umicore
materials for a better life

Rising to the challenges

Integrated Annual Report 2020

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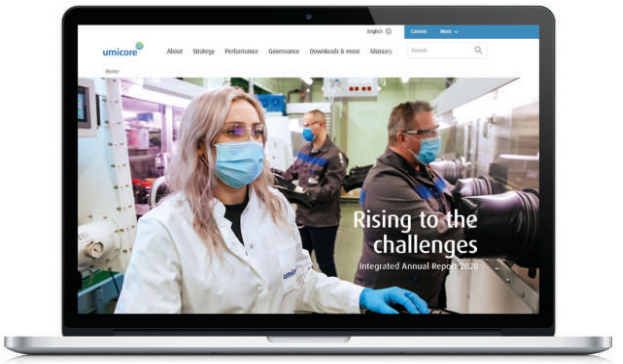
Front cover image: Reda Malakauskaité, Peter Verholen And Steven Van Hout working in the solid state battery team

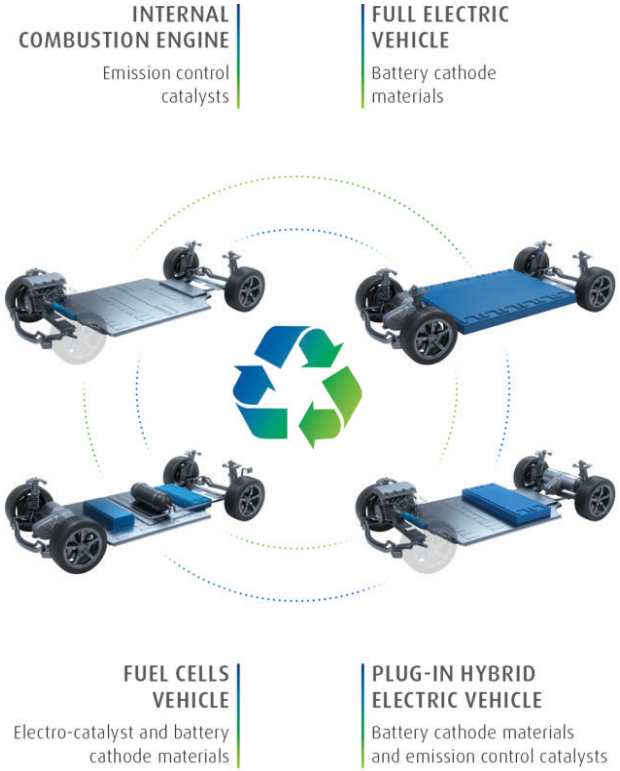
The Umicore integrated annual report offers a comprehensive and integrated view of our economic, financial, environmental, value chain and social performance for 2020. This report is in accordance with the GRI Standards: Core option.

Access all items in this report, online, at:
ANNUALREPORT.UMICORE.COM



About us

THE GLOBAL MATERIALS TECHNOLOGY & RECYCLING GROUP PROVIDING TOMORROW'S SUSTAINABLE SOLUTIONS FOR CLEAN MOBILITY AND RECYCLING



Umicore is uniquely positioned in all aspects of clean mobility materials and in recycling. we provide clean-mobility solutions for all platform types and we recycle these materials when they reach the end of their useful life.

Using our metallurgy, chemistry and materials science expertise, this closed-loop business model is our powerful differentiator and it will continue to be the basis on which we carry out our business and build our strategy.

We provide automotive catalysts to clean the exhaust gases from internal combustion engines for lightduty and heavy-duty vehicles of all fuel types, and the rechargeable battery materials and automotive catalysts that are required to power hybrid, plug-in hybrid and full electric vehicles. We also produce catalysts for fuel cell-powered vehicles and for static or industrial applications.

Umicore operates one of the world's most sophisticated precious metals recycling facilities and, across our activities, we can recover 28 precious and non-ferrous metals from industrial residues, used electronic scrap, batteries, automotive and industrial catalysts, fuel cells and more. We also provide recycling services to customers to help maximize their efficiency.

The recovered materials are then transformed into pure metals or new products.

We develop custom materials and ensure that processes take account of health and safety, recyclability, cost efficiency, waste reduction and energy efficiency, both in our own facilities and across the value chain.

We believe our success is linked to how we balance the economic, environmental and social impact of our operations.

Our integrated approach to sustainability is not just about minimizing the impact of our industrial operations: our commitment to ethical and responsible sourcing distinguish us from our competitors while delivering value for all.

Umicore strives to have a positive impact, enhancing quality of life through our products and services, reducing harmful vehicle emissions, giving new life to used metals and powering the cars of the future.

materials for a better life

Business groups

OUR COMPLEMENTARY BUSINESS GROUPS ENABLE A MORE SUSTAINABLE WORLD
COMBINING CUTTING-EDGE TECHNOLOGIES AND RECYCLING TO GIVE NEW LIFE TO USED METALS

CATALYSIS

REDUCING HARMFUL EMISSIONS

AUTOMOTIVE CATALYSTS
We are one of the leading producers of emission control catalysts for gasoline and diesel on-road and non-road applications, power generation and industrial processes to meet environmental standards around the world.

PRECIOUS METALS CHEMISTRY
We are experts in metals-based catalysis for life-enhancing applications. Emission treatment technologies, cancer treatments, the production of fine chemicals and advanced electronics – all are made possible by our organometallic technology know-how.

FUEL CELLS & STATIONARY CATALYSTS
We are a leading player in emissions control catalysis for industrial plants and shipping, and supply state-of-the-art fuel cell catalysts for zero emission mobility and green hydrogen production.

ENERGY & SURFACE TECHNOLOGIES

POWERING THE FUTURE

COBALT & SPECIALTY MATERIALS
We are experts in sourcing, production and distribution of cobalt and nickel products. Our materials are at the heart of everyday products such as rechargeable batteries, tools, paints and tyres. Our recycling and refining processes, including our proprietary lithium-ion rechargeable battery recycling technology, give new life to cobalt and other metals.

RECHARGEABLE BATTERY MATERIALS
We are a pioneer in battery materials and a leading cathode material supplier for rechargeable lithium-ion batteries, giving added range and performance to electric vehicles, and longer battery life for portable electronics.

ELECTROPLATING
We are experts in developing metal-based coating products applied to printed circuit boards, jewelry and industrial components. Our precious metal electrolytes and processes are used in coatings for technical, functional and decorative applications.

ELECTRO-OPTIC MATERIALS
We are a leading supplier of material solutions for the space, optics and electronics sectors, including products for thermal imaging, wafers for space solar cells, high brightness LEDs and chemicals for fiber optics.

RECYCLING

GIVING NEW LIFE TO USED METALS

PRECIOUS METALS REFINING
We operate the world's most sophisticated precious metals recycling facility and we are experts in treating the most complex materials. Our refining and recycling technology gives used metals a new lease of life. Our processes help bring value to the circular economy.

PRECIOUS METALS MANAGEMENT
We supply and handle all precious metals, ensuring physical delivery by using both the output of our precious metals refineries and our network of industrial partners and banks. We offer our customers tailor-made solutions for delivering, hedging and trading precious metals.

JEWELRY & INDUSTRIAL METALS
We are experts in developing products and processes based on precious metals such as gold, silver and platinum. Our customers use these materials to make fine jewelry, coins, high-purity glass and industrial catalysts.
We provide our customers with sustainable and responsible sourcing of these metals and closed-loop recycling.

Umicore at a glance

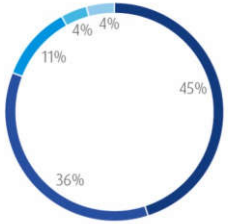
REVENUES
€3,239m*

R&D EXPENDITURE
7%
of revenue

ADJUSTED EBIT
€536m

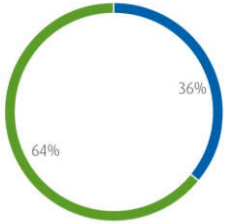
BASIC ADJUSTED EPS
€1.34
per share

REVENUES BY GEOGRAPHY



- Europe | 45%
- Asia-Pacific | 36%
- North America | 11%
- South America | 4%
- Africa | 4%

RESOURCE EFFICIENCY

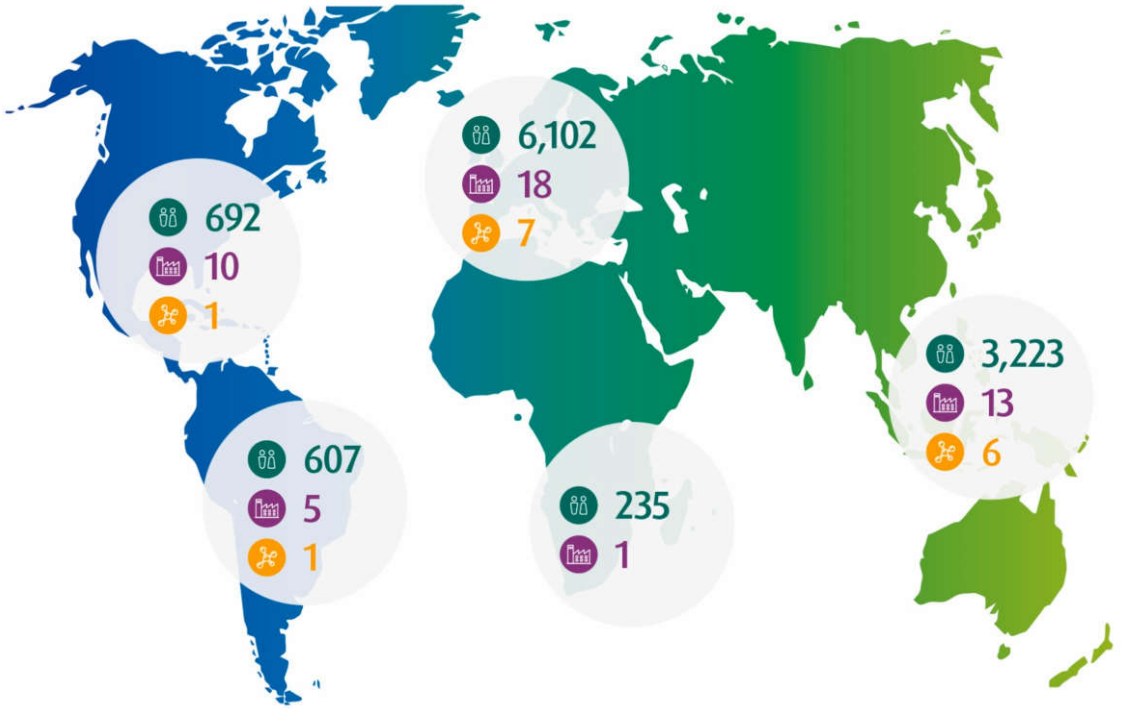


- Primary materials | 36%
- Secondary & end-of-Life materials | 64%

COLLEAGUES
10,859

PRODUCTION SITES
47

R&D | TECHNICAL CENTRES
15



* All references to revenues in this document refer to revenues excluding metals (all revenue elements – value of purchased metals).

Horizon 2020 successfully delivered

OUR OBJECTIVES

ECONOMIC PERFORMANCE

STRENGTHEN LEADERSHIP

WHY THEY ARE IMPORTANT

To position Umicore to thrive faced with the accelerating global megatrends of stringent emissions control, transport electrification and resource scarcity.

KEY PERFORMANCE INDICATORS

GROUP REVENUES ANNUAL GROWTH RATE 2015-20

+4.3%

DOUBLE THE EARNINGS

WHY THEY ARE IMPORTANT

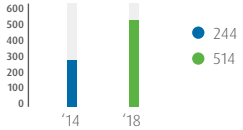
To secure Umicore's future success and sustainability by consistently investing in R&D to develop and market innovative products and services, and to ramp-up capacity to meet growing market demand for Umicore products and services.

KEY PERFORMANCE INDICATORS

OBJECTIVE ACHIEVED 2018

GROUP ADJUSTED EBIT

(€m)



2020 RECORD ADJUSTED EBIT

€ 536m

ROCE 15%+ TARGET

STEADY ROCE INCREASE THROUGH 2018; AVERAGE CAPITAL EMPLOYED NEARLY DOUBLED DURING HORIZON 2020

REBALANCE PORTFOLIO

WHY THEY ARE IMPORTANT

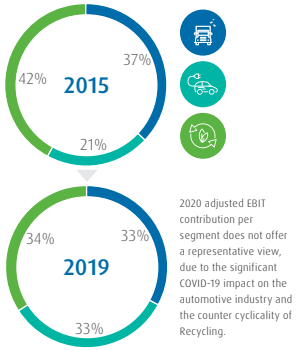
To sharpen Umicore's focus on the ambitious growth initiatives in clean mobility materials and recycling.

KEY PERFORMANCE INDICATORS

OBJECTIVE ACHIEVED IN 2019

ADJUSTED EBIT CONTRIBUTION

(%)



2020 adjusted EBIT contribution per segment does not offer a representative view, due to the significant COVID-19 impact on the automotive industry and the counter cyclicality of Recycling.

VALUE CHAIN AND SOCIETY

SUSTAINABLE SUPPLY

WHY THEY ARE IMPORTANT

To provide environmental and ethical sourcing benefits for comparatively scarce raw materials in order to foster sustainable success and growth.

KEY PERFORMANCE INDICATORS

FULLY ALIGNED WITH OECD DUE DILIGENCE GUIDANCE FOR RESPONSIBLE SUPPLY CHAINS OF MINERALS FROM CONFLICT-AFFECTED AND HIGH-RISK AREAS

SUSTAINABLE PRODUCTS & SERVICES

WHY THEY ARE IMPORTANT

To develop products and services that create sustainable value for our customers and society and increase resource security.

KEY PERFORMANCE INDICATORS

77%

OF TOTAL REVENUES FROM CLEAN MOBILITY AND RECYCLING

MUCH OF THE REST IS FROM SOLUTIONS SUCH AS IMPROVING CONNECTIVITY OR REDUCING ENERGY CONSUMPTION

SUSTAINABLE DEVELOPMENT GOALS

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

3 GOOD HEALTH AND WELL-BEING

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

	ECO-EFFICIENCY	GREAT PLACE TO WORK		
OUR OBJECTIVES	EFFICIENT OPERATIONS	SAFETY	HEALTH	PEOPLE ENGAGEMENT
WHY THEY ARE IMPORTANT	To make sustainability an irrefutable competitive advantage for Umicore.	To offer a safe workplace and embed a safety culture in our workforce.	To monitor, manage and protect from exposure risks.	To ensure Umicore's status as an employer of choice in all the regions where we operate.
KEY PERFORMANCE INDICATORS	ENERGY CONSUMPTION -17% vs 2015 benchmark, adjusted for intensity	NUMBER OF ACCIDENTS 49	EXCESS READINGS* 1.6% * based on internal target values	TOTAL EMPLOYED 10,859 RETENTION RATE 96%

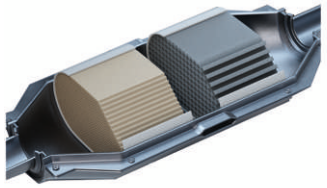
SUSTAINABLE DEVELOPMENT GOALS

OUR MATERIAL ISSUES AND STAKEHOLDER ENGAGEMENT

The Horizon 2020 strategy represents a strong focus on materially important topics for Umicore in the coming years: Economic performance, Value Chain and Society, Eco-Efficiency, and Great Place to Work.

Umicore applies a localized approach to stakeholder engagement and manages stakeholder relationships in line with our decentralized approach to unit management.

Global trends



We reduce harmful industrial and vehicle emissions to provide cleaner air

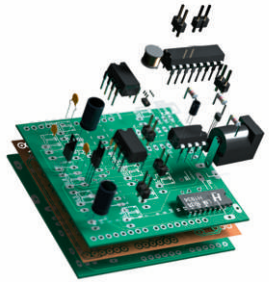
CATALYSIS

We are a technology leader in emission control catalysts for light-duty and heavy-duty vehicles and for all fuel types

We deliver clean energy storage solutions and power the vehicles and technologies of the future

ENERGY & SURFACE TECHNOLOGIES

We are an innovative leader in cathode materials for lithium-ion batteries in electromobility, portable electronics and energy storage



We contribute to resource stewardship by recycling metals and end-of-life products in a closed loop

RECYCLING

We are a technology leader in recycling complex waste streams containing precious metals and other valuable materials

CLEAN AIR

Automotive emission legislations and public advocacy for clean air continue to increase. In Europe and in Asia, legislators are developing clean mobility policies to reduce SOx, NOx and CO2 emissions and strengthening emission standards to push industry to design innovative emission control systems, including catalysts and catalytic filters.

VEHICLE ELECTRIFICATION

The transport sector is the fastest growing source of global greenhouse gases, with the largest share from road transport. Electrified transport is essential to meet ambitions of reduced emissions and clean air by combining energy efficient systems with renewable energy sources. Incentives favoring electric vehicles are increasing globally.

RESOURCE SCARCITY

Developing technologies, such as increasingly powerful rechargeable batteries to reduce the environmental impacts of society, increases the demand for specialty and precious metals. Mining metals from primary sources has significant environmental impacts, including a high carbon footprint. Easy-to-mine deposits are increasingly scarce and ore bodies poorer.

Taking on the big challenges

ADDRESSING THE WORLD'S MOST PRESSING ISSUES

Umicore is working to meet the growing demand for clean mobility and clean air. We are a leading producer of catalysts and catalytic filters used in emission abatement systems for light and heavyduty vehicles, on-road and off-road. Our catalysts and particulate filters convert pollutant emissions into harmless gases and trap the particulate matter, enabling our customers to meet present and future environmental standards. Our products have prevented hundreds of million tonnes of harmful pollutants from being emitted into the air.

We strive to deliver environmentally friendly technologies that ensure resource efficiency and sustainability in industry's supply chain.

Umicore is working to deliver energy efficiency technologies, optimize resource use and reduce pollution. We are a leading producer of cathode materials for lithium-ion batteries, which are key in determining the power and energy density of rechargeable batteries, to maximize driving distance of electrified vehicles. Our nickel-manganesecobalt (NMC) cathode materials are a reference in the industry. To meet growing market demand, we announced significant investments from 2017 to 2019 to further increase our production of NMC cathode materials.

We provide solutions for a cleaner and more resilient future.

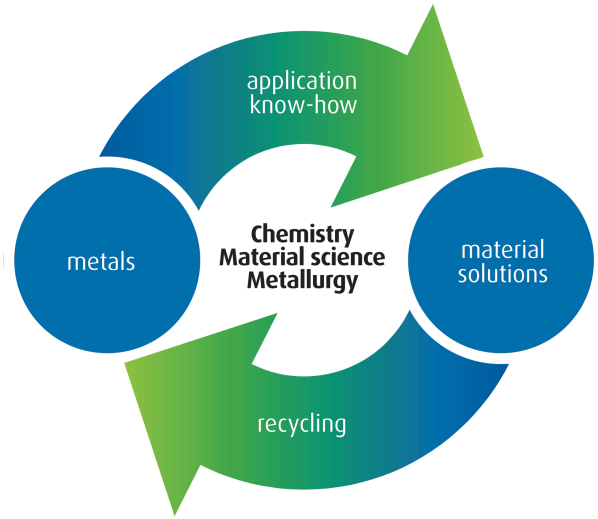
Umicore fosters sustainable growth and champions its circular business model. Our Hoboken facility is the world's largest and most complex precious metals recycling operation, processing over 200 types of raw material – from mining and industrial residues to "End-of-life" materials, such as electronic scrap and spent rechargeable batteries – and recovering over 20 different metals. As part of our closed-loop business model, most of our business units recycle industrial residues from customers. Umicore is growing its capacity to cater to rising demand.

We deliver environmental and ethical sourcing benefits, and increased resource security.

Umicore is determined to be a preferred employer wherever we operate and is committed to empowering women for leadership. We are a growing business with presence in markets around the world and have won Top Employer status for our sites in Europe and Asia. We think this is because we strive to create a collaborative environment, ensuring meaningful work and career-long learning and development opportunities. This means our employees have an average length of service of 10 years, and that group-wide we have a 96% retention rate.

We all share the same values, we all respect one another and we are all working towards making materials for a better life.

Business model



We transform metals into functional materials and recycle them to make new materials.

Our products deliver solutions for cleaner air and increased e-mobility, while we turn waste metals into a resource.

Our ethical sourcing and closed-loop approach distinguish us from our competitors.

MATERIAL SOLUTIONS

We transform metals into functional materials that are integrated into products by our customers, usually companies making products for consumer or industrial use. Our catalysis materials provide clean air and health solutions, while our battery materials give added range and performance to electric vehicles and increased battery life to portable electronics. Our materials are also inside computer motherboards and in the fiber optics and satellites that keep you connected.

APPLICATION KNOW-HOW

We take metal and apply our expertise in metallurgy, chemistry, engineering and materials science skills, we add our product, process and market know-how and offer solutions that enable our customers to develop better, more sophisticated and safer products.

RECYCLING

Metals are an outstanding ingredient for sustainable materials production because they can be recycled infinitely without losing any of their chemical or physical properties. This is one of the foundations of our business model.

A high volume of our metals come from recycled sources – production scraps and residues from customers and other industries, and end-of-life materials through our closed-loop services. Our recycling operations can recover 28 metals. Our precious metals recycling operation in Hoboken, Belgium, is built to recycle and refine the most complex materials and to recover a broad spectrum of metals. Using our Sustainable Procurement Charter and our framework for Cobalt, we purchase the remainder of our metal supplies from sustainably and ethically vetted primary sources.

Many factors – from raw materials supply to talent retention – underpin our business model. We manage these resources and relationships for the long term.

SKILLS AND EXPERTISE

Our employees contribute their expertise and commitment to Umicore. Metallurgy, chemistry, engineering and materials science skills are critically important in our key growth areas: recycling and materials for clean mobility.

We are growing in Asia and in Europe and this means a greater focus on attracting talent for positions ranging from production operators, engineers, research scientists, to commercial and administrative functions.

UMICORE TECHNOLOGY

Technology is at the core of our success. We are committed to innovation and research and development (R&D) are key for innovation-led growth. We develop a significant part of our technology using Umicore R&D findings and invest 6% of our revenues in R&D. Umicore also develops technology in with our industrial or academic partners and we protect our intellectual property with patents.

UMICORE OPERATIONS

Our operations are carried out in recycling plants, specialized chemicals and materials production facilities, offices and research centers, in 30 countries, often close to our customers to support collaboration and to meet their specific product requirements. We aim for excellence in environmental and social performance in all our operations. We seek to minimize the impact of metal emissions, generate improved material and energy efficiency and offer a safe and healthy workplace. Operational excellence is important both in securing our license to operate and in helping to make Umicore more competitive.

MAXIMUM EFFICIENCY

Input materials such as fuels and chemicals are essential to Umicore operations and are purchased using our Sustainable Procurement Charter framework. In most of the countries where we operate and given the specific nature of many of our operations, there is limited choice in terms of energy sourcing. For this reason, our priority is to maximise energy and auxiliary materials efficiency.

INVESTMENT & FUNDING

Investing in Umicore is an investment in producing materials for a better life – our mission – and supporting our strategy. Umicore has a proven track record of funding strategic growth initiatives from the cash-flow generated by our own operations. Indebtedness is kept at reasonable levels, as we aim to retain an investment-grade credit status at all times.

PRODUCTS & SERVICES

Our ambition is to produce materials for a better life.

Umicore products can be found in applications that make day-to-day life more comfortable and contribute to a cleaner, more efficient world. We work closely with our customers to develop customized materials or processes that consider health and safety, recyclability, cost efficiency, waste reduction and energy efficiency both in our own facilities and in the value chain.

We continuously search for innovative solutions for our customers and work to meet the needs of a rapidly changing and more demanding world.

THE UMICORE WAY

Umicore is committed to the principles of sustainable development. We aim for excellence in environmental and social impact and strive to offer a safe and healthy workplace. We offer solutions to global challenges: our recycling services address growing resource scarcity and reduce industrial waste and emissions. Our catalysts help reduce air pollution, while our rechargeable battery materials help make electrified transportation a reality. Umicore offers high quality employment with competitive salaries, training and development opportunities and long-term employment prospects.

