture this novel technology at scale.

As at 30 June 2021, the Group's R&D team comprised 172 full and part time employees including those focused on the continued development of nanopores, chemistries, ASICs, devices, kits, processes and complementary software tools with a range of expertise covering membrane proteins, molecular biology,

chemistry, physical sciences, analogue and digital electronic design, medical device engineering, computer science, data science, bioinformatics and machine learning.

## 9. Platform development

The Group adopts an agile approach to product development and release. This approach, pioneered by the software industry, is based on an iterative development methodology whereby a product is released and iterated in field through cycles of incremental improvements based on continuous engagement with users. This is in contrast to the traditional 'waterfall' approach which is sequential, whereby product specifications are established early in the design phase, leaving limited capability to adapt to the changing market and user needs. The Group believes that adopting an agile approach leads to more user-focused products and faster time to market.

### *Modular product design*

The Group has created a modular product, enabling different aspects of the platform to be worked on in parallel and resulting in accelerated performance improvements. Taking the example of the flow cell, which contains the nanopore, the nanopore can be enhanced by the nanopore team and shipped as an upgraded flow cell. In the meantime, the motor protein, contained in the sample preparation kit, can be improved by the chemistry team, and shipped as a subsequent improvement. Areas such as nanopores, enzymes, sequencing chemistry, sequencing software, device firmware, algorithms and bioinformatics are all worked on in parallel and brought together by the development team before launch.

### *Commercialisation and the in-life phases*

To succeed in the long term, the Group believes it is of utmost importance to retain the ability to deploy novel breakthroughs into the field. With the rapid expansion of users and partners, there are those who need products that have a steadier upgrade cadence alongside those who want the latest from the Group. To facilitate this, the Group uses a categorisation system to describe the release stage of products or specific upgrades. This includes the practice of releasing trials of new innovations to a small group of developers to confirm functionality and explore early use cases. Innovations can also be released to a broader group of 'early access' users. Following the establishment of appropriate commercial and manufacturing processes, innovations are put into a 'released' phase where iterations can still be expected but are more controlled. The most mature products are considered 'fully released'. These processes enable the Group to accelerate release of upgrades or new products while also managing customer expectations. For example, the latest Q20+ kits have been used by the developer group, and are now in the process of release to early access users.

## 10. Intellectual property

The Group invests in building and protecting its IP portfolio, consisting of patents, trademarks, registered designs, trade secrets and copyright.

To complement the Group's internally developed IP, the Group has fostered long-standing links with a number of leading academic institutions worldwide. The Group's products and business are materially dependent on a number of in-licensed patents spanning a range of nanopore and other patent fields from such research collaborators, including Harvard University, the University of California (Santa Cruz), McMaster University, the Vlaams Instituut voor Biotechnologie, and Xbrane Biopharma. The Group typically seeks to obtain licences of any IP developed through such collaborations on exclusive, worldwide licensing terms.

The Group has a broad patent portfolio of owned and in-licensed patents comprising more than 2,000 issued patents and patent applications, across more than 260 patent families. These cover all aspects of nanopore sensing including fundamental patents for nanopore sensing, and patents relating to DNA sequencing.

The Group has also developed a bioelectronics-based platform technology that has the potential to be adapted for the analysis of other molecules as well as DNA/RNA. The Group's IP portfolio therefore reflects the broad range of expertise and active R&D projects that are in progress in the Group and supported research within the laboratories of its academic collaborators.

The Group's products incorporate innovations in biology, chemistry and computer science, among other disciplines, and the Group's patent portfolio therefore covers a diverse array of technical fields, establishing a strong commercial advantage for the Group. The Group believes the expiration of any particular patent within its portfolio is not material to its operations. Some of the Group's earliest in-licensed foundational

patents are now expiring, but none of these disclose the working products. Some of the key technology fields covered by the Group's patent portfolio, together with the numbers of patent families that the Group owns for each field, are as follows:

- Sample Preparation & Tethering (46 patent families);
- Nanopores & Molecular Motors (65 patent families);
- Engineering & Circuit Designs (18 patent families);
- Chip and Arrays of Nanopores (8 patent families); and
- Informatics and Applications (38 patent families).

This diverse array of IP protection represents a high barrier to entry to potential competitors due to the difficulty of developing competitive technologies across the range of technical fields incorporated in the Group's products and IP estate. The Group operates in a litigious industry and third parties have asserted in the past that the Group's products and technologies infringe such third party's IP rights that they have obtained or may in the future obtain. The Group's IP strategy includes robust surveillance of third-party patent filings and disclosures in the fields in which the Group operates. The Group has therefore been involved in litigation concerning certain patents in the past and has been successful in defending its patent portfolio against actions by competitors seeking to stymie market adoption of the Group's products, including in respect of the following:

- The Group was subject to an investigation by the US International Trade Commission ("**US ITC**") in 2016 at the behest of PacBio, one of the Group's competitors, who alleged that the Group's importation of its nanopore-sequencing products infringed certain of PacBio's patents. In February 2019, the US Court of Appeals for the Federal Circuit affirmed the US ITC's decision that the PacBio patents had not been infringed.
- An action brought by PacBio in 2017 in the US District Court for the District of Delaware alleging that the Group infringed four of PacBio's US patents relating to nanopore sequencing technology. In March 2020, a jury at first instance found in favour of the Group and invalidated all four patents asserted by PacBio, but found that three of the patents would have been infringed had they been valid. Following the verdict, PacBio moved the District Court for judgments as a matter of law overturning the jury's invalidity findings. In July 2020, the District Court denied all of PacBio's motions and entered a final verdict in August 2020. PacBio subsequently filed an appeal in respect of the invalidity of two of the patents. In May 2021, the US Court of Appeals for the Federal Circuit unanimously affirmed the lower court ruling of the invalidity of these two patents, on the basis of lack of enablement and in June 2021 the same court issued a formal mandate, effectively ending the appeal proceedings. PacBio's window for filing a petition for a writ of certiorari to the US Supreme Court closes on 8 October 2021; however, the Group believes such a writ would be unusual and even less likely to be granted in this instance. The decision of the US Court of Appeals for the Federal Circuit was unanimous, no petition for rehearing was filed and there is no divergence in the law among the circuits.
- Actions brought by PacBio in the UK and Germany in 2017 alleging that the Group's use of certain sequencing technology infringed certain of PacBio's patents. These actions were settled on terms that do not restrict the Group's current or planned activities and do not require any payments to PacBio.
- The Group is a licensee of certain patents owned by the Regents of the University of California ("**UC Regents**") relating to nanopore sequencing technology. A researcher involved in the development of these patents subsequently co-founded Genia Technologies, Inc. (later purchased by F. Hoffmann-La Roche AG ("**Roche**")) and filed a series of patent applications directed to the same technology as that licensed to the Group by UC Regents. UC Regents filed an action in respect of Roche and the researcher's activities, which ultimately resulted in a favourable settlement for the Group and UC Regents in June 2018.
- The Group was subject to an investigation by the US ITC in 2016 at the behest of Illumina, alleging that the Group's importation of various nanopore sequencing products infringed a patent owned by Illumina. The Group defended the claim on the grounds that the Illumina patent was invalid. The Group also concurrently developed and migrated to an alternative technology that provided superior performance to the technology challenged by Illumina. As a result, and after a claim construction finding in the Group's favour, a favourable settlement was reached with Illumina and the investigation was terminated. A parallel action in the US District Court was dismissed.

The Group generally prosecutes patents in the US, in countries party to the European Patent Organisation, and in China. Some patents are also prosecuted in other jurisdictions, such as South Korea, Japan,

Australia, Canada, India, Singapore and Brazil.

In addition to patent filings, the Group also relies on trade secrets where appropriate to protect its investment in know-how. The Group employs policies and training relating to confidentiality, publication and public disclosure considerations to protect such trade secrets, and enters into non-disclosure and confidentiality agreements to mitigate the chance of trade secret misappropriation.

The Group's IP portfolio also includes almost 900 trademarks, trademark applications and registered designs that protect the Group's current and future product pipeline.

## 11. Manufacturing and distribution

The Group's technology transfer ("**TT**") function is responsible for taking new products (or iterations of existing products) developed by the Group's R&D function (see section 8 *(Innovation and the R&D function)* above) and developing and overseeing their high-volume manufacture without material disruption. The Group's TT function comprises a core team of experienced technical experts who focus on developing and stabilising large-scale processes, bills of materials and operating procedures. Once a product is deemed to be sufficiently developed and stable by the Group's TT function, the product proceeds to manufacturing.

The Group manufactures three main categories of physical products, being (a) the sequencing devices, (b) the sequencing components: flow cells, and (c) the sample preparation consumables: kits. Manufacturing involves a combination of sourcing components from third-party suppliers as well as in-house manufacturing and assembly. In general, the Group's approach to manufacturing is to maintain close control over, and internally manufacture or assemble, the key components of its products. Where third-party suppliers are engaged, the Group maintains close control through supply chain management that involves a risk-based approach utilising the Kraljic Matrix to categorise suppliers. Those suppliers identified by the Group as key are closely monitored throughout their relationship with the Group, from on-boarding through to ongoing performance monitoring and annual re-evaluation.

Having started commercial activities in 2015, the Group has a long-term, innovation-driven approach towards scale-up, across both its manufacturing and commercial operations. The Group intends to ensure that its ability to manufacture high-quality products grows in concert with increasing commercial demand for its products. For example, the Group has seen significant growth in its flow cell production capacity, which has been driven by improvements in the Group's manufacturing processes (e.g. increased automation) as well as the Group's investment in its manufacturing infrastructure, such as the MinION Building, which became operational in 2019. The MinION Building, an approximately 30,000 square foot manufacturing facility, is designed to enable modular expansion that will allow the Group to ultimately scale flow cell production to almost one million per year – achieving an almost tenfold increase in the Group's capacity since 2016.

The Group has been developing its distribution and logistics operations over recent years and now provides onwards global distribution from four international distribution hubs. The Group works with various distributors to support its commercial activities in certain countries and regions including China, Japan, Russia, Turkey, India, South Korea and parts of Africa. The Directors may, in future, increase the Group's sales distribution channels to expand its commercial footprint.

## 12. Scientific benefits of the Group's technology

The Group's competitors include those offering sequencing technology based on SBS methods, including from Illumina, BGI Group, Ion Torrent (from Thermo Fisher Scientific) and PacBio, all of which require the complexity of synthesis as part of their sequencing process. These are restricted to sequencing shorter fragments of DNA/RNA, apart from PacBio, which can sequence longer fragments. In contrast, the Group's technology sequences the native strand of DNA/RNA directly, enabling the delivery of rich biological data such as epigenetics, and can sequence fragments from short to ultra-long.

### 12.1 Nanopore-based sequencing

The Group's DNA/RNA sequencing technology has several features that distinguish it and provide scientific benefits over other sequencing technologies. These include:

- the ability to sequence the DNA/RNA strands from the organism of interest directly, rather than analysing the products of a synthesis reaction;
- the ability to sequence a range of lengths of DNA/RNA molecule, from short fragments to ultra-long fragments; and

- the ability to analyse data in real time.

These features of the technology translate into tangible advantages for the biological projects that scientists undertake. As outlined in section 7.3 (*Segments of the global LSRT market*), the main techniques that scientists deploy sequencing technology for are whole-genome sequencing, targeted sequencing, RNA analysis, metagenomics, and epigenetic analysis.

To illustrate the technology benefits using the example of whole-genome sequencing (for humans or other organisms), the scientific goals for generating a whole-genome sequence could include: completeness, contiguity, accuracy of analysis of a range of genetic variants and include additional information, such as methylation. Nanopore-based sequencing can address these challenges.

(A) **Completeness:** Mark Ebbert et al. (2019)[3] showed that when compared to other publicly available whole-genome datasets, nanopore-based sequencing was able to access and analyse far more of the genome than the other technologies investigated, due to the combination of direct sequencing and longer reads that is possible with nanopore-based sequencing.

It is believed that approximately 8% of the genome is hard to access with SBS technology, potentially missing areas of biological significance. In contrast, nanopore-based sequencing has been used to provide the first near-complete human genome sequence.

(B) **Contiguity:** assembling a human genome helps to identify structural and functional elements within that genome, and the more correctly the genome is joined together, the more useful it can be to scientists. The ability to sequence longer fragments improves contiguity; assembly of short-read datasets is computationally difficult and tends to result in fragmented assemblies, with gaps and errors.

For example, in the paper where the short-read assembly tool AllPaths was first described,[4] an assembly was obtained with an N50 of 24,000 bases using a traditional short-read SBS technology. N50 is a standard measure of contiguity and means that about half of the nucleotides are assembled into pieces greater than 24,000 bases long, and half are assembled into pieces shorter than 24,000 bases long. Given that a human genome is more than 3 billion bases in length, the short-read assembly still consists of many thousands of fragments. To obtain highly contiguous assemblies using short reads it is typically necessary to supplement the sequence data with other types of information, which adds to the expense and time taken. Because of this, researchers often settle for lower-quality assemblies, which are less useful.

Nanopore reads tens of kilobases long can be sequenced routinely, but the technology can also sequence 'ultra-long' fragments, as long as many megabases. This means that, even before assembly, nanopore reads can be more contiguous, or joined up, than short reads are after assembly. After assembly, the Group has recently shown that nanopore-only assemblies can produce assembly N50s of greater than 140 Mb, that is, entire fully assembled chromosomes. In the recent paper by Nurk et al. (2021),[5]describing a complete human reference genome, nanopore reads were instrumental in closing gaps and correcting mistakes.

Such genome assembly studies attempt to define what a 'normal' genome looks like. With this definition, it then becomes possible to look for differences between this reference and samples of interest. Those differences might explain some health conditions, or they might indicate that the definition of normal is too narrow and needs to be broader.

(C) **Accurate characterisation of genetic variation**

Genomes can differ from one another in several ways, including:

- structural variation (SV) – larger regions of more than 50 base pairs in length that have changed, in the form of inversions, insertions, deletions, translocations;
- single nucleotide variation (SNV) – insertion, deletion or substitution of one nucleotide at a time (sometimes also known as SNPs). Where an SNV occurs in >1% of the population it is known as a single nucleotide polymorphism (SNP); and
- epigenetic modification – methylation can control gene activity.

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[3] Ebbert, Mark T. W. et al., "Systematic Analysis Of Dark And Camouflaged Genes Reveals Disease-Relevant Genes Hiding In Plain Sight". *Genome Biology*, vol 20, no. 1, 2019.

[4] Gnerre, S. et al., High-quality draft assemblies of mammalian genomes from massively parallel sequence data, *PNAS*, 2011, 108(4), 1513 – 1518

[5] Nurk, S. et al., The complete sequence of a human genome, *bioRxiv*, 2021

***Structural variation***

Due to the ability to sequence longer fragments, nanopore-based sequencing can detect structural variants with high precision and recall (95.47% and 97.53% respectively as at October 2020), unlike short-read SBS technologies. Moreover, the technology is sufficiently scalable to enable population-scale analyses of SVs. For example, deCODE genetics[6] analysed the genomes of 3,622 Icelanders and found that whereas short-read SBS sequencing identified between 2,000 and 8,000 SVs per person, nanopore-based sequencing detected a median autosomal 22,636 SVs per person. The authors noted that they observed that short-reads entirely miss 40% of all structural variation – with the other 60% being extremely difficult to understand fully. This is because short reads are effective at identifying when a section of genome is missing, but are less able to reveal when a section has been inserted, and insertions were found to be more common in this study.

***SNVs and phasing***

Short-read SBS sequencing platforms are able to characterise SNVs very well in the regions of the genome that those technologies are successfully reaching. This has resulted in extensive characterisation of SNVs in literature, unlike SVs which are at an earlier stage of discovery and characterisation by the scientific community. The Group's technology can detect SNVs with excellent precision and recall (>99.7% and >99.5% respectively). Additionally, unlike short-read SBS sequencers, nanopore-based sequencing can separate each paternal allele, a process called phasing. Nanopore reads can be used to phase around 98% of the human genome. This is important because variants rarely act in isolation, and to fully understand the role of a variant it is necessary to see it in context.

***Epigenetic modification***

Epigenetic modification is another kind of variation, where DNA/RNA bases have been modified sometimes by environmental factors, with potential downstream effects that may be associated with disease. To study methylation using short-read sequencing it is necessary to perform several manipulations to a sample, which not only adds to the time taken but also introduces bias. Nanopore-based sequencing is able to detect methylation as standard and does not suffer from the sequence-specific biases seen with short-read technologies, meaning that *less* nanopore data is needed to find *more* methylation than traditional short-read methods.

The ability of nanopore-based sequencing to detect methylation and also to sequence long fragments was highlighted in recent work by the Telomere-2-Telomere consortium, where the authors generated methylation maps of entire chromosomes, including across regions that short reads were unable to deal with. In addition, information on different types of variants can be obtained from a single, standard nanopore dataset. This was illustrated in a recent presentation by Wouter De Coster from the University of Antwerp[7]. The team looked at both methylation and structural variation on a PromethION, to get a better understanding of neurological disease. They were able to phase methylation and SVs, which could not easily have been achieved with short reads.

(D) **Real-time data**

In addition to nanopore data possessing qualities that enable and simplify the above investigations, nanopore data is generated in real time, rather than being available only at the end of a fixed run time as is the case with standard workflows on traditional SBS technologies. This means that biological questions can be answered quickly, as illustrated by the Group's internal results sequencing the SARS-CoV-2 from 96 samples in under two hours. The real-time nature of nanopore-based sequencing also enables a feature called adaptive sampling, in which a strand can be selected or rejected while it is being sequenced. This feature can be used in several situations, such as to select one or more samples from a mixture of samples, or to enrich regions of interest from within a genome.

(E) **RNA/transcriptomics/gene expression**

The study of RNA, traditionally in the form of studying cDNA – but with nanopore-based sequencing it is also possible to study RNA directly – is of broad biological interest. It is possible to use

[6] Beyter, D. et al., Long read sequencing of 3,622 Icelanders provides insight into the role of structural variants in human diseases and other traits, *bioRxiv*, 2020

[7] de Coster, Wouter, "Allele-specific methylation in human brains", presentation delivered at the Group's Nanopore Community Meeting 2020, available at https://nanoporetech.com/resource-centre/videos/NCM2020/Allele-specific-methylation-in-100-brains

nanopore-based sequencing for counting applications like gene expression, as illustrated by a recent project undertaken by the Oxford Vaccine Group.[8] Here, the researchers took samples from a cohort of patients who had tested positive for SARS-CoV-2 and another cohort who had been diagnosed with typhoid fever. A full transcriptome analysis was performed on each patient, and the results showed that some genes were very clearly expressed at different levels between the groups, and that when compared to healthy people, both groups showed strongly upregulated immune-response genes.

Additionally, nanopore-based sequencing allowed the researchers to analyse full-length RNAs. This would not have been possible using short-read sequencing because RNAs can be several thousand bases long. Nanopore reads allowed the researchers to distinguish between different isoforms of the upregulated genes. This allowed them to identify novel biomarkers associated with each specific infection, opening up options for diagnostics and also therapeutics. Because of the number of reads required, and the length of the reads needed to identify these potential biomarkers, this project could not realistically have been done using any other technology.

The Group's technology can also, uniquely in the market, be used for the direct analysis of native RNA molecules, rather than requiring conversion to cDNA. This can support the characterisation of RNA base modifications, among other benefits, and the Group is currently working to develop this application further.

(F) **Shorter fragments**

In addition to being able to sequence long to ultra-long fragments of DNA, there are many applications for which the sample of DNA/RNA may already exist in shorter lengths, for example amplicons, the cell-free fragmented DNA that circulates in blood – sometimes from tumours – and DNA extracted from formalin-fixed paraffin-embedded tissue slices (FFPE). Nanopore sequencing is also able to sequence these short fragments of DNA.

## 13. Benefits of the Group's technology in specific markets, and examples of those use cases

### 13.1 The Group's value position in the global LSRT market

***The Group's presence and value proposition in genomics research***

The Group's technology is being used in a broad range of use cases in genomics research, by a broad range of customer types. To date, more than 2,100 publications (including pre-prints) describe the use of nanopore-based sequencing to answer biological questions in human, cancer, plant, animal, pathogen and environmental science. Customers who are performing broad genomics research may be doing so in a number of environments including universities, government labs or industrial research settings.

Customer drivers to use the technology vary according to the application that they are performing, consistent with the broad range of features offered by nanopore-based sequencing. For example, users who are interested in clinical research may use methods that focus on the rapid turnaround of results, rich data, and easy to access device formats. In contrast, users who are interested in characterising plant genomes may be more motivated by the ability to sequence large volumes of long fragments of DNA, with methylation data included, enabling assembly of these large and complex genomes. Users interested in environmental science may be driven to use nanopore because of portable formats that enable on-site sequencing of water or other environmental samples. Many nanopore users specialise in bioinformatics, and their work may focus on analysis techniques that support the broader development of sequencing as a tool for biological analysis. The Group tailors its offerings to this broad genomics research community using techniques described in section 7.3 (*Segments of the global LSRT market*).

***The Group's presence and value proposition in high-throughput human genomics***

The Group's PromethION device is designed to provide DNA sequencing data to service high-throughput human genomics programmes that are sequencing thousands of human genomes to develop a greater understanding of human genomics. The PromethION system can also scale to projects to analyse tens of thousands or more human genomes within a useful timescale. As with all nanopore sequencing devices, PromethION can sequence very long fragments of DNA (the longest read recorded is currently four million bases), enabling the characterisation of larger genetic variants (e.g. structural variation), phasing, repeat

[8] Chelysheva, Irina, "Application of long-read RNA sequencing to characterise and distinguish between infections: a pathway to novel diagnostics", presentation delivered at the Group's London Calling 2021 conference, available at https://nanoporetech.com/resource-centre/video/lc21/application-of-long-read-rna-sequencing-to-characterise-and-distinguish-between-infections-a-pathway-to-novel-diagnostics.

regions and reaching areas of the genome that were previously hard to reach (characterising the so-called 'dark genome').This genetic variation is biologically important, for example, structural variants are thirty times more likely than single nucleotide variants to affect gene expression. Long fragment analysis combined with platform improvements over recent years means that PromethION can provide a more comprehensive view of genetic variation than traditional high-throughput devices, which are limited to sequencing shorter fragments.

PromethION devices are now being used in high-throughput research projects in human biology, neurodegeneration and cancer, taking place across the US, Europe, Asia and in the Middle East. High-throughput human genome projects using a PromethION device include:

- The ambitious Emirati Genome Programme that aims to build the richest knowledge base possible about the genomics of its local population – and to use this information to deliver improved health outcomes. By August 2021, the project had sequenced its first 10,000 human genomes using nanopores and is analysing this data with a view to producing a new Arab reference genome. The project team is scaling its PromethION installation and surrounding workflows beyond the current capacity of 1,000 genomes a week. This is intended to comprise of a fleet of liquid handling robots and PromethIONs combined with powerful analysis capacity.
- The current programme with Genomics England aims to elucidate both SV and epigenetic modifications in cancer samples, where they are understood to be important biomarkers. The goal of understanding insights from whole cancer genomes can be achieved with nanopore-based sequencing in a small number of days, rather than weeks.
- Another programme underway at the National Institutes of Health in the US aims to elucidate variation in 4,000 neurology samples that can be missed with short reads – specifically approximately 10% of SNPs and indels that can be found in GC-rich areas of the genome that may include a high number of neurological driver mutations.

PromethION is available in formats with 48 and 24 flow cells, to service different data output requirements. The Group recently announced that it is developing a 'P2' version that can sequence one or two PromethION Flow Cells, with the goal of enabling accessible high-throughput genomics. PromethION represents a low barrier to entry for high-throughput genomics projects, with the potential to remove barriers to such programmes getting started.

There is potential for the PromethION device to be used to accelerate insights in whole-genomes that may be time critical, by applying a single genome library to a larger number of flow cells simultaneously – 2ml of blood would be sufficient for 48 PromethION Flow Cells. In this way 100 Gb of data could be delivered per hour and the flow cell set could be washed and reused for a subsequent sample. These rates of data can be fully supported by currently available cloud computing environments. There are many examples of situations in which this facility could be of value, including unidentified disease in critical newborn patients.

***The Group's presence and value proposition in public health and genomic epidemiology***

The Group's sequencing technology offers straightforward, rapid workflows and streams sequence data in real time. The modular format of the GridION device supports on-demand analysis rather than requiring users to batch a large number of samples to justify the costs of an experiment. This means that experimental results can often be achieved quickly. When combined with devices that are available without capital investment and are easy to transport, install and use, these features have encouraged the use of nanopore devices for the sequencing of various pathogens.

The Group's technology has been used to sequence pathogens since it was first made available in the MAP in 2014. By sequencing pathogens it is possible to understand the nature of the pathogen, map its transmission, and to understand whether it is changing ('new variants'), including the nature of drug resistance. From its initial use in understanding an infection spreading in a Birmingham hospital through to mapping the Ebola outbreak in Guinea, nanopore devices have previously been used to characterise a variety of outbreaks, including Zika, Ebola, salmonella, yellow fever, tuberculosis, as well as drug resistance in a range of pathogens, and other communicable diseases. The Group's technology was already established in many public health laboratories at the start of 2020, and it has been used extensively to sequence SARS-CoV-2, the virus that causes COVID-19, by researchers seeking to understand transmission, map new variants or understand the biology of the virus. In the international database GISAID, more than 85 countries have contributed SARS-CoV-2 genomes that have been sequenced on a nanopore device; as at 18 August 2021 this was more than 400,000 genomes in total that had been sequenced on a nanopore device. As awareness grows of the importance of understanding not only emerging novel viruses but seasonal viruses and the imminent threat of drug resistance in bacteria and

other pathogens, the Group plans to pursue further adoption of the technology in pathogen sequencing for public health.

***The Group's presence and value proposition in clinical and translational research***

Numerous publications have demonstrated that the specific properties of nanopore-based sequencing can be leveraged in clinical research applications. The ability to perform accurate, real-time, sequencing on native, often long, DNA molecules opens up new opportunities in this market including:

- Comprehensive, high-resolution detection of **large- and small-scale structural genomic variations that underpin a significant proportion of both inherited genetic diseases and cancers**. This includes work to characterise common genetic conditions such as thalassaemia, and the detection of chromosomal rearrangements that can inform the treatment choices in leukaemia; the large-scale discovery of new disease causing variants, and using sequencing rather than traditional karyotyping or arrays to understand disease-causing variation.
- Detecting **clinically significant variation in the so-called 'dark genome'** by using long nanopore reads to span highly repetitive or homologous regions of the genome. This has utility in characterising short tandem repeat expansions that are a common cause of neurological diseases such as ALS and Huntington's disease.
- **Resolving the complexity and diversity of immune system genes** that determine outcomes in transplantation and immune modulating therapies for cancer and autoimmune diseases. For example, characterising regions that determine organ transplantation compatibility or to understand immune signatures of disease states such as sepsis.
- **Epigenetics and disease:** profiling the landscape of DNA/RNA modifications (parts of the epigenome) and their variation over time, across disease states and their correlation with changes to the genomic sequence itself, all without additional sample preparation or specialised sequencing protocols. This has utility in characterising for example brain tumour tissue, understanding the methylation status of genes involved in the development of cancer and in rare genetic disorders.
- **The pathway to the introduction of 'precision medicine' to the field of infectious disease** diagnosis through the delivery of real-time, genomic insights with reporting times fast enough to empower clinicians to change treatment and also provide a stream of surveillance data for infection control interventions. Numerous clinical research studies have demonstrated the use of metagenomic nanopore-based sequencing to detect, directly from clinical specimens, the pathogens and resistance genes causative of infections in a range of samples including blood, respiratory and gastrointestinal in less than six hours, from sample acquisition; this may include common infections such as tuberculosis or STIs or the characterisation of drug resistance.
- **Bringing sequencing-based clinical testing nearer to the point of care,** reducing not only the time from sample accession in a reference laboratory to result reporting, but the more clinically meaningful metric of time from sampling of the patient to result reported.

Within the specific category of clinical genomics performed on research platforms, the Group's platform is currently being used by a number of researchers, mostly in Europe, to gain information in scenarios including rapid analysis of methylation of cancer tissue, rapid analysis of infectious disease samples and rapid analysis of tissue samples for typing in advance of transplantation. The Directors believe that these uses provide a demonstration of the utility of rapid, rich genomic insights in potential patient care scenarios, and that these uses may inform the Group's strategies for potential larger-scale approaches to the applied market in the medium-term (within the next 36 months).

### 13.2 The Group's value proposition in future potential segments of the applied market

Future potential segments of the applied market may include health-related applications such as diagnostics for oncology, infectious disease, immune profiling, or using microbiome analysis. They may also include non-health related analyses including food safety, water analysis, or the end-to-end surveillance of biological systems. Some of the Group's potential value propositions in these markets are outlined below; however, due to the breadth of potential markets, this list is not exhaustive.

#### (A) Oncology

The Directors believe that nanopore-based sequencing can provide rich biological insights that include the ability to directly characterise variants that are relevant in cancer, including methylation, structural variants, repeats and phasing. Analyses can be performed in real time, for rapid results, using targeted methods if

analysis of a specific region is required, or high-throughput methods on a single platform if whole cancer genomes are required. Shorter fragments can be sequenced, in the case of circulating tumour DNA, or ultra-long fragments for other cancer related analyses. The Group's hardware is relatively simple, and certain form factors may be placed very near patients in the future, to expand access to analyses and to support the rapid availability of results.

Within the research community, a number of researchers have developed analytical methods using nanopore sequencing, that elucidate information that may have utility in oncology. At present, these methods have not been made available to the market in the form of diagnostic products; however, future diagnostic products may be based on similar methods.

(B) **Immunoprofiling**

Access to detailed and dynamic information on the function and dysfunction of the human immune system is critical to the management of a range of both infectious and non-infectious diseases. From COVID-19, whose most severe consequences are driven by the immune response to infection, to cancer, whose progression is exacerbated by the failure of the immune system to tackle the growth of malignant tissue, to transplantation of organs from unrelated but tissue-matched donors, numerous opportunities exist for therapeutic intervention targeted to the immune response. However, the complexity, heterogeneity and dynamic nature of the immune response mean that companion diagnostics to facilitate precision use of these therapeutics requires very high-resolution profiling of the immune genome or transcriptome in near-real time.

Nanopore-sequencing devices have been shown to be able to resolve the complexity of immune gene variation, in a time frame that could in principle be clinically useful, for both oncology[9] and organ transplant applications.[10] Furthermore, researchers have demonstrated the capabilities of the nanopore platform to perform single-cell, high-resolution discrimination of the hyper-diverse T and B cell immune repertoires, which could support in principle – along with a range of other targeted and genome wide methods utilising the long-read and methylation profiling capabilities of the platform – a range of immune profiling applications in autoimmune disease management, cancer immunotherapy or the monitoring of vaccine effectiveness against infections such as COVID-19.[11]

(C) **Clinical infectious disease**

In order to prescribe the correct antimicrobial drugs for a patient with infectious disease, it is useful to understand the precise identity of a pathogen – or combination of pathogens – and to understand the presence and nature of drug resistance of those pathogens. Often, rapid results are required to support patients who may be in a critical condition. Nanopore-based sequencing analyses can be performed in real time and, in principle, on relatively simple near-patient devices, with the potential to deliver information about a pathogen in a clinically meaningful timescale when compared to traditional methods such as growing pathogens in culture. The ability to perform either targeted/whole pathogen genome sequencing, or metagenomic sequencing on a single technology supports a range of infectious disease analyses that may deliver the identity of a pathogen, whether the identity of that pathogen is suspected before the analysis, or not. The technology is suitable for characterising drug resistance in pathogens, which may enhance precision prescribing in infectious disease. The Group's hardware is relatively simple, and certain form factors may be placed very near patients in the future, to expand access to analyses and to support the rapid availability of results.

(D) **Microbiome**

In order to rapidly characterise a mixed sample of microbiota, it is useful to deploy real-time sequencing for rapid insights, with the ability to sequence longer fragments of DNA/RNA, which aids a more complete view of the microbiome and easier data analysis.

(E) **Food safety**

In the same way that sequence data can rapidly detect and characterise pathogens that cause infectious disease, the same is true for detecting the presence of food-borne pathogens, and to characterise

[9] Schuh, A. et al., The diagnostic chronic lymphocytic leukaemia genome by nanopore sequencing, *bioRxiv*, 2019.
[10] De Santis et al., Rapid high-resolution HLA genotyping by MinION Oxford nanopore sequencing for deceased donor organ allocation, HLA Immune Response Genetics, 2020, 96(2), 141 – 162.
[11] Vollmers et al., Complete characterization of the human immune cell transcriptome using accurate full-length cDNA sequencing, Genome Res., 2020, 30, 589 – 601.

pathogens in order to understand more about how harmful they may be and the relationship to other pathogens in the supply chain. Food pathogens can have a substantial health impact and cost. According to estimates by the Centers for Disease Control and Prevention, salmonella causes approximately 1.35 million illnesses, 26,500 hospitalisations and 420 deaths in the United States every year; food is the source for most of these illnesses. The Group believes there are opportunities to use rapid genomic data from nanopore sequencing to improve food safety. For example, the Group has partnered with US-based Clear Labs for the development and distribution of nanopore-based sequencing devices for food safety testing labs. The Group expects these products to be competitive with existing PCR-based methods in terms of cost and time to result, but with the added benefit of richer genetic information about detected pathogens in food.

## 14. The Group's approach to commercialisation

The Group's immediate commercial strategies reflect the goal of establishing a distributed network of users of nanopore-based sequencing technology, who are able to easily access the technology to meet their (often unmet) needs. At the heart of this strategy is the MinION, a sequencer available for as little as $1,000 for a starter pack, which scientists can start to use easily and quickly as a pocket-sized sequencing device, breaking the paradigm of reliance on centralised service providers.

The Group's commercial infrastructure supports the marketing, sale, distribution and post-sale support to customers across a wide range of scientific communities in more than 100 countries. Many teams work to drive commercial execution and success. The digital, marketing, sales, customer and technical services, logistics and channel partner management teams are aligned to deliver on the key business drivers of new account acquisition, increased utilisation (the use of consumables) and extended commercial reach – both geographically and within priority market segments.

### 14.1 Commercial strategy and goals

The Group's technology is designed to offer users richer biological data, faster and in a range of settings, whether in the field, nearer the sample than traditional sequencing technologies, or in a traditional high-throughput laboratory environment. The Group is also committed to providing accessible products that can be used by scientists in any environment, in both well-resourced and resource-limited settings. The commercial teams work to these goals of not only penetrating but reshaping the sequencing market.

The Group's first product release – under the MAP in 2014 – was an exercise in creating a community of users that the Group could collaborate with in order to drive experience in using the product. MAP provided feedback for continuous improvement, and user-driven development of tools or new methods to support the use of nanopore-based sequencing across a range of application areas. MAP was led by digital marketing, social media and internal product experts, rather than by a classical sales function. A key activity was the creation of an online community (the "**Nanopore Community**"), where technology users can log in to communicate with one another, and access information, training and support materials. In 2021, there were more than 17,000 individual members of the Nanopore Community.

The MAP sought to, and successfully created, a new market segment of highly distributed sequencing customers, starting to fill a market need that the Group continues to address. The pricing strategy of providing low-cost starter packs, without the requirement for a customer to deploy capital, supports low-risk entry to nanopore-based sequencing, with consumables priced to offer a competitive cost per sample or cost per unit of sequencing data. The Group believes that the customer segment created by the MAP can be harder to access by other sequencing companies whose lowest priced competitive devices are more than ten times the price of a MinION starter pack.

The MAP enabled the Group to build close relationships with participating early technology enthusiasts. The Group has since worked alongside the Nanopore Community to foster adoption of its technology in either new spaces (e.g. for portable sequencing, personal sequencing, and the use of long-read data at scale) or in market spaces that are, at least partly, occupied by existing technologies, and in which nanopore data offers added functional value (e.g. human genome sequencing, pathogen analysis, and cancer research).

The Group has now established, and continues to build, a broader, international sales and support team that builds on the foundational work of establishing the Nanopore Community. The Group continues to focus on a broad commercial strategy of aiming to create new markets and reshaping existing ones.

14.2 **Structures to support long-term development of broader applications for nanopore-based sequencing**

The Group has purposefully designed a permissive development model that enables customers to explore the potential of nanopore sequencing-based applications, under contractual conditions that include the obligation to share in long-term value in the applied market.

For commercial service providers, a framework has been established enabling labs to undergo a certification programme, for an agreed fee or royalty, allowing them to offer highest quality commercial services using nanopore-based sequencing, with appropriate support. The Group anticipates many such agreements to be feasible as market opportunities develop for both the LSRT and applied market for specific tests and/or decentralised use of biological insights across many industrial segments. Overall, the Group is aiming to drive continued growth of the use of its technology among both the decentralised and centralised life sciences research customers, as well as the emergence of new application-specific business segments guided by the functional attributes of the technology and the Group's accessible, non-capital pricing model.

14.3 **Structure of the life science research commercial teams**

The Group considers its commercial team a key strength. The commercial functions include sales, marketing, service and digital teams who are aligned to deliver on the Group's goals.

(A) **Sales:** The Group's sales team has grown from three people at the end of 2016 to approximately 60 people globally in June 2021. The commercial structure includes five sales and services team regional verticals, led by functional managers in the Americas, Europe and the UK, Asia Pacific (including Japan), China and the emerging markets.

The sales leadership team has broad experience across life sciences and technology organisations. Within regions, the structure allows for district- and territory-level management, with room to expand across all geographies. At territory level there are field-based salespeople (Strategic or Key Account Managers; SAM/KAM) – and office-based salespeople (Nanopore Account Specialists; NAS) - who take care of the relationships within a defined territory. Market Development teams support emerging application areas.

(B) **Technical Services:** The sales team is matched by an equivalent sized technical and customer services team which is also regionally structured. Technical services team roles include office-based Technical Services (TS), Technical Applications Specialists (TAS) and field-based Field Applications Specialists, (FAS).

Sales and Technical Services team members operate together as part of territory 'pods' to manage prospecting, technical and relationship account management. The Group's employees include many Masters and PhD graduates who have transitioned into customer facing roles, to ensure that the Group's target customers can relate to these teams and discuss their scientific research goals with high technical credibility. The experienced team understand the opportunity and have a desire to disrupt the current shape of the genomics marketplace in line with the Group's highly differentiated commercial model.

(C) **Customer services:** The team is regionally organised and responsible for triaging customer queries, managing non-technical queries related to registration, account set-up, purchasing and co-ordination of shipping. The customer service team is supported by a UK-based commercial operations team, which is responsible for account approval, order processing and stock allocation to customer orders. The customer service, commercial operations and commercial analytics capacity is scaled through the Group's partner based in India. The Group's global service function is ISO9001 accredited and accessed through the online community forums, website 'contact us' function, support email and dedicated phone services.

(D) **Marketing:** The sales and services teams work closely with the marketing team, whose role is to provide scientific marketing strategy, sales training and support, and an array of marketing operations activities, including: digital programmes that are designed to attract new customers into the sales process and include online content and systems; delivering systems and activities to nurture the existing user community, such as the flagship annual conference London Calling; digital marketing and marketing automation systems to ensure that potential customers can be supplied with the most relevant information for their needs. This work is designed to ensure that users' journey of understanding the technology, potentially buying it and using the technology, can all be performed at scale.

(E) **Digital:** Digital teams support a number of commercial functions including e-commerce, digital marketing/website and background systems that are designed to support rapid growth.

(F) **Logistics:** As part of the supply chain function, the Group's global logistics team, working with the commercial operations services, ensures completion of the smooth end-to-end process from order to delivery to the Group's customer or channel partners. The team monitors the Group's logistics and reverse logistics solutions, and evaluates improvements to drive greater efficiency as the Group expands its geographic reach and manages increased product volumes.

### 14.4 Structures to provide broad geographic coverage

The Group aims to make its technology available to a broad range of scientific users, and currently supports users in more than 100 countries. In some territories the Group works with distributors to achieve or enhance its own commercial presence. These distributors may be entities with local know-how who sell on the Group's behalf, allowing the Group to expand more quickly into under-served territories.

In August 2021, the Group finalised a global distribution agreement with VWR International, LLC (owned by Avantor, Inc.) ("**Avantor**"), a leading global provider of products and services to customers in the life sciences, advanced technologies and applied materials industries. Beginning in September 2021, MinION starter packs, MinION Flow Cells and library preparation kits will be available through Avantor's e-commerce platform, as well as the Group's own e-commerce platform. The agreement is designed to enhance the Group's commercial activities around MinION with those of Avantor's sales and life science specialist teams, who will provide local support for MinION users. The agreement includes distribution for MinION devices and consumables in North America (the US, including Puerto Rico, and Canada from early 2022) and Europe (EU, UK, Norway and Switzerland). Other regions will be added in 2022. Additional global sales distribution capacity has the potential to help expand the S1 customer community into under-reached groups, for example, users in the pharmaceutical and biotechnology industries. While the applications that this user group may wish to pursue may typically require higher-output devices, there are many applications for which MinION would benefit these users, in turn resulting in greater familiarity with the platform and opportunities to later develop into S2 or S3 customers (see section 14.6 *(Strategic deployment of commercial resources to drive growth)* for further information on the S1, S2 and S3 customer categorisations).

The Group currently works with distributors in Turkey, South Korea, Russia, the UAE, India and parts of Africa, a network of partners in China and a strong dealer network in Japan. In addition to local partners that market and sell on the Group's behalf, specialist logistics brokers are used who can work directly with the Group's customers in harder-to-ship to areas, including in Mexico, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Nicaragua, Panama, Uruguay and parts of Africa.

### 14.5 Commercial IT systems to support scaling

The Group has established systems to enable rapid growth of its commercial functions. Customer interactions are managed and visible through the Group's customer relationship management (CRM) system. In addition, the sales development team drives CRM systems compliance for sales process and takes the lead on driving improvements and best practices. Additional commercially-available systems are used to support marketing automation and e-commerce.

### 14.6 Strategic deployment of commercial resources to drive growth

The Group's model is to drive continued and increasing utilisation of its devices for an increasingly broad range of uses, by an increasingly broad range of users. The Group's commercial capabilities serve several thousand customers, grouped into three categories, designed to enable the effective and efficient deployment of commercial resource and drive utilisation across all account types.

Reflecting the Group's vision of enabling the analysis of anything, by anyone, anywhere, and its product and commercial strategy designed to reflect this goal, the user base of the Group has a different 'shape' to incumbents in the sequencing space. This includes a smaller number of customers with larger projects or high-usage environments, as well as a much larger number of users who have smaller scale sequencing requirements, but whose scientific goals and methods are often highly innovative, contributing to a reshaping of the sequencing market.

The Group broadly categorises customers into three groups as shown below. This approach to managing growth across customer groups is designed to ensure efficient but effective commercial attention is given to different types of customer throughout the sales pipeline to close new business and provide ongoing support for customer success. The three customer groups are fluid and movement between customer

groups is possible. The Group expects a sub-set of S1 customers to scale their usage of the Group's devices and ultimately, these customers may move into the S2 customer group. Similarly, larger S2 customers may transition to the S3 category.

- **'S1' customers** are typically users of the MinION Mk1B or Mk1C devices, for which starter packs can be purchased from $1,000. This group includes highly engaged early adopters who contribute actively to the Nanopore Community, as well as smaller research groups who may use MinION at varying rates of consistency and frequency, depending on their scientific requirements. S1 customers are supported with a 'light touch' customer journey. Devices can be purchased online and couriered directly to the user to be installed by them, supported by online instructions, training and support. In FY20 the Group saw approximately 75% of new MinION account sales complete without direct involvement of a salesperson; instead, these sales were driven by digital marketing activities and word of mouth. The global Customer Services team offer frontline support – with 24 hour, five days per week availability.
- **'S2' customers** are mid-range users and may be users of the MinION, GridION or PromethION devices. S2 customers are typically research teams or small university departments, and include labs providing internal sequencing core facilities. Often S2 customers have an existing sequencing platform (or access to one) and are taking their first steps into nanopore-based sequencing to add greater biological value, insights or faster results to their experiments or services. S2 also includes smaller labs whose funding structures do not currently support capital investment in devices; these customers can take advantage of the Group's consumable-based pricing model. The Group believes that the S2 group is underserved in the sequencing market and so has significant potential to expand and develop. Customer Service teams offer front line response and triage to any S2 customer query. Technical account management is led by office-based Technical Services teams (TS and TAS), who can be booked to discuss projects in advance of or during an experiment. The Nanopore Account Specialists (NAS) team manage sales opportunities with S2 accounts.
- **'S3' customers** are typically PromethION users with larger, high-impact or complex projects. They are predominantly large organisations including universities, commercial sequencing service providers and major production labs with medium- to high-level usage, who are seeking to deploy the properties of nanopore sequencing to their project at scale. The sales process for S3 typically has more complex procurement requirements, and an expectation of on-site support. These customers are supported by field-based territory account managers and technical Field Applications Specialists (FAS). The FAS ensure new accounts and projects are successfully optimised for rapid scale-up. Where required, additional expertise is provided from the market development or product management teams, to support senior level relationships and integration of new protocols or workflows.

Should they need more in-depth technical training, any of the Group's customers, regardless of type, can choose to purchase additional on-site training packages. The customer satisfaction score across the Group's technical training modules shows that more than 90% of respondents are 'satisfied/highly satisfied', emphasising the quality of training provided.

### 14.7 The Nanopore Community

Since the first introduction of a nanopore-based sequencing device in the MAP, the Group has devoted substantial resources to the establishment and nurture of the Nanopore Community. This is a network of users of nanopore-based sequencing devices who can communicate in an online setting but also communicate across research collaborations, social media and other channels. The Group works closely with many members of the community in order to solicit feedback to improve, to collaborate with them or support their generation of new methods and analysis tools that expand the potential range of uses of nanopore-based sequencing.

In 2021, there were more than 17,000 individual members of the online Nanopore Community, reflecting the community of users behind several thousand accounts.

The Group believes that this practice of working in close collaboration with its user community is the most effective and efficient way to introduce and improve its technology by eliciting feedback throughout the product release cycle. The Group typically releases products, or specific upgrades such as new software basecallers, at an early stage to a small 'developer community' of users. If successful, this developer phase will be expanded to an 'early access' phase with more, but still limited, users. In these stages, users are encouraged to provide candid, open feedback that the Group uses to improve its technology. After these improvements, the product or upgrade is then released to the broader user community.

The contribution of the scientific community to the development of nanopore-based sequencing and its associated uses has been, and continues to be, significant, including not only feedback but the

development of a myriad of analysis tools and scientific methods, and collective support and sharing of best practice. Users in the community typically publish their work using nanopore-based sequencing, either as rapid 'pre prints' for the immediate digestion of the scientific community, or as publications in peer review journals. This is one of many ways in which the community is strengthened and the utility of the technology becomes better known among a broader scientific community. At present, more than 2,100 publications (including pre-prints) describe the use of nanopore-based sequencing across a range of application areas.

The Group invests in many channels and activities that enable community members to connect with each other to share ideas, best practice and to collaborate, and which facilitate interactions between the Group and its diverse user base. Specific examples of this are the Group's flagship events, London Calling and Nanopore Community Meeting, during which hundreds of scientists are invited to present their work in presentations or posters. Typically, these are shared online so that an ever-increasing body of work on nanopore sequencing can be accessed, and insights used by others to improve their practice. The Group also operates continuous communications channels that support the community, including social media channels, email updates and online forums. The online customer community provides customers with a range of training and support materials including technical documentation, protocols, how-to guides and training modules. Customers can discuss technical matters with peers or the Group's support teams.

### 14.8 **Managed sales process**

The Group manages sales prospecting, lead nurture and sales opportunity pipeline management using an established CRM, which follows a staged opportunity progression, and allows a salesperson to build a territory pipeline reflecting the value of potential new accounts as well as new projects within existing accounts. The sales development team works to ensure compliance with this process across global teams so that CRM data can be examined for trends to inform the broader business. The Group's ability to manage growth in accounts is enabled by the unique data points generated from the Group's connected customer network, as much as by personal relationships and institutional know-how. Through the use of internal analytics, sales and service teams can monitor how regularly customers use their device, and track when they are close to requiring additional consumables. For technical support, data can be used to remotely troubleshoot for a very rapid first response. Leveraging these strengths, the Group can intervene with sales and technical support at the most impactful time and offer a differentiated and efficient customer experience.

The customer groups S1, S2, S3 are not static, and accounts often move up to higher groups as they can expand their nanopore-based sequencing without the requirement to invest new capital as they migrate to larger devices. The S1 customer group represents a rich community of users who have an opportunity to develop methods for new applications or to expand to higher-throughput use of the technology. As the Group aims to achieve further expansion of the S1 customer community, this is intended to provide an important foundation for future growth of all customer groups and applications.

### 14.9 **Commercial expansion goals**

Over recent years, the Group has also increased its global commercial presence by expanding its commercial function, including investment in its e-commerce platforms to ensure a smooth customer acquisition and servicing journey.

The Directors believe that the Group's DNA/RNA sequencing technology has improved substantially over recent years and is well-positioned for accelerated use across multiple applications. The Group intends to rapidly develop and expand its commercial infrastructure to optimise the take-up and successful utilisation of nanopore-based sequencing, with a broad goal of doubling its existing commercial teams over the short term in an expansion plan that builds capacity in underserved markets and specialist skill sets.

One opportunity for expansion of the S1 and new markets customer base is within developing economies, where there is significant opportunity to democratise sequencing with distributed low-cost nanopore technology. Building relationships with early technology enthusiasts at a local level in countries within the Association of Southeast Asian Nations, Latin America and parts of Africa, the Group can establish networks of researchers in academic and industrial settings. In August 2021, the Group added a global distribution partner, Avantor, for MinION sales, in order to target greater adoption of MinION. There is potential for entrepreneurial customers to leapfrog the centralised sequencing platforms which remain limited to labs with significant (and ongoing) sources of funding, and to instead establish nanopore-based sequencing, with its combination of rapid insights, rich data, near-sample formats and accessibility, as the preferred technology for the applied market. The Group intends to form partnerships to improve logistic and procurement access and ensure technical support is accessible within different time zones, and where possible in local languages, as network demand grows. The Group also plans direct on-ground commercial

leadership (e.g. in east Africa and India) in combination with specialist sales channels for covering more ground quickly. In the long term, the Group anticipates local entity set-up, local warehousing and expansion of commercial teams.

A range of future commercialisation options are available to the Group in order to maximise the potential of its technology in the market. These include direct commercialisation, strategic partnerships and out-licensing.

The Group employs specialists in market development to explore further markets and in addition has established OND and Metrichor as subsidiary companies to prioritise commercialisation of certain applied market opportunities.

## 15. Properties

In addition to the Group's laboratories, offices, production facilities and warehouses, the Group owns the leasehold title of its head office. The Group's head office is located at Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford, OX4 4DQ. The Group occupies its MinION Building manufacturing facility in Oxfordshire, UK pursuant to a lease agreement expiring in 2044.

## 16. Insurance

The Group maintains insurance to cover risks associated with the ordinary operation of its business, including general business interruption and material damage cover, public and products liability, errors or omissions liability, directors' and officers' liability, employers' liability, event cancellation and abandonment cover, and personal injury and travel insurance. All policies are underwritten with reputable insurance providers, and the Group conducts periodic reviews of its insurance coverage, both in terms of coverage limits and deductibles. The Directors believe that the Group's insurance coverage is sufficient for the material risks associated with its operations. However, no assurance can be given that this coverage will be sufficient to cover the cost of defence or damages in the event of a significant claim.

## 17. Environmental, social and corporate governance ("ESG")

### 17.1 Values and vision

The Group is committed to the principles of fairness and inclusivity, and aims to make DNA/RNA sequencing technology as available, affordable and easy to use as possible, to support any scientist who wants to access biological information. In order to achieve this, the Group designs and commercialises its products to make them as accessible as possible. The Group also supports the use of its technology to find solutions to important global challenges such as health inequality, food insecurity and climate change.

In addition, the Group is determined to minimise any negative impacts of its operations and technology by integrating principles of sustainability into its product design and manufacturing processes. The Group is currently working to align itself with UN Sustainable Development Goals and to expand the evaluation of its performance across ESG categories to improve its policies, business plans and processes.

The Group's FY20 annual report and accounts (the "**FY20 Annual Report**") included reporting on all sources of greenhouse gas ("**GHG**") emissions and energy usage as required under The Large and Medium-Sized Companies and Groups (Accounts and Reports) Regulations 2008. The FY20 Annual Report also took into account the 2019 UK Government Environmental Reporting Guidelines, the GHG Protocol Corporate Accounting and Reporting Standard (Revised Edition) and the UK Government's GHG reporting conversion factors. The Group intends to comply with applicable standards of environmental reporting in respect of its financial reports.

### 17.2 Environmental

The Group considers both its operational impact, and the impact that its technology can have in environmental applications.

***Operational impact***

The Group undertakes both a carbon emissions audit and an energy audit to identify its carbon footprint sources, support the Group's Energy Savings Opportunities Scheme submissions, and identify energy saving opportunities. The results of the Group's most recent Scope 1, 2 and 3 emissions audit are highlighted in the table below.

| | UK and offshore – FY20 |
|---|---|
| Emissions from combustion of gas (Scope 1 – tonnes of $CO_2e$) | 359.16 |
| Emissions from electricity purchased for own use, including for the purposes of transport (Scope 2 – tonnes of $CO_2e$) | 1,091.73 |
| Emissions from business travel in rental cars or employee-owned vehicles where company is responsible for purchasing the fuel (Scope 3 - tonnes of $CO_2e$) | 11.88 |
| **Total gross $CO_2e$ (tonnes) based on above** | **1,462.77** |
| Tonnes of $CO_2e$ per £million revenue | 12.85 |

The Group aims to reduce its tonnes of $CO_2e$ per £million revenue by 2.5% in 2021, and intends to review and work towards net zero on Scope 1 and Scope 2 emissions by 2030. Additionally, the Group has established a project to identify areas for reduction in Scope 3 emissions and initial results have identified where the largest gains can be made.

The Group has established a number of environmental initiatives to support its environmental aims. These include: (a) the use of wool packing rather than plastic; (b) product design to reduce the need for cold chain distribution; (c) the reduction of solvent use in its manufacturing processes; (d) improvements to its waste management processes; (e) recycling of consumable flow cells; and (f) ORG.one, a scheme to provide free consumables for the sequencing of critically endangered species. In addition, in FY20, 69% of the Group's energy was purchased from renewable sources and is certified under the Renewable Energy Guarantees of Origin scheme. This accounted for 85% of electricity purchased by the Group in FY20.

To support a circular economy, users of nanopore sequencing are encouraged – and in certain circumstances, obliged – to return their used flow cells so that certain electronic components can be re-used. This is a growing area of focus as the Group implements new strategies to drive positive consumer behaviour, and in addition provides risk mitigation to the Group in respect of its supply chain.

***Impact of the technology***

A thriving community of scientists use nanopore sequencing, and specifically, the portable MinION device, in environmental applications. These include using sequencing to: (a) understand plant and animal biodiversity; (b) analyse ocean or glacial microbiomes to understand the impact of climate change; and (c) enable the protection of wildlife.

The Group continues to support these scientists by developing devices, kits and analysis tools that enable their success. Devices such as the 'field kit' which does not require a cold chain during transport enables in-field analysis for users who conduct their experiments in the field rather than in the lab. More generally, the Group continues to develop R&D programmes to facilitate greater ease-of-use outside the lab environment. In addition, the Group's low-cost starter packs are designed to be inclusive to a range of scientific users, including those working in environmental science.

The Group recently launched ORG.one, a programme that provides free consumables to enable scientists to sequence critically endangered species on the International Union for Conservation of Nature's Red List of Threatened Species and to share the sequencing data generated publicly.

### 17.3 Social

The Group's long-term goal – to enable the analysis of anything, by anyone, anywhere – ultimately describes an ambition to positively impact a broad range of communities. The Group is working towards this goal through its accessible product design, pricing, and operational strategies.

The Group is involved in supporting a number of projects to empower communities that may have previously been unable to access sequencing technology. For example, in 2021 the Group partnered with the Nairobi-based BecA Hub at the International Livestock Research Institute to deliver an in-depth training programme entitled *"Third-generation genomics and bioinformatics for agribiosciences in Africa"*. In this programme, scientists selected from institutes across Africa undertook advanced training in all aspects of the genomics workflow, from sample selection, DNA extraction, nanopore sequencing and bioinformatics, enabling them to go on to disseminate their knowledge in their home institutes with ongoing support from the Group and ultimately establish nanopore sequencing hubs for local projects that were designed to use sequencing information to benefit those communities.

The accessibility of the Group's technology was also illustrated during the COVID-19 pandemic. At the start of the pandemic, the Group supported public health scientists in China, the worst affected country at the time. Since then, the Group's technology has been used by labs in more than 85 countries around the world who used the technology to quickly establish a process to track the virus – this included scientists

in remote or less well-resourced settings, where nanopore represented the first use of sequencing in that lab. The Group continues to work closely with the epidemiology community to explore potential onward benefits for surveillance of other existing or potential outbreaks in human or animal populations.

The Group is committed to recruiting people from diverse backgrounds with varied experiences and perspectives. This is essential in order to fully reflect the global scientific community that the Group serves. The Group adopts a zero tolerance policy towards discrimination, harassment and bullying. The Group is committed to and has taken steps to ensure that employees of all genders, ethnicities and backgrounds have equal opportunities across the business. The Group's annual gender pay gap analysis has shown that the Group is continuously improving on its gender pay gap performance.

The Group's goal to support diversity is also reflected in its broader business practices. For example, its flagship conferences, London Calling and the Nanopore Community Meeting, attract hundreds of speaker applications each year, and practices have been put in place to ensure that speakers at the conference reflect the diversity and scientific excellence of the scientific community, with speakers well-balanced across gender, geography and career stage. Following successful STEM events at previous live London Calling events, the Group intends to expand its activities to encourage a diverse range of students to enter these disciplines, as live events begin to return following an easing of COVID-19 restrictions.

### 17.4 Governance

The Group is led by an experienced management team and Board. The Group has established an interdepartmental ESG committee, which is expected to formulate an ESG policy that will be reviewed and approved by the Board. In 2021, the Group adopted a Board diversity policy, including a commitment to 33% female representation on the Board in line with the Hampton-Alexander Review within three years of the completion of any potential IPO. Additionally, the Group currently meets the target on ethnic diversity representation on the Board as set out in the Parker Review. The Group has also adopted corporate governance policies, covering matters such as modern slavery, whistle blowing, anti-bribery and corruption, anti-facilitation of tax evasion, export control and sanctions, conflicts of interest, and related party transactions. The Group has started Group-wide training on these policies, and training will continue to be implemented.

The Group has established a risk management framework that includes: (a) formal focused risk registers established for ISO 27001 and 9001 accreditations (Information Security and Process); (b) a process for maintaining a formal risk register resulting from contributions by all business unit leaders that includes a comprehensive methodology for scoring risk; and (c) a process to report risk to the senior leadership, who will approve mitigations and report to and consult with the Board's audit and risk committee.

The Group also assesses key suppliers using several ESG metrics, and regularly includes ESG requirements in its supplier contracts.

Further information about the Group's corporate governance is included in Part 5 *(Directors, Senior Managers and Corporate Governance)*.

## 18. Regulatory

The Group is subject to the laws and regulations of the jurisdictions in which it operates, which cover a wide variety of areas including product quality and safety, the environment, health and safety, competition, data protection and privacy, IP, export and import controls, anti-bribery and corruption legislation and trade sanctions. The laws and regulations in these areas, across the jurisdictions in which the Group operates, are constantly changing, as are the priorities of those who enforce them, and the Group regularly monitors these changes. The Directors believe that, as at the date of this Registration Document, the Group is in compliance with all material applicable laws and regulations.

***Data protection and privacy***

The Group collects and processes personal data from its customers and employees in the ordinary course of its business. As a result, the Group is subject to the data protection and privacy laws and regulations of the jurisdictions in which it operates. These include: (a) the EU GDPR in the EU; (b) the UK GDPR and DPA in the UK; (c) the Data Security Law, Cybersecurity Law and Personal Information Protection Law (expected to come into effect on 1 November 2021) in China; and (d) the HIPAA and various US state laws in the US. Among other things, these data protection laws impose certain restrictions on what the Group can and cannot do with the data it collects, and gives data subjects certain rights in relation to their data. To facilitate compliance with the various data protection and privacy laws and regulations that are applicable to it, the Group maintains and regularly reviews its written policies in areas such as data protection and

data retention. Moreover, compliance with data protection and privacy laws and regulations are regularly considered at Board-level as part of the Group's general compliance and risk management processes.

The Group maintains, regularly reviews and updates a separate Human Genomic Data policy that sets out the Group's approach to the handling and protection of Human Genomic Data. Under the terms and conditions of sale attaching to the Group's products, any data generated by or through a customer's use of a Group product (whether that product has been sold to or leased by the customer) that constitutes biological data, which includes Human Genomic Data, is owned and controlled by the customer alone. The terms and conditions also require customers to pseudonymise Human Genomic Data before sharing it with the Group for any further analysis and processing, such as through the Group's cloud-based service, EPI2ME. In addition, the EPI2ME platform displays a warning to customers detailing the necessity to have obtained informed consent in connection with the uploading of Human Genomic Data. The EPI2ME platform also alerts the relevant Group employee that such consent has been provided, prior to any data processing being undertaken by the Group.

***Export control and sanctions compliance***

Export controls imposed by governments apply to all of the Group's products and technologies and in all of its export markets. In some circumstances, these export controls may prohibit the export of some of the Group's products or technologies to certain persons or for certain military purposes or require a licence for export of the same.

The purpose of export controls is to control the supply of technology or strategic goods to third countries, principally for reasons of preventing proliferation of weapons of mass destruction ("**WMD**") and terrorism and promoting international security. In addition, many governments, including the UK and the US, impose economic and trade sanctions based on foreign policy and national security concerns against (a) targeted countries and regimes; (b) individuals and entities engaged in the proliferation of terrorism or WMDs; and (c) other individuals and entities that are considered to be threats to national security. In some instances, such as the US, these sanctions may have extraterritorial effect by allowing the government to impose measures against persons outside its national borders for engaging in sanctionable conduct, such as conducting significant or material transactions with a sanctioned party. Penalties for non-compliance with export control and sanctions laws and regulations can include heavy fines and/or loss of export privileges for the Group and fines and imprisonment for individuals.

In order to manage its export control and sanctions compliance, the Group has established an Export Control Committee (the "**Export Committee**") whose members include the General Counsel, the Chief Financial Officer and key management across the business, in areas such as technology, logistics, product management, supply chain and IT. The Export Committee's functions include establishing appropriate compliance procedures and training. The Export Committee also monitors the Group's compliance with export control and sanctions laws and regulations and determines whether an export licence, permit or end-user undertaking is necessary, including through consultation with external legal counsel where appropriate.

Procedures implemented by the Group to ensure compliance with export control and sanctions laws and regulations include the routine screening of the Group's products and technologies to determine whether export controls may apply. The Group also checks each new customer (and is in the process of establishing a check for each new order for customers located in China and Russia) against applicable embargoes and sanctions pursuant to UK sanctions and export control legislation and US sanctions programmes. The Group is in the process of implementing a system to conduct similar checks in respect of prospective contractual counterparties. The Group's customer, distributor and supplier agreements contain contractual safeguards to ensure compliance with export control and sanctions laws and regulations, such as restrictions on customers' use of the Group's products and technologies in a manner contrary to applicable export control or sanctions laws or regulations, and representations from distributors and suppliers that they are not embargoed or sanctioned individuals or organisations or owned or controlled by such entities. The Group also maintains and periodically reviews an export control and sanctions compliance policy.

***Anti-bribery and corruption***

The Group maintains a policy prohibiting bribery and corruption and intends to comply with all applicable laws and regulations related to the same, such as the Bribery Act 2010 in the UK. The Group maintains and periodically reviews an anti-corruption and bribery policy which applies to all employees (whether permanent, fixed term or temporary) operating at all levels and grades and all associated persons such as contractors, agency workers, sponsors and consultants. Anti-bribery and corruption training forms part

of the Group's induction process for all new employees. The Group is in the process of implementing computer-based learning and intends to roll-out anti-bribery and corruption training for all employees on an annual basis.

***Environmental, health and safety***

The Group is subject to environmental and health and safety laws and regulations in the jurisdictions in which it operates, relating to, among other matters, safe working conditions, product stewardship and environmental protection, including those relating to emissions in the air, discharges to land and surface waters, generation, handling, storage, transportation, treatment and disposal of hazardous substances and waste materials, and the registration and evaluation of chemicals. The Group maintains policies and procedures to monitor and control environmental, health and safety risks, and to monitor compliance with applicable environmental, health and safety requirements.

***Marketing regulations***

The Group's LSRT are marketed either as "Research Use Only" products or with the following label: "Oxford Nanopore Technologies' products are not intended for use for health assessment or to diagnose, treat, mitigate, cure or prevent any disease or condition." While certain customers incorporate the Group's LSRT into lab-developed tests, the Group complies with regulations prohibiting marketing or selling unregistered medical devices. New regulations in this area have been expected for some time in the US, Europe and China. The Group monitors the laws in this area with the assistance of outside advisers.

With respect to the Group's LamPORE product, the Group complies in its manufacture and marketing with its CE mark for *in vitro* diagnostic use.

# Part 5. Directors, Senior Managers and Corporate Governance

## 1. Directors

The Directors and their principal functions within the Group, together with a brief description of their business experience and principal business activities outside the Group, are set out below. The business address of each of the Directors (in such capacity) is Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford, OX4 4DQ.

| Name | Position |
|---|---|
| Peter Allen | Chair |
| Dr Gurdial (Gordon) Sanghera | Chief Executive Officer |
| Clive Brown | Chief Technology Officer |
| Timothy (Tim) Cowper | Chief Financial Officer |
| Dr James (Spike) Willcocks | Chief Business Development Officer |
| Alan Aubrey | Non-Executive Director |
| Wendy Becker | Non-Executive Director |
| Dr Guy Harmelin | Non-Executive Director |
| Adrian Hennah | Non-Executive Director |
| John O'Higgins | Non-Executive Director |
| Sarah Gordon Wild | Non-Executive Director |

**Peter Allen** *(Chair)*

Peter was appointed as Chair of the Board in June 2011, having been a member of the Board since April 2011. He has broad, senior experience in the life science industries and currently serves as Chair of the boards of Abcam plc and Advanced Medical Solutions Group plc. He is also a non-executive director of Istesso Limited. Peter has informed the Board that should any potential IPO occur, he does not intend to stand for re-election to the Board at the Company's first annual general meeting following the date of such IPO. In the event of any potential IPO, the Board intends to commence a process to identify a suitable successor to assume the role of Chair in due course.

Previously, Peter served as Chair of the board of Diurnal Group plc for five years until June 2020, and as Chair of the board of Clinigen Group plc since their IPO in 2012 until the end of August 2021. Peter also served as the Chief Financial Officer of the electronics company Abacus Group plc from April 2005 until the company was sold to Avnet, Inc. in January 2009. Prior to this he was the Chief Financial Officer of Celltech Group plc ("**Celltech**") between 1992 and 2004. During that time, in addition to managing Celltech's floatation process in 1993, Peter played a key role in several strategic acquisitions, including Chiroscience Group plc, Medeva plc and Oxford Glycosciences plc. In 2003 Peter was appointed the Deputy Chief Executive Officer of Celltech until it was sold to UCB SA in 2004.

Peter is a qualified chartered accountant by background and has a joint degree in accountancy and law from the University of Kent.

**Dr Gurdial (Gordon) Sanghera** *(Chief Executive Officer)*

Gordon is one of the co-founders of the Company and was appointed Chief Executive Officer of the Group in June 2005. He has over 20 years of experience in the design, development and global launch of disruptive platform sensor technologies.

Gordon spent 16 years at MediSense, Inc. Following its acquisition by Abbott Laboratories, Gordon held both UK and US vice president and director-level positions, including as Vice President (for world-wide marketing), Research Director and Manufacturing Process Development Director. Before its acquisition by Abbott Laboratories, Gordon led MediSense's R&D function, where he was instrumental in the launch of several generations of blood glucose bio-electronic systems for the consumer and hospital medical markets.

Gordon has a doctorate in bio-electronic technology and a degree in chemistry from Cardiff University.

**Clive Brown** *(Chief Technology Officer)*

Clive is the Group's Chief Technology Officer, having joined as director of bioinformatics and IT in 2008.

He has served on the Board since September 2019.

Clive joined the Group from the Wellcome Trust Sanger Institute in Cambridge, UK, where he played a key role in the adoption and exploitation of 'next generation' DNA sequencing platforms. In 2003, he was appointed director of Computational Biology and IT at Solexa Limited (acquired by Illumina, Inc. in 2007), where he was central to the development and commercialisation of the Genome Analyzer. Clive has also held various management and consulting positions at Glaxo Wellcome (now GlaxoSmithKline plc), Oxford Glycosciences plc and other EU and US based organisations.

Clive holds degrees in genetics and computational biology from the University of York.

**Timothy (Tim) Cowper** *(Chief Financial Officer)*

Tim was appointed Chief Financial Officer of the Group in March 2021, having previously served as Vice President (Finance). He joined the Group as Financial Controller in 2012 and became Commercial Operations Director in 2013. Tim took the role of Finance Director in 2017 and joined the Board in 2018.

Having qualified as an accountant at Ernst & Young, Tim became Financial Controller of Celltech, serving as a key member of their IPO team and managing several of their transactions as a listed company. He went on to serve as Financial Controller at Sterilox Medical. Tim has also been Finance Director at British Biotech plc (Vernalis plc) and has previously worked in management roles at other biotech and technology companies, including the AIM-listed Bioventix plc.

Tim has an economics degree from the University of Sussex and is a qualified chartered accountant.

**Dr James (Spike) Willcocks** *(Chief Business Development Officer)*

Spike is one of the co-founders of the Company and has served on the Board since May 2006. He was appointed Chief Business Development Officer of the Group in November 2016.

Spike was one of the initial members of IP Group plc ("**IP Group**") following its landmark partnership with the University of Oxford's Department of Chemistry. Ultimately leading its life science team, Spike's role encompassed all aspects of technology commercialisation, including spin-out company formation and business and corporate development, as well as private and public equity financings.

While at IP Group, Spike was a key player in the creation of 14 life science businesses based on technology from three universities, leading proposals for the investment of seed financing from IP Group and serving as director and chair for six portfolio companies. Working alongside the executive teams of the portfolio companies, Spike played an integral role in out-licensing transactions, co-development deals and acquisitions. As well as supporting fundraising for portfolio biotechnology companies, he also assisted with IP Group's IPO in 2003 on the London Stock Exchange.

Spike has a doctorate in biological sciences and a degree in chemistry from the University of Oxford.

**Alan Aubrey** *(Non-Executive Director)*

Alan was appointed as a Non-Executive Director in March 2009. Alan has informed the Board that should any potential IPO occur, he intends to retire from the Board and his position as chair of the audit and risk committee at the point of such IPO.

Alan currently serves as the Chief Executive Officer of IP Group. He also serves as non-executive Chair of Proactis Holdings plc, as a non-executive director of Oxford Sciences Innovation plc., and as a trustee of Eureka! The National Children’s Museum.

Prior to joining IP Group in 2005, Alan was the joint founder and Chief Executive Officer of Techtran Group Limited, the first company in Europe to offer a complete outsourced technology transfer function to universities. Techtran was acquired by IP Group in 2005. Between 1995 and 2002, Alan was a partner at KPMG where he specialised in providing advice to fast growing technology businesses.

Alan has a Master of Business Administration with Distinction from the University of Bradford and a degree in economics from the University of Leeds. He is a Fellow of the Institute of Chartered Accountants of England and Wales.

**Wendy Becker** *(Non-Executive Director)*

Wendy was appointed as a Non-Executive Director in June 2021.

Wendy is the current Chair of NASDAQ-listed Logitech International SA and is a non-executive director of Sony Corporation. Wendy is also on the board of FTSE 250 property business Great Portland Estates plc

and a member of the University of Oxford's executive governing body.

Wendy has served as Chief Executive Officer at Jack Wills Limited, a British-based brand name clothing manufacturer and retailer, having been promoted from Chief Operating Officer after turning around its historical operational difficulties and pursuing new growth avenues. Previously she worked in the telecoms industry as Group Chief Marketing Officer at Vodafone Group plc and Managing Director at TalkTalk Telecom Group plc. Wendy was also previously a partner at McKinsey & Company.

Wendy started her career in brand management at The Procter & Gamble Company after gaining a bachelor's degree in economics from Dartmouth College. She also holds a Master of Business Administration from Stanford University's Graduate School of Business and has been named by the FT in the "Top 50 Women to Watch in International Business".

**Dr Guy Harmelin** *(Non-Executive Director)*

Guy was appointed as a Non-Executive Director in September 2020.

Guy has extensive experience in healthcare and technology investment and entrepreneurship. He was previously on the leadership team at Harel Insurance Investments and Financial Services Ltd ("**Harel**"), the largest insurance group in Israel. He has invested and worked with multiple companies including Lemonade, Inc., Innoviz Technologies Ltd, American Well Corporation, Ecoppia Scientific Ltd, Ayala Pharmaceuticals, Inc., Biond Biologics Ltd, Tabit Technologies Ltd, Assured Allies (Assured, Inc.), QM Technologies, Inc., Rafael and Ein-Tal Hospitals. Prior to joining Harel, Guy was a co-founder and chief executive officer of RondinX Ltd, a computational drug target discovery company that was acquired by BiomX, Inc. in 2017.

Guy has a Doctor of Medicine (Summa Cum Laude) from the University of Florence and served as a resident physician at the Tel Aviv Medical Centre.

**Adrian Hennah** *(Non-Executive Director)*

Adrian was appointed as a Non-Executive Director in June 2021.

Adrian currently serves as a non-executive director of J Sainsbury plc where he is also Chair of the Audit Committee. Adrian also serves as an external member of the Finance Committee of Oxford University Press.

Adrian spent 18 years in Chief Financial Officer roles at three FTSE 100 companies and his executive career spans healthcare, engineering, IT, and fast-moving consumer goods. He was CFO at Reckitt Benckiser Group plc and held the same positions at Smith & Nephew plc and Invensys plc (now Invensys Limited). Prior to this, he spent 18 years at GlaxoSmithKline plc working in both finance and operations. Adrian has also recently completed a nine-year term as a director on the board of RELX plc.

Adrian began his career working in audit and consultancy with PwC and Stadtsparkasse KölnBonn, the German regional bank. He holds a degree in law and economics from the University of Cambridge.

**John O'Higgins** *(Non-Executive Director)*

John was appointed as a Non-Executive Director in September 2019.

John currently serves as senior independent director of both Johnson Matthey plc and Elementis plc. From 2006 to 2018 he was the Chief Executive Officer of Spectris plc, an international productivity-enhancing instrumentation and controls business, where he led rapid global growth and evolution of the company as it pursued multiple market applications from a board technology platform. From 2010 to 2015, he was a non-executive director of Exide Technologies, Inc. a US-based supplier of battery technology to automotive and industrial users.

John has a Master of Business Administration from INSEAD and a master's degree in mechanical engineering from Purdue University. He is a trustee of the Wincott Foundation and a member of the corporate partnerships board of the Great Ormond Street Hospital Children's Charity.

**Sarah Gordon Wild** *(Non-Executive Director)*

Sarah was appointed as a Non-Executive Director in January 2015.

Sarah currently serves as a non-executive director of Evox Therapeutics Limited and Redx Pharma plc, and as a partner at Duke's Auctioneers (Duke's 1823 LLP). She is also a board member of Lone Pine Capital LLC's offshore funds. From 1983 to 2003, Sarah worked as a biotechnology analyst, based on Wall Street for the majority of this time. She served as a Management Committee member and senior

healthcare analyst at Lone Pine Capital LLC between1998 and 2003.

Sarah has a master's degree in social and economic aspects of science and technology in industry from Imperial College, London and a zoology degree from Aberdeen University.

2. **Senior Managers**

The current members of the senior executive team with responsibility for day-to-day management of the Group (the "**Senior Managers**"), together with a brief description of their business experience and principal business activities outside the Group, are set out below. The business address of each of the Senior Managers (in such capacity) is Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford, OX4 4DQ.

| Name | Position |
|---|---|
| Jordan Herman | Vice President, General Counsel |
| Sarah Lapworth | Vice President, Global Human Resources |
| Zoe McDougall | Vice President, Marketing and Corporate Affairs |
| Dr John Milton | Chief Scientific Officer |
| John Schoellerman | Senior Vice President, Corporate Development and Investment |

**Jordan Herman** *(Vice President, General Counsel)*

Jordan joined the Group as General Counsel in January 2021.

Prior to this, Jordan was a partner at Baker Botts LLP, where he served as the Group's outside counsel for over a decade. Jordan has many years' experience in areas including technology transfer and commercial agreements, M&A, joint ventures, licensing and venture capital. He has worked across the life science, software, medical device and digital media industries, supporting high growth businesses in the US, Europe and around the world.

While at Baker Botts LLP, Jordan was chair of the Austin office corporate department and co-chair of the life sciences practice group. Jordan has a Juris Doctor from The Ohio State University, following which he clerked for the Hon. James Rosenbaum, formerly Chief Judge for the US District Court, District of Minnesota. Jordan also has a degree in political economy from Washington University.

**Sarah Lapworth** *(Vice President, Global Human Resources)*

Sarah is Vice President, Global Human Resources. She joined the Group in 2011 as a consultant before joining as a full-time employee in 2013.

Sarah has had national and global roles in the automotive, medical device and biotech industries, including playing an instrumental role in designing and implementing Abbott Diabetes Care’s (part of Abbott Laboratories) transformation programme.

Sarah is a Chartered Member of the Chartered Institute of Personnel and Development. Following her business apprenticeship, Sarah completed an honours degree in business studies and human resource management at Buckinghamshire New University. Sarah also has a postgraduate diploma in human resource management from Oxford Brookes University.

**Zoe McDougall** *(Vice President, Marketing and Corporate Affairs)*

Zoe is Vice President, Marketing and Corporate Affairs and joined the Group in January 2008.

Zoe started her career in sales and marketing at SmithKline Beecham (now GlaxoSmithKline plc). She subsequently managed a range of strategic scientific and healthcare marketing and communications at Porter Novelli, where clients included GlaxoSmithKline plc, Bristol-Myers Squibb Company and Pfizer, Inc. Prior to joining the Group, Zoe worked at Sinclair Pharma plc where she was part of the team that delivered its IPO in 2003 and subsequently led its investor relations.

Zoe has a degree in physiology from the University of Bristol.

**Dr John Milton** *(Chief Scientific Officer)*

John is the Group's Chief Scientific Officer, having joined as Director of Nanopore Chemistry in 2008.

John joined the Group from Solexa Limited (acquired by Illumina, Inc. in 2007), where he served as Senior Director of R&D, designing and building the Reversible Terminator chemistry that now drives the Illumina, Inc. HiSeq/MiSeq system. Prior to this, John held various scientific and management positions in medicinal chemistry, firstly at GlaxoWellcome (now GlaxoSmithKline plc) and then at Xenova Group plc, where he specialised in designing new chemical systems that interact with the biological machinery of genetic processing and which can be applied as antiviral and anti-cancer therapeutics.

John has a doctorate in chemistry from the University of Liverpool.

**John Schoellerman** *(Senior Vice President, Corporate Development and Investment)*

John is Senior Vice President, Corporate Development and Investment and joined the Group in July 2019.

John joined the Group from Lazard, where he served as Managing Director and head of MedTech, leading a broad range of strategic transactions for clients in the US, Europe and Asia. Previously, John worked in healthcare investment banking at JP Morgan in San Francisco, London and New York.

John holds a Bachelor of Arts from Harvard University and a Master of Business Administration from INSEAD.

## 3. Corporate Governance

### 3.1 The Board

The Board is responsible for leading and controlling the Group and has overall authority for the management and conduct of its business, strategy and development. The Board is also responsible for approving strategic plans, financial statements, acquisitions and disposals, major contracts, projects and capital expenditures.

As at the date of this Registration Document, the Board consists of four Executive Directors and seven Non-Executive Directors.

The UK Corporate Governance Code does not apply to the Company as at the date of this Registration Document.

As at the date of this Registration Document, the Company has the following board committees: (a) audit and risk committee; (b) remuneration committee; (c) nomination committee; and (d) operating committee, details of which are set out below.

### 3.2 Audit and risk committee

The audit and risk committee’s role is to assist the Board with the discharge of its responsibilities in relation to financial reporting, including reviewing the Group’s financial statements and accounting policies, internal and external audits and controls, reviewing and monitoring the scope of the annual audit and the extent of the non-audit work undertaken by external auditors, advising on the appointment of external auditors and reviewing the effectiveness of the internal audit, internal controls, whistle blowing and fraud systems in place within the Group.

The audit and risk committee is chaired by Alan Aubrey and its other members are Guy Harmelin, Adrian Hennah and John O’Higgins. Peter Allen attends audit and risk committee meetings as an observer.

### 3.3 Remuneration committee

The remuneration committee's role is to develop the Group’s policy on executive remuneration (including bonuses, incentive payments and pension arrangements) and determines the levels of remuneration for the chair of the Board, the Executive Directors and other senior employees of the Group.

The remuneration committee is chaired by Sarah Gordon Wild and its other members are Peter Allen, Alan Aubrey, Wendy Becker, Guy Harmelin and John O’Higgins.

### 3.4 **Nomination committee**

The nomination committee's role is to assist the Board in reviewing the structure, size and composition of the Board. It is also responsible for reviewing succession plans for the Company's directors and other senior employees.

The nomination committee is chaired by Peter Allen and its other members are Alan Aubrey, Wendy Becker, Guy Harmelin, Adrian Hennah, John O'Higgins, Gordon Sanghera and Sarah Gordon Wild.

### 3.5 **Operating committee**

The operating committee's role is to develop the Group's purpose, values, objectives, culture, strategic and long-range plans. The operating committee also develops the Board's agenda and enables the flow of information to and from the Board and across the Group by facilitating communications and engagement between key internal stakeholders. The operating committee also reviews and manages the Group's key projects, strategic and significant transactions and any major litigation.

The operating committee is comprised of the Group's Executive Directors, Jordan Herman, Sarah Lapworth, Zoe McDougall and John Schoellerman.

## Part 6. Selected Historical Financial Information

The table below sets out the Group's selected historical financial information as at and for the periods indicated, as prepared in accordance with IFRS, which have been extracted without material adjustment from the Historical Financial Information set out in Section B of Part 8 *(Historical Financial Information)*.

**Consolidated Income Statement**

| | 2020<br>£000's | 2019<br>£000's | 2018<br>£000's |
|---|---|---|---|
| **Revenue** | 113,860 | 52,061 | 32,521 |
| Cost of sales | (66,981) | (26,442) | (16,506) |
| Gross profit | 46,879 | 25,619 | 16,015 |
| **Operating expenses** | | | |
| Research and development expenses | (48,551) | (40,456) | (37,102) |
| Selling, general & administrative expenses | (71,388) | (66,056) | (41,089) |
| **Total operating expenses** | (119,939) | (106,512) | (78,191) |
| **Loss from operations** | (73,060) | (80,893) | (62,176) |
| Finance income | 91 | 518 | 574 |
| Finance costs | (747) | (709) | (423) |
| Other gains | 563 | 600 | - |
| **Loss before tax** | (73,153) | (80,484) | (62,025) |
| Tax credit | 11,909 | 8,268 | 8,906 |
| **Loss for the year** | (61,244) | (72,216) | (53,119) |
| **Loss per share** | £(1.99) | £(2.48) | £(1.86) |

# Part 7. Operating and Financial Review

The following is a discussion and analysis of the Group's results of operations and financial condition for FY18, FY19, FY20, HY20 and HY21 (collectively, the "**periods under review**") and should be read together with the Group's selected consolidated financial and operating data and the Group's consolidated financial information and the related notes included elsewhere in this Registration Document.

For the purposes of this Part 7 *(Operating and Financial Review)*:

- the figures used for the comparisons between FY18, FY19 and FY20 are based on the Historical Financial Information set out in Section B of Part 8 *(Historical Financial Information)* and the figures used for the comparisons between HY20 and HY21 are based on the Historical Financial Information set out in Section C of Part 8 (*Historical Financial Information*); and
- unless otherwise indicated, the historical and other financial data presented in the following tables have been derived from the Historical Financial Information.

The following discussion includes forward-looking statements that, although based on assumptions that the Group considers reasonable, are subject to risks and uncertainties that could cause actual events or conditions to differ materially from those expressed or implied by the forward-looking statements. For a discussion of some of those risks and uncertainties see section 6 (*Forward-looking statements*) of Part 2 (*Presentation of Financial and Other Information*).

## 1. Overview

The Group was established in 2005 and its long-term mission is to enable the analysis of anything, by anyone, anywhere. To this end, the Group's business is focused on designing, developing, manufacturing and commercialising innovative nanopore-based sensing technologies, which, at this time, are principally applied in DNA/RNA sequencing, but have the potential to be developed for sensing or sequencing other types of molecules.

The Group operates in, and generates revenue from, the provision of products and services across the global LSRT market (comprising sequencing for scientific research purposes) and the applied market (which, in the periods under review, comprised the COVID testing market for purposes of the Group's operations), which correspond to the Group's operating segments: the LSRT segment (the "**LSRT segment**") and the COVID testing segment (the "**COVID testing segment**").

The Group's core business is currently focused on sequencing for research purposes in the LSRT sector. While the Group does not expect to generate any material recurring revenue from the COVID testing market following HY21, the Group's sequencing products continue to be used to sequence SARS-CoV-2, the virus responsible for COVID-19, for the purposes of genomic surveillance (including identification of new variants), which are reported within the LSRT segment. Additional uses in the broader applied market (such as in health, food, agriculture and industrial analyses) represent opportunities for future growth. As such, it is anticipated that the Group will not maintain a COVID testing segment following the end of FY21 but may introduce an "applied market" operating segment in the medium term.

- The LSRT segment reflects the Group's revenue from providing products and services for research purposes, to customers typically situated in university, industrial, government research or commercial laboratories. The Group also provides tools used for large-scale human genomics and public health within the LSRT segment.
- The COVID testing segment reflects the Group's revenue from:
  - the LamPORE assay ("**LamPORE**"), the Group's first CE-IVD test, which was developed and commercialised in FY20 to detect the SARS-CoV-2 virus and which combines loop mediated isothermal amplification with nanopore sequencing to perform high-throughput testing; as well as related products (including mobile laboratories). LamPORE has been used for COVID-19 testing in the UK, UAE and Switzerland in FY20 and HY21; and
  - sourcing PCR tests and associated products ("**PCR tests**") from third-party suppliers and reselling them to the UK government.

At present, the Group's technology is being used by a broad range of customers in more than 100 countries, principally in the United States, Europe, the UAE, China, the United Kingdom and Japan. While the Group's technology platform is predominantly used by customers conducting life science research, it is increasingly being used as part of customer-driven applications that move closer towards tests in the applied market. The Directors believe there is overlap and interconnectivity between customers using

sequencing for the purposes of research to understand biology, customers using sequencing to develop services or products based on sequencing, and customers developing molecular tests.

### 1.1 The Group's products and services, revenue model and recognition

The Group generates revenue from the sale and supply of a range of products that users require to perform nanopore sequencing, including consumables (which comprise flow cells and kits) and devices. The Group also generates revenue from delivering complementary services.

*Products*

The Group's products deliver an end-to-end sequencing workflow and are categorised as follows: sequencing products, sample preparation products, and software and analysis tools.

**Sequencing products include:**

- ***Sequencing consumable flow cells.*** The Group generates revenue from the sale of three types of flow cells: MinION/GridION flow cells, PromethION flow cells and Flongle flow cells. Together with sample preparation kits, these comprise the Group's consumables.
- ***Sequencing devices.*** The Group generates revenue from the supply and sale of a range of sequencing devices (MinION Mk1B, MinION Mk1C, GridION, Flongle and PromethION).The Group's portfolio of devices enables users to run the three available formats of flow cells that it supplies, and are made available to customers as part of starter packs (as defined below) and via the CapEX option with a view to driving the sale of consumables.

**Sample preparation products** include sample preparation kits and devices. The Group generates revenue from the sale of a range of proprietary sample preparation kits that enable users to prepare their samples for nanopore sequencing, and from the sale of VolTRAX, a USB-powered portable sample preparation device designed to automate the sample preparation process.

Sample preparation kits and sequencing products can be purchased individually (other than sequencing devices) or as part of starter packs (including the CapEX option (described below) in FY18, FY19 and FY20 through to December 2020) ("**starter packs**").

**Software and analysis tools** include the Group's proprietary MinKNOW software to run its devices; a range of basecalling tools, a range of bioinformatics tools, EPI2ME (a cloud-based data analysis platform) and EPI2ME Labs (a bioinformatics solution).

While bioinformatics tools that are released into open access are available to customers without charge and do not directly generate revenue for the Group, developments can be incorporated into supported products or analysis workflows by the Group.

The MiniKNOW software, basecalling tools, EPI2ME and EPI2ME Labs are currently offered to customers as a package, which is incorporated within the software licence and device warranty ("**SLDW**"). Customers are required to maintain an SLDW to operate devices included within starter packs; in the case of a device purchased as part of the CapEX option, an SLDW is required to continue to receive support and upgrades to such device. While the Group currently generates revenue from these software and analysis tools by way of fees charged in respect of the SLDW, the Group may, in the future, generate further revenue from software and analysis tools that are made available for purchase individually (over and above tools that are included within the SLDW), including potential enhancements to tools included within the SLDW.

The Group does not generate direct revenue from bioinformatics tools that are developed and released by the user community into open access and are available to users without charge.

*Services*

***Software Licence and Device Warranty ("SLDW").*** The MinION Mk1C, GridION and PromethION devices are supplied to customers with a 12-month SLDW as part of a starter pack. Following the initial 12-month period, customers that have received a device as part of a starter pack are required to purchase a further 12-month SLDW to continue using the device; otherwise, they are required to return the device. Customers that have purchased the device outright as part of a CapEX option also receive a 12-36 months SLDW (depending on the package option), and are required to renew the SLDW to continue to receive support and upgrades to their device. The Group generates revenue from licensing fees in respect of the SLDW.

***Certification.*** The Group enables customers of GridION and PromethION to offer nanopore sequencing as a service to third parties, provided that such customers have obtained the required certification to do so. Certified labs undergo a certification programme to ensure they offer the highest quality nanopore data

to their end users. To obtain certification, service labs are required to complete a number of sequencing runs on the GridION and/or PromethION using validated DNA/RNA samples. The Group typically charges a one-off charge for certifying a lab, and typically generates revenue from the certification of GridION and PromethION devices on an annual basis as device certifications must be renewed (and are charged) annually.

***Training.*** The Group offers free training for the operation of its sequencing devices and workflows, including online tutorials. The Group generates revenue from offering a more personalised training service at a charge, which is designed to equip attendees with a comprehensive overview of the technology and tools needed to perform successful nanopore sequencing experiments.

***Ongoing improvements to the nanopore technology platform.*** The Group typically delivers ongoing improvements to its nanopore sequencing technology platform, which may include upgrades of sample preparation kits, flow cell chemistries and analysis methods. As the upgrades are made to consumables and software and analysis tools, they can be delivered in a cost-effective way without requiring a device to be replaced. Where device upgrades are appropriate, these upgrades are prioritised to users with active SLDWs and open consumable orders. This approach has delivered rapid performance enhancements in user hands, in contrast to other vendors that typically require users to incur significant capital investments in order to benefit from the latest technology changes.

In respect of upgrades to consumables (such as flow cells and kits), the Group generates revenue from the sale of upgraded products. While the Group does not, at present, separately charge for improvements to its software and analysis tools, the Directors believe such upgrades are central to the Group's strategy and competitiveness.

*Revenue model and recognition*

The Directors believe that the Group's revenue model and pricing strategies differentiate it from its competitors, as it lowers barriers to entry by making the Group's products highly accessible to users, with the goal of enabling and driving broad use and adoption of its technology across a wide range of use cases.

To this end, the Group's revenue model is predicated on seeking to acquire new customers by introducing them to a range of starter packs, and then focusing on helping them to successfully carry out their experiments, following which the Group seeks to generate further recurring revenue from the sale of consumables. The Group's starter packs provide customers with use of a device for a specified period of time, together with an initial supply of consumables to run experiments and generate data on the device, access to accompanying services to support the installation of larger devices, and a 12-month SLDW in respect of the device(s) provided, all for a packaged price. Starter packs are designed to be affordable to a broad range of customers, and, in most cases, can be purchased through users' consumable budgets without requiring access to capital funding. In addition, the Group remains focused on lowering barriers to entry for new customers by making starter packs readily available through its e-commerce platform.

- The least expensive starter pack is for the MinION device, which is available on the Group's e-commerce platform for $1,000.
- The Group also sells larger starter packs that are designed to compete across the range of laboratories and customer types within the sequencing market. For example, the GridION Starter pack at $49,955 contains 60 flow cells, reagent kits, a GridION device available for use for 12 months, a 12-month SLDW and onsite set up.
- In addition, the Group offers a PromethION 24 starter pack for $195,455 and, for the Group's largest customers, a PromethION 48 starter pack for $285,455; in each case, the Group makes the PromethION device available for use for 12 months, and provides users with a fixed number of flow cells and reagent kits, a 12-month SLDW, and onsite set up and familiarisation.

As a result of providing devices without a separate charge within starter packs, the Group's margins are usually lower on starter packs.

In FY18, FY19 and FY20 (through to December 2020), customers were also offered a CapEX option that enabled them to purchase and own their device, together with an initial supply of consumables to run experiments and generate data on the device, access to accompanying services to support the successful installation of larger devices, and an SLDW for 12-36 months (depending on the package provided) in respect of the device provided, also for a packaged price. Since December 2020, the CapEX option only includes sale of the relevant device as a stand-alone item that includes an SLDW for 12-36 months. The CapEX option is also designed to facilitate greater accessibility and broad use of the Group's products.

The price of a device sold via the CapEX option ranges from $9,300 for a MinION Mk1C, $69,955 for a GridION Mk1 and $530,000 for a PromethION 48. For purposes of this Part 7, revenue generated from the sale of CapEX options is included within starter pack revenue.

Once all consumables in a starter pack (and, historically, the CapEX option) have been used, the Group has the opportunity to generate recurring revenue from the sale of consumables, the renewal of the SLDW (typically on an annual basis), and the provision of ongoing services to customers. Pricing of consumables is transparent and accessible on the Group's website. For example, the Flongle flow cell is sold for $90, and is, to the knowledge of the Directors, the least expensive sequencing consumable available in the LSRT market.

SLDWs, which are required for GridION and PromethION devices, range from approximately $12,500 to $30,000 annually.

On-site training for specific applications is charged according to the type of device, from $6,000 for a day of training to approximately $20,000 for a 2.5 day of advanced training on the PromethION device. Currently, the training charge includes the cost of consumables used to perform the training.

The Group typically charges $10,000 for the certification of a lab, which is a one-off charge, and typically generates $2,000 and $8,000 in revenue from the certification of a GridION device and PromethION device, respectively, which device certifications must be renewed (and are charged) annually. The certification charge includes the supply of consumables required to perform the control experiments. In certain contexts, such as in food safety applications, the Group generates revenue from a share of revenue on the tests or services that its certified customers provide to third parties. While this revenue stream is not currently material, the Group expects it to become increasingly important with growing usage of its devices and platform.

Revenue from the sale of standalone products or products within starter packs (including the CapEX option) are recognised at a point in time (being the time of sale).

Revenue from the lease of sequencing devices included within starter packs is recognised on a straight-line basis over time, being the first 12 months following the purchase of a starter pack.

Revenue from SLDWs included within starter packs (including the CapEX option) or purchased individually by the Group’s customers is recognised on a straight-line basis over the duration of the SLDW, which can range from 12-36 months in the case of an SLDW.

Revenue from the provision of services not included within the SLDW, such as technical training, certification and consultancy services to customers is recognised over time, across the period the services are provided.

### 1.2 Customer categories and commercialisation of the Group's products and services

Due to the different commercial strategies used for various types of customers, the Directors evaluate the Group's revenue across three customer categories, which are categorised by the Group according to the value of invoiced revenue that they generated for the Group in the previous twelve months. Customers within each customary category are evaluated and reclassified bi-annually, in June and December, based on amounts invoiced in the previous twelve months.

For revenue analysis purposes, the Group categorises its customers within the LSRT segment as follows:

- *"*S1" customer accounts generate invoiced revenue less than $25,000 in the previous twelve months. Customer accounts in this category are typically users of the low-cost MinION device and are usually supported with a 'light touch' customer journey. Customers in this category with strategically important applications, or potential to grow, are typically offered additional services, in order to support their growth.
- "S2" customer accounts generate invoiced revenue between $25,000 and $250,000 in the previous twelve months. Customer accounts within this category could be users of the MinION, GridION or PromethION devices. Such customers are typically supported with a blend of online and office- based resources, and in-field resources are deployed to ensure customer success. Many of these customers either choose to purchase additional services or are targeted with additional in-house and field based support due to their potential to grow into larger customers.

- "S3" customer accounts generate invoiced revenue in excess of $250,000 in the previous twelve months. Typically, customers in this category run networks of GridIONs or PromethION devices with larger or more complex projects, or have high-impact uses. These customers are typically supported by designated field-based account managers and support teams.

The Group provides technical support to its customers as they start to use the products. The level of ongoing support and the nature of interaction with each customer is determined by the category of their customer account, with the overall goal of promoting successful ramp-up and increasing utilisation of consumables over time.

See section 14.6 *(Strategic deployment of commercial resources to drive growth) of* Part 4 *(Business and industry)*, for further information on the Group's customer categories from a business perspective.

In seeking to maximise its revenue, the Group is able to deploy a range of commercialisation options, which include direct commercialisation, strategic partnerships and distribution and dealer agreements. The Group has developed its own sales, marketing and support functions to directly commercialise its products, including an e-commerce function (which supports transparent, volume-stratified pricing structures and self-service), and a sales team that targets larger customers in a more traditional manner.

As well as direct sales to customers, the Group relies on local distributors and dealers in certain territories to support its commercial activities, including China, Japan, Russia, Turkey, India, South Korea and parts of Africa. The Group may, in the future, add additional sales distribution channels to increase its commercial footprint. As well as commercialising its existing products, the Group intends to support its customers in the commercialisation of future applications, which the Group believes will maximise the impact of potential new methods in the applied market.

### 1.3 Recent developments and current trading

On 11 August 2021, the Group signed a distribution agreement with Avantor, a leading global provider of mission-critical products and services to customers in the life sciences, advanced technologies and applied materials industries. Beginning in September 2021, MinION starter packs, MinION flow cells and the Group's preparation kits are available through Avantor's e-commerce platform across North America (including the US and Puerto Rico, with Canada included from early 2022) and Europe (including the UK, EU, Norway and Switzerland), with other regions expected to be added in 2022. The Group also continues to sell MinION products directly. The Group's sales and support teams are enhanced by Avantor's sales and life science specialist teams, who provide local support for MinION. All users of MinION continue to be supported within the online Nanopore Community, where they can keep up to date with latest product news and collaborate with other nanopore users.

## 2. Key factors affecting the Group's results of operations

The Group discusses below the principal factors that have had, and are likely to continue to have, a material effect on the Group's results of operations. While each of these factors may present significant opportunities for the Group's business, they also pose important challenges that the Group must successfully manage in order to achieve targeted growth and improve the Group's results of operations.

### 2.1 Investment in innovation (R&D) to improve product performance, expand the Group's product range and drive revenue growth

The Group's investment in innovation (R&D) is central to its growth strategy, and the Directors believe that such investment has been a principal driver of revenue growth and net losses in the periods under review.

The Group's R&D programmes drive continuous iteration, and improvement of the Group's products, through multiple processes including developing novel chemistry approaches around the nanopore, membrane, and sample preparation processes, as well as complementary algorithm development. These programmes include R&D towards substantially easier-to-use, low-cost, portable analysis, and ongoing performance improvements, which have the potential to be adopted at scale in distributed networks, provide new features into the market to access, reshape and expand it, or drive costs-efficiencies in the sequencing of larger datasets (for example through low-cost whole human genome sequencing). For example, having developed the electronic platform to support nanopore sensing, as well as specific products for DNA/RNA sequencing, the Group also intends to develop products designed to analyse other types of molecules, most notably for electronic protein analysis. For further information on the Group's pipeline of products that are under development, please refer to section 6 *(Pipeline products)* of Part 4 *(Business and industry)*.

The Group has incurred significant R&D expenditure in the periods under review, which is recognised

on the Group's income statement, as well as development costs (which principally comprise those costs incurred in developing the Group's core technology platform and sequencing kits) that qualify under IAS 38 to be capitalised as internally generated intangible assets. Please refer to note 3 to the Historical Financial Information for further information regarding the preconditions that must be satisfied to capitalise development costs. The following table presents a breakdown of the Group's R&D expenditure and capitalised development costs periods indicated.

| | FY 18 | | FY19 | | FY20 | | | HY20 | | | HY21 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | % of LSRT revenue | £,000s | % of total revenue | % of LSRT revenue | £,000s | % of total revenue | % of LSRT revenue |
| Research and development expenses | 37,102 | 114.1 | 40,456 | 77.7 | 48,551 | 42.6 | 74.1 | 23,770 | 49.2 | 94.3 | 30,602 | 51.9 | 58.2 |
| Capitalised development costs | 6,619 | 20.4 | 11,829 | 22.7 | 10,735 | 9.4 | 16.4 | 1,825 | 3.8 | 7.2 | 4,256 | 7.2 | 8.1 |
| **Total research and development expenses and capitalised development costs** | **43,721** | **134.4** | **52,285** | **100.4** | **59,286** | **52.0** | **90.5** | **25,595** | **53.0** | **101.5** | **34,859** | **59.1** | **66.3** |

The Group's R&D expenditure and capitalised developments costs in the periods under review have been focused on, and the Group's revenue growth in the periods under review has been driven by:

- the launch of new products, including GridION, PromethION 24 and PromethION 48, MinION Mk1C, which the Directors believe has been a significant contributor to growth in the Group's customer base, recurring revenue from the Group's customers, (particularly average revenue generated from S2 and S3 customers), and total revenue in the periods under review:
  - the Group began commercialising its products in 2015, with Mk1B MinION, which can run one flow cell at a time and requires attachment to a PC. The GridION, which was released in FY19 (subsequent to release of the GridION Beta in July 2017), enables MinION customers to easily expand their capacity without changing protocols, as five MinION flow cells may be run at the same time, with a TMO of 250 Gb per run. Five MinION flow cells generate revenue for the Group in the range of $2,375-$4,500 per 72 hour run excluding sample preparation kits; and
  - the PromethION 24 runs 24 PromethION flow cells at the same time, with a TMO of 7 Tb per run. 24 PromethION flow cells generate revenue for the Group of $15,000 or more per 72 hour run. The PromethION 48 runs 48 PromethION flow cells at the same time, is used by high throughput customers in large-scale projects, and has competitive pricing relative to the largest sequencing devices in the world. The Group's larger customers with greater than 10 PromethION 48's have the potential to generate revenues for the Group that exceed $500,000 per week, assuming two runs per device per week;
- the development and commercialisation of LamPORE in FY20, in response to a call from the UK government to develop new COVID-19 testing technologies as an alternative to PCR tests. Sales of LamPORE and related products (which comprise mobile laboratories) accounted for £25.2 million and £6.4 million of the Group's total revenue in FY20 and HY21, respectively;
- rapid innovation towards building novel and competitive technology, broadening the range of applications that can be performed with the Group's technology and extending the use cases of current nanopore sequencing technology to drive market expansion;
- delivering continuous improvement in respect of the performance, accuracy and usability of the Group's technology (including ongoing improvements to product features and minor performance enhancements (such as delivering frequent upgrades of flow cell chemistries, analysis methods and free hardware upgrades), and delivering substantial step-changes, through extensive internal R&D completed via external collaborations. A recent example of such innovation is the release of the PromethION 24, PromethION 48 and related new PromethION chip design in FY19, which has driven a substantial increase in 'pore occupancy' on the sensor chip, which in turn has driven increases in data yields and therefore supports greater price competitiveness for high-throughput sequencing;
- throughput improvements to enable customers to substantially reduce their cost of sequencing, such that the Group is now able to offer more price-competitive sequencing to customers in line with its competitors, without the need for an upfront capital investment from customers; and

- improvements to the accuracy and quality of data produced, which has driven an increase in the number of applications and range of projects that use the Group's platform.

As an innovation-led business, the Group's R&D expenses and capitalised development costs will remain core to its business, including to develop new products and technologies, support further scale-up and drive future growth. The size and focus of such investment may vary year-on-year depending on the Group's strategic focus and initiatives. While the Directors anticipate future losses as the Group continues to invest in further R&D to drive future growth in line with its business strategy, the Directors expect the Group's R&D expenses will grow at a slower rate, in absolute terms, relative to growth in revenue. This should support the Group's target of reducing its net losses year-on-year, with the aim of improving its Adjusted EBITDA to break-even within the next five years.

### 2.2 Changes to the Group's revenue mix, with growth in recurring revenues supported by new customer acquisition

*The Group's differentiated pricing model targeted at supporting new customer acquisition and driving growth in recurring revenue*

The Group's revenue in the periods under review has, to a material extent, benefited from an increase in revenue contribution from the sale of consumables relative to revenue generated from the sale of starter packs and CapEX options. See section 5 (*Results of operations*) for further detail.

The Directors believe this trend was achieved as a result of the Group's commercial strategy of driving broader market usage by providing devices to its customers without requiring a significant upfront capital investment, as part of starter packs (including CapEX options) that contain consumables to facilitate easy and efficient exposure to the Group's technology, and, which in turn encourage recurring purchases of sequencing consumables. The Directors also believe that this trend was supported by significant investment in innovation, including the development of a new range of products and improvements to existing products and the Group's platform, which has supported customer retention and further purchases of consumables.

The Directors expect the Group's revenue from the sale of consumables to grow on an absolute basis, and continue to become an increasingly important contributor to the Group's revenue over time.

*Recurring revenue*

The Group generates recurring revenue from the sale of consumables, as well as other services (particularly from SLDWs and certifications, which are required to be renewed). The Group continues to assess trends relating to recurring revenue based on its product offerings, its customer base and its understanding of how customers use its products. Revenue contribution from products and services that are recurring in nature may vary from period to period due to, among other factors, customer demand and budgets, the Group's introduction of new products and services, as well as enhanced features and solutions or other improvements to existing products and services. In addition, funding cycles of the Group's customers vary, leading to seasonality or project-based consumables order patterns. See section 2.8 *(Economic cycles, market dynamics, seasonality and changes to large scale human genomic projects or customer funding cycles)* below for further information on seasonality.

*Customer concentration*

While no single customer accounted for more than 10% of the Group's revenues in FY20 (excluding the DHSC in respect of the COVID testing segment), and while only one major customer based in the UAE accounted for more than 10% of the Group's revenues in HY21 (17.5% compared to 0.7% in HY20), the Group's results of operations have in the past, and are expected to continue to be, affected by customer concentration, as a limited number of customers historically have accounted, and are expected in the short-to-medium term, to continue to account for a substantial portion of the Group's revenues, including revenue from the LSRT segment and, in FY20 and HY21, COVID testing revenue.

In FY18, FY19, FY20 and HY21, the Group's S3 customers (representing 12, 28, 29 and 42 customers, respectively) accounted for 20.7%, 32.2%, 27.1% and 37.1%, respectively, of LSRT revenue. Further, an increasing portion of the Group's revenue relates to large scale human genomic surveillance programmes. These programmes, which are typically conducted by government agencies or institutions, are generally dependent on public funding, and the extent of the Group's participation in such programmes will ultimately depend on agreed terms (which may not guarantee recurring revenue). The Group generated £3.8 million and £9.8 million of revenue in FY20 and HY21, respectively, from the sale of products and services to one customer in the UAE, to set up a large-scale human genomics programme that is dependent on public funding. The Group expects to generate $32 million of revenue, in aggregate, under this existing contract

(the "**Emirati Contract**"). The Group is currently in discussions with G42, which has indicated that the Emirati Department of Health has stated its ambition is to sequence the entire Emirati founder population of approximately 1.1 million people (the "**Emirati Project**"), regarding the Group's ongoing participation in such programme following the expiry of the Emirati Contract later this year.

In addition, as a result of the COVID-19 pandemic, governments have increased funding in respect of pathogenic surveillance programmes as a tool to research and control the pandemic. However, the Group's results of operations may be affected and may not grow at the same rate as growth achieved in FY20, if governments do not continue to increase or maintain their current funding levels in respect of large scale human genomic surveillance programmes in the future.

In the COVID testing segment, all of the Group's revenue from the resale of PCR tests (in FY20) and the substantial majority of revenue from the sale of LamPORE and related products (in FY20 and HY21) was attributable to one customer (the DHSC). In April 2021, the DHSC determined it no longer had a requirement for LamPORE and sent a notice purporting to terminate its contract with the Group early before taking the maximum quantity allowable under the contract. While this event has had no financial effect on the net assets or any individual financial statement line item as of 31 December 2020, and while the Group does not expect to suffer any liability as a result of this contract termination, the Group's revenue in FY21 is expected to be materially impacted. The Directors expect the Group's rate of revenue growth in FY21 to be slowed notwithstanding the anticipated growth in revenue from the LSRT segment.

Although the Group's wider customer base continues to grow, the rate of such growth may not be sufficient in the short term to reduce the proportionate share of revenue of the Group's largest customers. In the short term, the Directors expect the most significant contribution to the Group's revenue and revenue growth to continue to be derived from a relatively small number of customers in the S3 customer category, which are very active users typically engaged in large-scale human genomics and public health studies. The S3 customer category is expected to represent the largest addressable customer category in the short term, in particular due public funds being directed to such customers' projects and due to the resumption and expansion of S3 projects that were deferred in FY20 due to closure of customers' labs as a result of the COVID-19 pandemic. While the Group operates a transparent, volume-driven pricing scheme, such customers may have a degree of bargaining power that could affect broader contractual terms and adversely impact the Group's margins.

In the medium-to-long term, the Directors expect the S2 customer category to provide strong and steady growth, and represent the largest addressable segment for the Group, as sequencing is democratised and more labs implement in-house sequencing. The Group saw evidence of this in FY20 and HY21 as molecular biology labs adopted viral sequencing in response to the COVID-19 pandemic. In addition, S1 customers are expected continue to be strategically important as the Group develops distributed networks of nanopore users.

If the Group ceases to do business with a material customer (due to decisions by either party) or if the levels of sales of the Group's products to such a customer were to materially decrease (including if sales to a material government customer in order for it to pursue large scale human genomic surveillance programmes materially decrease, including by reason of any decrease in or renegotiation of orders previously placed), or if the Group's contracts are re-negotiated in such a way as to adversely impact pricing and/or its margins, the Group's results of operations may be materially adversely affected.

In addition, due to customer concentration, the Group may have a large amount of outstanding receivables with a material customer at any one time. If there is an adverse change in the creditworthiness of such a material customer, or if it were, for example, to file for bankruptcy protection, the Group could be prevented from collecting its receivables, which would adversely affect the Group's results of operations.

2.3 **Changes to the Group's margins impacted by product mix, innovation and operational infrastructure**

In the periods under review, the Group's gross profit (being revenue less cost of sales) increased from £16.0 million in FY18 to £25.6 million in FY19 and £46.9 million in FY20, and also increased year-on-year from £16.1 million in HY20 to £30.2 million in HY21. The Group's gross profit margin in the periods under review remained relatively stable at 49.2% in FY18 and FY19, declining to 41.2% in FY20, and increased from 33.3% in HY20 to 51.2% in HY21 (although the Group’s gross profit margin in HY20 as well as FY20, was adversely affected by sales of COVID-19 testing products, which carry a lower gross profit margin).

The Group's gross profit and gross profit margin have been, and are expected to continue to be, impacted by, among other things: changes in the mix of the Group's revenue; manufacturing automation and improvements to the Group's manufacturing process and designs; improved logistics; recycling of costly

components; the cost of raw materials; improvements to the Group's products and services (particularly as products become more established; for example, the Group's gross profit margin in FY20 was adversely affected as a result of the replacement of early access GridION Betas that were at customer sites with GridION MK1s free of charge, to address quality issues with the early access versions; and the significant increase in the Group's margin on the PromethION flow cells in HY21 relative to FY19 and FY20, as they became more established products). The Group's gross profit and gross profit margin have been, and are expected to continue to be, affected by fluctuations in the Group's product performance which may be material, driven by but not limited to inconsistency in raw material components, challenges in supply of materials and replacement of end-of-life materials. These inconsistencies have been experienced across all of the Group's consumable platforms, which have in the past required the Group to provide replacement consumable products at no additional charge, with an adverse impact on the Group's costs. In addition, low utilisation rates of the Group's products could also impose downward pressure on the Group's gross profit margin.

The outcome of any material litigation may also impact the Group's revenue and, consequently, gross profit, and any changes to royalties that the Group is required to pay, could impact the Group's gross profit margins.

Depreciation of assets subject to operating leases, which comprise GridION Betas, GridION Mk1s, PromethION Betas, PromethION 24s and PromethION 48s at customer sites, which have been and/or are made available to customers as part of starter packs, have also impacted the Group's gross profit and gross profit margins in the periods under review, as the Group has sought to drive the sale of starter packs (which typically carry a gross profit margin of less than 30%). The depreciation of assets subject to operating leases is accounted for within the Group's cost of sales, and amounted to £3.2 million, £7.5 million, £5.0 million, £2.4 million, and £3.1 million in FY18, FY19, FY20, HY20 and HY21, respectively.

The Group's gross profit margins are typically higher on the sale of consumables (in particular MinION flow cells and reagent kits), relative to bundled products and services such as starter packs, which are core to the Group's efforts to drive accessibility and new customer acquisition, and which promote growth in recurring revenue from the sale of consumables and other services (such as SLDW and certification). Established consumables typically carry a gross profit margin of more than 60%. In certain instances, margins may be lower on certain consumables, such as products that are less established, or as a result of commercial decisions taken by the Group (such as to lower margins on PromethION flow cells sold in FY20 in connection with the strategic decision to change chip manufacturing methods in order to improve long-term scale up for manufacturing of PromethION flow cells). As consumables become more established, the Directors anticipate that margins from such consumables will increase over time, to become more in line with margins received for established consumable products (such as the MinION flow cell, which currently carries higher gross profit margins than the PromethION flow cell).

The Group's gross profit margins on products and services associated with COVID-19 testing are generally lower than those on the sale of consumables, which also contributed to the decline in the Group's gross profit margin in FY20 relative to FY19. As such, the improvement in the Group's gross profit margin in HY21 is, in part, due to COVID testing revenue accounting for a smaller proportion of total revenue. The Directors believe the Group's gross profit margin in FY21 and beyond is expected to benefit from no further revenue being generated from COVID testing products beyond HY21.

As the Group expands its pipeline of products and services (such as preparation or automation devices, sequencing devices, further basecalling methods and analysis tools), the Directors expect such products and services to complement the Group's starter pack and consumable offerings, with the potential to charge for potential enhancements to services currently included within the SLDW, which may carry higher gross profit margins. In addition, the Directors believe that as the Group's technology matures and pipeline products are developed, this will support diversification of the Group's revenue by facilitating expansion of its offering to address the unmet needs of customers across the applied market, which may include healthcare, agriculture, food, industrial or environmental analysis or education. As at the date of this Registration Document, the Group's sales into the applied market have primarily consisted of sales of LamPORE. As the Group expands into the applied market, it will have opportunities to explore a different pricing strategy rather than the consumables-driven model currently used in the global LSRT market; for example, a 'per test' pricing strategy and/or pricing based on a percentage share of the Group's customers' revenue received from third parties in respect of services that they provide, which should have a positive impact on the Group's gross profit margin. However, if the Group offers devices free of charge in applied market commercial models, to support the Group's broad philosophy of making technology easy to access and to support volume test pricing, the Group's gross profit margin may be impacted.

The Group's pricing strategy for its products and services, and associated gross profit margins, may

fluctuate in future due to a variety of factors, including the introduction by others of competing products and solutions, or the attempted integration by third-parties of capabilities similar to the Group's into their existing products. The Group intends to mitigate downward pressure on its average selling prices by continuing to increase the value proposition offered by its devices and consumables, primarily by, for example, expanding the applications for its devices and increasing the quantity and quality of data that can be obtained using the Group's consumables.

The improvement in the Group's gross profit margin in HY21 is, in part, due to improvements in the Group's manufacturing process and designs, including the opening in FY19 of the new MinION high-tech manufacturing facility designated to scale-up high quality production capacity, such as enabling modular clean room and laboratory expansion that will allow for a tenfold scale-up of current capacity.

The Directors are targeting a gross profit margin of approximately 55% in FY21, a gross profit margin in excess of 60% in FY23 and, in the medium term, a gross profit margin in excess of 65%, supported by a greater proportion of the Group's total revenue being derived from consumables relative to starter packs, a decline in COVID testing revenue, growing gross profit margins from products as they become established, and from improvements to manufacturing automation (including greater use of manufacturing capacity, and improved manufacturing techniques). The Directors also believe the Group's gross profit margins will, in future, benefit from greater economies of scale, including in particular with respect to manufacturing automation and improvements in manufacturing processes, improved logistics, increased recycling of costly components, as well as the Group's ability to source raw materials more cheaply as its business grows.

### 2.4 Investment in operational, commercial and IP infrastructure and growth

The Directors believe that the Group's significant revenue growth in the periods under review has benefited from, and the Group's future revenue will benefit from, its investment in operational, commercial and IP infrastructure and growth. Such investment to date has been funded principally from funds raised from the issuance of new shares by way of a series of private placements and from available cash and cash equivalents. The Group's investment in operational, commercial and IP infrastructure and growth in the periods under review have included:

- establishing solid operational infrastructure to support growth, including the development of commercial infrastructure and manufacturing capabilities (such as manufacturing-specific innovation and automation) that cover the breadth of manufacturing, from the product development phase through to established manufacturing processes, to expand production capacity and commercial operations. This includes, for example, the investment in opening the MinION high-tech manufacturing facility in FY19;
- investing in the growth of the Group's commercial operations, including establishing commercial offices in Oxford, New York, Boston, San Francisco, Singapore, Tokyo, the Netherlands, Shanghai, and Beijing. In addition, the Group has established distributorships in South Korea, India, Russia, China, Turkey and other difficult to reach areas, to facilitate growth in the Group's commercial operations;
- expanding the Group's reach and distribution capabilities, such that the Group's products are able to be shipped directly from the Group's manufacturing facility in Oxfordshire as well as from third-party logistics facilities based in the United States, the Netherlands and Shanghai, to customers in more than 100 countries;
- developing the Group's:
    - TT function, which occurs primarily in-house, and which takes new products and iterations of products out of R&D and develops the manufacturing processes at scale, before transferring an established product and process into high-volume manufacturing operations;
    - IT, including investments in sales operations, finance, manufacturing and operational systems and teams;
    - e-commerce site and its online community, to facilitate electronic transactions and communications with the majority of customers. In particular, this enables the Group to interact with and grow its S1 customer base at a relatively low cost;
    - in-house digital telemetry systems, together with the ERP system, which integrate with devices in the field, to service and support existing customers by enabling the serial tracking of all flow cells and devices at point of manufacture, distribution and at the customer's site, enabling the real-time monitoring of product quality and performance in-field, the anticipation of issues and ongoing product performance in the hands of a customer, while reducing the need for traditional customer

service resources. This allows the Group to service a broad range of customers with relatively efficient commercial resources, in contrast with traditional sequencing technologies that require greater sales and support resources, which developments contributed to investments in property, plant and equipment in the periods under review (which comprised purchases of property, plant and equipment of £3.4 million, £11.0 million, £6.9 million, £2.0 million and £3.9 million, in FY18, FY19, FY20, HY20 and HY21, respectively), including investments in laboratories and laboratory equipment, IT equipment, manufacturing and technology transfer infrastructure. In FY19, this also included an £8.7 million investment in the MinION manufacturing facility;

- deploying targeted marketing across the Group's online community, and establishing a significant presence at industry and Group-led conferences around the world, to facilitate greater understanding and recognition of the Nanopore brand worldwide; for example, hundreds of participants were present at London Calling 2019 and this has since expanded to thousands of participants as the conference transitioned to a virtual format in 2020 and 2021 due to the COVID-19 pandemic;
- building an extensive IP portfolio through in-house development and licensing agreements with third parties, which covers a broad range of aspects of nanopore sensing, including potential future generations using solid state materials; the Group's patent portfolio includes more than 2,000 issued patents and applications (of which more than 800 were generated by internal R&D) across more than 260 patent families that cover all aspects of nanopore sensing including fundamental patents for nanopore sensing, and patents relating to DNA sequencing;
- establishing an electronics-based platform technology that has the potential to be adapted for the analysis of other molecules as well as DNA/RNA;
- incurring expenditure to manufacture a large number of GridION and PromethION devices at customer sites, which are classified as assets subject to operating leases and, while they are robust and typically continue to operate for many years, they are depreciated over two and three years, respectively. The Group invested £7.8 million, £7.5 million, £8.8 million, £3.4 million, and £5.9 million in the addition of assets subject to operating leases at customer sites, in FY18, FY19 and FY20, HY20 and HY21, respectively, which reflects the portion invested in property, plant and equipment to manufacture and add new GridION and PromethION devices to the Group's assets in such periods;
- participating in research collaborations and maintaining licences with 28 academic institutions; and
- recruiting the best talent across a range of disciplines, and building strong commercial, innovation and operational support teams.

As a result of such investments, the Group has, in the periods under review, benefited from significant growth in revenues and incurred significant losses. This includes operating losses of £62.2 million, £80.9 million, £73.1 million, £41.7 million and £43.6 million in FY18, FY19, FY20, HY20 and HY21, respectively.

As part of its growth strategy, the Directors expect to continue to invest in the Group's technology, the development of existing products and an innovative product range, and other initiatives targeted at accelerating revenue growth and customer traction, and reducing the risks associated with such growth. Such investments may include, among other things:

- an increase in sales, marketing and distribution expenses to achieve the Group's objective of doubling its commercial team in the next 18 months as the Group continues to grow its user base;
- an increase in investment in R&D (see section 2.1 *(Investment in innovation (R&D) to improve product performance, expand the Group's product range and drive revenue growth)* for further information) to deliver the Group's product pipeline;
- an increase in capital investment to support the Group's ability to continue to offer accessible technology to a broad range of users and extend the Group's reach to under-served markets (for example, increased investment in assets subject to operating leases, being GridIONs and PromethIONs included within starter packs);
- further investment in scaling-up manufacturing operations and the surrounding supply chain, with the aim of improving manufacturing automation, manufacturing processes and design, and continuing to bring manufacturing in-house over time to increase margins and to reduce associated risks and costs;
- expansion of core functions that support rapid growth, especially where the regionalisation of the Group's business requires additional teams (such as in HR, finance, legal or other corporate functions);
- further investment in expanding or adding key technologies that the Directors believe will facilitate the

commercialisation of the Group's products and services and accelerate growth in the applied market;

- scaling-up recycling of costly components to achieve cost savings, particularly across the S3 customer category with which the Group maintains closer relationships; and
- expansion of in-licensing and pursuing acquisitions (which may take the form of an asset acquisition, a business acquisition or the exclusive or non-exclusive licence of patented technology).