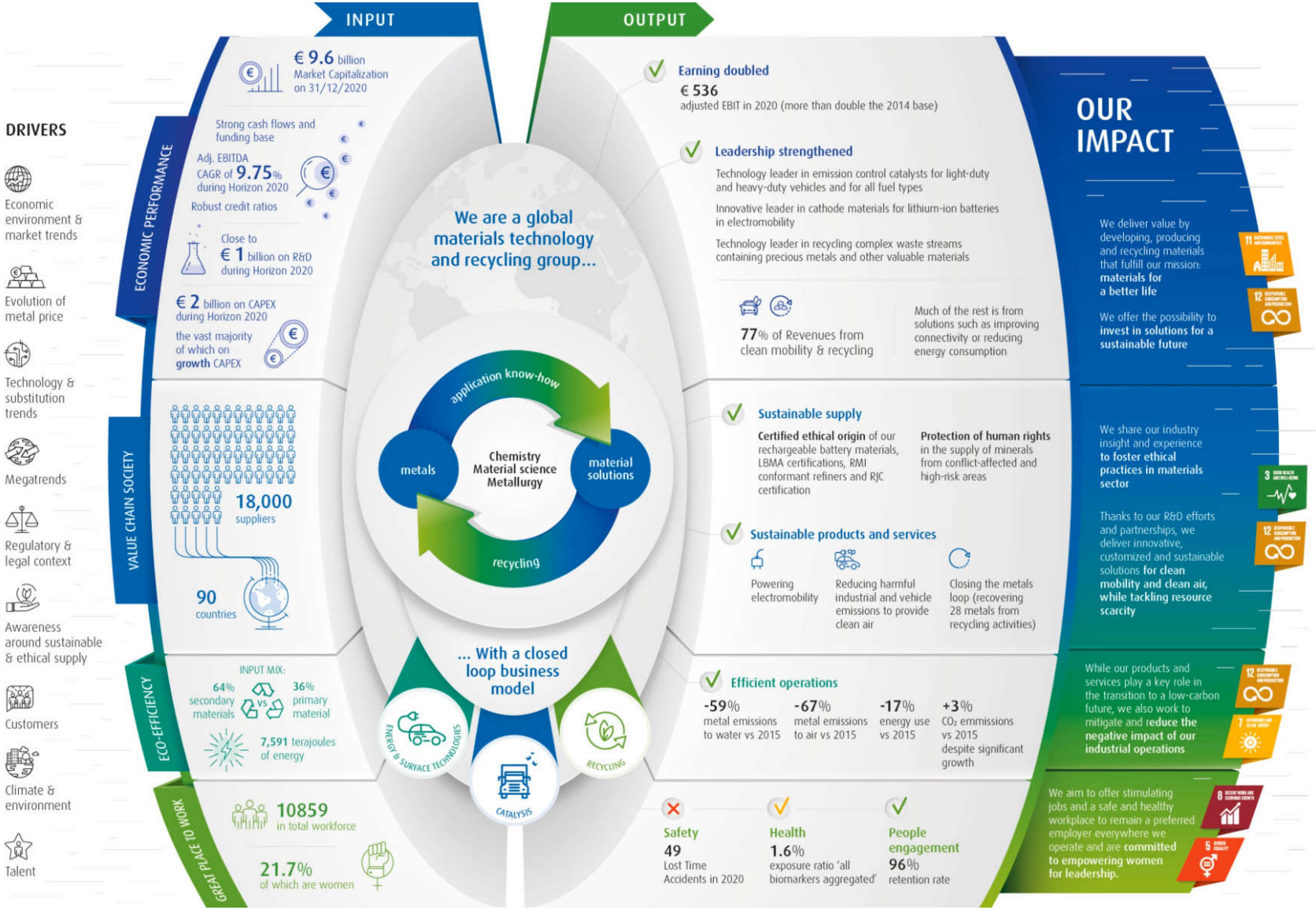
Each site aims to be considered as a preferred employer locally. Umicore supports the principle of collective bargaining and signed a Global Framework Agreement on Sustainable Development with the IndustriALL Global Union.

SUPERIOR GROWTH & RETURNS

Umicore aims to generate a return on capital employed of more than 15%. One of our Horizon 2020 goals is to double our earnings, mainly through growth in recycling and materials for clean mobility. While the primary focus is on organic growth, acquisitions are also considered if they fit the strategy and can add value for shareholders.

Our closed-loop business model delivers economic, social and environmental value for all our stakeholders.

DELIVERING VALUE



CEO and Chairman's review

MARC GRYNBERG & THOMAS LEYSEN ON 2020, REACHING HORIZON 2020 AND THE OUTLOOK FOR UMICORE

MARC GRYNBERG CEO
& THOMAS LEYSEN CHAIRMAN

Virtual meeting between Marc Grynberg and Thomas Leysen

The pandemic outbreak in 2020 brought sudden challenges to our living and working environment. Our priority was immediately the wellbeing of our employees and the communities in which we operate.

We would like to thank Umicore employees for their spirit, solidarity and strength during the pandemic.

We would also like to express our gratitude to all the Umicore medical staff and employees who worked hard under difficult circumstances to make sure we could be safe, first and foremost, and keep our operations up and running.

The challenge has been tremendous and the effort to get through these times has been very demanding.

Despite the severe disruption brought on by the COVID-19 pandemic, Umicore posted its strongest financial performance ever in 2020. This reflects the merits of our strategy as well as a stellar performance in Recycling, which was boosted by an exceptional price environment in platinum group metals, and the resilience of our business operations overall. It also reflects the agility and engagement of our teams to adapt to challenging conditions and keep serving our customers with diligence.

Revenues for the full year were down 4% at € 3.2 billion while adjusted EBITDA increased 7% to € 804 million, with adjusted EBIT up 5% at € 536 million, thereby exceeding the Horizon 2020 goal of doubling earnings in five years' time. Return on Capital Employed was 12.1%, well above our cost of capital despite continued growth investments.

Umicore generated a solid performance in the first half of 2020, with a strong result in Recycling offsetting the impact of the automotive industry downturn on the results of Catalysis and Energy & Surface Technologies. The second half of the year was marked by a strong sequential improvement in the Group's revenues and earnings driven by a sharp recovery in Catalysis as well as continued robust operational performance and buoyant metal prices in Recycling. Umicore's response to the COVID-19 pandemic included some temporary plant closures in the spring and certain projects, development or qualification programs incurred delays due to government-imposed lockdown measures or travel restrictions. The vast majority of operations, however, were kept on stream throughout the year. While we pursue ambitious growth programs, we further streamlined our operations by closing plants in the USA at Tulsa (Automotive Catalysts) and Wickliffe (Cobalt & Specialty

Materials). This is largely reflected in the 2.7% total headcount decrease to 10,859 at the end of 2020.

In **Catalysis** revenues decreased, albeit less than the global car market, thanks to Umicore's strong market position in gasoline technologies for light-duty vehicles, particularly in China and Europe, as well as higher sales of heavy-duty diesel and fuel cells catalysts. Revenues in **Energy & Surface Technologies** reflected the impact of the pandemic as well as lower sales of cathode materials for high-end portable electronics and energy storage applications. Sales of cathode materials for EV batteries grew broadly in line with EV battery demand. **Recycling** had a stellar performance due to high metal prices, high activity levels despite the COVID-19 crisis and favorable trading conditions.

Investments in strategic growth projects continued in 2020 with capital expenditure totalling € 403 million, compared with € 553 million in 2019. This reduction reflects the decision taken shortly after the start of the COVID-19 outbreak to postpone selected investment projects pending more clarity on market outlook, except for those related to safety, health and environment and strategic growth programs. Considering the continued investment in Rechargeable Battery Materials' greenfield plant in Poland, Energy & Surface Technologies accounted for close to two thirds of the Group's capital expenditure.

Our operations generated cashflows of € 603 million, up from € 549 million in 2019, enabling Umicore to continue funding its ambitious growth programs. Our balance sheet is strong with net financial debt of € 1,414 million at 31 December 2020, corresponding to 1.76 times adjusted EBITDA, below the ratio of 1.92 at the end of 2019. In the first half of the year, we further diversified our sources of funding by completing a € 500 million convertible bond offering due in 2025 and by concluding a € 125 million 8-year loan with the European Investment Bank.

One of the ambitions defined in our Horizon 2020 strategy was to turn **sustainability** into a greater competitive edge. In 2020 Umicore achieved a Platinum EcoVadis rating, placing us among the top 1% of our industry peers in the EcoVadis global network of over 65,000 rated companies.

Our **safety** performance made encouraging improvements in 2020 compared to previous years. The pandemic has led us to pay closer attention to detail and we are convinced this has had a positive impact on safety. However, in December, a fatal accident occurred at Umicore's Cobalt & Specialty Materials site in Subic, the Philippines. This tragic event shows that the journey to make Umicore a zero-accident workplace is far from completion, even in sites with an outstanding safety record: Subic had operated more than 13 years without LTA. Overall, the group recorded 49 lost time accidents in 2020 compared with 90 in 2019.

Our efforts in 2020 to make Umicore a **great place to work** focused on our response to the COVID-19 pandemic, with the protection of employees' health remaining our top priority. We introduced strict hygiene and other precautionary measures starting with our facilities in Asia, which were the first to be affected. Measures were quickly tightened at all Umicore sites worldwide, with the aim of reducing the transmission risk within the organization, keeping our employees healthy and offering them a safe workplace. Umicore delivered surgical masks for private use to the homes of all employees worldwide at a time when they were unavailable on the open market.

We have seen a gradual increase in women in management and non-management positions although we have not met our Horizon 2020 diversity goals. Our commitment to increase gender diversity at all management levels is intact and we have adapted our recruitment programs accordingly. In 2020, the share of women recruited into management positions increased to 30%.

In terms of the **environmental profile of our operations**, our focus continues to be on minimizing the impact of our production activities. For several decades, the blood levels of children living close to the Umicore recycling plant in Hoboken, Belgium, have been monitored twice a year by the authorities. The sudden rise in the lead in blood readings of the children living close to the plant in July 2020 came unexpectedly. A combination of external factors, including exceptional weather conditions and the children's increased exposure from spending several months at home due to the COVID-19 lockdown measures, contributed to the elevated readings. In addition to taking the necessary measures to return to the positive trend of recent years, and although the root cause investigation showed no major source of lead emissions in our plant, Umicore is working on creating a green zone, to increase the distance from the residential area, by buying the houses closest to the plant. In doing so, Umicore aims at a structural and sustainable solution to this historical issue. A € 50 million provision was booked to cover the estimated costs of establishing the green zone.

Our **eco-efficiency** is measured against our Horizon 2020 goal of performing equally well or better than in 2015, with values adjusted for activity levels. The impact of our operations was substantially reduced, with metal emissions to water and air down by 59% and 67%, respectively, compared with 2015 levels. Energy consumption was slightly higher than in 2019 in absolute value, but adjusted to 2015 activity levels, energy consumption was down 17% as a result of significant efficiency improvements.

The growing **added value of our sustainable business** is demonstrated by over 60% of secondary and end-of-life materials in our input mix. Future sourcing for catalysts, fuel cells and batteries alike, will only be possible by closing the loop and recovering the scarce metals used in these products when they reach end of life. Umicore's unwavering pursuit of ethical raw materials supply is the driver of our **sustainable sourcing**. Umicore remains the first cathode material producer to offer certified materials from a clean and ethical origin to its customers.

Our work with the **Global Battery Alliance**, of which Umicore was a founding member in 2017, continues. In addition to the battery passport initiative to share reliable information and data to consumers about the level of sustainability of a battery, the Alliance is developing a standard for responsible artisanal mining in the Cobalt Action Partnership to address the socio-economic risks linked to cobalt mining activities in the Democratic Republic of Congo (DRC) and to eradicate child labor. In 2020, the Alliance created a collaborative fund for the Prevention of Child Labor in Mining Communities**,** seeking to strengthen cobalt mining communities in the DRC and tackle the root causes of child labor. The Fund, administered and programmed by UNICEF, works in cooperation with local government entities and civil society organizations in the DRC. Umicore is proud to be the first contributor to the Fund.

Many of the sources of turbulence in 2020, including the impact of COVID-19 and its impact on industry, particularly in the automobile sector, remain unresolved and limit visibility. Umicore adjusted with agility to the challenges caused by the pandemic. We implemented measures to protect employee health, cashflows and strengthen liquidity, and we reassessed our production footprint and the carrying value of certain assets. We are convinced that these steps strengthened our position in an uncertain environment and we will continue to remain agile in the face of evolving market dynamics.

The push towards **clean mobility** is stronger than ever, with various governments including green recovery measures and stimuli for cleaner mobility in their crisis recovery packages, in particular in Europe and China. In this context, we chose to move forward with our ambitious growth strategy in cathode materials for **electrified vehicles** and made significant progress with the construction of our greenfield plant in Nysa, Poland, which on commissioning by the end of the first half of 2021, will be the first industrial-scale cathode materials plant in Europe.

In addition, we are moving ahead with our growth plans in fuel cell catalysts for automotive applications and with the expansion of light-duty and heavy-duty catalyst production in China, to cater to the growing demand for our technologies as emission norms continue to tighten. In terms of addressing **resource scarcity**, Umicore continues to invest to improve the environmental and safety performance of the Hoboken recycling plant.

Technology innovation remains vital to our success and R&D expenditure increased by 6% in 2020 to € 223 million, equivalent to 7% of our revenues. The majority of this increase came from higher R&D spend on new product and process technologies in Rechargeable Battery Materials.

We are proud of our performance and results in 2020 and confident that our long-term growth strategy will continue to deliver value.

The global economy is showing signs of recovery from the severe downturn caused by the COVID-19 pandemic. However, a high degree of uncertainty remains with respect to the evolution of the pandemic and the pace and speed of the recovery in different regions. Against this backdrop and under the assumption that COVID-19 will not result in additional material or protracted disruptions to the economy or Umicore's operations, Umicore expects to achieve substantial growth in earnings in 2021, with growth in all Business Groups.

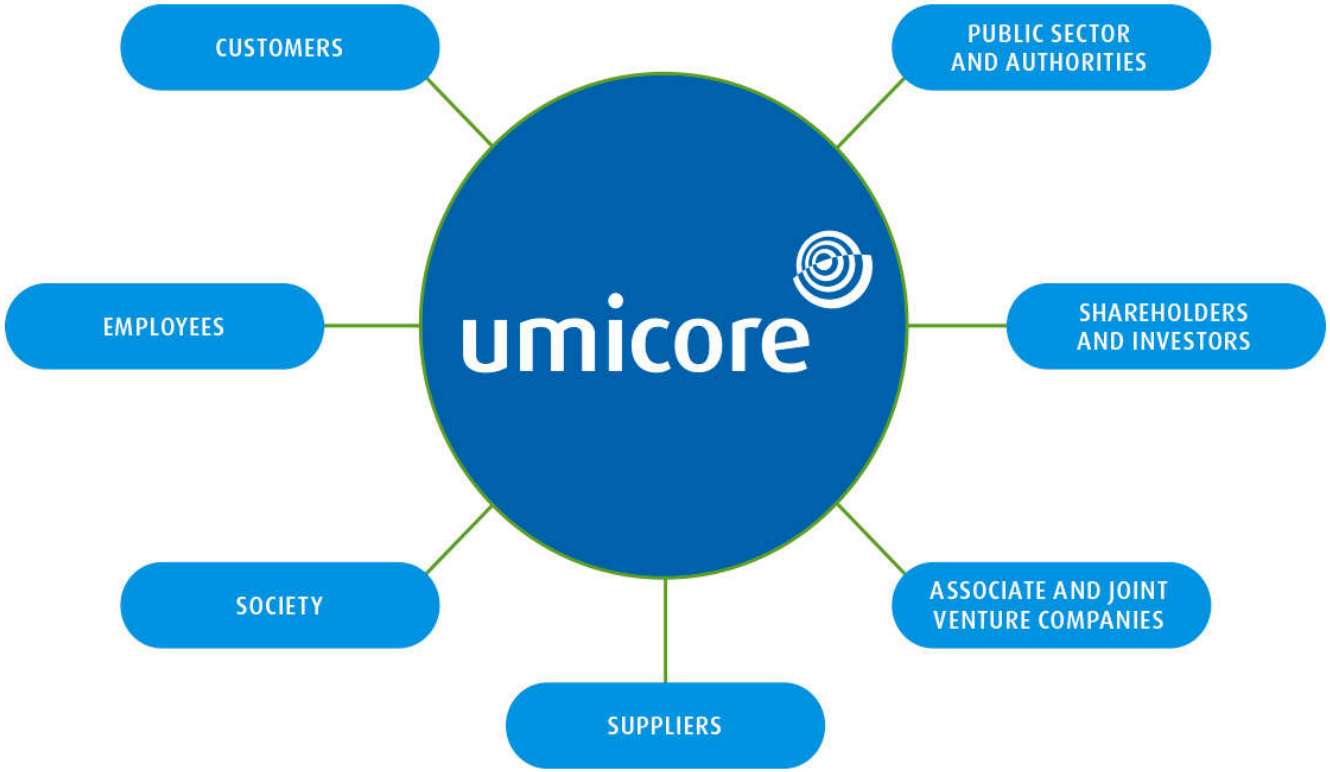
We have successfully completed our Horizon 2020 strategy and have reached new heights.

Everything is in place for Umicore to keep thriving – talented teams, a promising innovation pipeline, highly supportive megatrends and the financial means to fund our ambition. With all this in place, we feel that it is an auspicious moment to think about the next chapter of Umicore's success story and start preparation for the CEO succession. The Supervisory Board will take the time to identify a successor who will build on these strong fundamentals and bring Umicore to its next stage of development and Marc will assist the Board with a smooth transition in due course.

This year's annual report provides additional clarity on the value Umicore brings to society, as we prepare to move into a new strategic phase as of 2021 and marks our first report in our transition to "digital first" communications.

We would again like to express our thanks to all the stakeholders for their contribution to our performance in the face of the unprecedented conditions in 2020, most especially to all Umicore employees for their spirit and their prompt, determined and effective response to the COVID-19 threat.

MARC GRYNBERG CEO
& THOMAS LEYSEN CHAIRMAN



Stakeholder Engagement

Umicore is a publicly listed company. As such, we interact with many parties who have an interest in the way we conduct business. The relationship that we foster with these parties or stakeholders has a direct impact on our success.

Stakeholder engagement at Umicore is based on a localized approach whereby all sites are required to identify their respective stakeholders and establish suitable ways of engaging with them. In many cases, such as the dialogue with customers and suppliers, the stakeholder relationships are primarily managed by the business units themselves, in line with our decentralized approach to unit management.

The management board receives feedback from stakeholders in several ways, ranging from direct feedback from visits to customers, suppliers, employees and investors, to information provided by the business units, departments or workers' representatives during their regular briefings to senior management. Other forms of input include periodic employee survey results.

The Horizon 2020 strategy represents a strong focus on what is of material importance for Umicore through 2020. The development of the strategy has involved a specific stakeholder approach, described in the materiality assessment process in this chapter.

Umicore is an active participant in various industry associations through which we engage with policy makers to contribute to a better understanding of industry-related issues. These associations are also important platforms for Umicore to contribute to broader, industry-wide action on sustainable development.

On a less formal level, members of our senior management are often called upon or volunteer to participate in public forums to discuss our business strategy and sustainable development approach. Such events provide the opportunity to interact with various groups including business leaders, academics and civil society.

Umicore's main stakeholder groups are highlighted and have been categorized in broad terms, using generic stakeholder categories that apply to most industrial organizations. Also shown are the nature of the transactions that occur and a brief description of the dialogue between Umicore and the stakeholders.

CUSTOMERS

Umicore materials can be found in a variety of applications that deliver solutions for cleaner air and increased e-mobility. Umicore's unique closed-loop services turn waste metals into a resource. To be the preferred partner of our customers, we work closely with them to develop, produce and recycle metal-related materials for material-based solutions tailored to their needs.

We provide advanced products that are built on our customers' specific performance, environmental and sustainable sourcing needs, including development of bespoke solutions when needed. Beyond this customer-oriented approach, we provide close collaboration across all regions to deliver a sustainable and secure supply of high-quality products and services. Umicore has an international customer base and the presence to support them in both growing and established markets. Our high investments in R&D provide advanced and efficient production and process technologies that enable our customers to meet the most stringent sustainability demands and ambitions.

Ongoing interaction with customers is managed by the business units. In addition to this close contact, all business units have a customer feedback process to periodically gauge customer satisfaction.

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Countries with Umicore customers

EMPLOYEES

Umicore employs 10,859 people worldwide. Because our employees are key to our success, we invest significant resources in ensuring we are an employer of choice in all the regions where we operate. In 2020, Umicore paid a total of € 798 million in salaries and other benefits to the employees of fully consolidated companies, of which € 97 million in social security payments.

Umicore is committed to providing competitive salaries and working conditions to its employees and to providing occupational and professional training opportunities. Employees are expected to adhere to the principles and policies outlined in The Umicore Way and Code of Conduct. Open dialogue is promoted within the company and includes an opinion survey every 3 years.

Umicore respects the principle of collective bargaining wherever it is requested. While such practice is commonplace in Europe, in other locations collective bargaining mechanisms and trade unions may be less common or face local legal restrictions. In 2019, Umicore renewed the sustainable development agreement with the international union IndustriALL on the global implementation of its policies on human rights, equal opportunities, labor conditions, ethical conduct and environmental protection. The agreement allows trade unions to participate constructively in the pursuit of these objectives. A joint monitoring committee composed of both parties oversees the implementation of the agreement.

Company-wide communication channels include intranet and company and business unit newsletters. Umicore operates a Group-wide learning management platform called "MyCampus".

€798m

In salaries & other benefits

SOCIETY

Umicore can only continue operating if it has the license to do so from society and we the utmost to operate in a way that promotes sustainable development, going beyond the legally defined boundaries set for all companies. We set our own standards, applicable across the Group, often surpassing the legislative demands in many areas where we operate. Umicore also strives to develop materials that enhance quality of life and specifically addressing certain critical environmental or societal challenges.

Contact with the communities where Umicore operates is the most direct way that we interact with society. Open and transparent dialogue with such communities is an integral part of our stakeholder engagement. Through employment, Umicore participates in the generation of wealth in the areas where it operates. Although wealth generation is an obvious benefit, the way in which this wealth is generated is also of great importance. We strive to be top employer wherever we operate. ivil society groups periodically declare a stake in our operations and the way we do business. Umicore welcomes such interest and attempts to engage openly and constructively.

Umicore makes voluntary contributions at site and Group-level to a range of charitable causes. We manage Group-level engagement efforts through a Group Donations Committee that has the mandate of engaging with civil society groups and determining the extent of partnerships. For information on these initiatives in 2020 see Giving Back to Society.

€1.5m

Donated to charitable causes

SUPPLIERS

Umicore operates through 3 business groups on 5 continents. These business groups not only require materials to make their products but also energy, transportation and a range of other services. Overall, Umicore has over 18,000 suppliers across over 90 countries. These suppliers benefit from our presence as a customer: in 2020, Umicore paid these suppliers € 18.7 billion (including the metal content of raw materials).

We are engaged in a constant dialogue with our suppliers to define technical specifications and to ensure mutually acceptable terms and conditions for continued partnership, such as prompt and uninterrupted delivery of materials/services. The business units are responsible for the purchase of raw materials while the corporate Purchasing and Transportation department works to ensure that transportation, energy and other provisioning needs are met.

Our approach is shaped by our Sustainable Procurement Charter. This charter is complemented by specific approaches or frameworks for some critical raw materials. Our Horizon 2020 strategy includes an objective on sustainable supply that builds on the experience gained through our previous objective on sustainable procurement. For information, see Value Chain & Society.

€18,719m

Paid to suppliers worldwide

ASSOCIATE & JOINT VENTURE COMPANIES

Umicore has investments in various business activities over which it does not exercise full management control. Associate companies are those where Umicore has a significant influence over financial and operating policies, but no control. Typically, this is evidenced by ownership of between 20% and 50% of the voting rights, while joint ventures usually entail a 50:50 split in ownership and control. Joining forces is a way to speed up technological developments or gain access to specific markets.

Where management control is not exercised by Umicore, we are able to guide and control the management and monitor business developments through representation on the board of directors. Although we cannot impose our own policies and procedures on any associate (or indeed any joint venture where we do not possess majority voting rights), our expectations that the operations be run in accordance with the principles of the Umicore Way are clearly communicated.

Umicore is rigorous in safeguarding any intellectual property that is shared with associate or joint venture partners. For a full list of associate and joint venture companies, see note F17.

4

Associate companies

SHAREHOLDERS & INVESTORS

Umicore strives to provide timely and accurate information on its strategy, performance and prospects to its shareholders. In 2020, the macro-economic uncertainty brought on by the COVID-19 pandemic significantly affected the financial markets, driving extraordinary volatility on the stock exchanges. Against this background, Umicore's Investor Relations team focused on communicating Umicore's business continuity plan and actions to mitigate financial and operational headwinds. This involved the publication of several updates on the impact of COVID-19 throughout the year as result of the rapidly evolving market environment. As well as publishing press releases and the Annual Report, Umicore's management and Investor Relations team communicated in 2020 with investors during virtual roadshows in North America, Europe and Asia, as well as through virtual investor conferences, webcasts, conference calls and the annual general meeting of shareholders. Main topics covered included the description of the impact of COVID-19 on Umicore's operations, the liquidity position, the shareholder remuneration, investment plans and outlook. Umicore's disclosure covers both financial and Environmental, Social and Governance (ESG) performance and we regularly engage with our investors on those topics.