As a result of projected investments to pursue the Group's revenue growth objectives, and anticipated fluctuations in operating expenses and capital expenditures over time, the Directors expect the Group to continue to incur operating losses, with a target of improving its Adjusted EBITDA to break-even within the next five years. The Directors expect to achieve this through greater economies of scale and improved gross profit margins, including due to improvements in manufacturing automation, manufacturing processes (including manufacturing designs), improvements in logistics, greater recycling of costly components, and more efficient sourcing of raw materials. See section 2.3 *(Changes to the Group's revenue mix, with growth in recurring revenues supported by new customer acquisition)* above for further information.

### 2.5 IP protection and litigation

In the periods under review, the Group has made material investments in building and protecting its IP portfolio, consisting of patents, trademarks, use of trade secrets and copyright**.** To complement the Group's internally developed IP, the Group has also fostered long-standing relationships with a number of leading academic institutions worldwide. The Group sponsors academic research with a view to identifying technological developments and patents that the Group may wish to licence. The Group has typically obtained, and will typically seek to obtain, licences of IP developed through such collaborations on exclusive, worldwide licensing terms. The Group has incurred material costs in respect of sponsored research and IP licences, including due to licensing more IP than the Group uses in connection with its existing products and services, with a view to strengthening its IP protection and providing greater flexibility in the event that changes are made to the Group's products and services. In FY18, FY19, FY20, HY20 and HY21, the Group incurred £5.4 million, £6.7 million, £6.5 million, £3.5 million and £5.0 million in respect of IP costs and sponsored academic research.

In addition, the Group has, in the periods under review, incurred material costs in monitoring and preventing unauthorised use of the Group's IP rights, and defending litigation or other proceedings relating to IP rights brought by third parties, including the Group's competitors, who have sought to challenge the validity, enforceability or scope of the Group's IP rights. For example, the Group was recently involved in litigation concerning certain patents, including patents relating to nanopore sequencing technology held by PacBio, one of the Group's competitors. See Part 4 *(Business and industry)*, section 10 *(Intellectual property)* for further information. In FY18, FY19, FY20, HY20 and HY21, the Group incurred legal fees of £7.6 million, £9.5 million, £9.3 million, and £6.7 million and £0.7 million, respectively, the majority of which was in connection with protecting the Group's IP. While such litigation is effectively no longer outstanding, the Group may incur material costs in future in defending other litigation or proceedings, which could have a material adverse effect on its results of operations.

If the Group fails to obtain and maintain sufficient IP protection for its current and future products and technologies, or is unable to enforce such IP protections against third parties, its ability to develop and exploit those products and technologies and the competitiveness of those products and technologies, could be adversely affected, and the Group's results of operations may, in turn, be materially adversely affected. In particular, where the Group's products and technologies only benefit from unregistered IP rights (such as copyright or know-how), there will be limited protection against competitors independently developing, or having independently developed, technology comparable to that employed by the Group. Third parties could seek to create alternative technologies that perform similar functions but remain technically distinct from the Group's patented technology, so as to circumvent the Group's owned and in-licenced patents and patent applications.

The Group also pays royalties under some of its patent licence agreements, which are accounted for within the Group's cost of sales. In FY18, FY19, FY20, HY20 and HY21, the Group incurred £1.6 million, £2.7 million, £5.0 million, £0.9 million and £3.2 million in royalty payments, respectively. Calculation of royalties can be uncertain and depends on complex legal and factual questions regarding the scope of claims and whether the Group's products would infringe such claims but for the licence. The Group's judgements in calculating such royalties may be challenged and an error in such judgements may result in a loss of a licence that could have a material adverse effect on the Group's ability to manufacture or commercialise one or more products in one or more jurisdictions. If there is any conflict, dispute, disagreement or issue of

non-performance between the Group and its licensing partners regarding any of the Group's other rights and obligations under the licence agreements, the Group may become liable to pay damages, and the Group's licensing partner may have a right to terminate the affected licence. The Group's and its partners' ability to utilise the affected IP in their products and technologies, and the Group's ability to enter into collaboration or marketing agreements for an affected product may also be adversely affected. Any of the foregoing could have a material adverse effect on the Group's results of operations.

As a result of the Group's significant investment in IP, the Directors expect to benefit from a reduced rate of UK corporation tax in respect of relevant IP income under the UK patent box regime, which is expected to have a material effect on the Group's results of operations. See section 2.6 *(Tax benefits and credits)* below for further information.

2.6 **Taxation**

The Group's results of operations have, in the periods under review, materially benefited from recoverable R&D tax credits in respect of certain R&D expenditure, amounting to £9.0 million, £8.9 million, £11.7 million, £6.2 million and £1.8 million, in FY18, FY19, FY20, HY20 and HY21, respectively. As of 1 January 2021, the Group has ceased to be eligible for R&D tax relief available to small and medium sized enterprises in the UK, which is expected to have a material impact on profitability. For example, while the Group accrued £11.7 million of tax credits in FY20, the Directors expect to accrue no tax credits under that scheme in FY21 and the financial year ended 31 December 2022. While the Group has qualified for R&D tax relief available to large companies through the research and development expenditure credit scheme ("**RDEC**") in HY21 and while the Directors expect the Group to continue to qualify for tax relief under RDEC, the amount of tax credits claimed by the Group in FY21 and beyond is expected to be substantially reduced. Tax credits available to the Group through the RDEC scheme are accounted for within the Group's selling, general and administrative expenses.

Once the Group is profitable, the Directors expect to benefit from a reduced rate of UK corporation tax in respect of relevant IP income under the UK patent box regime, which is expected to have a material effect on the Group's results of operations. Given that almost all of the Group's revenue is derived from UK-based patents, the Directors expect all taxable profits that the Group derives in the United Kingdom to be taxed at close to the applicable rate under the UK patent box regime. Any changes to, reduction in benefit or withdrawal of, the UK patent box regime in respect of the Group may adversely affect the Group's results of operations.

Changes in corporate tax rates can affect the value of deferred tax assets and deferred tax liabilities, and the value of the Group's deferred tax assets could be affected by the Group's profitability as well as other factors that affect underlying assumptions. As of 31 December 2020, the Group recognised a deferred tax asset in the US of £1.4 million, and had an unrecognised deferred tax asset in the UK of £80.9 million. The deferred tax asset in the UK was not recognised due to uncertainty regarding the timing of future UK taxable profits and, if the Group continues to incur losses going forward, it will not be able to make use of its deferred tax asset.

In addition, the Group's future effective tax rates, as well as the tax burden on the Group's revenue, could be adversely affected by changes in rules regarding tax presence in certain jurisdictions, changes in the ability to offset net operating losses against profits, and changes in the ability to capitalise investments. In particular, the Group's business and results of operations may be adversely affected by increases in the rate of VAT, business rates or other applicable taxes and tariffs in countries where it does business or countries relevant to its suppliers and/or customers. If the Group is unable to pass on such additional costs to its customers fully, or at all, this may adversely affect the Group's operating margins. However, even if the Group is able to pass on such costs to its customers, this may have a material adverse effect on demand for the Group's products and, therefore, its revenue. The level of VAT, business rates or other applicable tariffs can be changed at very short notice.

As a result of a potential IPO, the Group has a constructive obligation to pay the employer social security taxes when its employees exercise unapproved share options. This liability is included in the Group's financial statements and depends on a number of factors, including the fair value of the Ordinary Shares at the balance sheet date, the Ordinary Share option exercise price, the number of options likely to vest and the employer social security rate of the relevant tax jurisdiction. As the Ordinary Shares are not traded in an active market in the periods under review, the Directors estimated the fair value of the Ordinary Shares based on the more recent price per Ordinary Share achieved in any given fundraising. The Group's liability in respect of employer social security taxes on unapproved share options amounted to £11.3 million at 30 June 2021, based on an estimated fair value of £70 at such date. The Group accrued a £7.3 million and a £4.0 million charge in R&D expenses and general and administrative expenses, respectively, in HY21

(£nil and £nil, respectively, in HY20) relating to accrued employer social security taxes that became due on share options that are classified as “readily convertible assets” as a result of a potential IPO.

The Directors expect the Group’s results of operations to be impacted in future by employer social security taxes on unapproved share options going forward, particularly in light of share options that have been granted in HY21 to promote the retention of talent as the Group transitions to becoming publicly listed. On the basis of a Share price of £70, the Directors anticipate the Group will incur aggregate charges to its operating expenses of approximately £16.0 million in FY21. However, any increase in the Share price may substantially increase such charges, which would have a material adverse effect on the Group’s results of operations.

### 2.7 Foreign exchange movements

The Group reports its financial results in pounds sterling, but a significant portion of its revenue and costs as well as certain of its assets and liabilities are recorded in other currencies. As such, the Group's results of operations may be affected by both transactional and translational foreign exchange movements.

Although the Group is domiciled in the UK, international revenues account for a substantial part of its revenues, and the Directors believe that a significant portion of the Group's future revenue will continue to be derived from global markets.

The proportion of revenue from the LSRT segment, by geography, was as follows:

| % of LSRT revenue | FY 18 | FY19 | FY20 | HY20 | HY21 |
|---|---|---|---|---|---|
| United Kingdom | 9.1 | 7.1 | 8.0 | 6.0 | 7.7 |
| United States | 31.5 | 28.1 | 25.0 | 28.8 | 21.8 |
| Europe | 24.4 | 27.5 | 27.9 | 20.8 | 22.5 |
| China | 12.7 | 16.8 | 11.8 | 20.4 | 6.0 |
| Japan | 6.9 | 6.2 | 6.4 | 6.9 | 5.9 |
| UAE[(1)] | - | - | - | - | 19.6 |
| Rest of the World[(2)] | 15.4 | 14.3 | 20.9 | 17.1 | 16.4 |

(1) Does not include revenue for FY18, FY19, FY20 and HY20 which, due to immateriality, is included within the rest of the world category for those periods in the Historical Financial Information.

(2) Includes revenue from the UAE for FY18, FY19, FY20 and HY20.

The Group's revenue from the United States, China and the rest of the world (excluding the UK and Europe) is typically denominated in US dollars. In particular, while the majority of LSRT revenues have been, in the periods under review, and are expected to continue to be, denominated in US dollars, the Group's costs (including manufacturing costs) have been, and are expected to be, primarily denominated in sterling. However, the Group still incurs material expenditures in US dollars and, where possible, seeks to incur costs in US dollars (or other foreign currencies, such as euros), as well as hold on to significant amounts of U.S. dollars, to create a natural hedge. The Group's royalty payments are also generally payable in US dollars or euros. In FY20, 33% of the Group's expenditures were denominated in US dollars (compared to 21% and 26% in FY18 and FY19, respectively) and 15% of the Group's expenditures were denominated in euros (compared to 13% and 10% in FY18 and FY19, respectively).

Changes in currency exchange rates have in the periods under review, and may, in the future, have a material effect on the Group's results of operations including but not limited to: (a) increasing the cost of non-UK R&D expenses, the cost of labour and the cost of sourced product components outside the UK (in the case of a weakening of sterling); (b) decreasing the value of the Group's revenues denominated in other currencies (in the case of a strengthening of sterling); (c) distorting the value of non-sterling transactions and cash deposits; and (d) affecting commercial pricing and gross profit margins of the Group's products and services.

In the periods under review, the impact foreign exchange movements in the value of the pound sterling against other currencies, in particular the US dollar, resulted in a net total foreign exchange loss of £0.1 million, £2.1 million and £0.4 million in FY19, FY20 and HY21, respectively, compared to a foreign exchange gain of £0.6 million and £0.1 million in FY18 and HY20, respectively. These movements relate to, for accounting purposes, the need to mark-to-market foreign exchange contracts at the end of the financial year, and assets and liabilities held in foreign currencies and, as such, reflect a non-cash gain or loss. While foreign exchange losses have, in the periods under review, been relatively small, these may materially increase in future.

The Group has, in the periods under review, entered into, and may in the future enter into, matching

forward contracts or hold deposits of foreign currency in cash, to hedge material exposures and reduce cash flow exposure relating to the sourcing and distribution of products. The Group regularly reviews and measures the performance of its hedging strategies and may adjust them accordingly.

### 2.8 Economic cycles, market dynamics, seasonality and changes to large scale human genomic projects or customer funding cycles

Economic cycles and other factors affecting the economic and political environment in the markets where the Group operates has, in the periods under review, and could in the future, affect demand, quality of supply, and pricing of products and services sold by the Group.

While the Directors believe the Group's business and commercial model is relatively resilient to both economic upturns and economic downturns, negative economic cycles have in the past, and may in the future, interrupt or reduce funding for large scale human genomics projects or other projects of the Group's customers, which could have a material adverse effect on the Group's results of operations. As a result of market dynamics and commercial demand, the Directors expect the most significant contribution to the Group's revenue and revenue growth in the short term to continue to be derived from a relatively small number of customers in the S3 customer category, which are very active users typically engaged in large scale human genomics and other large projects, and whose projects tend to be reliant on public funding. In addition, in the medium-to-long term, the Directors anticipate the Group's business to increasingly focus on commercial customers relative to not-for-profit and government customers, which commercial customers may be more significantly affected by economic downturns.

While the demand for the Group's products and services is not particularly seasonal in nature, a greater proportion of LSRT revenue has, in the past, been generated in the second half of the year. For example, in the periods under review, 38%, 44%, and 39%, of LSRT revenue in FY18, FY19, FY20, respectively, was generated in the first half of the year, compared to 62%, 56%, and 61% in the second half of those years, respectively.

The Directors believe this is due to various factors including variances in the funding cycles of the Group's customers, and the timing of government funding and grants, which lead to seasonality in customers' order patterns, particularly with respect to consumables. The timing of government funding and grants tend to follow specific calendar events across different markets. For example, the grants and government funding tend to be focused between the months of September and March in the United States compared to the months of January to March in Japan. In addition, a portion of the Group's customer base have budget cycles that typically expire at year end, therefore typically resulting in greater purchases by such customers in the second half of the year relative to the first half of the year. As the Group expands its S3 customer category in the short term, the split of the Group's revenue as between the first and second half of any given year will increasingly depend on the location of S3 customers, although the Directors expect the effects of seasonality patterns in different countries and markets to be mitigated by the Group's ongoing strategy of focusing on growth across the world.

As the Group's sales cycle is inherently unpredictable and sometimes lengthy, this makes it difficult to forecast revenue and may increase the magnitude of periodic fluctuations in the Group's results of operations. In addition, if the Group fails to convert its backlogged orders into revenue, this could have a material adverse effect on its results of operations.

### 2.9 COVID-19 pandemic

The COVID-19 pandemic has caused widespread disruption to normal business activity across the globe, including imposition of restrictions on movement and social distancing measures in the UK, the US and other geographical regions, which affected the Group's operations, and those of its customers (particularly in the LSRT segment), suppliers, dealers and distributors. For example, the rate of growth in the Group's LSRT segment in FY20 was affected by the closure of customer sites as a result of restrictions associated with the COVID-19 pandemic, which contributed to the deferral of projects, including large projects within the S3 customer category that were resumed and expanded in HY21. The rate of growth in the S1 customer category also slowed in FY20 as a result of the closure of customer sites.

Laboratory closures due to the COVID-19 pandemic reduced the size of the sequencing market from an estimated $4.5 billion in FY19 to an estimated $4.2 billion in FY20, according to DeciBio. Notwithstanding this, the Group continued to trade strongly relative to its peer Group (who generally experienced a decline in LSRT revenue in FY20, based on publicly available information) and experienced 26% growth in LSRT revenue in FY20 compared to FY19. The Directors believe the Group's strong performance in FY20 was, in large part, due to strong growth (£7.1 million, or 42.5%) in revenue derived from S2 customers, as well

as continued engagement of a small number of the Group's major S3 customers for purposes of one-off projects or initiatives, and continued growth (£2.8 million, or 18.1% increase) in revenue derived from S1 customers. See section 5.2 (*Comparison of the Group's results of operations for FY19 and FY20)* for further information regarding the drivers of such growth.

In response to COVID-19, governments have increased funding in respect of pathogenic surveillance programmes as a tool to research and control the pandemic, which has contributed, and is expected to continue to contribute to the Group's LSRT business. While the Directors expect government funding may increase following the recent commitment to future pandemic preparedness using genomic surveillance at the G7 summit, there can be no assurance that governments will continue to increase or maintain their current funding levels in respect of genomic surveillance programmes in the future, particularly in light of any recovery from the COVID-19 pandemic.

In addition to strong trading in the LSRT segment, the Group's results of operations were positively impacted by significant COVID testing revenue in FY20 and, to a lesser extent, in HY21. Such revenue was generated from the sale of LamPORE in FY20 in response to a call from the UK government to develop new COVID-19 testing technologies as an alternative to PCR tests, at a time when there was a global shortage of PCR tests. The Group was able to demonstrate that its nanopore technology platform could be put to use for accurate, scalable and cost-effective clinical diagnostics. The Group also generated significant COVID testing revenue in FY20 from the sourcing of PCR tests from third-party suppliers and resale of such products to the UK government. In FY20 and HY21, the Group generated £48.3 million, or 42.4%, and £6.4 million, or 10.8%, of the Group's total revenue, from the sale of LamPORE and related products, as well as the resale of PCR tests. £47.6 million and £5.5 million of such revenue was generated from sales to the DHSC in FY20 and HY21, respectively, of which £23.1 million was attributable to the resale of PCR products to the DHSC in FY20 (£nil in HY21). The rate of the Group's total revenue growth in FY21 is expected to be affected by the termination of the DHSC contract with the Group and the anticipation of no further revenue being generated from the sale of LamPORE and PCR tests beyond HY21 following the global rollout of the vaccination programme. The Group therefore remains strategically focused on driving growth in its core LSRT business.

As a result of the foregoing, the Group's results of operations in FY20 and HY21 may not be indicative of the trend in future periods. However, the Directors anticipate growth in LSRT revenue in FY21 to partially offset the decline in COVID testing revenue, which trend has already been seen in HY21. For example, in HY21, the Group experienced £27.4 million, or 108.5%, growth in LSRT revenue, compared to HY20, which more than offset a £16.7 million, or 72.4%, decline in COVID testing revenue. This was in part attributable to growth in LSRT revenue from COVID-19 sequencing products in HY21, and the Group is striving to leverage the increased awareness of nanopore sequencing resulting from COVID sequencing, particularly in the public health sector. The COVID-19 pandemic brought many new customers into the Group's community, and the Group aims to expand its engagement with customers beyond COVID-19 sequencing over time.

The sale of LamPORE and related products and the resale of PCR tests contributed to a decline in the Group's gross profit margin in FY20 relative to FY19, and a decline in the Group's gross profit margin in HY20 and HY21, in part due to lower margins carried by such products.

The Group relies on a limited number of key suppliers for certain components, which are crucial to the manufacturing and assembly of the Group's products, and the COVID-19 pandemic continues to present risks for the Group with respect to the availability and cost of sourcing of raw materials and key components. For example, the COVID-19 pandemic has adversely affected the lead-times for, and availability of supply of, ASICs (which may, in certain circumstances, be in excess of a year), making it difficult to plan for matching purchasing requirements and demand for the Group's products. In FY20 and HY21, the Group was required to make large orders for ASICs to mitigate the risk associated with growing lead times and limited sources of supply. The Group also had to incur higher costs on purchase of certain electrical components, and additional costs associated with expedited fees on some components. Costs of raw materials and key components, as well as shipping costs, are expected to increase if demand for such products continues to exceed supply. In addition, if the COVID-19 pandemic and any associated restrictions were to disrupt the operations of the Group's third-party manufacturing partners and suppliers, this could have a material adverse effect on the availability and cost of raw materials and key components which are crucial to the manufacturing and assembly of the Group's products. The costs incurred by the Group in purchasing such inventory, and any write-offs incurred by the Group, could have a material and adverse effect on its results of operations.

### 2.10 Share-based payments

Gordon Sanghera, Clive Brown, Spike Willcocks and Tim Cowper may receive conditional equity retention awards of up to 6.5% (in the aggregate) of the Company's issued share capital of 2,304,718 Shares in May 2021. These are designed to reward ambitious, sustainable growth. Performance hurdles are linked 50% to the Share price and 50% to revenue. In the case of the Share price hurdles, vesting occurs in equal portions at 120% of the Share price at Admission, £154 per share (pre-share split) and £209 per share (pre-share split), and on a straight-line basis between hurdles. In the case of the revenue hurdles, vesting occurs in equal portions at £140 million annual revenue, £231 million annual revenue and £308 million annual revenue, and on a straight-line basis between hurdles. The grants are also subject to holding periods which, together with the hurdles, are designed to retain the executive talent and tie executive rewards to increased shareholder value. The effect of such conditional equity retention awards are accounted for within share-based payments within operating expenses. On 22 June 2021, grants were made to Gordon Sanghera, Clive Brown, Spike Willcocks and Tim Cowper. While such conditional equity retention awards have not had a material effect on the Group's results of operations in the periods under review (£0.7 million in HY21), the Directors expect the Group to incur a charge of approximately £21.0 million in the second half of FY21 (of which approximately £15.0 million and £6.0 million are expected to be allocated to the Group's selling, general and administrative expenses, and to the Group's R&D expenses respectively) and approximately £125.0 million over the vesting period of up to five years (assuming all performance hurdles are satisfied).

## 3. Key performance indicators, Non-IFRS Financial Measures and targets

In evaluating the Group's results of operations against its strategy, the Directors consider the following key performance indicators and Non-IFRS Financial measures. See section 2 *(Non-IFRS financial measures)* of Part 2 *(Presentation of Financial and Other Information)* for further information.

### 3.1 Key performance indicators

The Group's key performance indicators comprise:

- **LSRT revenue growth**, being revenue from the LSRT segment for the period compared to revenue from the LSRT segment in the immediately preceding comparable period, expressed as a percentage;
- **LSRT gross profit margin**, being gross profit attributable to the LSRT segment (i.e., revenue attributable to the LSRT segment less cost of sales allocated to the LSRT segment), expressed as a percentage of revenue attributable to the LSRT segment;
- **Number of publications,** being the number of scientific publications that include nanopore sequencing, and which are publicly available in online resources including PubMed and BioRxiv. Publications are an indicator of the breadth and diversity of the use of nanopore sequencing in the scientific community. In calculating this metric, the Group seeks to avoid duplication of pre-print versus peer review publications; and
- **Staff attrition rates,** being the number of full-time employee leavers in a period divided by the average number of full-time employees in such period.

The following table presents the Group's key performance indicators across the periods under review.

| | FY18 | FY19 | FY20 | HY20 | HY21 |
|---|---|---|---|---|---|
| | £,000s unless otherwise indicated | | | | |
| LSRT revenue | 32,521 | 52,061 | 65,533 | 25,216 | 52,587 |
| **LSRT revenue growth (%)** | 136 | 60 | 26 | 10 | 109 |
| LSRT gross profit | 16,015 | 25,619 | 28,081 | 11,314 | 26,879 |
| **LSRT gross profit margin (%)** | 49.2 | 49.2 | 42.9 | 44.9 | 51.1 |
| **Number of publications** | 134 | 325 | 821 | 401 | 528 |
| Number of full-time employees | 405 | 466 | 527 | 497 | 639 |
| Number of employee leavers | 25 | 25 | 19 | 11 | 21 |
| **Staff attrition rates (%)** | 6.2 | 5.4 | 3.6 | 2.2 | 3.3 |

### 3.2 Non-IFRS Financial Measures

- The Group's non-IFRS Financial Measures comprise:
- **EBITDA**, being loss for the period before finance income, finance costs (comprising interest on the Term

Loan Facility and interest on leases), tax(charged)/credit, depreciation and amortisation; and

- **Adjusted EBITDA**, being EBITDA, adjusted for other gains and losses (which comprise both the realised and unrealised gains or losses relating to the ineffective portion of the Group's derivatives (which relate to foreign currency forward contracts)) and gains or losses on foreign exchange (which relates to the fluctuation of the exchange rate of foreign currencies in which the Group holds monetary assets and liabilities and translation differences arising on normal business activities). The Directors adjust for such items as they are not considered to be reflective of the Group's underlying business.

  The following table presents the Group's EBITDA and Adjusted EBITDA, together with a reconciliation to loss for the period.

| | FY18 | FY19 | FY20 | HY20 | HY21 |
|---|---|---|---|---|---|
| | | | £,000s | | |
| **Loss for the period** | **(53,119)** | **(72,216)** | **(61,244)** | **(35,461)** | **(44,830)** |
| (Tax credit)/Tax charge | (8,906) | (8,268) | (11,909) | (6,885) | 426 |
| Finance income | (574) | (518) | (91) | 51 | (60) |
| Interest on Term Loan Facility | 423 | 263 | 251 | 118 | 144 |
| Interest on leases[(1)] | - | 351 | 496 | 208 | 329 |
| Depreciation of property, plant and equipment | 6,142 | 11,118 | 10,125 | 4,754 | 6,131 |
| Depreciation of right- of-use assets | - | 2,014 | 2,375 | 1,114 | 1,241 |
| Amortisation of internally generated intangible assets | 214 | 1,713 | 4,835 | 1,782 | 4,644 |
| **EBITDA** | **(55,820)** | **(65,543)** | **(55,162)** | **(34,421)** | **(31,975)** |
| Other (gains)/losses | - | (600) | (563) | 561 | 749 |
| (Gains)/losses on foreign exchange | (569) | 95 | 2,070 | (422) | (644) |
| **Adjusted EBITDA** | **(56,389)** | **(66,048)** | **(53,655)** | **(34,282)** | **(31,870)** |

(1) Included in FY19, FY20, HY20 and HY21, but not in FY18, as IFRS 16 was adopted as of 1 January 2019 and has not been applied retrospectively in FY18.

### 3.3 Guidance

***LSRT revenue guidance***

The Group is targeting LSRT revenue growth of 30-40% in FY21 (calculated on a constant currency basis, excluding the potential impact of an expansion to the Emirati Contract, if any).

In addition, the Group is targeting £165 million to £175 million in LSRT revenue in FY23.

Finally, the Group is targeting revenue growth at a compound annual growth rate in excess of 30% through the medium term.

***Gross profit margin guidance***

The Group is targeting a gross profit margin of approximately 55% in FY21. In addition, the Group is targeting a gross profit margin in excess of 60% in FY23. Finally, the Group is targeting a gross profit margin in excess of 65% in the medium term.

***Operating expenses guidance***

While the Group will seek to double its commercial team in the next 18 months, the first financial year in which such expenses will be fully reflected is expected to be FY23. Thereafter, through the medium term, the Group expects its selling, marketing and distribution expenses to grow at a slower rate, in absolute terms, relative to growth in revenue.

While the Directors anticipate future losses as the Group continues to invest in further R&D to drive future growth in line with its business strategy, the Directors expect the Group's R&D expenses will grow at a slower rate, in absolute terms, relative to growth in revenue.

In FY21, cash-related general and administrative expenses (i.e., excluding amortisation, depreciation and share-based payments) are expected to grow, including due to expenses associated with becoming a publicly listed company. However, the Group expects the rate of increase to be less than revenue growth through the medium term as it begins to benefit from significant investments in corporate infrastructure to date.

***Adjusted EBITDA guidance***

In the next five years, the Group is targeting a reduction in losses year-on-year, with the aim of improving

its Adjusted EBITDA to break-even.

The Group will seek to achieve its revenue and gross profit margin improvement principally through changes in revenue mix (with an increased proportion of revenue from consumables), improvements in manufacturing processes and design, maturing products, increased recycling of components (including flow cells), and greater economies of scale.

***Working capital guidance***

The Group expects its days sales outstanding (meaning the value of trade debtors divided by (its cumulative revenue multiplied by the number of days in the relevant period)) and creditor days (meaning the value of trade creditors divided by the number of purchases per day) to move towards 60 days over the medium term. As at 30 June 2021, the Group's days sales outstanding and creditor days were 69 days and 96 days, respectively.

The Group expects year-end inventory to be greater than 12 months of cost of sales in the short term, and reduce to between 6 and 12 months in the medium term, in support of the Group's growth targets.

***Number of scientific publications and staff attrition rate guidance***

The Group's customers are currently running studies that will likely result in publications in the next 12-24 months. The Group is targeting a consistent increase year-on-year in the number and breadth of scientific publications and an attrition rate of less than 10% each year. The Group recognises that some attrition is normal and, in fact, productive, for growth companies.

## 4. Key income statement items

### 4.1 Revenue

The Group's revenue comprises:

- revenue from the sale of a range of DNA/RNA sequencing products that users require in order to perform nanopore sequencing, including consumables and devices (which may be purchased by customers outright or as part of a CapEX option), which is recognised at a point in time;
- lease income from the lease of certain sequencing devices included within starter packs:
    - leases for which the Group is a lessor are classified as operating leases and represent GridION and PromethION devices held at customer premises;
    - rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease; and
    - initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term.

When a contract includes both lease and non-lease components, the Group applies IFRS 15 to allocate the consideration under the contract to each component. Please refer to note 3 to Section B, Part 8 *(Historical Financial Information)* for further information regarding income from leases;

- fees in respect of SLDWs included within starter packs (including the CapEX option) or purchased individually by the Group's customers, and which are required to operate the Group's devices; such revenue is recognised on a straight-line basis over the term of the SLDW; and
- revenue from the provision of services not included within the SLDW, such as technical training, certification and consultancy services to customers; such revenue is recognised over time, across the period the services are provided.

The Group's products are sold either on a standalone basis or as part of a larger bundle of goods and services. Bundled contracts of goods and services (which include the starter packs and, for FY18, FY19 and FY20 (through to December 2020), the CapEX option) typically include a variety of goods and services that generate revenue for the Group, including lease income from a sequencing device, licensing fees from software licence(s) (in respect of software and analysis tools that are required to operate a device) and warranties on sequencing devices, sequencing consumables, technical training and support services.

The Group generates revenue from direct sales or via third-party distributors and dealers. Please see section 1.1 *(Revenue model and recognition)* above for further information.

### 4.2 Cost of sales

Cost of sales consists of the direct costs of manufacturing and distributing DNA/RNA sequencing products

and of delivering the Group's services, including:

- costs of raw materials and outsourced manufactured components;
- manufacturing costs incurred in the production process, including personnel and related costs, factory costs (including overheads), packaging and delivery costs and allocated costs including facilities and IT;
- royalties paid under certain patent licence agreements in respect of in-licenced patents and patent applications for licenced technologies included in the Group's products;
- warranty and product replacement costs;
- depreciation of assets subject to operating leases, which comprise GridION Betas, GridION Mk1s, PromethION Betas, PromethION 24s and PromethION 48s at customer sites, which have been and/or are made available to customers as part of starter packs. GridIONs and PromethIONs are currently depreciated over two and three years, respectively, although such timeframes may be extended for so long as the devices are operating effectively. Flongle and MinIONs do not qualify as assets subject to operating leases and are not subject to depreciation;
- provisions for slow-moving and obsolete inventory; and
- payroll expenses and benefits for employees involved in delivering certain of the Group's customer support, certification and training services, including employer social security taxes on unapproved share option and other share-based payments that are attributable to cost of sales staff and allocated to cost of sales.

### 4.3 Gross profit

Gross profit reflects the Group's revenue net of cost of sales.

### 4.4 Operating expenses

Operating expenses include R&D expenses, and selling, general and administrative expenses.

*R&D expenses*

R&D expenses comprise all expenditure on the Group's R&D activities, which are recognised as an expense in the period in which they are incurred, except for development costs that are able to be capitalised. R&D expenses primarily include payroll expenses and benefits (including salaries, payroll fees, payroll taxes, benefits and bonuses (including employer social security taxes on unapproved share option and other share-based payments that are attributable to R&D staff and allocated to R&D expenses)) for personnel involved in delivering R&D ("**R&D staff**"), independent contractor costs, laboratory supplies, internally manufactured equipment and consumables used for R&D, the cost of other materials used in R&D, the cost of external collaborations and in-licensing from third- party organisations, and other central costs which are allocated to R&D (including HR, facilities (comprising properties) and IT costs).

The Group regularly assesses R&D expenditures against the criteria for development costs to be recognised as an asset as set out in IAS 38 (intangible assets). Capitalised development costs principally comprise qualifying costs incurred in developing the Group's core technology platform and sequencing kits). Please refer to note 3 to Part 8 *(Historical Financial Information)* for further information regarding the preconditions that must be satisfied to capitalise development costs and the recognition of internally-generated intangible assets.

*Selling, general and administrative expenses*

Selling, general and administrative expenses comprise all costs related to the sale, marketing and distribution of the Group's products and services, and the administration of the Group's business, which primarily include:

- payroll expenses and benefits for sales, logistics, marketing, finance, HR, legal, facilities, and IT personnel, and other administrative personnel and contractors who provide support and services within these functions (including salaries, payroll taxes, benefits and bonuses (including employer social security taxes on unapproved share option and other share-based payments that are attributable to staff within the selling, general and administrative functions, and allocated to selling, general and administrative expenses));
- expenses incurred in connection with recruiting and training employees;

- commercial, marketing and advertising expenses, including costs of attending industry trade shows and other events, and organising nanopore conferences for the Group's customers;
- expenses incurred in developing and maintaining the e-commerce website;
- expenses incurred in providing customer service and support (including customer services typically made available to S2 and S3 customers) excluding the portion of such costs that are allocated to the Group's cost of sales;
- expenses incurred in complying with laws, regulations and other requirements;
- expenses incurred in sponsoring research at academic institutions;
- professional fees for legal, tax, accounting and financial advice and consulting fees (including for professional fees incurred in connection with obtaining and maintaining IP, and litigation);
- property costs (including the cost of leases relating to properties and corporate overheads (such as utilities)) of the Group's offices and manufacturing facilities;
- other sundry costs;
- provisions for, and write-offs of, bad debts;
- gains or losses on foreign exchange which relates to the fluctuation of the exchange rate of foreign currencies in which the Group holds monetary assets and liabilities and translation differences arising on normal business activities;
- depreciation of property, plant and equipment, excluding depreciation of assets subject to operating leases (comprising GridIONs and PromethIONs held at customer sites) that are accounted for within the Group's cost of sales;
- amortisation and impairment of intangible assets; and
- in the case of HY21 and going forward, tax credits available to the Group through the RDEC scheme.

4.5 **Loss from operations**

Loss from operations reflects the Group's revenue, net of cost of sales and operating expenses.

4.6 **Finance income**

Finance income costs of interest earned on cash held in the bank.

4.7 **Finance costs**

Finance costs include interest charges payable on outstanding indebtedness, which primarily consists of:

- the Term Loan Facility with Barclays Bank plc, to partially fund the Company's purchase of the lease of land and accompanying purchase of the Gosling Building (which comprises the Group's registered office), which matures on 4 August 2024, and which carried an average interest rate of 2.54%, 2.75% and 2.63% in FY18, FY19 and FY20, respectively; and
- interest on leases in FY19, FY20, HY20 and HY21, but not in FY18, as IFRS 16 was adopted as of 1 January 2019 and has not been applied retrospectively in FY18.

See note 12 to Part 8 *(Historical Financial Information)* for further information regarding the Group's indebtedness.

4.8 **Other gains/(losses)**

Other gains and losses reflect both the realised and unrealised gains or losses relating to the ineffective portion of the Group's derivatives (that relate to foreign currency forward contracts), which are recognised immediately in the Group's profit or loss.

4.9 **Loss before tax**

Loss before tax reflects the Group's loss from operations, net of finance costs, plus finance income and other gains/(losses).

4.10 **Tax (charged)/credit**

Tax on the Group's profit or loss for the periods under review comprises currently payable and deferred

tax. The Group is liable for UK tax as well as overseas tax in a number of jurisdictions as a result of the operations of its subsidiaries outside the United Kingdom.

The Group's currently payable tax is based on taxable profit for the period, which differs from net profit as reported in the Group's income statement because it excludes items of income or expense that are taxable or deductible in other periods and it further excludes items that are never taxable or deductible.

The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the balance sheet date. A provision is recognised for those matters for which the tax determination is uncertain but it is considered probable that there will be a future outflow of funds to a tax authority.

Up until 31 December 2020, the Group was entitled to claim cash tax credits in the UK for certain R&D expenditure. The credit was paid in arrears once tax returns were filed and agreed. With effect from 1 January 2021, the Group has ceased to be eligible for R&D tax relief available to small and medium enterprises in the UK, which is expected to have a material impact on profitability. While the Directors expect that the Group will qualify for R&D tax relief available to large companies through RDEC, they believe this will result in a substantial reduction in the amount of cash claimed by the Group. In HY21 and going forward, tax credits available to the Group under RDEC are accounted for within the Group's selling, general and administrative expenses and not within tax (charged)/credit on its income statement.

The Group's tax credit earned in a period is based on an assessment of likely receipt, and is recognised in the consolidated income statement, while the corresponding asset is included within current assets in the Group's balance sheet until such time as it is received.

The Group's deferred tax comprises tax that is expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit and is accounted for using the liability method. See note 3 to Part 8 *(Historical Financial Information)* for further information.

## 5. Results of operations

The following table sets out the Group's consolidated income statement for the periods under review:

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of revenue | £,000s | % of revenue | £,000s | % of revenue | £,000s | % of revenue | £,000s | % of revenue |
| **Revenue** | **32,521** | **-** | **52,061** | - | **113,860** | - | **48,307** | - | **58,951** | - |
| Cost of sales | (16,506) | 50.8 | (26,442) | 50.8 | (66,981) | 58.8 | (32,214) | 66.7 | (28,747) | 48.8 |
| **Gross profit** | **16,015** | **49.2** | **25,619** | **49.2** | **46,879** | **41.2** | **16,093** | **33.3** | **30,204** | **51.2** |
| Research and development expenses | (37,102) | 114.1 | (40,456) | 77.7 | (48,551) | 42.6 | (23,770) | 49.2 | (30,602) | 51.9 |
| Selling, general and administrative expenses | (41,089) | 126.3 | (66,056) | 126.9 | (71,388) | 62.7 | (34,040) | 70.5 | (43,173) | 73.2 |
| **Total operating expenses** | **(78,191)** | **240.4** | **(106,512)** | **204.6** | **(119,939)** | **105.3** | **(57,810)** | **119.7** | **(73,775)** | **125.1** |
| **Loss from operations** | **(62,176)** | **192.9** | **(80,893)** | **155.4** | **(73,060)** | **64.2** | **(41,717)** | **86.4** | **(43,571)** | **73.9** |
| Finance income | 574 | 1.8 | 518 | 1.0 | 91 | 0.1 | 51 | 0.1 | 60 | 0.1 |
| Finance costs[(1)] | (423) | 1.3 | (709) | 1.4 | (747) | 0.7 | (118) | 0.2 | (144) | 0.2 |
| Other gains/(losses) | - | - | 600 | 1.2 | 563 | 0.5 | (562) | 1.2 | (749) | 1.3 |
| **Loss before tax** | **(62,025)** | **190.7** | **(80,484)** | **154.6** | **(73,153)** | **64.2** | **(42,346)** | **87.7** | **(44,404)** | **75.3** |
| Tax (charged) / credit | 8,906 | 27.4 | 8,268 | 15.9 | 11,909 | 10.5 | 6,885 | 14.3 | (426) | 0.7 |
| **Loss for the period** | **(53,119)** | **163.3** | **(72,216)** | **138.7** | **(61,244)** | **53.8** | **(35,461)** | **73.4** | **(44,830)** | **76.0** |

(1) Includes interest on leases in FY19, FY20, HY20 and HY21, but not in FY18, as IFRS 16 was adopted as of 1 January 2019 and has not been applied retrospectively to FY18.

The following table sets out the Group's revenue for the periods under review across its reportable segments, the LSRT segment and the COVID testing segment, across key geographical regions. All revenues earned in FY18 and FY19 were generated from LSRT.

| | FY18 total revenue | FY19 total revenue | FY20 total revenue | FY20 COVID Testing revenue | FY20 LSRT revenue | HY20 total revenue | HY20 COVID testing revenue | HY20 LSRT revenue | HY21 total revenue | HY21 COVID testing revenue | HY21 LSRT revenue |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | | | | | | | | | | |
| **Revenue** | | | | | | | | | | | |
| USA | 10,246 | 14,613 | 16,414 | - | 16,414 | 7,261 | - | 7,261 | 11,483 | - | 11,483 |
| Europe | 7,921 | 14,341 | 18,914 | 629 | 18,285 | 5,233 | - | 5,233 | 12,635 | 809 | 11,826 |
| China | 4,144 | 8,740 | 7,715 | - | 7,715 | 5,139 | - | 5,139 | 3,148 | - | 3,148 |
| UK | 2,953 | 3,691 | 52,879 | 47,611 | 5,268 | 24,609 | 23,091 | 1,518 | 9,607 | 5,539 | 4,068 |
| Japan | 2,250 | 3,228 | 4,162 | - | 4,162 | 1,745 | - | 1,745 | 3,087 | - | 3,087 |
| UAE[1] | - | - | - | - | - | - | - | - | 10,329 | - | 10,329 |
| Rest of the World[2] | 5,007 | 7,448 | 13,776 | 87 | 13,689 | 4,320 | - | 4,320 | 8,662 | 16 | 8,646 |
| **Total Revenue** | **32,521** | **52,061** | **113,860** | **48,327** | **65,533** | **48,307** | **23,091** | **25,216** | **58,951** | **6,364** | **52,587** |

(1) Does not include revenue for FY18, FY19, FY20 and HY20 which, due to immateriality, is included within the rest of the world category for those periods in the Historical Financial Information.

(2) Includes revenue from the UAE for FY18, FY19, FY20 and HY20.

The following table sets out the Group's revenue across key geographical regions (based on location of the customer).

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue |
| **Geographical region** | | | | | | | | | | |
| USA | 10,246 | 31.5 | 14,613 | 28.1 | 16,414 | 14.4 | 7,261 | 15.0 | 11,483 | 19.5 |
| Europe | 7,921 | 24.4 | 14,341 | 27.5 | 18,914 | 16.6 | 5,233 | 10.8 | 12,635 | 21.4 |
| China | 4,144 | 12.7 | 8,740 | 16.8 | 7,715 | 6.8 | 5,139 | 10.6 | 3,148 | 5.3 |
| United Kingdom | 2,953 | 9.1 | 3,691 | 7.1 | 52,879 | 46.4 | 24,609 | 50.9 | 9,607 | 16.3 |
| Japan | 2,250 | 6.9 | 3,228 | 6.2 | 4,162 | 3.7 | 1,745 | 3.6 | 3,087 | 5.2 |
| UAE [1] | - | - | - | - | - | - | - | - | 10,329 | 17.5 |
| Rest of the world [2] | 5,007 | 15.4 | 7,448 | 14.3 | 13,776 | 12.1 | 4,320 | 9.0 | 8,662 | 14.7 |
| **Total Revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **113,860** | **100.0** | **48,307** | **100.0** | **58,951** | **100.0** |

(1) Does not include revenue for FY18, FY19, FY20 and HY20 which, due to immateriality, is included within the rest of the world category for those periods in the Historical Financial Information.

(2) Includes revenue from the UAE for FY18, FY19, FY20 and HY20.

The following table sets out the Group's revenue across key categories of contracts with customers in the periods under review.

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue |
| **Category** | | | | | | | | | | |
| Sale of goods | 29,762 | 91.5 | 46,620 | 89.6 | 106,057 | 93.1 | 44,121 | 91.3 | 49,127 | 83.3 |
| Rendering of services | 514 | 1.6 | 3,391 | 6.5 | 4,884 | 4.3 | 2,443 | 5.1 | 2,077 | 3.5 |
| Lease income | 2,245 | 6.9 | 2,050 | 3.9 | 2,919 | 2.6 | 1,743 | 3.6 | 7,747 | 13.1 |
| **Total Revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **113,860** | **100.0** | **48,307** | **100.0** | **58,951** | **100.0** |

The following table sets out the timing of the Group's revenue recognition in the periods under review.

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue |
| **Timing of revenue recognition** | | | | | | | | | | |
| At a point in time | 29,762 | 91.5 | 46,620 | 89.6 | 106,057 | 93.1 | 44,121 | 91.3 | 49,127 | 83.3 |
| Over time | 2,759 | 8.5 | 5,441 | 10.4 | 7,803 | 6.9 | 4,186 | 8.7 | 9,824 | 16.7 |
| **Total Revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **113,860** | **100.0** | 48,307 | 100.0 | 58,951 | 100.00 |

The following table sets out the Group's revenue by customer type in the periods under review. As the chemistry is consistent across the range of the Group's devices and a customer's choice of device will depend on its specific requirements, the Group segregates customers according to the amount of revenue that they are expected to generate for the Group.

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue |
| **Direct customers** | | | | | | | | | | |
| S3 | 6,736 | 20.7 | 16,749 | 32.2 | 17,761 | 15.6 | 5,059 | 10.5 | 19,525 | 33.1 |
| S2 | 13,783 | 42.4 | 16,655 | 32.0 | 23,727 | 20.8 | 10,292 | 21.3 | 17,974 | 30.5 |
| S1 | 10,866 | 33.4 | 15,768 | 30.3 | 18,616 | 16.3 | 8,151 | 16.9 | 12,092 | 20.5 |
| Indirect customers[(1)] | 1.136 | 3.5 | 2,889 | 5.5 | 5,429 | 4.8 | 1,714 | 3.5 | 2,996 | 5.1 |
| **LSRT revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **65,533** | **57.6** | **25,216** | **52.2** | **52,587** | **89.2** |
| COVID testing revenue | - | - | - | - | 48,327 | 42.4 | 23,091 | 47.8 | 6,365 | 10.8 |
| **Total Revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **113,860** | **100.0** | **48,307** | **100.0** | **58,951** | **100.00** |

(1) Represents revenue generated customers that purchase the Group's products and services via dealers and third-party distributors.

The following table sets out the Group's revenue by type of product or service in the periods under review.

| | FY18 | | FY19 | | FY20 | | HY20 | | HY21 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue | £,000s | % of total revenue |
| Flow cells | 12,820 | 39.4 | 25,636 | 49.2 | 30,721 | 27.0 | 10,954 | 22.7 | 27,019 | 45.8 |
| Kits | 4,982 | 15.3 | 7,324 | 14.1 | 8,767 | 7.7 | 3.931 | 8.1 | 7,650 | 13.0 |
| Starter Packs (including the CapEX option) | 13,212 | 40.6 | 16,849 | 32.4 | 20,837 | 18.3 | 7,765 | 16.1 | 14,567 | 24.7 |
| Other products and services (excluding COVID testing products) | 1,507 | 4.6 | 2,252 | 4.3 | 5,208 | 4.6 | 2,566 | 5.3 | 3,351 | 5.7 |
| COVID testing products | - | - | - | - | 48,327 | 42.4 | 23,091 | 47.8 | 6,365 | 10.8 |
| **Total Revenue** | **32,521** | **100.0** | **52,061** | **100.0** | **113,860** | **100.0** | **48,307** | **100.0** | **58,951** | **100.0** |

## 5.1 Comparison of the Group's results of operations for HY20 and HY21

*Revenue*

Revenue increased by £10.6 million, or 22.0%, from £48.3 million in HY20 to £59.0 million in HY21.

The increase in the Group's revenue in HY21 compared to HY20 was principally due to £27.4 million, or 108.5%, revenue growth in the LSRT segment, and was partially offset by a £16.7 million, or 72.4%, decline in revenue from the COVID testing segment.

Revenue from the COVID testing segment amounted to £6.4 million in HY21 (all attributable to the sale of LamPORE, with no revenue from the resale of PCR tests), compared to £23.1 million in HY20 (which was wholly attributable to the resale of PCR tests).

For purposes of comparing the Group's revenue growth across the periods under review, the Directors believe it is useful to assess growth in LSRT revenue, which comprises the ongoing core business of the Group, as COVID testing revenue is not expected to be a recurring opportunity beyond HY21.

The majority of the Group's total revenue and LSRT revenue in HY21 was derived from the sale of goods (principally stand-alone consumables and consumables within starter packs), which revenue is recognised at a point in time and, to a lesser extent, from lease income (which is recognised over the first 12 months on devices included within starter packs) and the rendering of services (including stand-alone services and services included within starter packs, including SLDW), which revenue is recognised over time.

- £49.1 million, or 83.3% of the Group's total revenue in HY21 was derived from the sale of goods, £7.7 million, or 13.1%, from lease income, and £2.1 million, or 3.5%, from the rendering of services. By comparison, £44.1 million, or 91.3% of the Group's total revenue in HY20 was derived from the sale of goods, £2.4 million, or 5.1%, from the rendering of services, and £1.7 million, or 3.6%, from lease income.
- £49.1 million, or 83.3%, of the Group's revenue in HY21 was recognised at a point in time and £9.8 million, or 16.7% of the Group's revenue in HY21 was recognised over time. By comparison, £44.1 million, or 91.3% of the Group's revenue in HY20 was recognised at a point in time and £4.2 million, or 8.7%, of the Group's revenue in HY20 was recognised over time. Rendering of services and lease income are recognised over time, whereas revenue from the sale of goods are recognised at the point of delivery to the customer.

The Group achieved growth in total revenue from the sale of goods (and therefore revenue recognised at a point in time) in HY21 as a result of growth across all LSRT product lines (and, in particular, stand-alone consumables and consumables included within starter packs), which more than offset the decline in the sale of LamPORE, and related products and the resale of PCR tests. The Group's also achieved growth in lease income in HY21 as a result of growth in the sale of starter packs. Revenue from services rendered to customers increased in HY21 due to growth in demand across all services. Revenue growth from lease income and services rendered contributed to growth in revenue recognised over time in HY21. The Group's business remains predominantly focused on the sale of goods and the generation of lease income associated with the sale of starter packs, rather than the provision of services.

In the LSRT segment in HY21 compared to HY20, the Group achieved:

- a £16.1 million, or 146.6%, increase in revenue from flow cells, which accounted for 51.4% of LSRT revenue in HY21 compared to 43.4% in HY20;
- a £3.7 million, or 94.6%, increase in revenue from kits (which together with flow cells, comprise the Group's consumables), and which tend to grow in line with growth in flow cells because customers require a kit for each experiment, which accounted for 14.5% of LSRT revenue in HY21 compared to 15.6% in HY20;
- a £6.8 million, or 87.6%, increase in revenue from starter packs (including from the CapEX option), which accounted for 27.7% of LSRT revenue in HY21 compared to 30.8% in HY20, supported by the rollout of the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19; and
- a £0.8 million, or 30.6% increase in revenue from other products and services (excluding COVID-19 testing products), which accounted for 6.4% of LSRT revenue in HY21 compared to 10.2% in HY20, supported by the increase in sales of starter packs and the Group's expanding customer base.

Revenue growth in the LSRT segment in HY21 was principally driven by growth in the number of customers and average revenue per customer account across the S3 and S2 customer categories, which, in turn, was principally attributable to significant growth in the sale of consumables and starter packs, as described above. By customer type, the Group's S1, S2, S3 and indirect customers accounted for the following proportion of total revenue and LSRT revenue.

| | % of total revenue[1] | | % of LSRT revenue | |
|---|---|---|---|---|
| | HY20 | HY21 | HY20 | HY21 |
| S1 | 16.9 | 20.5 | 32.3 | 23.0 |
| S2 | 21.3 | 30.5 | 40.8 | 34.2 |
| S3 | 10.5 | 33.1 | 20.1 | 37.1 |
| Indirect customers | 3.5 | 5.1 | 6.8 | 5.7 |

(1) £6.4 million, or 10.8% of the Group's revenue comprised COVID testing revenue in HY21, compared to £23.1 million, or 47.8% in HY20, which revenue is not included within the S1, S2 and S3 customer categories.

By customer type, the Group experienced:

- a £14.5 million, or 285.9%, increase in revenue derived from S3 customers (of which £9.8 million was attributable to sales to G42 under the Emirati Contract in HY21, compared to £0.2 million in HY20), a £254,072 increase in average revenue per S3 customer account, from £210,799 in HY20 to £464,871 in HY21, and a 75.0% increase in number of S3 customer accounts invoiced in the last 12 months, from 24 in HY20 to 42 in HY21. The Group achieved a significant increase in LSRT revenue from the UAE, from £0.3 million in HY20 to £10.3 million in HY21, which was principally attributable to a large-scale human genomics programme being undertaken in the region.
- a £7.7 million, or 74.6%, increase in revenue derived from S2 customers, a £2,926 increase in average revenue per S2 customer account, from £28,830 in HY20 to £31,757 in HY21, and a 58.5% increase in the number of S2 customer accounts invoiced in the last 12 months, from 357 in HY20 to 566 in HY21; and
- a £3.9 million, or 48.4%, increase in revenue derived from S1 customers, a £511 increase in average revenue per S1 customer account, from £2,926 in HY20 to £3,437 in HY21, and a 26.3% increase in the number of S1 customer accounts invoiced in the last 12 months, from 2,786 in HY20 to 3,519 in HY21,

  in each case, in HY21 compared to HY20, respectively.

The increases across the S2 and S3 customer category metrics described above were principally attributable to the roll-out of the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19, which contributed to increased demand in HY21 for starter packs and consumables (flow cells and kits) across the Group's medium and large devices, particularly as some larger deferred S3 customer projects were resumed in HY21. Several larger S2 customers also moved into the S3 customer category in HY21 following completion of their starter packs. The increases in the S1 customer category metrics described above were principally attributable to recurring revenue from existing customers and new customers acquired through the sale of starter packs (including the CapEX option).

By geography, in HY21, £9.6 million, or 16.3%, of the Group's revenue was attributable to the UK market in HY21, compared to £24.6 million, or 50.9%, of the Group's revenue in HY20. This was principally due to £23.1 million of revenue from the COVID testing segment in HY20, compared to £6.4 million in HY21.The majority of LSRT revenue in HY21 was attributable to geographical regions other than the UK, as presented below.

| | HY20 | | HY21 | |
|---|---|---|---|---|
| | £ in millions | % of LSRT revenue | £ in millions | % of LSRT revenue |
| US | 7.3 | 28.8 | 11.5 | 21.8 |
| Europe | 5.2 | 20.8 | 11.8 | 22.5 |
| China | 5.1 | 20.4 | 3.1 | 6.0 |
| Japan | 1.7 | 6.9 | 3.1 | 5.9 |
| UAE [1] | - | - | 10.3 | 19.6 |
| Rest of the World [2] | 4.3 | 17.1 | 8.6 | 16.4 |

(1) Does not include revenue for HY20, which, due to immateriality, is included within the rest of the world category for that period in the Historical Financial Information.

(2) Includes revenue from the UAE for HY20.

The Group achieved a significant increase in LSRT revenue from the UAE, from £0.3 million in HY20 to £10.3 million in HY21, which was principally attributable to a large-scale human genomics programme being undertaken in the region. The Directors believe the 126.0% increase in LSRT revenue from Europe and 58.2% increase in LSRT revenue from the United States, from HY20 to HY21, respectively, was principally attributable to increased sales and marketing resources applied to these regions, together with growth in demand for the Group's products following the implementation of various improvements. LSRT revenue from China declined by 38.7% in HY21 compared to HY20, principally due to a reduction in sequencing carried out by a small number of customers. LSRT revenue from Japan and the rest of the world increased by 76.9% and 116.7%, respectively, in HY21 compared to HY20, principally due to increased demand for the Group's products.

*Cost of sales*

The Group's cost of sales decreased by £3.5 million, or 10.8%, from £32.2 million in HY20 to £28.7 million in HY21. The Group's cost of sales decreased in HY21 notwithstanding 22.0% growth in total revenue from £48.3 million in HY20 to £59.0 million in HY21. The decrease in the Group's cost of sales in HY21 was principally due to a £15.3 million, or 83.4%, decrease in cost of sales associated with the COVID testing segment, from £18.3 million in HY20 to £3.0 million in HY21, which more than offset an £11.8 million, or 84.9%, increase in cost of sales associated with the LSRT segment, from £13.9 million in HY20 to £25.7 million in HY21.

Cost of sales attributable to the COVID testing segment declined as a result of the decline in revenue from the sale of LamPORE and related products in HY21, as well as no revenue from the resale of PCR tests in HY21 (compared to £23.1 million of such revenue in HY20) which PCR tests carry a lower margin relative to LamPORE (£18.3 million of the Group's cost of sales in HY20 were incurred in the purchase of PCR tests which were resold by the Group).

Cost of sales attributable to the LSRT segment increased principally due to growth in revenue from the LSRT segment in HY21 compared to HY20. While the Group's cost of sales attributable to the LSRT segment increased in HY21, such cost of sales as a proportion of revenue from the LSRT segment declined, from 55.1% in HY20 to 48.9% in HY21, principally due to improvements in manufacturing processes and continued scale-up of new PromethION flow cells in HY21.

*Gross profit*

As a result of the foregoing factors, the Group's gross profit increased by £14.1 million, or 87.7%, from £16.1 million in HY20 to £30.2 million in HY21.

The Group's gross profit as a percentage of revenue (gross profit margin) increased by 17.9 percentage points, from 33.3% in HY20 to 51.2% in HY21. This was principally due to the Group having experienced an improvement to its margins as a result of a decline in the sale of products and services associated with COVID-19 testing (which carry lower margins) in HY21 compared to HY20, as well as increasing margins on PromethION flow cells sold in HY21 following the change in chip manufacturing methods in order to improve long term scale-up for manufacturing of such flow cells. The Group's gross profit and gross profit margin attributable to the LSRT segment increased from £11.3 million and 44.9% in HY20, and £26.9 million and 51.1% in HY21, respectively.

*Operating expenses*

The Group's total operating expenses increased by £16.0 million, or 27.6%, from £57.8 million in HY20 to £73.8 million in HY21, principally due to:

- a £6.8 million, or 28.7%, increase in R&D expenses (which does not include capitalised development costs of £1.8 million and £4.3 million in HY20 and HY21, respectively), from £23.8 million in HY20 to £30.6 million in HY21; and
- a £9.1 million, or 26.8%, increase in selling, general and administrative expenses, from £34.0 million in HY20 to £43.2 million in HY21.

The increase in the Group's R&D expenses in HY21 was principally due to the following (including capitalised development costs, although these are not accounted for within operating expenses):

- a 13.6% increase in average headcount of R&D staff to 272 in HY21, compared to 239 in HY20, to support the research phase into early product release across the platform, which contributed to a 6.0% increase in payroll expenses and other benefits associated with R&D staff (from £10.5 million in HY20 to £11.1 million in HY20); and
- a £7.3 million charge in HY21 (£nil in HY20) relating to accrued employer social security taxes that

became due on share options that are classified as "readily convertible assets" as a result of a potential IPO.

The increase in the Group's R&D expenses more than offset a reduction in R&D materials and outsourced R&D costs. Including capitalised development costs (which are not accounted for within operating expenses), the Group experienced a 3.6% decline in R&D materials and outsourced R&D costs, from £11.1 million in HY20 to £10.7 million in HY21, principally attributable to a reduction in spend on ASICS development and the development of PromethION P-chips in HY21.

The increase in the Group's selling, general and administrative expenses in HY21, was principally due to a £7.8 million, or 32.0%, increase in general and administrative expenses in HY21, from £24.2 million in HY20 to £32.0 million in HY21, and a £1.4 million, or 14.1% increase in sales, marketing and distribution expenses, from £9.8 million in HY20 to £11.2 million in HY21.

The Group's general and administrative expenses increased in HY21, principally due to:

- a 126.6% increase in average headcount of staff within the Group's HR, finance, central administration, legal functions, and certain corporate executives to support business growth, from 47 in HY20 to 107 in HY21, which contributed to a £2.8 million increase in payroll expenses and other benefits associated with staff within the general and administrative functions, from £5.2 million in HY20 to £8.0 million in HY21;
- a £4.0 million charge in HY21 (£nil in HY20) relating to accrued employer social security taxes that became due on share options that are classified as "readily convertible assets" as a result of a potential IPO;
- a £1.5 million increase in share-based payments to staff within the general and administrative functions, from £2.0 million in HY20 to £3.5 million in HY21, due to share options granted to new staff within such functions that vested in the period;
- a £1.5 million, or 47.3%, increase in facilities and central IT costs, from £3.1 million in HY20 to £4.6 million in HY21, principally attributable to an increased investment in IT, and increased building and facilities costs associated with increased headcount within the Group's HR, finance, central administration, legal functions, and corporate executives; and
- a £3.7 million, or 71.1%, increase in depreciation and amortisation, from £5.2 million in HY20 to £9.0 million in HY21, which was principally due to a £2.9 million increase in amortisation of intangible assets, from £1.8 million in HY20 to £4.6 million in HY21, following the increase in capitalised development costs attributable to the development of PromethION and other products and software, as well as depreciation of the MinION manufacturing facility.

The increase in the Group's general and administrative expenses was partially offset by:

- a 76.1% decrease in professional fees, from £7.6 million in HY20 to £1.8 million in HY21, principally due to a decline in legal fees associated with the PacBio litigation; and
- a tax credit of £1.8m under RDEC.

The Group's sales, marketing and distribution expenses increased in HY21 principally due to:

- an 18.6% increase in average headcount of staff within the Group's sales, marketing and distribution functions, from 120 in HY20 to 142 in HY21, which contributed to a 3.7% increase in payroll expenses and other benefits associated with such staff from £6.2 million in HY20 to £6.4 million in HY21; and
- a £1.2 million, or 32.0%, increase in other sales, marketing and distribution expenses, from £3.6 million in HY20 to £4.8 million in HY21, principally due to an increase in logistics costs.

The increase in the Group's sales, marketing and distribution expenses were partially offset by a 53.6% decline in sales and marketing costs associated with travel, events, and consultants within the sales and marketing function, from £2.8 million in HY20 to £1.3 million in HY21, principally attributable to the COVID-19 pandemic which resulted in the cancellation of face-to-face meetings and in-person events.

The Group's total operating expenses as a percentage of revenue increased by 5.4 percentage points, from 119.7% in HY20 to 125.1% in HY21. The Group's R&D expenses as a percentage of revenue increased by 2.7 percentage points, from 49.2% in HY20 to 51.9% in HY21, and the Group's selling, general and administrative expenses as a percentage of revenue increased by 2.7 percentage points, from 70.5% in HY20 to 73.2% in HY21.

*Loss from operations*

As a result of the foregoing factors, the Group's loss from operations increased by £1.9 million, or 4.4%, from an operating loss of £41.7 million in HY20 to an operating loss of £43.6 million in HY21.

The Group's operating loss as a percentage of revenue decreased from an operating loss of 86.4% of revenue in HY20 to an operating loss of 73.9% of revenue in HY21.

*Finance income*

Finance income remained stable at £0.1 million in HY21 and HY20.

The Group's finance income as a percentage of revenue remained stable at 0.1% in HY20 and HY21.

*Finance costs*

Finance costs remained stable at £0.1 million in HY20 and HY21. Finance costs in HY21 are attributable to interest on leases and interest payable in respect of the Term Loan Facility.

The Group's finance costs as a percentage of revenue remained stable at 0.2% in HY20 and HY21.

*Other gains/(losses)*

The Group recognised other losses of £0.7 million in HY21, compared to £0.6 million of other losses in HY20, principally due to losses on derivative financial instruments.

The Group's other gains/(losses) as a percentage of revenue increased by 0.1 percentage points, from 1.2% in HY20 to 1.3% in HY21.

*Loss before tax*

As a result of the foregoing factors, the Group recognised loss before tax of £44.4 million in HY21, compared to a loss before tax of £42.3 million in HY20.

The Group's loss before tax as a percentage of revenue decreased by 12.4 percentage points, from 87.7% in HY20 to 75.3% in HY21.

*Tax (charged)/credit*

The Group recognised a tax charge of £0.4 million in HY21 compared to a tax credit of £6.9 million in HY20. The Group's tax charge in HY21 was recognised on a loss before tax of £44.4 million, giving rise to an effective tax rate of -1.0% In HY21. The Group's tax credit in HY20 was recognised on a loss before tax of £42.3 million in HY20, giving rise to an effective tax rate of 16.3% in HY20. The Group's effective tax rate for HY21 was lower than the standard rate of corporation tax in the United Kingdom of 19%. (HY20: lower than 19%).

For HY21, the Group's tax credit included a recoverable R&D tax credit of £1.8 million (all of which is accounted for within the Group's selling, general and administrative expenses), compared to £6.2 million in HY20 (which is accounted for within the Group's tax (charged)/credit). From 1 January 2021, the Group operates under the RDEC scheme, where tax relief is less than under the SME scheme, and which is accounted for within the Group's selling, generation and administrative expenses.

The Group's tax (charged)/credit as a percentage of revenue increased by 15 percentage points, from a tax credit of 14.3% of revenue in HY20 to a tax charge of 0.7% of revenue in HY21.

*Loss for the period*

As a result of the foregoing factors, the Group recognised a loss for the period of £44.8 million in HY21, compared to a loss for the period of £35.4 million in HY20.

The Group's loss for the period as a percentage of revenue increased by 2.6 percentage points, from 73.4% in HY20 to 76.0% in HY21.

### 5.2 Comparison of the Group's results of operations for FY19 and FY20

*Revenue*

Revenue increased by £61.8 million, or 118.7%, from £52.1 million in FY19 to £113.9 million in FY20. All of the Group's revenue in FY19 was derived from the LSRT segment.

The significant increase in the Group's revenue in FY20 compared to FY19 was principally due to:

- £13.5 million, or 25.9%, revenue growth in the LSRT segment; and
- £48.3 million of revenue from the COVID testing segment (which comprised £25.2 million of revenue

from the sale of LamPORE and £23.1 million of revenue from the resale of PCR tests).

The Group's total revenue and LSRT revenue in FY20 was principally derived from the sale of goods (principally stand-alone consumables and consumables included within starter packs), which revenue is recognised at a point in time and, to a lesser extent, the rendering of services and lease income (which is recognised for the first 12 months on devices included within starter packs), which revenue is recognised over time.

- £106.1 million, or 93.1%, of the Group's total revenue in FY20 was derived from the sale of goods, £4.9 million, or 4.3%, from the rendering of services, and £2.9 million, or 2.6%, from lease income. By comparison, £46.6 million, or 89.6%, of the Group's total revenue in FY19 was derived from the sale of goods, £3.4 million, or 6.5%, from the rendering of services, and £2.1 million, or 3.9%, from lease income.
- £106.1 million, or 93.1%, of the Group's revenue in FY20 was recognised at a point in time, and £7.8 million, or 6.9% of the Group's revenue in FY20 was recognised over time. By comparison, £46.6 million, or 89.6%, of the Group's revenue in FY19 was recognised at a point in time, and £5.4 million, or 10.4%, of the Group's revenue in FY19 was recognised over time.

The Group achieved such growth in revenue from the sale of goods (and therefore revenue recognised at a point in time) in FY20 as a result of the sale of LamPORE and related products, the resale of PCR tests, as well as growth in sales across all LSRT product lines. The Group achieved growth in lease income (which is recognised for the first 12 months on devices included within starter packs) and income from services rendered to customers in FY20 as a result of growth in the sale of starter packs and associated services, respectively, which contributed to growth in revenue recognised over time in FY20.

In the LSRT segment in FY20 compared to FY19, the Group achieved:

- a £5.1 million, or 19.8%, increase in revenue from flow cells, which accounted for 46.9% of LSRT revenue in FY20 compared to 49.2% in FY19;
- a £1.4 million, or 19.7%, increase in revenue from kits (which together with flow cells, comprise the Group’s consumables, and which tend to grow in line with growth in flow cells because customers require a kit for each experiment), which accounted for 13.4% of LSRT revenue in FY20 compared to 14.1% in FY19;
- a £4.0 million, or 23.7%, increase in revenue from starter packs (including from the CapEX option), which accounted for 31.8% of LSRT revenue in FY20 compared to 32.4% in FY19, supported by the rollout of the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19; and
- a £3.0 million, or 131.3%, increase in revenue from other products and services (excluding COVID-19 testing products), which accounted for 7.9% of LSRT revenue in FY20 compared to 4.3% in FY19, supported by the increase in sales of starter packs and the Group’s expanding customer base.

Revenue growth in the LSRT segment in FY20 was principally driven by growth in the number of customers and average revenue per customer account generated in each of the S1, S2 and S3 customer categories, as well as certain indirect sales through distributors, which, in turn, was principally due to significant growth in the sale of starter packs and consumables. For the second half of FY20, revenues in LSRT were reduced due to the closure of customer sites as a result of restrictions associated with the COVID-19 pandemic, which contributed to the deferral of projects, including large projects within the S3 customer category. The rate of growth in the S1 customer category also slowed in FY20 as a result of the closure of customer sites. By customer type, the Group's S1, S2, S3 and indirect customers accounted for the following proportion of total revenue and LSRT revenue.

| | % of total revenue[1] | | % of LSRT revenue | |
|---|---|---|---|---|
| | **FY19** | **FY20** | **FY19** | **FY20** |
| S1 | 30.3 | 16.3 | 30.3 | 28.4 |
| S2 | 32.0 | 20.8 | 32.0 | 36.2 |
| S3 | 32.2 | 15.6 | 32.2 | 27.1 |
| Indirect customers | 5.5 | 4.8 | 5.5 | 8.3 |

(1) £48.3 million, or 42.4% of the Group's revenue comprised COVID testing revenue in FY20, compared to nil in FY19, which revenue is not included within the S1, S2 and S3 customer categories.

By customer type, the Group experienced:

- a £1.0 million, or 6.0%, increase in revenue derived from S3 customers, a £14,268 increase in average

revenue per S3 customer account, from £598,175 in FY19 to £612,443 in FY20, and a 3.6% increase in number of S3 customer accounts invoiced in the last 12 months, from 28 in FY19 to 29 in FY20;

- a £7.1 million, or 42.5%, increase in revenue derived from S2 customers, a £5,840 increase in average revenue per S2 customer account, from £45,630 in FY19 to £51,470 in FY20, and a 26.3% increase in the number of S2 customer accounts invoiced in the last 12 months, from 365 in FY19 to 461 in FY20; and
- a £2.8 million, or 18.1%, increase in revenue derived from S1 customers, a £506 increase in average revenue per S1 customer account, from £3,695 in FY19 to £4,201 in FY20, and a 3.8% increase in the number of S1 customer accounts invoiced in the last 12 months, from 4,267 in FY19 to 4,431 in FY20, in each case, in FY20 compared to FY19, respectively.

The increase in the S2 and S3 customer category metrics described above, was principally attributable to the roll-out of the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19, which contributed to increased demand for starter packs and consumables in FY20 across the Group's medium and large devices, notwithstanding some temporary deferrals of larger S3 customer projects in FY20. Several larger S2 customers also moved into the S3 customer category in FY20 following completion of their starter packs. The increase in the S1 customer category metrics in FY20 was principally attributable to recurring revenue from existing customers and new customers acquired through the sale of starter packs (including the CapEX option).

By geography, in FY20, £52.9 million, or 46.4%, of the Group's revenue was attributable to the UK market, compared to £3.7 million, or 7.1%, of the Group's revenue in FY19. This was principally due to £47.6 million of revenue from the COVID testing segment in FY20.The majority of LSRT revenue in FY20 was attributable to geographical regions other than the UK, as presented above.

| | FY19 | FY19 | FY20 | FY20 |
|---|---|---|---|---|
| | £ in millions | % of LRST revenue | £ in millions | % of LRST revenue |
| US | 14.6 | 28.1 | 16.4 | 25.0 |
| Europe | 14.3 | 27.5 | 18.3 | 27.9 |
| China | 8.7 | 16.8 | 7.7 | 11.8 |
| Japan | 3.2 | 6.2 | 4.2 | 6.4 |
| Rest of the World | 7.4 | 14.3 | 13.7 | 20.9 |

The Group experienced a £6.3 million, or 83.8%, increase in revenue from the rest of the world in FY20, principally attributable to revenue from the sale of products to set up a large-scale human genomics programme in the UAE. The Group's revenue from China declined as a percentage of total Group sales in FY20 compared to FY19 principally due to the closure of customer sites as a result of restrictions associated with the COVID-19 pandemic and reduced demand for the Group's products and services. Growth across other regions (excluding the UK) was principally due to growth in demand for the Group's products and services in the LSRT segment.

*Cost of sales*

The Group's cost of sales increased by £40.5 million, or 153.3%, from £26.4 million in FY19 to £67.0 million in FY20. The Group's cost of sales increased in FY20 principally due to growth in total revenue. The increase in the Group's cost of sales was principally attributable to £29.5 million of costs attributable to the COVID testing segment, compared to nil in FY19, as well as an £11.0 million, or 41.6%, increase in cost of sales attributable to the LSRT business.

The increase in cost of sales attributable to the LSRT business was principally due to the increase in LSRT revenue in FY20 compared to FY19, the rollout and upgrade of a large number of PromethIONs and GridION Betas that were at customer sites, as well as the production costs associated with the manufacture at scale of new PromethION flow cells in FY20 (to complement the PromethION 24 and PromethION 48), following the development of the Group's new flow cell manufacturing facility at the end of 2019.

*Gross profit*

As a result of the foregoing factors, the Group's gross profit increased by £21.3 million, or 83.0%, from £25.6 million in FY19 to £46.9 million in FY20.

The Group's gross profit as a percentage of revenue (gross profit margin) decreased by 8.0 percentage points, from 49.2% in FY19 to 41.2% in FY20. This was principally due to lower margins on products

and services associated with COVID-19 testing, as well as lower margins on PromethION flow cells sold in FY20 resulting from a change in chip manufacturing methods in order to improve long term scale-up for manufacturing of PromethION flow cells. As the PromethION flow cells become more established, the Directors anticipate that the gross profit margin on these flow cells will increase, to become more in line with gross profit margins received for established consumable products (such as the MinION flow cell that was commercialised in 2015).

As a result of the launch of the GridION Mk1, PromethION 24 and PromethION 48 in FY19, the Group experienced an increase in demand for GridION MK1s to replace early access GridION Betas that were at customer sites (due to maturation of the GridION device to address quality issues with the early access versions) and the consumables to be used on the PromethION platforms, which contributed to an increase in the Group's cost of sales as replacement GridIONs were provided to customers free of charge. This increase in early-stage costs is in line with the Directors anticipated performance for early- stage manufacturing scale-up yields, consistent with previous platform development.

The Group's gross profit and gross profit margin attributable to the LSRT segment declined, from £25.6 million and 49.2% in FY19 to £28.1 million and 42.9% in FY20, respectively.

*Operating expenses*

The Group's total operating expenses increased by £13.4 million, or 12.6%, from £106.5 million in FY19 to £119.9 million in FY20, principally due to:

- a £8.1 million, or 20.0%, increase in R&D expenses (which does not include capitalised development costs of £10.7 million and £11.8 million in FY19 and FY20, respectively), from £40.5 million in FY19 to £48.6 million in FY20; and
- a £5.3 million, or 8.1%, increase in selling, general and administrative expenses, from £66.1 million in FY19 to £71.4 million in FY20.

The increase in the Group's R&D expenses in FY20 was principally due to the following (including capitalised development costs, although these are not accounted for within operating expenses):

- a 9.8% increase in average headcount of R&D staff to 235 in FY20, compared to 214 in FY19, to support the research phase into early product release across the platform, which contributed to a 15.9% increase in payroll expenses and other benefits associated with R&D staff (from £18.9 million in FY19 to £21.9 million in FY20); and
- a 24% increase in R&D materials and outsourced R&D costs, from £22.9 million in FY19 to £28.5 million in FY20, principally attributable to ASICS development and PromethION P-chips, including professional fees and outsourced consultancy costs to support the development of flow cells for the manufacturing process.

These increases more than offset a decrease in share-based payments. Including capitalised development costs (which are not accounted for within operating expenses), the Group experienced a £2.4 million decrease in share-based payments from £5.5 million in FY19 to £3.1 million in FY20, due to a decline in the amount of share options granted to R&D staff that vested in the period.

The increase in the Group's selling, general and administrative expenses in FY20, was principally due to an increase in general and administrative expenses of £7.0 million in FY20, which more than offset a £1.6 million reduction in sales, marketing and distribution expenses.

The Group's general and administrative expenses increased by £7.0 million, or 16.0%, from £43.7 million in FY19 to £50.7 million in FY20, principally due to:

- a 20.6% increase in average headcount of staff within the Group's HR, finance, central administration, legal functions and certain corporate executives to support business growth, from 49 in FY19 to 57 in FY20, which contributed to a £2.8 million increase in payroll expenses and other benefits associated with staff within the general and administrative functions, from £7.5 million in FY19 to £10.2 million in FY20;
- an 8.9% increase in professional fees, from £11.2 million in FY19 to £12.2 million in FY20, which was principally attributable to legal fees incurred in connection with defending various litigation against the Group in FY19 and FY20 (principally attributable to the PacBio litigation);
- a 17.8% increase in facilities and central IT costs, from £7.3 million in FY19 to £8.6 million in FY20, principally attributable to rent reviews in FY20, building and facilities costs associated with the MinION building that was established in October 2019, and improvements to the Group’s IT infrastructure to

support growing headcount and business growth; and

- an 70.8% increase in depreciation and amortisation, from £7.2 million in FY19 to £12.4 million in FY20, which was principally due a £3.1 million increase in amortisation of intangible assets, from £1.7 million in FY19 to £4.8 million in FY20, following the increase in capitalised development costs principally attributable to the development of PromethION and LamPORE, as well as depreciation of the MinION manufacturing facility.

These increases more than offset a £0.7 million reduction in share-based payments to staff within the general and administrative functions, from £4.4 million in FY19 to £3.7 million in FY20, due to a decline in the amount of share options granted to staff that vested within the period.

The Group's sales, marketing and distribution expenses decreased by £1.6 million, or 7.2%, from £22.3 million in FY19 to £20.7 million in FY20, principally due to a 74.9% decline in sales, marketing and travel costs, from £10.2 million in FY19 to £2.6 million in FY20, attributable to the COVID-19 pandemic and associated restrictions which resulted in the cancellation of face-to-face meetings and in-person events (such as London Calling and the Nanopore Community Meeting). The decline in sales, marketing and travel costs more than offset:

- a 38.7% increase in payroll expenses and other benefits associated with staff within the Group's sales, marketing and distribution functions to support business growth, from £9.2 million in FY19 to £12.8 million in FY20, which was attributable to a 20.6% increase in average headcount of such staff from 107 in FY19 to 129 in FY20; and
- a 86.2% increase in other sales, marketing and distribution expenses associated with customer-facing IT and online services, as well as costs associated with overseas offices that provide customers with technical support and customer service, from £2.9 million in FY19 to £5.3 million in FY20, principally attributable to an increase in resources applied to commercialisation of the Group's products.

The Group's total operating expenses as a percentage of revenue decreased by 99.3 percentage points, from 204.6% in FY19 to 105.3% in FY20. This was principally due to the increase in total revenue from £52.1 million in FY19 to £113.9 million in FY20.

The Group's R&D expenses as a percentage of revenue declined by 35.1 percentage points, from 77.7% in FY19 to 42.6% in FY20 and the Group's selling, general and administrative expenses as a percentage of revenue declined by 64.2 percentage points, from 126.9% in FY19 to 62.7% in FY20.

*Loss from operations*

As a result of the foregoing factors, the Group's loss from operations decreased by £7.9 million, or 9.7%, from an operating loss of £80.9 million in FY19 to an operating loss of £73.0 million in FY20.

The Group's operating loss as a percentage of revenue decreased from an operating loss of 155.4% of revenue in FY19 to an operating loss of 64.2% of revenue in FY20.

*Finance income*

Finance income decreased by £0.4 million in FY20, from £0.5 million in FY19 to £0.1 million in FY20. This was principally due to a decrease in interest earned on cash held in the bank.

The Group's finance income as a percentage of revenue decreased by 0.9 percentage points, from 1.0% in FY19 to 0.1% in FY20.

*Finance costs*

Finance costs remained stable at £0.7 million in FY19 and FY20. Finance costs in FY20 were attributable to:

- £0.5 million of interest on leases, compared to £0.4 million in FY19, reflecting a £0.1 million, or 41.3%, increase in FY20; and
- £0.3 million of interest payable in respect of the Term Loan Facility, which remained relatively stable compared to FY19.

The Group's finance costs as a percentage of revenue decreased by 0.7 percentage points, from 1.4% in FY19 to 0.7% in FY20.

*Other gains/(losses)*

The Group recognised other gains of £0.6 million in FY20, compared to £0.6 million of other gains in FY19, principally due to gains on derivative financial instruments.

The Group's other gains/(losses) as a percentage of revenue decreased by 0.7 percentage points, from 1.2% in FY19 to 0.5% in FY20.

*Loss before tax*

As a result of the foregoing factors, the Group recognised loss before tax of £73.2 million in FY20, compared to £80.5 million in FY19.

The Group's loss before tax as a percentage of revenue decreased from 154.6% in FY19 to 64.2% in FY20.

*Tax credit*

The Group recognised a tax credit of £11.9 million in FY20 compared to a tax credit of £8.3 million in FY19. The Group's tax credit in FY20 was recognised on a loss before tax of £73.2 million, giving rise to an effective tax rate of 16.3% In FY20. The Group's tax credit in FY19 was recognised on a loss before tax of £80.5 million in FY19, giving rise to an effective tax rate of 10.3% in FY19. The Group's effective tax rate for FY20 was lower than the standard rate of corporation tax in the United Kingdom of 19%. (FY19: lower than 19%).

The Group's tax credit as a percentage of revenue decreased by 5.4 percentage points, from 15.9% in FY19 to 10.5% in FY20.

*Loss for the year after tax*

As a result of the foregoing factors, the Group recognised a loss for the year after tax of £61.2 million in FY20, compared to a loss for the year after tax of £72.2 million in FY19.

The Group's loss for the year after tax as a percentage of revenue decreased by 84.9 percentage points, from 138.7% in FY19 to 53.8% in FY20.

### 5.3 Comparison of the Group's results of operations for FY18 and FY19

*Revenue*

Revenue increased by £19.5 million, or 60.1%, from £32.5 million in FY18 to £52.1 million in FY19. All of the Group's revenue in FY18 and FY19 was derived from the LSRT segment.

The growth in the Group's LSRT business in FY19 was principally driven by growth in revenue from all products and services, as well as growth in the number of customers and average revenue per customer account generated in the S3 customer category, as well as in each of the S1 and S2 customer categories, and certain indirect sales through distributors.

The Group's total revenue in FY19 was principally from the sale of goods, which revenue is recognised at a point in time, the rendering of services and, to a lesser extent, from lease income, which revenue is recognised over time.

- £46.6 million, or 89.6%, of the Group's total revenue in FY19 was derived from the sale of goods, £3.4 million, or 6.5%, from the rendering of services, and £2.1 million, or 3.9%, from lease income. By comparison, £29.8 million, or 91.5% of the Group's total revenue in FY18 was derived from the sale of goods, £0.5 million, or 1.6%, from the rendering of services, and £2.2 million, or 6.9%, from lease income.
- £46.6 million, or 89.6%, of the Group's revenue in FY19 was recognised at a point in time, and £5.4 million, or 10.4% of the Group's revenue in FY19 was recognised over time. By comparison, £29.8 million, or 91.5% of the Group's revenue in FY18 was recognised at a point in time, and £2.8 million, or 8.5%, of the Group's revenue in FY18 was recognised over time.

The Group achieved growth in revenue from the sale of goods (and therefore revenue recognised at a point in time) in FY19 as a result of growth across all product lines, particularly stand-alone consumables and consumables within starter packs to be used on the GridION and PromethION platforms. The Group's lease income (which is recognised for the first 12 months on devices included within starter packs) and income from services rendered to customers (and therefore revenue recognised over time) increased in FY19 as a result of growth in the sale of the GridION Mk1, PromethION 24 and PromethION 48, which were released in FY19, and associated SLDWs on starter packs and CapEX options which included those devices. The Group also achieved an increase in service income due to more training being provided in connection with the release of those new devices.

In FY19 compared to FY18, the Group achieved:

- a £12.8 million, or 100.0%, increase in revenue from flow cells, which accounted for 49.2% of revenue in FY19 compared to 39.4% in FY18 driven by the release of the GridION Beta and PromethION Beta devices in July 2017 and FY18, respectively, and their subsequent replacement with the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19, which led to the first consumable orders on those platforms as well as continued growth in flow cells on the original MinION platform;
- a £2.3 million, or 47.0%, increase in revenue from kits (which together with flow cells, comprise the Group's consumables, and which tend to grow in line with growth in flow cells because customers require a kit for each experiment), which accounted for 14.1% of revenue in FY19 compared to 15.3% in FY18;
- a £3.6 million, or 27.5%, increase in revenue from starter packs and CapEX bundles, which accounted for 32.4% of revenue in FY19 compared to 40.6% in FY18; and
- a £0.7 million, or 49.4% increase in revenue from other products and services, which accounted for 4.3% of revenue in FY19 compared to 4.6% in FY18, principally due to growth in revenue from certifications, demand for which increased as a result of the release of the new GridION and PromethION devices (as these are the devices in respect of which certification is sought).

  Revenue growth across all product and service categories was driven by changes to the Group's customer base. By customer type, the Group's S1, S2, S3 and indirect customers accounted for the following proportion of total revenue.

| | % of total revenue | |
|---|---|---|
| | **FY18** | **FY19** |
| S1 | 33.4 | 30.3 |
| S2 | 42.4 | 32.0 |
| S3 | 20.7 | 32.2 |
| Indirect customers | 3.5 | 5.5 |

By customer type, the Group experienced:

- a £10.0 million, or 148.6%, increase in revenue derived from S3 customers, a £36,819 increase in average revenue per S3 customer account, from £561,356 in FY18 to £598,175 in FY19, and a 133.3% increase in number of S3 customer accounts invoiced in the last 12 months, from 12 in FY18 to 28 in FY19;
- a £2.9 million, or 20.8%, increase in revenue derived from S2 customers, a £4,308 decline in average revenue per S2 customer account, from £49,938 in FY18 to £45,630 in FY19, and a 32.2% increase in number of S2 customer accounts invoiced in the last 12 months, from 276 in FY18 to 365 in FY19; and
- a £4.9 million, or 45.1%, increase in revenue derived from S1 customers, a £633 increase in average revenue per S1 customer account, from £3,063 in FY18 to £3,695 in FY19, and a 20.3% increase in number of S1 customer accounts invoiced in the last 12 months, from 3,548 in FY18 to 4,267 in FY19, in each case, in FY19 compared to FY18, respectively.

The increase in the S1, S2 and S3 customer category metrics described above was principally attributable to the increase in revenue from consumables and, in the case of S2 and S3 customers, due to the success of the GridION Beta and PromethION Beta which were released in July 2017 and FY18, respectively, and which were subsequently replaced with the GridION Mk1 and the PromethION 24 and PromethION 48 in FY19. The increase in revenue across all customer categories was also attributable to strong sales of the Group's starter packs (including CapEX option). The Group experienced a significant increase in the number of S3 customers in FY19 as a result of S2 customers moving into the S3 customer category in FY19 following completion of their starter packs, which led to S3 customers accounting for a greater proportion of total revenue in FY19, relative to S1 and S2 customers (whose revenue contribution declined as a proportion of the Group's total revenue in FY19).

In FY19, £3.7 million, or 7.1%, of the Group's revenue was attributable to the UK market, compared to £3.0 million, or 9.1%, of the Group's revenue in FY18. By comparison, the majority of the Group's revenue in FY18 and FY19 was attributable to other geographical regions, as presented below:

| | FY18 | | FY19 | |
|---|---|---|---|---|
| | £ in millions | % of total revenue | £ in millions | % of total revenue |
| US | 10.2 | 31.5 | 14.6 | 28.1 |
| Europe | 7.9 | 24.4 | 14.3 | 27.5 |
| China | 4.1 | 12.7 | 8.7 | 16.8 |
| Japan | 2.3 | 6.9 | 3.2 | 6.2 |
| Rest of the World | 5.0 | 15.4 | 7.4 | 14.3 |

In FY19, the Group experienced growth in revenue attributable to the United States and Europe, principally due to enhanced selling efforts as the Group invested in its sales function (including through increasing the number of sales staff in those regions) to drive sales of the GridION and PromethION devices (including through starter packs and the CapEX option), consumables and associated services. The Group's results also benefited from the expansion of the Group's geographical reach in the United States in FY19 (selling into 30 States in FY19 compared to 10 States in FY18). Growth in revenue attributable to the Chinese market was principally due to increased sales via distributors (as a result of two new distributors that were added in May 2018 and at the end of FY18), with the full year benefit in FY19. Growth in Japan and the UK markets in FY19 was attributable to the release of the newer and improved GridION and PromethION products. Growth in the rest of the world was principally attributable to growth in Canada and South Korea, including due to the addition of a new distributor in South Korea.

*Cost of sales*

The Group's cost of sales increased by £9.9 million, or 60.2%, from £16.5 million in FY18 to £26.4 million in FY19, principally due to 60.1% growth in revenue, from £32.5 million in FY18 to £52.1 million in FY19.

*Gross profit*

As a result of the foregoing factors, the Group's gross profit increased by £9.6 million, or 60.0%, from £16.0 million in FY18 to £25.6 million in FY19.

The Group's gross profit as a percentage of revenue (gross profit margin) remained stable at 49.2% in FY18 and FY19.

*Operating expenses*

The Group's total operating expenses increased by £28.3 million, or 36.2%, from £78.2 million in FY18 to £106.5 million in FY19, principally due to:

- a £3.4 million, or 9.0%, increase in R&D expenses (which does not include capitalised development costs of £6.6 million and £11.8 million in FY18 and FY19, respectively), from £37.1 million in FY18 to £40.5 million in FY19; and
- a £25.0 million, or 60.8%, increase in selling, general and administrative expenses, from £41.1 million in FY18 to £66.1 million in FY19.

The increase in the Group's R&D expenses in FY19 was principally due to the following (which figures presented below include capitalised development costs, although these are not accounted for within operating expenses):

- a 6.5% increase in average headcount of R&D staff to 214 in FY19, compared to 201 in FY18, to support innovation, which contributed to a £0.7 million increase in payroll expenses and other benefits associated with R&D staff (from £18.3 million in FY18 to £19.0 million in FY19);
- a 74% increase in R&D materials and outsourced R&D costs, from £13.2 million in FY18 to £22.9 million in FY19, which was principally attributable to increased investment in R&D to create new products and improve the functionality of existing products, together with investment in developing the new PromethION P-chips; and
- a 57.1% increase in share-based payments, from £3.5 million to £5.5 million, attributable to the grant of share options that vested in the period.

These increases more than offset a £5.2 million increase in capitalised development costs in FY19 compared to FY18, which were not accounted for within operating expenses. In FY19, £11.8 million of development expenditure was capitalised (principally attributable to the development of PromethION and

PromethION P-chips, and GridION MK1), compared to £6.6 million in FY18 (principally attributable to the development of the PromethION and GridION platforms), which reflected the stage of maturity of the Group's product pipeline.

The increase in the Group's selling, general and administrative expenses in FY19 was principally due to a £17.4 million increase in general and administrative expenses and a £7.6 million increase in sales, marketing and distribution expenses.

The Group's general and administrative expenses increased by £17.4 million, or 65.8%, from £26.4 million in FY18 to £43.8 million in FY19, was principally due to:

- a 20.0% increase in average headcount of staff within the general and administrative functions, from 40 in FY18 to 48 in FY19, principally attributable to strengthening the Group's HR, finance and legal functions, which contributed to a £1.3 million increase in payroll expenses and other benefits associated with such staff, from £6.2 million in FY18 to £7.5 million in FY19; a 52.4% increase in professional fees, from £7.3 million in FY18 to £11.2 million in FY19, which was principally attributable to legal fees incurred in connection with defending various litigation against the Group (principally attributable to the PacBio litigation);
- a 12.3% increase in costs associated with the Group's properties and IT, from £6.5 million in FY18 to £7.3 million in FY19, principally attributable to the growing size and scale of the Group's business, and a significant change in operational infrastructure in FY19;
- a 24.1% increase in IP and academic research expenses, from £5.4 million in FY18 to £6.7 million in FY19, principally attributable to the cost of maintaining patents and in-licensing, and the costs of sponsoring academic research;
- a 128.8% increase in depreciation and amortisation, from £3.2 million in FY18 to £7.2 million in FY19, principally attributable to the commencement of depreciation on the new leasehold improvements, plant and equipment at the Harwell facility; and
- a 25.7% increase in share-based payments, from £3.5 million to £4.4 million, attributable to the grant of share options that vested in the period.

The Group's sales, marketing and distribution expenses increased by £7.6 million, or 51.7%, from £14.7 million in FY18 to £22.3 million in FY19, principally due to:

- a 49.8% increase in sales marketing and transport costs, from £8.1 million in FY18 to £12.1 million in FY19, principally attributable to the Group's sales and marketing efforts, including organising and attending industry conferences and face-to-face events such as London Calling, the Nanopore Community Meeting and a technology tour in Asia; and
- a 64.3% increase in payroll expenses and other benefits associated with sales, marketing and distribution staff, from £5.6 million in FY18 to £9.2 million in FY19, which was attributable to a 55.1% increase in average headcount of such staff from 69 in FY18 to 107 in FY19, principally due to growth of the Group's commercial team.

The Group's total operating expenses as a percentage of revenue decreased by 35.8 percentage points, from 240.4% in FY18 to 204.6% in FY19. This was principally due to:

- a 36.4 percentage point decline in the Group's R&D expenses as a percentage of revenue, from 114.1% in FY18 to 77.7% in FY19; and
- a 0.5 percentage point decline in the Group's selling, general and administrative expenses as a percentage of revenue, from 126.4% in FY18 to 126.9% in FY19.

*Loss from operations*

As a result of the foregoing factors, the Group's loss from operations increased by £18.7 million, or 30.1%, from an operating loss of £62.2 million in FY18 to an operating loss of £80.9 million in FY19.

The Group's operating loss as a percentage of revenue decreased from an operating loss of 191.2% of revenue in FY18 to an operating loss of 155.4% of revenue in FY19.

*Finance income*

Finance income decreased by £0.1 million in FY19, from £0.6 million in FY18 to £0.5 million in FY19.

The Group's finance income as a percentage of revenue decreased by 0.8 percentage points, from 1.8% in FY18 to 1.0% in FY19.

*Finance costs*

Finance costs increased by £0.3 million, or 67.6%, from £0.4 million in FY18 to £0.7 million in FY19, principally due to £0.4 million of interest on leases, compared to £nil in FY18 (principally due to the adoption of IFRS 16 as of 1 January 2019, which was not retrospectively adopted for FY18), which more than offset a £0.2 million, or 37.8%, decline in interest payable in respect of the Term Loan Facility, from £0.4 million in FY18 to £0.3 million in FY19.

The Group's finance costs as a percentage of revenue increased by 0.1 percentage point, from 1.3% in FY18 to 1.4% in FY19.

*Other gains/(losses)*

The Group recognised other gains of £0.6 million in FY19, compared to £nil of other gains/(losses) in FY18, principally due to gains on derivative financial instruments in FY19.

The Group's other gains/(losses) as a percentage of revenue was 1.2% in FY19 compared to nil in FY18.

*Loss before tax*

As a result of the foregoing factors, the Group recognised loss before tax of £80.5 million in FY19, compared to £62.0 million in FY18.

The Group's loss before tax as a percentage of revenue decreased by 36.1 percentage points, from 190.7% in FY18 to 154.6% in FY19.

*Tax credit*

The Group recognised a tax credit of £8.3 million in FY19 compared to a tax credit of £8.9 million in FY18.

The Group's tax credit in FY19 was recognised on a loss before tax of £80.5 million, giving rise to an effective tax rate of 10.3% In FY19. The Group's tax credit in FY18 was recognised on a loss before tax of £62.0 million in FY18, giving rise to an effective tax rate of 14.4% in FY18. The Group's effective tax rate for FY19 was lower than the standard rate of corporation tax in the United Kingdom of 19% (FY18: lower than 19%).

The Group's tax credit as a percentage of revenue decreased by 11.5 percentage points, from 27.4% in FY18 to 15.9% in FY19.

*Loss for the year after tax*

As a result of the foregoing factors, the Group recognised a loss for the year after tax of £72.2 million in FY19, compared to a loss for the year after tax of £53.1 million in FY18. The Group's loss for the year after tax as a percentage of revenue decreased by 24.6 percentage points, from 163.3% in FY18 to 138.7% in FY19.

## 6. Liquidity and capital resources

### 6.1 Overview

In the periods under review, the Group's principal source of funds has been cash flows from financing activities (being borrowings under the Company's Term Loan Facility, interest earned on cash held in the bank and on short-term deposits, and proceeds raised from the issuance of new shares by way of a series of private placements), as well as available cash and cash equivalents. In FY18, FY19, FY20, and HY21, the Group received £100.3 million, £0.3 million, £164.0 million and £202.0 million, respectively in proceeds from the issuance of new shares by way of private placements. In the future, the Directors expect the Group's principal source of funds to also include cash flows from its operating activities.

The Group's liquidity requirements primarily relate to funding its working capital requirements, funding its operating expenses and capital expenditures (including its investments in R&D, and operational and commercial infrastructure), and meeting its ongoing debt service obligations (including under the Term Loan Facility and in respect of lease liabilities). The Group may also require cash resources to fund any future acquisitions that it may wish to undertake.

As of 31 December 2020 and 30 June 2021, the Group had total loans and borrowings under the Term Loan Facility of £9.5 million, all of which was secured. The Company has entered into the Term Loan Facility Agreement with Barclays Bank plc. The Senior Facilities Agreement includes the Term Loan Facility for £9.5 million, which was drawn in full by the Group to partially fund the purchase of the lease of land and accompanying purchase of the Gosling building, which was acquired for £16.2 million in FY17. The outstanding borrowings under the Term Loan Facility are due for repayment over seven instalments of £0.3

million each, commencing August 2022, with a final lump sum repayment due August 2024. The average interest rate charged under the Term Loan Facility was 2.90 % in HY21 (FY18: 2.54%; FY19: 2.75%; and FY20: 2.63%). Borrowings under the Term Loan Facility are subject to certain customary conditions, including compliance with financial maintenance covenants (to the extent certain loan to value thresholds are exceeded) and other covenants, representations and warranties. See note 25 to Part 8 *(Historical Financial Information)* for further information.

As of 31 December 2020 and 30 June 2021, the Group had lease liabilities of £14.1 million and £13.8 million, respectively. These relate to the Group's properties which are classified as right-of-use assets that were entered into with a corresponding lease contract.

The Group had cash and cash equivalents of £80.9 million as of 31 December 2020 and £119.7 million as of 30 June 2021.

The Group's principal or interest payments when due on its indebtedness, including indebtedness under the Company's existing Term Loan Facility, lease liabilities or any future indebtedness it may incur, and its ongoing operations and any consideration that may be payable in respect of acquisitions (including contingent consideration or deferred consideration payable), are expected to be funded from its cash on hand and cash flows from operating activities. The Group's future funding needs will depend on many factors, including its revenue, cash flow and control of costs (which may be subject to general economic, financial, competitive, legislative, legal, regulatory and other factors, as well as other factors discussed in Part 1 *(Risk Factors)*, many of which are beyond the Group's control), as well as any proceeds raised from the issuance of shares, including in a potential IPO. If the Group were to undertake acquisitions and other investments in the future, it may need to raise additional capital to do so.

The Group seeks to manage its capital to ensure that its entities will be able to continue as a going concern, while optimising its capital structure to have sufficient capital to implement the Group's growth strategies.

Cash flow forecasting is performed by the central finance team. The Group monitors rolling forecasts of its liquidity requirements to ensure it has sufficient cash to meet operational needs.

### 6.2 Cash flows

The following table sets forth the Group's consolidated statement of cash flow items for the periods indicated.

| | FY18 | FY19 | FY20 | HY20 | HY21 |
|---|---|---|---|---|---|
| | | | £,000s | | |
| Net cash (outflow) from operating activities | (55,509) | (48,679) | (63,806) | (25,979) | (15,465) |
| Net cash (used in)/generated from investing activities | (65,420) | 28,523 | (26,939) | (7,194) | (144,480) |
| Net cash (used in)/generated from financing activities | 98,403 | (1,988) | 158,577 | 75,511 | 198,902 |
| **Net increase/(reduction) in cash and cash equivalents** | **(22,526)** | **(22,144)** | **67,832** | **42,338** | **38,966** |

### 6.3 Cash flows from operating activities

The Group's net cash outflow from operating activities was attributable to losses before tax of £62.0 million, £80.5 million, £73.2 million, £42.3 million and £44.4 million, in FY18, FY19, FY20, HY20 and HY21, respectively, depreciation of property, plant and equipment, depreciation of right of use assets, amortisation of internally generated intangible assets, loss on disposal of property, plant and equipment, net exchange losses, finance costs on lease liabilities, net bank interest, other gains and losses, and employee share benefit costs), as set out in the Group's cash flow statement, as well as for the movement in working capital described below, foreign tax paid, and tax credits received of £15.3 million, £nil, £8.5 million, £9.1 million and £9.8 million in FY18, FY19, FY20, HY20 and HY21, respectively.

*Working Capital*

The Group's working capital movements comprise movements in trade and other receivables, inventory, and trade and other payables.

The Group's business had a negative working capital profile in FY18, FY20, HY20 and HY21, and a positive working capital profile in FY19. The following table sets out changes in the Group's working capital for the periods indicated:

| | FY18 | FY19 | FY20 | HY20 | HY21 |
|---|---|---|---|---|---|
| | | | £,000s | | |
| (Increase)/decrease in trade and other receivables | (12,726) | (3,525) | (41,484) | 7,288 | 22,228 |
| (Increase)/decrease in inventory | (12,154) | (1,432) | (15,592) | (7,399) | (13,695) |
| (Decrease)/increase in trade and other payables | 6,471 | 12,798 | 33,655 | (3,675) | (19,201) |
| **Change in working capital** | **(18,409)** | **7,841** | **(23,421)** | **(3,786)** | **(10,668)** |

As a result of the change in working capital in the periods under review, the cash absorbed by the Group's operations amounted to £70.7 million, £48.4 million, £71.1 million, £34.5 million and £25.0 million, in FY18, FY19, FY20, HY20 and HY21, respectively.

The £10.7 million working capital outflow in HY21 reflects a £22.2 million decrease in trade and other receivables (principally due to the receipt of a payment from the DHSC in HY21 in respect of LamPORE purchased in FY20, which more than offset the increase in trade and other receivables as a result of revenue growth), a £13.7 million increase in inventory (principally due to the purchase of a greater quantity of raw materials to meet increased demand for the Group's products), and a £19.2 million decrease in trade and other payables (principally due to payment of amounts owed to the Group's suppliers in respect of inventory to produce LamPORE sold to the DHSC).

The £3.8 million working capital outflow in HY20 reflects a £7.3 million decrease in trade and other receivables (principally due to a higher volume of sales in the last quarter of 2019, and a reduction in sales in HY21 due to the COVID-19 pandemic), a £7.4 million increase in inventory (principally due to the purchase of raw materials to meet anticipated increased demand for the Group's products in the second half of FY20), and a £3.7 million decrease in trade and other payables (principally due to payment of amounts owed in respect of inventory purchased in FY19)

The £23.4 million working capital outflow in FY20 reflects a £41.5 million increase in trade and other receivables (principally due to growth in COVID testing revenue in the last quarter of FY20), a £15.6 million increase in inventory (principally due to the purchase of a greater quantity of raw materials in preparation for Brexit, and in response to increased demand for the Group's products in line with revenue growth), and a £33.7 million increase in trade and other payables (principally due to revenue growth).

The £7.8 million working capital inflow in FY19 reflects a £3.5 million increase in trade and other receivables (principally due to revenue growth), a £1.4 million increase in inventory (principally attributable to increased demand for the Group's products in line with revenue growth), and a £12.8 million increase in trade and other payables (principally attributable to revenue growth).

The £18.4 million working capital outflow in FY18 reflects a £12.7 million increase in trade and other receivables (principally due to revenue growth), a £12.2 million increase in inventory (principally attributable to increased demand for the Group's products in line with revenue growth), and a £6.5 million increase in trade and other payables (principally due to revenue growth).

*Cash flows (used in)/generated from investing activities*

Net cash used in investing activities in HY21 amounted to £144.5 million, principally due to £130.5 million of cash invested in money market deposits (relating to the proceeds from share issuances in HY21), £9.8 million incurred in the purchase of property, plant and equipment (principally attributable to £5.9 million of assets subject to operating leases (comprising GridION and PromethION devices at customer sites) and £3.9 million of plant, machinery and equipment (attributable to growth in R&D and the purchase of IT equipment due to growing headcount)), £4.3 million of capitalised development costs (principally attributable to the development of PromethION, and other products and software), and £0.1 million of interest received from cash held in the bank.

Net cash used in investing activities in HY20 amounted to £7.2 million, principally due to £5.4 million incurred in the purchase of property, plant and equipment (principally attributable to £3.4million of assets subject to operating leases (comprising GridION and PromethION devices at customer sites) and £2.0 million of plant, machinery and equipment (attributable to growth in R&D and the purchase of IT equipment

due to growing headcount)), £1.8 million of capitalised development costs (attributable to the development of PromethION, kits, Flongle, software upgrades and LamPORE), and £0.1 million of interest received from cash held in the bank.

Net cash used in investing activities in FY20 amounted to £26.9 million, principally due to £15.7 million incurred in the purchase of property, plant and equipment (principally attributable to £8.8 million of assets subject to operating leases (comprising GridION and PromethION devices at customer sites) and £6.8 million of plant, machinery and equipment (attributable to growth in R&D and the purchase of IT equipment due to growing headcount)), £10.7 million of capitalised development costs (principally attributable to the development of PromethION and LamPORE), £0.5 million incurred in the acquisition of an investment in an associate (attributable to the acquisition of an 18.5% stake in Veiovia Limited, a University of York spin-out developing novel and potentially complementary data processing software) and £0.1 million of interest received from cash held in the bank.

Net cash generated from investing activities in FY19 amounted to £28.5 million, principally due to £58.0 million of proceeds received from maturing short-term deposit investments and £0.8 million of interest received from cash held in the bank, which offset £18.5 million incurred in the purchase of property, plant and equipment (principally attributable to £7.5 million of assets subject to operating leases comprising GridION and PromethION devices at customer sites, £8.8 million invested in the MinION manufacturing facility and £2.2 million of equipment (principally attributable to the purchase of IT equipment for staff)), and £11.8 million of capitalised development costs (principally attributable to the development of PromethION and PromethION P-chips, and GridION MK1).

Net cash used in investing activities in FY18 amounted to £65.4 million, primarily due to £11.2 million incurred in the purchase of property, plant and equipment (principally attributable to £7.8 million of assets subject to operating leases comprising GridION and PromethION devices at customer sites, and £3.4 million of plant, machinery and equipment (half of which was attributable to the manufacturing plant and machinery and the other half to the purchase of IT equipment)), £6.6 million of capitalised development costs (principally attributable to the development of the PromethION and GridION platforms), and £48.0 million of cash deposited in short-term investments, which offset £0.4 million of interest received on cash held in the bank.

*Cash flows (used in)/generated from financing activities*

Net cash generated from financing activities of £198.9 million in HY21 was principally due to a £202.6 million cash inflow from proceeds from the issuance of shares pursuant to a private placement, which more than offset a £2.3 million cash outflow in respect of the costs associated with the issuance of such shares (including commission fees of £44,000 paid to IP Group, which is a related party, as well as aggregate commission fees of £1.4 million paid to unrelated parties), a £0.9 million cash outflow in respect of rental payments on the Group's properties, a £0.3 million cash outflow in respect of interest paid on leases, and a £0.1 million cash outflow in respect of interest paid on the Term Loan Facility.

Net cash generated from financing activities of £75.5 million in HY20 was principally due to a £78.1 million cash inflow from proceeds from the issuance of shares pursuant to a private placement, which more than offset a £1.3 million cash outflow in respect of the costs associated with the issuance of such shares (including aggregate commission fees of £1.2 million paid to unrelated parties), a £1.0 million cash outflow in respect of rental payments on the Group's properties, a £0.2 million cash outflow in respect of interest paid on leases, and a £0.1 million cash outflow in respect of interest paid on the Term Loan Facility.

Net cash generated from financing activities of £158.6 million in FY20 was principally due to a £164.0 million cash inflow from proceeds from the issuance of shares pursuant to a private placement (in respect of which the Group incurred commission fees of £0.7 million to IP Group, which is a related party, as well as aggregate commission fees of £2.4 million to unrelated parties, in FY20), which more than offset a £2.7 million cash outflow in respect of the costs associated with the issuance of such shares, a £2.1 million cash outflow in respect of rental payments on the Group's properties, a £0.4 million cash outflow in respect of interest paid on leases, and a £0.2 million cash outflow in respect of interest paid on the Term Loan Facility.

Net cash used in financing activities of £2.0 million in FY19 was primarily due to a £1.7 million cash outflow in respect of rental payments on the Group's properties, a £0.2 million cash outflow in respect of interest paid on leases, a £0.3 million cash outflow in respect of interest paid on the Term Loan Facility, and a £0.1 million cash outflow in respect of the cost of issuing shares, which more than offset a £0.3 million cash inflow from proceeds from the issuance of shares.

Net cash generated from financing activities of £98.4 million in FY18 was primarily due to a £100.3 million cash inflow from proceeds from the issuance of shares pursuant to a private placement, which more than

offset a £1.5 million cash outflow attributable to the costs associated with the issuance of such shares.

### 6.4 Capital expenditure

The Group's capital expenditure represents a significant component of its investing activities and consists of expenditure on acquiring property and leasehold improvements, plant and machinery (which includes equipment to be used for manufacturing and R&D, assets subject to operating leases held at customer premises, as well as office and IT equipment). In addition, the Group capitalises development costs in accordance with IAS 38 and purchases certain patent and licence rights that are capable of being capitalised.

The Group undertook capital expenditure on property, plant and equipment of £11.2 million, £18.5 million, £15.7 million, £5.4 million and £9.8 million in FY18, FY19, FY20, HY20 and HY21, respectively. In addition the Group capitalised intangible assets (comprising capitalised development costs and, in FY20, the purchase of a patent for £0.5 million) of £6.6 million, £11.8 million, £11.2 million, £1.8 million and £4.3 million in FY18, FY19, FY20, HY20 and HY21, respectively.

Capital expenditure in the periods under review has been largely focused on developing the Group's manufacturing and R&D infrastructure to drive business growth, and increasing the number of assets held at customer premises under operating leases in line with the Group's strategy for new customer acquisition.

### 6.5 Anticipated capital expenditure

The Group's competitiveness and long-term profitability depends in part on its ability to deliver returns from the deployment of its capital expenditures. The Group's capital expenditure requirements depend on many factors including the Group's revenue growth rate, R&D efforts, the timing and extent of additional capital expenditures to invest in existing and new facilities, improvements to manufacturing processes and designs, the expansion of sales, marketing and commercial activities including into different types of markets and/or geographical regions, and the introduction of new products and services. The Group has in the past, and may in the future, enter into arrangements to acquire or invest in businesses, services and technologies, including IP rights, and any such acquisitions or investments could materially increase the Group's capital needs. The Group has a flexible and discretionary capital expenditure model that allows it to adjust its capital expenditure to match its growth strategy and operating performance.

The Directors believe the Group's significant investment to date in the development of its technology platform and operational infrastructure positions it well for achieving greater functionality and scale. These can be readily scaled up to service increased demand for the Group's products and services, whether through organic or inorganic growth.

In respect of property, plant and equipment, the Group expects to make further investments in facilities and IT in FY21 (which expenditure, in absolute terms, is expected to exceed relative expenditure in FY20) to support business growth. The Directors currently expect to incur similar levels of capital expenditure in the medium term, as well as some incremental capital expenditure primarily in connection with assets subject to operating leases at customers premises in line with growth in the Group's S2 and S3 customer categories (i.e., slightly slower than overall revenue as growth in the sale of consumables is anticipated to outpace growth in the sale of starter packs). In the medium, the Group also expects to maintain approximately the same amount of annual investment in property, plant and equipment, on an absolute basis. In addition, the Directors expect the Group will undertake material investment in automation and other manufacturing equipment to drive down costs of manufacture and may expand manufacturing capabilities to bring additional capabilities in-house.

The Group's anticipated capital expenditure is subject to change and the actual amount and timing of capital expenditure will depend on the opportunities the Group ultimately considers and undertakes, including any future acquisitions and decisions to undertake significant development to its existing platform and infrastructure.

### 6.6 Contractual obligations and commitments

The Group manages its cash and borrowing requirements through preparation of annual cash flow forecasts reflecting known commitments and anticipated projects in order to maximise interest income and minimise interest expense, whilst ensuring that the Group has sufficient liquid resources to meet the operating needs of the Group. Borrowing facilities are arranged as necessary to finance requirements.

The following table sets out, as of 30 June 2021 (unless otherwise indicated below), a summary of the Group's key contractual obligations and commitments, inclusive of future interest payable (unless

otherwise indicated). It reflects management's estimates of the contractual maturities of its obligations and the associated future interest payable. These maturities may differ significantly from the actual maturity of these obligations.

| | Payments to be made by period | | | |
|---|---|---|---|---|
| | Less than 1 year | Between 1 and 5 years | 5 years and over | Total |
| | | (£,000s) | | |
| Bank Loans and Borrowings[1] | - | 9,500 | - | 9,500 |
| Commitments under research agreements[2] | 1,457 | 1,016 | - | 2,473 |
| **Total** | **1,457** | **10,516** | - | **11,973** |

(1) Reflects the principal amount and interest payable on the Term Loan Facility and leases on the Group's properties.

(2) Reflects non-cancellable commitments under research agreements.

### 6.7 Pension obligations

*Defined Contribution Pension Scheme and 401(k) Plan*

The Group currently provides pension arrangements for the benefit of certain of its current and former employees in the UK and the US through a number of pension arrangements. In the UK, the Group operates a defined contribution pension scheme for the benefit of all of its eligible UK employees. Most of the employees who contribute to this pension scheme do so via a salary sacrifice. In the US, the Group operates a 401(k) plan for all of its eligible US employees. In addition, if appropriate, employees will be auto-enrolled into the defined contribution scheme or 401(k) plan.

Contributions to the defined contribution scheme and 401(k) plan are charged to the Group's income statement as incurred. The total cost of the Group's contributions to the defined contribution pension scheme amounted to £0.6 million, £0.6 million, £0.9 million, £0.4 million and £nil in FY18, FY19, FY20, HY20 and HY21, respectively. On 30 June 2021, £0.02 million of pension costs relating to the defined contribution scheme were accrued within trade and other payables (£nil, £nil, £0.2 million, and £0.2 million in FY18, FY19, FY20 and HY20, respectively).

The Group's contributions to the 401(k) plan in the periods under review amounted to £nil. The Group expects to make contributions to the 401(k) plan going forward.

The Group is reviewing its benefits package to ensure that it is appropriate for a more mature business and, from FY21, it is anticipated that the Group will fund contributions of up to 6% under both the defined contribution pension scheme and the 401(k) plan depending on employees' contributions.

### 6.8 Off-balance sheet arrangements

As of 30 June 2021, the Group had no off-balance sheet arrangements.

### 6.9 Qualitative and quantitative disclosure about market risk

The Group has exposure to liquidity, credit and market risks from the use of financial instruments.

### 6.10 Credit risk

The Group's exposure to credit risk arises from cash and cash equivalents, as well as outstanding receivables and derivatives. It encompasses the risk of financial loss to the Group if a deposit taker should fail. The Group's current policy is to ensure that the majority of external monetary deposits are made on a fixed interest basis over terms varying from one to three months depending upon rates available to the Group. Maturities of the Group's deposits are staggered whenever possible to spread exposure to movements in interest rates. Although the Directors accept that this policy neither protects the Group from the risk of receiving interest rates below the current market rates nor eliminates fully cash flow risk associated with interest receipts, they believe the policy strikes an appropriate balance in light of the Group's credit risk exposure. Term deposits are denominated in UK sterling with institutions rated as "A" or better by both Moody's and Standard & Poor's.

As of 30 June 2021, £130.5 million of the Group's cash and cash equivalents were held on deposit with several reputable financial institutions to minimise the Group's credit risk.

The credit risk on liquid funds and derivative financial instruments are measured at an amount equal to lifetime expected credit losses. Their credit risk is considered as limited because the counterparties are

banks with high credit-ratings assigned by international credit-rating agencies.

Other than lease liabilities and outstanding indebtedness, the Directors consider all of the Group's financial liabilities at 30 June 2021 to have maturity dates of less than 12 months from such date.

The Group faces additional credit risk on its trade receivables, which is managed by a centralised accounts receivable process including credit checks on initial order acceptance. Credit approvals and other monitoring procedures are also in place to ensure that follow-up action is taken to recover overdue debts. Furthermore, the Group reviews the recoverable amount of each trade debt and debt investment on an individual basis at the end of the reporting period to ensure that adequate loss allowance is made for irrecoverable amounts. In this regard, the Directors consider that the Group's credit risk is significantly reduced and will remain at the same level for the foreseeable future.

The Group's trade receivables consist of a large number of customers, spread across diverse geographical areas. Of the outstanding trade receivables balance at 30 June 2021, £0.4 million was due from the UK government (the Group's largest customer) (£29.8 million at 31 December 2020).

The Group provides credit to customers in the normal course of business. The amounts presented in the Group's balance sheet in relation to the Group's trade receivables are presented net of loss allowances. As of 30 June 2021, an amount of £1.9 million has been estimated as a loss allowance in accordance with IFRS 9 (£0.9 million, £1.9 million and £2.0 million as of 31 December 2018, 2019 and 2020, respectively) and measured at an amount equal to 12-month expected credit losses. Please refer to note 21 to the Historical Financial Information for further information.

The carrying amount of financial assets recorded in the financial statements, which is net of impairment losses, represents the Group's maximum exposure to credit risk.

### 6.11 **Liquidity risk**

Liquidity risk arises from the Group's management of working capital and the amount of funding required for growth. It comprises the risk that the Group will encounter difficulty in meeting its financial obligations as they fall due.

The Group's approach to managing liquidity is to ensure, as far as possible, that it has sufficient liquidity to meet liabilities as they fall due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Following the latest capital raise in HY21 from the issuance of new shares by way of private placement, the Directors believe the Group has substantial cash balances to fund its operations and financial obligations.

In order to maintain liquidity to ensure that sufficient funds are available for ongoing operations and future developments, the Group uses a mixture of long-term and short-term deposits.

### 6.12 **Market risk**

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's R&D costs or the value of its holdings in financial instruments. The Group has little exposure to interest rate risk other than that returns on short-term fixed interest deposits will vary with movements in underlying bank interest rates. The Group's principal market risk exposure is to movements in foreign exchange rates.

### 6.13 **Foreign exchange risk**

Foreign exchange risk is the risk that movements in exchange rates affect the profitability of the business.

Foreign exchange risk arises because the Group enters, from time to time, into transactions denominated in a currency other than pound sterling. Where it is considered that the foreign exchange risk to the Group is significant, the Group will enter into a matching forward contract with a reputable bank, or hold deposits of the currency in cash.

Derivatives are only used for economic hedging purposes and not as speculative investments.

In addition, significant amounts of U.S. dollars are held by the Group from time to time. In FY20, 33% of the Group's annual expenditures were denominated in US dollars (compared to 21% and 26% in FY18 and FY19 respectively) and 15% of the Group's expenditures were denominated in euros (compared to 13%, and 10% in FY18 and FY19, respectively). A significant portion of the Group's revenue is denominated in US dollars (see section 2.7 *(Foreign exchange movements)* for further information).

Exchange rate exposures are managed within approved policy parameters. See note 34 to the Historical Financial Information for a breakdown of carrying amounts of the Group's foreign currency denominated

monetary assets and liabilities at 30 June 2020 and 2021, and 31 December 2018, 2019 and 2020.

The effect of a 5% strengthening of the US Dollar against the Pound Sterling at the reporting date on the US Dollar denominated net financial liabilities carried at that date would, all other variables held constant, have resulted in a decrease in loss for the period and increase in equity for the period of £0.3 million and £0.3 million in FY20 (FY18: £0.1 million and £0.1 million; FY19: £0.3 million and £0.3 million, respectively).

### 6.14 Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group is exposed to interest rate risk because of funds borrowed under the Term Loan Facility and leases (in respect of the Group's properties), and in respect of cash that it invests in short-term deposits. In FY20, the average interest rate for the Term Loan Facility was 2.63%. The interest rate for short-term deposits is variable dependent on the rates offered by the Group's bankers. In HY21, the short-term deposits returned an average of 0.25% in FY20 (FY18: 0.80% and FY19: 0.95%).

The Group has considered its sensitivity to interest rate fluctuations and does not believe that a change in interest rates would have a material risk impact on the financial statements. As such, as of 30 June 2021, the Group had no outstanding financial derivatives to reduce its exposure to interest rate risks.

### 6.15 Capital management

The Group defines the capital that it manages as the Group's total equity. The Group's objectives when managing capital are:

- to safeguard the Group's ability to continue as a going concern, so that it can continue to strive to provide returns to investors;
- to provide an adequate return to investors based on the level of risk undertaken;
- to have available the necessary financial resources to allow the Group to invest in areas that may deliver future benefits for inventive sources and returns to investors; and
- to maintain sufficient financial resources to mitigate against risks and unforeseen events.

The following table illustrates the Group's debt to equity ratio as of the dates indicated.

| | FY18 | FY19 | FY20 |
|---|---|---|---|
| | | £,000s | |
| Debt | 9,500 | 9,500 | 9,500 |
| Equity | 142,893 | 109,528 | 185,934 |
| **Debt to Equity Ratio** | **6.6%** | **8.7%** | **5.1%** |

Debt is defined as long- and short-term borrowings (excluding derivatives and financial guarantee contracts). Equity includes all capital and reserves of the Group that are managed as capital.

## 7. Critical accounting judgements and estimates

The discussion and analysis of the Group's financial condition and results of operations are based on the Historical Financial Information, which were prepared in accordance with IFRS. The preparation of this financial information requires the Group to make significant assumptions and estimates about future events, and apply judgements that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities that are not readily apparent from other sources. These assumptions, estimates and judgements are continually evaluated and are based on historical experience, trends and other factors that management believes to be relevant and reasonable at the time the Group's financial statements are prepared. Revisions are recognised in the period in which the estimates are revised and/or in any future period affected.