Umicore has a high free float with a broad base of international shareholders which at the end of 2020 were primarily situated in Europe and North America. The overview of shareholders holding voting rights equal to 3% or more and analyst research and consensus information can found on our website under Share Information. 22 brokerage firms cover and publish equity research notes on Umicore, reflecting strong and global interest from the financial market in Umicore's equity story and growth opportunities.

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Management roadshows

PUBLIC SECTOR & AUTHORITIES

In 2020 Umicore engaged with a variety of stakeholders to introduce the technology fundamentals of the material solutions we offer to our customers. Umicore coordinates and fosters a range of interactions in the countries and regions where we are operationally active. We focus on policy development supporting the introduction of clean mobility supporting the global energy transition to reduce climate impact. In addition, we contribute to a better understanding and faster implementation of circular economy models in the applications related to Umicore activities. Continuous innovation is crucial to improve our products and services and therefore we also engage in national and international programs and initiatives that develop longer-term technology roadmaps serving as a basis for collaborative funding opportunities. As a result, Umicore was approved as a partner in the first Important Project of Common European Interest for Batteries (IPCEI) starting from early 2020. Part of the innovation and upscaling activities for battery materials and battery recycling in Belgium, Germany and Poland will be funded by the national governments. Umicore is mindful of the sensitivity of taking positions on issues of public interest and has developed guidelines to do so responsibly through the industry groups to which we are affiliated. Well-developed science and facts form the basis of the opinions and position we take.

Umicore paid € 79 million in taxes on our 2020 operations and with our employees contributed € 97 million in social security payments. Umicore regularly enters scientific partnerships with public institutions such as universities with the primary aim of furthering research projects or providing expert advice on technology directions. Partnerships and research grants are occasionally contracted with public organizations. As a matter of policy, Umicore does not make donations to political parties or organization.

€79m

Taxes paid on our 2020 operations

KEY MEMBERSHIPS

A3M (L'Alliance des Minerais, Minéraux et Métaux); Agoria (Belgian multi-sector federation for the technology industry); American European Community Association (AECA); Bebat; Belgian Indian Chamber of Commerce and Industry (BICC&I); Belgian industrial Research and Development (BiR&D); Belgium-Japan Association & Chamber of Commerce (BJA); Eurometaux (European Non-Ferrous Metals Association); European Industrial Research Management Association (EIRMA); European Round Table of Industrialists (ERT); ETION; Federation of Belgian Industrial Energy Consumers (FEBELIEC); Flemish Aerospace Group (FLAG); Flemish Network of Enterprises (Voka); Flanders-China Chamber of Commerce (FCCC); Global Legislators for a Balanced Environment (GloBE EU); Metalle pro Klima (WirtschaftsVereinigung Metalle); TransAtlantic Business Council (TABC); Verbond van Belgische Ondernemingen (VBO); Vlaamse Technische Kring (VTK); World Economic Forum (WEF).

Associacao dos Fabricantes de Equipamentos para Controle de Emissoes Veiculares da América do Sul (AFEEVAS); Association for Emissions Control by Catalyst (AECC); Catalyst Manufacturers Association, Japan (CMAJ); Committee of Vehicle Emission Control in China (CVEC); Emission Controls Manufacturers Association, India (ECMA); European Precious Metals Association (EPMF); Hydrogen Council; Hydrogen Europe; Manufacturers of Emission Controls Association (MECA); Verband der Automobilindustrie (VDA); Verband der Chemischen Industrie e.V. (VCI).

Battery Europe Partnerhip Association (BEPA); Cobalt Institute; Cobalt REACH consortium; Deutsche Gesellschaft für Galvano- und Oberflaechentechnik (DGO); Energy Materials Industrial Research Initiative (EMIRI); European Association for Battery, Hybrid and Fuel Cell Electric Vehicles (AVERE); Nickel Institute; Nickel REACH consortium.

European Battery Recycling Association (EBRA); European Electronics Recyclers Association (EERA); European Precious Metals Federation; Fachvereinigung Edelmetalle (German Precious Metals Association); Global Battery Alliance (GBA); International Platinum Group Metals Association (IPA); International Precious Metals Institute; Minor Metals Trade Association; Responsible Jewellery Council (RJC); The European Association of Advanced Rechargeable Batteries (RECHARGE); The International Platinum Group Metals Association (IPA); The London Bullion Market Association (LBMA); The London Platinum and Palladium Market (LPPM); Vereniging Nederlandse Metallurgische Industrie (VNMI).

Advocacy for impact

We focus on supporting clean mobility for the global transition towards reducing climate impact and on supporting a better understanding and faster implementation of circular economy models related to Umicore activities.

We also engage in national and international programs and initiatives that develop longer-term technology roadmaps.

Well-developed science and facts form the basis of the opinions and positions we take.

CORPORATE

The World Economic Forum's Global Battery Alliance was launched in September 2017. This global public-private partnership comprises over 40 international organizations to establish a sustainable battery value chain to power the decarbonization of the world's energy and transport systems. Umicore chairs the Executive Board. As part of this initiative we maintained a strong effort toward ensuring that the cobalt extraction industry is free of child labor and that alternative livelihoods for cobalt-dependent households are made available. In addition, we contributed to a new WEF working group (Circular Car Initiative) focusing primarily on policy recommendations to make a circular economy model for batteries viable in the future. This work also explored also the impact of a second life battery market, material passports and focused on design-for-recycling concepts in the future automotive and transportation business models.

CATALYSIS

As concerns on air quality continue to increase, legislation aiming to minimize the impact of transportation using internal combustion engines on air quality is becoming increasingly stringent. As a producer of key components of catalytic emission control systems, Umicore is a member of various industry associations worldwide through which, in close collaboration with automotive engineering companies, we aim to contribute significantly to the portfolio of ultra-clean transportation options of the future using the most advanced emission control technologies. We also engage with authorities responsible for air quality impact as a result of maritime transport to further increase the emission purification of ships and vessels.

ENERGY & SURFACE TECHNOLOGIES

Accelerating the transition to a low-carbon society requires driving down the cost of clean mobility technologies and clean energy. Electrification of transport and heating processes in industry using electricity generated from renewable sources are crucial to meet the goals of the Paris Agreement. Advanced materials represent a sizeable part of the cost of these clean technologies and are key enablers of the low-carbon society. The advanced materials path from lab to market is long, risky and capital-intensive, so industry welcomes risk-sharing initiatives supporting European industrial leadership. Founded in 2012 by Umicore and other industrial and research organizations, EMIRI (the Energy Materials Industrial Research Initiative) works to increase awareness about the role of advanced materials in everyday life and in the European economy, and advocates for stronger EU-level innovation support.

Umicore has also actively participated and supported the creation of the European Battery alliance (since 2017) and the Battery European Partnership Association (BEPA) which is the public-private entity that will support the European Commission in defining the technology roadmaps and the research and innovation priorities to be funded in the 2021-2027 time frame (under the Horizon Europe program).

RECYCLING

The European Union is striving to establish a Circular Economy. Umicore, a frontrunner with our "closed loop" business model, contributes to numerous conferences and expert working groups. Specifically, we emphasize the links between a Circular Economy and responsible sourcing, resource efficiency, waste management and high-quality recycling. We use our experience to promote electromobility as a gateway to a Circular Economy in Europe. In 2020, Umicore chaired the 'Traction Batteries' working group of the Circular Economy Initiativ Deutschland to develop recommendations for the future in creating a circular economy model for batteries.

Materiality

SETTING THE COURSE WITH OUR STAKEHOLDERS FROM 2015 THROUGH 2020

Umicore strives to plan for the best possible future by remaining in a healthy and competitive position whilst considering global economic, social and environmental megatrends.

Our Vision 2015 strategy built on existing competencies, market positions and our long-standing expertise in metallurgy, materials science, application know-how and recycling, and combined them with our closed-loop business model to give us strong growth potential in clean air, clean energy, vehicle electrification and addressing resource scarcity.

Horizon 2020, launched in 2015, represents continuity in Umicore's strategic choices over the past decade and sets out further economic, environmental, value chain and society challenges. The definition of the environmental, value chain and society objectives for the Horizon 2020 strategy involved a materiality assessment to identify areas with the potential to turn sustainability into a greater competitive edge.

VALIDATING GLOBAL MEGATRENDS & ASSESSING VISION 2015 ACHIEVEMENTS

In 2014-15, the executive committee scanned in detail the four megatrends that underpin Umicore's growth ambitions. The results clearly showed that three of the four megatrends were strengthening: resource scarcity, the need for clean air and vehicle electrification (see pages 10-11 for more on these megatrends). The landscape had shifted significantly in photovoltaics, the fourth megatrend, where a combination of economic and technology choices led to a less favorable market for Umicore's higher-end solutions. Based on the results, the executive committee elected to focus Umicore's Horizon 2020 growth ambitions on activities that are linked to clean air (automotive catalysts), vehicle electrification (rechargeable battery materials) and resource efficiency, ensuring precious and specialty metals recycling through our closed-loop business model. These activities are therefore at the heart of our ambition to double Umicore earnings by 2020.

In terms of sustainability performance, Vision 2015 yielded positive results. On the environmental front, we achieved a significant reduction in CO_2 and metal emissions to water and air, surpassing our targets in all three cases.

We also made strides in personnel development and stakeholder engagement. By 2015, the vast majority of Umicore employees had received an annual appraisal and development plan and we had further reduced exposure levels of our employees to various metals. Our last People Survey in 2018 confirmed that we had achieved several of our Horizon 2020 objectives.

In sustainable procurement, we built on our reputation as a pioneer in the field by deploying our Sustainable Procurement Charter and sought out conflict-free certifications for our smelters.

Safety was the sole area where performance was less than satisfactory. We set ourselves the target of becoming an accident-free company by 2015 and, while our safety performance improved, we fell short of this objective.

The challenge for Horizon 2020 is to maintain the progress made, continue focusing on topics such as safety where we fell short of our goals and to develop goals that enhance Umicore's competitive positioning, as follows:

- MAINTAIN ACHIEVEMENTS in carbon and metal emissions, preferred employer and stakeholder engagement. Although we will not set further objectives for these themes, we will continue to measure and report on the impact and performance when relevant from a materiality point of view.
- IMPROVE safety and occupational exposure. We will continue to pursue the zero accident and zero excess readings goals.
- SECURE COMPETITIVE ADVANTAGE through sustainable sourcing. Thanks to the implementation of the Umicore Sustainable Procurement Charter, we have developed a reputation for ethical sourcing. This approach is aligned with Umicore's values and ethics but comes at a cost that is only gradually accepted by customers. Horizon 2020 seeks to leverage this sustainable sourcing approach to generate an enhanced competitive edge.

IDENTIFYING AND CHOOSING MATERIAL TOPICS FOR HORIZON 2020

With the activities linked to clean air, vehicle electrification and recycling defined as the main levers for Umicore's growth, we screened for other topics of material importance to our business units and to our main stakeholder groups.

In addition to producing the initial list of material topics, based on the learning from Vision 2015, other potential topics were identified through direct feedback from stakeholders, including the findings of the annual internal business risk assessment, the results from the 2014 People Survey for all employees, the data from the implementation of Umicore's APS (Assessment of Product and services Sustainability) tool from 2012 to 2015 and direct questions submitted to Umicore or its business units by customers.

At corporate level, we screened material issues at peer companies and customers, as well as potentially relevant topics discussed by international business groups, research groups and media.

All topics identified in the materiality screening phase were used to produce a draft materiality matrix. The relevance of these topics for Umicore was assessed by a project team and discussed with the Environment, Health and Safety (EHS) and Human Resources (HR) corporate teams. The starting matrix, containing about 65 topics, was submitted for further refining with the business unit management teams.

Based on the feedback received, a revised version of the Umicore Group materiality matrix was compiled consisting of top quartile topics. These 25 topics were the basis of the materiality testing and for ease of reference were clustered into five categories: Supply, Products, Operational Excellence, Human Resources, Health and Safety.

The list of material topics was then tested using an online survey that was sent to 48 stakeholders. These stakeholders – investors, customers and employees – ranked the topics.

DEFINITION OF OBJECTIVES AND REPORTING SCOPE

Based on the results of the first two phases, we established the scope of the objectives for Horizon 2020. We clustered our objectives in four main themes. Three of the Vision 2015 themes were kept – Economic Performance, Eco-Efficiency and Great Place to Work – but "Stakeholder Engagement" was replaced by "Value Chain and Society" to highlight our ambition of adopting a more holistic view of Umicore's presence in and impact on the overall value chain. This constitutes Umicore's main focus through 2020.

The process for defining the environmental, value chain and society objectives within Horizon 2020 involved a structured dialogue with the management of each business unit to determine the social and environmental topics that could generate a greater competitive edge.

To ensure a degree of alignment with external expectations, we also conducted an online stakeholder survey. The objectives were debated and ratified by the executive committee in February 2016.

We also identified a range of issues that Umicore and our stakeholders identified as important for management purposes, which should remain part of the report, albeit not part of any specific Horizon 2020 objective.

One example is CO_2 emissions: in our Vision 2015 review, we assessed that the absolute level of our CO_2 emissions was dependent on the energy mix of the countries in which we operate, a roadblock to pursuing a specific CO_2 emission reduction objective. We therefore chose to pursue energy, operational and materials efficiency instead. However, many stakeholders expect Umicore to report CO_2 emission and this data remains part of the reporting scope.

VALIDATION

The matrix and its translation into specific environmental, value chain and society objectives were validated by the executive committee in February 2016. The economic objectives and growth ambitions had been previously validated in 2015.

As a result, we believe that our Horizon 2020 objectives and the information that we report in this document represent a balanced reflection of external requirements and our own internal needs, and enable a balanced appreciation of our performance.

You will find the strategic targets associated with this materiality assessment on the following page.

UPDATES

Following the 2020 review, the management board confirmed that Operational Excellence, Supply, Products, Human Resources and Health and Safety remain Umicore's material issues. We continue to follow our Horizon 2020 objectives and the associated materiality in determining the content and disclosure in this report.

As part of preparations for the next strategic cycle, Umicore reviewed materiality in 2020. The findings will be used in reporting during the new strategic cycle, as of 2021.

HORIZON 2020 TARGETS

ECONOMIC PERFORMANCE

STRENGTHEN LEADERSHIP

Confirm our strong position and unique offer in clean mobility materials and recycling processes

DOUBLE THE EARNINGS

At least double the size of recurring EBIT compared to 2014 and excluding the discontinued operations

REBALANCE PORTFOLIO

Ensure a more balanced distribution of earnings among the three business groups

VALUE CHAIN AND SOCIETY

SUSTAINABLE SUPPLY

Secure materials supply and promote our closed-loop business offer

Main material topics: *Criticality of raw materials, Recyclability and potential to close the loop, Recycled input materials use, Resource scarcity, Supplier screening, Supply disruptions, Sustainability of supply chain/responsible sourcing*

SUSTAINABLE PRODUCTS AND SERVICES

Develop products that create sustainable value for our customers or society

Main material topics: *Life cycle thinking, Opportunities and risk from technologies and products, Product stewardship, Public health and safety, Resource efficient products and production, Toxic substances and phase out or ban*

Main stakeholders: *Customers, Investors and funders, Public sector & authorities, Society, Suppliers*

ECO-EFFICIENCY

EFFICIENT OPERATIONS

Increase value through efficient use of metals, energy and other substances

Main material topics: *Energy consumption and efficiency, Opportunities and risk from technologies and products, Resource efficient products and production*

Main stakeholders: *Customers, Investors and funders, Public sector & authorities, Society, Suppliers*

GREAT PLACE TO WORK

SAFETY

Become a zero-accident workplace

Main material topics: *Occupational safety, Process safety*

HEALTH

Reduce employee exposure to specific metals

Main material topics: *Occupational health*

PEOPLE ENGAGEMENT

Further improve people engagement with specific focus on talent attraction & retention, diversity management and employability

Main material topics: *Diversity and inclusion, Employee training and development, Talent attraction and retention*

Main stakeholders: *Customers, Employees, Investors and funders, Public sector & authorities, Society, Suppliers*

Other topics that were defined as material by at least one stakeholder group during the materiality assessment but are not a specific Horizon 2020 objective (i.e, CO2 or metal emissions) are reported in the statements section of the report.

Giving back to society

UMICORE SEEKS TO CONTRIBUTE TO THE WELL-BEING OF THE COMMUNITIES IN WHICH IT OPERATES AND TO BE A RESPONSIBLE CORPORATION AND GOOD CORPORATE NEIGHBOR

Children in Kolwezi, Democratic Republic of Congo

Umicore supports several causes both financially and by making time and talent available. Umicore channels resources to sponsorships and donations with each business unit expected to allocate an annual donations budget based on an internal framework that promotes stable and longer-term commitments, irrespective of the wider economic environment.

Umicore believes that by empowering Umicore sites for local sponsorship and donation initiatives, it will make a positive difference in the communities in which it operates, beyond the direct benefits generated by employment and local taxes. Umicore's support may include contributions in kind and releasing staff to work on community-related projects.

While sites determine the specific focus of their own initiatives, the general focus is on supporting and promoting a strong social fabric in the community around the site, with priority given to educational initiatives.

At corporate level, the emphasis is on projects with an international scope. Priority is given to initiatives with a clear educational component and that link with sustainable development (social, environmental and/or technological).

Educational initiatives are particularly relevant for Umicore as a technology-oriented business and provide an excellent way of engaging with young people in the community and reinforcing links between Umicore and its neighborhood.

PARTNERING FOR IMPACT

Quality education for all is one of the main objectives of UNICEF, with which Umicore has had a long-term partnership since 2011, committing to 2 specific child-education projects in India and Madagascar. Despite impressive achievements and tireless work, big efforts are still needed to ensure that every child has access to quality education in both countries. UNICEF is doing a remarkable job by acting in the field, hand in hand with local authorities. Our partnership translates into very concrete actions such as the construction of four school classrooms per year in Madagascar, benefiting more than thousand boys and girls, and the development of an action plan to empower young girls in India and to end child marriage.

In addition, Umicore is a founding member of Entrepreneurs pour Entrepreneurs/ Ondernemers voor Ondernemers which pairs corporate donors with development charities that focus on promoting entrepreneurship in the developing world. Over the years, Umicore and Entrepreneurs for Entrepreneurs have supported work in Bolivia, Cambodia, Congo, Ecuador, Haiti, Mali, Togo and more.

Umicore also aims to contribute to disaster relief wherever it may be needed, contributing in 2020 to the Red Cross to help the victims of the bushfires in Australia and to the Doctors without Borders fund to help people fleeing violence in Ethiopia.

In 2020, Umicore also co-initiated and was the first contributor to the Fund for the Prevention of Child Labour in Mining Communities – A Global Battery Alliance Collaboration. This Fund seeks to address the issue of child labour in DRC's cobalt mines by strengthening communities and addressing the root causes of the problem. Through a multi-sectoral package of interventions, the Fund - supported projects will contribute towards alleviating poverty, strengthening social services for children, supporting responsible production and consumption and getting children out of mines.

In 2020, Umicore also donated ventilator machines to hospitals and supported hospitals, care homes and home nurses with surgical masks and cleaning supplies in their fight against COVID-19.

These combined efforts around the globe support us in our ambition to be a responsible company and to give back to society.

Umicore's response to COVID-19

KEEPING OUR BUSINESS RUNNING & OUR EMPLOYEES SAFE DURING THE PANDEMIC

Registration point at Umicore Hoboken

Within only a few weeks after COVID-19 first broke out in China, the pandemic had spread around the globe, making its way to even the most remote communities. It was soon clear that COVID-19 was more than just a seasonal flu and that the consequences could potentially be serious.

By the time COVID-19 had reached pandemic proportions, Umicore was already taking far-reaching measures to protect its employees and ensure continuity of production, at a time when it was impossible to predict exactly how the pandemic would progress.

FAST AND DECISIVE RESPONSE

In these exceptional and very difficult circumstances, Umicore's top priority has always been the health and safety of its employees worldwide. As of the end of January 2020, we introduced strict hygiene and other precautionary measures starting with our facilities in Asia, which were the first to be affected.

Individual and workplace hygiene measures were quickly tightened at all Umicore sites worldwide, with the aim of reducing the transmission risk within the organization, keeping our employees healthy and offering them a safe workplace. Prompted by the fact that contamination could occur in public spaces, Umicore delivered surgical masks for private use to the homes of all employees worldwide at a time when they were unavailable on the open market.

Weekly meetings were held with the management board and a task force of health professionals to review the COVID-19 situation in all regions globally and to evaluate the measures in place according to each local situation. Even when national policies were less stringent, Umicore implemented its strict company policy to keep employees healthy and safe and to contain further spread of the virus.

ESSENTIAL TO SOCIETY

As far as possible, Umicore also needed to take measures to mitigate the impact of COVID-19 on its performance. Umicore continued to operate in order to provide activities and products which are essential for the protection of the vital interests and needs of the population.

The continuation of our production was utterly important because of the essential applications in which our products are used. Our metals are of great importance in the medical sector. Without our precious and other non-ferrous metals, no high-tech products can be produced for healthcare, including cancer treatment, treatment of arrhythmias, pain therapy and the production of ventilators, catheters and medicines.

Umicore also provides materials for the early detection and monitoring of coronavirus. Screening is often based on infrared (IR) thermal imaging optical components to check places where dense groups are gathered, such as airports and train stations, serving as an additional source of information when people may not show symptoms.

Following the widespread shutdown of assembly lines by our automotive customers, Umicore also temporarily shut down 10 of its 16 automotive catalyst plants. Any disruption in the production plants caused by the pandemic was because of interruptions to the supply chain. These sites resumed operations shortly thereafter. None of the other production sites worldwide was shut down during the pandemic.

THE RESILIENCE OF OUR EMPLOYEES

Our employees have shown great resilience in dealing with this difficult situation, impacting all aspects of their lives. Their determination, agility and hard work ensured that our working environment could remain safe and healthy. While adjusting to very challenging conditions in order to ensure business continuity, many of our employees also volunteered for a number of charity initiatives, including the donation of food, masks, money and goods for children.

UMICORE THERMAL IMAGING IN THE FIGHT AGAINST COVID-19

Concatenation of the Tessella ™ technology together with full optic assemblies

Limiting the spread of the virus by early detection has been crucial in all phases of the pandemic. One method of early detection is screening with thermal imaging cameras in densely populated places such as airports, hospitals, companies and schools.

Thermal imaging cameras can measure temperatures with up to 0,3°C accuracy and can detect an elevated body temperature that could indicate fever. While body temperature is not proof of COVID-19, and while somebody infected with the COVID-19 virus may not always have a higher body temperature, this is still is an excellent early detection mechanism to help contain widespread outbreaks.

From February 2020 until summer, Umicore's Infrared Optics team saw a drastic increase in demand for its optics. Globally hundreds of thousands optics were sold for integration into thermal cameras used in detection of elevated body temperature. The team was able to absorb the sudden demand peak in demand as Umicore is, to a large extent, vertically integrated (starting from metals) and therefore less dependent on third party suppliers. Additionally, activity levels were increased in challenging circumstances (for example, introduction of hygiene rules and higher preventive absences). The ramp-up of Umicore's newly introduced and cost-effective wafer optic Tessella™ technology supported its customers in rapidly introducing affordable high-performance systems.

Hisashi Kaga, Program Director

New Business Incubator as part of Umicore's innovation strategy

Umicore's innovation strategy targets robust business growth for years to come. To further leverage and expand its innovation capabilities, Umicore has created a new unit called New Business Incubator (NBI). Built on a startup-based operating environment that benefits from the support of a global company and sizeable scale organization, NBI is both focused and agile in managing Umicore's long-term horizon innovation projects. UMICORE.COM/STORIES

Driving economic performance

2020 TARGET

STRENGTHEN LEADERSHIP — Confirm our strong position and unique offer in clean mobility materials and recycling.

DOUBLE THE EARNINGS — Double the size of recurring EBIT compared to 2014 excluding the discontinued operations.

REBALANCE PORTFOLIO — Ensure a more balanced contribution of earnings from our 3 business groups.