The Directors believe that the following assumptions, estimates and judgements are likely to have the most significant effect on the amounts recognised in the Group's financial statements. Due to the uncertainty inherent in these matters, actual results could materially differ from the estimates the Group uses in applying the critical accounting policies described below. For a detailed discussion of the application of these and other accounting policies as well as related assumptions, estimates and judgements, see note 4 to the Historical Financial Information.

7.1 **Judgements**

*Internally Generated Intangible Assets - R&D expenditure*

Critical judgements are required in determining whether development spend meets the criteria for capitalisation of such costs as laid out in IAS 38 "Intangible Assets," in particular whether any future economic benefit will be derived from the costs and flow to the Group. The Directors believe that the criteria for capitalisation as per IAS 38 paragraph 57 for specific projects were met during the period and accordingly all amounts in relation to those projects have been capitalised as an intangible asset during the period. All other spend on R&D projects has been recognised within R&D expenses in the income statement during the period.

Critical judgement is required in consideration of the Useful Economic Life (UEL) of those assets capitalised during the period. The amortisation of R&D costs for FY20, was £4,835,000, based on the following assessments for UEL:

- Development of Core Technology Platform: three years
- Development of Sequencing Kits & related technology: two years

If the UELs had been assessed as being a year longer for each category:

- Development of Core Technology Platform: four years
- Development of Sequencing Kits & related technology: three years

Then the cumulative amortisation would have been £3,066,000, £1,769,000 less than the amount included in the Historical Financial Information for FY20.

If the UELs had been assessed as being a year shorter for each category:

- Development of Core Technology Platform: two years
- Development of Sequencing Kits & related technology: one year

Then the amortisation would have been £6,267,000, £1,431,000 more than included in the Historical Financial Information for FY20.

*Revenue recognition*

As described in the Group's revenue recognition accounting policy, revenue contracts for the sale of bundled goods and services require the allocation of the total contract price to individual performance obligations based on their stand-alone selling prices. In particular, contract bundles, which include the lease or purchase of a PromethION or GridION sequencing device, require management to exercise judgement in determining the stand-alone selling prices of the devices for the purposes of allocation of revenue to these performance obligations. This is because these particular sequencing devices are not sold separately and hence do not have a directly observable stand-alone selling price. As a result, judgement exists in determining the approach to allocation of the transaction price, which impacts the profile of revenue recognition for such contracts. As the business continues to grow, the introduction of new pricing structures could cause the assumptions on which the allocation of the transaction price is based to change, which could materially affect how revenue is recognised in the future.

*Bill-and-hold arrangement*

In FY20 the Group recognised revenue amounting to £18.8 million under a bill-and-hold arrangement for the sale of goods to a customer. The customer did not have adequate storage facilities and requested the Group ship the goods to a specific storage facility located on the Group's premises. Revenue was recognised as goods were shipped to this delivery location. The bill-and-hold recognition criteria requires that there is substantive evidence that the customer has requested this arrangement. This is not explicit in the signed contract; therefore, there is judgement in applying this method. In addition, management has applied significant judgement in allocating the total contract price to each performance obligation in the contract.

*Inventory provisioning*

Critical judgement is required in consideration of the need for an inventory provision against the LamPORE inventory the Company holds.

In July 2020, the Company entered into a contract with the DHSC to deliver LamPORE. Some LamPORE was sold to the DHSC in 2020, but in April 2021, the DHSC determined it no longer had a requirement for LamPORE and sent a notice purporting to terminate its contract with the Group early before taking the

maximum quantity allowable under the contract. As of 30 June 2021, the Company held inventory relating to LamPORE. The Directors do not expect any liability as a result of this contract termination and have used judgement to conclude that no provision is required against this inventory.

*Employer social security taxes on unapproved share options*

As a result of a potential IPO, the Group has a constructive obligation to pay the employer social security costs when its employees exercise unapproved share options. This lability is included in the Group's financial statements and depends on a number of factors, including the fair value of the Shares at the balance sheet date, the Share option exercise price, the number of options likely to vest and the employer social security rate of the relevant tax jurisdiction. As the Shares are not traded in an active market in the periods under review, the Directors estimated the fair value of the Shares based on the more recent price per Share achieved in any given fundraising. The Group's liability in respect of employer social security taxes on unapproved share options amounted to £11.3 million at 30 June 2021, based on an estimated fair value of £70 at such date. The Group accrued a £7.3 million and a £4.0 million charge in R&D expenses and general and administrative expenses, respectively, in HY21 (£nil and £nil, respectively, in HY20) relating to accrued employer social security taxes that became due on share options that are classified as "readily convertible assets" as a result of a potential IPO.

7.2 **Estimates**

*Share-based payments*

Details of the share-based payment schemes operated by the Group and share option valuation methods used are disclosed in note 30 to the Historical Financial Information. During the period, awards that have a market performance vesting condition were valued using the Monte Carlo Simulation model. The model incorporates a number of assumptions based on management's best estimate of when certain events are likely to take place. In particular, the probability of options vesting and the expected vesting period are considered to be key estimates made by management at the grant date and cannot subsequently be revised. As of 31 December 2020, the estimated expected vesting period for these particular awards is approximately 3.3 years. If the vesting period were to decrease to two years, the Group recognised total expenses of £6.8 million (FY19: £9.9 million) relating to equity-settled share-based payment transactions in FY20, would have increased by £4.5 million (FY19: £2.4 million).

# Part 8. Historical Financial Information

## Section A: Accountants' report on the Historical Financial Information

Deloitte LLP
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EC4A 3HQ

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The Board of Directors
on behalf of Oxford Nanopore Technologies Limited
Gosling Building
Edmund Halley Road
Oxford Science Park
Oxford
OX4 4DQ

9 September 2021

Dear Sirs/Mesdames

**Oxford Nanopore Technologies Limited (the "Company" and, together with its subsidiaries, the "Group")**

We report on the financial information of the Group for the three years ended 31 December 2020 set out in Section B, Part 8 of the registration document dated 9 September 2021 (the "Registration Document"). This report is required by Annex 1 item 18.3.1 of the UK version of the Commission delegated regulation (EU) No 2019/980 supplementing the Prospectus Regulation which is part of UK law by virtue of the European Union (Withdrawal) Act 2018 (the "Prospectus Delegated Regulation") and is given for the purpose of complying with that requirement and for no other purpose.

**Opinion on financial information**

In our opinion, the financial information gives, for the purposes of the Registration Document, a true and fair view of the state of affairs of the Group as at 31 December 2020, 31 December 2019 and 31 December 2018 and of its losses, cash flows and changes in equity for the three years ended 31 December 2020 in accordance with the International Financial Reporting Standards as adopted by the European Union.

**Responsibilities**

The Directors of the Company are responsible for preparing the financial information in accordance with International Financial Reporting Standards as adopted by the European Union.

It is our responsibility to form an opinion on the financial information and to report our opinion to you.

Save for any responsibility arising under Annex 1 item 1.2 of the Prospectus Delegated Regulation to any person as to and to the extent there provided, to the fullest extent permitted by law we do not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this report or our statement, required by and given solely for the purposes of complying with Annex 1 item 1.3 of the Prospectus Delegated Regulation, consenting to its inclusion in the Registration Document.

**Basis of preparation**

This financial information has been prepared for inclusion in the Registration Document on the basis of the accounting policies set out in note 3 to the financial information.

**Basis of opinion**

We conducted our work in accordance with Standards for Investment Reporting issued by the Financial Reporting Council ("FRC") in the United Kingdom. We are independent of the Group in accordance with the FRC's Ethical Standard as applied to Investment Circular Reporting Engagements, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Our work included an assessment of evidence relevant to the amounts and disclosures in the financial information. It also included an assessment of significant estimates and judgments made by those responsible for the preparation of the financial information and whether the accounting policies are appropriate to the entity's circumstances, consistently applied and adequately disclosed.

We planned and performed our work so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial information is free from material misstatement whether caused by fraud or other irregularity or error.

Our work has not been carried out in accordance with auditing or other standards and practices generally accepted in jurisdictions outside the United Kingdom, including the United States of America, and accordingly should not be relied upon as if it had been carried out in accordance with those standards and practices.

**Conclusions Relating to Going Concern**

In performing this engagement on the financial information, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial information is appropriate.

Based on the work we have performed, we have not identified any material uncertainties related to events or conditions that, individually or collectively, may cast significant doubt on the Group's ability to continue as a going concern for a period of at least twelve months from 9 September 2021.

**Declaration**

For the purposes of item 1.2 to Annex 1 of the Prospectus Delegated Regulation we are responsible for this report as part of the Registration Document and declare that, to the best of our knowledge, the information contained in this report is in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Registration Document in compliance with Annex 1 item 1.2 of the Prospectus Delegated Regulation and for no other purpose.

Yours faithfully

Deloitte LLP

## Section B: Historical Financial Information

### Consolidated Income Statement

| | *Notes* | 2020<br>£000's | 2019<br>£000's | 2018<br>£000's |
|---|---|---|---|---|
| **Revenue** | 5 | 113,860 | 52,061 | 32,521 |
| Cost of sales | | (66,981) | (26,442) | (16,506) |
| Gross profit | | 46,879 | 25,619 | 16,015 |
| **Operating expenses** | | | | |
| Research and development expenses | | (48,551) | (40,456) | (37,102) |
| Selling, general & administrative expenses | | (71,388) | (66,056) | (41,089) |
| **Total operating expenses** | | (119,939) | (106,512) | (78,191) |
| **Loss from operations** | | (73,060) | (80,893) | (62,176) |
| Finance income | 12 | 91 | 518 | 574 |
| Finance costs | 12 | (747) | (709) | (423) |
| Other gains | 13 | 563 | 600 | - |
| **Loss before tax** | 7 | (73,153) | (80,484) | (62,025) |
| Tax credit | 14 | 11,909 | 8,268 | 8,906 |
| **Loss for the year** | | (61,244) | (72,216) | (53,119) |
| **Loss per share** | 8 | £(1.99) | £(2.48) | £(1.86) |

The results of the Group are all derived from continuing operations and should be read in conjunction with the accompanying notes.

## Consolidated Statement of Comprehensive Income

| | 2020<br>£000's | 2019<br>£000's | 2018<br>£000's |
|---|---|---|---|
| **Attributable to: Equity shareholders of the Company** | | | |
| **Loss for the year** | (61,244) | (72,216) | (53,119) |
| **Items that may be reclassified subsequently to profit or loss** | | | |
| Exchange differences on translation of foreign operations | (429) | (133) | 118 |
| **Total comprehensive loss** | (61,673) | (72,349) | (53,001) |

## Consolidated Statement of Financial Position

| | *Notes* | 2020<br>£000's | 2019<br>£000's | 2018<br>£000's |
|---|---|---|---|---|
| **Non-current assets** | | | | |
| Intangible assets | 15 | 22,867 | 16,521 | 6,405 |
| Property, plant and equipment | 16 | 39,386 | 33,788 | 26,464 |
| Right-of-use assets | 17 | 13,815 | 9,567 | - |
| Investments in associates | 19 | 548 | - | - |
| Deferred tax asset | 14 | 1,439 | 348 | - |
| | | 78,055 | 60,224 | 32,869 |
| **Current assets** | | | | |
| Inventory | 20 | 35,627 | 20,034 | 18,603 |
| Trade and other receivables | 21 | 65,906 | 53,306 | 21,816 |
| R&D tax credit recoverable | 14 | 20,696 | 17,479 | 8,579 |
| Other financial assets | 34 | - | - | 58,000 |
| Derivative financial instruments | 23 | 62 | 600 | - |
| Cash and cash equivalents | 31 | 80,863 | 13,092 | 35,321 |
| | | 203,154 | 104,511 | 142,319 |
| **Total assets** | | 281,209 | 164,735 | 175,188 |
| **Current liabilities** | | | | |
| Trade and other payables | 22 | (70,144) | (34,719) | (21,790) |
| Lease liabilities | 24 | (2,039) | (2,015) | - |
| | | (72,183) | (36,734) | (21,790) |
| **Net current assets** | | 130,971 | 67,777 | 120,529 |
| **Non-current liabilities** | | | | |
| Lease liabilities | 24 | (12,093) | (7,566) | - |
| Loan | 25 | (9,500) | (9,500) | (9,500) |
| Provisions | 25 | (1,499) | (1,407) | (1,005) |
| | | (23,092) | (18,473) | (10,505) |
| **Total liabilities** | | (95,275) | (55,207) | (32,295) |
| **Net assets** | | 185,934 | 109,528 | 142,893 |
| **Equity** | | | | |
| Share capital | 26 | 36 | 33 | 33 |
| Share premium reserve | 27 | 610,544 | 479,332 | 450,231 |
| Share based payment reserve | 30 | 35,079 | 28,215 | 18,332 |
| Accumulated deficit | 28 | (459,023) | (397,779) | (325,563) |
| Translation reserve | 29 | (702) | (273) | (140) |
| **Total equity** | | 185,934 | 109,528 | 142,893 |

## Consolidated Statements of Changes in Equity

| | Share Capital | Share Premium Account | Employee share-based payments | Accum Deficit | Translation Reserve | Total |
|---|---|---|---|---|---|---|
| | £000's | £000's | £000's | £000's | £000's | £000's |
| **Balance at 1 January 2018** | **31** | **351,409** | **14,846** | **(272,464)** | **(238)** | **93,584** |
| Loss for the year | - | - | - | (53,119) | - | (53,119) |
| Exchange gain on translation of subsidiary | - | - | - | 20 | 98 | 118 |
| Issue of share capital | 2 | 100,324 | - | - | - | 100,326 |
| Cost of share issue | - | (1,502) | - | - | - | (1,502) |
| Employee share-based payments | - | - | 3,486 | - | - | 3,486 |
| **Balance at 31 December 2018** | **33** | **450,231** | **18,332** | **(325,563)** | **(140)** | **142,893** |
| Loss for the year | - | - | - | (72,216) | - | (72,216) |
| Exchange gain on translation of subsidiary | - | - | - | - | (133) | (133) |
| Issue of share capital | - | 29,534 | - | - | - | 29,534 |
| Cost of share issue | - | (433) | - | - | - | (433) |
| Employee share-based payments | - | - | 9,883 | - | - | 9,883 |
| **Balance at 31 December 2019** | **33** | **479,332** | **28,215** | **(397,779)** | **(273)** | **109,528** |
| Loss for the year | - | - | - | (61,244) | - | (61,244) |
| Exchange loss on translation of subsidiary | - | - | - | - | (429) | (429) |
| Issue of share capital | 3 | 135,061 | - | - | - | 135,064 |
| Cost of share issue | | (3,849) | - | - | - | (3,849) |
| Employee share-based payments | - | - | 6,864 | - | - | 6,864 |
| **Balance at 31 December 2020** | **36** | **610,544** | **35,079** | **(459,023)** | **(702)** | **185,934** |

## Consolidated Statement of Cash Flows

| | *Notes* | 2020<br>£000's | 2019<br>£000's | 2018<br>£000's |
|---|---|---|---|---|
| **Net cash outflow from operating activities** | 31 | (63,806) | (48,679) | (55,509) |
| **Investing activities** | | | | |
| Purchases of property, plant and equipment | | (15,737) | (18,462) | (11,184) |
| Capitalisation of Development costs | | (10,735) | (11,829) | (6,619) |
| Investment in associate | 19 | (548) | - | - |
| Interest received | | 81 | 814 | 383 |
| Proceeds from maturities of short-term investments / (Purchases of short-term investments) | 34 | - | 58,000 | (48,000) |
| **Net cash (outflow)/inflow in investing activities** | | (26,939) | 28,523 | (65,420) |
| **Financing activities** | | | | |
| Proceeds from issue of shares | | 163,955 | 276 | 100,326 |
| Costs of share issue | | (2,676) | (55) | (1,502) |
| Principal elements of lease payments | | (2,058) | (1,708) | - |
| Interest paid | | (229) | (263) | (421) |
| Interest paid on leases | | (415) | (238) | - |
| **Net cash inflow/(outflow) from financing activities** | | 158,577 | (1,988) | 98,403 |
| **Net reduction in cash and cash equivalents before foreign exchange movements** | | 67,832 | (22,144) | (22,526) |
| Effect of foreign exchange rate losses | | (61) | (85) | 50 |
| **Cash and cash equivalents at beginning of period** | | 13,092 | 35,321 | 57,797 |
| **Cash and cash equivalents at end of period** | | 80,863 | 13,092 | 35,321 |

## 1. Presentation of the Historical Financial Information

*General information*

The Company is a company incorporated in the United Kingdom under the Companies Act 2006 and is registered in England and Wales. The address of the registered office is Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford, OX4 4DQ, United Kingdom.

The principal activities of the Company and its Group and the nature of the Group's operations are to research, develop, manufacture and commercialise the world's only commercial nanopore-based sequencing platform that allows the real-time analysis of deoxyribonucleic acid (DNA) or ribonucleic acid (RNA). This enables the Group's customers to perform scientific/biomedical research in a range of areas, including human genetics, cancer research, outbreak surveillance, environmental analysis, pathogens/ antimicrobial resistance, microbiome analysis and crop science. These emerging uses may include applications in healthcare, agriculture, biopharma production, food/water supply chain surveillance, and education or consumer markets; anywhere where DNA information can tell a user about a sample: for example its identity, whether it is changing, healthy, or diseased.

The Company is the parent entity and the ultimate parent company of the Group.

The historical financial information presented in this Section B *(Historical Financial Information)* (for the purposes of this Section B, the "**historical financial information**" or the "**consolidated historical financial information**") is presented in pounds sterling because that is the currency of the primary economic environment in which the Group operates, and are rounded to the nearest thousand pounds. Foreign operations are included in accordance with the policies set out in note 3.

## 2. Adoption of New and Revised Standards

### 2.1 New and amended IFRS standards adopted by the Group

In FY20, the Group applied the below amendments to IFRS Standards and Interpretations issued by the Board that are effective for an annual period that begins on or after 1 January 2020. Their adoption has not had any material impact on the disclosures or on the amounts reported in the historical financial information.

*Amendments to References to the Conceptual Framework in IFRS Standards*

Together with the revised Conceptual Framework, which became effective upon publication on 29 March 2018, the IASB has also issued Amendments to References to the Conceptual Framework in IFRS Standards. The document contains amendments to IFRS 2, IFRS 3, IFRS 6, IFRS 14, IAS 1, IAS 8, IAS 34, IAS 37, IAS 38, IFRIC 12, IFRIC 19, IFRIC 20, IFRIC 22, and SIC-32.

Not all amendments, however, update those pronouncements with regard to references to and quotes from the framework so that they refer to the revised Conceptual Framework. Some pronouncements are only updated to indicate which version of the Framework they are referencing to (the IASC Framework adopted by the IASB in 2001, the IASB Framework of 2010, or the new revised Framework of 2018) or to indicate that definitions in the Standard have not been updated with the new definitions developed in the revised Conceptual Framework. The amendments, where they actually are updates, are effective for annual periods beginning on or after 1 January 2020, with early application permitted.

*Amendments to IAS 1 and IAS 8 Definition of 'material'*

The amendments are intended to make the definition of 'material' in IAS 1 easier to understand and are not intended to alter the underlying concept of materiality in IFRS Standards. The concept of 'obscuring' material information with immaterial information has been included as part of the new definition.

The threshold for materiality influencing users has been changed from 'could influence' to 'could reasonably be expected to influence'.

The definition of 'material' in IAS 8 has been replaced by a reference to the definition of 'material' in IAS 1. In addition, the IASB amended other Standards and the Conceptual Framework that contain a definition of 'material' or refer to the term 'material' to ensure consistency.

The amendments are applied prospectively for annual periods beginning on or after 1 January 2020, with earlier application permitted.

*New and revised IFRS standards in issue but not yet effective*

At the date of authorisation of the historical financial information, the Group has not applied the following new and revised IFRS Standards that have been issued but are not yet effective:

| | |
|---|---|
| IFRS 17 | *Insurance Contracts* |
| IFRS 10 and IAS 28 (amendments) | *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture* |
| Amendments to IFRS 3 | *References to the Conceptual Framework* |
| Amendments to IAS 16 | *Property, Plant and Equipment – Proceeds before Intended Use* |
| Amendments to IAS 37 | *Onerous Contracts – Cost of Fulfilling a Contract* |
| Annual Improvements to IFRS Standards 2018-2020 Cycle | *Amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 9 Financial Instruments, IFRS 16 Leases, and IAS 41 Agriculture* |

The Directors do not expect that the adoption of the Standards listed above will have a material impact on the historical financial information of the Group in future periods.

## 3. Significant Accounting Policies

### 3.1 Basis of Preparation

The consolidated historical financial information for the three years ended 31 December 2020 has been prepared specifically for the purposes of this Registration Document and in accordance with the UK version of commission delegated regulation (EU) 2019/980 of the European Parliament and of the Council which is part of the UK law by virtue of the European Union (Withdrawal) Act of 2018 and in accordance with this basis of preparation.

The historical financial information has been prepared in accordance with International Financial Reporting Standards (IFRSs). The historical financial information has also been prepared in accordance with IFRS Standards adopted by the European Union and therefore the Group historical financial information complies with Article 4 of the EU IAS Regulation.

The historical financial information has been prepared on the historical cost basis, except for the revaluation of certain financial instruments that are measured at revalued amounts or fair values at the end of each reporting period, as explained in the accounting policies below. Historical cost is generally based on the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in the consolidated historical financial information is determined on such a basis, except for share-based payment transactions that are within the scope of IFRS 2, leasing transactions that are within the scope of IFRS 16, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 or value in use in IAS 36.

The principal accounting policies adopted are set out below.

### 3.2 Going Concern

As at 31 December 2020, the consolidated statement of financial position reflects a net asset position of £185.9 million, with cash reserves of £80.9 million. Subsequent to the end of FY20 the Group received £202.0 million in April and May 2021, relating to a private placement of Ordinary Shares in the Company.

As part of the Directors' consideration of the appropriateness of adopting the going concern basis in preparing the historical financial information, a range of reasonably possible scenarios have been reviewed, including the potential impact of any further COVID-19 restrictions and regulations.

Under all the scenarios modelled, after taking appropriate mitigating actions, the forecasts did not indicate

an additional cash requirement. On the basis of these reviews, the Directors consider it is appropriate for the going concern basis to be adopted in preparing the historical financial information.

### 3.3 Basis of Consolidation

The consolidated historical financial information incorporates the historical financial information of the Company, entities controlled by the Company (its subsidiaries) and its interest in associates (using the equity method of accounting) made up to 31 December each year. Control is achieved where the Company:

(A) has the power over the investee;

(B) is exposed, or has rights, to variable returns from its involvement with the investee; and

(C) has the ability to use its power to affects its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Where necessary, adjustments are made to the historical financial information of subsidiaries to bring the accounting policies used into line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between the members of the Group are eliminated on consolidation.

Non-controlling interests in subsidiaries are identified separately from the Group's equity therein. Those interests of non-controlling shareholders that are present ownership interests entitling their holders to a proportionate share of net assets upon liquidation may initially be measured at fair value or at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. The choice of measurement is made on an acquisition-by-acquisition basis. Other non-controlling interests are initially measured at fair value. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity.

Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of the subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

Changes in the Group's interests in subsidiaries that do not result in a loss of control are accounted for as equity transactions. The carrying amount of the Group's interests and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries. Any difference between the amount by which the non-controlling interests are adjusted and the fair value of the consideration paid or received is recognised directly in equity and attributed to the owners of the Company.

When the Group loses control of a subsidiary, the gain or loss on disposal recognised in profit or loss is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), less liabilities of the subsidiary and any non-controlling interests. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as required/permitted by applicable IFRS Standards). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9 when applicable, or the cost on initial recognition of an investment in an associate or a joint venture.

For associates, the Group recognises its interest in the joint venture or associate as an investment and uses the equity method of accounting.

### 3.4 Revenue Recognition

The Group manufactures and sells a range of DNA and RNA sequencing products and also provides a range of technical training and consultancy services to customers. Products are either sold on a stand-alone basis or as part of a larger bundle of goods and services.

Revenue is recognised when control of the products has transferred, typically being when the products are delivered to the customer to the location specified during the sales ordering process. Revenue from providing services is recognised in the period in which the services are rendered because the customer

receives and uses the benefits simultaneously.

Revenue from the sale of bundled goods and services include multiple performance obligations which are separately recognised. For example, a bundled contract might include the lease of a sequencing device, software licences required to operate the device, sequencing consumables and technical training services. Each deliverable is accounted for as a separate performance obligation and the transaction price for the bundle is allocated to each performance obligation based on the stand-alone selling prices of each deliverable observed on the online store. In instances where there is no directly observable stand-alone selling price, management estimate this based on an expected cost-plus margin approach. As each performance obligation in the bundle is satisfied, revenue is either recognised at a point in time when the consumables are delivered or in the case of the lease of the sequencing device or provision of software licence, recognised over the period to which they relate.

In the case of bundled goods and services contracts, customers either pay for the whole contract in advance of delivery of all the goods and services on the contract or are invoiced as the goods and services are delivered. If the transaction price allocated to the goods delivered or services rendered by the Group exceed the payment received from a customer, a contract asset is recognised. If the payment exceeds the transaction price allocated to the goods delivered or services rendered by the Group, a contract liability is recognised. In the case of non-bundled goods and services contracts, payment of the transaction price is typically due when the customer receives the goods or services.

For bill-and-hold arrangements in respect of the supply and delivery of goods, revenue is recognised when the customer has obtained control of the goods. Control is deemed to have transferred when the goods have been delivered to the specified delivery location. Under bill-and-hold arrangements it is deemed appropriate to recognise revenue provided the customer has requested the bill-and-hold arrangement for substantive purposes, for example, because it lacks the physical space/facilities to store the goods. In addition, the goods must be able to be identified as belonging to the customer and cannot be used to satisfy orders for other customers i.e. the customer can redirect or determine how the goods are used or where the goods are delivered to.

### 3.5 Leased Assets

The Group has adopted IFRS 16 Leases retrospectively from 1 January 2019 but has not restated comparatives for the 2018 reporting period, as permitted under the specific transition provisions in the standard. The reclassifications and the adjustments arising from the new leasing rules are therefore recognised in the opening balance sheet on 1 January 2019. The new accounting policies are disclosed below.

On adoption of IFRS 16, the Group recognised lease liabilities in relation to leases which had previously been classified as ‘operating leases’ under the principles of IAS 17 Leases. These liabilities were measured at the present value of the remaining lease payments, discounted using the lessee’s incremental borrowing rate as of 1 January 2019. The weighted average lessee’s incremental borrowing rate applied to the lease liabilities on 1 January 2019 was 2.7%.

There were no leases previously classified as finance leases at 1 January 2019.

*i) Practical expedients applied*

In applying IFRS 16 for the first time, the Group has used the following practical expedients permitted by the standard:

- relying on previous assessments on whether leases are onerous as an alternative to performing an impairment review (there were no onerous contracts as at 1 January 2019);
- excluding initial direct costs for the measurement of the right-of-use asset at the date of initial application; and
- using hindsight in determining the lease term where the contract contains options to extend or terminate the lease.

The Group has also elected not to reassess whether a contract is or contains a lease at the date of initial application. Instead, for contracts entered into before the transition date the group relied on its assessment made applying IAS 17 and Interpretation 4 *Determining whether an Arrangement contains a Lease.*

*ii) Initial measurement of right-of-use assets*

The associated right-of-use assets for property leases were measured at the amount equal to the lease

liability, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognised in the balance sheet as at 31 December 2018. This is disclosed in note 17.

*iii) Measurement of lease liabilities*

| | Group £000's |
|---|---|
| Operating lease commitments disclosed as at 31 December 2018 | 3,160 |
| Discounted using the lessee's incremental borrowing rate of 2.7% at the date of initial application | 3,040 |
| Adjustments as a result of a different treatment of extension and termination options | 1,936 |
| **Lease liability recognised as at 1 January 2019** | **4,976** |

Of which are:

| | |
|---|---|
| Current lease liabilities | 1,663 |
| Non-current lease liabilities | 3,313 |
| | **4,976** |

*iv) Adjustments recognised in the balance sheet on 1 January 2019*

The change in accounting policy affected the following items in the balance sheet on 1 January 2019:

| | Group £000's |
|---|---|
| Right-of-use assets (increase) | 4,912 |
| Prepayments (decrease) | (177) |
| Accruals (decrease) | 241 |
| Lease liabilities (increase) | (4,976) |
| Net impact on retained earnings on 1 January 2019 | - |

*The Group as a lessee - Accounting policy adopted for the years ended 31 December 2020 and 31 December 2019:*

The Group leases various offices and buildings. Rental contracts are typically made for fixed periods of 12 months to 5 years and may include extension and termination options. These are used to maximise operational flexibility in terms of managing the assets used in the Group's operations. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessor.

The Group assesses whether a contract is or contains a lease, at inception of the contract. The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less). For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise:

(A) fixed lease payments (including in-substance fixed payments), less any lease incentives receivable;

(B) variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date;

(C) the amount expected to be payable by the lessee under residual value guarantees;

(D) the exercise price of purchase options, if the lessee is reasonably certain to exercise the options; and

(E) payments of penalties for terminating the lease, if the lease term reflects the exercise of an option to terminate the lease.

The lease liability is presented as a separate line in the consolidated statement of financial position.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made.

The Group remeasures the lease liability (and makes a corresponding adjustment to the related right-of-use asset) whenever:

(A) the lease term has changed or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;

(B) the lease payments change due to changes in an index or rate or a change in expected payment under a guaranteed residual value, in which cases the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate (unless the lease payments change is due to a change in a floating interest rate, in which case a revised discount rate is used);

(C) a lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day, less any lease incentives received and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and impairment losses.

Whenever the Group incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognised and measured under IAS 37. To the extent that the costs relate to a right-of-use asset, the costs are included in the related right-of-use asset, unless those costs are incurred to produce inventories.

Right-of-use assets are depreciated over the shorter period of lease term and Useful Economic Life (UEL) of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. The depreciation starts at the commencement date of the lease.

The right-of-use assets are presented as a separate line in the consolidated statement of financial position.

The Group applies IAS 36 to determine whether a right-of-use asset is impaired and accounts for any identified impairment loss as described in the 'Property, Plant and Equipment' policy.

Variable rents that do not depend on an index or rate are not included in the measurement the lease liability and the right-of-use asset. The related payments are recognised as an expense in the period in which the event or condition that triggers those payments occurs and are included within "Operating expenses" in profit or loss.

*The Group as a lessee - Accounting policy adopted for the year ended 31 December 2018:*

For the 2018 reporting period, the principles of IAS 17 were adopted, rentals payable under operating leases were charged to income on a straight-line basis over the term of the relevant lease. In the event that lease incentives are received to enter into operating leases, such incentives are recognised as a liability. The aggregate benefit of incentives is recognised as a reduction of rental expense on a straight-line basis over the lease term. There were no leases previously classified as finance leases at 1 January 2019.

*The Group as lessor*

The Group did not need to make any adjustments to the accounting for assets held as lessor under operating leases as a result of the adoption of IFRS 16.

The Group leases some of its devices to customers. Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee, the contract is classified as a finance lease. All other leases are

classified as operating leases.

Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognised on a straight-line basis over the lease term. See note 4 for income from leases.

When a contract includes both lease and non-lease components, the Group applies IFRS 15 to allocate the consideration under the contract to each component.

### 3.6 Foreign Currencies

The historical financial information of each Group entity is presented in the currency of the primary economic environment in which it operates (its functional currency). For the purposes of the consolidated historical financial information, the results and financial position of each Group company are expressed in pounds sterling, which is the functional currency of the Company, and the presentational currency for the consolidated historical financial information.

In preparing the historical financial information of the Group entities, transactions in currencies other than the entity's functional currency (foreign currencies) are recognised at the rates of exchange prevailing on the dates of the transactions. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognised in profit or loss in the period in which they arise.

For the purpose of presenting consolidated historical financial information, the assets and liabilities of the Group's foreign operations are translated at exchange rates prevailing on the reporting date. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the date of transactions are used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in a foreign exchange translation reserve (attributed to non-controlling interests as appropriate).

### 3.7 Retirement Costs

Payments to defined contribution retirement benefit plans are recognised as an expense when employees have rendered service entitling them to the contributions.

### 3.8 Short-term and other Long-term Employee Benefits

A liability is recognised for benefits accruing to employees in respect of wages and salaries, annual leave and sick leave in the period the related service is rendered at the undiscounted amount of the benefits expected to be paid in exchange for that service.

Liabilities recognised in respect of short-term employee benefits are measured at the undiscounted amount of the benefits expected to be paid in exchange for the related service.

Liabilities recognised in respect of other long-term employee benefits are measured at the present value of the estimated future cash outflows expected to be made by the Group in respect of services provided by employees up to the reporting date.

### 3.9 Taxation

The tax expense represents the sum of the tax currently payable and deferred tax.

*Current tax*

The tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the balance sheet date.

A provision is recognised for those matters for which the tax determination is uncertain but it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are measured at the best estimate of the amount expected to become payable. The assessment is based on the judgement of

tax professionals within the Company supported by previous experience in respect of such activities and in certain cases based on specialist independent tax advice.

The Group is entitled to claim tax credits in the United Kingdom for certain R&D expenditure.

The credit is paid in arrears once tax returns have been filed and agreed. The tax credit earned in the period, based on an assessment of likely receipt, is recognised in the consolidated income statement, within the taxation line, with the corresponding asset included within current assets in the balance sheet until such time as it is received.

*Deferred tax*

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the historical financial information and the corresponding tax bases used in the computation of taxable profit and is accounted for using the liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled, or the asset is realised based on tax laws and rates that have been enacted, or substantively enacted, at the reporting date.

Deferred tax is charged or credited in the income statement, except when it relates to items charged or credited in other comprehensive income, in which case the deferred tax is also dealt with in other comprehensive income.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

3.10 **Property, Plant and Equipment**

Properties in the course of construction for production, supply or administrative purposes, or for purposes not yet determined, are carried at cost, less any recognised impairment loss. Cost includes professional fees and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, determined on the same basis as other property assets, commences when the assets are ready for their intended use.

Plant, machinery, fixtures and fittings are stated at cost less accumulated depreciation and accumulated impairment loss.

Freehold land is not depreciated.

Depreciation is recognised so as to write off the cost or valuation of assets (other than freehold land and properties under construction) less their residual values over their useful lives using the following rates:

| | |
|---|---|
| Leasehold Land | - over lease period straight-line |
| Building | - over 40 years straight-line |
| Leasehold improvements | - over the expected duration of the lease straight-line |
| Plant and machinery | - three to 10 years straight-line |
| Office equipment | - three years straight-line |

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Right-of-use assets are depreciated over the shorter period of the lease term and the UEL of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that the Group expects to exercise a purchase option, the related right-of-use asset is depreciated over the UEL of the underlying asset.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. The gain or loss arising on the disposal

or retirement of an asset is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

### 3.11 Internally-generated Intangible Assets – Research and Development Expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred. The Group regularly assesses the development expenditures against the criteria for development costs to be recognised as an asset, as set out in IAS 38 "Intangible Assets". The amortisation periods for internally generated assets incurred by the Group are:

(A) Development of Core Technology Platform – three years

(B) Development of Sequencing Kits – two years

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognised if, and only if, all of the following conditions have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognised for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed until the asset is available for use or sale. Where no internally-generated intangible asset can be recognised, development expenditure is recognised in profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortisation and accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

### 3.12 Patents and licence

Patents and trademarks are measured initially at purchase cost and are amortised on a straight-line basis over their estimated useful lives which is disclosed in note 15.

### 3.13 Impairment of Tangible and Intangible Assets excluding Goodwill

At each reporting date, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with an indefinite UEL are tested for impairment at least annually and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease and to the extent that the impairment loss is greater than the related revaluation surplus, the excess impairment loss is recognised in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or cash-generating

unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss, unless the relevant asset is carried at a revalued amount, in which case the reversal of the impairment loss is treated as a revaluation increase.

### 3.14 Inventories

Inventories are stated at the lower of cost, calculated as standard cost based on average cost, and net realisable value.

Cost comprises direct materials and, when applicable, direct labour cost and those overheads that have been incurred in bringing the inventories to their present location and condition. Net realisable value represents the estimated selling price less all estimated costs of completion.

### 3.15 Financial Instruments

Financial assets, other than those at fair value through profit or loss (**FVTPL**), are assessed for indicators of impairment at each balance sheet date. In accordance with IFRS 9 impairment of financial assets is based on an expected credit loss ('**ECL**') model. The ECL model requires the Group to account for the ECLs and changes in those ECLs at each reporting date to reflect changes in credit risk since initial recognition of the financial assets. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected, IFRS 9 also requires current and future events to be considered when making an impairment assessment.

The Group applies the IFRS 9 simplified approach to the measurement of the ECLs which uses a lifetime ECL for all trade receivables. The ECL on these trade receivables are estimated using a provision matrix for collective assessment based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, to the extent that these are expected to have an effect on recovery of trade receivables.

To measure the ECLs, trade receivables have been grouped based on shared credit risk characteristics where relevant, and the days past due. The ECL percentage rates of default applied to trade receivables grouped by days past due are based on the payment profiles of sales over a selected period and the corresponding historical default (non-payment which resulted in the debt being written off) experienced in relation to these sales. The percentage rates of default are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of customers to settle the receivables where applicable.

For financial assets carried at amortised cost, the amount of the impairment is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the financial asset's original effective interest rate.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognised in the income statement.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

### 3.16 Investments in associates

An associate is an entity over which the Group has significant influence and that is neither a subsidiary nor an interest in a joint venture. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The results and assets and liabilities of associates are incorporated in the historical financial information

using the equity method of accounting, except when the investment is classified as held for sale, in which case it is accounted for in accordance with IFRS 5.

Under the equity method, an investment in an associate is recognised initially in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

An investment in an associate is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

The requirements of IAS 36 are applied to determine whether it is necessary to recognise any impairment loss with respect to the Group's investment in an associate. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with IAS 36 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised is not allocated to any asset, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with IAS 36 to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date when the investment ceases to be an associate. When the Group retains an interest in the former associate and the retained interest is a financial asset, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition in accordance with IFRS 9. The difference between the carrying amount of the associate or a joint venture at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate or a joint venture is included in the determination of the gain or loss on disposal of the associate.

In addition, the Group accounts for all amounts previously recognised in other comprehensive income in relation to that associate on the same basis as would be required if that associate had directly disposed of the related assets or liabilities.

Therefore, if a gain or loss previously recognised in other comprehensive income by that associate would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) when the associate is disposed of.

When the Group reduces its ownership interest in an associate but the Group continues to use the equity method, the Group reclassifies to profit or loss the proportion of the gain or loss that had previously been recognised in other comprehensive income relating to that reduction in ownership interest if that gain or loss would be reclassified to profit or loss on the disposal of the related assets or liabilities.

When a Group entity transacts with an associate of the Group, profits and losses resulting from the transactions with the associate are recognised in the Group’s consolidated historical financial information only to the extent of interests in the associate that are not related to the Group.

The Group applies IFRS 9, including the impairment requirements, to long-term interests in an associate to which the equity method is not applied and which form part of the net investment in the investee. Furthermore, in applying IFRS 9 to long-term interests, the Group does not take into account adjustments to their carrying amount required by IAS 28 (i.e. adjustments to the carrying amount of long-term interests arising from the allocation of losses of the investee or assessment of impairment in accordance with IAS 28).

### 3.17 **Trade and other Receivables**

Trade receivables (excluding derivative financial assets) are recognised at cost less allowances for expected credit losses. They arise principally through the provision of goods and services to customers. The provision is based on the Group's ECL.

### 3.18 Cash and Cash Equivalents

Cash and cash equivalents comprise cash in hand and deposits held at call with banks and other short-term highly liquid investments with a maturity of three months or less at the date of acquisition.

Cash is not held for the purpose of investment in its own right and the primary goal of investment strategies is capital preservation. Cash not required for short-term working capital requirements is invested in short-term treasury deposits (other financial assets). To the extent that it is reasonable, deposits are spread between two or more banks that have been approved by the Board of Directors. Cash required to meet short-term working capital requirements as they arise is maintained in instant access accounts at one or more approved banks.

### 3.19 Trade and other Payables

Trade payables (excluding derivative financial liabilities) are non-interest bearing and are stated at cost which equates to their fair value.

### 3.20 Other financial assets

Other financial assets comprise short-term deposits held with banks that do not meet the IAS 7 definition of a cash equivalent.

### 3.21 Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle that obligation and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the reporting date, considering the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (when the effect of the time value of money is material).

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognised as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

*Dilapidation provisions*

Provisions for the costs to restore leased plant assets to their original condition, as required by the terms and conditions of the lease, are recognised when the obligation is incurred, either at the commencement date or as a consequence of having used the underlying asset during a particular period of the lease, at the Directors' best estimate of the expenditure that would be required to restore the assets. Estimates are regularly reviewed and adjusted as appropriate for new circumstances.

### 3.22 Share-based payments

Where share options and other equity instruments are awarded to employees, the fair value of the instrument at the date of grant is charged to the income statement over the vesting period. Non-market vesting conditions are taken into account by adjusting the number of equity instruments expected to vest at each balance sheet date so that, ultimately, the cumulative amount recognised over the vesting period is based on the number of instruments that eventually vest. Market vesting conditions are factored into the fair value of the options granted. As long as all other vesting conditions are satisfied, a charge is made irrespective of whether the market vesting conditions are satisfied. The cumulative expense is not adjusted for failure to achieve a market vesting condition. Where the terms and conditions of options are modified before they vest, the increase in the fair value of the options, measured immediately before and after the modification, is also charged to the income statement over the remaining vesting period.

Where equity instruments are granted to persons other than employees, the income statement is charged with the fair value of goods and services received.

## 4. Critical Accounting Judgements and Sources of Estimation Uncertainty

In applying the Group's accounting policies, which are described in Note 3, the Directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from

these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

4.1 **Critical Judgements in Applying the Group's Accounting Policies**

The following are the critical judgements and estimates that the Directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in historical financial information.

4.2 **Judgements**

*Internally Generated Intangible Assets - Research and Development Expenditure*

Critical judgements are required in determining whether development spend meets the criteria for capitalisation of such costs as laid out in IAS 38 "Intangible Assets", in particular whether any future economic benefit will be derived from the costs and flow to the Group. The Directors believe that the criteria for capitalisation as per IAS 38 paragraph 57 for specific projects were met during FY20 and accordingly all amounts in relation to those projects have been capitalised as an intangible asset during FY20. All other spend on R&D projects has been recognised within R&D expenses in the income statement during the period.

Critical judgement is required in consideration of the UEL of those assets capitalised during FY20. The Directors believe that UELs identified are consistent with the definition in IAS 38 paragraph 8 of a useful life. The amortisation of development costs for FY20, was £4,835,000, based on the following assessments for UEL:

(A) Development of Core Technology Platform – three years

(B) Development of Sequencing Kits & related technology – two years

If the UEL's had been assessed as being a year longer for each category:

(A) Development of Core Technology Platform – four years

(B) Development of Sequencing Kits & related technology – three years,

then the amortisation would have been £3,066,000, £1,769,000 less than included in the historical financial information.

If the UEL’s had been assessed as being a year shorter for each category:

(A) Development of Core Technology Platform – two years

(B) Development of Sequencing Kits – one year,

then the amortisation would have been £6,267,000, £1,431,000 more than included in the historical financial information.

*Revenue recognition*

As noted in the revenue recognition accounting policy, revenue contracts for the sale of bundled goods and services require the allocation of the total contract price to individual performance obligations based on their stand-alone selling prices. In particular, contract bundles which include the lease or purchase of a PromethION or GridION sequencing device require management to exercise judgement in determining the stand-alone selling prices of the devices for the purposes of allocating revenue to these performance obligations. This is because these particular sequencing devices are not sold separately and hence do not have a directly observable stand-alone selling price. As a result, judgement exists in determining the approach to allocation of the transaction price, which impacts the profile of revenue recognition for such contracts. As the business continues to grow, the introduction of new pricing structures could cause the assumptions on which the allocation of the transaction price is based to change, which could materially affect how revenue is recognised in the future.

*Bill-and-hold arrangement*

During FY20, the Group recognised revenue amounting to £18.8 million under a bill-and-hold arrangement

for the sale of goods to a customer. The customer did not have adequate storage facilities and requested the company ship the goods to a specific storage facility located on the Group's premises. Revenue was recognised as goods were shipped to this delivery location. The bill-and-hold recognition criteria requires that there is substantive evidence that the customer has requested this arrangement. This is not explicit in the signed contract, therefore there is judgement in applying this method. In addition, management has applied significant judgement in allocating the total contract price to each performance obligation in the contract.

### 4.3 Estimates

*Share-based payments*

Details of the share-based payment schemes operated by the Group and share option valuation methods used are disclosed in note 30. During FY20, awards which have a market performance vesting condition were valued using the Monte Carlo Simulation model. The model incorporates a number of assumptions based on management's best estimate of when certain events are likely to take place. In particular, the probability of options vesting and the expected vesting period are considered to be key estimates made by management at the grant date and cannot subsequently be revised. The estimated expected vesting period for these particular awards is approximately 3.3 years. If the vesting period were to decrease to 2 years, the Group recognised total expenses of £6.8 million (FY19: £9.9 million) relating to equity-settled share-based payment transactions in FY20 would increase by £4.5 million (FY19: £2.4 million).

## 5. Revenue

The Group derives revenue from the transfer of goods and services over time and at a point in time in the following categories and geographical regions:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Geographical region** | | | |
| USA | 16,414 | 14,613 | 10,246 |
| Europe | 18,914 | 14,341 | 7,921 |
| China | 7,715 | 8,740 | 4,144 |
| UK | 52,879 | 3,691 | 2,953 |
| Japan | 4,162 | 3,228 | 2,250 |
| Rest of World | 13,776 | 7,448 | 5,007 |
| | 113,860 | 52,061 | 32,521 |

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Category** | | | |
| Sale of goods | 106,057 | 46,620 | 29,762 |
| Rendering of services | 4,884 | 3,391 | 514 |
| Lease income | 2,919 | 2,050 | 2,245 |
| **Total revenue from contracts with customers** | 113,860 | 52,061 | 32,521 |

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Timing of revenue recognition** | | | |
| At a point in time | 106,057 | 46,620 | 29,762 |
| Over time | 7,803 | 5,441 | 2,759 |
| **Total revenue from contracts with customers** | 113,860 | 52,061 | 32,521 |

Notes 21 and 22 disclose assets and liabilities the Group has recognised in relation to contracts with customers.

Revenue recognised in relation to contract liabilities:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Revenue recognised that was included in the contract liability balance at the beginning of the period | 4,740 | 3,081 | 1,616 |

## 6. Segment Information

### 6.1 Products and services from which reportable segments derive their revenues

The information reported to the Group's senior management team, which is considered the chief operating decision maker ("**CODM**"), for the purposes of resource allocation and assessment of segment performance is defined by market rather than product type. The segment measure of profit evaluated by the CODM is Adjusted EBITDA, as this is considered to give the most appropriate information in respect of profitability of the individual segments.

The Directors consider that the Group reportable segments under IFRS 8 Operating Segments are as set out below:

| **Reportable segments** | **Description** |
|---|---|
| Life Science Research Tools ("**LSRT**") | Oxford Nanopore's core business, generating revenue from providing products and services for research use, including Research and Development expenditure and corporate expenditure. |
| COVID Testing | In FY20, the Group generated revenue from providing products for SAR-Cov-2 testing. It should be noted that its sequencing products continue to be used for the purposes of COVID-19 genomic surveillance, including variant identification, but this is reported within the LSRT segment. |

The accounting policies of the reportable segments are the same as the Group's accounting policies described in note 3.

### 6.2 Information about major customers

The Group has one major UK Government customer, which represents 42% of Group revenue. Revenues from this customer were £47.6 million (FY19: £nil) and reported within the COVID Testing segment.

No other individual customer represents more than 10% of the Group's total revenue.

The following is an analysis of the Group's revenue, results, assets and liabilities by reportable segment.

| | LSRT | COVID Testing | **2020** | 2019* | 2018* |
|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's |
| **Revenue** | | | | | |
| USA | 16,414 | - | 16,414 | 14,613 | 10,246 |
| Europe | 18,285 | 629 | 18,914 | 14,341 | 7,921 |
| China | 7,715 | - | 7,715 | 8,740 | 4,144 |
| UK | 5,268 | 47,611 | 52,879 | 3,691 | 2,953 |
| Japan | 4,162 | - | 4,162 | 3,228 | 2,250 |
| Rest of the World | 13,689 | 87 | 13,776 | 7,448 | 5,007 |
| **Total Revenue** | 65,533 | 48,327 | 113,860 | 52,061 | 32,521 |

* All revenues earned in 2018 and 2019 were generated from LSRT.

## 6.3 Adjusted EBITDA

Adjusted EBITDA is loss for the year before finance income, loan interest, interest on leases, other gains, taxes, depreciation and amortisation, and foreign exchange losses/movements. Adjusted EBITDA reconciles to loss before tax as follows:

| | LSRT | COVID Testing | **2020** | 2019* | 2018* |
|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's |
| **(Loss)/Profit before tax** | (87,854) | 14,701 | (73,153) | (80,484) | (62,025) |
| Finance income | (91) | - | (91) | (518) | (574) |
| Loan interest | 251 | - | 251 | 263 | 423 |
| Interest on leases | 496 | - | 496 | 351 | - |
| Depreciation and amortisation | 16,839 | 496 | 17,335 | 14,845 | 6,356 |
| EBITDA | (70,359) | 15,197 | (55,162) | (65,543) | (55,820) |
| Other gains | (563) | - | (563) | (600) | - |
| Exchange losses/(gains) | 2,070 | - | 2,070 | 95 | (569) |
| **Adjusted EBITDA** | (68,852) | 15,197 | (53,655) | (66,048) | (56,389) |

* All Adjusted EBITDA earned in 2018 and 2019 were generated from LSRT.

## 6.4 Supplementary Information

| | LSRT | COVID Testing | **2020** | 2019* | 2018* |
|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's |
| Depreciation of property, plant and equipment | 10,125 | - | 10,125 | 11,118 | 6,142 |
| Depreciation of right-of-use assets | 2,247 | 128 | 2,375 | 2,014 | - |
| Amortisation of internally generated intangible assets | 4,467 | 368 | 4,835 | 1,713 | 214 |
| Additions to non-current assets** | 26,794 | 6,365 | 33,159 | 41,872 | 11,184 |
| | | | | | |
| **Segment assets** | | | | | |
| Investment in associates | 548 | - | 548 | - | - |
| Acquired intangible assets | 446 | - | 446 | - | - |
| Other segment assets*** | 128,846 | 48,309 | 177,155 | 133,216 | 73,288 |
| | | | | | |
| Total segment assets | 129,840 | 48,309 | 178,149 | 133,216 | 73,288 |
| Unallocated: | | | | | |
| Deferred tax asset | | | 1,439 | 348 | - |
| R&D tax credit recoverable | | | 20,696 | 17,479 | 8,579 |
| Derivative financial instruments | | | 62 | 600 | |
| Other financial assets | | | **-** | - | 58,000 |
| Cash and cash equivalents | | | 80,863 | 13,092 | 35,321 |
| | | | | | |
| **Total assets as per the balance sheet** | | | 281,209 | 164,735 | 175,188 |
| | | | | | |
| **Segment liabilities** | | | | | |
| Total segment liabilities | (84,411) | (1,364) | **(85,775)** | (45,707) | (22,795) |
| Unallocated: | | | | | |
| Non-current borrowings | | | **(9,500)** | (9,500) | (9,500) |
| **Total liabilities as per the balance sheet** | | | **(95,275)** | (55,207) | (32,295) |

* All supplementary information in 2018 and 2019 relates to LSRT.

** Additions to non-current assets include all non-current assets except for investments and deferred tax asset.

*** Other segment assets include non-current assets except for investments, acquired intangible assets and deferred tax assets. It also includes inventory and trade and other receivables.

The Group's non-current assets by geographical location are detailed below:

| | LSRT | COVID Testing | **2020** | 2019 | 2018 |
|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's |
| USA | 4,508 | - | **4,508** | 2,652 | 1,255 |
| Europe | 7 | - | **7** | - | - |
| China | 340 | - | **340** | 505 | - |
| UK | 69,558 | 2,125 | **71,683** | 56,664 | 31,614 |
| Japan | 36 | - | **36** | 27 | - |
| Rest of world | 42 | - | **42** | 28 | - |
| | 74,491 | 2,125 | **76,616** | 59,876 | 32,869 |

Non-current assets comprise intangible assets, interest in associate, right of use assets and property, plant and equipment.

## 7. Loss before Tax

| | ***Notes*** | **2020** | 2019 | 2018 |
|---|---|---|---|---|
| | | **£000's** | £000's | £000's |
| *This is after charging / (crediting):* | | | | |
| Non-staff R&D costs | | 22,030 | 19,042 | 19,018 |
| Amortisation of internally generated intangible assets | 15 | 4,835 | 1,713 | 214 |
| Depreciation of property, plant and equipment | 16 | 10,125 | 11,118 | 6,142 |
| Depreciation of right-of-use assets | 17 | 2,375 | 2,014 | - |
| Loss on disposal of property, plant and equipment | | 1 | 4 | 20 |
| Cost of inventories | | 33,767 | 17,427 | 22,011 |
| Write-down of inventories | | 1,428 | 1,196 | 1,232 |
| Net foreign exchange loss/(gain) | | 2,070 | 95 | (569) |

All amounts relate to continuing operations.

Amortisation of internally generated intangible assets is included within selling, general & administration expenses in the consolidated income statement.

No amortisation was charged to the acquired intangible asset which was acquired as at 31 December 2020.

## 8. Loss per Share

### 8.1 Basic and diluted loss per share

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£'s** | £'s | £'s |
| Total basic and diluted loss per share attributable to the ordinary equity holders of the company from continuing operations | (1.99) | (2.48) | (1.86) |

### 8.2 Losses used in calculating loss per share

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| *Basic and diluted loss* | | | |
| Loss attributable to the ordinary equity holders of the company used in calculating basic and diluted loss per share from continuing operations | (61,244) | (72,216) | (53,119) |

## 8.3 Weighted average number of shares used as the denominator

| | 2020 (Number) | 2019 (Number) | 2018 (Number) |
|---|---|---|---|
| Weighted average number of Ordinary Shares used as the denominator in calculating basic loss per share | 30,727,651 | 29,089,856 | 28,558,900 |

There have been no events that have caused any retrospective adjustments between the balance sheet date and the date of issuance of the historical financial information, being the date of this Registration Document.

*Options*

Options granted to employees under the Oxford Nanopore Technologies Share Option Scheme and the Oxford Nanopore Technologies Limited Share Option Plan 2018 are considered to be potential ordinary shares. These options have not been included in the determination of diluted loss per share for FY20 on the basis they are anti-dilutive. They could potentially dilute basic earnings per share in the future. Details relating to the options are set out in note 30.

## 9. Auditor's Remuneration

The analysis of auditor's remuneration is as follows:

| | 2020 £000's | 2019 £000's | 2018 £000's |
|---|---|---|---|
| *Fees payable to the Group's auditor for the audit of the Group's annual accounts* | | | |
| - Current year | 250 | 190 | 122 |
| - Prior years | 31 | - | - |
| Fees payable to the Group's auditor for other services to the Group | 21 | 2 | - |
| **Total fees payable to the Group's auditor** | 302 | 192 | 122 |

## 10. Staff Costs

The average monthly number of employees was:

| | 2020 (Number) | 2019 (Number) | 2018 (Number) |
|---|---|---|---|
| R&D | 235 | 214 | 201 |
| Production | 106 | 97 | 95 |
| Sales, General & Administration | 186 | 155 | 109 |
| | 527 | 466 | 405 |

| Their aggregate remuneration comprised: | Notes | 2020 £000's | 2019 £000's | 2018 £000's |
|---|---|---|---|---|
| Wages and salaries | | 40,619 | 33,157 | 25,922 |
| Pension costs | | 946 | 606 | 1,596 |
| Social security costs | | 4,324 | 3,588 | 2,576 |
| Other staff costs | | 897 | 684 | 562 |
| Share-based payments | 30 | 6,864 | 9,883 | 3,486 |
| | | 53,650 | 47,918 | 34,142 |

Pension costs relate to the Company's defined contribution scheme.

## 11. Directors' and Key Management Compensation

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| *Directors' emoluments consist of:* | | | |
| Salaries, bonuses and benefits in kind | 2,610 | 1,969 | 1,639 |
| Amount paid as directors' fees | 238 | 182 | 167 |
| Money purchase pension contributions | 10 | 6 | - |
| | 2,858 | 2,157 | 1,806 |
| Highest paid director: | | | |
| Remuneration for director's fees and management services | 870 | 798 | 727 |
| | 870 | 798 | 727 |

One director is a member of a money purchase plan.

The highest paid director exercised no share options in the current period (FY19: nil; FY18: nil).

In FY20, no share options were granted to the Directors (FY19: 193,000; FY18: nil) and 18,825 share options were exercised during FY20 (FY19: nil; FY18: nil). The total number of share options held by Directors is 282,179 (FY19: 301,004; FY18: 108,004).

Executive directors receive medical insurance for themselves as a non-monetary benefit. Total premiums in respect of this cover amounted to £19,852 (FY19: £18,951; FY18: £18,397). All the emoluments relate to short-term employee benefits. No director received any post-employment benefit, other long-term benefit or termination benefit.

*Key Management Compensation*

Aggregate compensation for key management, being Directors and members of the Executive Committee, was as follows:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Short-term employee benefits | 3,939 | 2,936 | 2,858 |

In addition to the above, charges to the profit and loss account relating to share-based payments relating to options held by Directors amounted to £1,193,218 (FY19: £2,386,831; FY18: £16,474).

## 12. Finance Income and Costs

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Bank interest | 91 | 518 | 574 |
| | 91 | 518 | 574 |

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Finance costs** | | | |
| Loan interest | (251) | (263) | (423) |
| Interest on leases | (496) | (351) | - |
| Exchange losses | - | (95) | - |
| | (747) | (709) | (423) |

## 13. Other Gains and Losses

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Gains** | | | |
| Gain on derivative financial instrument | 563 | 600 | - |
| | 563 | 600 | - |

The derivative financial instruments are disclosed in note 23.

## 14. Tax on Loss on Ordinary Activities

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Current tax** | | | |
| R&D tax credit receivable for the period | (10,934) | (9,000) | (8,579) |
| Prior year adjustment in respect of R&D tax credit | (762) | 100 | (470) |
| Prior year adjustment in respect of current tax | 386 | - | - |
| Tax payable on foreign subsidiary | 492 | 980 | 143 |
| **Deferred tax** | | | |
| Origination and reversal of temporary differences | (1,091) | (348) | - |
| **Total tax** | (11,909) | (8,268) | (8,906)- |

A deferred tax asset of £1,439,000 (FY19: £348,000, FY18; £nil) has been recognised in relation to future share option exercises, and other timing differences in Oxford Nanopore Technologies Inc., because it is probable that the asset will be utilised in the foreseeable future.

The remaining deferred tax asset of £80,891,000 (FY19: £51,545,000; FY18: £43,730,000) relating to the rest of the Group has not been recognised due to uncertainty that the asset will be utilised in the foreseeable future. The unrecognised deferred tax asset in relation tax losses of £343,167,000 (FY19: £299,212,000; FY18: £250,907,000) has increased during the period. Deferred tax balances have been recognised at the rate expected to apply when the deferred tax attribute is forecast to be utilised based on substantively enacted rates at the balance sheet date.

All other current tax balances have been calculated at the rates enacted for the period. The effective rate of corporation tax applied to reported loss is 16.1% (FY19: 10.3%; FY18: 14.4%) of the loss before tax for the Group.

The current UK corporation tax rate of 19% was set to reduce to 17% from 1 April 2020, however this reduction was reversed in the Finance Bill 2020 (substantively enacted on 17 March 2020). It has been announced that the rate of UK corporation tax will increase to 25% from April 2023. When enacted this will increase the unrecognised deferred tax asset to £106,408,000. Taxation for other jurisdictions is calculated at the rates prevailing in the respective jurisdictions.

The differences between the rate of corporate tax in the UK of 19% (FY19: 19%; FY18: 19%) and the tax credit for the year are explained below:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Loss before taxation | (73,153) | (80,484) | (62,025) |
| Tax rate in the UK for period as a percentage of losses at 19% (FY19 and FY18: 19%)<br>(FY19: 19%) | (13,900) | (15,292) | (11,785) |
| Adjustment in respect of overseas tax rates | 43 | 30 | - |
| Enhanced R&D tax relief | (4,705) | (3,872) | (3,698) |
| Expenses not deductible | 716 | 133 | 179 |
| Adjustments to tax charge in respect of previous periods | (376) | 100 | (470) |
| Origination of unrecognised tax losses | 8,257 | 9,223 | 6,895 |
| Impact of share options | (1,690) | 1,410 | (27) |
| Other timing differences | (254) | - | - |
| | (11,909) | (8,268) | (8,906) |

| **R&D tax credit recoverable** | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Balance at 1 January | 17,479 | 8,579 | 14,786 |
| Adjustment to R&D tax credit in respect of previous periods | 762 | (100) | |
| Cash receipt | (8,479) | - | (15,258) |
| R&D tax credit for the period | 10,934 | 9,000 | 8,579 |
| Balance at 31 December | 20,696 | 17,479 | 8,579 |

## 15. Intangible Assets

| | Patent and Licence £000's | Capitalised development costs £000's | Total £000's |
|---|---|---|---|
| **Cost** | | | |
| At 1 January 2018 | - | - | - |
| Additions from internal development | - | 6,619 | 6,619 |
| At 31 December 2018 | - | 6,619 | 6,619 |
| Additions from internal development | - | 11,829 | 11,829 |
| At 31 December 2019 | - | 18,448 | 18,448 |
| Additions from internal development | - | 10,735 | 10,735 |
| Additions | 446 | - | 446 |
| At 31 December 2020 | 446 | 29,183 | 29,629 |
| **Amortisation** | | | |
| At 1 January 2018 | - | - | - |
| Charge for the year | - | (214) | (214) |
| At 31 December 2018 | - | (214) | (214) |
| Charge for the year | - | (1,713) | (1,713) |
| At 31 December 2019 | - | (1,927) | (1,927) |
| Charge for the year | - | (4,835) | (4,835) |
| At 31 December 2020 | - | (6,762) | (6,762) |
| **Carrying amount** | | | |
| At 31 December 2018 | - | 6,405 | 6,405 |
| At 31 December 2019 | - | 16,521 | 16,521 |
| At 31 December 2020 | 446 | 22,421 | 22,867 |

Development costs have been capitalised in accordance with IAS 38 Intangible Assets and are therefore not treated for dividend purposes as a realised loss until recognised as an amortisation charge in the income statement.