KEY RISKS & OPPORTUNITIES

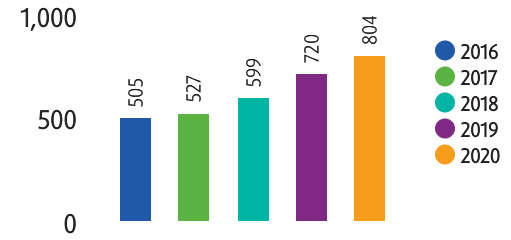
1. Regulatory and legal context
2. Sustainable and ethical supply
3. Technology and substitution
4. Cyber security
5. Market
6. Metal price and availability

SUSTAINABLE DEVELOPMENT GOALS

Economic Review

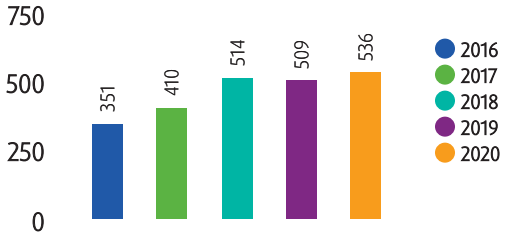
ADJUSTED EBITDA

Millions of Euros



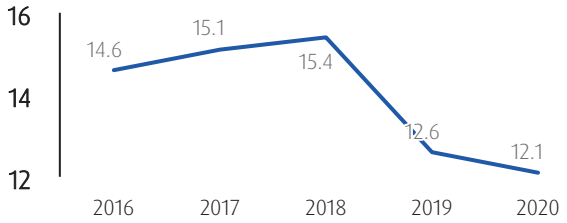
ADJUSTED EBIT

Millions of Euros



RETURN ON CAPITAL EMPLOYED

%



RECORD RESULTS

We selected 3 key performance indicators to measure our success in the execution of our ambitious Horizon 2020 growth strategy and our progress towards our longer-term targets and objectives:

- Adjusted EBITDA gives a clear indication on earnings and profitability, and is a good proxy for generated operating cashflows (cashflow from operations before change in cash working capital).
- As part of our Horizon 2020 strategy we set a 2020 adjusted EBIT target of doubling the 2014 figure or in other words, reaching € 500 million.
- We want our investments to create value by generating attractive returns and set a Group ROCE target of 15%+.

Despite the severe disruption brought by the COVID-19 pandemic in its end-markets, Umicore posted its **strongest financial performance ever**, boosted by an exceptional PGM price environment. This underscores Umicore's resilience and the **merits of its strategy building on the complementarity of its activities.**

After a solid performance in the first half of 2020, with a strong result in Recycling offsetting the impact of the automotive industry downturn on the results of Catalysis and Energy & Surface Technologies, the second half of the year was marked by a strong sequential improvement in the Group's revenues and earnings driven by continued robust operational performance and buoyant metal prices in Recycling, as well as strong growth in Catalysis.

Umicore's earnings and profitability reached new highs with full year **adjusted EBIT** amounting to **€ 536 million (**up 5% year on year) and **adjusted EBITDA** amounting to **€ 804 million** (up 7% year on year). **2020 ROCE** for the Group stood at **12.1%** (down from 12.6% in 2019), reflecting a lower ROCE in Catalysis and in Energy & Surface Technologies.

Revenues in **Catalysis** decreased, albeit less than the global car market, due to Umicore's strong market position in gasoline technologies for light-duty vehicles, particularly in China and Europe, as well as higher sales of heavy-duty diesel and fuel cells catalysts. Adjusted EBIT declined more than revenues for the full year reflecting the significant impact of the pandemic in the first half of the year.

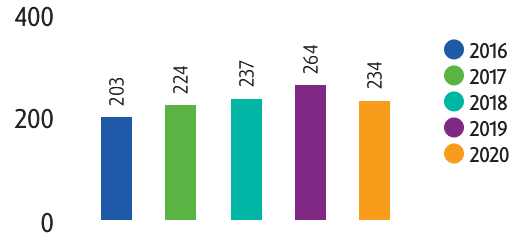
Revenues of **Energy & Surface Technologies** reflected the impact of the pandemic as well as lower sales of cathode materials for high-end portable electronics and energy storage applications. The decline in adjusted EBIT was more pronounced reflecting significant negative operating leverage and the impact of an unfavorable pricing environment for cathode materials due to substantial industry overcapacity in China.

Recycling doubled its adjusted EBIT compared to the previous year, driven by strong growth across business units, reflecting high metal prices, high activity levels despite the COVID-19 crisis and favorable trading conditions.

CATALYSIS

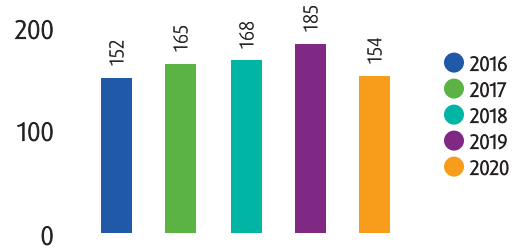
ADJUSTED EBITDA

Millions of Euros



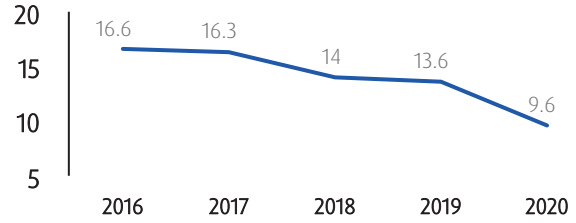
ADJUSTED EBIT

Millions of Euros



RETURN ON CAPITAL EMPLOYED (ROCE)

%



In 2020, revenues in Catalysis decreased by 7% year on year, amounting to € 1,364 million, against the backdrop of an 18% contraction in the global car market. **Umicore's revenues suffered much less than the global car market, due to the company's strong market position in gasoline technologies for light-duty vehicles, particularly in China and Europe.** Revenues were further supported by higher sales of Umicore's catalysts for heavy-duty diesel applications and fuel cells catalysts.

Adjusted EBIT in Catalysis amounted to **€ 154 million**, down 17% year on year due to the significant negative operating leverage in the first half of 2020 as a result of the COVID-19 pandemic impact on the automotive industry. In the second half of the year adjusted EBIT increased significantly, both sequentially and compared to the same period in the prior year, boosted by a sharp volume recovery in Automotive Catalysts and savings in manufacturing and SG&A costs. For the full year, **adjusted EBITDA was € 234 million**, down 11%. **ROCE decreased to 9.6%** (from 13.6% in 2019) due to the combination of lower returns and a higher capital employed base. Rising PGM prices, particularly in the second half of the year, increased the working capital needs in the business group .

The global automotive industry was significantly impacted by the COVID-19 pandemic and declined by 18% for the full year, with a marked contrast between the first and the second half of the year.

In the first half of 2020, car OEMs had to shut down their production plants and close their dealerships in several key regions as a result of government imposed lock-downs. Global car demand started to pick up again in the second half of 2020, albeit with discrepancies between the regions in terms of timing, speed and intensity of the recovery.

After a year-on-year contraction of 35% in the first half, car production in the second half grew by more than 40% sequentially (yet declined by 2% compared to the second half of 2019), with China being the clear driving force behind the global recovery. Other key markets started to pick up later and more gradually and still recorded negative growth for the second half of the year.

Against this extremely challenging backdrop, revenues and adjusted EBIT for **Automotive Catalysts** were only moderately below the level of the previous year as the business unit demonstrated tremendous resilience. **It benefited disproportionately from the sharp market recovery in the second half of the year and outperformed the car market both in volumes and revenues, due to its strong position in the Chinese and European light-duty gasoline markets.** In addition to the positive operating leverage created by the strong sales recovery, earnings were supported by cost savings resulting from recent footprint adjustments and operational excellence initiatives in manufacturing and SG&A.

In China, where car production for the full year was down 5%, Umicore's revenues were well up, reflecting Umicore's exposure to the growing penetration of direct injection gasoline platforms which require particulate filters under China 6 emission norms.

In Europe, Umicore's sales volumes and revenues were down less than the car market due to the company's strong market position in gasoline catalyst technologies.

In North America, sales performance was slightly lower than the market as a result of an unfavorable customer mix, while volumes in South America outperformed a heavily contracting car market.

Umicore's revenues in Japan and Korea evolved in line with the overall market. In South-East Asia, volumes and revenues substantially outperformed the market, driven by market share gains in India as Umicore qualified for new platforms compliant with Bharat 6 regulation.

The sharp economic contraction and the lower industrial production induced by COVID-19 also had a significant and a more prolonged impact on the heavy-duty diesel market segment in 2020 except in China. Despite this challenging context, Umicore grew volumes and revenues in this market segment, due mainly to strong demand in the second half of the year for its China V technologies and a favorable customer mix.

Umicore's stationary catalyst activity was substantially impacted by the disruptions caused by COVID-19, in particular in its power, chemicals and oil refining end-markets where several large projects were postponed.

Revenues and earnings for **Precious Metals Chemistry** declined compared to the previous year, despite stronger demand for Umicore's fuel cells catalysts in Korea. The business unit was hit in the first half of the year by the **severe downturn in the automotive industry** and the related impact on demand for its inorganic chemicals. Demand for Umicore's homogeneous catalysts used in pharmaceutical and fine chemical applications remained stable.

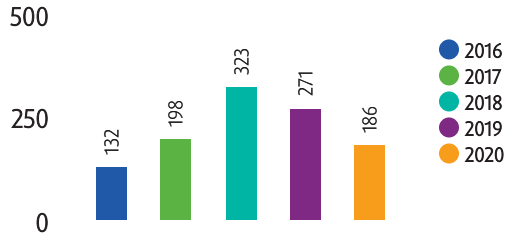
Against a backdrop of accelerating demand for Umicore's state-of-the-art catalysts for proton exchange membrane (PEM) fuel cells and to enable this activity to pursue its growth strategy, Umicore decided to house it in a new business unit **Fuel Cells & Stationary Catalysts** within the Catalysis business group. As of 1 January 2021, this business unit combines both Umicore's fuel cell catalyst activities, previously included in the business unit Precious Metals Chemistry, and Umicore's stationary catalyst activities, previously part of the Automotive Catalysts business unit. This change has no reporting impact on the Catalysis business group level**. The new business unit will build on a strong portfolio of technologies to grow globally both in PEM fuel cells and stationary catalysis**.

To learn more, see our story about Umicore fuel cell catalysts (p. 37).

ENERGY & SURFACE TECHNOLOGIES

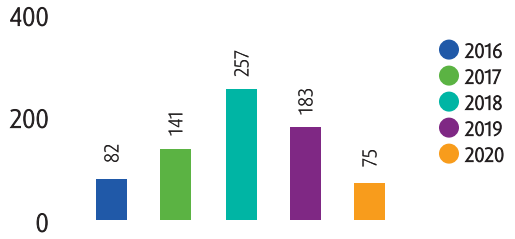
ADJUSTED EBITDA

Millions of Euros



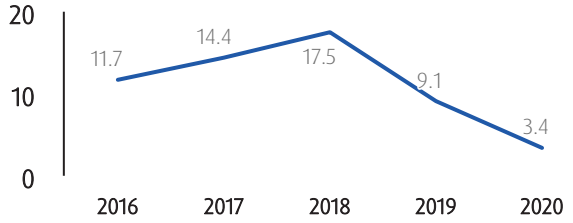
ADJUSTED EBIT

Millions of Euros



RETURN ON CAPITAL EMPLOYED (ROCE)

%



In 2020, revenues in Energy & Surface Technologies amounted to € 1,045 million, down 15% compared to 2019, driven by **the negative impact of the pandemic on several end-markets and reflecting much lower sales of cathode materials for high-end portable electronics and energy storage applications.** After a severe contraction of the global EV market in the first half, Umicore's sales volumes of cathode materials for EVs grew in the second half of the year, both sequentially and year on year. The integration of the cobalt refining and cathode precursor activities acquired in Finland at the end of 2019 also helped mitigate the decline in the business group's full year revenues.

As expected and in line with guidance, **adjusted EBIT** amounted to **€ 75 million**, 59% below the 2019 levels. The underutilized capacity in Umicore's Chinese greenfield cathode material plant, in combination with higher fixed costs related to recent and ongoing expansions, resulted in a significant negative operating leverage. In addition, the unfavorable pricing environment in China, due to the substantial excess capacity in that region, severely weighed on margins. **Adjusted EBITDA** was **€ 186 million**, down 31% year on year. **2020 ROCE** further reflected the higher investments in Rechargeable Battery Materials and was **3.4%** (versus 9.1% in 2019) .

Revenues and volumes in **Rechargeable Battery Materials** were down compared to 2019 as **higher sales of NMC cathode materials used to power EVs were more than offset by lower sales of high energy LCO cathode materials for high-end portable electronics and reduced demand for NMC cathode materials used in energy storage applications.**

The global EV market was profoundly affected by the COVID-19 pandemic in the first half of the year and rebounded in the second half of the year, primarily driven by strong EV growth in Europe and, later in the year and to a lesser extent, by increasing EV sales in China. For the full year 2020, EV sales grew 50% to 3.4 million vehicles. This translated in an addressable market for cathode materials producers of some 137 GWh, or a 17% year-on-year growth.

For the full year, Umicore's sales volumes of cathode materials going into EVs grew less than battery demand in GWh as the cathode materials industry, including Umicore, could not immediately benefit from the rebound in battery demand in the second half of the year because of the existence of excess inventories in the supply chain. These excess inventories were largely depleted by year-end. **Excluding this inventory effect, Umicore's sales volumes grew broadly in line with EV battery demand.** As anticipated, Umicore's sales volumes for EVs grew in the second half of the year, both sequentially and year on year.

In China, battery demand for EVs remained bleak until the summer and turned positive in the second half of the year, albeit compared to a depressed second half in 2019. After years of strong year-on-year growth, culminating with a more than doubling of demand in 2018 and leading to massive capacity additions in the battery materials value chain, demand for cathode materials for EVs has lagged the anticipated growth in 2019 and 2020. This slowdown has resulted in significant excess capacity and pressure on the pricing environment. Umicore is not immune to this effect and its performance in the region was also impacted by underutilized capacity in its Chinese greenfield cathode materials plant.

In Europe, battery demand for EVs recorded strong momentum throughout 2020, in particular in the second half of the year, and doubled compared to 2019. This growth was driven by new models launched by car OEMs to comply with the more stringent CO_2 directive which kicked in in 2020, local incentives for EV buyers in several countries as part of their recovery plans and more environmentally-friendly choices by consumers when purchasing a new car. Umicore sales of cathode materials in the region grew in line with the market trend. Umicore is currently using its capacity in Korea to serve that growth, until its new greenfield plant in Nysa, Poland will start commercial production. **The Nysa plant will be the first industrial cathode materials production plant in Europe** and its construction is progressing well with commissioning expected towards the end of the first half of 2021. Once production lines will have gone through customers' qualifications, initial commercial

production volumes are expected in the fourth quarter of 2021, with the full ramp-up of volumes taking place in 2022.

While having production capacities in three different locations (Korea, China and Europe) involves higher capital investments and operating costs than for most competitors, Umicore is convinced that having a **presence in multiple key markets will prove a strong competitive differentiator** over time as battery and car OEMs will increasingly require electric car components to be produced locally to minimize their CO_2 footprint.

The push towards electric mobility is stronger than ever, driven by regulatory initiatives to protect air quality and reduce greenhouse gas emissions in several regions. Europe recently reconfirmed its ambition to achieve zero-emission mobility and remains committed to increasingly more stringent CO_2 emission targets. The EU ambitions and commitments to a cleaner future imply rapid growth in GWh of battery demand in the coming years. In China, the Ministry of Industry and Information Technology announced an extension of the NEV subsidy plan from 2020 until end 2022. It also confirmed its long-term commitment to achieve a target penetration rate of 20% NEVs in 2025 and 50% by 2035. Although it will take a while before the current excess capacity in China is fully utilized, these targets will boost electrification in the coming years.

Revenues for **Cobalt & Specialty Materials** were below the level of the previous year, reflecting the **severe impact of COVID-19 on the activity levels in most of the business unit's end-markets**.

Although demand for cobalt and nickel chemicals and activity levels in the distribution activities gradually recovered in the second half of the year, this could not compensate for the volume losses incurred in the first half of 2020. Order levels for tool materials declined substantially year on year, impacted by reduced activity levels in the construction and industrial manufacturing sectors throughout the year. The reduced demand levels for cobalt and nickel chemicals also resulted in lower throughput and contribution from the refining and recycling activities. Revenues from carboxylates remained stable compared to the previous year.

As part of the ongoing assessment of its global production footprint, Umicore announced in September its decision to consolidate the cobalt refining and transformation activities in Kokkola, Finland and Nashville, US in order to achieve synergies and strengthen the unit's competitive position. The transfer of the activities is on track and is anticipated to be finalized by mid-2023. Earlier in the year, the business unit closed its cobalt, nickel and rhenium refining and recycling plant in Wickliffe, Ohio.

Revenues for **Electroplating** were slightly higher compared to the previous year reflecting primarily higher demand for advanced precious metal-based electrolytes used in portable electronics. This more than offset the impact of lower demand for precious and base metal compounds as a result of the COVID-related slowdown in the jewelry and industrial end-markets.

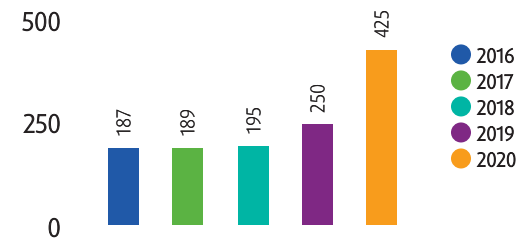
As of 1 January 2021, the business unit Electroplating has been renamed **Metal Deposition Solutions**. In addition to the activities previously included in Electroplating, the new business unit also includes the thin film products business, which was previously part of the Electro-Optic Materials business unit and which manufactures evaporation materials and sputtering targets for the microelectronic and optical industries, with activities in Liechtenstein and Taiwan. The purpose of this transfer is to bring together businesses serving similar applications and customers in electronics and semiconductors.

Revenues for **Electro-Optic Materials** decreased compared to the previous year. This was mainly due to lower demand for high purity chemicals used in optical fibers as a result of a delay in 5G-deployment. Revenues increased both for substrates and for infrared optics, following the successful launch of innovative new products and services.

RECYCLING

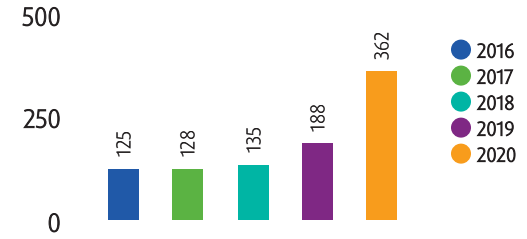
ADJUSTED EBITDA

Millions of Euros



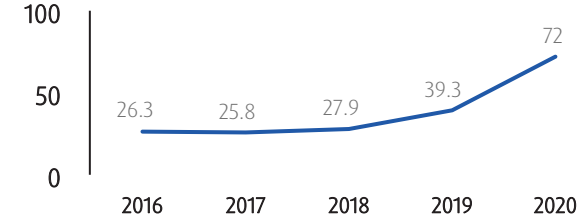
ADJUSTED EBIT

Millions of Euros



RETURN ON CAPITAL EMPLOYED (ROCE)

%



The Recycling business group delivered a record performance in 2020, posting an increase in revenues of 23% to € 836 million and nearly doubling its **adjusted EBIT** to **€ 362 million**. This stellar performance was driven by **strong growth across all business units, reflecting high metal prices, high activity levels despite the COVID-19 crisis and favorable trading conditions**. **Adjusted EBITDA** amounted to **€ 425 million**, an increase of 70% compared to 2019. These record earnings drove **ROCE** up to **72%** (versus 39.3% in 2019).

Revenues for **Precious Metals Refining** increased significantly year on year and adjusted EBIT more than doubled, reflecting primarily higher received metal prices, particularly for platinum group metals, and to a lesser extent a supportive supply environment and higher processed volumes.

The performance of the business unit was boosted by a favorable metal price environment. Average received metal prices were well above the level of the previous year for most precious and platinum group metals, in particular rhodium. In a context of tight supply and growing demand from the car industry as a result of increasingly more stringent emission norms, the rhodium price surged from the high levels already reached at the end of 2019. The business unit also benefited, to a more moderate extent, from the price increases of gold, platinum and palladium as it previously hedged a significant portion of its exposure to these metals.

The overall supply of industrial by-products remained favorable over the period, despite the temporary shutdowns of certain mining activities in response to COVID-19. Also the supply of end-of-life materials remained strong and the Hoboken plant benefited from an ample inflow of highly complex spent automotive catalysts.

The business unit continued to leverage its unique recycling technology to efficiently treat such highly complex materials. Processed volumes in 2020 were higher compared to 2019 as a result of the process improvements which were introduced in 2019 and which required a longer than usual shutdown during that year. The higher processed volumes, in combination with the valuable mix, further supported the performance of the Hoboken plant.

As part of its endeavors to continuously drive improvement in the robustness of the Hoboken operations and the overall safety performance of the plant, a multi-year investment program has been launched with a **priority on fire prevention and emergency planning**. In parallel, Umicore continues with the execution of the investment program aimed at further reducing emissions.

Revenues for **Jewelry & Industrial Metals** increased compared to the previous year. The impact of lower demand from the jewelry and industrial sectors was offset by a substantial increase in orders for precious metal based investment products as well as strong demand for platinum engineered materials. The revenues and margins of the business unit were further supported by a higher contribution from the refining and recycling activities, which benefited from robust demand as well as a favorable metal price environment, in particular for gold.

The earnings contribution from **Precious Metals Management** substantially increased compared to 2019 as the business unit benefited from high metal prices and exceptionally high metal price volatility which resulted in favorable trading conditions. In addition, demand for gold and silver investment bars was strong.

FINANCIAL REVIEW

FINANCIAL RESULT AND TAXATION

Net financial charges totaled € 104 million, up from € 83 million in the same period last year due to higher net interest charges resulting from a higher average financial debt as well as fees and costs linked to the issuance of new debt instruments. These higher charges were partly offset by lower forex costs and lower discounting costs related to provisions. The adjusted tax charge for the period amounted to € 103 million, stable compared with the same period last year despite substantial changes in the underlying regional result distribution. Both the adjusted taxable base for the group and effective group tax rate were stable year on year. The latter reached 24,2%, compared to 24,7% last year. Taking into account the tax effects on EBIT adjustments, the net tax charge amounted to € 59 million. The total tax paid in cash over the period amounted to € 79 million, which is lower than last year.

CASHFLOWS

Cashflow generated from operations, including changes in net working capital, amounted to € 603 million, compared to € 549 million last year. After deduction of € 436 million of capital expenditures and capitalized development expenses, this corresponds to a free cash flow from operations over the period of € 167 million, compared to a cash drain of - € 39 million in 2019, demonstrating the resilience of the Group's cash flows in a challenging market context. Adjusted EBITDA was € 804 million compared to € 753 million last year, corresponding to an adjusted EBITDA margin for the Group of 24.6%, up versus 22.1% in 2019 driven by the strong performance in Recycling. Net working capital for the Group increased by € 104 million since the end of 2019. Working capital needs increased in Catalysis and, to a lesser extent, in Recycling due to strong year-on-year price increases in precious metals, PGM's in particular. Energy & Surface Technologies reported a decrease in working capital needs year on year due to subdued sales volumes and metal prices. Capital expenditures totaled € 403 million, compared with € 553 million last year. This reduction reflects the decision taken shortly after the start of the COVID-19 outbreak to postpone selected investment projects with the exception of safety and license to operate investments, awaiting more clarity on market outlook. Taking into account the continued investment in Rechargeable Battery Materials' greenfield plant in Poland, Energy & Surface Technologies accounted for close to two thirds of the Group's capex. Spending for this strategic project will continue into 2021. Capitalized development expenses amounted to € 32 million compared to € 35 million last year. The net cash outflow related to the exercise of options and the purchase of treasury shares to cover option plans and share grants was € 27 million, slightly lower than in the previous year.

FINANCIAL DEBT

Net financial debt at 31 December 2020 stood at € 1,414 million, slightly down from € 1,443 million at the end of 2019. This corresponded to 1.76x adjusted EBITDA which is lower than the ratio of 1.92x at the end of 2019. In the first half of the year, Umicore further diversified its sources of funding by completing a € 500 million convertible bond offering due in 2025 and by concluding a € 125 million 8-year loan with the European Investment Bank. Prior to that, in response to the COVID-19 outbreak, Umicore had already increased its undrawn committed bank lines, ensuring itself of ample liquidity to pursue its strategy. Group shareholders' equity was € 2.557 million at the end of the year, including the value of the convertible bond's conversion rights, corresponding to a net gearing ratio (net debt / net debt + equity) of 35,0% (35.2% at the end of 2019).

EBIT ADJUSTMENTS

Adjustments had a negative impact of € 237 million on EBIT in 2020 of which € 72 million were already recognized in the first half. Of this total, € 112 million were related to Energy & Surface Technologies. The latter including € 56 million charges linked to the restructuring initiatives in Cobalt & Specialty Materials, a resulting € 34 million impairment charge linked to the rightsizing of permanently tied up cobalt inventories in that same business unit as well as a € 15 million impairment in Rechargeable Battery Materials due to a site reconfiguration in Korea. Catalysis accounted for € 57 million charges of which € 55 million were already recognized in the first half, linked mainly to the consolidation of the North American automotive catalyst production and some impairments including selected capitalized development costs and license agreements. In Recycling, a charge of € 51 million was accounted for, comprising a € 50 million provision to cover costs related to the intention to buy houses closest to the Hoboken plant and create a green zone. These costs comprise an estimated purchase value of the houses (based on third party appraisal) to be demolished as well as an estimate of demolition and landscaping costs. Concertation with the city council and residents is ongoing and might result in adjustments to this cost estimate. Finally, EBIT adjustments also include € 14 million charges linked to restructuring, property, plant and equipment and goodwill impairments in Element Six Abrasives, a JV in which Umicore has a 40% stake. Of the total adjustments, € 147 million have a non-cash nature. Restructuring-related charges account for € 128 million of the total, environmental items for € 56 million and selected asset impairments for € 45 million. After tax, the adjustments to net group earnings over the period correspond to - € 192 million.

METAL HEDGING

Over the course of 2020 and early 2021, Umicore entered into additional forward contracts, thereby securing a substantial portion of its structural future price exposure to certain precious metals and providing increased earnings visibility. For 2021 and 2022, approximately two thirds of the expected gold and palladium exposure and somewhat less than half of the expected silver exposure have been locked-in. In addition, close to one third of the expected platinum exposure for 2021 has been hedged. In spite of the absence of a liquid futures market, Umicore entered in recent months into forward contracts locking in a minority of its expected 2022 and 2023 rhodium exposure.

INVESTING IN UMICORE

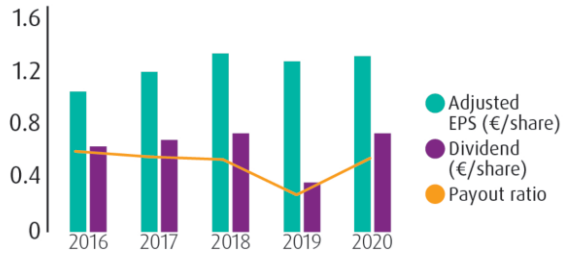
€ 1.34

EARNINGS PER SHARE

DENOMINATOR ELEMENTS

	2020
Total shares issued as at 31 December	**246,400,000**
of which treasury shares	5,733,685
of which shares outstanding	240,666,315
Weighted average number of outstanding shares	**240,589,550**
Potential dilution due to stock option plans	1,183,525
Adjusted weighted average number of outstanding shares	241,773,075

RETURNS TO SHAREHOLDERS



Investing in Umicore is an investment in producing materials for a better life – our mission – and supporting our growth strategy. We have a healthy capital structure with funding headroom to execute our growth strategy while remaining within the equivalent of an investment grade credit status territory.

THE UMICORE SHARE

Umicore shares are listed on the Euronext stock exchange.

The total number of outstanding and fully paid-up shares, and the number of voting rights, are 246,400,000. During 2020, no new shares were created as a result of the exercise of stock options with linked subscriptions rights. During the year Umicore used 1,024,435 of its treasury shares in the context of the exercise of stock options and 66,430 of its treasure shares for shares granted. In the course of 2020, Umicore bought back 1,200,000 own shares. On 31 December 2020, Umicore owned 5,733,685 of its own shares representing 2.33% of the total number of shares issued as of that date.

SHAREHOLDER RETURNS

Umicore aims to create value for its shareholders. There is no fixed pay-out ratio.

Umicore's Supervisory Board will propose a gross annual dividend of € 0.75 per share for the full year 2020. This compares to a full dividend of € 0.375 per share paid out for the financial year 2019. Taking into account the interim dividend of € 0.25 per share paid out on 25 August 2020 and subject to shareholder approval, a gross amount of € 0.50 per share will be paid out on 5 May 2021.

The Supervisory Board has decided that starting in 2021, the interim dividend will be a fixed amount of € 0.25 per share. The dividend policy of a stable to growing dividend remains unchanged.

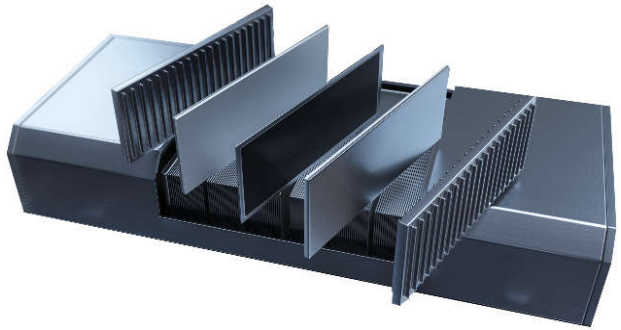
Over the course of its Horizon 2020 strategy, Umicore delivered strong and sustainable shareholder returns through growth of its intrinsic value and dividend distribution.

Over the 2015-2020 period, Umicore substantially outperformed the Stoxx Europe 600 Chemicals index with a share price performance of 140.2% versus 60.6% for the index. The corresponding annualized share price performance amounts to 15.7% per year over the 5-year period.

INDEXES & RATINGS	
EURONEXT	BEL20; Euronext 100
ECPI	EMU Ethical Equity; Euro ESG Equity; World ESG Equity
FTSE RUSSELL	FTSE4GOOD; FTSE Environmental Opportunities 100
ISS OEKOM	PRIME ESG Rating
MSCI	ACWI Sustainable Impact Index, ACWI Low Carbon Target, Belgium IMI Index, EMU ESG Enhanced Focus Index, Global Pollution Prevention Index, World ESG Leaders Index, AAA ESG Rating (Leader)
SOLACTIVE	Solactive Europe Corporate Social Responsibility Index
STOXX	STOXX Europe 600; STOXX Europe Mid 200
SUSTAINALYTICS	29.1 (Low Risk)
VIGEO EIRIS	Benelux 20; Eurozone 120

For more, visit: UMICORE.COM/INVESTORS

UMICORE FUEL CELL CATALYSTS



Open fuel cell stack with Umicore proton-exchange membrane catalyst

Around the world, the way energy is managed is changing, moving away from fossil fuels and towards more sustainable energy solutions, including for cleaner mobility. Umicore provides clean-tech solutions for all vehicle types including cathode materials used in lithium-ion batteries for electromobility and electro-catalysts for fuel cell vehicles.

A fuel cell is like a battery in that it generates electricity from an electrochemical reaction, and is built with an anode and a cathode. However, fuel cells do not run down or need recharging. The main difference between a battery and fuel cell is that a battery stores energy, while a fuel cell generates energy. A fuel cell takes an energy source (the "fuel"), such as hydrogen, and an oxidizing agent, oxygen from air, and through its reaction converts it into electricity. In doing so, as long as air and fuel are supplied, a fuel cell can run indefinitely. The assembly of fuel cell components is referred to as a stack, which is the power generation unit of a fuel cell system.

Typically batteries and fuel cells can be found working together, where a battery will store the electricity generated by a fuel cell and the total energy output will be the combined output from the two energy sources.

At Umicore, our tailor made Proton Exchange Membrane (PEM) fuel cell catalyst provide superior performance to accelerate the development of fuel cells, boasting longer ranges, shorter refueling times and higher energy density.

In the move towards cleaner mobility, and with the technology maturity now demonstrated, fuel cell drivetrains are gaining momentum in the trend towards electrified vehicles. Since 2019, Umicore has recorded strong growth in the demand of fuel cell catalysts used in the transportation segment. To support the rapid growth of our automotive customers we have created a new and promising business unit for fuel cell and stationary catalysts and are ready to ramp up our production.

With 30 years of experience developing PEM fuel cell catalysts, covering both anode and cathode electrode applications, Umicore's competitive products are key components of commercial stack platforms found on the road today. We are present in most of the development platforms of the biggest OEMs, and our R&D centers and industrial production activities both in Germany and South Korea are well placed to globally serve our automotive customers.

We expanded our production capacity in Korea, close to Umicore's technology development center near Seoul, to support the growth of Hyundai Motors Group and we will also support our other automotive customers allowing further expansion to cover future growing demand.

Umicore's fuel cell material solutions are also applicable to water electrolysis, the cleanest production of low-carbon hydrogen. Looking ahead, we share the vision that clean hydrogen has a key role to play in decarbonizing the energy, mobility and industry systems. Scaling up of hydrogen technologies is direly needed to achieve competitiveness across many applications and reach its full deployment potential by 2050. Hydrogen technologies are therefore crucial to climate change mitigation while delivering on economic value creation and generating massive job opportunities.

Umicore also closes the loop for fuel cells, recycling end-of-life and production waste in our Precious Metals Refining operations, a world market leader in eco-efficient recycling of complex waste streams containing precious and other non-ferrous metals. At Umicore, after recovering precious metals, we are able to convert these scarce metals back into advanced materials for new fuel cell technology.

Today, fuel cell vehicles are already circulating on roads all over the globe though in limited numbers. Market deployment of fuel cell vehicles will intensify provided that a refueling infrastructure is sufficiently developed. Electric buses and energy-intensive heavy-duty applications such as trucks will strongly rely on fuel cell technology. On the road to 2050, fuel cell electric vehicles will dominate long range and medium-high duty applications.

Fuel cells have a clear role to play in the engine and energy mix providing one of the various technologies required towards zero emissions. They provide the best of both worlds by combining the environmental advantages of battery drivetrains with the driving range and refueling time of internal combustion engines. Therefore, as a complementary technology, Umicore's fuel cell catalysts are part of our unique technology portfolio offering the full spectrum of clean mobility materials.

For Umicore products and services, visit:
UMICORE.COM/INDUSTRIES

Jens Le Comte virtually receiving the Prebes Award

Prebes Award

In November, our colleague from the Cobalt & Specialty Materials site in Bruges, Jens Le Comte, won the Prebes Award for his thesis to obtain his degree for "Prevention Advisor Level 3". Each year, Prebes, a Belgian non-profit organization focused on health, prevention and the environment, rewards a number of final works that contribute to improving or promoting well-being at work. Jens earned the award for his thesis on the CO_2 fire extinguishing system. UMICORE.COM/STORIES

Value chain and society

2020 TARGET

SUSTAINABLE SUPPLY

Secure materials supply and promote our closed loop business offer.

SUSTAINABLE PRODUCTS & SERVICES

Develop products that create sustainable value for our customers and society.

KEY RISKS & OPPORTUNITIES

1. Regulatory and legal context
2. Sustainable and ethical supply
3. Technology and substitution
5. Market
8. Climate and environment

SUSTAINABLE DEVELOPMENT GOALS

SUSTAINABLE DEVELOPMENT GOALS

3 GOOD HEALTH AND WELL-BEING

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Value chain and society

Human rights are fundamental to Umicore.

We want Umicore to be a leader in providing and creating material-based solutions to contribute to fundamental improvements in the quality of life.

Human rights within the Umicore organization are enshrined in **The Umicore Way** which is the cornerstone of everything we do at Umicore, representing our organization's values. All Umicore personnel commit to upholding these values under the following key statement: **" We uphold fundamental human rights and respect those rights in conducting our operations throughout the world. We engage with the communities around our operations and communicate transparently with our stakeholders".** Our success is measured in our ability to provide environmental and ethical sourcing benefits of scarce raw materials and to deliver products and services that create sustainable value for our customers and society.

Umicore's Horizon 2020 objectives reflect a proactive view of our role in the overall value chain.

Upstream, we have placed greater emphasis on the management of key raw materials supply requirements. We have also sought to ensure that Umicore's efforts in the field of ethical sourcing can generate a competitive edge for the company.

Downstream, we have a strong portfolio of products and services that offer specific sustainability advantages to our customers and society. We use our long-standing and growing experience in ethical sourcing and sustainably managing raw materials to advocate for better practices.

Umicore and IndustriALL Global Union renewed their Global framework Agreement on Sustainable Development in 2019, for 4 years. The agreement reaffirmed Umicore's commitment to sustainable development, embracing economic, environmental and social objectives.

More specifically, it covers human rights, including collective bargaining and equal opportunities, safe and healthy working conditions, environmental and supply chain matters and digital transformation. All parties have undertaken to pursue the constructive dialogue they initiated in 2007 to ensure successful implementation of the agreement.

To ensure our activities are conducted in line with the Umicore Way, we have adopted policies including the Umicore Code of Conduct, Human Rights Policy, and our Sustainable Procurement Charter. Umicore fully supports the United Nations Universal Declaration of Human Rights. We are committed to uphold fundamental human rights and respect those rights in conducting our operations throughout the world.

This commitment applies to all Umicore employees, all subsidiaries and joint ventures where we have operational control and all subcontractors working on our sites.

Our success depends on a relationship of trust and professionalism with employees, commercial partners, shareholders, government authorities and the public. These principles are embedded in our Code of Conduct which sets the framework for ethical behavior and respect of the rule of law, including regarding anticorruption and bribery. It incorporates whistle blowing procedures (Integrity Hotline) and supports our commitment to equal opportunities and diversity. All employees have access to, and are required to comply with, the Code of Conduct and The Umicore Way.

SUSTAINABLE & ETHICAL SUPPLY

We aim to leverage our sustainability approach in the value chain, both upstream with our suppliers and downstream with our customers.

As a global materials technology and recycling group, we purchase and recycle minerals and metals for use in a wide range of products and technologies.

For our operations to function, we need raw materials, transportation, energy and other goods and services.

Sustainable procurement is a key driver in Umicore's Horizon 2020 aspiration to turn sustainability into a greater competitive edge.

Our **Sustainable Procurement Charter** mitigates the supply chain risks, including human rights. The Charter outlines our commitment to fair dealing, transparency and communication, health and safety, and our efforts to include smaller sized and local suppliers in our procurement processes wherever possible, to support local economies where we operate.

We are determined to ethically and sustainably secure a competitive edge in our approach to critical raw materials. To avoid misuse of precious metals and minerals to finance armed conflict, cause human rights abuses, draw upon forced or child labor or support corruption and money laundering, we ensure that conflict minerals procurement is in line with Umicore's values through our policy for **Responsible global supply chain of minerals from conflict affected and high-risk areas** which is based on the OECD guidelines.

Umicore also continues to ensure that gold and silver production operations are certified as conflict-free, and that our cobalt, platinum, palladium and rhodium are sourced responsibly. Our customers are increasingly requesting such guarantees and we provide them with the necessary documentation to assure the conflict-free status of our products.

Umicore sites undergo audit and certification for the London Bullion Market Association (LBMA), the Responsible Jewellery Council (RJC) and the Responsible Minerals Initiative (RMI). For more information on our many accreditations see note V2(p. 182).

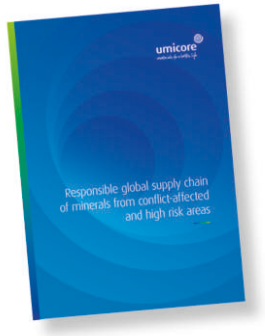
We expect our suppliers to be committed to business integrity, to promote the principles of sustainable procurement in their supply chain, to be compliant with local environmental laws and to respect international human rights law on their own sites and from their own suppliers, including to abolish child and forced labor and eliminate discrimination.

Overall, we have over 18,000 suppliers worldwide to which we paid over € 18.7 billion (including the metal content of raw materials) in 2020. Umicore's Purchasing & Transportation teams worldwide manage indirect procurement processes for energy and other goods and services (accounting for usually around 10% of our spend) while the metal-bearing raw materials are purchased directly by the business units (accounting for the vast majority of our spend).

In 2020, EcoVadis continued to assess indirect procurement streams for Umicore.

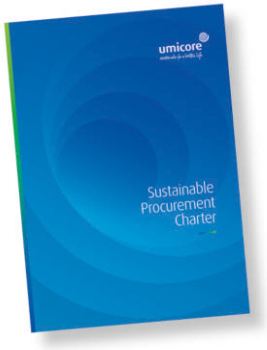
Umicore Responsible global supply chain of minerals from conflict affected and high risk areas available at:

UMICORE.COM/RESPONSIBLE-SUPPLY-CHAIN-POLICY



Umicore Sustainable Procurement Charter available at:

UMICORE.COM/SUSTAINABLE-PROCUREMENT-CHARTER



SUSTAINABLE COBALT

For over a century Umicore has been a world leader in cobalt products, used in many applications, from tooling to rechargeable batteries for electric cars.

Some reserves of cobalt ore are in regions fraught with challenges, giving rise to unethical practices such as forced labor, poor health and safety conditions, child labor and corruption.

For us, sustainable procurement of cobalt means considering economic, environmental and social performance of our suppliers, and the social and environmental impact of the supply, in the purchase of materials. To source cobalt, we have implemented a pioneering Sustainable Procurement Framework for Cobalt and were the first to obtain external validation for our approach in this area.

The various sustainability aspects of the battery supply chain include the conditions under which raw materials are extracted and processed. Umicore is aware of the sustainability risks that are linked to the sourcing of cobalt particularly in the Democratic Republic of Congo. Often, artisanal and small-scale mining (ASM) activities are linked to issues such as human rights abuses, child labor, poor occupational health and safety conditions. In 2004 Umicore decided to exclude cobalt obtained from ASM from its supply chain.

Umicore is the first company in the world to have introduced a Sustainable Procurement Framework for Cobalt and to obtain external validation for its ethical procurement approach in this area. It aims to minimize the risk of any connection between the cobalt in its supply chain – and subsequently that of its customers – and human rights abuses or unethical business practices. Building on the specific approach to sustainable and ethical cobalt sourcing that Umicore introduced in 2004, the framework has evolved to address specific risks linked to unethical mining practices, such as child labor and poor health and safety conditions. Regular independent audits ensure that Umicore's supply chain remains compliant with these policies.

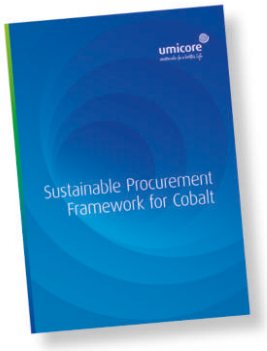
To ensure the traceability of materials in our supply chain, we carry out detailed research and risk assessments of our suppliers. This includes visiting plants, screening policies and procedures and, if required, developing improvement programs. In 2020, Umicore again performed due diligence activities for all its purchased cobalt materials used in rechargeable batteries, tools, catalysts and several other applications. In 2019, Umicore piloted a new third-party site audit protocol on our largest cobalt supplier, with a plan to roll out to other suppliers starting in 2020. Due to the COVID-19 pandemic, the roll out of our new third-party audit was not possible. Umicore did however follow up on mitigation actions defined in the previous year's audit.

Umicore obtained, for the sixth year in a row, third-party assurance from PwC that our 2020 cobalt purchases are carried out in line with the conditions set out in the Framework. The share of cobalt from recycled origin was also reviewed as part of the assurance process and decreased to 4% in 2020, down from 9% in 2019, in part due to the impact of COVID-19 on the availability of cobalt-containing industrial scraps and end-of-life materials for recycling.

The 2020 Due Diligence Compliance Report for Cobalt Procurement, as well as previous years' reports are available online.

Umicore also supports the development of traceability projects across the industry. In 2019, the Cobalt Institute launched the Cobalt Industry Responsible Assessment Framework (CIRAF), a management framework which strengthens the ability of cobalt producers and buyers to assess, mitigate, and report on responsible production and sourcing risks in their operations and supply chain. Umicore is again reporting on our supply chain using the CIRAF, which we helped develop. In 2020, Umicore's supply chain approach is aligned with the level 3 requirements of the CIRAF, an improvement from level 2 in 2019. The compliance report for 2020 is available online.

Within the Battery Alliance, Umicore continues to support the development of a battery passport to ensure transparency on the origin of the raw materials, their transformation, use and end of life. The passport will trace the origins of battery materials and monitor them throughout their entire lifecycle on a global digital platform, to help eradicate unacceptable social or environmental practices and push unsustainable materials out of the market.

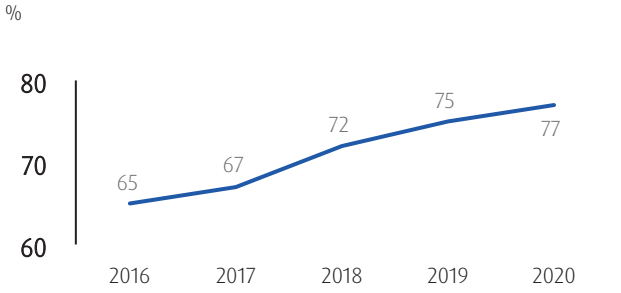


Umicore Sustainable Procurement Framework for Cobalt available at:

UMICORE.COM/SUSTAINABLE-PROCUREMENT-CHARTER-COBALT

SUSTAINABLE PRODUCTS AND SERVICES

CLEAN MOBILITY & RECYCLING REVENUES



In 2020, 77% of Group revenues were from activities that deliver products or services that are directly linked to clean mobility or recycling, up from 75% in 2019, and up 18% compared to 2016, when we began tracking revenues in this way. Many of the materials and services making up the remaining 23% of revenues provide answers to specific societal needs such as improved connectivity (materials for high quality glass, displays) or reduced energy consumption (materials for use in energy-efficient lighting such as LEDs).

Umicore's Horizon 2020 objective is to generate further competitive advantage through the development of products that have specific sustainability benefits.

Our primary focus is on activities that provide solutions for clean mobility and resource scarcity.

Umicore plays a pioneering role in promoting a sustainable value chain for batteries and was the first company to provide its customers with battery materials of a certified sustainable and ethical origin. We strongly believe that higher transparency along the value chain will increase the sustainability of the battery industry. Therefore, Umicore joined Glencore, ERG and CMOC in the Re|Source consortium. Re|Source is developing an industry-wide blockchain platform to trace the origins of the raw materials and track them along the entire battery value chain.

To be a **preferred sustainable supplier**, we work directly with our customers to meet their environmental requirements and disclose our own performance and ambitions. In recent years, some customers have opted for a third party sustainable supplier assessment. For these customers, Umicore discloses to the CDP (see responses: CDP).

Umicore has fully monitored and reported on emissions since 1999 and included reduction targets in our strategic approach in 2010. We delivered emissions reductions beyond our targets then, and in the context of Horizon 2020 we're committed to continuous improvement of our environmental performance even as we continued to grow.

In 2020, Umicore received the Platinum Medal in Corporate Social Responsibility from EcoVadis, placing us among the top 1% of our industry peers in the EcoVadis global network of over 65,000 rated companies.

To support our ambition to turn sustainability into a greater competitive advantage, it is essential to develop a full understanding of the impact that our products have on the world and use it as a lever for improving the footprint of our products and services. At Umicore, the business units work with corporate EHS on life cycle assessments (LCA) to identify the environmental impact of their products and services and set a baseline against which improvements can be measured.

We share our learning and participate in association-driven efforts, such as those of the Nickel Institute, the International Platinum Association and the Cobalt Institute.

We perform LCAs on our materials on an ongoing basis. Using the opportunities identified in this new robust data, Umicore can leverage our unique combination of materials chemistry, energy mix and raw and recycled materials for improved overall environmental impact and a lower-carbon mobility. Umicore will continue to develop selective products and services that have specific sustainability benefits and answer the growing sustainability needs of our customers.

We develop specific sustainability solutions for our products and their applications by working closely with customers.

As a metal that offers huge potential for innovative applications such as clean tech and cutting-edge semiconductors, germanium is an important focus for Umicore's circularity ambitions. Over the last five years, we have taken significant strides toward our goal of supplying 100%-sustainable germanium through a number of initiatives.

Germanium sourced through zinc production has an 85% smaller footprint than germanium sourced from coal, and recycled germanium has a 95% smaller footprint. Today, **50% of the germanium we use is recycled** and more than two thirds of the remainder is recovered from industrial by-products, rather than coal. We also collaborate with companies around the world to develop innovative new ways to recover germanium from production processes and waste streams. For more on Umicore's approach to Germanium, read Pioneering the sourcing & recycling of sustainable germanium(p. 52).

For Umicore products and services, visit:
UMICORE.COM/INDUSTRIES

Umicore's virtual trade show booth

UMICORE INNOVATES WITH VIRTUAL TRADE SHOW

Every year, Umicore participates in more than 60 trade shows where we meet and talk face to face with our customers and potential customers. Due to COVID-19, almost all trade shows were postponed, cancelled or replaced by virtual events. While our commercial teams still favor the live events where a close interaction with the customer is possible, we quickly realized we could not miss the opportunity to join virtual trade shows. Group Communications started to develop a new concept of virtual exhibits that can be customized for the different business units. Very soon a first project appeared: the e-scrap conference, a high-profile trade show on electronic waste.

As a global player in the field of e-scrap recycling, Precious Metals Refining (PMR) was not only one of the exhibitors, but the only one with a virtual booth. Group communications demonstrated that innovation applies to all areas of the business by including trade shows in its long-term "digital first" approach.