The amortisation periods for intangible assets are:

(A) Development of Core Technology Platform – three years

(B) Development of Sequencing Kits – two years

(C) Patent and Licence – over the expected duration of the patent or licence

## 16. Property, Plant and Equipment

| | Land and Buildings £000's | Leasehold Improvements £000's | Plant and Machinery £000's | Assets subject to operating leases £000's | Equipment £000's | Total £000's |
|---|---|---|---|---|---|---|
| **Cost** | | | | | | |
| At 1 January 2018 | 16,194 | 1,360 | 7,727 | - | 4,516 | 29,797 |
| Additions | 49 | 34 | 1,728 | 7,844 | 1,529 | 11,184 |
| Disposals | - | - | (156) | - | (5) | (161) |
| Foreign exchange movements | - | - | 16 | 88 | 21 | 125 |
| At 31 December 2018 | 16,243 | 1,394 | 9,315 | 7,932 | 6,061 | 40,945 |
| Additions | - | 4,795 | 4,000 | 7,478 | 2,189 | 18,462 |
| Disposals | - | - | (50) | (1,985) | (5) | (2,040) |
| Transfers | - | 340 | (340) | - | - | - |
| Foreign exchange movements | - | - | (16) | - | (25) | (41) |
| At 31 December 2019 | 16,243 | 6,529 | 12,909 | 13,425 | 8,220 | 57,326 |
| Additions | 158 | - | 3,785 | 8,829 | 2,965 | 15,737 |
| Disposals | - | - | (76) | (2,241) | (18) | (2,335) |
| Foreign exchange movements | - | - | (7) | (11) | (31) | (49) |
| At 31 December 2020 | 16,401 | 6,529 | 16,611 | 20,002 | 11,136 | 70,679 |
| **Accumulated depreciation** | | | | | | |
| At 1 January 2018 | (51) | (1,258) | (4,391) | - | (2,721) | (8,421) |
| Charge for the year | (409) | (94) | (1,420) | (3,169) | (1,050) | (6,142) |
| Eliminated on disposals | - | - | 135 | - | 5 | 140 |
| Foreign exchange movements | - | - | (14) | (31) | (13) | (58) |
| At 31 December 2018 | (460) | (1,352) | (5,690) | (3,200) | (3,779) | (14,481) |
| Charge for the year | (419) | (120) | (1,413) | (7,553) | (1,613) | (11,118) |
| Eliminated on disposals | - | - | 49 | 1,985 | 2 | 2,036 |
| Foreign exchange movements | - | - | 10 | - | 15 | 25 |
| At 31 December 2019 | (879) | (1,472) | (7,044) | (8,768) | (5,375) | (23,538) |
| Charge for the year | (1,347) | (34) | (1,653) | (4,968) | (2,123) | (10,125) |
| Eliminated on disposals | - | - | 75 | 2,241 | 18 | 2,334 |
| Foreign exchange movements | - | - | 10 | 1 | 25 | 36 |
| At 31 December 2020 | (2,226) | (1,506) | (8,612) | (11,494) | (7,455) | (31,293) |
| **Carrying amount** | | | | | | |
| At 31 December 2018 | 15,783 | 42 | 3,625 | 4,732 | 2,282 | 26,464 |
| At 31 December 2019 | 15,364 | 5,057 | 5,865 | 4,657 | 2,845 | 33,788 |
| At 31 December 2020 | 14,175 | 5,023 | 7,999 | 8,508 | 3,681 | 39,386 |

On 1 June 2017 the Company purchased the building and land known as Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford subject to a long leasehold. The remaining length of the lease at year end is 134 years and 9 months.

At 31 December 2020 and 2019, the Group did not enter into contractual commitments for the acquisition of property, plant and equipment.

## 17. Right-of-Use Assets

| | Buildings £000's | Total £000's |
|---|---|---|
| **Cost** | | |
| At 1 January 2019 | - | - |
| Recognised on adoption of IFRS 16 | 11,581 | 11,581 |
| At 31 December 2019 | 11,581 | 11,581 |
| Additions | 6,687 | 6,687 |
| Exchange gain | (127) | (127) |
| At 31 December 2020 | 18,141 | 18,141 |
| **Amortisation** | | |
| At 1 January 2019 | - | - |
| Charge for the year | (2,014) | (2,014) |
| At 31 December 2019 | (2,014) | (2,014) |
| Charge for the year | (2,375) | (2,375) |
| Exchange loss | 63 | 63 |
| At 31 December 2020 | (4,326) | (4,326) |
| **Carrying amount** | | |
| At 31 December 2019 | 9,567 | 9,567 |
| At 31 December 2020 | 13,815 | 13,815 |

## 18. Investment in Subsidiaries

The principal subsidiaries of the Company are as follows:

| Name | Registered address | Country of Incorporation | Share class | Proportion of ownership interest 31 December 2020 | Proportion of ownership interest 31 December 2019 |
|---|---|---|---|---|---|
| Oxford Nanopore Technologies, Inc. | One Kendall Square, Building 200 Suite B2005 | USA | Ordinary | 100% | 100% |
| Oxford Nanolabs Limited | Gosling Building, Edmund Halley Road, Oxford Science Park, OX4 4DQ | UK | Ordinary | 100% | 100% |
| The Genome Foundry Limited | Gosling Building, Edmund Halley Road, Oxford Science Park, OX4 4DQ | UK | Ordinary | 100% | 100% |
| Metrichor Limited | Gosling Building, Edmund Halley Road, Oxford Science Park, OX4 4DQ | UK | Ordinary | 100% | 100% |
| KK Oxford Nanopore Technologies | Tokyo Club Building 11F 3-2-6 Kasumigaseki, Chiyoda-ku, Tokyo 100-0013 | Japan | Ordinary | 100% | 100% |
| Oxford Nanopore Diagnostics Limited | Gosling Building, Edmund Halley Road, Oxford Science Park, OX4 4DQ | UK | Ordinary | 100% | 100% |
| Nanopore Technologies Hong Kong Limited | Room 1901, 19/F, Lee Garden One, 33 Hysan Avenue, Causeway Bay, Hong Kong | Hong Kong | Ordinary | 100% | 100% |
| Nanopore Technologies (Shanghai) Co. Limited | Room 2208, Tower 1, Grand Gateway 66, No. 1 Hongqiao Road, Xuhui District, Shanghai | China | Ordinary | 100% | 100% |
| Oxford Nanopore Technologies Singapore PTE Ltd | 38 Beach Road, #29-11, South Beach Tower, Singapore (189767) | Singapore | Ordinary | 100% | 100% |
| Oxford Nanopore Technologies BV | Gustav Mahlerplein 2, 1082 MA Amsterdam | The Netherlands | Ordinary | 100% | 100% |
| Oxford Nanopore Technologies Australia PTY Ltd* | Level 10, 171 Clarence Street, Sydney, NSW 2000 | Australia | Ordinary | 100% | n/a |
| Oxford Nanopore Technologies Denmark ApS** | c/o Crowe Rygårds Allé 104, 2009 Hellerup, Denmark | Denmark | Ordinary | 100% | n/a |
| Oxford Nanopore Technologies SARL*** | 22 Rue de Londres, 75009 Paris 9 | France | Ordinary | 100% | n/a |

(A) Oxford Nanopore Technologies Inc. was set up on 23 September 2011 to provide sub-contracted R&D and other services in the USA to Oxford Nanopore Technologies Limited.

(B) Oxford Nanolabs Limited was set up on 20 March 2008, has never traded and is a dormant company.

(C) Metrichor Limited was set up on 17 May 2013 to offer analysis solutions vertically integrated to nanopore sensing devices, with the potential to enable a wide range of new users, applications and markets outside of the traditional laboratory-confined customers. The company is exempt from the requirements under the Companies Act 2006 relating to the audit of historical financial information under section 479A of that Act. Oxford Nanopore Technologies Limited has provided a parent company guarantee over the liabilities of this subsidiary company, pursuant to section 479C of the Companies Act 2006.

(D) The Genome Foundry Limited was set up on 7 September 2015, has never traded and is a dormant company.

(E) KK Oxford Nanopore Technologies was set up on 25 May 2016 to provide services to Oxford Nanopore Technologies Limited in Japan.

(F) Nanopore Technologies Hong Kong Limited was set up on 26 March 2018.

(G) Nanopore Technologies (Shanghai) Co. Limited was set up on 4 June 2018 and is a 100% subsidiary of Nanopore Technologies Hong Kong Limited.

(H) Oxford Nanopore Technologies Singapore PTE Ltd was set up on 14 September 2018.

(I) Oxford Nanopore Diagnostics Limited was set up on 14 November 2018 and has not commenced trading. On 22 April 2020, the name of the company was changed firstly from Oxford Nanopore Manufacturing Limited to Oxford Nanopore Technologies Services Limited and then on 28 August 2020 to Oxford Nanopore Diagnostics Limited.

(J) Oxford Nanopore Technologies B.V. was set up on 31 October 2019 and commenced trading on 1 May 2020.

(K) *Oxford Nanopore Technologies Australia PTY Ltd was set up on 6 January 2020 and commenced trading in November 2020.

(L) **Oxford Nanopore Technologies Denmark ApS was set up on 29 September 2020 and commenced trading on 1 December 2020.

(M) ***Oxford Nanopore Technologies SARL was set up on 1 December 2020 and not yet commenced trading.

All of the Company's subsidiary undertakings have been consolidated in the Group historical financial information.

## 19. Investment in Associates

An associate of Oxford Nanopore Technologies Limited is as follows:

| Name | Principal activities | Country of Incorporation | Class of shares | Proportion of ownership interest | | |
|---|---|---|---|---|---|---|
| | | | | **31 December 2020** | 31 December 2019 | 31 December 2018 |
| Veiovia Limited | Technology Development | UK | Ordinary | 18.5% | n/a | n/a |

The above associate is accounted for using the equity method in the consolidated historical financial information as set out in the Group's accounting policies in note 3.

(A) Pursuant to a shareholder agreement, the Company has the right to cast 18.5% of the votes of Veiovia Limited.

(B) Although the Group holds less than 20% of the equity shares of Veiovia Limited, and it has less than 20% of the voting power at shareholder meetings, the Group exercises significant influence by virtue of its contractual right to appoint one director to the board of directors of that entity.

(C) For the purposes of applying the equity method of accounting, the financial statements of Veiovia Limited for FY20 have been used. Management is not aware of any indicators of impairment that may have developed and existed at the reporting year end.

(D) Veiovia Limited's registered office is The University of York, Biology B/A/039, Wentworth Way, York, UK, YO10 5DD.

| | **2020 £000's** | 2019 £000's | 2018 £000's |
|---|---|---|---|
| Investment at cost | 548 | - | - |
| **Carrying amount of the Group's interest in the associate** | 548 | - | - |

## 20. Inventory

| | **2020 £000's** | 2019 £000's | 2018 £000's |
|---|---|---|---|
| Raw materials | 11,738 | 13,078 | 9,490 |
| Work in progress | 14,363 | 3,850 | 5,517 |
| Finished goods | 9,526 | 3,106 | 3,596 |
| | 35,627 | 20,034 | 18,603 |

Cost of inventories recognised as an expense during FY20 amounted to £33.8 million (FY19: £17.4 million; FY18: £22.0 million). These were included in cost of sales (note 7) in the statement of profit and loss.

The carrying amount of inventories were not materially different from their replacement cost.

## 21. Trade and Other Receivables

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Trade receivables | 49,021 | 14,126 | 10,575 |
| Contract assets | 1,873 | - | 1,000 |
| Other debtors | 1,310 | 30,007 | 862 |
| Accrued interest income | 16 | 7 | 303 |
| Other taxes | 2,886 | 4,360 | 3,119 |
| Prepayments | 10,800 | 4,806 | 5,957 |
| | 65,906 | 53,306 | 21,816 |

Other Debtors at 31 December 2019 includes £29.3 million in relation to share capital that was issued on 31 December 2019, but for which funds were outstanding at that date. These funds were received in the first two months of 2020.

Ageing of past due trade receivables with loss allowance calculated using the Group's provision matrix.

| | Trade receivables – days past invoice date | | | | |
|---|---|---|---|---|---|
| Trade receivables | not past due | 30-60 days | 61-90 days | 91+ days | Total |
| At 31 December 2020 | 34,513 | 5,800 | 3,260 | 7,406 | 50,979 |
| Loss allowance | - | - | - | (1,958) | (1,958) |
| | 34,513 | 5,800 | 3,260 | 5,448 | 49,021 |
| At 31 December 2019 | 7,639 | 3,197 | 1,520 | 3,714 | 16,070 |
| Loss allowance | - | - | - | (1,944) | (1,944) |
| | 7,639 | 3,197 | 1,520 | 1,770 | 14,126 |
| At 31 December 2018 | 3,637 | 2,367 | 2,118 | 3,324 | 11,446 |
| Loss allowance | (29) | (71) | (106) | (665) | (871) |
| | 3,608 | 2,296 | 2,012 | 2,659 | 10,575 |

The following table shows the movement in lifetime ECL that has been recognised for trade receivables in accordance with the simplified approach set out in IFRS 9:

| | **Total** |
|---|---|
| | **£000's** |
| **At 1 January 2018** | 173 |
| Net charges and releases to income statement | 676 |
| Amounts written off | - |
| Foreign exchange gains and losses | 22 |
| **Balance at 31 December 2018** | 871 |
| Net charges and releases to income statement | 1,145 |
| Amounts written off | (50) |
| Foreign exchange gains and losses | (22) |
| **Balance at 31 December 2019** | 1,944 |
| Net charges and releases to income statement | 51 |
| Foreign exchange gains and losses | (37) |
| **Balance at 31 December 2020** | 1,958 |

The contract assets relate to the Group's rights to consideration for goods and services provided but not billed at the reporting date for goods and services provided. The contract assets are transferred to receivables when the rights become unconditional. This usually occurs when the Group issues an invoice to the customer.

## 22. Current Trade and Other Payables

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Trade payables and other creditors | 31,007 | 11,952 | 10,530 |
| Payroll taxation and social security | 2,890 | 894 | 2,156 |
| Corporation tax payable | 570 | 884 | - |
| Accruals | 17,849 | 14,481 | 6,023 |
| Contract liabilities | 17,828 | 6,508 | 3,081 |
| | 70,144 | 34,719 | 21,790 |

Trade payables and accruals principally comprise amounts outstanding for trade purchases and ongoing costs. The average credit period taken for trade purchases by the Company and Group is 89 days (FY19: 41 days; FY18: 39 days).

The Group has financial risk management policies in place to ensure that all payables are paid within the pre-agreed credit terms.

The Directors consider that the carrying amount of trade payables approximates to their fair value.

Contract liabilities primarily relate to performance obligations on customer contracts which were not satisfied at 31 December. Contract liabilities have increased by £11.3 million mainly due to an increase in overall contract activity. Management expects that the majority of the transaction price allocated to unsatisfied performance obligations as of 31 December 2020 will be recognised as revenue during the next reporting period.

## 23. Derivative Financial Instruments

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| **Derivative financial assets** | **£000's** | £000's | £000's |
| Foreign currency forward contracts | 62 | 600 | - |
| | 62 | 600 | - |

## 24. Lease Liabilities

| | **2020** | 2019 | 2018* |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| **Maturity analysis – contractual undiscounted cash flows** | | | |
| Up to one year | 2,656 | 2,119 | - |
| One to five years | 7,512 | 4,264 | - |
| Greater than five years | 9,940 | 8,594 | - |
| **Total undiscounted lease liabilities at 31 December** | 20,108 | 14,977 | - |
| Current | 2,039 | 2,015 | - |
| Non-current | 12,093 | 7,566 | - |
| **Lease liabilities included in the consolidated statement of financial position** | 14,132 | 9,581 | - |

* The Group has adopted IFRS 16 Leases retrospectively from 1 January 2019 but has not restated comparatives for the 2018 reporting period, as permitted under the specific transition provisions in the standard. The reclassifications and the adjustments arising from the new leasing rules are therefore recognised in the opening balance sheet on 1 January 2019.

## 25. Loans and Provisions

| Loans | 2020 £000's | 2019 £000's | 2018 £000's |
|---|---|---|---|
| Loan on Land and Building Purchase | 9,500 | 9,500 | 9,500 |
| **Balance at 31 December** | 9,500 | 9,500 | 9,500 |

During 2017 the Lease of land and accompanying purchase of Gosling Building (see note 16) was purchased for £16.2 million. A term loan facility of £9.5 million was taken out with Barclays Bank plc to part fund the purchase (the balance being taken out of cash reserves). During FY20, the Group has refinanced the loan with Barclays Bank for a new term starting from 5 August 2020 for 4 years. The average interest rate charged in the year was 2.63% (FY19: 2.75%; FY18: 2.54%). Barclays Bank has a legal charge on this leasehold property as security against the loan. The financial covenant relating to this loan is for the loan outstanding to be no more than 55% of the property value. The Company continues to meet this banking covenant, with significant headroom.

Loan on Land and Building is measured at amortised cost under IFRS 9 (note 34).

| Provisions | 2020 £000's | 2019 £000's | 2018 £000's |
|---|---|---|---|
| Balance at 1 January | 1,407 | 1,005 | 1,005 |
| Additional provision in the year | 97 | 402 | - |
| Foreign exchange movements | (5) | - | - |
| **Balance at 31 December** | 1,499 | 1,407 | 1,005 |

The dilapidation provision relates to the leased properties, representing an obligation to restore the premises to their original condition at the time the Group vacates the properties.

The provision is non-current and expected to be utilised between 2 and 25 years.

The Group has reviewed the provision on the properties at the Oxford Science Park and considers that no additional charge was required during FY20.

## 26. Share Capital

| | Number of shares | | | | | | |
|---|---|---|---|---|---|---|---|
| **Issued Share Capital** | **2020** | 2019 | 2018 | **Par Value** | **2020** | 2019 | 2018 |
| Issued Share Capital | **Shares** | Shares | Shares | £ | **£** | £ | £ |
| Opening - ordinary shares | 29,711,482 | 29,129,799 | 27,056,210 | 0.001 | 29,711 | 29,130 | 27,056 |
| Opening - deferred shares | 733,677 | 733,677 | 733,677 | 0.005 | 3,668 | 3,668 | 3,668 |
| Issued - ordinary shares | 2,741,192 | 581,683 | 2,073,589 | 0.001 | 2,742 | 582 | 2,074 |
| Issued - deferred shares | - | - | - | 0.005 | - | - | - |
| Closing - ordinary shares | 32,452,674 | 29,711,482 | 29,129,799 | 0.001 | 32,453 | 29,711 | 29,130 |
| Closing - deferred shares | 733,677 | 733,677 | 733,677 | 0.005 | 3,668 | 3,668 | 3,668 |
| Total authorised, issued and fully paid Share Capital | | | | | 36,121 | 33,379 | 32,798 |

On 31 December 2020, Oxford Nanopore raised £135 million (FY19: 29 million) through the issuance of 2,505,915 ordinary shares (FY19: 504,470) at a share price of £53 per share (FY19: £58). During FY20, 235,277 ordinary shares (FY19: 77,213; FY18: 141,221) were issued as a result of share options exercised. Transaction costs for the issue of shares are offset against the Share Premium Reserve.

The ordinary shares do not carry any right to fixed income.

The deferred shares have no voting or dividend rights and only very limited capital return rights, which render them effectively valueless. The Company redeemed all the deferred shares in May 2021 for £0.01.

## 27. Share Premium

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| At 1 January | 479,332 | 450,231 | 351,409 |
| Premium arising on issue of equity shares | 135,061 | 29,534 | 100,324 |
| Share issue costs | (3,849) | (433) | (1,502) |
| **At 31 December** | 610,544 | 479,332 | 450,231 |

## 28. Accumulated Deficit

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| At 1 January | (397,779) | (325,563) | (272,464) |
| Total recognised loss for the year | (61,244) | (72,216) | (53,119) |
| **At 31 December** | (459,023) | (397,779) | (325,563) |

## 29. Foreign Exchange Translation Reserve

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| At 1 January | (273) | (140) | (238) |
| Exchange (loss)/gain on translating the net assets of foreign subsidiaries | (429) | (133) | 98 |
| **At 31 December** | (702) | (273) | (140) |

## 30. Share-Based Payments Reserve

Share options have been awarded under two equity-settled share-based remuneration schemes: the Oxford Nanopore Technologies Share Option Scheme and the Oxford Nanopore Technologies Limited Share Option Plan 2018. The contractual life of all options is 10 years.

The share options outstanding can be summarised as follows:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| At 1 January | 28,215 | 18,332 | 14,846 |
| Employee share-based payments | 6,864 | 9,883 | 3,486 |
| **At 31 December** | 35,079 | 28,215 | 18,332 |

**Oxford Nanopore Technologies Limited Share Option Plan 2018:** The Plan was approved by the Board in November 2018 and replaces the Oxford Nanopore Technologies Share Option Scheme. The first grant of awards was made in January 2019. All employees are eligible to be awarded approved share options, with the exception of employees in Nanopore Technologies (Shanghai) Co. Limited due to local taxation rules. These employees are instead eligible to be remunerated under a local bonus scheme. All awards granted to participants in FY19 were subject to either service conditions or both service and market performance conditions. The market performance condition was met in April 2021. Options cannot normally be exercised before the third anniversary of the date of grant.

**Oxford Nanopore Technologies Limited Share Option Scheme:** This Scheme was closed to new members in FY18. The Scheme was set up to allow the Company to award both HM Revenue & Customs approved Executive Management Incentive ("**EMI**") share options to qualifying individuals and unapproved share options.

All unapproved options may be subject to performance criteria and vesting schedules set at the Board's discretion. All employees are eligible to be awarded unapproved share options.

The movement in share options outstanding is summarised in the following table:

| | **Year ended 31 December 2020** | | Year ended 31 December 2019 | | Year ended 31 December 2018 | |
|---|---|---|---|---|---|---|
| | **Number of share options** | **Weighted average exercise price (in £)** | Number of share options | Weighted average exercise price (in £) | Number of share options | Weighted average exercise price (in £) |
| Outstanding at beginning of period | 2,649,419 | 19.52 | 1,930,567 | 16.55 | 2,007,419 | 15.06 |
| Granted during the period | 144,050 | 24.50 | 831,510 | 24.96 | 107,500 | 27.90 |
| Forfeited during the period | (61,147) | 12.18 | (35,445) | 19.79 | (43,131) | 22.69 |
| Exercised during the period | (235,277) | 9.57 | (77,213) | 3.59 | (141,221) | 2.15 |
| Outstanding at the end of the period | 2,497,045 | 20.93 | 2,649,419 | 19.52 | 1,930,567 | 16.55 |
| Exercisable at the end of the period | 1,372,645 | 17.32 | 1,640,503 | 15.85 | 1,818,834 | 12.93 |

Share options outstanding at the end of the year have the following expiry and exercise prices:

| **Scheme** | Grant year | Expiry year | Exercise price (£) | **2020 (Number)** | 2019 (Number) | 2018 (Number) |
|---|---|---|---|---|---|---|
| Oxford Nanopore Technologies Limited Share Option Scheme | 2008 - 2018 | 2020 - 2028 | 0.70 - 27.90 | **1,534,565** | 1,825,409 | 1,930,567 |
| Oxford Nanopore Technologies Limited Share Option Plan 2018 | 2019 - 2020 | 2029 - 2030 | 20.70 - 36.23 | **962,480** | 824,010 | - |
| | | | | **2,497,045** | 2,649,419 | 1,930,567 |

The weighted average share price at the date of exercise for share options exercised during FY20 was £53.00 (FY19: £51.75; FY18: £31.05).

The options outstanding at 31 December 2020 had a weighted average exercise price of £20.93 (FY19: £19.52; FY18: £16.55), and a weighted average remaining contractual life of 6.0 years (FY19: 6.3 years; FY18: 5.9 years).

The Group recognised total expenses of £6,840,682 (FY19: £9,883,110; FY18: £3,485,773) related to equity-settled share-based payment transactions in FY20.

**Valuation models**

*Oxford Nanopore Technologies Limited Share Option Plan 2018*

The fair value of share options granted during FY20 was determined using the Monte Carlo Simulation model and Black Scholes model dependent on the performance vesting conditions.

*Oxford Nanopore Technologies Limited Share Option Scheme*

There were 144,050 options granted during FY20 (FY19: nil), all options granted in previous years were valued using the Black Scholes model.

*Black Scholes*

The following assumptions were used in the Black Scholes model in calculating the fair values of the options granted during FY20:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| Weighted average share price | £ 53.00 | £ 51.75 | £27.90 |
| Weighted average exercise price | £ 24.50 | £ 26.60 | £27.90 |
| Expected volatility | 47% | 49.92% - 51.28% | 50.0% |
| Expected life | 6.5 years | 6.5 years | 10 years |
| Risk-free rate | 0% | 0.46% - 0.88% | 0.73% |
| Expected dividend yields | Nil | Nil | Nil |

The volatility assumption has been derived as the median volatility over a 5 year period of a bespoke comparator group. For options granted during FY20, the expected life assumption of 6.5 years assumes exercise will occur halfway through the total exercisable period, being the midpoint of years 3 and 10. The risk-free interest rate used reflects the UK Government 5-year Gilt rate as reported by the Bank of England. The weighted average fair value of options granted during FY20 determined using the Black Scholes model at the grant date was £34.62 (FY19: £34.30) per option.

*Monte Carlo Simulation*

There were no options granted in FY18 that were valued solely using the Monte Carlo Simulation model. The following assumptions were used in the Monte Carlo Simulation model in calculating the fair values of the options granted during FY20:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| Weighted average share price | £ 53.00 | £ 51.75 | - |
| Weighted average exercise price | £ 24.50 | £ 23.80 | - |
| Expected volatility | 47% | 49.92% - 51.28% | - |
| Expected life | 2.5 years | 4.08 - 4.41 years | - |
| Risk-free rate | 0% | 0.55% - 0.88% | - |
| Expected dividend yields | Nil | Nil | - |

The Monte Carlo Simulation model has been used to value the portion of the awards which have a market performance vesting condition (achievement of a target company valuation). The model incorporates a discount factor reflecting this performance condition into the fair value of this portion of the award. The weighted average fair value of options granted during FY20 determined using the Monte Carlo Simulation model at the grant date was £33.72 (FY19: £20.90) per option.

The volatility assumption has been derived as the median volatility over a 5-year period of a bespoke comparator group. For options granted during FY20, the expected life represents the term until expected vesting and exercise. The risk-free interest rate used reflects the UK Government 5-year Gilt rate as reported by the Bank of England.

## 31. Notes to the Cash Flow Statement

### Cash and cash equivalents

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Cash and cash equivalents | **80,863** | 13,092 | 35,321 |

Cash and cash equivalents comprise cash and short-term bank deposits with an original maturity of three months or less. The carrying amount of these assets is approximately equal to their fair value. Cash and cash equivalents at the end of the reporting period as shown in the consolidated statement of cash flows can be reconciled to the related items in the consolidated reporting position as shown above.

At 31 December 2020, the Company had £9.7 million of undrawn facilities.

*Reconciliation from loss before tax to operating cashflows*

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Loss before tax | (73,153) | (80,484) | (62,025) |
| Adjustments for: | | | |
| Depreciation on property, plant and equipment | 10,125 | 11,118 | 6,142 |
| Depreciation on right-of-use assets | 2,375 | 2,014 | - |
| Amortisation of internally generated intangible assets | 4,835 | 1,713 | 214 |
| Loss on disposal of property, plant and equipment | 1 | 4 | 20 |
| Exchange loss/(gain) | 69 | (33) | 179 |
| Interest on leases | 496 | 351 | - |
| Net bank interest | 160 | (255) | (330) |
| Non-cash movement on derivatives | 538 | (600) | - |
| Employee share benefit costs | 6,864 | 9,883 | 3,486 |
| Operating cash flows before movements in working capital | (47,690) | (56,289) | (52,314) |
| (Increase) in receivables | (41,484) | (3,525) | (12,726) |
| (Increase) in inventory | (15,592) | (1,432) | (12,154) |
| Increase in payables | 33,655 | 12,798 | 6,471 |
| Cash absorbed by operations | (71,111) | (48,448) | (70,723) |
| Income taxes – R&D tax credit received | 8,479 | - | 15,256 |
| Foreign tax paid | (1,174) | (231) | (42) |
| Net cash absorbed by operating activities | (63,806) | (48,679) | (55,509) |

***(i) Non-cash transactions***

During the year ended 31 December 2020, the Group refinanced a term loan facility of £9.5 million with Barclays Bank for a new term starting from 5 August 2020 for 4 years.

Additions to right-of-use assets during the year ended 31 December 2020 amounting to £6.7 million (2019: £6.7 million) were financed by new leases.

***(ii) Changes in Liabilities arising from Financing Activities***

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated cash flow statement as cash flows from financing activities.

| | | **Non-cash changes** | | | **Cash changes** | | | |
|---|---|---|---|---|---|---|---|---|
| | **1/1/20** | **Financing cash flows (i)** | **Refinance of bank loan** | **New leases** | **Other changes (b)** | **Principal repaid** | **Interest paid** | **31/12/20** |
| | **£000's** | **£000's** | **£000's** | **£000's** | **£000's** | **£000's** | **£000's** | **£000's** |
| Bank loans (note 25) | 9,500 | - | - | - | - | - | - | 9,500 |
| Lease liabilities (note 24) | 9,581 | 4,551 | - | 6,590 | 434 | (2,058) | (415) | 14,132 |
| Total liabilities from financing activities | 19,081 | 4,551 | - | 6,590 | 434 | (2,058) | (415) | 23,632 |

| | | Non-cash changes | | | Cash changes | | | |
|---|---|---|---|---|---|---|---|---|
| | 1/1/19 | Financing cash flows | Refinance of bank loan | New leases | Other changes (c) | Principal repaid | Interest paid | 31/12/19 |
| | £000's | £000's | £000's | £000's | £000's | £000's | £000's | £000's |
| Bank loans (note 25) | 9,500 | - | - | - | - | - | - | 9,500 |
| Lease liabilities (note 24) | - | 9,581 | - | 6,246 | 4,976 | (1,290) | (351) | 9,581 |
| Total liabilities from financing activities | 9,500 | 9,581 | - | 6,246 | 4,976 | (1,290) | (351) | 19,081 |

| | | Non-cash changes | | | Cash changes | | | |
|---|---|---|---|---|---|---|---|---|
| | 1/1/18 | Financing cash flows | Refinance of bank loan | New leases | Other changes | Principal repaid | Interest paid | 31/12/18 |
| | £000's | £000's | £000's | £000's | £000's | £000's | £000's | £000's |
| Bank loans (note 25) | 9,500 | - | - | - | - | - | - | 9,500 |
| Total liabilities from financing activities | 9,500 | - | - | - | - | - | - | 9,500 |

(a) The cash flows from bank loans and other borrowings make up the net amount of proceeds from borrowings and repayments of borrowings in the cash flow statement.

(b) Other changes include lease interest accrued and exchange difference.

(c) Other changes in 2019 included a recognition of lease liabilities in relation to the adoption of IFRS 16 as at 1 January 2019.

## 32. Commitments

As at 31 December 2020, the Group had the following non-cancellable commitments under research agreements. The total of future minimum non-cancellable payments due for each of the following periods are:

| | 2020 | 2019 | 2018 |
|---|---|---|---|
| | £000's | £000's | £000's |
| Within one year | 1,229 | 2,021 | 1,797 |
| In the second to fifth years inclusive | 339 | 456 | 170 |
| **At 31 December** | 1,568 | 2,477 | 1,967 |

## 33. Retirement Benefit Plans

The Group operates a defined contribution pension scheme for the benefit of its employees. Most of the employees who contribute to the Company's pension scheme do so via salary sacrifice.

The total expense recognised in the consolidated income statement of £949,065 (FY19: £606,072; FY18: £562,379) represents contributions payable to the scheme by the Group at rates specified in the rules of the scheme. As at 31 December 2020, contributions of £174,254 (FY19 and FY18: nil) due in respect of the current reporting period had not been paid over to the plans.

## 34. Financial Instruments – Risk Management

### 34.1 *Classes and categories of financial instruments and their fair values*

The following table combines information about:

(A) classes of financial instruments based on their nature and characteristics;

(B) loan on Land and Buildings is held at amortised cost;

(C) the carrying amounts of financial instruments; and

(D) fair values of financial instruments (except financial instruments when carrying amount approximates their fair value).

| | Total Carrying Value | Fair Value |
|---|---|---|
| | £000's | £000's |
| **31 December 2020** | | |
| **Financial assets** | | |
| Cash and cash equivalents | 80,863 | 80,863 |
| Trade and other receivables | 65,906 | 65,906 |
| Derivative financial instruments | 62 | 62 |
| **Financial liabilities** | | |
| Trade and other payables | (70,144) | (70,144) |
| Loan on Land & Buildings | (9,500) | (9,500) |

| | Total Carrying Value | Fair Value |
|---|---|---|
| **31 December 2019** | **£000's** | **£000's** |
| **Financial assets** | | |
| Cash and cash equivalents | 13,092 | 13,092 |
| Trade and other receivables | 48,500 | 48,500 |
| Derivative financial instruments | 600 | 600 |
| Financial liabilities | | |
| Trade and other payables | (28,211) | (28,211) |
| Loan on Land & Buildings | (9,500) | (9,500) |

| | Total Carrying Value | Fair Value |
|---|---|---|
| **31 December 2018** | **£000's** | **£000's** |
| **Financial assets** | | |
| Other financial assets | 58,000 | 58,000 |
| Cash and cash equivalents | 35,321 | 35,321 |
| Trade and other receivables | 14,859 | 14,859 |
| **Financial liabilities** | | |
| Trade and other payables | (18,709) | (18,709) |
| Loan on Land & Buildings | (9,500) | (9,500) |

The following summarises the methods and assumptions used in estimating the fair values of financial instruments reflected in the table.

*Trade receivables, trade payables, other financial assets and cash and cash equivalents*

Trade payables and receivables generally have a remaining life of less than one year so their value recorded in the balance sheet is considered to be a reasonable approximation of fair value. Other financial assets comprise short-term deposits held with banks that do not meet the IAS 7 definition of a cash equivalent.

*Foreign currency forward swaps*

Discounted cash flow. Future cash flows are estimated based on forward exchange rates (from observable forward exchange rates at the end of the reporting period) and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.

During FY20, a number of fixed forward contracts were entered into. As at the end of FY20, only one contract remained unsettled, with a settlement date of 30 September 2021 as is included in the Balance Sheet as follows:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Foreign currency forwards – cash flow hedges | 62 | 600 | - |
| | 62 | 600 | - |

## 34.2 Financial Risk Management Objectives and Policies

*Overview*

The Group has exposure to liquidity, credit and market risks from its use of financial instruments. This note sets out the Group's key policies and processes for managing these risks.

*Liquidity risk*

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities as they fall due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Following the share capital raised in FY20, the Group has a substantial cash balance to fund its operations.

At the end of FY20, the Group has the following financing arrangements:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| **Maturity analysis** | **£000's** | £000's | £000's |
| - Expiring within one year (undiscounted lease liabilities) | 2,656 | 2,119 | - |
| - Expiring beyond one year (undiscounted lease liabilities and bank loan) | 26,952 | 22,358 | 9,500 |
| | 29,608 | 24,477 | 9,500 |

The bank loan facility has a term of four years from 5 August 2020, at an average rate of 2.65% p.a. The amounts disclosed in this table for lease liabilities are based on contractual undiscounted cash flows.

The Directors consider that except for lease and loan liabilities, all of the Group's financial liabilities at the year end and prior year end have maturity dates of less than 12 months from the balance sheet date.

Management monitors rolling forecasts of the Group's financing arrangements (comprising the lease liabilities and bank loan above) and cash and cash equivalents (note 31) on the basis of expected cash flows. This is generally carried out at local level in the operating companies of the group, in accordance with practice and limits set by the Group.

*Credit risk*

Credit risk is the risk of financial loss to the Group if a deposit taker should fail. It is currently Group policy that the majority of external monetary deposits are made on a fixed interest basis over terms varying from one to three months depending upon the rate available. Maturities are staggered whenever possible to spread exposure to interest rate movement. Although the Board accepts that this policy neither protects the Group from the risk of receiving rates below the current market rates nor eliminates fully cash flow risk associated with interest receipts, it considers that it achieves an appropriate balance of exposure to these

risks. Term deposits are denominated in UK sterling with institutions rated as A or better by both Moody's and Standard & Poor's.

At the end of FY20, the Group placed £60 million (FY19: nil; FY18: £58 million) deposits with several reputable financial institutions to minimise its credit risk.

Additional credit risk exists on trade receivables, which is managed by a centralised accounts receivable process including credit checks on initial order acceptance.

Credit approvals and other monitoring procedures are also in place to ensure that follow-up action is taken to recover overdue debts. Furthermore, the Group reviews the recoverable amount of each trade debt and debt investment on an individual basis at the end of the reporting period to ensure that adequate loss allowance is made for irrecoverable amounts. In this regard, the Directors of the Company consider that the Group's credit risk is significantly reduced and remain at the same level for the foreseeable future. Trade receivables consist of a large number of customers, spread across diverse geographical areas.

Of the trade receivables balance at the end of FY20, £29.8 million (FY19: nil) is due from the UK Government, the Group's largest customer.

As at the end of FY20, an amount of £1.96 million (FY19: £1.94 million; FY18: £0.87 million) measured at an amount equal to 12-month expected credit losses has been estimated as a loss allowance in accordance with IFRS 9 (see note 21).

The credit risk on liquid funds and derivative financial instruments are measured at an amount equal to lifetime expected credit losses. Their credit risk is considered as limited because the counterparties are banks with high credit-ratings assigned by international credit-rating agencies.

*Market risk*

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's costs of R&D or the value of its holdings in financial instruments. The Group has little exposure to interest rate risk other than that returns on short-term fixed interest deposits will vary with movements in underlying bank interest rates. The Group's principal market risk exposure is to movements in foreign exchange rates.

*Foreign currency risk*

Foreign exchange risk arises because the Group from time to time enters into transactions denominated in a currency other than Sterling. Where it is considered that the risk to the Group is significant, it will enter into a matching forward contract with a reputable bank, or hold deposits of the currency in cash.

Derivatives are only used for economic hedging purposes and not as speculative investments.

In addition, significant amounts of dollars were held during FY20. In FY20 approximately 33% (FY19: 26%; FY18: 21%) of the Group's annual expenditures was denominated in US dollars and approximately 15% (FY19: 10%; FY18: 13%) of the Group's expenditure was denominated in Euros. A significant portion of the Group's revenue is denominated in US Dollars.

Exchange rate exposures are managed within approved policy parameters. The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

| | **Assets** | | | **Liabilities** | | |
|---|---|---|---|---|---|---|
| | **2020** | 2019 | 2018 | **2020** | 2019 | 2018 |
| | **£000's** | £000's | £000's | **£000's** | £000's | £000's |
| Financial assets and liabilities | 16,454 | 13,423 | 8,726 | 6,182 | 932 | 4,952 |

*Sensitivity analysis*

A 5% strengthening of the US$ at 31 December 2020 would have resulted in changes to equity and profit or loss by the amounts shown below:

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Decrease in loss for the period | (321) | (291) | (139) |
| Increase in equity | (321) | (291) | (139) |

The interest rate for short-term deposits is variable dependent on the rates offered by the Group's bankers. During FY20, the short-term deposits returned an average of 0.25% (FY19: 0.95%; FY18: 0.80%).

The Group has considered its sensitivity to interest rate fluctuations and does not believe that a change in interest rates would have a material risk impact on the historical financial information.

*Capital management*

The Group defines the capital that it manages as the Group's total equity. The Group's objectives when managing capital are:

(A) to safeguard the Group's ability to continue as a going concern, so that it can continue to strive to provide returns to investors;

(B) to provide an adequate return to investors based on the level of risk undertaken;

(C) to have available the necessary financial resources to allow the Group to invest in areas that may deliver future benefits for inventive sources and returns to investors; and

(D) to maintain sufficient financial resources to mitigate against risks and unforeseen events.

| | **2020** | 2019 | 2018 |
|---|---|---|---|
| | **£000's** | £000's | £000's |
| Debt | 9,500 | 9,500 | 9,500 |
| Equity | 185,934 | 109,528 | 142,893 |
| Debt to Equity Ratio | 5.1% | 8.7% | 6.6% |

Debt is defined as long- and short-term borrowings (excluding derivatives and financial guarantee contracts) as detailed in note 25. Equity includes all capital and reserves of the Group that are managed as capital.

## 35. Related Party Transactions

At the end of FY20, there were 112,759 (FY19: 149,023) options outstanding in respect of options granted to Non-Executive Directors and consultants.

The Company continued to fund the following subsidiaries during FY20: Oxford Nanopore Technologies Inc. ("**ONT Inc**"), KK Oxford Nanopore Technologies, Nanopore Technologies (Shanghai) Co. Ltd, Oxford Nanopore Technologies Singapore PTE Ltd and Metrichor Limited. During FY20, the Company paid these subsidiaries £10,124,000 (FY19: £5,715,000; FY18: £4,104,000) for the R&D and other services provided to it.

In addition, the Company made sales to its US subsidiary, ONT Inc, of $14.3 million (FY19: $12.8 million; FY18: $9.6 million), the Group's limited risk distributor in the USA.

During FY20, the Company paid commission fee on fund raising of £660,000 to IP Group which is related to the Company by the shared directorship of Alan Aubrey. No commission fee was paid to IP Group in FY19.

In FY18, the Company purchased services from IP Group to the value of £793,000.

## 36. Post Balance Sheet Events

### 36.1 Trading

In July 2020, the Company entered into a contract with the Department of Health and Social Care ("**DHSC**")

to deliver LamPORE kits for the testing of the SARS-Cov-2 virus, as part of the UK Governments Test and Trace strategy. A number of kits were sold to the DHSC in 2020, but in April 2021, the DHSC determined that they no longer had a requirement for the Group's product and terminated the contract before taking the maximum quantity allowable under the contract.

This is a non-adjusting event, there is no financial effect on the net assets or any individual financial statement line item as at 31 December 2020. The Group does not expect to suffer any liability as a result of this contract termination.

36.2 **Equity**

On the 29 March 2021, a resolution was passed to cancel and extinguish £610.8 million of the share premium account of the Company.

Oxford Nanopore has completed a £202.0 million of fund raise in April 2021 via a private placement of ordinary shares in the Group.

On 9 June 2021, the shareholders approved:

(a) a conditional retention equity award of up to 6.5% of the Company's equity to the Executive Directors. The grant is subject to achievement of performance conditions tied to revenue and share price and is subject to holding periods. On 22 June 2021, awards under this plan were granted to the executive directors of the company; and

(b) a limited anti-takeover non-voting share of £1.00 in the capital of the Company (a "**LAT Share**").

The Articles contain provision for three classes of "limited anti-takeover" share, each of £1.00 in the capital of the Company: (i) the class A "limited anti-takeover" share (the "**A LAT Share**"); (ii) the class B "limited anti-takeover" share (the "**B LAT Share**"); and (iii) the class C "limited anti-takeover" share (the "**C LAT Share**") (the A LAT Share, the B LAT Share and the C LAT Share being, collectively, the "**LAT Shares**"). The rights attaching to the LAT Shares are set out below.

*The Active LAT Share*

The "Active LAT Share" shall be determined as follows:

- the Active LAT Share shall be the A LAT Share unless, for any reason, Dr Gordon Sanghera ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**GS Disqualifying Event**");
- if a GS Disqualifying Event occurs, then the Active LAT Share shall be the B LAT Share unless, for any reason, Dr James Willcocks ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**JW Disqualifying Event**");
- if a GS Disqualifying Event and a JW Disqualifying Event has occurred, then the Active LAT Share shall be the C LAT Share unless, for any reason, Clive Brown ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**CB Disqualifying Event**"); and
- if, at any time, each of a GS Disqualifying Event, a JW Disqualifying Event and a CB Disqualifying Event has occurred then, from the last of those events to occur, there shall no longer be any Active LAT Share.

The holder of a LAT Share will have the right to attend and speak at any general meeting of the Company. However, no LAT Share will carry any voting rights (other than in respect of a separate class meeting of the LAT Shares or any class of them (as a separate class)), until a Change of Control of the Company (in which case the Active LAT Share will carry the voting rights set out below).

Immediately on a Change of Control of the Company, the Active LAT Share will automatically carry such number of votes on any resolution put to the shareholders at a general meeting as shall be necessary to ensure the effective passing of such shareholder resolution if those votes are cast by the holder of the Active LAT Share in favour of, or to ensure the defeat of, such shareholder resolution if those votes are cast by the holder of the Active LAT Share against such shareholder resolution.

For the purposes of this summary, a Change of Control will broadly arise if there is an acquisition by any person of an interest in Ordinary Shares which (when taken together with the Ordinary Shares in which that person and any persons acting in concert with them are interested) carry more than 50% of the voting rights exercisable by the shareholders on a poll in a general meeting (excluding those attributable to the Active LAT Share). In circumstances where an offer is made for the Ordinary Shares, a Change of Control will occur: (a) on a scheme of arrangement under Part 26 of the Companies Act 2006 at the point at which

the scheme of arrangement becomes effective; and (b) on a takeover offer under Part 28 of the Companies Act 2006, at the point at which the takeover offer becomes unconditional in all respects.

No LAT Share will entitle any holder to receive any dividend or other distribution of the Company whether out of profits or on the winding-up of the Company or otherwise.

LAT Shares are not capable of transfer (unless pursuant to a purchase or cancellation by the Company of any LAT Shares following the sunset period (as set out below)) and the broader transfer provisions under the Articles applicable to the Ordinary Shares will not apply.

The rights attributable to a LAT Share will cease (and that LAT Share will be capable of being repurchased or cancelled by the Company) on the earlier of: (a) the date falling three years after the date of the issue of that LAT Share; (b) the transfer of that LAT Share to any person; and (c) a GS Disqualifying Event, JW Disqualifying Event or CB Disqualifying Event (as relevant).

The rights attached to the LAT Shares (or any class of them) shall not be capable of being varied or abrogated in any respect whatsoever without the prior written consent of the holder of each affected class of the LAT Shares.

On 23 August 2021, the Company completed a bonus issue (one-for-one) and a subsequent share split (10-for-one) which resulted in share capital increasing from £35,000 to £71,000, with a corresponding decrease in accumulated income reserves. There was no cash or other financial impact.

### 36.3 Employer social security taxes on unapproved share options

Share options that are 'readily convertible assets' ("**RCAs**") (i.e. where there is an arrangement in place that allows employees easy conversion of shares into cash) typically attract social security taxes on exercise.

On 31 March 2021, the Company informed its shareholders that it had started the process of preparing for the IPO. Whilst the timing of the IPO is not under the control of the Company, due to market condition, at that time, the Company intended the IPO to occur in the second half of 2021.

As a result, in accordance with Section 702 (Earnings and Pensions) Act 2003, share options granted under the Unapproved Share Option Scheme have become RCAs and will be subject to social security taxes on exercise. The Company estimates employer social security taxes will not exceed £11 million based on the number of outstanding unapproved share options at 31 December 2020 as this is a non-adjusting subsequent event.

## 37. Litigation and Contingent Liabilities

PacBio filed a complaint against ONT Inc in the US District Court for the District of Delaware on 15 March 2017, alleging infringement of US Patent No. 9,546,400 (US '400). A subsequent complaint filed on 25 September 2017, alleged infringement of US Patent Nos. 9,678,056 (US '056) and 9,738,929 (US '929) and an amended complaint filed on 28 March 2018 also alleged infringement of US Patent No. 9,772,323 (US '323). PacBio also filed further complaints against the Company with the effect that both the Company and ONT Inc (together, "**Oxford Nanopore**") were parties to the proceedings. On 18 March 2020, a federal jury in Delaware found in favour of Oxford Nanopore and invalidated all four patents asserted by PacBio in this litigation. Following the verdict, PacBio moved the Court for judgments as a matter of law overturning the jury's invalidity findings. On 30 July 2020, the trial judge, Chief Judge Leonard Stark, denied all of PacBio's motions. The final verdict was entered on 13 August 2020.

PacBio appealed the ruling to the US Court of Appeals for the Federal Circuit. This appeal was limited to the determinations that the '400 and the '323 patents were invalid for lack of enablement. PacBio also asked that the Federal Circuit grant PacBio a new trial because it alleged Oxford Nanopore's references to its efforts relating to coronavirus detection unfairly prejudiced the jury. On 11 May 2021, the US Court of Appeals for the Federal Circuit issued a unanimous Precedential Opinion and Judgement affirming the jury's March 2020 verdict in the PacBio v. Oxford Nanopore case that invalidated a number of PacBio patents. PacBio did not petition for a rehearing.

## 38. Ultimate Controlling Party

The Company is owned by a number of investors, none of whom is deemed to have overall control.

## Section C: Interim Financial Information

## Condensed Consolidated Income Statement

| | *Notes* | 6 months to June 2021 £000's (Unaudited) | 6 months to June 2020 £000's (Unaudited) |
|---|---|---|---|
| **Revenue** | 3 | 58,951 | 48,307 |
| Cost of sales | 4 | (28,747) | (32,214) |
| Gross profit | | 30,204 | 16,093 |
| | | | |
| **Operating expenses** | | | |
| Research and development expenses | 4 | (30,602) | (23,770) |
| Selling, general & administrative expenses | 4 | (43,173) | (34,040) |
| **Total operating expenses** | | (73,775) | (57,810) |
| | | | |
| **Loss from operations** | | (43,571) | (41,717) |
| | | | |
| Finance income | | 60 | 51 |
| Finance costs | | (144) | (118) |
| Other losses | | (749) | (562) |
| **Loss before tax** | | (44,404) | (42,346) |
| | | | |
| Tax (expense) / credit | 5 | (426) | 6,885 |
| | | | |
| **Loss for the period** | | (44,830) | (35,461) |
| **Loss per share** | 6 | (0.0026) | (0.0024) |

## Condensed Consolidated Statement of Comprehensive Income

| | 6 months to June 2021 £000's (Unaudited) | 6 months to June 2020 £000's (Unaudited) |
|---|---|---|
| **Attributable to: Equity shareholders of the Company** | | |
| **Loss for the period** | (44,830) | (35,461) |
| **Items that may be reclassified subsequently to profit or loss** | | |
| Exchange differences on translation of foreign operations | (96) | 199 |
| **Total comprehensive loss** | (44,926) | (35,262) |

## Condensed Consolidated Statement of Financial Position

| | *Notes* | 30 June 2021 £000's (Unaudited) | 31 December 2020 £000's (Audited) |
|---|---|---|---|
| **Non-current assets** | | | |
| Intangible assets | 7 | 22,480 | 22,867 |
| Property, plant and equipment | 8 | 43,009 | 39,386 |
| Right-of-use assets | | 13,615 | 13,815 |
| Investments in associates | 9 | - | 548 |
| Deferred tax asset | | 3,749 | 1,439 |
| | | 82,853 | 78,055 |
| **Current assets** | | | |
| Inventory | 10 | 49,321 | 35,627 |
| Trade and other receivables | | 41,351 | 65,906 |
| R&D tax credit recoverable | | 12,733 | 20,696 |
| Other financial assets | 11 | 130,539 | - |
| Derivative financial instruments | | - | 62 |
| Cash and cash equivalents | 11 | 119,687 | 80,863 |
| | | 353,631 | 203,154 |
| **Total assets** | | 436,484 | 281,209 |
| **Current liabilities** | | | |
| Trade and other payables | | (50,365) | (70,144) |
| Derivative financial instruments | | (139) | - |
| Lease liabilities | | (1,786) | (2,039) |
| | | (52,290) | (72,183) |
| **Net current assets** | | 301,341 | 130,971 |
| **Non-current liabilities** | | | |
| Lease liabilities | | (11,998) | (12,093) |
| Loan | | (9,500) | (9,500) |
| Provisions | 16 | (12,837) | (1,499) |
| | | (34,335) | (23,092) |
| **Total liabilities** | | (86,625) | (95,275) |
| **Net assets** | | 349,859 | 185,934 |
| **Equity** | | | |
| Share capital | 13 | 35 | 36 |
| Share premium reserve | 14 | 200,854 | 610,544 |
| Share based payment reserve | 15 | 42,850 | 35,079 |
| Accumulated income / (deficit) | | 106,918 | (459,023) |
| Translation reserve | | (798) | (702) |
| **Total equity** | | 349,859 | 185,934 |

## Condensed Consolidated Statement of Changes in Equity

| | Share Capital | Share Premium Account | Employee Share Based Payments | Accum (Deficit)/ Income | Translation Reserve | Total |
|---|---|---|---|---|---|---|
| | £000's | £000's | £000's | £000's | £000's | £000's |
| **Balance at 1 January 2021** | **36** | **610,544** | **35,079** | **(459,023)** | **(702)** | **185,934** |
| Loss for the period | - | - | - | (44,830) | - | (44,830) |
| Exchange loss on translation of subsidiary | - | - | - | - | (96) | (96) |
| Issue of share capital | 3 | - | - | - | - | 3 |
| Premium arising on issue of equity shares | - | 202,636 | - | - | - | 202,636 |
| Cancellation of deferred shares | (4) | - | - | 4 | - | - |
| Cost of share issue | - | (1,559) | - | - | - | (1,559) |
| Employee share-based payments | - | - | 5,929 | - | - | 5,929 |
| Deferred tax asset | | | 1,842 | | | 1,842 |
| Capital reduction (Note 14) | - | (610,767) | - | 610,767 | - | - |
| **Balance at 30 June 2021 (unaudited)** | **35** | **200,854** | **42,850** | **106,918** | **(798)** | **349,859** |

| | Share Capital | Share Premium Account | Employee Share Based Payments | Accum Deficit | Translation Reserve | Total |
|---|---|---|---|---|---|---|
| | £000's | £000's | £000's | £000's | £000's | £000's |
| **Balance at 1 January 2020** | **33** | **479,332** | **28,215** | **(397,779)** | **(273)** | **109,528** |
| Loss for the period | - | - | - | (35,461) | - | (35,461) |
| Exchange loss on translation of subsidiary | - | - | - | - | 199 | 199 |
| Issue of share capital | 1 | - | - | - | - | 1 |
| Premium arising on issue of equity shares | - | 48,935 | - | - | - | 48,935 |
| Cost of share issue | - | (1,508) | - | - | - | (1,508) |
| Employee share-based payments | - | | 3,635 | - | - | 3,635 |
| **Balance at 30 June 2020 (unaudited)** | **34** | **526,759** | **31,850** | **(433,240)** | **(74)** | **125,329** |

## Condensed Consolidated Statement of Cash Flows

| | *Notes* | 6 months to June 2021 £000's (Unaudited) | 6 months to June 2020 £000's (Unaudited) |
|---|---|---|---|
| **Net cash outflow from operating activities** | 11 | (15,456) | (25,980) |
| **Investing activities** | | | |
| Purchases of property, plant and equipment | | (9,761) | (5,421) |
| Cash expenditures for development costs | | (4,256) | (1,825) |
| Proceeds from sale of fixed asset | | - | 1 |
| Interest received | | 76 | 51 |
| Purchases of short-term investments | 11 | (130,539) | - |
| **Net cash outflow in investing activities** | | (144,480) | (7,194) |
| **Financing activities** | | | |
| Proceeds from issue of shares | | 202,636 | 78,085 |
| Costs of share issue | | (2,319) | (1,305) |
| Principal elements of lease payments | | (942) | (1,020) |
| Finance costs net of exchange loss | | (144) | (49) |
| Interest paid on leases | | (329) | (200) |
| **Net cash inflow from financing activities** | | 198,902 | 75,511 |
| **Net increase in cash and cash equivalents before foreign exchange movements** | | 38,965 | 42,337 |
| Effect of foreign exchange rate losses | | (141) | 159 |
| **Cash and cash equivalents at beginning of period** | | 80,863 | 13,092 |
| **Cash and cash equivalents at end of period** | | 119,687 | 55,588 |

1. **General Information**

The information for FY20 does not constitute statutory accounts as defined in section 434 of the Companies Act 2006. A copy of the statutory accounts for that year has been delivered to the Registrar of Companies. The auditors reported on those accounts: their report was unqualified, did not draw attention to any matters by way of emphasis and did not contain a statement under section 498(2) or (3) of the Companies Act 2006.

2. **Accounting Policies**

**Basis of preparation**

The annual financial statements of the Company will be prepared in accordance with the IFRS. The condensed set of financial statements included in this Section C *(Interim Financial Information)* (for the purposes of this Section C, the "**condensed interim financial statements**" or the "**financial statements**") has been prepared in accordance with United Kingdom adopted IAS 34 'Interim Financial Reporting'.

The condensed interim financial statements have been prepared in accordance with the accounting policies set out in the Group's annual report and financial statements for FY20.

**Going concern**

During the period Oxford Nanopore received £202.0 million in April and May 2021, relating to a private placement of ordinary shares in the Company. As at 30 June 2021, the consolidated statement of financial position reflects a net asset position of £349.9 million, with cash reserves of £120 million and short-term investments of £130 million.

As part of the Directors' consideration of the appropriateness of adopting the going concern basis in preparing the historical financial information, a range of reasonably possible scenarios have been reviewed, including the potential impact of any further COVID-19 restrictions and regulations.

Under all the scenarios modelled, after taking appropriate mitigating actions, the forecasts did not indicate an additional cash requirement. On the basis of these reviews, the Directors consider it is appropriate for the going concern basis to be adopted in preparing the historical financial information.

**Judgements**

The following are the critical judgements and estimates that the Directors have made in the process of applying the Company's accounting policies and that have the most significant effect on the amounts recognised in the financial statements.

(i) *Inventory provisioning*

Critical judgement is required in consideration of the need for an inventory provision against the LamPORE inventory the Company holds. LamPORE is the Company's Covid testing product sold through the Covid testing segment.

In July 2020, the Company entered into a contract with the DHSC to deliver LamPORE kits for the testing of the SARS-Cov-2 virus, as part of the UK Government's Test and Trace strategy. A number of kits were sold to the DHSC in 2020, but in April 2021, the DHSC determined that they no longer had a requirement for the Group's product and terminated the contract before taking the maximum quantity allowable under the contract. As at 30 June 2021, the Company held inventory relating to LamPORE. However, the Directors do not expect to suffer any liability as a result of this contract termination and have used judgement to conclude that no provision is required against this inventory.

(ii) *Employer social security taxes on unapproved share options*

The Company has a constructive obligation to pay the employer social security costs when employees exercise unapproved share options. The liability included in the financial statements depends on a number of factors including: the fair value of the Company's shares at the balance sheet date, the share option exercise price, the number of options likely to vest and the employer social security rate of the relevant tax jurisdiction. As the Company's shares are not traded in an active market, the Directors estimated the fair value of the shares on its most recent fundraising share price. The liability at the balance sheet date was approximately £11.3 million. This was based on an estimated share fair value of £70 at the balance sheet date.

(iii) *Long-term incentive plan*

The Company informed its shareholders on 30 March 2021 that it has started the process of preparing for an IPO and the Directors expect it will occur in the second half of 2021 on the London Stock Exchange. The Company has set up a long-term incentive plan ("**LTIP**") which was approved by the Board on 22 June 2021. The LTIP is a one-off discretionary share plan, under which the Company granted awards over 6.5% of the Company's Ordinary Share capital (at the date of grant) to the Executive Directors. Awards were granted as conditional awards of Ordinary Shares ("**Conditional Awards**").

There are a number of judgements involved in the valuation of and accounting for this award, which has resulted in a total charge to the income statement in HY21 of £0.7 million, as outlined in note 15. It is the Directors' judgement that it is probable the IPO will occur, and assumptions over the vesting percentage of the awards have been made which could change over time, having a material impact on the charge going forward. It has also been assumed that the awards with revenue conditions will vest over a three year period, and the awards with share price conditions will vest over a 2.16 year period. The vesting period for the awards with revenue conditions could alter should conditions be met earlier/later, resulting in an accelerated/decelerated charge.