GLOBAL TEAMWORK

As the decision to convert the e-scrap conference into a virtual event was communicated very late, it was a race against time to get our very first virtual booth ready in time. "A team from the United States, Germany, Brazil and Belgium worked very hard to get PMR's first virtual exhibition booth ready just in time. I am also proud that we can provide all our business units with this platform to present their activities and interact with their customers virtually." --Werner Appel, Head of Exhibitions and Events

THE ONLY COMPANY WITH VIRTUAL MODE

During the two-day e-scrap conference a whole team literally worked behind the screen. Lies Geunens, Junior Supply Manager Recyclables at PMR was one of them. "We were the only company with a customized virtual booth fully in line with the look and feel of our booth for physical events. The fact that we were there with a virtual stand shows what an innovative company Umicore really is." -- Lies Geunens, Junior Supply Manager Recyclables

Visit one of our virtual booths at: VIRTUAL-BOOTH-U.COM

#ClimateAction

Climate Action Program

Through the Umicore Climate Action Program created in 2019, we invite our employees to submit innovative ideas to reduce our ecological footprint in all areas, from quick wins in the office to global responsible business travel. Employees have answered the call for ideas with great enthusiasm. In Germany, for example, over 50 ideas were submitted and 31 currently implemented. In China, over 100 ideas were submitted of which 84 have been slated for action. UMICORE.COM/STORIES

Eco-efficiency

2020 TARGET

EFFICIENT OPERATIONS

Increase value through efficient use of metals, energy and other inputs

KEY RISKS & OPPORTUNITIES

1. Regulatory and legal context
3. Technology and substitution
8. Climate and environment

SUSTAINABLE DEVELOPMENT GOALS

Eco-efficiency

WE AIM TO OPTIMIZE THE SUSTAINABILITY PERFORMANCE OF OUR OWN OPERATIONS, FOCUSING ON ENERGY EFFICIENCY

-17%
ENERGY CONSUMPTION VS 2015

-67%
METAL EMISSIONS TO AIR VS 2015

-59%
METAL EMISSIONS TO WATER VS 2015

64%
SECONDARY & END-OF-LIFE MATERIALS IN INPUT MIX

As a materials technology company, we aim to drive an even more efficient use of metals, energy and other inputs in our operations to balance environmental and economic factors and work to increase closed-loop relationships with our customers.

As part of our commitment to sustainability, we take into account the environmental impact of our operations, and strive to continuously improve our environmental performance, implement risk management strategies based on valid data and sound science, actively participate in the management and remediation of risks that are the result of historical operations and facilitate and encourage responsible design, use, re-use, recycling and disposal of our products.

Our success is measured in our ability to make sustainability a competitive advantage by being increasingly energy and material efficient compared with our 2015 baseline.

Umicore is a world leader in the eco-efficient recycling and refining of precious metal-bearing materials.

These materials include by-products from other non-ferrous industries, end-of-life consumer and industrial products and e-scrap. Our **eco-efficient process** entails maximizing both the physical recycling of materials and the revenue obtained, while minimizing the associated environmental burden and total cost. We recover and sell precious, special, secondary and base metals and our **closed-loop business model** maximizes material re-use.

This ambition to address increasing global **resource scarcity** and achieve **material efficiency** is an important factor in our strategy. Over the span of our Horizon 2020 strategy we have consistently secured over half our materials supply from non-primary sources. In 2020, 64% of the materials we used were from end-of-life or secondary origin, while 34% were of primary origin.

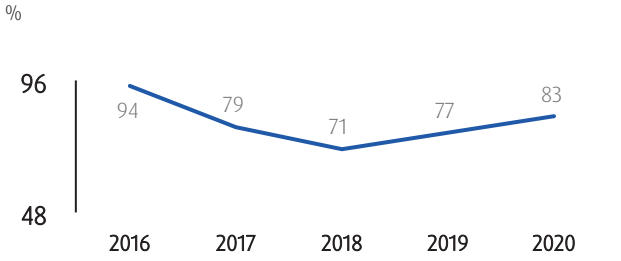
In our Horizon 2020 strategy, we defined **energy efficiency** and **metal emissions reduction** as key eco-efficiency performance indicators. We pursue eco-efficiency initiatives to generate compelling value and a competitive edge through reduced costs, minimizing our carbon footprint and strengthening our license to operate. In addition, we believe that it is equally important to continuously monitor, control and report our performance in relation to other environmental aspects. Our Horizon 2020 approach of continuous improvement was successful in improving our efficiency and reducing our impact.

We continue to invest in research to innovate in clean mobility and sustainability.

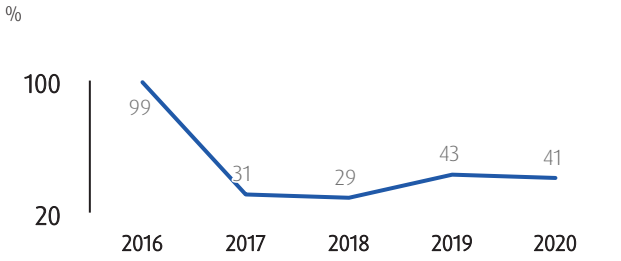
Umicore prioritizes R&D to support our Horizon 2020 ambitions by focusing on the development of innovative solutions for materials and processes. Our ability to create a pipeline for these innovations and solutions is an important component of our long-term eco-efficiency performance.

ECO-EFFICIENCY

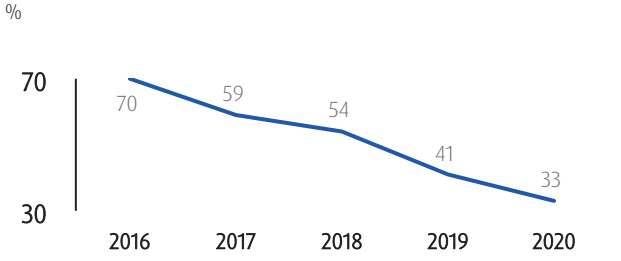
NORMALIZED ENERGY CONSUMPTION



METAL EMISSION REDUCTION TO WATER



METAL EMISSION REDUCTION TO AIR



ENERGY EFFICIENCY

Umicore plays a key role in the transition to a low-carbon society.

We produce rechargeable battery materials for EVs, catalysts for reducing transport and industrial emissions, and contribute to resource stewardship by recycling metals and end-of-life products in a closed loop. In our own operations, we are committed to achieving further energy efficiency compared to our 2015 levels.

Energy consumption is continually monitored and regulated at all sites. The bigger contributors are additionally encouraged to develop energy efficiency projects and are required to report on them. Several Umicore sites have implemented the ISO 50001 **energy efficiency** standard and the 2 largest sites in Belgium have been part of the energy efficiency covenant with the Flemish government since 2004.

In 2020, 26 sites accounted for 95% of the Group's energy consumption with a total of 38 energy efficiency projects implemented over the course of the year. By the end of 2020, Umicore had achieved a 17% reduction in energy consumption compared to the 2015 baseline, correcting for production intensity. This result is the combination of improvements in productivity and the continuous implementation of energy efficiency projects. Over the last 5 years, 189 efficiency projects were implemented, the bulk of which tackled heat, HVAC, lighting and process efficiencies.

When looking at our **carbon emissions**, we register a 7% reduction compared to 2019. In 2020, we built a nitric acid plant at our Hoboken site in Belgium, where we also produce sulfuric acid. Nitrous oxide, a byproduct of sulfuric acid production also known as laughing gas, is a greenhouse gas that has about 300 times more impact on global warming than carbon dioxide (CO_2). By capturing and transforming nitrous oxide released during production into nitric acid, we avoid the emission of nitrous oxide into the air. In doing so, we reduce our carbon footprint by almost 40,000 tonnes CO_2e/year and turn waste into a resource, a pillar of the Umicore business model. When compared to the outset of our Horizon 2020 strategy, our carbon emissions have increased 3%. In that time, Umicore has expanded in terms of operational footprint and ramped up production lines while maintaining a continuous process improvement approach. For more information, see note E3(p. 192).

In recent years, as part of our commitment to sustainable operations, we began examining the share of **renewable energy** in our purchased energy mix. 2019 marked the first year we systematically collected information from our sites on purchased electricity sourced from wind, solar and/or biomass energy and could report the result. In 2020, the share of renewables in Umicore's purchased energy mix was 15%. For more information, see note E4(p. 192).

While choosing the share of renewables in our purchased energy mix is a challenge in some of the regions where we are most active, Umicore is actively pursuing an increase in the share of renewables in our purchased energy mix.

METAL EMISSIONS

We monitor and take steps to reduce the impact of metals emissions on the environment – both to water and air. Each of the different metals that we emit has a specific level of potential toxicity for the environment and human health. For this reason, we focus on reducing the impact of our emissions.

The aim for Horizon 2020 was to reduce metal emissions impacts while considering growing volumes of production. While monitoring continues on all sites, reporting focuses on the 10 or fewer sites that contribute to 95% of the emissions expressed in impact.

In 2020, the impact of **metal emissions to air** fell by 67% compared to 2015, mainly thanks to further efforts to improve filtration and process efficiency. Compared to 2015, after correction for activity levels, the impact of **metal emissions to water** in 2020 fell by 59%. For more information, see note E2(p. 189).

STEWARDSHIP

Umicore is a global company with a global footprint. In terms of our products and services, we are uniquely positioned to address global megatrends — namely the need for **cleaner air** and **resource stewardship**, and environmental performance and safety are at the heart of our process designs.

Umicore continues to provide advanced emission control and battery material technologies while advocating for a ramp-up of clean energy and clean mobility technologies. We also emphasize the links between a **Circular Economy** and **responsible sourcing**, resource efficiency, waste management and **high-quality recycling**. We aspire to turn sustainability into a greater competitive edge through our unique business model and our commitment to ethical and responsible sourcing.

Part of our commitment to sustainability is to take into account the environmental impact of our operations with growing and expanding capacity. Many factors are considered in choosing to build new sites or to expand existing sites.

Our new site in Nysa, Poland, for example, was selected for its vicinity to our European customers (providing reduced transport impact of our products) and a skilled technical workforce, as well as low-carbon electricity supply. The Nysa site will make use of wind, hydro and photovoltaic energy.

Active participation in the management and remediation of risks from operations is an integral part of the Umicore Way. Our proactive program for assessing and remediating, where necessary, soil and groundwater contamination progresses tirelessly.

For more, see note E7(p. 195).

Managing impact in Hoboken

Umicore's Hoboken proposed green zone

The Umicore site in Hoboken is one of the world's largest precious metals refiners, offering recycling and refining services for precious metal bearing materials such as by-products from industry, electronic scrap and spent industrial and automotive catalysts. For several decades, the blood levels of children living close to the plant have been monitored twice per year by the authorities. In July 2020 the readings of the children living close to the Umicore recycling plant in Hoboken, Belgium, showed elevated levels of lead in their blood after multiple years of steady decreases, with historically low levels in 2019. Although the root cause investigation showed no major direct source of lead emissions in the plant, Umicore is aware that the risks associated with lead need to be well managed at all times. Various actions have been taken to reduce diffuse emissions and to ensure that the local community and industry can co-exist sustainably.

Read the full story on: UMICORE.COM/STORIES

EXEMPLARY MANAGEMENT OF HISTORICAL RADIOACTIVE WASTE STORED IN OLEN

UMICORE'S OLEN SITE LEGACY

Aerial view of Umicore Olen

From 1922 until the end of the 1970s, Umicore's predecessor companies manufactured radium and uranium products in Olen, Belgium. Until the 1960s radium was the only treatment for cancer. Uranium oxide was used in fuel rods for nuclear power stations. Since the 1970s there has no longer been any radium or uranium production at the Olen site. All buildings and installations where radioactive material was processed have been dismantled. The residues storage area has been cleaned up to eliminate any possible adverse effect on employees, the surrounding population or the environment.

Some low radioactive residues remain from these past activities and are stored at the Umicore site in Olen using the best available techniques and in concertation with the authorities. These residues cannot be compared in any way to the radioactive waste from nuclear power plants. Waste from nuclear power plants is category C waste (according to the classification of the International Atomic Energy Agency) which is highly radioactive and generates significant heat. Such waste has to be buried at a depth of several hundred meters. The residues present on the Umicore site (essentially category A residues and a small quantity of category B) are of very low radioactivity and are stored according to the guidelines set out by the relevant federal agencies.

In Olen, Umicore has state-of-the-art storage facilities of industrial residues where there is only a small fraction that is lightly contaminated. Additionally, there is a dedicated facility on site, built in the 80s, to contain radioactive storage for light radioactive materials. Strict inspections are carried out regularly by the competent authorities.

LONG-TERM SOLUTIONS

While a study in the 1990s, still applicable today, stated that 'at present there is no danger to public health and the environment', Umicore has sought a long-term solution to maximize safety in the storage of the historical radioactive waste. Umicore has depolluted the premises outside the plant in order to make permanent improvements to the existing conditions and to provide effective long-term protection to human beings and the environment. We continue to work with the authorities on monitoring and on long-term solutions.

Umicore has set in place a monitoring program with an external radiation expert, and periodic reporting to the authorities. This program includes visual inspection to ensure the integrity of the external grass cover, radon emanation measurements, stability measurements and monitoring of groundwater quality. The government has confirmed that there are no risks to the health of employees, local residents or the environment.

"There is no danger to public health."
-- FANC, Federal Agency for Nuclear Control

Since 2009 the Federal and Regional Agencies (FANC, NIRAS and OVAM) have been working with Umicore to find a long-term solution to the storage of historical radioactive waste. Early in 2020, the Federal Government, through FANC and NIRAS, issued a vision document in which a final waste storage destination is proposed to deal once and for all with the historical radioactive legacy at the Olen site. Umicore fully supports the proposed approach and is cooperating with the authorities on planning the next steps in this major step forward towards a long-term, sustainable and agreed solution to Olen's radioactive legacy. Working groups comprising representatives of OVAM, NIRAS, FANC and Umicore are being formed to shape this program.

OPEN AND CONSTRUCTIVE DIALOGUE

While no further action is needed at present, the ongoing proactive and constructive cooperation between FANC, the Municipality of Olen and Umicore has been publicly confirmed by the neighbors and by the local authorities .

"We have always had an open dialogue with Umicore about radioactivity." -- Seppe Bouquillon, Mayor of Olen, Belgium

The mayor of Olen believes the experts of the Federal Agency for Nuclear Control and Umicore when they say that there is no immediate danger for public health and the environment*. (Source: Belga)

* Burgemeester van Olen: 'Steeds open overleg gehad met Umicore over radioactiviteit' - België - Knack

Margot Neven and Scott Segers in the hydrometallurgical lab

Research, development & innovation

As a materials technology company, our future success depends on our ability to develop and market innovative products and services. We strive to meet the needs of a rapidly changing world and continuously search for new solutions for our customers. We dedicate our research and development (R&D) to solving some of the world's largest societal challenges in the areas of clean mobility and clean air, resource scarcity and sustainability.

We have prioritized our R&D programs to support our short term and long term ambitions, focusing on the development of closed-loop material solutions. We are consistently investing in research to meet the growing demand for clean mobility materials and for quality recycling of precious and other valuable metals. Besides our core strategic domains, we are exploring new developments in adjacent and new markets based on our expertise domains.

From production and process technology to deep knowledge of metallurgy and materials science, a significant part of our technology is delivered using Umicore R&D findings. Umicore also develops technology in collaboration with industrial or academic partners and, where appropriate, we protect our intellectual property with patents. 63 patents were filed in 2020.

Umicore continues to invest in R&D and to attract international scientific talent to develop the next generation of sustainable products and process technologies for our customers.

Umicore R&D employees cover 35 nationalities in 15 locations, and in 2020, 1 in 4 were women.

Over the past 5 years, the R&D investments increased by over 40%. In 2020 Umicore invested € 223 million on R&D, 6% more than in 2019, largely on rechargeable battery materials product and process technologies development, new business incubation and competence development. The R&D spend represented 7% of revenues and capitalized development costs accounted for € 32 million.

TECHNOLOGY IS AT THE CORE OF OUR SUCCESS

€ 223m

2020 R&D SPEND

15

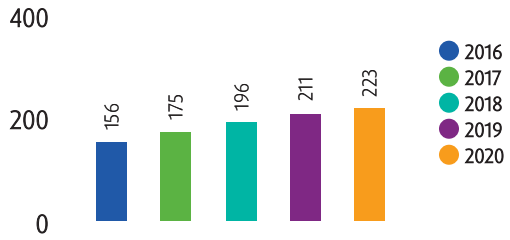
R&D SITES

1,325

R&D EMPLOYEES

R&D EXPENDITURE

Millions of Euros



CLEAN MOBILITY INNOVATION

The clean mobility trend, toward zero well-to-wheel emission ambitions, points to a combination of electric and hybrid vehicles, fuel cell vehicles and carbon neutrally-fueled internal combustion engines.

Umicore has a unique position in clean mobility materials across all drive-train technologies. It is one of three global leaders in emission control catalysts for internal combustion engines, a leading supplier of materials for rechargeable batteries used in electric vehicles and catalysts for fuel cell applications.

Legislation increasingly requires gasoline vehicles to be equipped with particulate filters. Our work focuses on improved catalyst technologies for gasoline and diesel vehicles in a cost efficient way to meet these increasingly stringent regulations. For gasoline particulate filters (GPF), Umicore is optimizing the distribution of the catalytic material in the pores of the filter so that an optimal balance of backpressure, filtration efficiency and chemical reactivity is obtained.

In response to COVID-19, recovery projects worldwide accelerated the adoption of sustainable technologies, such as electric vehicles. The key to improving the total cost of EV ownership, and the environmental footprint of their batteries, is their increase in energy density. As battery-powered vehicles become mainstream, different user segments emerge, each with different cost and performance needs, presenting opportunities for tailored materials solutions. Research programs on cathode and anode materials with novel compositions, or for batteries working at a higher voltage, address these upcoming needs. To ensure synchronization with market demand, this type of innovation is often performed in close collaboration with our external partners who test samples of our next-generation products.

Hydrogen is a promising future energy carrier which is converted into clean electricity by fuel cells.

Umicore's electrocatalysts play a crucial role in Proton Exchange Membrane fuel cells used in stationary and mobility applications on the global path to zero emissions. Our fuel cell catalyst portfolio covers all relevant technologies for both anode and cathode electrode applications. Working with platinum and platinum alloy on carbon catalysts as well as special protective additives, Umicore R&D improves the robustness of the fuel cell under critical operating conditions to achieve performance requirements in vehicle applications.

INNOVATION IN RECYCLING

Umicore is the world's leading recycler of complex waste streams containing precious and other valuable metals, including from batteries, electronics and catalysts. Umicore's closed-loop business model will be a powerful strategic differentiator for the foreseeable future. Umicore's recycling is not only the cornerstone in the sustainable development of several industries, but with the supply of metal based products and recycling under one roof, Umicore is also the partner of choice for the management of metals throughout the loop, providing reliable sourcing and financial optimization of both working capital and metal price exposure in the value chain.

Innovation projects for recycling follow industry trends closely. In 2020, our attention in battery recycling went beyond the recycling process, to the safety and ergonomics of operations and how these can be supported by automation and robotization. We started mapping what the future urban mine may look like and how this may inspire new flowsheets.

DIGITAL TRANSFORMATION

Digitalization and Industry 4.0 are powerful tools to create value in many domains. Three initiatives have been undertaken to scale these efficiently across the group: first, the definition of digitalization roles and the corresponding training programs; second, the choice of Umicore standard tools for certain business processes, such as financial planning, procurement or the storage and self-service analysis of operating data; third, the set-up of a central team that guides business units in the drafting and implementation of digitalization roadmaps. Such roadmaps aim at unlocking value through projects covering a spectrum of opportunities, from operational excellence, over the pro-active management of our EHS performance, to revolutionizing R&D.

R&D FIT FOR FUTURE GROWTH

A carbon neutral economy by 2050 will require further adoption of clean mobility solutions and renewable energy sources for electricity such as hydrogen and other alternative fuels with zero carbon footprint (synthetic fuels, e-fuels, biofuels, etc.). Clean cities with zero local emission and with zero-waste streams are the ultimate goal. The evolution towards zero-waste streams will put even more emphasis on circular economy to address resource scarcity in all smart sectors (mobility, IoT, Industry 5.0, etc.).

The push towards decarbonization of industry will form a Hydrogen economy with new opportunities for innovation in catalysis. Building on our expertise of fuel cell technologies in stationary and mobile applications, Umicore intensified the development efforts in the field of anode and cathode catalysts for green hydrogen production.

Value creation through innovation goes further than R&D. The New Business Incubation unit created in 2019 grew in 2020 to become the unit in which our long-term research projects and internal ventures, such as battery recycling, silicon composite anodes or chemical metal deposition solutions, are groomed to become mature businesses over a horizon of 5 to 10 years.

OPEN INNOVATION

We continuously strengthen our in-house competence expertise in metallurgy, chemistry and material science, while constantly expanding our external collaboration network. Despite travel restrictions in 2020, Umicore remained committed to open innovation; a dedicated team facilitates the collaboration with dozens of research institutes, start-ups and universities worldwide. Foresight is crucial now, more than ever, and we composed a strategic insights and analysis team to develop a coherent view on future scenarios.

Often multiple innovation disciplines contribute to the result. For instance, the Umicore open innovation and digitalization teams helped in setting up the collaboration with an external partner to bring robotization expertise to battery recycling. In another example, Umicore, Imec and other partners have started to work together in the development of a new sensor for harsh industrial environments.

A worldwide, ever more diverse Umicore community of over 1300 scientists is collaborating with customers, academic and technology institutes to sharpen our skills, improve the quality of our products, develop our processes, speed up development, lower costs, improve safety and reduce our environmental impact.

World-class expertise is used and developed into effective building blocks of our innovation engine. The most important building blocks include:

- Metallurgy
- Materials science
- Analytics, trace analysis and material characterization
- Chemistry and PGM chemistry
- Surface science
- Computational science including data science
- Application testing and testing methods
- Process technology and process scaling

These areas are all undergoing rapid developments, creating opportunities to improve our technology. We follow, test and develop these science and technology trends and integrate them in our development work.

Deeper understanding of thermodynamics, kinetics and complex element interactions are driving the speed of our development and help avoid excessive experimental or pilot validations. We work with worldwide consortia to develop and finetune methods that are applicable to Umicore's different metallurgical flows.

Advances in modeling fuel insights on improving materials and on understanding and predicting performance. Surface engineering has become important in optimizing product performance, complementing our expertise in materials synthesis and colloid chemistry. Increased availability, development and deployment of accurate analytical methods provide operational efficiency and accelerate both our innovation process and learning speed.

Computational science and data science are essential at all phases of the innovation process and play a growing role in optimizing our workflows. Natural language processing in market and technology intelligence, image and pattern recognition, machine learning, amongst others, make computational science our fastest growing area of expertise.

Technology innovation and differentiation remain key for our future growth. Umicore's forward-looking approach is fueled by our expanding expertise. The combination of detailed modeling and growing improvements in integrated process data, strengthened by artificial intelligence, accelerate process understanding and improvements. Our ambition is to grow our portfolio of collaborative programs focusing on measuring and understanding materials functionality, leading to better product design.

"We use the power of technology, innovation and data to help people have better lives and to reduce our impact on the planet"
-- An Steegen, CTO

PIONEERING THE SOURCING & RECYCLING OF SUSTAINABLE GERMANIUM

Production scraps from fiberoptic cables containing germanium

We continuously strive to transform sustainability into a competitive advantage.

GERMANIUM: VALUABLE & VERSATILE – BUT NOT SIMPLE TO FIND

When it comes to high-tech innovation, the unique characteristics of germanium are valuable in a whole host of applications, and the semiconductor is **recognised as a critical material** by the governing bodies of the European Union and the United States. To give just a few examples, germanium is used in fibre-optic cables required for 5G connectivity, in solar cells powering satellites and Mars rovers and in cutting-edge semiconductors.

Because its elemental state isn't found in nature, most germanium is extracted through coal combustion or sourced as a by-product from the zinc production process. However – and crucial for Umicore as a supplier of sustainable materials – **germanium can also be recycled**.

LEADING THE ENTIRE INDUSTRY BY DEFINING SUSTAINABLE BEST PRACTICES

Research has shown that germanium sourced through zinc production has a 85%-smaller carbon footprint than germanium sourced from coal, and recycled germanium boasts a 95%-smaller footprint. As a result, sustainable germanium is **an important focal point for our circularity efforts**.

We've made significant progress on our quest toward 100%-sustainable germanium, enabling us to set highly demanding industry benchmarks through our own operations. In fact, between 2015 and 2020, Umicore has reduced its supply of coal-sourced germanium by 50%. Today, 50% of the germanium used by Umicore is recycled and more than two-thirds of the remainder is recovered from industrial by-products. Thanks to these efforts, we are considered amongst **the most sustainable germanium manufacturers** worldwide.