## 3. Segment Information

A summary of the key financial results is set out below:

| | **30 June 2021** | 30 June 2020 |
|---|---|---|
| | **£000's** | £000's |
| **Geographical region** | | |
| USA | 11,483 | 7,261 |
| Europe | 12,635 | 5,233 |
| China | 3,148 | 5,139 |
| UK | 9,607 | 24,609 |
| UAE | 10,329 | 330 |
| Japan | 3,087 | 1,745 |
| Rest of World | 8,662 | 3,990 |
| | 58,951 | 48,307 |

| | **30 June 2021** | 30 June 2020 |
|---|---|---|
| | **£000's** | £000's |
| **Category** | | |
| Sale of goods | 49,127 | 44,121 |
| Rendering of services | 2,077 | 2,443 |
| Lease income | 7,747 | 1,743 |
| **Total revenue from contracts with customers** | 58,951 | 48,307 |

Products and services from which reportable segments derive their revenues.

The information reported to the Group's senior management team, which is considered the CODM, for the purposes of resource allocation and assessment of segment performance is defined by market rather than product type. The segment measure of profit evaluated by the CODM is Adjusted EBITDA, as this is considered to give the most appropriate information in respect of profitability of the individual segments.

The Directors consider that the Group reportable segments under IFRS 8 Operating Segments are as set out below:

| **Reportable segments** | **Description** |
|---|---|
| LSRT | The Group's core business, generating revenue from providing products and services for research use, including R&D expenditure and corporate expenditure. |
| COVID Testing | In the interim period, the Group generated revenue from providing products for SAR-Cov-2 testing. It should be |

| | |
|---|---|
| | noted that its sequencing products continue to be used for the purposes of COVID genomic surveillance, including variant identification, but this is reported within the LSRT segment. |

(a) Information about major customers

In HY21, the Group has one major customer based in the UAE, which represents 17.5% of Group revenue (HY20: 0.7%).

No other individual customer represents more than 10% of the Group's total revenue.

The following is an analysis of the Group's revenue, results, assets and liabilities by reportable segment.

| | LSRT | COVID Testing | **30 June 2021** | LSRT | Covid Testing | 30 June 2020 |
|---|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's | £000's |
| **Revenue** | | | | | | |
| USA | 11,483 | - | **11,483** | 7,261 | - | 7,261 |
| Europe | 11,826 | 809 | **12,635** | 5,233 | - | 5,233 |
| China | 3,148 | - | **3,148** | 5,139 | - | 5,139 |
| UK | 4,068 | 5,539 | **9,607** | 1,518 | 23,091 | 24,609 |
| Japan | 3,087 | - | **3,087** | 1,745 | - | 1,745 |
| UAE | 10,329 | - | **10,329** | 330 | - | 330 |
| Rest of the World | 8,646 | 16 | **8,662** | 3,990 | - | 3,990 |
| **Total Revenue** | 52,587 | 6,364 | **58,951** | 25,216 | 23,091 | 48,307 |

(b) Adjusted EBITDA

Adjusted EBITDA is loss for the year before finance income, loan interest, interest on lease, other gains, taxes, depreciation and amortisation, and foreign exchange losses/movements. Adjusted EBITDA reconciles to loss before tax as follows:

| | LSRT | COVID Testing | **30 June 2021** | LSRT | COVID Testing | 30 June 2020 |
|---|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's | £000's |
| Profit/(loss) before tax | (46,065) | 1,661 | **(44,404)** | (47,235) | 4,889 | (42,346) |
| Finance income | (60) | - | **(60)** | (51) | - | (51) |
| Loan interest | 144 | - | **144** | 118 | - | 118 |
| Interest on leases | 329 | - | **329** | 208 | - | 208 |
| Exchange gains | (644) | - | **(644)** | (422) | - | (422) |
| Other losses | 749 | - | **749** | 561 | - | 561 |
| Depreciation and amortisation | 10,949 | 1,067 | 12,016 | 7,650 | - | 7,650 |
| **Adjusted EBITDA** | (34,598) | 2,728 | **(31,870)** | (39,171) | 4,889 | (34,282) |

(c) Supplementary information

| **Segment assets** | LSRT | COVID Testing | **30 June 2021** | LSRT | COVID Testing | 30 June 2020 |
|---|---|---|---|---|---|---|
| | £000's | £000's | **£000's** | £000's | £000's | £000's |
| Investment in associates | - | - | **-** | 548 | - | 548 |
| Acquired intangible assets | 430 | - | **430** | 446 | - | 446 |
| Other segment assets* | 152,860 | 16,486 | **169,346** | 177,155 | - | 177,155 |
| Total segment assets | 153,290 | 16,486 | **169,776** | 178,149 | | 178,149 |
| Unallocated: | | | | | | |
| Deferred tax asset | | | **3,749** | | | 1,439 |
| R&D tax credit recoverable | | | **12,733** | | | 20,696 |
| Derivative financial instruments | | | **-** | | | 62 |
| Other financial assets | | | **130,539** | | | - |
| Cash and cash equivalents | | | **119,687** | | | 80,863 |
| **Total assets as per the balance sheet** | | | **436,484** | | | 281,209 |
| | | | | | | |
| **Segment liabilities** | | | | | | |
| Total segment liabilities | (75,683) | (1,303) | **(76,986)** | (85,775) | - | (85,775) |
| Unallocated: | | | | | | |
| Derivative financial instruments | (139) | - | **(139)** | - | - | - |
| Non-current borrowings | (9,500) | - | **(9,500)** | (9,500) | - | (9,500) |
| **Total liabilities as per the balance sheet** | | | **(86,625)** | | | (95,275) |

* Other segment assets include non-current assets except for investments, acquired intangible assets and deferred tax assets. It also includes inventory and trade and other receivables.

## 4. Notes to Expenses

| | **30 June 2021** | **30 June 2020** |
|---|---|---|
| | **£000's** | **£000's** |
| **Cost of sales** | (28,747) | (32,214) |
| **Operating expenses** | | |
| Research and development expenses | (30,602) | (23,770) |
| Selling, general & administrative expenses | (43,173) | (34,040) |
| **Total operating expenses** | (73,775) | (57,810) |

Included within cost of sales in HY21 are employee share benefit costs totalling £0.2 million (HY20: £0.2 million) and National Insurance on readily convertible assets of £0.9 million (HY20: £nil).

Included within R&D expenses in HY21 are employee share benefit costs totalling £2.2 million (HY20: £1.5 million) and National Insurance on readily convertible assets of £6.4 million (HY20: £nil).

Included within selling, general & administrative expenses in HY21 are employee share benefit costs totalling £3.5 million (HY20: £2.0 million) and National Insurance on readily convertible assets of £4.0 million (HY20: £nil).

## 5. Income Tax

| | 30 June 2021 | 30 June 2020 |
|---|---|---|
| | £000's | £000's |
| **Current tax** | | |
| R&D tax credit receivable for the period | - | (5,468) |
| Prior year adjustment in respect of R&D tax credit | - | (762) |
| Prior year adjustment in respect of current tax | - | 386 |
| Tax payable on foreign subsidiary | 907 | 246 |
| **Deferred tax** | | |
| Origination and reversal of temporary differences | (481) | (1,287) |
| **Total current tax** | 426 | (6,885) |

A deferred tax asset of £3,749,000 (FY20: £1,439,000) has been recognised in relation to future share option exercises, and other timing differences in ONT Inc, because it is probable that the asset will be utilised in the foreseeable future.

All other current tax balances have been calculated at the rates enacted for the period.

The effective rate of corporation tax applied to reported profit is -0.95% (FY20: 16.28%) of the profit before tax for the Group. In 2021 the Company will claim the R&D Expenditure Credit for the first time. This has reduced the Group's effective tax rate.

The current UK corporation tax rate of 19% was set to reduce to 17% from 1 April 2020, however this reduction was reversed in the Finance Bill 2020 (substantively enacted on 17 March 2020). It has been announced that the rate of UK corporation tax will increase to 25% from April 2023. Taxation for other jurisdictions is calculated at the rates prevailing in the respective jurisdictions.

| | 30 June 2020 | 30 December 2019 |
|---|---|---|
| | £000's | £000's |
| **R&D tax credit recoverable** | | |
| Balance at start of period | 20,696 | 17,479 |
| Adjustment to R&D tax credit in respect of previous periods | 0 | 762 |
| Cash receipt | (9,763) | (8,479) |
| R&D tax credit for the period | 1,800 | 10,934 |
| Balance at end of period | 12,733 | 20,696 |

## 6. Loss per Share

(a) Basic and diluted loss per share

| | 30 June 2021 | 30 June 2020 |
|---|---|---|
| | £'s | £'s |
| Total basic and diluted loss per share attributable to the ordinary equity holders of the company from continuing operations | (0.0026) | (0.0024) |

(b) Reconciliations of losses used in calculating loss per share

| | 30 June 2021 | 30 June 2020 |
|---|---|---|
| | £000's | £000's |
| *Basic and diluted loss per share* | | |
| Loss attributable to the ordinary equity holders of the company used in calculating basic and diluted loss per share from continuing operations | (44,830) | (35,461) |

(c) Weighted average number of shares used as the denominator

| | **30 June 2021 (Number)** | 30 June 2020 (Number) |
|---|---|---|
| Weighted average number of ordinary shares used as the denominator in calculating basic loss per share | 17,469,607 | 14,974,914 |

There have been no events that have caused any retrospective adjustments between the balance sheet date and the date of issuance of the financial statements, being the date of this Registration Document.

*Options*

Options granted to employees under the Oxford Nanopore Technologies Share Option Scheme and the Oxford Nanopore Technologies Limited Share Option Plan 2018 are considered to be potential Ordinary Shares. These options have not been included in the determination of basic and diluted loss per share for HY21. They could potentially dilute basic earnings per share in the future.

## 7. Intangible Assets

During HY21, the Group capitalised £4.3 million of R&D costs (FY20: £10.7 million).

## 8. Property, Plant and Equipment

| **Group** | **Land and Buildings £000's** | **Leasehold Improvements £000's** | **Plant and Machinery £000's** | **Assets Subject to Operating Leases £000's** | **Equipment £000's** | **Total £000's** |
|---|---|---|---|---|---|---|
| **Cost** | | | | | | |
| At 1 January 2020 | 16,243 | 6,529 | 12,909 | 13,425 | 8,220 | 57,326 |
| Additions | 158 | - | 3,785 | 8,829 | 2,965 | 15,737 |
| Disposals | - | - | (76) | (2,241) | (18) | (2,335) |
| Foreign exchange movements | - | - | (7) | (11) | (31) | (49) |
| At 31 December 2020 | 16,401 | 6,529 | 16,611 | 20,002 | 11,136 | 70,769 |
| Additions | - | 417 | 2,069 | 5,863 | 1,404 | 9,753 |
| Transfer | (1,344) | 1,344 | - | - | - | - |
| Disposals | - | - | (13) | (840) | (4) | (857) |
| Foreign exchange movements | (1) | - | (4) | (2) | (8) | (15) |
| At 30 June 2021 | 15,056 | 8,290 | 18,663 | 25,023 | 12,528 | 79,560 |
| **Accumulated depreciation** | | | | | | |
| At 1 January 2020 | (879) | (1,472) | (7,044) | (8,768) | (5,375) | (23,538) |
| Charge for the year | (1,347) | (34) | (1,653) | (4,968) | (2,123) | (10,125) |
| Eliminated on disposals | - | - | 75 | 2,241 | 18 | 2,334 |
| Foreign exchange movements | - | - | 10 | 1 | 25 | 36 |
| At 31 December 2020 | (2,226) | (1,506) | (8,612) | (11,494) | (7,455) | (31,293) |
| Charge for the year | (151) | (539) | (1,184) | (3,066) | (1,191) | (6,131) |
| Transfer | 1,293 | (1,293) | - | - | - | - |
| Eliminated on disposals | - | - | 13 | 850 | 2 | 865 |
| Foreign exchange movements | - | - | 3 | - | 5 | 8 |
| At 30 June 2021 | (1,084) | (3,338) | (9,780) | (13,710) | (8,639) | (36,551) |
| **Carrying amount** | | | | | | |
| At 1 January 2021 | 14,175 | 5,023 | 7,999 | 8,508 | 3,681 | 39,386 |
| At 30 June 2021 | 13,972 | 4,952 | 8,883 | 11,313 | 3,889 | 43,009 |

On 1 June 2017 the Company purchased the building and land known as Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford subject to a long leasehold. The remaining length of the lease at period

end is 134 years and 3 months.

At 30 June 2021, certain assets previously classified as land and buildings were transferred to leasehold improvements. At 30 June 2021 and 31 December 2020, the Group had not entered into contractual commitments for the acquisition of property, plant and equipment.

## 9. Investment in Associates

An associate of the Company is as follows:

| Name | Principal activities | Country of Incorporation | Class of shares | Proportion of ownership interest | |
|---|---|---|---|---|---|
| | | | | **30/06/2021** | **31/12/2020** |
| Veiovia Limited | Technology Development | UK | Ordinary | 18.5% | 18.5% |

- Pursuant to a shareholder agreement, the Company has the right to cast 18.5% of the votes of Veiovia Limited.
- Although the Company holds less than 20% of the equity shares of Veiovia Limited, and it has less than 20% of the voting power at shareholder meetings, the Company exercises significant influence by virtue of its contractual right to appoint one director to the board of directors of that entity.
- For the purposes of applying the equity method of accounting, the financial statements of Veiovia Limited for HY21 have been used. Management has considered full impairment loss on the investment, as the recoverable amount of the investment falls below its carrying amount.
- Veiovia Limited's registered office is The University of York, Biology B/A/039, Wentworth Way, York, UK, YO10 5DD.

| | **30 June 2021** | 30 December 2020 |
|---|---|---|
| | **£000's** | £000's |
| Investment at cost | 548 | 548 |
| Less: Impairment | (548) | - |
| Carrying amount of the Company's interest in the associate | - | 548 |

## 10. Inventory

| | **30 June 2021** | 30 December 2020 |
|---|---|---|
| | **£000's** | £000's |
| Raw materials | 18,697 | 11,738 |
| Work in progress | 23,122 | 14,363 |
| Finished goods | 7,502 | 9,526 |
| | 49,321 | 35,627 |

## 11. Notes to the Cash Flow Statement

### Cash, cash equivalents and other financial assets

| | **6 months** | 12 months | 6 months |
|---|---|---|---|
| | **30 June 2021** | 31 December 2020 | 30 June 2020 |
| | **£000's** | £000's | £000's |
| Cash and cash equivalents | **119,687** | 80,863 | 55,589 |
| Other financial assets | **130,539** | **-** | **-** |

Cash and cash equivalents comprise cash in hand and deposits held at call with banks and other short-term highly liquid investments with a maturity of three months or less at the date of acquisition.

Cash is not held for the purpose of investment in its own right and the primary goal of investment strategies is capital preservation. Cash not required for short-term working capital requirements is invested in short-term treasury deposits (other financial assets). To the extent that it is reasonable, deposits are spread between two or more banks that have been approved by the Board. Cash required to meet short-term

working capital requirements as they arise is maintained in instant access accounts at one or more approved banks.

Other financial assets comprise longer-term deposits held with banks that do not meet the IAS 7 definition of a cash equivalent.

| | **6 months 30 June 2021 £000's** | 6 months 30 June 2020 £000's |
|---|---|---|
| Loss before tax | (44,404) | (42,346) |
| Adjustments for: | | |
| Depreciation on property, plant and equipment | 6,131 | 4,754 |
| Depreciation on right-of-use assets | 1,241 | 1,114 |
| Amortisation of internally generated intangible assets | 4,644 | 1,782 |
| Impairment of associate | 548 | - |
| RDEC tax credit | (1,800) | - |
| Loss on disposal of property, plant and equipment | 1 | - |
| Exchange loss | 121 | 329 |
| Net bank interest | 84 | 67 |
| Increase in provision | 11,339 | - |
| Employee share benefit costs | 7,772 | 3,635 |
| Operating cash flows before movements in working capital | (14,323) | (30,665) |
| Decrease in receivables | 22,228 | 7,288 |
| (Increase) in inventory | (13,695) | (7,399) |
| (Decrease) in payables | (19,201) | (3,675) |
| Cash absorbed by operations | (24,991) | (34,451) |
| Income taxes – R&D tax credit received | 9,763 | 9,146 |
| Foreign tax paid | (228) | (675) |
| Net cash absorbed by operating activities | (15,456) | (25,980) |

## 12. Related Party Transactions

At the end of HY21, there were 68,368 (FY20: 112,759) options outstanding in respect of options granted to Non-Executive Directors and consultants.

The Company continued to fund the following subsidiaries during HY21: ONT Inc, KK Oxford Nanopore Technologies, Nanopore Technologies (Shanghai) Co. Ltd, Oxford Nanopore Technologies Singapore PTE Ltd and Metrichor Limited. During HY21, the Company paid these subsidiaries £2,960,000 (FY20: £10,124,000) for the R&D and other services provided to it.

During HY21, the Company accrued a commission fee on fundraising of £44,000 (FY20: £660,000) to IP Group which is related to the Company by the shared directorship of A Aubrey.

## 13. Share Capital

| | Number of shares | | Par Value | | |
|---|---|---|---|---|---|
| | **30 June 2021** | 31 December 2020 | | **30 June 2021** | 31 December 2020 |
| | **Shares** | Shares | £ | **£** | £ |
| **Issued Share Capital** | | | | | |
| Opening - ordinary shares | 32,452,674 | 29,711,482 | 0.001 | 32,453 | 29,711 |
| Opening - deferred shares | 733,677 | 733,677 | 0.005 | 3,668 | 3,668 |
| Issued - ordinary shares | 3,004,501 | 2,741,192 | 0.001 | 3,005 | 2,742 |
| Redeemed - deferred shares | (733,677) | - | 0.005 | (3,668) | - |
| Closing - ordinary shares | 35,457,175 | 32,452,674 | 0.001 | 35,457 | 32,453 |
| Closing - deferred shares | - | 733,677 | 0.005 | - | 3,668 |
| Total authorised, issued and fully paid Share Capital | | | | 35,457 | 36,121 |

During HY21, the Group raised £202 million (FY20: £132.8 million) through the issuance of 2,886,667 Ordinary Shares (FY20: 2,505,915) at a share price of £70 per share (FY20: £53). In addition, 71,690 Ordinary Shares (FY20: 235,277) were issued as a result of share options exercised. Transaction costs for the issue of shares are offset against the Share Premium Reserve.

The Ordinary Shares do not carry any right to fixed income.

The Deferred Shares have no voting or dividend rights and only very limited capital return rights, which render them effectively valueless. The Company redeemed all the Deferred Shares in April 2021 for £0.01.

On 9 June 2021, the Ordinary Shareholders approved: (a) a conditional retention equity award of up to 6.5% of the Company's equity to the Executive Directors, which was subsequently granted on 22 June 2021 (see note 15). The grant is subject to the achievement of performance conditions tied to revenue and share price and is subject to holding periods; and (b) a LAT Share (as defined in note 36 of Section B *(Historical Financial Information)* above. The latter was granted to help ensure the Company has time to realise the opportunity it believes is available to it with its new generation of sensing technology and to maximise long-term shareholder value, the Board is hereby proposing that, conditional on completion of the IPO, Dr Gordon Sanghera, who is the co-founder of the Company and has been its chief executive officer since its foundation in 2005, will be issued a LAT Share. To provide for continuity of protection, and as described below, each of Dr James Willcocks and Mr Clive Brown would also be issued a LAT Share, conditional on completion of the IPO. However, no rights would attach to Dr James Willcocks' or Mr Clive Brown's LAT Shares for so long as Dr Gordon Sanghera is a director or employee of the Company (or a Group company).

The LAT Shares are effectively only a single set of share rights, with the rights transferring between the holders in the order of priority set out below when there is a Disqualifying Event (as defined below) in respect of the preceding holder. The LAT Shares have been structured this way to ensure that there are no issues at a critical time with respect to delay (including as a consequence of the probate process) in the rights attaching to any LAT Share being transferred to the right person upon the holder of such LAT Share being subject to a Disqualifying Event. The rights attaching to each LAT Share will cease automatically upon the holder ceasing to be a director or employee of the Company (or any Group company) (or, if earlier, upon such holder giving or being given notice of termination of such appointment or engagement) (a "**Disqualifying Event**").

On 23 August 2021, the Company completed a bonus issue (one-for-one) and a subsequent share split (10-for-one) which resulted in share capital increasing from £35,000 to £71,000, with a corresponding decrease in accumulated income reserves. There was no cash or other financial impact.

## 14. Share Premium Reserve

| | 30 June 2021 | 31 December 2020 |
|---|---|---|
| | £000's | £000's |
| At 1 January | 610,544 | 479,332 |
| Premium arising on issue of equity shares | 202,636 | 135,061 |
| Share issue costs | (1,559) | (3,849) |
| Capital reduction | (610,767) | - |
| **At 30 June & 30 December** | 200,854 | 610,544 |

On 29 March 2021, a resolution was passed to cancel and extinguish £610.8 million of the share premium account of the Company. This was transferred to retained earnings.

## 15. Share Based Payments

The total charge for share-based incentive plans in 2021 was £5.9 million (31 December 2020: £6.8 million). Of this amount, £5.2 million (31 December 2020: £6.8 million) arose from the Company Share Option plans and £0.7 million (31 December 2020: £nil) arose from the Company Long-term Incentive Plan.

| | 30 June 2021 | 31 December 2020 |
|---|---|---|
| | £000's | £000's |
| At 1 January | 35,079 | 28,215 |
| Employee share-based payments | 5,929 | 6,864 |
| Deferred tax asset | 1,842 | - |
| **At 30 June & 30 December** | 42,850 | 35,079 |

### Share options

**Oxford Nanopore Technologies Limited Share Option Plan 2018:** The Plan replaced the Oxford Nanopore Technologies Share Option Scheme in January 2018. The first grant of awards was made in January 2019. All employees are eligible to be awarded approved share options, with the exception of employees in Nanopore Technologies (Shanghai) Co. Limited due to local taxation rules. These employees are instead eligible to be remunerated under a local bonus scheme. Awards granted to participants are subject to either service conditions or both service and market performance conditions. Options cannot normally be exercised before the third anniversary of the date of grant.

**Oxford Nanopore Technologies Limited Share Option Scheme:** This Scheme was closed to new members in 2018. The Scheme was set up to allow the Company to award both HM Revenue & Customs approved EMI share options to qualifying individuals and unapproved share options.

All unapproved options may be subject to performance criteria and vesting schedules set at the Board's discretion. All employees are eligible to be awarded unapproved share options.

The movement in the Company's share option schemes outstanding is summarised in the following table:

| | Period ended 30 June 2021 | | Year ended 31 December 2020 | |
|---|---|---|---|---|
| | Number of share options | Weighted average exercise price (in £) | Number of share options | Weighted average exercise price (in £) |
| Outstanding at beginning of period | 2,497,045 | 20.93 | 2,649,419 | 19.52 |
| Granted during the period | 934,453 | 42.40 | 144,050 | 24.50 |
| Forfeited during the period | (4,329) | 22.79 | (61,147) | 12.18 |
| Exercised during the period | (111,802) | 4.81 | (235,277) | 9.57 |
| Outstanding at the end of the period | 3,315,367 | 22.80 | 2,497,045 | 20.93 |
| Exercisable at the end of the period | 1,261,020 | 18.41 | 1,372,645 | 17.32 |

Share options outstanding at the end of the year have the following expiry and exercise prices (for the avoidance of doubt, such figures not taking into account any amendments to the share option schemes

arising from the one-for-one Bonus Issue and the 10-for-one Share Subdivision further particularised in "Share capital" at section 4 of Part 9 (*Additional Information*)):

| **Scheme** | Grant year | Expiry year | Exercise price (£) | **2021 (Number)** | 2020 (Number) |
|---|---|---|---|---|---|
| Oxford Nanopore Technologies Limited Share Option Scheme | 2008 - 2018 | 2020 - 2028 | 0.70 - 27.90 | **1,984,963** | 1,534,565 |
| Oxford Nanopore Technologies Limited Share Option Plan 2018 | 2019 - 2021 | 2029 - 2031 | 20.70-70.00 | **1,330,404** | 962,480 |
| | | | | **3,315,367** | 2,497,045 |

The weighted average share price at the date of exercise for share options exercised during HY21 was £57.00 (FY20: £53.00).

The options outstanding at the end of HY21 had a weighted average exercise price of £22.80 (FY20: £20.93), and a weighted average remaining contractual life of 6.9 years (FY20: 6.0 years).

The Group recognised total expenses of £5,235,000 (FY20: £6,841,000) related to equity-settled share-based payment transactions in 2020.

**Valuation models:**

**Oxford Nanopore Technologies Limited Share Option Plan 2018**: The fair value of share options granted during the period was determined using the Monte Carlo Simulation model and Black Scholes model dependent on the performance vesting conditions.

There were 934,453 options granted during HY21 (FY20: 144,050).

**Black Scholes**:

The following assumptions were used in the Black Scholes model in calculating the fair values of the options granted during HY21:

| | **30 June 2021** | 31 December 2020 |
|---|---|---|
| Range of share prices | £ 53.00 - £70.00 | £ 53.00 |
| Range of exercise prices | £42.40 - £70.00 | £ 24.50 |
| Expected volatility range | 47% - 50% | 47% |
| Expected life | 6.5 years | 6.5 years |
| Risk-free rate range | 0% - 0.4% | 0% |
| Expected dividend yields | Nil | Nil |

The volatility assumption has been derived as the median volatility over a five year period of a bespoke comparator group. For options granted during 2021, the expected life assumption of 6.5 years assumes exercise will occur halfway through the total exercisable period, being the midpoint of years three and 10. The risk-free interest rate used reflects the UK Government five year Gilt rate as reported by the Bank of England.

The weighted average fair value of options granted during HY21 determined using the Black Scholes model at the grant date was £34.74 (FY20: £34.62) per option.

**Monte Carlo Simulation**:

There were no options granted in HY21 that were valued solely using the Monte Carlo Simulation model. The following assumptions were used in the Monte Carlo Simulation model in calculating the fair values of the options granted during HY21:

| | **30 June 2021** | 31 December 2020 |
|---|---|---|
| Weighted average share price | £ 53.00 | £ 53.00 |
| Weighted average exercise price | £42.40 | £ 24.50 |
| Expected volatility | 48% | 47% |
| Expected life | 2.5 years | 2.5 years |
| Risk-free rate | 0% | 0% |
| Expected dividend yields | Nil | Nil |

The Monte Carlo Simulation model has been used to value the portion of the awards which have a market performance vesting condition (achievement of a target company valuation). The model incorporates a discount factor reflecting this performance condition into the fair value of this portion of the award. The weighted average fair value of options granted during HY21 determined using the Monte Carlo Simulation model at the grant date was £24.27 (FY20: £33.72) per option.

The volatility assumption has been derived as the median volatility over a five year period of a bespoke comparator group. For options granted during HY21, the expected life represents the term until expected vesting and exercise. The risk-free interest rate used reflects the UK Government five year Gilt rate as reported by the Bank of England.

**LTIP**

**Oxford Nanopore Technologies LTIP:** The Company has set up a LTIP which was approved by the Board on 22 June 2021. The LTIP is a one-off discretionary share plan, under which the Company granted awards over 6.5%" of the Company's Ordinary Share capital (at the date of grant) to the Executive Directors. Awards were granted as Conditional Awards. The grant is subject to achievement of performance obligations tied to revenue and share price and is subject to holding periods.

The movement in LTIP scheme awards outstanding at 30 June 2021 is summarised in the following table:

| | 30 June 2021 |
|---|---|
| | Number of awards |
| Outstanding at beginning of period | - |
| Granted during the period | 2,304,718 |
| Forfeited during the period | - |
| Released during the period | - |
| Outstanding at the end of the period | 2,304,718 |

The LTIP awards are free to the recipient and therefore have an exercise price of £nil. ‘Released’ means the Executive Director becoming entitled to receive the shares subject to the award. The LTIP awards outstanding at the end of HY21 had a weighted average contractual life of 5.51 years (FY20: £nil).

**Valuation models:**

**Oxford Nanopore Technologies Long-Term Incentive Plan 2021 (“LTIP”):** The fair value of awards granted during the period was determined using the Monte Carlo Simulation model and Black Scholes model dependent on the performance vesting conditions.

**Black Scholes**:

The following assumptions were used in the Black Scholes model in calculating the fair values of the LTIP awards granted during the year:

| | 30 June 2021 |
|---|---|
| Weighted average share price | £70.00 |
| Weighted average exercise price | £0.00 |
| Expected volatility | 50% |
| Expected life | 3 years |
| Risk-free rate | 0.4% |
| Expected dividend yields | Nil |

The volatility assumption has been derived as the median volatility over a five-year period of a bespoke comparator group. The risk-free interest rate used reflects the UK Government five-year Gilt rate as reported by the Bank of England. The share price assumptions are made with reference to recent equity fund rounds.

The weighted average fair value of LTIP awards granted during the period determined using the Black Scholes model at the grant date was £64.46 per award.

**Monte Carlo Simulation**

The following assumptions were used in the Monte Carlo Simulation model in calculating the fair values of the LTIP awards granted during the year:

| | 30 June 2021 |
|---|---|
| Weighted average share price | £70.00 |
| Weighted average exercise price | £0.00 |
| Expected volatility | 50% |
| Expected life | 2.16 years |
| Risk-free rate | 0.4% |
| Expected dividend yields | Nil |

The volatility assumption has been derived as the median volatility over a five-year period of a bespoke comparator group. The risk-free interest rate used reflects the UK Government five-year Gilt rate as reported by the Bank of England. The share price assumptions are made with reference to recent equity fund rounds.

The weighted average fair value of LTIP awards granted during the period determined using the Monte Carlo simulation model at the grant date was £43.64 per award.

## 16. Provisions

| | Employer social security taxes | Dilapidation provision | Total |
|---|---|---|---|
| | £000's | £000's | £000's |
| Balance at 1 January 2020 | - | 1,407 | 1,407 |
| Additional provision in the year | - | 97 | 97 |
| Foreign exchange movements | - | (5) | (5) |
| Balance at 1 January 2021 | - | 1,499 | 1,499 |
| Additional provision in the period | 11,339 | - | 11,339 |
| Foreign exchange movements | - | (1) | (1) |
| **Balance at 30 June 2021** | 11,339 | 1,498 | 12,837 |

*The dilapidation provision*

The dilapidation provision relates to the leased properties, representing an obligation to restore the premises to their original condition at the time the Company vacates the properties.

The provision is non-current and expected to be utilised between two and 25 years.

The Company has reviewed the provision on the properties at the Oxford Science Park and considers that no additional charge was required during the period.

*Employer social security taxes on Unapproved share options*

Share options that are RCAs (i.e. where there is an arrangement in place that allows employees easy conversion of shares into cash) typically attract social security taxes on exercise.

On 31 March 2021, the Company informed its shareholders that it had started the process of preparing for a potential IPO. Whilst the timing of the IPO is not under the control of the Company, due to market conditions at that time, the Company intended the IPO to occur in the second half of 2021.

As a result, in accordance with section 702 Income Tax (Earnings and Pensions) Act 2003, share options granted under the Unapproved Share Option Scheme have become RCAs and will be subject to social security taxes on exercise. Based on the fair value of the shares as at 30 June 2021, the Company estimates employer social security taxes will be £11.3 million based on the number of outstanding unapproved share options.

## 17. Litigation and Contingent Liabilities

PacBio filed a complaint against ONT Inc in the United States District Court, District of Delaware on 15 March 2017, alleging infringement of US Patent No. 9,546,400 (US '400), a subsequent complaint filed on 25 September 2017, alleging infringement of US Patent Nos. 9,678,056 (US '056) and 9,738,929 (US '929) and an amended complaint filed on 28 March 2018 alleging infringement of US Patent No. 9,772,323 (US '323). PacBio also filed further complaints against the Company with the effect that both the Company and ONT Inc are parties to the proceedings. On 18 March 2020, a federal jury in Delaware found in favour of

Oxford Nanopore and invalidated all four patents asserted by PacBio in this litigation. Following the verdict, PacBio moved the Court for judgements as a matter of law overturning the jury's invalidity findings. On 30 July 2020, the trial judge, Chief Judge Leonard Stark, denied all of PacBio's motions. The final verdict was entered on 13 August 2020.

PacBio appealed the ruling to the US Court of Appeals for the Federal Circuit. This appeal was limited to the determinations that the '400 and the '323 patents are invalid for lack of enablement. PacBio was also asking that the Federal Circuit grant PacBio a new trial because it alleges Oxford Nanopore's references to its efforts relating to coronavirus detection unfairly prejudiced the jury. On 11 May 2021, the US Court of Appeals for the Federal Circuit issued a unanimous Precedential Opinion and Judgement affirming the jury's March 2020 verdict in the PacBio v. Oxford Nanopore case, which invalidated a number of PacBio patents. PacBio did not petition for a rehearing.

# Part 9. Additional Information

## 1. Responsibility

The Directors (whose names and principal functions are set out in Part 5 *(Directors, Senior Managers and Corporate Governance)*) and the Company accept responsibility for the information contained in this Registration Document. To the best of the knowledge of the Directors and the Company, the information contained in this Registration Document is in accordance with the facts and this Registration Document makes no omission likely to affect their import.

## 2. Incorporation

The Company was incorporated and registered in England and Wales on 9 March 2005, with the registered number 05386273, as a private company limited by shares under the Companies Act 1985 with the name Oxford Nanolabs Limited. On 19 May 2008, the Company changed its name to Oxford Nanopore Technologies Limited.

The Company is domiciled in England and Wales. The Company's registered office and principal place of business is at Gosling Building, Edmund Halley Road, Oxford Science Park, Oxford, Oxfordshire, OX4 4DQ, United Kingdom, its telephone number is +44 (0)845 034 7900, its legal entity identifier number is 213800IRWQ2Q6M2CDW55 and its website is www.nanoporetech.com.

The principal legislation under which the Company operates is the Companies Act 2006 and the regulations made thereunder.

## 3. History of the Group

The Group was founded in 2005 as a spin-out from the University of Oxford by Gordon Sanghera, Spike Willcocks and Professor Hagan Bayley (currently Professor of Chemical Biology at the University of Oxford). During the early years of the Company, the Group formed collaborations with key academic scientists in the field of nanopore sensing, including Professor Dan Branton at Harvard University, and Professors David Deamer and Mark Akeson at the University of California (Santa Cruz). The collaborations included sponsorship of fundamental research in these labs and the formation of patent licensing agreements with these and other institutions to form a foundational portfolio of nanopore sensing expertise and IP.

### 3.1 Early work: building a scalable sensing platform

During its early years, the Group's R&D priorities were to:

- research and develop a variety of nanopore chemistries, in order to understand and improve their sensing properties and ensure that successful nanopores could be reliably manufactured at scale in its bespoke biological production processes; and
- in parallel, the Group was developing a new, bespoke electronics platform, consisting of arrayed sensor chips and bespoke ASICs to enable the high-frequency, highly sensitive measurement of nanopore signals. These were designed to sensitively measure picoamp currents, in large-scale arrays for high-throughput research of nanopore sensors, with the goal of producing commercial nanopore sensors. Over time, the Group moved from using single-channel 'Axopatch' devices to measure currents through the nanopores it was screening in its R&D programme, to inventing and building small arrays of four, nine and then 128 channel sensor chips that could be used to screen the nanopores at higher throughput. This sensing platform was further developed to more mature, commercial designs of sensor arrays of 512 (MinION), 2,675 (PromethION, although the chip design is expected to allow up to 3,000 with further development) and 126 (Flongle) channels.

In 2007, the Group chose to focus on DNA/RNA sequencing as a first deployment of nanopore sensing. This decision was made for a number of reasons:

- **the start of the genomic era:** the completion of the Human Genome Project (2003) and launch of National Human Genome Research Institute $1000 genome grants (2004) demonstrated global interest and commitment to the field of genomics. The market was in its infancy and had a clear pathway to substantial growth;
- **an innovative customer community:** life science researchers were keen to explore the utility of new technologies, and were supported by budgets to explore and develop emerging technologies;
- **large unmet needs that could be met by a nanopore-based technology:** with only traditional, 'big

box' systems available at the time, the potential disruptive value of real-time, scalable technology that could sequence native DNA/RNA, and sequence short or long fragments was already apparent; and

- **low regulatory barriers:** as sequencing tools were used primarily for scientific research rather than in regulated markets, the Group recognised that there were low regulatory barriers of entry to the development of DNA/RNA sequencing and the penetration of the global life science research market. The Group recognised that it would not be reliant on regulated markets for its early revenues, while its technology was still in development.

As R&D progress continued, the Group moved from smaller premises on the Begbroke Science Park to a larger facility on the Oxford Science Park in 2009 where it has been headquartered ever since. Having made progress on developing bespoke electronics, multiple elements of the sequencing chemistry from in-house R&D programme and external collaborations were brought together, including the use of an enzyme motor capable of controlling DNA movement through the nanopore, combined with a nanopore that produced measurable variations in signal as DNA or RNA was passed through the pore. These innovations were brought together for the first time in summer 2010 and by March 2011, the Group had achieved a key breakthrough: the first example of DNA sequencing with a nanopore. The Group described this data for the first time at the February 2012 Advances in Genome Biology and Technology conference, and at the same time provided an overview of the versatility of the electronic sensing platform and potential designs for a portable device called MinION and a scalable system called GridION.

### 3.2 Bringing nanopore sequencing to the market

Having disclosed in 2012 that the Group had successfully sequenced DNA and was developing commercial devices, in November 2013, the Group announced that applications could be made to join the MAP, a programme where users would provide a refundable $1,000 deposit to receive a MinION and supply of consumables in order to explore the utility of the technology. The programme was designed to gain feedback from an innovative user community, and for that community to have the opportunity to share best practice, and develop analytical tools and methods that could make nanopore sequencing easier and more useful in a range of applications.

In spring 2014, the Group shipped approximately 500 MinION devices to MAP participants in many countries including the UK, US, Japan, and across Europe. The MAP community of users started to publish research and analysis tools centred around nanopore sequencing.

By May 2015, the MinION had become commercially available, with a starter pack costing $1,000. In the subsequent years the Group developed and introduced other devices based on the same platform: GridION, PromethION and the Flongle adapter. In June 2017, the Group launched its RNA sequencing solutions, providing for direct, real-time RNA sequencing and additional cDNA analysis.

### 3.3 Towards anyone, anywhere

The Group's recent history is characterised by continuous technological improvements in nanopore sequencing, the release of new products, and a scaling up of the Group's production capabilities, bringing the Group closer towards its goal to enable the analysis of anything, by anyone, anywhere.

A number of landmarks have illustrated the Group's technological, commercial and operational progress. For example, in May 2018, the first greater than 2 Mb single DNA fragment (more than two million DNA bases) was continuously sequenced by a University of Nottingham research team using a MinION device. In April 2019, in an internal experiment, a PromethION 48 generated more than 7 Tb in a single sequencing run, the highest known single yield from any sequencing device at the time. And in 2021, members of the Group demonstrated single-molecule accuracy of 99.8% using the latest Duplex method. Q28 (99.8% modal accuracy) from the Duplex method has also been demonstrated in-field as part of the early access programme for the Q20+ chemistry. The ability to sequence long fragments, at scale, rapidly and to high accuracy are key features of the technology and the Directors believe that further improvements will be demonstrated in future.

In July 2019, the Group opened the MinION Building, a new manufacturing facility in Oxfordshire, UK, with architecture resembling the MinION device. The factory was designed to support the Group's rapid expansion of production, including many automation processes to ensure increasingly efficient, consistent, high-quality production.

The Group's technology has steadily gained traction in its user communities over recent years, resulting in more than 2,100 publications (including pre-prints) to date that feature nanopore-based sequencing. Reflecting the increasing ability to provide sequencing at ultra-high throughput, in 2019, the Group's technology was chosen for the first time to be a key platform for a population scale human sequencing

programme, the Emirati Genome Programme. This aims to sequence a very large cohort in order to pursue scientific understanding and explore improved health delivery for the region. During the COVID-19 pandemic, the Group's products have been used to rapidly sequence SARS-CoV-2 genomes, to understand transmission of the virus and identify variants. By March 2021, researchers in more than 85 countries had used the Group's technology in the surveillance of COVID-19. In 2020, the Group also developed and introduced its first diagnostic product. The LamPORE COVID-19 test received CE marking for *in vitro* diagnostic use in October 2020. LamPORE was shown to be highly accurate in the detection of SARS-CoV-2 in both symptomatic and asymptomatic individuals in trials of more than 24,000 patient samples. The Group intends to pursue further opportunities in clinical markets in the future, and has now established a subsidiary, OND – Oxford Nanopore Diagnostics.

## 4. Share capital

### 4.1 Issued share capital

The issued share capital of the Company as at the Latest Practicable Date is as follows:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Ordinary Shares (fully paid) | £0.0001 | 710,116,100 | £71,011.61 |

### 4.2 History of the share capital

On incorporation, the share capital of the Company comprised 100 Ordinary Shares with a nominal value of £1 each.

As at 1 January 2018, the Company's share capital comprised:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Deferred Shares (fully paid) | £0.005 | 733,677 | £3,668.39 |
| Ordinary Shares (fully paid) | £0.001 | 27,056,210 | £27,056.21 |

Between 1 January 2018 and 31 December 2018, the Company issued 2,073,864 Ordinary Shares. As at 31 December 2018, the Company's share capital comprised:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Deferred Shares (fully paid) | £0.005 | 733,677 | £3,668.39 |
| Ordinary Shares (fully paid) | £0.001 | 29,130,074 | £29,130.07 |

Between 1 January 2019 and 31 December 2019, the Company issued 2,233,673 Ordinary Shares. On 14 May 2019, the Company repurchased and cancelled 2,156,310 Ordinary Shares. As at 31 December 2019, the Company's share capital comprised:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Deferred Shares (fully paid) | £0.005 | 733,677 | £3,668.39 |
| Ordinary Shares (fully paid) | £0.001 | 29,207,437 | £29,207.44 |

Between 1 January 2020 and 31 December 2020, the Company issued 3,245,237 Ordinary Shares. As at 31 December 2020, the Company's share capital comprised:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Deferred Shares (fully paid) | £0.005 | 733,677 | £3,668.39 |
| Ordinary Shares (fully paid) | £0.001 | 32,452,674 | £32,452.67 |

Between 1 January 2021 and period immediately preceding the Bonus Issue (defined below), the Company issued 3,053,131 Ordinary Shares. On 14 April 2021, the Company redeemed and cancelled 733,677 Deferred Shares. On 23 August 2021, the Company issued its Ordinary Shareholders, on a *pro rata* basis, one bonus Ordinary Share for each Ordinary Share then in issue (the "**Bonus Issue**"). Immediately following the Bonus Issue, on 23 August 2021, the Company effected a subdivision of its Ordinary Shares then in issue on a 10-for-one basis (the "**Share Subdivision**"). Between the Share Subdivision and the Latest Practicable Date, the Company issued no Ordinary Shares. As at the Latest Practicable Date, the Company's share capital comprised:

| Share class | Nominal value | Number of shares issued | Aggregate nominal value |
|---|---|---|---|
| Ordinary Shares (fully paid) | £0.0001 | 710,116,100 | £71,011.61 |

The Company does not hold any shares in treasury.

## 5. Dividend policy

The Group expects to prioritise the re-investment of its cash flows into the continued expansion of its business and therefore, at the date of this Registration Document, does not plan to pay out a dividend in the near term. However, the Group will continue to monitor its capital allocation and may decide to pay a dividend at an appropriate time in the future.

## 6. Articles of association

The articles of association of the Company in force as at the date of this Registration Document (the "**Articles**") were adopted on 9 June 2021.

As outlined in its press release dated 30 March 2021, the Company has started the process of preparing for a potential IPO of its Ordinary Shares on the London Stock Exchange, however the Directors note that the timing of the IPO is dependent on market conditions and other matters not fully within the Company's control. Should the Company proceed with the IPO, the Directors intend to adopt new articles of association suitable for a UK public limited company.

The Articles contain (amongst others) provisions to the following effect:

### 6.1 Limited liability

The liability of the Ordinary Shareholders is limited to the amount, if any, unpaid on the Ordinary Shares held by them.

### 6.2 Share rights

Subject to the provisions of the Companies Act 2006 and to any rights attached to existing shares, shares may be issued with such rights or restrictions as the Company may by ordinary resolution determine.

### 6.3 Share certificates

Every shareholder, upon becoming the holder of any shares in the Company, shall be entitled without payment to one certificate for all the shares of each class held by them (and, if applicable, upon transferring a part of their holding of Ordinary Shares, to a certificate for the balance of such holding of Ordinary Shares) or several certificates each for one or more of their shares upon payment for every certificate after the first of such reasonable sum as the Directors may determine. Every certificate shall be sealed with the Company seal and shall specify the number, class and distinguishing numbers (if any) of the shares to which it relates and the amount or respective amounts paid upon them. In respect of Ordinary Shares, the Company shall not be bound to issue more than one certificate for Ordinary Shares held jointly by several persons and delivery of a certificate to one joint holder shall be a sufficient delivery to all of them.

### 6.4 Lien over Ordinary Shares

The Company has a lien over every Ordinary Share whether fully paid or not and to all Ordinary Shares registered in the name of any person indebted or under liability to the Company whether they be the sole registered holder thereof or one of several joint holders.

The Company may sell in such manner as the Directors determine any Ordinary Shares on which the Company has a lien if a sum in respect of which the lien exists is presently payable and is not paid within 14 clear days after notice has been given to the holder of the Ordinary Share or to the person entitled to it in consequence of the death or bankruptcy of the holder, demanding payment and stating that if the notice

is not complied with the Ordinary Shares may be sold.

6.5 **Call on Ordinary Shares and forfeiture**

Subject to the terms of allotment, the Directors may send a call notice to the Ordinary Shareholders for any specified sum of money which is payable in respect of the Ordinary Shares which the Ordinary Shareholders hold. Each Ordinary Shareholder must, with at least 14 days' notice, pay to the Company the amount called.

A person upon whom a call is made remains liable for calls made upon them notwithstanding the subsequent transfer of the Ordinary Shares in respect of which the call was made. The joint holders of an Ordinary Share are jointly and severally liable to pay all calls in respect of that Ordinary Share.

If a call remains unpaid after it has become due and payable, the Directors may send a notice of intended forfeiture to the person from whom the call is due, requiring payment of the amount unpaid together with any interest which may have accrued and all expenses that may have been incurred by the Company by reason of such non-payment, with at least 14 days' notice. If the notice is not complied with, the Directors may decide that any Ordinary Share in respect of which the notice was given is forfeited and the forfeiture is to include all dividends or other moneys payable in respect of the forfeited Ordinary Shares and not paid before the forfeiture. A forfeited Ordinary Share may be sold, re-allotted or otherwise disposed of as the Directors think fit.

6.6 **Rights attaching to Ordinary Shares**

The Company's share capital comprises Ordinary Shares. The rights attaching to the Ordinary Shares are set out below.

*Voting rights*

Subject to the voting cap described below, each holder of Ordinary Shares is entitled to receive notice of, attend and vote at general meetings of the Company whether on a show of hands or a poll. The Companies Act 2006 provides that: (a) on a show of hands every Ordinary Shareholder present in person has one vote; and (b) on a poll every Ordinary Shareholder has one vote per Ordinary Share held by them. This is subject to any rights or restrictions which are given to any Ordinary Shares or on which Ordinary Shares are held (including the voting cap described below).

*Dividends*

(A) The Company may, by ordinary resolution, declare dividends on the Ordinary Shares. A dividend must not be declared unless the Directors have made a recommendation as to its amount, and such dividends must not exceed the amount recommended by the Directors.

(B) Except as otherwise provided by the terms on which Ordinary Shares are issued, all dividends shall be declared and paid according to the amounts paid up on the Ordinary Shares on which the dividend is paid, and apportioned and paid proportionately to the amounts paid up on the Ordinary Shares during any portion or portions of the period in respect of which the dividend is paid.

(C) No dividend or other moneys payable in respect of an Ordinary Share shall bear interest against the Company unless otherwise provided by the rights attached to the Ordinary Share.

*Rights as to capital*

The Ordinary Shares have attached to them full capital distribution rights, including on a winding up.

*Redemption*

The Ordinary Shares do not confer any rights of redemption.

*Variation of rights*

Subject to the Companies Act 2006, the rights attached to the Ordinary Shares may from time to time be varied either: (a) with the written consent of the holders of not less than 75% in nominal value of the Ordinary Shares; or (b) with the sanction of a special resolution passed at a separate general meeting of the Ordinary Shareholders.

6.7 **Rights attaching to LAT Shares**

The Articles contain provision for three classes of "limited anti-takeover" share, each of £1.00 in the capital of the Company: (a) the class A "limited anti-takeover" share (the "**A LAT Share**"); (b) the class B "limited anti-takeover" share (the "**B LAT Share**"); and (c) the class C "limited anti-takeover" share (the "**C LAT Share**") (the A LAT Share, the B LAT Share and the C LAT Share being, collectively, the "**LAT Shares**"), albeit that none of these shares have been issued as at the date of this Registration Document. The rights attaching to the LAT Shares are set out below.

*The Active LAT Share*

The "Active LAT Share" shall be determined as follows:

- the Active LAT Share shall be the A LAT Share unless, for any reason, Dr Gordon Sanghera ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**GS Disqualifying Event**");
- if a GS Disqualifying Event occurs, then the Active LAT Share shall be the B LAT Share unless, for any reason, Dr James Willcocks ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**JW Disqualifying Event**");
- if a GS Disqualifying Event and a JW Disqualifying Event have occurred, then the Active LAT Share shall be the C LAT Share unless, for any reason, Clive Brown ceases to be a director or employee of any company in the Group (including by reason of death) or is given, or gives, notice of the same (a "**CB Disqualifying Event**"); and
- if, at any time, each of a GS Disqualifying Event, a JW Disqualifying Event and a CB Disqualifying Event has occurred then, from the last of those events to occur, there shall no longer be any Active LAT Share.

*Voting rights*

The holder of a LAT Share will have the right to attend and speak at any general meeting of the Company. However, no LAT Share will carry any voting rights (other than in respect of a separate class meeting of the LAT Shares or any class of them (as a separate class)), until a Change of Control of the Company (in which case the Active LAT Share will carry the voting rights set out below).

*Rights upon a Change of Control*

Immediately on a Change of Control of the Company, the Active LAT Share will automatically carry such number of votes on any resolution put to the shareholders at a general meeting as shall be necessary to ensure the effective passing of such shareholder resolution if those votes are cast by the holder of the Active LAT Share in favour of, or to ensure the defeat of, such shareholder resolution if those votes are cast by the holder of the Active LAT Share against such shareholder resolution.

A Change of Control of the Company is defined in the Articles (and that definition is set out below in Part 11 *(Definitions)*). For the purposes of this summary, a Change of Control will broadly arise if there is an acquisition by any person of an interest in Ordinary Shares which (when taken together with the Ordinary Shares in which that person and any persons acting in concert with them are interested) carry more than 50% of the voting rights exercisable by the shareholders on a poll in a general meeting (excluding those attributable to the Active LAT Share).

In circumstances where an offer is made for the Ordinary Shares, a Change of Control will occur: (a) on a scheme of arrangement under Part 26 of the Companies Act 2006 at the point at which the scheme of arrangement becomes effective; and (b) on a takeover offer under Part 28 of the Companies Act 2006, at the point at which the takeover offer becomes unconditional in all respects.

*Rights as to capital and dividends*

No LAT Share will entitle any holder to receive any dividend or other distribution of the Company whether out of profits or on the winding-up of the Company or otherwise.

*Permitted transfers*

LAT Shares are not capable of transfer (unless pursuant to a purchase or cancellation by the Company of any LAT Shares following the sunset period (as set out below)) and the broader permitted transfer provisions under the Articles (including the ability for individual Ordinary Shareholders to transfer shares

to certain family members) will not apply.

*Termination of the rights attaching to the LAT Shares*

The rights attributable to a LAT Share will cease (and that LAT Share will be capable of being repurchased or cancelled by the Company) on the earlier of: (a) the date falling three years after the date of the issue of that LAT Share; (b) the transfer of that LAT Share to any person; and (c) a GS Disqualifying Event, JW Disqualifying Event or CB Disqualifying Event (as relevant).

*Variation of rights*

The rights attached to the LAT Shares (or any class of them) shall not be capable of being varied or abrogated in any respect whatsoever without the prior written consent of the holder of each affected class of the LAT Shares.

6.8 **Voting cap and other restrictions on voting**

Ordinary Shareholders who acquire (whether through one acquisition or a series of acquisitions) more than 9.9% of the total voting share capital of the Company on or after 1 July 2020 may exercise no more than 9.9% of the voting rights attributable to the shares of the Company. For this purpose, the voting rights of an Ordinary Shareholder shall be aggregated with the voting rights of its connected persons and concert parties. Any voting rights that an Ordinary Shareholder is unable to exercise due to this restriction shall be exercisable by the chairperson of the Company from time to time, acting on the instructions of the Board.

No Ordinary Shareholder shall vote at any general meeting or at any separate meeting of the Ordinary Shareholders in the Company, either in person or by proxy, in respect of any Ordinary Share held by them, unless all amounts payable to the Company in respect of that Ordinary Share have been paid.

6.9 **Further issues of Ordinary Shares**

The Directors may allot, grant rights, options or warrants to subscribe or otherwise dispose of Ordinary Shares to such persons, at such times, and on such terms as they think proper, as if sections 561 and 562 of the Companies Act 2006 do not apply to the Company.

Any unissued Ordinary Shares or other equity securities shall not be allotted to any person unless the Company has, in the first instance, offered such new Ordinary Shares to all Ordinary Shareholders on a *pari passu* basis and on the same terms and at the same price as such new Ordinary Shares are being offered to such other person. This shall not apply to: (a) an issue of new Ordinary Shares which has been authorised by a special resolution of the Company; (b) an issue of new Ordinary Shares pursuant to the exercise of an option granted under an option scheme (subject to certain limits); or (c) an issue of new Ordinary Shares as consideration for the purchase by the Company of the shares or assets of another company.

6.10 **Reserved matters**

The Company shall not (and shall procure that no member of the Group shall), without Ordinary Shareholder approval by way of special resolution of the Company, do any of the following:

(A) Substantial disposals: Sell, lease, transfer, license or otherwise dispose of all or substantially all of the Group's assets, whether by a single transaction or a series of transactions, or the agreement to do the same, other than pursuant to applicable law or to meet the requirements of any governmental or regulatory authority, or where such disposal is to or in favour of another member of the Group.

(B) Related party transactions: Enter into any transaction, arrangement or agreement with a connected person, otherwise than on arms' length terms.

6.11 **Transfer of Ordinary Shares**

Ordinary Shares may be transferred only:

(A) between family members, group companies or funds, nominees at the behest of trust beneficiaries or the like (each being a 'permitted transfer' for the purposes of the Articles);

(B) by any Ordinary Shareholder holding Ordinary Shares totalling 2.5% or less of the Company's issued share capital pursuant to the 'matching process' under the Articles (pursuant to which the

Directors may match existing Ordinary Shareholders who wish to sell their Ordinary Shares with those who wish to purchase Ordinary Shares);

(C) by giving notice in writing to the Directors, who will offer the Ordinary Shares for purchase to all Ordinary Shareholders in proportion to the number of Ordinary Shares then held by them respectively (in accordance with the pre-emptive process set out in the Articles);

(D) where an Ordinary Shareholder is adjudicated bankrupt, deceased, or insolvent; or

(E) pursuant to the acceptance of a tag along offer made in accordance with the Articles or pursuant to the exercise of the drag along rights under the Articles.

Ordinary Shares in certificated form may be transferred by means of an instrument of transfer in any usual form or any other form approved by the Directors, which is executed by or on behalf of the transferor and, if any of the Ordinary Shares are partly paid, the transferee.

6.12 **Tag along rights**

No transfer of Ordinary Shares shall have any effect if it would result in an Ordinary Shareholder owning more than 50% of the Ordinary Shares, unless the acquirer has made a bona fide offer to purchase all the Ordinary Shares held by the Ordinary Shareholders (excluding Ordinary Shares held by connected members). The offer must specify a price per Ordinary Share as agreed with the Directors or, failing such agreement, as determined by the Company's auditors to be the fair value of the Ordinary Shares.

6.13 **Drag along rights**

If any one or more Ordinary Shareholders wish to transfer any Ordinary Shares which would result in an Ordinary Shareholder owning more than 75% of Ordinary Shares, the selling Ordinary Shareholders or, after the transfer, the acquiring Ordinary Shareholders, shall have the option to require all the other Ordinary Shareholders to transfer all their Ordinary Shares to the acquiring Ordinary Shareholders (or as the acquiring Ordinary Shareholders shall direct). This transfer must be for consideration per Ordinary Share not less than the amount per Ordinary Share payable in accordance with the transfer or proposed transfer giving rise to the drag along right.

6.14 **Alteration of share capital**

Subject to the provisions of the Companies Act 2006, the Company may by special resolution reduce its share capital, any revaluation reserve, any capital redemption reserve and any share premium account in any way.

6.15 **General meetings**

All general meetings must be called by at least 14 clear days' notice, but a general meeting may be called by shorter notice if it is so agreed by a majority in number of the Ordinary Shareholders having a right to attend and vote being a majority together holding not less than 90% in nominal value of the Ordinary Shares giving that right. Notice of a general meeting shall be given in writing or shall be given using electronic communications and must be sent to every Ordinary Shareholder and Director.

The Directors may call general meetings and, on the requisition of Ordinary Shareholders pursuant to the provisions of the Companies Act 2006, are required to proceed forthwith to convene a general meeting in accordance with the provisions of the Companies Act 2006 but in any event for a date not later than 28 days after the date of the notice convening the meeting.

No business is to be transacted at any meeting unless a quorum is present. Save in the case of the Company having a single Ordinary Shareholder, two persons entitled to vote upon the business to be transacted, each being an Ordinary Shareholder or a proxy for an Ordinary Shareholder or a duly authorised representative of a corporation, constitute a quorum.

Each Director is entitled to attend and speak at any general meeting.

6.16 **Directors**

*Appointment, removal and number of directors*

The Directors may appoint a person who is willing to act to be a director, either to fill a vacancy or as an additional director provided always that the number of directors shall not, unless otherwise determined by a majority vote of the Directors, exceed nine.

*Vacation of office*

The office of a Director is vacated if:

(A) they cease to be a director by virtue of the Companies Act 2006 or they are prohibited by law from being a director;

(B) they become bankrupt or make any arrangement or composition with their creditors generally;

(C) they are, or may be, suffering from mental disorder and either: (a) they are admitted to hospital in pursuance of an application for admission for treatment under the Mental Health Act 1983; or (b) an order is made by a court having jurisdiction (whether in the United Kingdom or elsewhere) in matters concerning mental disorder for their detention or for the appointment of a receiver, curator bonis or other person to exercise powers with respect to their property or affairs;

(D) they resign their office by notice to the Company; or

(E) they shall for more than six consecutive months have been absent without permission of the Directors from meetings of Directors held during that period and the Directors resolve that their office be vacated.

*Alternate director*

Any Director may appoint as an alternate any other Director, or any other person approved by resolution of the Directors, to exercise that Director's powers and carry out that Director's responsibilities, in relation to the taking of decisions by the Directors in the absence of the alternate's appointor.

*Proceedings of the Board*

The Directors, or a committee of the Directors, may hold meetings by telephone either by conference telephone connection(s) or by a series of telephone conversations.

The quorum for the transaction of the business of the Directors may be fixed by the Directors and unless so fixed at any other number shall be two. A person who holds office only as an alternate Director shall, if their appointor is not present, be counted in the quorum.

A decision is taken at a Directors' meeting by a majority of the votes of the participating Directors, and each Director participating in a Directors' meeting has one vote. In the case of an equality of votes, the chair of the Board shall have a second or casting vote.

The Directors may appoint one of their number to be the chair of the Board and may at any time remove them from that office. Unless they are unwilling to do so, the Director so appointed shall preside at every meeting of Directors at which they are present. But if there is no Director holding that office, or if the Director holding it is unwilling to preside or is not present within five minutes after the time appointed for the meeting, the Directors present may appoint one of their number to be chair of the meeting.

*Directors' fees and expenses*

The Directors shall be entitled to such remuneration as the Company may by ordinary resolution determine and, unless the resolution provides otherwise, the remuneration shall be deemed to accrue from day to day.

The Directors may be paid all travelling, hotel, and other expenses properly incurred by them in connection with their attendance at meetings of Directors or committees of Directors or general meetings or separate meetings of the holders of any class of shares or of debentures of the Company or otherwise in connection with the discharge of their duties.

*Directors' benefits*

The Directors may provide benefits, whether by the payment of gratuities or pensions or by insurance or otherwise, for any Director who has held but no longer holds any executive office or employment with the Company.

*Directors' interests*

If a situation arises in which a Director has, or can have, a direct or indirect interest that conflicts, or possibly may conflict, with the interests (directly or indirectly) of the Company or would otherwise constitute

a breach of duty under section 175 of the Companies Act 2006, the Directors (other than the conflicted Director) may resolve to authorise such situation and confirm that the existence of such situation will not give rise to a breach of duty under section 175 of the Companies Act 2006.

Any authorisation of a matter shall be subject to such conditions or limitations as the Directors may determine, whether at the time such authorisation is given or subsequently, and may be varied or terminated by the Directors at any time.