Among the key milestones we've achieved through partnerships, Umicore:

- **signed multiple long-term agreements** with a major company for sustainable germanium;
- established **multiple licensing and recycling agreements** with international partners to extract and concentrate germanium from waste streams;
- collaborated with a partner to **develop an innovative, cost-effective process** for germanium extraction from scrap and production waste;
- guided a photovoltaic technology business **in methods to optimise the collection of germanium** from their new manufacturing processes.

SHAPING THE FUTURE OF CIRCULARITY IN HIGH TECH – & BEYOND

In addition to identifying and developing new ways to source germanium sustainably, these achievements have also led to **deep, lasting and impactful relationships** with our customers and partners. The positive outcomes are many and mutual, including financial benefits for every party in the supply chain, a stronger global focus on germanium as a circular resource, more environmentally friendly industrial processes, and much more.

PAVING THE WAY FOR A CIRCULAR ECONOMY

At Umicore, we see it as our responsibility as a global industrial player to commit to ensuring a healthier planet for all. We're proud of what we have achieved in collaboration with our partners, and look forward to further closing the germanium loop through innovative, multidisciplinary projects.

For Umicore products and services, visit:
UMICORE.COM/INDUSTRIES

Thomas Creemers for the "That's brilliant" Battery Challenge - Photography by ©Frederik Beyens

Umicore supports “That's brilliant” to bring young people closer to STEM

The next generation of innovators will play an important role for a technology oriented company like Umicore. Stimulating scientific interest and challenging young people to think about innovation are important links in building a sustainable future. Science, technology, engineering and mathematics (STEM) education gives students the tools to building that future.

UMICORE.COM/STORIES

Great place to work

2020 TARGET

HEALTH — Become a zero-accident workplace.

SAFETY — Reduce employee exposure to specific metals.

PEOPLE ENGAGEMENT — Further improve people engagement with specific focus on talent attraction & retention, diversity management and employability.

KEY RISKS & OPPORTUNITIES

7 Talent attraction and retention

SUSTAINABLE DEVELOPMENT GOALS

Great place to work

THE LONG-TERM SUCCESS OF UMICORE DEPENDS ON OUR BEING A SAFE, HEALTHY AND ENGAGING PLACE TO WORK

10,859
Group employees

21.7%
Women in our workforce

96%
Retention rate

Our success is measured by our ability to offer a safe workplace and embed a safety culture in our workforce, to monitor, manage and protect our employees from exposure risks, to ensure Umicore's status as an employer of choice in all the regions where we operate and to manage talent as a driver for reaching our desired business growth.

We are proud of our position as a pioneer and world leader in materials technology and sustainability, but in a disruptive industry, we need to continue innovating, challenging the status quo and growing, both as a company and as an employer.

We strive to create an environment in which all our employees can succeed, and which encourages innovation, thrives on collaboration, rewards contribution and provides every employee with the opportunity to develop.

The varying ambitions and interests of our colleagues and new recruits enrich Umicore with new outlooks and new ways of working together which build our competitive advantage.

Our values and mutual respect remain consistent as we all work towards the same vision: to create materials for a better life.

Umicore has a truly global profile, with operations on every major continent. 10,859 employees currently work at Umicore, across 47 production sites, 15 research & development centers and in supporting offices including our global headquarters in Brussels.

Our Horizon 2020 strategy is designed to consider the future trends that impact Umicore, the labor market and societal expectations. Our objectives are centered on health and safety, talent management, diversity and employability – aspects that will have the greatest impact on reaching Horizon 2020 goals.

Despite competitive markets we are making strides in talent management, diversity and employee engagement. We continue to pursue our long-term goals of eliminating lost-time accidents and occupational-related ill-health and to seek new ways of engaging colleagues by promoting safety and wellbeing in the workplace.

HEALTH & SAFETY

49

Lost Time Accidents

83%

Reporting sites without LTA

1.6%

Exposure Ratio,
all biomarkers aggregated

The safety of our people is a key priority.

ZERO ACCIDENTS

In 2020, while 83% of the reporting sites operated without a lost time accident, our overall safety results were again disappointing. In December 2020, a fatal accident occurred at Umicore's Cobalt & Specialty Materials site in Subic, the Philippines. This tragic event shows once more that the journey to make Umicore a zero-accident workplace is far from completion, even in sites with an outstanding safety track record such as Subic which had operated more than 13 years without LTA.

Umicore recorded 49 lost time accidents in 2020 compared to 90 in 2019. The frequency rate was 2.52 (4.60 in 2019) and the severity rate was 0.47 (0.20 in 2019).

In the past we reported that there is a clear need to change behavior and mindset to install a true safety culture. While absence from the workplace due to the COVID crisis did not have an impact on lost time accidents, we have noted that health precautions tied to the crisis did improve the safety culture at Umicore. The sense of urgency in the face of the crisis, the purposeful care of one another combined with a workplace communications style that focused on safety coaching resulted in improved safety performance. Umicore's commitment to safety is unwavering, and these results have confirmed that tackling cultural change in terms of safety is the right path to creating a safe and great place to work.

In 2020, process safety activities focused on executing process risk assessment studies. At year end,over 70% of the production processes had received specific process hazard and risk assessments compliant with Umicore standards. A detailed timeline for completion of the remaining studies over the coming years gives priority to processes with high risk-profiles.

Umicore continues our internal HAZOP leader training program to increase and secure process safety knowledge.

OCCUPATIONAL EXPOSURE

Umicore makes continuous efforts to eliminate occupational-related health issues and to promote wellbeing in the workplace. The main occupational health risks are related to exposure to hazardous substances and physical hazards (mainly noise).

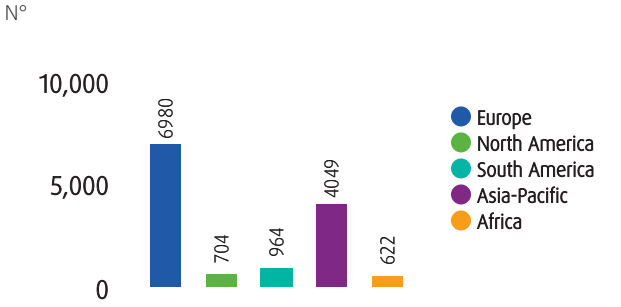
Umicore is leading the industry by setting voluntary, science-based targets for potentially hazardous exposure that are more stringent than legal requirements, where they exist.

All employees with a potential workplace exposure to any of the target metals (arsenic, cadmium, cobalt, indium, nickel, lead and platinum salts) or other metals are monitored by an occupational health program. The Horizon 2020 objective for occupational exposure is to reduce to zero the number of individual readings that indicate an exposure for an employee that is higher than the internal target levels. While these excess readings do not necessarily indicate a risk for the person concerned, they are important indicators of recent or lifetime exposure and are used as the basis for further improvements on specific sites.

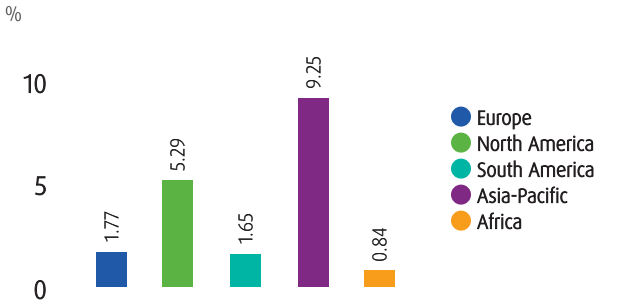
In 2020, a total of 7,406 biological samples were taken from employees with occupational exposure to at least one of the metals mentioned above (platinum salts excluded). 122 readings showed a result in excess of the internal target value, bringing the total excess rate to 1.6%, down from 1.8% in 2019 and 3.2% at the beginning of our Horizon 2020 strategic cycle. All occupationally exposed employees are regularly monitored by an occupational health physician.

TALENT MANAGEMENT

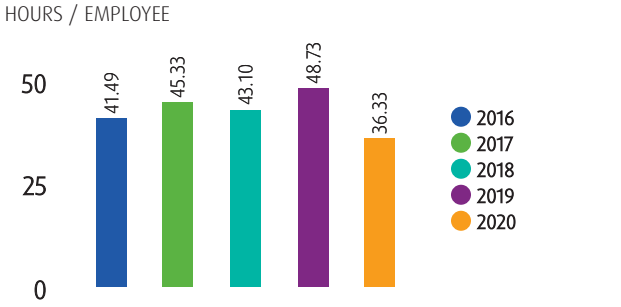
WORKFORCE BY REGION



VOLUNTARY LEAVERS RATIO BY REGION



AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE



Talent management involves finding and retaining the right people at all levels of the organization and in a wide variety of functions, including equipment operators, laboratory analysts, office staff and production engineers. For Umicore the main drivers are linked to the Horizon 2020 growth ambitions in the sectors and regions where we are active.

The number of employees in the fully consolidated companies decreased from 11,152 at the end of 2019 to 10,859 at the end of 2020. This decrease mainly reflects the plant closures in Tulsa, US (Automotive Catalysts) and Wickliffe, US (Cobalt & Specialty Materials).

Umicore can attract, develop and retain high caliber leaders by offering attractive and challenging leadership roles.

In 2020, following up on the outcomes of the previous year's talent review, Umicore implemented mentoring programs for emerging talent, including for young top talent, with targeted development programs. These programs revolve around developing broad profiles and providing multifunctional development opportunities.

In 2020, our overall retention rate increased to 96%, up from 94% in 2019. Significant regional differences in retention rates continue, with Asia-Pacific reporting the highest voluntary leaver rate at 9.25%, an improvement from 11.87% in 2019.

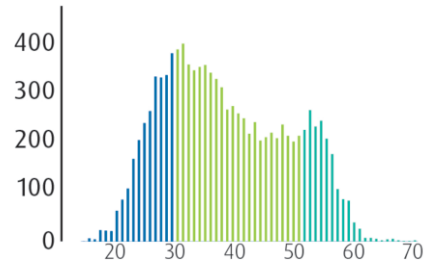
Umicore provides managers with a training curriculum aligned across all regions and promotes career development using an internal online vacancies tool, promoting greater internal mobility. Training at Umicore encompasses traditional classroom-type modules, e-learning and in-service instruction.

In 2020, the average training hours per employee reached 36 hours, lower than 49 hours in 2019, primarily due to COVID-19. Due to the pandemic, training was organized differently: in smaller groups and respecting social distancing where in-person presence was possible, and through online sessions. Some training was postponed or cancelled. In 2020, managers training hours (27 hours) were lower than for other employees (39 hours).

DIVERSITY

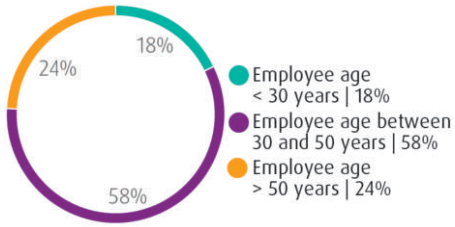
AGE DISTRIBUTION

Number of employees

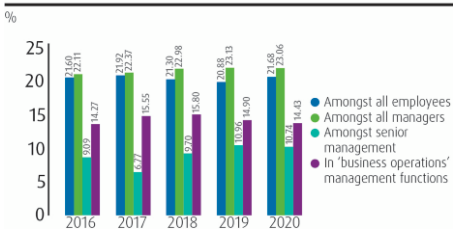


Employees under 18 are trainees, apprentices or interns.

WORKFORCE AGE SPLIT



WOMEN AT UMICORE



Umicore seeks to benefit as much as possible from diversity, for example in gender, culture and ethnicity. Umicore believes that more diverse management teams improve the quality of decision-making.

Umicore developed a group policy on diversity to support an inclusive work culture that offers equal opportunities, leading to a high level of employee engagement for all employees, irrespective of their diverse backgrounds. Diversity includes gender, religion, race, national or ethnic origin, cultural background, social group, disability, sexual orientation, marital status, age or political opinion.

We are especially seeking broader cultural representation in our management teams. Considering that 60% of our revenues are generated outside Europe and our growing global footprint, we decided to act to ensure that non-Europeans are better represented in our senior management. Currently, 20% of the top management positions in Umicore are filled by non-Europeans, up from 18.5% from 2019 and 16.7% in 2016. Our efforts continue, as a better balance in this regard will enable us to make business decisions that are better aligned with the markets we serve.

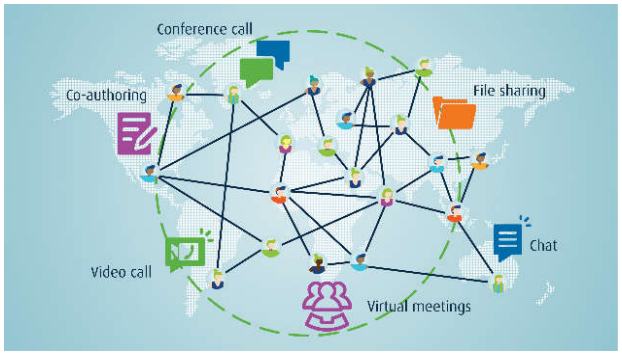
Umicore employees covered 74 nationalities in 2020, as in 2019.

Women are underrepresented at senior management level at Umicore. While this can be partly ascribed to the fact that chemical companies tend to attract fewer women, the career prospects for talented women can still be improved within Umicore. In 2020, only 21.6% of Umicore employees were female, a slight increase from 2019. This is attributed to the nature of industrial operations, where candidates are usually male. Despite this, our commitment to an inclusive and diverse workplace remains.

Our overall focus continues to be on recruiting and developing female managers. In 2020, 30% of managers recruited were female. Women in management roles have slowly increased from 18.6% in 2010 to 23% in 2020. The number of overall managers grew again in 2020, leading to a slightly decreased share of women in these roles from 23.1% in 2019 to 23% in 2020, despite our recruitment efforts.

Women in senior management decreased slightly to 10.7% in 2020, down from 10.9% in 2019, and below our overall ambition of 15% by 2020. We remain committed to increasing the female representation in senior management at the earliest possible date.

EMPLOYEE ENGAGEMENT



In today's dynamic environment, digital literacy and a mindset focused on collaboration, transparency and self-organized learning are crucial. If applied correctly, digital tools can improve efficiency, productivity and innovation. Yet providing tools and training is not enough. The most difficult and most important step is to change familiar patterns and ways of thinking. Employees need to break out of their comfort zone, share successes and failures transparently, try out new approaches, network across regions and departments, take the initiative and be empowered to do all this through an appropriate environment.

The vision of our digital workplace is to enable everyone within Umicore to collaborate from anywhere in the world.

KEEPING OUR COLLEAGUES CONNECTED THANKS TO THE DIGITAL WORKPLACE

Launched globally in December 2019, Umicore's Digital Workplace project aimed to improve the efficiency, productivity and innovation of our employees by optimally using digital tools. The vision of our digital workplace is to enable everyone within Umicore to collaborate from anywhere in the world, sharing experiences and knowledge through a worldwide network as part of our daily routine.

Little did we know at the end of 2019 that the timing of the launch of Umicore's digital workplace would come at exactly the right time, given the spread of COVID-19 a few months later. By the time the first wave of the pandemic hit, Umicore employees had been using the digital tools on a daily basis for several weeks already. Digital meetings and calls had become part of our routine and collaborating on documents for projects was becoming increasingly common.

DIGITAL HEROES TO THE RESCUE

When the COVID-19 pandemic made it impossible to hold physical meetings and so many of us had to work from home, Umicore employees were familiar with the digital tools. As such, they were able to keep our activities running and stay connected with colleagues, almost as in normal times. Those in need of support could rely on an ambassador community of 'digital heroes' to personally help them solve technical issues. We also hosted a series of specific learning sessions on digital workplace topics such as remote working, efficient online meetings, file sharing and virtual leadership.

DIGITAL ALTERNATIVES

As the uncertainties around COVID-19 and the corresponding safety measures persisted throughout 2020, many Umicore employees began looking for innovative solutions to their daily challenges which they found in the digital workplace. For example, audits were conducted remotely; physical town hall meetings (where information is typically shared to a broad live audience) were successfully replaced by virtual town hall meetings; a digital onboarding program was implemented to virtually welcome new employees joining during the pandemic; and to maintain the connection between colleagues, virtual social events were hosted, such as birthday celebrations. In our operations, smart glasses made it possible to install production systems in some of our plants.

Amidst the many challenges of 2020, our digital workplace enabled us to seize the opportunity to stay connected and engaged with our global community of colleagues.

WORKING AT UMICORE

Saskia Bodvin, Thomas Morias and Kris Tolpe in the pyrometallurgical lab, Olen

We aim to lead the way, both for our customers and for our employees.

We strive to create a collaborative environment and a culture of shared ideas, developing expertise and advancing careers, working together on technologies that will benefit future generations and setting new standards in one of the world's most dynamic and disruptive industries.

In our state-of-the-art production processes technical operators, production supervisors and engineers use their know-how and ideas to benefit future generations. Our support teams play a critical role in supporting the business growth by making sure our decisions are commercially viable, enhancing our reputation, building new customer relationships or finding the right people who can build on what we have already achieved.

Managers at Umicore work on projects that are as exciting as they are challenging. R&D experts develop the technologies that address issues from clean mobility to resource scarcity.

We seek to ensure career-long learning and development opportunities for our employees and to promote the transferability of skills and knowledge across Umicore.

The Junior Management Program (JUMP) is offered to a selected group of junior managers using a "twin-coaching" format, bringing together two participants from different regions and business units, but within the same function family, to develop international thinking, shadow best practices and provide exposure to other business units.

Leading for Excellence (L4E) is offered to a selected group of managers in the Asia Pacific region to drive performance in the region by fostering collaboration and engagement across sites and sharpening leadership skills.

Entrepreneurs for Tomorrow (E4T) is offered to a selected group of middle to senior managers to develop corporate culture with highly competent managers and promote cross-functional integration within Umicore.

The Strategic Leadership Program is offered to a selected group of senior managers, organized in collaboration with INSEAD. Participants move from exploration of the economic 'macro-environment', through doing business in Asia, to the challenges of creating an agile strategy and an aligned organization and developing their personal leadership style.

People work longer before retiring, particularly in Europe. Umicore wants to ensure that people who are working well into their sixties are provided with suitable, motivating and rewarding work and can transfer their skills and knowledge to younger colleagues. This is accomplished by training, maintaining their mental flexibility to carry out new tasks, managing work-life issues, and providing support in the transition from employee to retiree.

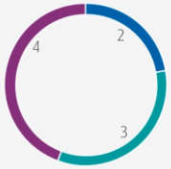
UMICORE.COM/CAREERS

Leadership

Supervisory Board

BOARD DIVERSITY

Tenure

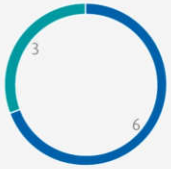


- (0-2 years) | 2
- (3-5 years) | 3
- (6+ years) | 4

Independence

- Independent | 6
- Non-independent | 3

Gender



- Male | 6
- Female | 3

Nationalities


Australia


Belgium


France


Germany


Switzerland


USA


Spain

From left to right, 1st row: Mark Garrett, Laurent Raets, Liat Ben-Zur, Mario Armero. Second row: Ines Kolmsee, Thomas Leysen, Marc Grynberg (invited by the Board), Géraldine Nolens. 3rd row: Marc Van Sande, Françoise Chombar, Eric Meurice, Koenraad Debackere

THOMAS LEYSEN
CHAIRMAN

Belgian, 60

DATE APPOINTED TO BOARD
10 May 2000 (date appointment Chair: 19 November 2008)

EDUCATION
Law – KU Leuven, Belgium

EXPERIENCE
Thomas Leysen became Chairman of Umicore in November 2008 after serving as Chief Executive Officer of Umicore since 2000. During this mandate, he transformed the former Union Minière from a non-ferrous company into an international materials technology group called Umicore. He joined the group in 1993 as member of the Executive Committee, and successively managed several industrial divisions.

EXTERNAL APPOINTMENTS
Chair, Mediahuis, a European newspaper publishing group - Chair, King Baudouin Foundation, Belgium - Member of the Supervisory Board of Royal DSM

Expiration of mandate
Annual General Meeting of 2021

Chairman since
19 November 2008

Chairman of the Nomination & Remuneration Committee since
19 November 2008

MARIO ARMERO
MEMBER

Spanish, 62

DATE APPOINTED TO BOARD
30 April 2020

EDUCATION
Law – University Complutense of Madrid, Spain

EXPERIENCE
Mr Armero started his professional career at the Armero Law firm and later joined AT&T Spain. From 1992 to 1999 he served as Secretary General at General Electric Plastics Spain, a position which he held until 2001, when he was appointed Chairman and CEO of General Electric Spain and Portugal, being the ultimate responsible for all the Group's Divisions in Iberia. In March 2008, he joined Corporación Llorente, a diversified family owned industrial group, as CEO. Following that he joined Ezentis as Executive Chairman. From 2012 until 2020, Mr Armero has been the Executive Vice President of ANFAC, the Spanish Car manufacturers association.

EXTERNAL APPOINTMENTS
Advisor of Global Infrastructure Partners - Chairman of ENSO - Independent Board member of Bankinter Consumer Finance - Member of the CEDE Foundation (Spanish Confederation of Executives)- Board member of non lucrative association Junior Achievement

Member of the nomination & remuneration committee since
9 December 2020

Expiration of mandate
Annual General Meeting of 2023

LIAT BEN-ZUR
INDEPENDENT MEMBER

American, 44

DATE APPOINTED TO BOARD
25 April 2017

EDUCATION
Electrical engineering – UC Davis, USA Business Administration – UCLA Anderson, USA

EXPERIENCE
Liat Ben-Zur has been Corporate Vice President for Modern Life and Devices Product Marketing Management at Microsoft since September 2018.

Prior to joining Microsoft, she was SVP and Digital Technology Leader at Royal Philips where she was responsible for driving the connectivity and digital strategy, since 2014. She served previously in several leadership positions at Qualcomm, a US wireless telecommunications company, and was cofounder and Chairwoman of the AllSeen Alliance, a consortium for an open source, common language for the Internet of Things.

EXTERNAL APPOINTMENTS
No external appointments

Expiration of mandate
Annual General Meeting of 2023

FRANÇOISE CHOMBAR
INDEPENDENT MEMBER

Belgian, 58

DATE APPOINTED TO BOARD
26 April 2016

EDUCATION
Master Applied Language Studies Dutch, English, Spanish – Ghent University, Belgium

EXPERIENCE
Françoise Chombar is co-Founder, Chief Executive Officer and Managing Director of Melexis, a producer of smart sensor and driver semiconductors for automotive, industrial and durable consumer and health applications. She served previously as planning manager at Elmos GmbH and operations manager and director at several companies within the Elex group. Françoise was a mentor in the Belgian women's network Sofia for 17 years and is committed to STEM and gender balance advocacy, for which she received a Flemish Community Honour in 2019. In 2012, she was granted an Honorary Ambassadorship for Applied Language by the University of Ghent. In 2018, she received the title of Science Fellow by the VUB, University of Brussels.

EXTERNAL APPOINTMENTS
CEO and Director, Melexis NV, Belgium - Chairwoman, Flemish STEM Platform, an independent advisory group to the government of Flanders - Independent Director, Soitec S.A., France

Expiration of mandate
Annual General Meeting of 2022

Member of the Nomination & Remuneration Committee since
26 April 2018

KOENRAAD DEBACKERE
INDEPENDENT MEMBER

Belgian, 59

DATE APPOINTED TO BOARD
26 April 2018

EDUCATION
Engineering – Ghent University, Belgium Management – Ghent University, Belgium Management – MIT Sloan School of Management, USA

EXPERIENCE
Prof. Dr. Ir. Koenraad Debackere has been with KU Leuven since 1995, where he teaches Technology & Innovation Management and Policy. He has won numerous awards for his research, and in 2010 was awarded a Francqui Lecture Chair in economics and business. From 2005 until September 2020 he was the general manager of KU Leuven and member of the Board of KU Leuven.

EXTERNAL APPOINTMENTS
Chairman of the Board, KBC Group NV, Belgium - Member Board of Governors, RWTH Aachen University, Germany

Expiration of mandate
Annual General Meeting of 2021

Member of the nomination & remuneration committee since
9 December 2020

Member of the Audit Committee since
26 April 2018

MARK GARRETT
INDEPENDENT MEMBER

Australian/Swiss, 58

DATE APPOINTED TO BOARD
28 April 2015

EDUCATION
Economics – University of Melbourne, Australia Applied Information Systems – Royal Melbourne Institute of Technology, Australia

EXPERIENCE
Mark Garrett has been Chief Executive Officer at Marquard & Bahls AG, a Hamburg-based leading independent energy supply, trading and logistics company, since August 2018.