*Indemnity of Directors*

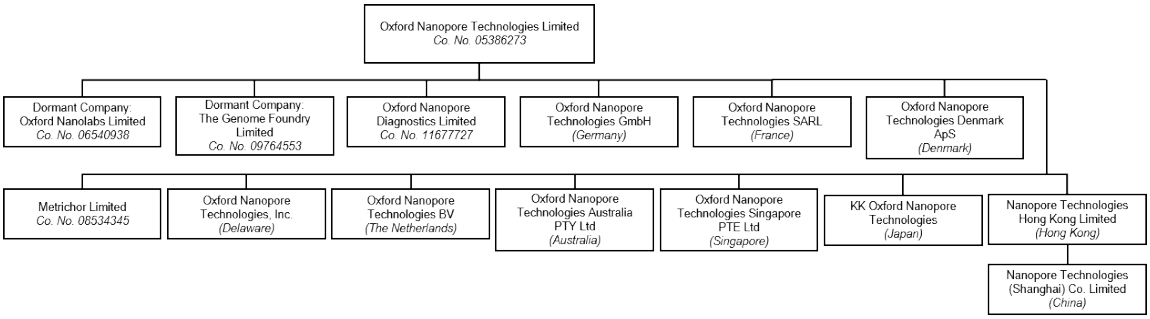
To the extent permitted by the Companies Act 2006, any Director, auditor, secretary or other officer of the Company may be indemnified out of the Company's assets against all costs, charges, losses, expenses and liabilities incurred by them in the execution and/or discharge of their duties and/or the exercise of their powers and/or otherwise properly in relation to or in connection with their duties.

*Insurance*

To the extent permitted by the Companies Act 2006, the Company may purchase and maintain for any Director, auditor, secretary or other officer of the Company insurance cover against any liability which by virtue of any rule of law may attach to them in respect of any negligence, default, breach of duty or breach of trust of which they may be guilty in relation to the Company.

## 7. Organisational structure

The Company is the key operating company of the Group. A structure chart showing the Company and its subsidiaries is set out below. Each of the subsidiaries in the structure chart is wholly-owned by a member of the Group.




The significant subsidiaries of the Company as at the date of this Registration Document are set out in the following table. Each of the companies listed below is wholly-owned by a member of the Group.

| Name of subsidiary | Place of incorporation | Principal activity |
|---|---|---|
| Metrichor Limited | England and Wales | Development of biological data analysis solutions |
| KK Oxford Nanopore Technologies | Japan | Development and sale of DNA sequencing technology |
| Oxford Nanopore Technologies, Inc. | Delaware | Research and development in DNA sequencing |
| Oxford Nanopore Technologies BV | The Netherlands | Development and sale of DNA sequencing technology |
| Nanopore Technologies Hong Kong Limited | Hong Kong | Holding company |
| Nanopore Technologies (Shanghai) Co. Limited | China | Development and sale of DNA sequencing technology |
| Oxford Nanopore Technologies Singapore PTE Ltd | Singapore | Development and sale of DNA sequencing technology |
| Oxford Nanopore Technologies Australia PTY Ltd | Australia | Development and sale of DNA sequencing technology |
| Oxford Nanopore Technologies Denmark ApS | Denmark | Development and sale of DNA sequencing technology |
| Oxford Nanolabs Limited | England and Wales | Dormant company |
| The Genome Foundry Limited | England and Wales | Dormant company |

| Name of subsidiary | Place of incorporation | Principal activity |
|---|---|---|
| Oxford Nanopore Diagnostics Limited | England and Wales | Has not commenced trading |
| Oxford Nanopore Technologies SARL | France | Has not commenced trading |
| Oxford Nanopore Technologies GmbH | Germany | Has not commenced trading |

## 8. Major shareholders

As at the date of this Registration Document and insofar as it is known to the Company, the following persons are directly or indirectly interested (within the meaning of the Companies Act 2006) in 3% or more of the voting rights of the Company:

| Major shareholder | No. of Ordinary Shares | % of voting rights |
|---|---|---|
| IP2IPO Limited [(1)] | 102,577,680 | 14.4% |
| Image Frame Investment (HK) Limited [(2)] | 63,117,700 | 8.9% |
| G42 Investments AI Holdings RSC Limited | 44,328,120 | 6.2% |
| Merton Oxford Holdings LLC [(3)] | 38,955,000 | 5.5% |
| Lansdowne Shareholders [(4)] | 37,490,000 | 5.3% |
| RM Special Holdings 4, LLC [(5)] | 34,817,120 | 4.9% |
| GT Healthcare Shareholders [(6)] | 31,404,260 | 4.4% |
| GIC Private Limited | 30,981,140 | 4.4% |
| Nortrust Nominees Limited A/C WIZ02 [(7)] | 25,927,100 | 3.7% |

(1) A wholly-owned subsidiary of IP Group plc.

(2) A wholly-owned subsidiary of Tencent Holdings Limited.

(3) Merton Oxford Holdings LLC is a wholly-owned subsidiary of Merton Acquisition Holdco LLC which, in turn, is a wholly-owned subsidiary of Acacia Research Corporation.

(4) Funds affiliated with Lansdowne Partners (UK) LLP.

(5) Fund affiliated with Redmile Group, LLC.

(6) Funds affiliated with GT Healthcare Capital Partners.

(7) Beneficial interest in the Ordinary Shares is held by Schroder UK Public Private Trust plc.

The Company is not aware of any persons who, directly or indirectly, jointly or severally, exercise or could exercise, control over the Company.

Subject to any application of the voting cap in the Articles as summarised in paragraph 6.8 *(Voting cap and other restrictions on voting)* above, none of the Ordinary Shareholders referred to in this section 8 *(Major shareholders)* has different voting rights from any other Ordinary Shareholder in respect of any Ordinary Shares held by them.

## 9. Directors and Senior Managers

### 9.1 Conflicts of interest

Save as set out below, there are no actual or potential conflicts of interest between the duties owed by the Directors or the Senior Managers to the Company and the private interests and/or other duties that they may also have.

Since 2005, Alan Aubrey has also served as a director of IP Group. As at the date of this Registration Document, IP Group is the largest shareholder in the Company. IP Group may from time to time acquire and hold interests in businesses that compete directly or indirectly with the Group, or with which the Group conducts business. Each of the Directors has a statutory duty under the Companies Act 2006 to avoid conflicts of interest with the Company and to disclose the nature and extent of any such interest to the Board. Under the Articles and, as permitted by the Companies Act 2006, the Board may authorise any matter which would otherwise involve a Director breaching this duty to avoid conflicts of interest (see paragraph 6.16 *(Directors)* above).

### 9.2 Directors and Senior Managers' confirmations

(A) As at the date of this Registration Document, no Director or Senior Manager has during the last five years:

(i) been convicted in relation to fraudulent offences;

(ii) been associated with any bankruptcy, receivership or liquidation while acting in the capacity of a member of the administrative, management or supervisory body or of senior manager of any company;

(iii) been subject to any official public incrimination and/or sanctions by any statutory or regulatory authorities (including designated professional bodies); or

(iv) been disqualified by a court from acting as a member of the administrative, management or supervisory body of a company or from acting in the management or conduct of the affairs of any company.

(B) No Director was selected to act in such capacity pursuant to any arrangement or understanding with any shareholder, customer, supplier or any other person having a business connection with the Group.

(C) There are no family relationships between any of the Directors and/or the Senior Managers.

(D) There are no outstanding loans or guarantees granted or provided by any member of the Group for the benefit of any of the Directors or Senior Managers.

### 9.3 Directorships and partnerships

The details of those companies and partnerships of which the Directors and Senior Managers are currently directors or partners, or have been directors or partners at any time during the five years prior to the publication of this Registration Document, are as follows:

| Name | Current directorships and partnerships | Past directorships and partnerships |
|---|---|---|
| ***Directors*** | | |
| Peter Allen | ABCAM plc<br>Advanced Medical Solutions Group plc<br>Istesso Limited | Clinigen Group plc<br>Diurnal Group plc<br>Future plc<br>Macrotarg Limited |
| Alan Aubrey | Ditto AI Limited<br>IP Group plc<br>Oxford Sciences Innovation plc<br>Proactis Holdings plc<br>Eureka! The National Children's Museum | Avacta Group plc<br>Ceres Power Holdings plc<br>Mobilion Systems Inc. |
| Wendy Becker | The Design Museum<br>Great Portland Estates plc<br>Logitech International SA<br>Sony Corporation<br>Saïd Business School, Oxford<br>Oxford University Press<br>The University of Oxford | Barnardo's<br>Cancer Research UK<br>NHS England<br>The Prince's Trust<br>Whitbread plc |
| Clive Brown | SCO Group Ltd | - |
| Tim Cowper | - | - |
| Guy Harmelin | Ecoppia Scientific Ltd<br>Tsumego Ltd<br>QM Technologies, Inc. | Harel Insurance Investments and Financial Services Ltd<br>RondinX Ltd<br>Ayala Pharmaceuticals, Inc.<br>Biond Biologics Ltd<br>Tabit Technologies Ltd |
| Adrian Hennah | Gt Peter St Apartment Management Company Limited<br>J Sainsbury plc<br>Oxford University Press | Reckitt Benckiser Group plc<br>RELX plc |
| John O'Higgins | Elementis plc<br>Envea Global SA<br>Johnson Matthey plc | Spectris plc |

| Name | Current directorships and partnerships | Past directorships and partnerships |
|---|---|---|
| ***Directors*** | | |
| Gordon Sanghera | - | - |
| Sarah Gordon Wild | Duke's 1823 LLP<br>Evox Therapeutics Limited<br>Larkham Limited<br>Leweston School Trust<br>Lone Pine Capital LLC (various offshore funds)<br>Redx Pharma plc<br>SGW Research Limited<br>The Bridport Literary Festival Limited | - |
| Spike Willcocks | Veiovia Limited | - |
| ***Senior Management*** | | |
| Jordan Herman | - | Austin Public Broadcasting Service<br>Baker Botts LLP<br>Texas Health Institute |
| Sarah Lapworth | - | Lapworth HR Consulting Limited |
| Zoe McDougall | | Rozo Limited (dissolved) |
| Dr John Milton | - | - |
| John Schoellerman | - | - |

### 9.4 Interests of Directors and Senior Managers in the share capital of the Company

The table below sets out the direct and indirect interests of the Directors and the Senior Managers (including, for the avoidance of doubt, the interests of persons closely associated with them (as defined under MAR)) in the share capital of the Company as at the Latest Practicable Date:

| Director/Senior Manager | No. of Ordinary Shares | % of voting rights |
|---|---|---|
| Alan Aubrey | 1,854,500 | 0.26% |
| Clive Brown | 1,910,660 | 0.27% |
| Tim Cowper | 205,140 | 0.03% |
| Zoe McDougall | 1,622,560 | 0.23% |
| John Milton | 1,762,400 | 0.25% |
| Gordon Sanghera | 10,373,260 | 1.46% |
| Sarah Gordon Wild | 86,900 | 0.01% |
| Spike Willcocks | 5,297,700 | 0.75% |

In addition to the interests in Ordinary Shares of the Directors and Senior Managers described above, as set out below, the following Directors and Senior Managers have, as at the Latest Practicable Date, interests in options to acquire ordinary shares in the Company with a nominal value of £0.001 each. References to 'Unapproved', 'CSOP', 'EMI' and 'Conditional Award' refer to 'Unapproved Options', 'CSOP Options', 'EMI Options' and 'Conditional Awards' as defined in section 11 *(Employee share plans)* below.

| Director/Senior Manager | Type of Award | No. of Ordinary Shares each | Grant date | Option price | Normal vesting date |
|---|---|---|---|---|---|
| Peter Allen | Unapproved** | 368,200 | 18 Apr 2011 | £0.0668 | 18 Apr 2014 |
| Alan Aubrey | Unapproved** | 500,000 | 20 Jun 2011 | £0.0668 | 20 Jun 2014 |
| Clive Brown | Unapproved | 300,000 | 3 Dec 2012 | £0.13 | 3 Dec 2015 |
| | Unapproved*** | 13,000,000 | 10 Nov 2016 | £0.002 | 10 Nov 2019 |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Unapproved | 871,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Conditional Award***** | 14,182,880 | 22 Jun 2021 | - | 22 Jun 2026* |
| | Unapproved | 1,800,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Tim Cowper | Unapproved | 5,000 | 1 May 2014 | £0.73 | 1 May 2017 |
| | Unapproved | 250,000 | 10 Nov 2016 | £1.20 | 10 Nov 2019 |
| | Unapproved | 771,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Conditional Award***** | 3,545,720 | 22 Jun 2021 | - | 22 Jun 2026* |

| Director/Senior Manager | Type of Award | No. of Ordinary Shares each | Grant date | Option price | Normal vesting date |
|---|---|---|---|---|---|
| | Unapproved | 1,600,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Jordan Herman | Unapproved | 2,400,000 | 9 Jan 2021 | £2.12 | 9 Jan 2024* |
| | Unapproved | 480,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Sarah Lapworth | Unapproved | 105,320 | 31 Oct 2013 | £0.73 | 31 Oct 2016 |
| | Unapproved | 6,060 | 1 May 2014 | £0.73 | 1 May 2017 |
| | Unapproved | 50,000 | 10 Nov 2016 | £1.20 | 10 Nov 2019 |
| | Unapproved | 271,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Unapproved | 150,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Zoe McDougall | Unapproved | 403,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Unapproved | 480,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| John Milton | Unapproved | 471,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Unapproved | 240,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Gordon Sanghera | Unapproved | 641,020 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | CSOP | 28,980 | 14 Jan 2019 | £1.035 | 14 Jan 2022* |
| | Conditional Award***** | 15,601,160 | 22 Jun 2021 | - | 22 Jun 2026* |
| | Unapproved | 2,400,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| John Schoellerman | Unapproved | 1,920,000 | 15 Jul 2019 | £1.8113 | 15 Jul 2022* |
| | Unapproved | 440,000 | 15 Jul 2019 | £1.8113 | 15 Jul 2022* |
| | Unapproved | 480,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |
| Spike Willcocks | EMI**** | 148,660 | 5 May 2011 | £0.0668 | 5 May 2014 |
| | Unapproved | 1,260,000 | 2 Jul 2019 | £1.8113 | 2 Jul 2022* |
| | Conditional Award***** | 12,764,600 | 22 Jun 2021 | - | 22 Jun 2026* |
| | Unapproved | 1,600,000 | 15 Jun 2021 | £3.0625 | 15 Jun 2024* |

*Subject to the satisfaction of applicable performance conditions.

**Peter Allen and Alan Aubrey were granted Unapproved Options over 25,000 ordinary shares with a nominal value of £0.001 each on 18 April 2011 and 20 June 2011 (which are now equivalent to 500,000 Ordinary Shares following adjustments to take into account the Bonus Issue and Share Subdivision, as defined in section 4 (*Share capital*) above), respectively. As at the Latest Practicable Date, Peter Allen has exercised the option over 6,590 ordinary shares with a nominal value of £0.001 each (which are now equivalent to 131,800 Ordinary Shares), and holds an outstanding option over 368,200 Ordinary Shares. Alan Aubrey's options have not been exercised. On 19 November 2020, the Company agreed to extend the exercise period of these options until 30 June 2023.

***Clive Brown has been granted an option over 650,000 shares in the capital of Metrichor Limited pursuant to the Metrichor Share Option Scheme. This option will convert into an option over 1,300,000 Ordinary Shares, with an exercise price of £1.20 per share on or around the completion of any potential IPO. See section 11.3 *(Metrichor Share Option Scheme)* below.

****Spike Willcocks was granted an EMI option over 20,000 ordinary shares with a nominal value of £0.001 each (which are now equivalent to 400,000 Ordinary Shares following adjustments to take into account the Bonus Issue and Share Subdivision) on 5 May 2011. On 23 December 2016 the option was exercised over 8,567 ordinary shares with a nominal value of £0.001 each (which are now equivalent to 171,340 Ordinary Shares) and on 16 December 2020 the option was exercised over a further 4,000 ordinary shares with a nominal value of £0.001 each (which are now equivalent to 80,000 Ordinary Shares) . On 19 November 2020, the Company agreed to extend the exercise period of the outstanding option over 7,433 ordinary shares with a nominal value of £0.001 (which are now equivalent to 148,660 Ordinary Shares) each until 30 June 2023, as an Unapproved Option.

*****Under the rules of the LTIP, the Conditional Award will vest if applicable performance conditions are met on: (a) if the Conditional Award vests before the third anniversary of the grant date, the later of the second anniversary of the vesting date and the third anniversary of the grant date; and (b) if the Conditional Award vests on or after the third anniversary of the grant date, the earlier of the second anniversary of the vesting date and the fifth anniversary of the grant date.

## 10. Directors' service agreements and terms of appointment

### 10.1 *Executive Directors*

As at the date of this Registration Document, the Company has four Executive Directors:

(A) Gordon Sanghera (Chief Executive Officer), currently employed under a service agreement dated 14 December 2016;

(B) Spike Willcocks (Chief Business Development Officer), currently employed under a service agreement dated 1 September 2017;

(C) Tim Cowper (Chief Financial Officer), currently employed under a service agreement dated 12 October 2018; and

(D) Clive Brown (Chief Technology Officer), currently employed under a service agreement dated 11 April 2008.

In the case of Gordon Sanghera, Spike Willcocks and Tim Cowper, either party may terminate the service agreement on twelve months' written notice. In the case of Clive Brown, either party may terminate the service agreement on three months' written notice. The Company in its discretion is entitled to terminate

each Executive Director's service agreement with immediate effect by making a payment in lieu of the basic salary that would otherwise have been payable during the notice period (or, in the case of Clive Brown, basic salary plus benefits). The Executive Directors can be placed on garden leave for part or all of their notice period.

The Executive Directors are eligible to participate in the Company's private healthcare scheme, permanent health insurance scheme and its death in service scheme, and each Executive Director is entitled to be enrolled in a pension scheme designated by the Company, with any contributions by the Executive Director to be deducted from his salary. The Executive Directors are also entitled to 25 days' holiday per year, in addition to bank and public holidays.

Each of the Executive Directors is subject to a confidentiality undertaking unlimited in time, and non-compete, non-solicitation, non-dealing and non-hiring post-termination restrictive covenants.

In the case of Gordon Sanghera, Spike Willcocks and Tim Cowper, in the event of a change of control of the Company and in the 12 months following the change of control, directly or indirectly in connection with such change of control, the Company terminates the Executive Director's employment (other than for cause) or the Executive Director is constructively dismissed, the Executive Director is, subject to certain conditions, entitled to be paid an amount equivalent to: (a) the Executive Director's gross annual salary; and (b) the bonus the Executive Director received in the last bonus year, multiplied by two. If the Company is listed on a recognised stock exchange (as defined in FSMA), this entitlement will cease to apply and no such payment will be made.

10.2 **Non-Executive Directors**

As at the date of this Registration Document, the Company has seven Non-Executive Directors:

(A) Peter Allen (non-executive chair of the Board), appointed under the terms of a letter dated 24 February 2015;

(B) Alan Aubrey, appointed under the terms of a letter dated 24 February 2015;

(C) Wendy Becker, appointed under the terms of a letter dated 11 June 2021;

(D) Dr Guy Harmelin, appointed under the terms of a letter dated 17 September 2020;

(E) Adrian Hennah, appointed under the terms of a letter dated 11 June 2021;

(F) John O'Higgins, appointed under the terms of a letter dated 13 September 2019; and

(G) Sarah Gordon Wild, appointed under the terms of a letter dated 9 January 2015.

Peter Allen is entitled to receive £225,000 per annum for his services as Non-Executive Director, chair of the Board and chair of the nomination committee. Each other Non-Executive Director is entitled to receive £70,000 per annum for their services as Non-Executive Directors. In addition, £20,000 per annum is paid in respect of holding the chair position for each of the audit and risk committee and remuneration committee.

In the case of the chair of the Board and each Non-Executive Director, either party may terminate the appointment on three months' written notice. The Company is entitled to terminate each Non-Executive Director's appointment with immediate effect in certain circumstances, including where the Non-Executive Director has: (a) ceased to be a director of the Company; (b) breached their obligations under the service agreement or their statutory, fiduciary or common law duties; (c) been guilty of fraud or dishonesty or acted in a manner which has brought or is likely to bring the Company into disrepute; (d) been convicted of an arrestable offence; (e) been declared bankrupt; or (f) been disqualified from acting as a director.

The chair of the Board and Non-Executive Directors are subject to confidentiality undertakings without limitation in time, and a non-compete restrictive covenant for the duration of their appointments and for nine months after the termination of their appointments.

The chair of the Board and each Non-Executive Director are entitled to reimbursement of reasonable expenses.

The chair of the Board and Non-Executive Directors have each waived any claim against the Company in respect of the termination of their appointments as Non-Executive Directors in relation to any provision in the rules of any share option scheme, in the Articles or in any agreement which has the effect of requiring them to sell or give up any shares, options or rights at any price or which causes any options or other rights granted to the Non-Executive Directors to become prematurely exercisable or lapse.

The chair of the Board and the Non-Executive Directors have the benefit of the Company's directors' and officers' liability insurance policy.

10.3 **Directors' and Senior Managers' remuneration**

The aggregate amount of remuneration paid (including any contingent or deferred compensation) and all benefits in kind granted to the Directors and the Senior Managers (in FY20 the Senior Managers consisted of four individuals), by the Company and its subsidiaries for services in all capacities for the year ended 31 December 2020 was £2,837,011 and $1,572,528. Of this amount, £2,094,426 and $930,140 was paid to the Directors as set out below and £742,585 and $642,388 was paid to the Senior Managers.

Under the terms of their service contracts or letters of appointment and applicable incentive plans, in the year ended 31 December 2020, the Directors were remunerated as set out below:

| Name | Position | Base salary/Fees | Bonus | Other Benefits (ex. Bonus) |
|---|---|---|---|---|
| Gordon Sanghera | Chief Executive Officer | £561,880 | £280,940 | £19,172 |
| Spike Willcocks | Chief Business Development Officer | $647,349 (base salary)<br>£12,000 (fees) | $258,940 | $23,851 |
| Tim Cowper | Chief Financial Officer | £252,780 | £88,473 | £12,042 |
| Clive Brown | Chief Technology Officer | £448,870 | £179,548 | £12,888 |
| Peter Allen | Non-Executive Director | £75,000 | Nil | Nil |
| Alan Aubrey | Non-Executive Director | £40,000 | Nil | Nil |
| Guy Harmelin | Non-Executive Director | £15,833 | Nil | Nil |
| John O'Higgins | Non-Executive Director | £55,000 | Nil | Nil |
| Sarah Gordon Wild | Non-Executive Director | £40,000 | Nil | Nil |

There is no arrangement under which any Director has waived or agreed to waive future emoluments nor has there been any waiver of emoluments during the financial year immediately preceding the date of this Registration Document.

11. **Employee share plans**

The Company has granted share options and awards to employees and former employees, and a limited number of non-employees, over Ordinary Shares in a number of jurisdictions, including the United Kingdom, Germany, Japan and the United States. In addition, share options have been granted to employees and former employees over ordinary shares in the capital of Metrichor Limited.

The awards have been granted under the following share plans:

(A) Oxford Nanopore Technologies Limited Share Option Scheme (the "**Share Option Scheme**");

(B) Oxford Nanopore Technologies Limited Share Option Plan 2018 (the "**Share Option Scheme 2018**");

(C) Metrichor Limited Share Option Scheme (the "**Metrichor Share Option Scheme**"); and

(D) Oxford Nanopore Technologies Limited Long-Term Incentive Plan 2021 (the "**LTIP**").

Employees in China, Australia, the Netherlands, France, Denmark and Singapore do not participate in the share plans due to local taxation and securities laws, however certain employees resident in those jurisdictions may hold options that they were granted prior to relocating. The Company also operates a phantom option scheme for these employees, pursuant to which bonus payments are made based on the value of the Company.

11.1 **Share Option Scheme**

(A) The Share Option Scheme was approved by the Board in August 2005 and was subsequently amended on 14 April 2021. Options to acquire Ordinary Shares at a specified per share exercise price under the Share Option Scheme were granted between 17 August 2005 and 8 January 2018 in the form of UK tax advantaged enterprise management incentive options to eligible

employees ("**EMI Options**") and options that do not qualify for tax advantages in any jurisdiction ("**Unapproved Options**"). The last round of EMI Options were granted on 31 March 2011, and following this grant the Company ceased to be a 'qualifying company' under the EMI legislation.

(B) Options granted under the Share Option Scheme are subject to a service-based vesting condition with one-sixth ($^1/_6$) of the shares vesting on the six month anniversary of the date of grant and a further one-sixth ($^1/_6$) vesting on each six month anniversary thereafter. Options should therefore be fully vested on the third anniversary of the date of grant. Options become exercisable: (a) in part, on each vesting date; or (b) in full, on the third anniversary of the date of grant or on a change of control of the Company or asset sale (regardless of whether or not the options have vested), subject to payment of the exercise price. This means that there is no acceleration of vesting on an IPO, but an IPO will not cause the options to lapse. All options granted under the Share Option Scheme have vested in full and become exercisable.

(C) If an optionholder ceases to be an employee of, or engaged by, the Group (except in the case of gross misconduct, or the termination of any consultancy agreement as a result of the breach by an optionholder, or the removal of a non-executive director from office as a result of a breach of their directors' duties), any vested options will remain exercisable for a period of 40 days from the date of cessation, or such longer period as the Board may determine. If the optionholder does not exercise the options within the specified exercise period, the options will lapse. Any unvested options will lapse on the date of cessation.

(D) In the event of the optionholder's death, their personal representative will be able to exercise their vested options for a period of 12 months following the date of death, or such longer period as the Board may determine. If the personal representative does not exercise the options within the specified exercise period, their options will lapse.

(E) If a disqualifying event (as defined in the EMI legislation) occurs which would result in an option ceasing to be an EMI Option, the Board, may, at its discretion, allow the optionholder to exercise the option during the period of 40 days after the occurrence of the disqualifying event. If the optionholder does not exercise the option within such period, the options will remain exercisable (subject to the rules of the Share Option Scheme) but will no longer qualify as an EMI Option.

(F) EMI Options, to the extent not exercised, will lapse 10 years after the date of grant unless an earlier lapse event occurs. Unapproved Options, to the extent not exercised, will lapse 10 years after the date of grant unless an earlier lapse event occurs or the Board (in its sole discretion) determines that options may be exercised after the 10-year period. These earlier lapse events include the transfer or disposal of the option, bankruptcy of the optionholder and misconduct.

11.2 **Share Option Scheme 2018**

(A) The Share Option Scheme 2018 was approved by the Board on 15 November 2018, and subsequently amended on 14 April 2021. Options to acquire ordinary shares with a nominal value of £0.001 each at a specified per share exercise price under the Share Option Scheme 2018 have been granted since January 2019 in the form of UK tax advantaged options to eligible employees ("**CSOP Options**") and options that do not qualify for tax advantages in any jurisdiction ("**Unapproved Options**").

(B) Options granted under the Share Option Scheme 2018 are subject to a service-based vesting condition with one-sixth ($^1/_6$) of the shares vesting on the six month anniversary of the date of grant and a further one-sixth ($^1/_6$) vesting on each six month anniversary thereafter. In addition, certain options granted to Directors and Senior Managers are subject to a performance condition which is based on the value of the Company. For CSOP Options and Unapproved Options granted from 14 January 2019, this performance condition was met in April 2021.

(C) Options subject to a service-based vesting condition should therefore be fully vested on the third anniversary of the date of grant; however options granted to Directors and Senior Managers will only vest once the service condition and the performance conditions are met.

(D) CSOP Options become exercisable in whole or in part, on the third anniversary of the date of grant (subject to the satisfaction or waiver of any applicable performance conditions) or on a change of control of the Company (regardless of whether or not the options have vested), subject to payment of the exercise price. This means that there is no acceleration of vesting on an IPO, but an IPO will not cause the options to lapse.

(E) Unapproved Options become exercisable: (a) in part, on each vesting date; or (b) in full, on the third anniversary of the date of grant (subject to the satisfaction or waiver of any applicable performance conditions) or on a change of control of the Company (regardless of whether or not the options have vested), subject to payment of the exercise price. This means that there is no acceleration of vesting on an IPO, but an IPO will not cause the options to lapse.

(F) If an optionholder ceases to be an employee of, or engaged by, the Group after the third anniversary of the date of grant (except in the case of misconduct), any vested options will remain exercisable for a period of 90 days from the date of cessation, or such longer period as the Board may determine. If the optionholder does not exercise the options within the specified exercise period, the options will lapse.

(G) If an optionholder ceases to be an employee of, or engaged by, the Group before the third anniversary of the date of grant (except in the case of misconduct), any vested options will be exercisable for a period of 90 days from the date of cessation, or such longer period as the Board may determine. If the optionholder does not exercise the options within the specified exercise period, their options will lapse. Any unvested options will lapse on the date of cessation.

(H) In the event of the optionholder's death, their personal representative will be able to exercise their vested options for a period of 12 months following the date of death. If the personal representative does not exercise the options within the specified exercise period, their options will lapse.

(I) CSOP Options and Unapproved Options, to the extent not exercised, will lapse 10 years after the date of grant unless an earlier lapse event occurs. These earlier lapse events include the transfer or disposal of the option, bankruptcy of the optionholder and misconduct.

11.3 **Metrichor Share Option Scheme**

(A) The Metrichor Share Option Scheme was approved by the board of directors of Metrichor Limited on 24 August 2016. Options to acquire ordinary shares in the capital of Metrichor Limited at a specified per share exercise price under the Metrichor Share Option Scheme were granted on 10 November 2016 in the form of options that do not qualify for tax advantages in any jurisdiction.

(B) Options become exercisable in full, on the third anniversary of the date of grant, or on a change of control of Metrichor Limited or the Company, or an asset sale of Metrichor Limited or the Company, or the IPO of the ordinary share capital in Metrichor Limited or the Company (regardless of whether or not the options have vested), subject to payment of the exercise price. All options granted under the Metrichor Share Option Scheme have fully vested and become exercisable.

(C) The Board may determine that options over shares in Metrichor Limited will, with effect from the date on which a general offer is declared unconditional, or the date a court sanctions a scheme of arrangement or the date on which shares are admitted to trading on the London Stock Exchange (each a "**Trigger Date**") convert into an option over Ordinary Shares. The rate of conversion is based on the value of the shares in the Company and the value of the shares in Metrichor Limited (as determined by the Board). The rules of the Metrichor Share Option Scheme require that no more than 0.1 Ordinary Shares will be equivalent to one ordinary share in Metrichor Limited and no less than 0.001 Ordinary Shares in the Company will be equivalent to one ordinary share in Metrichor Limited. On the conversion, the Board may make such adjustments to the exercise price as it considers fair and reasonable to reflect the value of the shares in the Company and the value of the shares in Metrichor Limited. If the Board makes such a determination it must, as soon as reasonably practicable, notify each affected optionholder that their option will, subject to a change of control or an IPO, be converted into an option over Ordinary Shares. The option will then be exercisable for a period of four months, or such other period as the Board may determine, beginning on the Trigger Date. If the optionholder does not exercise the options within the specified exercise period, their options will lapse. If the Board does not decide to convert any options into options over Ordinary Shares, each optionholder will, unless the Board determines otherwise, be entitled to exercise their option within four months of the Trigger Date and to the extent that the option is not exercised it shall lapse.

(D) If an optionholder ceases to be an employee of, or engaged by, the Group (except in the case of gross misconduct), any vested options will remain exercisable for a period of 40 days from the date of cessation, or such longer period as the Board may determine. If the optionholder does not exercise the options within the specified exercise period, the options will lapse. Any unvested options will lapse on the date of cessation.

(E) In the event of the optionholder's death, their personal representative will be able to exercise their vested options for a period of 12 months following the date of death, or such longer period as the Board may determine. If the personal representative does not exercise the options within the specified exercise period, their options will lapse.

(F) Options, to the extent not exercised, will lapse 10 years after the date of grant unless an earlier lapse event occurs. These earlier lapse events include the transfer or disposal of the option, bankruptcy of the optionholder and misconduct.

11.4 **LTIP**

(A) The LTIP was approved by the Board on 22 June 2021. The LTIP is a one-off discretionary share plan, under which the Company granted awards over 6.5% of the Company's Ordinary Share capital (at the date of grant) to the Executive Directors on 22 June 2021. Awards were granted as Conditional Awards. The LTIP will be administered by the remuneration committee.

(B) Performance conditions

The vesting of Conditional Awards will be subject to the satisfaction of the following performance conditions.

*Share price targets:*

- Target 1: share price 120% of the share price at an IPO on the London Stock Exchange;
- Target 2: share price £154; and
- Target 3: share price £209.

Revenue growth targets:

- Target 1: annual revenue of £140 million;
- Target 2: annual revenue of £231 million; and
- Target 3: annual revenue of £308 million.

Any performance condition may be amended by the remuneration committee if anything happens which causes the remuneration committee reasonably to consider it appropriate to amend the performance conditions, provided that the remuneration committee considers that any amended performance condition would not be materially less or more challenging to satisfy.

(C) Vesting and release of Conditional Awards

The Conditional Awards will vest subject to the achievement of performance conditions relating to the Company's share price and revenue growth performance (on a straight line/percentage of completion basis between hurdles). The Conditional Awards will have their revenue performance conditions assessed every six months during the performance period beginning on grant and ending at the end of the 2026 financial year. To the extent that the performance conditions are satisfied, the Conditional Awards will vest at that time. The Conditional Awards will have their share price performance conditions assessed on a rolling 90-day basis until the end of the 2026 financial year.

If the Conditional Awards vest, they are subject to a post-vesting holding period. If a share price hurdle, or a revenue growth target is met before the third anniversary of the grant, the holding period will apply until the later of two years from the relevant vesting date and the third anniversary of grant. If a share price hurdle, or a revenue growth target is met after the third anniversary of grant, the holding period will apply until the earlier of two years from the relevant vesting date and the fifth anniversary of the grant. During the applicable holding period, shares subject to the Conditional Awards will not be delivered to participants and at the end of such holding period the Conditional Awards will be "released".

(D) Overall limits

The LTIP may operate over new issue Ordinary Shares or existing Ordinary Shares. However, as the Conditional Awards have been granted prior to any IPO of the Ordinary Shares, if new issue Ordinary Shares are used to satisfy Conditional Awards following an IPO of the Ordinary Shares on the London Stock Exchange, they will be disregarded for the purposes of the standard "5% and 10% in ten years" dilution limits.

(E) Dividend equivalents

Participants will receive an amount (in cash, unless the remuneration committee decides it will be paid in Ordinary Shares) equal to the value of any dividends which would have been paid on Ordinary Shares subject to a Conditional Award which vest by reference to record dates during the period beginning on the grant date and ending on the date the holding period applicable to a Conditional Award ends. This amount may assume the reinvestment of dividends and exclude or include special dividends.

(F) Malus and clawback

In certain circumstances, the remuneration committee may at any time prior to the fifth anniversary of the date of grant of a Conditional Award (or, if an investigation into the conduct or actions of any participant or any member of the Group has started, such later date as the remuneration committee may determine in order to allow the investigation to be completed): (a) reduce a Conditional Award (to zero if appropriate); (b) impose additional conditions on a Conditional Award; or (c) require that the participant either returns some or all of the Ordinary Shares acquired under a Conditional Award or makes a cash payment to the Company in respect of the Ordinary Shares delivered. The remuneration committee may invoke these malus and clawback provisions only where there are exceptional circumstances, including:

(i) a material misstatement in the published results of the Group or a member of the Group;

(ii) an error in determining the number of Ordinary Shares subject to a Conditional Award or in assessing any performance conditions (as applicable);

(iii) the determination of the number of Ordinary Shares subject to a Conditional Award or the assessment of any performance conditions being based on inaccurate or misleading information;

(iv) misconduct on the part of the relevant participant;

(v) the participant's breach of any relevant restrictive or confidentiality covenants;

(vi) where the remuneration committee determines that the participant has caused wholly or in part a material loss for the Group as a result of reckless, negligent or wilful acts or omissions, or inappropriate values or behaviour;

(vii) where the remuneration committee determines that the participant is responsible for or had management oversight over a member of the Group receiving censure by a regulatory body or suffering a significant detrimental impact on its reputation; or

(viii) the Company or a material proportion of the Group becoming insolvent or otherwise suffering corporate failure.

(G) Cessation of employment

An unvested Conditional Award will usually lapse upon a participant ceasing to be employed by or to hold office with the Group.

If, however, a participant ceases to be an employee or director of the Group because of their ill-health, injury, disability or redundancy or the sale of the participant's employing company or business out of the Group or in other circumstances at the discretion of the remuneration committee (i.e. they leave as a "good leaver"), their Conditional Award will normally continue to vest (and be released) on the date when it would have vested (and been released) if they had not ceased to be an employee or director of the Group.

The extent to which Conditional Awards normally vest in these circumstances will be determined by the remuneration committee, taking into account the satisfaction of any performance conditions applicable to Conditional Awards measured over the original performance period, the underlying performance of the Company and the participant and such other factors the remuneration committee considers, in its opinion, relevant. The remuneration committee retains discretion, however, to allow the Conditional Award to vest (and be released) following the individual's cessation of office or employment, taking into account any applicable performance conditions measured up to that point or, where the participant is a "good leaver" as a result of their employing company or business being sold out of the Group, to require that the Conditional Award is exchanged for an equivalent award over shares in another company.

Unless the remuneration committee decides otherwise, the extent to which a Conditional Award

vests will also take into account the proportion of the original performance period which has elapsed on the cessation of the participant's office or employment with the Group.

If a participant dies, their Conditional Award will vest (and be released from its holding period) on the date of their death on the basis set out for other "good leavers" above. Alternatively, the remuneration committee may decide that an unvested Conditional Award will vest (and be released from its holding period) on the date it would have if the participant had not died on the basis set out for other "good leavers" above.

If a participant ceases to be an officer or employee of the Group during a holding period in respect of a Conditional Award for any reason other than summary dismissal, their Conditional Award will normally be released at the end of the holding period, unless the remuneration committee determines that it should be released on the cessation of their office or employment. If a participant dies during the holding period, their Conditional Award will be released on the date of death (unless the remuneration committee decides it will be released at the end of the normal holding period). If a participant is summarily dismissed, any outstanding Conditional Awards they hold will normally lapse immediately.

(H) Corporate events

In the event of a takeover of the Company, Conditional Awards will normally vest (and be released) early. The proportion of any unvested Conditional Awards which vest will be determined by the remuneration committee, taking into account: (a) the extent to which the performance conditions applicable to Conditional Awards have been satisfied at that time; and (b) unless the remuneration committee determines otherwise, the proportion of the original performance period which has elapsed. Alternatively, the remuneration committee may require that Conditional Awards are exchanged for equivalent awards over shares in another company (subject to the acquiring company's consent).

If the Company is wound up or other corporate events occur such as a variation of the Company's share capital, a demerger, special dividend or other transaction which, in the remuneration committee's opinion, would materially affect the value of Ordinary Shares, the remuneration committee may determine that Conditional Awards will vest (and be released) on the same basis as for a takeover.

(I) Adjustments

If there is a variation of the Company's share capital or in the event of a demerger, special dividend or other transaction which, in the remuneration committee's opinion, would materially affect the value of Ordinary Shares, the Committee may make such adjustments to the number or class of Ordinary Shares subject to Conditional Awards as it considers appropriate.

(J) Settlement

The remuneration committee may, in its discretion, decide to satisfy a Conditional Award with a cash payment equal to the market value of the Ordinary Shares that the participant would have received had the Conditional Award been satisfied with Ordinary Shares.

(K) Rights attaching to Ordinary Shares

Ordinary Shares delivered under the LTIP will not confer rights on the participant until that participant has received the underlying shares. Any Ordinary Shares issued will rank equally with Ordinary Shares then in issue (except for rights arising by reference to a record date prior to their issue).

(L) Amendments

The remuneration committee may, at any time, amend the LTIP in any respect. However, following an IPO of the Ordinary Shares, the prior approval of Ordinary Shareholders must be obtained in the case of any amendment which is made to the advantage of eligible employees and/or participants and relates to the provisions relating to eligibility, individual or overall limits, the basis for determining the entitlement to, and the terms of, cash or Ordinary Shares provided under the LTIP, the adjustments that may be made in the event of any variation of the Company's share capital and/or the rule requiring such prior approval. There are, however, exceptions to this requirement to obtain shareholder approval for any minor amendments to benefit the administration of the LTIP, to take account of the provisions of any legislation, or to obtain or maintain favourable tax, exchange control or regulatory treatment for any participant or member of

the Group.

(M) Non-transferability

Conditional Awards are not transferable except to the participant's personal representatives if the participant dies.

(N) Benefits not pensionable

Benefits received under the LTIP are not pensionable.

## 12. Employees

As at 30 June 2021, the Group employed 690 full- and part-time employees.

The following table details the numbers of the Group's employees (full- and part-time) by function:

| | As at 31 December | | | As at 30 June |
|---|---|---|---|---|
| | **2018** | **2019** | **2020** | **2021** |
| Applications, Engineering and Technology Transfer | 98 | 74 | 103 | 127 |
| Corporate | 40 | 53 | 69 | 120 |
| Production | 81 | 89 | 116 | 121 |
| Research and Development | 138 | 152 | 171 | 172 |
| Sales and Distribution | 82 | 112 | 147 | 149 |
| **Total** | **439** | **480** | **606** | **690** |

The following table details the numbers of the Group's employees (full- and part-time) by geographic location:

| | As at 31 December | | | As at 30 June |
|---|---|---|---|---|
| | **2018** | **2019** | **2020** | **2021** |
| Australia | 0 | 0 | 2 | 2 |
| China | 7 | 9 | 14 | 16 |
| Denmark | 0 | 1 | 1 | 1 |
| France | 1 | 3 | 5 | 5 |
| Germany | 2 | 2 | 3 | 3 |
| Japan | 6 | 6 | 8 | 9 |
| The Netherlands | 0 | 1 | 1 | 2 |
| Singapore | 0 | 3 | 8 | 9 |
| UK | 386 | 410 | 506 | 577 |
| US | 37 | 45 | 58 | 66 |
| **Total** | **439** | **480** | **606** | **690** |

## 13. Pensions

The Group provides retirement benefits to certain of its current and former employees through a number of pensions arrangements.

In the UK, the Group offers a defined contribution pension plan which is open to all of the Group's employees.

The Group also has additional pension arrangements in most jurisdictions in which it operates. In the United States, the Group offers a 401(k) savings plan.

Details relating to the Group's contribution to the defined contribution pension plan are set out in "Pension obligations" in section 6.7 of Part 7 (*Operating and Financial Review*). The Group did not make any contributions to the 401(k) savings plan in FY18, FY19 and FY20.

## 14. Litigation

There are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Company is aware) during the period covering the 12 months preceding the date of this Registration Document, which may have, or have had in the recent past, significant effects on the Company's and/or the Group's financial position or profitability.

## 15. Related party transactions

Save as disclosed in Note 35 of Section B, Part 8 *(Historical Financial Information)*, no member of the Group entered into any related party transactions (which for these purposes are those set out in the standards adopted according to the Regulation (EC) No. 1606/2002 as it forms part of the retained EU law as defined in the EUWA 2018) between 1 January 2018 and the date of this Registration Document.

## 16. Material contracts

Save as set out below, there are no contracts (not being contracts entered into in the ordinary course of business) that have been entered into by the Company or another member of the Group: (a) within the two years immediately preceding the date of this Registration Document which are material to the Company or any member of the Group, or (b) at any time and contain provisions under which the Company or any member of the Group has an obligation or entitlement which is, or may be, material to the Company or any member of the Group as at the date of this Registration Document.

### 16.1 Avantor distribution agreement

On 11 August 2021, the Company entered into a distribution agreement with Avantor for the global distribution of specified MinION products (the "**MinION Products**") by Avantor (the "**Distribution Agreement**"). The Distribution Agreement runs for an initial term of 36 months beginning on 11 August 2021 and renews automatically for additional and successive terms of 12 months.

Under the terms of the Distribution Agreement, the Company has granted Avantor the following distribution rights during the term of the agreement:

- the exclusive right (except with respect to direct sales by the Company and limited tenders) to promote, market, sell and distribute the MinION Products directly to end-users as a LSRT for research purposes (i.e., not for commercial gain or diagnostic, therapeutic or clinical procedures) in the United States and its territories, Puerto Rico, Canada, the European Union, Switzerland, Norway and the United Kingdom; and

- the non-exclusive right to promote, market, sell and distribute the MinION Products to end users as a LSRT to the extent permitted by law and without the right to register the MinION Products as medical devices in all countries where trade with the United States and United Kingdom is not prohibited, excluding the United States and its territories, Puerto Rico, Canada, the European Union, Switzerland, Norway, the United Kingdom, South Africa, the UAE, Kuwait, Pakistan, Kazakhstan, Belarus, South Korea, Turkey, China, Japan, Russia, Hong Kong and Taiwan.

The Company shall also provide support for the sales and marketing of the MinION Products, including: creation of e-literature and e-catalogue materials for the promotion and sale of the MinION Products; development and conduct of training programmes for Avantor employees; and having the Company's personnel accompany Avantor sales personnel on sales presentations as agreed in advance between the parties. The Distribution Agreement may be terminated for convenience at any time by either party upon one year's prior written notice.

## 17. No significant change

There has been no significant change in the financial position or financial performance of the Group since 30 June 2021, the date to which the latest historical financial information of the Group was published.

## 18. Statutory auditors

Deloitte LLP of 1 New Street Square, London, EC4A 3HQ, are registered to carry out audit work by the Institute of Chartered Accountants in England and Wales. Deloitte LLP are the statutory auditors of the Group and have audited the consolidated statutory financial statements for the Group as at and for the years ended 31 December 2018, 2019 and 2020.

## 19. Consents

(A) Deloitte LLP has given and has not withdrawn its written consent to the inclusion in this Registration Document of its report in Section A of Part 8 *(Historical Financial Information)*, and has authorised the contents of this report as part of this Registration Document for the purposes of item 1.3 of Annex 1 of Commission Delegated Regulation (EU) 2019/980 as it forms part of retained EU law as defined in the EUWA 2018 ("**UK Commission Delegated Regulation**").

(B) DeciBio Consulting, with registered office at 10203 Santa Monica Blvd. #400, Los Angeles, CA 90067 has given and has not withdrawn its written consent to the inclusion of the information from its report in this Registration Document and has authorised the content which has been sourced to DeciBio Consulting for the purposes of item 1.3 of Annex 1 of the UK Commission Delegated Regulation. DeciBio Consulting accepts responsibility for the inclusion of the relevant information in this Registration Document which has been sourced from DeciBio Consulting and declares that, for the purposes of item 1.2 of Annex 1 of the UK Commission Delegated Regulation, to the best of its knowledge, such information is in accordance with the facts and contains no omission likely to affect its import.

(C) Health Advances, with registered office at 275 Grove Street, Suite 1-300, Newton, MA 02466 has given and has not withdrawn its written consent to the inclusion of the information from its report in this Registration Document and has authorised the content which has been sourced to Health Advances for the purposes of item 1.3 of Annex 1 of the UK Commission Delegated Regulation. Health Advances accepts responsibility for the inclusion of the relevant information in this Registration Document which has been sourced from Health Advances and declares that, for the purposes of item 1.2 of Annex 1 of the UK Commission Delegated Regulation, to the best of its knowledge, such information is in accordance with the facts and contains no omission likely to affect its import.

## 20. Documents available for inspection

Copies of the following documents will be available on the Group's website, at www.nanoporetech.com, for a period of 12 months following the date of this Registration Document:

(A) the Articles;

(B) Deloitte LLP's accountant's report set out in Section A of Part 8 *(Historical Financial Information)*;

(C) the Historical Financial Information;

(D) the DeciBio Report;

(E) the Health Advances Report;

(F) the consent letters referred to in Section 19 *(Consents)* of this Part 9 *(Additional Information)*; and

(G) this Registration Document.

## Part 10. Technical Glossary

**Assembly**

This can refer to the *'de novo'* assembly of genomes (typically species that have not previously been completely sequenced), reference-guided, or comparative assembly. With longer read lengths achievable with nanopore sequencing, this allows genomes to be sequenced using fewer fragments, and the greater overlap between reads enables easier and more accurate *de novo* genome assembly.

**Chromatin Conformation**

The Group's products provide a complete solution for investigating the three-dimensional conformation of genomes. Pore-C is an end-to-end workflow, from sample preparation to analysis. With long nanopore sequencing reads, the user can obtain long-range, multi-way contact information; this cannot be achieved using traditional short reads. Furthermore, Pore-C requires no amplification step. Therefore, combined with the direct detection of modifications alongside nucleotide sequence, the user can achieve an even more comprehensive understanding of the regulation of gene expression.

**Fusion Transcripts**

Fusion transcripts are RNA molecules which are the product from the transcription of a fusion gene or from differential splicing of RNA transcripts encoded by different genes. They are significant in clinical research due to association with diseases, including some cancers. Sequencing of transcripts using traditional approaches requires generation of fragmented cDNA sequencing libraries, during which a reliance on PCR may lead to a loss of representation for fragments which are difficult to amplify. Full-length transcript sequences are imputed by computational assembly of short reads. This process can lead to incorrectly assembled transcripts, high levels of multimapping (where reads cannot be assigned to a single transcript), and increases the difficulty of conducting precise breakpoint mapping. Nanopore sequencing is superior to traditional approaches: fragmentation is not required, enabling full length transcripts to be sequenced end-to-end in a single read. This delivers unambiguous identification of fusion transcripts. In addition, nanopore sequencing enables direct sequencing of RNA molecules, enhancing the possibility of elucidating novel transcripts which exist naturally in low numbers, or may not be represented in amplified samples alongside preserving markers such as methylation.

**Gene Expression**

Understanding the RNA in an organism can give insights into how the DNA code is being 'expressed'. Traditional gene expression studies have typically sequenced short fragments, and while such short reads allow gene-level expression analysis, they may preclude the differentiation of transcript isoforms, which, importantly, can exhibit different expression levels and functional properties. With nanopore sequencing, read length is equal to RNA (or cDNA) fragment length, allowing the unambiguous analysis of full-length transcripts – enabling accurate characterisation and quantification of gene expression at the isoform level.

**Raw-Read Accuracy**

The accuracy with which an individual strand of DNA/RNA can be determined in a single pass measurement.

**SBS**

The cyclical labelling reaction known as sequencing by synthesis.

**Single-Cell Transcriptomics**

Single-cell RNA sequencing (scRNA-Seq) is a rapidly expanding area of scientific research; however, short reads may limit some of the potential of the analysis, as it is challenging to analyse splicing, chimeric transcripts, and sequence diversity across the molecule. In contrast, nanopore technology, which has no requirement for fragmentation and can sequence long fragments, can sequence the entire RNA molecule (transcript).[12]As a result, full-length transcripts can be sequenced in single reads, allowing accurate, isoform-level

characterisation and quantification.

**Single Nucleotide Variants and Phasing**

Single point genetic mutations can provide important biological information. For example, assigning a variant to the maternal or paternal chromosome is important for understanding inheritance patterns, mosaicism, and parental origin of *de novo* mutations. To directly resolve the haplotype of two heterozygous SNPs, they both need to be present within the same sequencing read. This is inherently challenging with short sequencing reads as they are, on average, 1 kb apart. Nanopore long reads provide sequence context and enhance the phasing of variants.

**Species Identification**

This refers to the identification of an organism, or a variant of a specific organism, to confirm its identity. Nanopore sequencing can provide rapid and accurate species identification, in portable formats if required.

**Structural Variants**

Structural variants ("**SVs**") are of high significance across a broad range of fields, from clinical research into their roles in diseases such as cancer, through to identifying SVs encoding desirable crop traits in agricultural science. However, as these genetic variants may be hundreds, thousands or even millions of bases long, many cannot be spanned by traditional short reads; instead, they must be sequenced in short sections and reassembled. This can result in incomplete or incorrect assemblies, whilst the requirement of PCR in short-read sequencing means that SVs in regions that cannot be amplified may not be represented at all.

With nanopore sequencing, single reads can reach hundreds of kilobases in length, with a current record in excess of 4 million bases. This means that even large SVs can often be sequenced end-to-end in single reads, making for simple, accurate characterisation and often removing any need for assembly.

**TMO**

Theoretical Maximum Output. The TMO in respect of the Flongle Flow Cell assumes that the system is run for 16 hours at 420 bases per second. The TMO in respect of the MinION/GridION and PromethION Flow Cells assumes that the system is run for 72 hours at 420 bases per second.

[12] RNA sequencing with nanopores may be direct RNA sequencing, or sequencing of cDNA, a complementary DNA molecule reverse-transcribed from the sequence of RNA.

## Part 11. Definitions

| | |
|---|---|
| **Allied Market Research** | the market research and advisory company of Allied Analytics LLP; |
| **Allied Market Research Metabolomics Market Report** | the publicly available report by Allied Market Research entitled "Metabolomics Market by Product & Service (Metabolomics Instruments and Metabolomics Bioinformatics Tools and Services), Application (Biomarker Discovery, Drug Discovery, Toxicology Testing, Nutrigenomics, Functional Genomics, Personalized Medicine, and Others), Indication (Cancer, Cardiovascular Disorders, Neurological Disorders, Inborn Errors of Metabolism, and Others) - Global Opportunity Analysis and Industry Forecast, 2017-2023", published in September 2017; |
| **Allied Market Research Proteomics Market Report** | the publicly available report by Allied Market Research entitled "Proteomics Market by Component (Instruments, Reagents, and Services) and Application (Drug Discovery, Disease Diagnosis, and Others): Global Opportunity Analysis and Industry Forecast, 2019-2027", published in January 2021; |
| **Allied Market Research Reports** | the Allied Market Research Metabolomics Market Report and the Allied Market Research Proteomics Market Report; |
| **Articles** | the articles of association of the Company in force as at the date of this Registration Document; |
| **ASIC** | application-specific integrated circuit; |
| **Avantor** | VWR International, LLC (owned by Avantor, Inc.); |
| **Board** | the board of directors of the Company from time to time; |
| **Change of Control** | the acquisition by any person (other than, if there is an Active LAT Share, the holder of the Active LAT Share or any persons acting in concert (as defined in the Takeover Code) with him) of an interest in Ordinary Shares which (when taken together with Ordinary Shares in which that person and any persons acting in concert with such person are interested) carry more than 50% of the voting rights exercisable by members on a poll in a general meeting (excluding, if there is an Active LAT Share, any voting rights attached to the Active LAT Share) and, without prejudice to the generality of the foregoing, if such an acquisition is effected by means of a:<br><br>(a) scheme of arrangement under Part 26 of the Companies Act 2006, a Change of Control shall take place at the point at which the scheme of arrangement becomes effective; and<br><br>(b) takeover offer under Part 28 of the Companies Act 2006, a Change of Control shall take place at the point at which the takeover offer becomes unconditional in all respects;<br><br>for the avoidance of doubt, a person will not be deemed to have “acquired” an interest in Ordinary Shares carrying voting rights by virtue of:<br><br>(a) the issue by the Company of new Ordinary Shares to that person or to a person acting in concert with that person;<br><br>(b) the purchase or redemption by the Company of its own Ordinary Shares in accordance with the Companies Act 2006, with a commensurate increase in the proportion of voting rights held by that person; or |

(c) by virtue of a change in identity of those persons that are acting in concert with that person from time to time,

provided that, in each case, this is not also accompanied with another connected transaction in which an interest in Ordinary Shares in the Company is acquired;

for these purposes, a person shall have an "interest" in Ordinary Shares if:

(a) he is the registered holder;

(b) not being the registered holder, he is entitled to exercise voting rights conferred by the holding of those Ordinary Shares or to control any exercise of any such voting rights; or

(c) where an interest in Ordinary Shares is comprised in property held on trust, he is a beneficiary of that trust (and, in this case, every beneficiary of the trust shall be treated as having an interest in those Ordinary Shares),

provided, in each case, that a person shall not be considered to have an interest in Ordinary Shares if and to the extent that a person is:

(a) acting as a nominee or custodian for another person, in which case the person on whose behalf that person is so acting will be considered to be so interested;

(b) interested by reason of his appointment as a proxy to vote at a specific general meeting or class meeting of the Company, or his authorisation by a corporation to act as its representative at any general meeting or class meeting of the Company;

(c) a bank and is interested by reason of the taking of security over Ordinary Shares or other securities in the normal course of its business;

(d) a borrower of Ordinary Shares under a stock borrowing arrangement, providing that such a borrower does not exercise the voting rights attributable to those Ordinary Shares; or

(e) interested by virtue of receiving an irrevocable commitment to accept or reject a specified takeover offer for Ordinary Shares or to vote in relation to a general meeting or class meeting of the Company or other meeting of shareholders of the Company necessary to implement a specified scheme of arrangement under Part 26 of the Companies Act 2006;

| | |
|---|---|
| **Companies Act 1985** | the Companies Act 1985 of England and Wales; |
| **Companies Act 2006** | the Companies Act 2006 of England and Wales, as amended from time to time; |
| **Company** | Oxford Nanopore Technologies Limited; |
| **Conditional Awards** | the conditional awards of Ordinary Shares granted under the LTIP; |
| **DeciBio Consulting** | DeciBio Consulting LLC; |
| **DeciBio Report** | the report by DeciBio Consulting entitled "Next Generation Sequencing (NGS) |

| | |
|---|---|
| | Market Size, Growth and Trends (2017-2023)" – 6th edition, dated 4 December 2020; |
| **Deferred Shares** | the deferred shares of £0.005 each in the capital of the Company, having the rights set out in the articles of association of the Company adopted on 10 July 2020; |
| **Directors** | the directors of the Company as at the date of this Registration Document, whose details are set out in Part 3 *(Directors, Registered Office and Advisers)*; |
| **DPA** | Data Protection Act 2018, as amended; |
| **EU GDPR** | the General Data Protection Regulation in the EU, as amended; |
| **EUWA 2018** | EU (Withdrawal) Act 2018; |
| **Executive Directors** | the executive Directors; |
| **FCA** | the Financial Conduct Authority; |
| **FSMA** | the Financial Services and Markets Act 2000, as amended; |
| **FY18** | the financial year ended 31 December 2018; |
| **FY19** | the financial year ended 31 December 2019; |
| **FY20** | the financial year ended 31 December 2020; |
| **FY21** | the financial year ending 31 December 2021; |
| **FY23** | the financial year ending 31 December 2023; |
| **GPU** | graphics processing unit; |
| **Group** | the Company and each of its direct and indirect subsidiaries from time to time (and "**subsidiary**" shall have the meaning ascribed to it in the Companies Act 2006); |
| **Health Advances** | Health Advances, a wholly-owned subsidiary of Parexel International Corporation; |
| **Health Advances Report** | the report by Health Advances entitled "Application Market Sizing – Short summary report", presented to the Group on 10 March 2021 and summarised in August 2021; |
| **HIPAA** | the US Health Insurance Portability and Accountability Act, as amended; |
| **Historical Financial Information** | the consolidated historical financial information of the Group included in Sections B and C of Part 8 *(Historical Financial Information)*; |
| **HR** | human resources; |
| **HY20** | the six months ended 30 June 2020; |
| **HY21** | the six months ended 30 June 2021; |
| **IFRS** | the International Financial Reporting Standards, as adopted by the European Union; |
| **Illumina** | Illumina, Inc.; |
| **IP** | intellectual property; |

| | |
|---|---|
| **IP Group** | IP Group plc; |
| **IPO** | initial public offering; |
| **ISA** | the International Standards on Auditing (UK), issued by the Financial Reporting Council, as applicable; |
| **IT** | information technology; |
| **Latest Practicable Date** | 6 September 2021; |
| **Listing Rules** | the listing rules made under Part VI of FSMA (as set out in the FCA Handbook), as amended; |
| **long term** | within the next 60 months from the date of this Registration Document; |
| **LSRT** | life science research tools; |
| **LTIP** | the Company's Long-Term Incentive Plan 2021; |
| **MAP** | MinION Access Programme; |
| **Market Abuse Regulation** | the Market Abuse Regulation EU 596/2014 as it forms part of retained EU law as defined in the EUWA 2018; |
| **medium term** | within the next 36 months from the date of this Registration Document; |
| **Nanopore Community** | the community of members using nanopore technology; |
| **Non-Executive Directors** | the non-executive Directors; |
| **Non-IFRS Financial Measure** | a financial measure not presented in accordance with ISA, IFRS, US GAAP, SEC requirements or any other generally accepted accounting principles, and which may not be comparable with similarly titled measures used by others in the Group's industry; |
| **OND** | Oxford Nanopore Diagnostics Limited; |
| **Ordinary Shareholder** | a registered holder of Ordinary Shares from time to time; |
| **Ordinary Shares** | the ordinary shares in the capital of the Company from time to time; |
| **PacBio** | Pacific Biosciences of California, Inc.; |
| **PCAOB** | the Public Company Accounting Oversight Board of the United States; |
| **PCR** | polymerase chain reaction; |
| **Prospectus Regulation Rules** | the prospectus regulation rules of the FCA made pursuant to section 73A of FSMA, as amended; |
| **R&D** | research and development; |
| **Registration Document** | this document; |
| **SEC** | the US Securities and Exchange Commission; |

| | |
|---|---|
| **Senior Managers** | those individuals identified as such in Part 5 *(Directors, Senior Managers and Corporate Governance)*; |
| **short term** | within the next 18 months from the date of this Registration Document; |
| **TT** | technology transfer; |
| **UK Corporate Governance Code** | the UK Corporate Governance Code published by the Financial Reporting Council, as amended from time to time; |
| **UK GDPR** | the EU GDPR as it forms part of retained EU law as defined in the EUWA 2018, as amended; |
| **UK Prospectus Regulation** | Regulation EU 2017/1129 as it forms part of retained EU law as defined in the EUWA 2018, as amended; |
| **US GAAP** | the accounting practices generally accepted in the United States; |
| **US GAAS** | the auditing standards generally accepted in the United States; and |
| **US Securities Act** | the US Securities Act of 1933, as amended. |