Before joining Marquard & Bahls AG, he served as Chief Executive Officer at Borealis AG, Austria, a position he had held since 2007. Prior to that, he built an extensive career in the chemical industry working with companies such as Ciba-Geigy and DuPont.

EXTERNAL APPOINTMENTS
CEO, Chairman of the Executive Board, Marquard & Bahls AG, Germany - Non-Executive Chairman, Board of Directors, Axalta Coating Systems Ltd., USA- Non-executive Chairman, Board of Directors, OMV AG

Expiration of mandate
Annual General Meeting of 2021

Member of the Nomination & Remuneration Committee since
29 July 2017

INES KOLMSEE
INDEPENDENT MEMBER

German, 50

DATE APPOINTED TO BOARD
26 April 2011

EDUCATION
Process and Energy Engineering – Technische Universität Berlin, Germany Industrial Engineering – École nationale supérieure des Mines de Saint-Étienne, France Business Administration – INSEAD Business School, France

EXPERIENCE
Ines Kolmsee was Chief Executive Officer of Services & Solutions at Aperam from October 2017 through September 2020. She previously served as CEO of SKW Stahl-Metallurgie Group, a specialty chemicals company with operations worldwide, COO and CTO at German utility EWE AG and CFO at Arques Industries AG.

EXTERNAL APPOINTMENTS
No external appointments

Expiration of mandate
Annual General Meeting of 2023

Member of the Audit Committee since
26 April 2011

Chairman of the Audit Committee since
28 April 2015

ERIC MEURICE
INDEPENDENT MEMBER

French, 64

DATE APPOINTED TO BOARD
28 April 2015

EDUCATION
Economics – Sorbonne, France Mechanical Engineering – École Centrale Paris, France Business Administration – Stanford Graduate School of Business, USA

EXPERIENCE
Eric Meurice was formerly President and Chief Executive Officer of Netherlands-based ASML Holding, a major provider of advanced technology systems for the semiconductor industry. He was previously EVP in charge of Thomson Multimedia TV Division and held senior positions in several technology groups such as Intel, ITT, and Dell Computer.

EXTERNAL APPOINTMENTS
Non-Executive Director, Global Blue Group S.A., Switzerland- Non-Executive Director, IPG Photonics Corp, USA - Non-Executive Chairman, Board of Directors, Soitec S.A., France

Expiration of mandate
Annual General Meeting of 2021

LAURENT RAETS
MEMBER

Belgian, 41

DATE APPOINTED TO BOARD
25 April 2019

EDUCATION
Commercial Engineering – Solvay Brussels School of Economics & Management, Belgium

EXPERIENCE
Laurent Raets joined Groupe Bruxelles Lambert (GBL) in 2006 and became Deputy Head of Investments in 2016. He began his career in 2002 as an M&A consultant at Deloitte Corporate Finance, where he was involved in buy and sell mandates, due diligence and valuation assignments.

EXTERNAL APPOINTMENTS
Censor of the Board of Directors of Imerys S.A., France

Expiration of mandate
Annual General Meeting of 2022

Member of the Audit Committee since
25 April 2019

MARC VAN SANDE
SENIOR ADVISOR

Formerly EVP Energy & Surface Technologies

Belgian, 69

EDUCATION
Physics – University of Antwerp, Belgium Business Administration – Antwerp Management School, Belgium

EXPERIENCE
Marc Van Sande was appointed Executive Vice-President Energy & Surface Technologies in June 2010, after serving as CTO from 2005 to 2010 and as EVP Advanced Materials from 1999 to 2005. Marc joined Umicore in 1980, and held several positions in research, marketing and production. He was also responsible for the Energy & Surface Technologies business group and China.

GÉRALDINE NOLENS
BOARD SECRETARY

Belgian, 49

(see Management Board)

KAREL VINCK
HONORARY CHAIRMAN

Belgian

ABOUT THE SUPERVISORY BOARD

The Supervisory board's cumulative industry experience is broad, covering automotive, electronics, chemicals, metals, energy and finance sectors in addition to the fields of academia and science.It also includes people experienced in the public and private sector and members with experience in the different regions in which Umicore is active.

Collectively, the Supervisory board possesses strong experience of managing industrial operations and counts 8 active or former CEOs in its ranks.

The board also has collective experience in disciplines that are specifically relevant to Umicore's non-financial Horizon 2020 goals such as health and safety, talent attraction and retention and supply chain sustainability.

READ MORE ABOUT CORPORATE GOVERNANCE(p. 87)

Management Board

From left to right, 1st row: Marc Grynberg, An Steegen, Ralph Kiessling. 2nd row: Denis Goffaux, Filip Platteeuw, Géraldine Nolens, Stephan Csoma

MARC GRYNBERG
CHIEF EXECUTIVE OFFICER

Belgian, 55

EDUCATION
Commercial Engineering – Solvay Brussels School of Economics & Management, Belgium

EXPERIENCE
Marc Grynberg was appointed Chief Executive Officer in November 2008 after heading the Automotive Catalysts business unit from 2006 to 2008, and serving as CFO of Umicore from 2000 until 2006. He joined Umicore in 1996 as Group Controller. Prior to joining Umicore, Marc worked for DuPont de Nemours in Brussels and Geneva.

FILIP PLATTEEUW
CHIEF FINANCIAL OFFICER

Belgian, 48

EDUCATION
Applied Economics – Ghent University, Belgium Financial Management – Vlerick Management School, Belgium

EXPERIENCE
Filip Platteeuw was appointed Chief Financial Officer in November 2012. He joined Umicore in 2004 and served as VP Corporate Development from 2010 to 2012 and was instrumental in streamlining the business portfolio, including the divestment of the copper and zinc smelting operations. Prior to Umicore, Filip worked for KBC Bank, taking up positions in corporate banking, equity market research and investment banking.

AN STEEGEN
CHIEF TECHNOLOGY OFFICER

Belgian, 50

EDUCATION
PhD in Material Science and Electrical Engineering – KU Leuven, Belgium

EXPERIENCE
An Steegen joined Umicore and was appointed Chief Technology Officer in October 2018, after serving as Executive Vice President Semiconductor Technology and System R&D at imec, a leading research center with a focus on nanoelectronics and digital technology innovation.

Prior to joining imec in 2010, An worked at IBM's Semiconductor Research & Development center in Fishkill, NY and in the last several years of service at IBM, was in charge of the bulk CMOS technology development.

GÉRALDINE NOLENS
EXECUTIVE VICE-PRESIDENT, CHIEF COUNSEL

Belgian, 49

EDUCATION
Master of Laws – University of Chicago Law School, USA European Economic Law – Julius Maximilians Universität Würzburg, Germany Law – KU Leuven, Belgium

EXPERIENCE
Géraldine Nolens was appointed Chief Counsel for the Group in 2009 and joined the Management Board in 2015.

She started her career at the international law firm Cleary Gottlieb Steen & Hamilton before joining GDF Suez (now Engie) in 2001, where she was Electrabel's Chief Legal Officer for Southern Europe, France and new European markets. Géraldine's career includes periods working and living in the US, Germany, Italy and Belgium.

DENIS GOFFAUX
EXECUTIVE VICE-PRESIDENT ENERGY & SURFACE TECHNOLOGIES

Belgian, 53

EDUCATION
Mining Engineering – Université de Liège, Belgium

EXPERIENCE
Denis was appointed Executive Vice-President Energy & Surface Technologies in 2018. He will take up the position of Executive Vice-President Recycling as of 1 April 2021. Previously he served as Chief Technology Officer from 2010 to September 2018 and EVP for Precious Metals Refining from 2015 to 2018.

Prior to that, he occupied successive business line and country management functions in China and Japan. Denis began his career at Umicore with Research & Development in Olen, before moving to what was then our Cobalt & Energy Products Business Unit.

STEPHAN CSOMA
EXECUTIVE VICE-PRESIDENT RECYCLING

Belgian, 56

EDUCATION
Economics – UC Louvain, Belgium Chinese/Mandarin – Fudan University Shanghai, China

EXPERIENCE
Stephan Csoma was appointed Executive Vice-President Recycling in 2015, serving through March 31 2021. He served as EVP of the former Performance Materials from 2012 to 2015, SVP Government Affairs from 2009 to 2012, and SVP South America from 2005 to 2009.

Stephan joined Umicore in 1992 and set up Umicore's first industrial operations in China in the mid-1990s and went on to lead the Zinc Chemicals business unit.

RALPH KIESSLING

EXECUTIVE VICE-PRESIDENT CATALYSIS

German, 55

EDUCATION

PhD Chemical Engineering – University of Erlangen, Germany

EXPERIENCE

Ralph Kiessling was appointed Executive Vice-President Energy & Surface Technology as of 1 March 2021. Before this he was EVP Catalysis since 1 February 2019, after serving as SVP Operations for Automotive Catalysts since 2015.

He previously occupied successive management functions in process technology, production and business controlling, including 5 years in China. In 2012 he moved to India where he built Umicore's automotive catalyst plant. Prior to joining Umicore, Ralph held management positions in the Degussa group from 1995.

BART SAP

EXECUTIVE VICE PRESIDENT CATALYSIS (as of 1 March 2021)

Belgian, 43

EDUCATION

Commercial Science – Vlerick Management School, Belgium

EXPERIENCE

Bart Sap was appointed Executive Vice-President Catalysis as of 1 March 2021. Bart joined Umicore in 2004 as a controller for Cobalt & Specialty Materials and, after successive assignments in Korea and Belgium covering finance, supply of raw materials, business development and refining operations, he became Senior Vice-President for Cobalt & Specialty Materials and Supply at the beginning of 2020.

READ MORE ABOUT OUR MANAGEMENT APPROACH(p. 72)

Senior management

as of March 26, 2021

MARC GRYNBERG
CHIEF EXECUTIVE OFFICER

CELINE VAN HAUTE
SVP Human Resources

CARSTEN GERLEMAN
SVP Umicore South America

EVELIEN GOOVAERTS
VP Group Communications & Investor Relations

AN STEEGEN
CHIEF TECHNOLOGY OFFICER

Corporate Research & Development

FILIP PLATTEEUW
CHIEF FINANCIAL OFFICER

Finance

GÉRALDINE NOLENS
EXECUTIVE VICE-PRESIDENT

Chief Counsel

DENIS GOFFAUX
EXECUTIVE VICE-PRESIDENT

Recycling
as of April 1st, 2021

STEPHAN CSOMA
EXECUTIVE VICE-PRESIDENT

Recycling
until March 31, 2021

RALPH KIESSLING
EXECUTIVE VICE-PRESIDENT

Energy & Surface Technologies
as of March 1, 2021

BART SAP
EXECUTIVE VICE-PRESIDENT

Catalysis
as of March 1, 2021

KURT VANDEPUTTE
SVP Government Affairs

THOMAS ENGERT
SVP Metal Deposition Solutions

YVES VAN ROMPAEY
SVP Corporate Research & Development

LOTHAR MUSSMANN
SVP NBI - Catalysis & Connectivity, & IP

THOMAS JANSSEUNE
SVP NBI - Battery Materials & Recycling, & Digitalization

WANNES PEFEROEN
SVP Electro-Optic Materials

PATRICK VERMEULEN
SVP Information Systems

ALAIN BYL
VP Group Treasurer

FLAVIA LEONE
VP Group Tax

OLIVIER GHYSSENS
VP Corporate Development

BENOÎT STEVENS
VP Group Accounting & Controlling (as of April 1st, 2021)

PIERRE VAN DE BRUAENE
SVP Environment, Health & Safety

MARK CAFFAREY
President Umicore USA

SYBOLT BROUWER
VP Purchasing & Transport

GEERT BENS
VP Strategic Projects

JENS BLECHSCHMIDT
Head of Internal Audit

KRISTL MATTON
Corporate Security

BERNHARD FUCHS
SVP Precious Metals Management & UMS

JOHAN RAMHARTER
SVP Precious Metals Refining

FRANZ-JOSEF KRON
SVP Jewelry & Industrial Metals

ATSUYA HANAZAWA
President Umicore Japan

FRANK STREIGNART
SVP RBM Operations

JUNDONG LU
SVP RBM Sales

DONG-JOON IHM
Executive Chairman Umicore Korea

DAVID FONG
SVP Umicore Greater China

IGNACE DE RUIJTER
SVP CSM

ERIK BRIJS
VP Control & IT

BERNARD TONNON
VP RBM Process Technology & Engineering

GEON-SEOG SON
VP RBM Research & Development

STEPHAN JANIS
VP Supply & Refining

WILFRIED MÜLLER
SVP AC Product Management

JÖRG VON RODEN
SVP AC Global Sales & Marketing

STEPHANIE DAM
SVP AC Operations

JOAKIM REIMER THOGERSEN
SVP Fuel Cells & Stationary Catalysts

GEERT OLBRECHTS
VP AC Research & Technology

ENRICO CISCO
VP Control & IT

LAWRENCE LI
VP AC China

JENSEN VERHELLE
VP Precious Metals Chemistry

Management approach

The Umicore Way is the cornerstone of everything we do at Umicore.

We believe that materials have been a key element in furthering the progress of mankind, that they are at the core of today's life and will continue to be enablers for future wealth creation.

We believe that metal-related materials have a vital role to play, as they can be efficiently and infinitely recycled, which makes them the basis for sustainable products and services. We want Umicore to be a leader in providing and creating material-based solutions to contribute to fundamental improvements in the quality of life.

The overarching principles guiding our "Materials for a better life" mission are:

VALUES We hold the values of openness, respect, innovation, teamwork and commitment to be crucial to our success.

ENVIRONMENT AND SOCIETY We recognise that our commitment to financial success must also take into account the broader economic, environmental and social impact of our operations.

EMPLOYEES We strive to be a preferred employer of both current and potential employees.

BUSINESS INTEGRITY Wherever we operate, our reputation is a most valuable asset, and it is determined by how we act. We avoid any action that would jeopardise our reputation.

POLICIES

The Umicore Way is supplemented by detailed company codes including:

- Code of Conduct, a comprehensive framework for ethical business practice;
- Corporate Governance Charter, which sets out our management philosophy and governance principles;
- Sustainable Procurement Charter, which outlines our commitment to align our supply chain to our own values and practices; and
- Many internal policies developed in support of our vision and values such as Safety, Human Rights and Working Conditions, Training & Development and Donations & Sponsorship.

GOALS AND PERFORMANCE 2016-2020

The Umicore Way outlines our values, the way in which we wish to achieve our strategic goals and our overall commitment to the principles of sustainable development. Our Horizon 2020 economic growth ambitions are tied to the megatrends of resource scarcity, clean air and vehicle electrification. The social and environmental objectives are clustered in three themes: Great Place to Work, Eco-efficiency and Value Chain and society. These objectives reflect our operational excellence and the aspects of our products and services that we can further improve to turn sustainability into a greater competitive edge.

The supporting components of our Horizon 2020 strategy described in this chapter, including policies, responsibilities and evaluation, ensure a close monitoring of our economic, environmental and social performance.

RESPONSIBILITIES

Final accountability for all aspects of Umicore's business lies with the executive committee.

The broad sustainability approach is guided by an interdepartmental team with representatives from Environment, Health and Safety (EHS), Human Resources (HR), Finance and Procurement & Transportation. This team is responsible for developing and obtaining approval for sustainability objectives and guiding business units in their efforts to contribute to these objectives.

At business group level, the economic/financial, environmental and social performance is owned by the Executive Vice-President of that entity. At business unit level, these aspects are owned by the head of the business unit. At site level, the site manager is responsible for the economic, social and environmental performance of the site.

MONITORING, EVALUATION AND CONTINUOUS IMPROVEMENT

Corporate EHS and Corporate HR have developed detailed technical guidance notes to assist the business units and sites, ensuring a collective understanding of concepts, definitions, roles and responsibilities. Regular workshops and meetings are organised each year at various levels of the organisation to share best practices.

Progress towards our objectives is measured annually against a set of KPIs reported through a group data management system. The data is collected and reported at the relevant entity level: site, business unit or business group. Social and environmental performance indicators that are relevant and material to Umicore's operations are also measured and reported. Corporate EHS, Corporate HR and Corporate Finance aggregate the performance of the business units to evaluate Umicore's overall progress towards the Horizon 2020 objectives.

On-site data verification relating to social and environmental performance and progress towards objectives is carried out internally. In addition, Umicore uses an assurance provider to check its social and environmental data. This assurance has been carried out by PricewaterhouseCoopers (PwC) since 2011. PwC evaluates the completeness and reliability of the reported data as well as the

robustness of the associated data management system. Wherever necessary, performance indicators and reporting processes are reviewed and updated after every assurance cycle, as part of a continuous improvement process.

ECONOMIC & FINANCIAL PERFORMANCE

GOALS AND PERFORMANCE 2016-2020

Based on the validity analysis of the megatrends relevant for Umicore's Vision 2015 strategy, we identified specific growth areas where Umicore can contribute to solve certain societal and environmental problems. These growth areas form the basis of the Horizon 2020 strategy and are expected to enable Umicore to double its adjusted EBIT between 2014 and 2020.

OPERATIONAL RETURNS

Umicore seeks to generate economic value through our existing businesses and any acquisitions or organic growth initiatives that we undertake, in line with our Horizon 2020 strategy. This entails generating a return on capital employed (adjusted pre-tax operating profit/average capital employed for the period) in excess of our overall pre-tax cost of capital.

This cost of capital can vary over time in function of our risk profile and the state of the world's debt and equity markets. The return on capital employed (ROCE) targeted for the Group in our Horizon 2020 strategy is over 15%.

Investments are assessed on a case-by-case basis: acquisitions are expected to be earningsenhancing in the early phase of their integration and value-enhancing shortly thereafter. Similar criteria exist for organic investments, although the pursuit of longer-term growth projects invariably requires a longer view on expected returns.

In terms of operational performance, emphasis is placed on ROCE. We deal with precious and other rare metals and we therefore have a relatively high working capital intensity. Management is therefore incentivised to optimise performance both from an earnings perspective and by minimising capital employed.

SHAREHOLDER RETURNS

Umicore aims to create value for its shareholders. This is achieved through the development of a compelling strategy and a strong track record of delivering a solid performance against the strategic objectives. We seek to grow our existing businesses while maintaining or establishing strong leadership positions on the back of innovative technologies (see below). Shareholder returns depend on the valuation of the Umicore stock and are supported by the payment of dividends.

FINANCIAL STRENGTH

Umicore aims to safeguard the business through sound financial management and by maintaining a strong balance sheet. While we have no fixed target regarding debt levels, we aim to maintain an investment grade status at all times. We also seek to maintain a healthy balance between short and longer-term debt and between debt secured at fixed and floating interest rates. This approach, coupled with strong cash flow generated from operations, allows us to self-fund the majority of our growth initiatives.

RESEARCH AND DEVELOPMENT

As a materials technology company, the future success and sustainability of our business depend on our ability to develop and market innovative products and services. We invest consistently in research and development (R&D), with the equivalent of 5% to 7% of revenues typically dedicated to R&D every year.

MARKET PRESENCE

As part of our Horizon 2020 strategy, Umicore seeks to maintain market leadership positions in recycling and clean mobility materials. The nature of our business, which consists of products for highly specific applications, means that we do not have a presence in any country or region which makes up a significant part of that country or region's economy. Our business is global in nature with 50 production sites in 33 countries.

ECONOMIC AND FINANCIAL PERFORMANCE POLICY

Our approach to financial and economic management derives from our vision, values and organisational principles as described in The Umicore Way. Specific internal policies have been developed to frame the Company's approach to specific financial and economic aspects including: Dividend, Financing and Funding, Transfer Pricing, Credit Management, Hedging, Capital Expenditure and Mergers & Acquisitions.

ECONOMIC AND FINANCIAL PERFORMANCE RESPONSIBILITY

Accountability for the overall economic and financial performance of Umicore lies with the Chief Executive Officer while each Executive Vice-President is responsible for the financial performance of his/her business group. The Chief Technology Officer and his/her organisation has oversight for the technology portfolio of the Group and the overall research and development activities.

At business unit level, the head of the business unit is responsible for the operational and financial performance of the business unit. The Chief Financial Officer has overall oversight of Umicore's financial and economic performance and is supported by a Corporate Finance team that includes specific expertise centres covering aspects such as tax, treasury, accounting & control, and the internal control environment. At business unit level, financial controllers are responsible for managing the financial and reporting aspects of the business unit.

VALUE CHAIN & SOCIETY PERFORMANCE

GOALS AND PERFORMANCE 2016-2020

The relationship between customers and suppliers is an essential element to building financial and economic value and plays a key role in the promotion of social and environmental best practices. The Umicore Way also covers the relationships with our various stakeholders. The value chain and society objectives cover Umicore's presence and impact upstream with suppliers, and downstream contribution of our products and services to a better life. The

performance review of these material topics is reported in Value Chain and Society(p. 39).

While Umicore's value chain and society objectives determine a special focus through 2020, we believe it is equally important to continuously monitor, control and report our relationship with all the other stakeholders. Information on our stakeholder groups is listed in the Stakeholder Engagement(p. 16). In addition, we report on the following topics in the Value Chain Statements(p. 181) section:

- Monitoring of the supplier assessment for indirect procurement, note V3(p. 184)
- Product regulatory compliance,note V4(p. 185)
- Monitoring of our donations, note V5(p. 186) The following specific management approach applies to both materials topics and the underlying performance indicators.

VALUE CHAIN AND SOCIETY PERFORMANCE POLICY

Our approach to stakeholder engagement derives from the vision, values and organisational principles found in The Umicore Way. Specific charters/policies have been developed to frame specific elements of our approach to stakeholder engagement, including the Sustainable Procurement Charter, Responsible global supply chain of minerals from conflict-affected and high risk areas Policy, Human Rights & Working Conditions Policy and External Communications Policy.

VALUE CHAIN AND SOCIETY PERFORMANCE RESPONSIBILITY

Our presence and impact both upstream and downstream is based on a business-specific approach whereby all business units are required to identify and engage with their respective suppliers, customers and stakeholders. In addition, a team comprising members of various departments, including Corporate EHS, Corporate HR, Group Communications, Corporate Finance and Procurement & Transportation, meets regularly to map the overall stakeholder expectations and to convene, whenever necessary, internal or external stakeholder dialogue sessions.

VALUE CHAIN AND SOCIETY PERFORMANCE BOUNDARY

The value chain and society theme focuses on potential impacts on society incurred through our activities, products and services. For reporting, all entities are considered. While we focus primarily on those of our activities that are directly linked to clean mobility and recycling, other initiatives targeting suppliers, customers or society are tracked and appropriately reported, whether through communications such as this annual report or through other specific communication channels.

ENVIRONMENTAL PERFORMANCE

GOALS AND PERFORMANCE 2016-2020

In The Umicore Way, Umicore commits to continually improve its environmental performance. As a materials technology company, we have defined energy efficiency and the reduction of metal emissions as core environment-related objectives in our Horizon 2020 strategy. These objectives represent what we believe to be the most material environmental aspect of our business and the ones that are most important to our various stakeholders (see Materiality)(p. 22). The performance review of energy efficiency is reported in Eco-Efficiency(p. 45).

While Umicore's environmental objectives through 2020 focus on energy efficiency and the reduction of metal emissions, we believe it is equally important to continuously monitor, control and report the performance of our organisation in relation to other environmental aspects. We do that using the same measurement tools indicated in our General Management Approach. These indicators monitor how we are building on the Vision 2015 achievements in terms of environmental performance. These underlying performance indicators, detailed in the Environmental Statements(p. 188) section, include:

- Emission to water and air, note E2(p. 189)
- Greenhouse gases, note E3(p. 192)
- Water consumption, note E5(p. 194)
- Waste volumes, note E6(p. 195)
- Control and remediation of historical pollution,note E7(p. 195)
- Regulatory compliance and management systems, note E8(p. 197)

The following specific management approach applies to both material topics and the underlying performance indicators.

ENVIRONMENTAL PERFORMANCE POLICY

Our approach to environmental management derives from the vision, values and organizational principles found in The Umicore Way. An internal Group EHS Guidance Note details the approach to measuring and reporting on each relevant environmental indicator. A specific internal policy on energy efficiency was rolled out throughout the Group from 2011 to 2015 and created a high level of awareness and commitment at sites and within business units to strive for continual energy efficiency improvement. In addition, Umicore encouraged all business unit initiatives that increased recycling potential. On a global scale, metals recycling reduces the environmental impact related to the acquisition and transformation of metals into products.

ENVIRONMENTAL PERFORMANCE RESPONSIBILITY

Umicore's environmental performance and impact accountability lies with the executive committee. In the executive committee, the Chief Counsel is Executive Vice-President for Environment, Health and Safety, Corporate Security and Internal Audit and responsible for all environmental matters and is supported by the Senior Vice President Environment, Health & Safety. The Executive Vice-Presidents are responsible for the overall environmental performance of their business group. At business unit level, the head of the business unit is responsible for the overall environmental performance. The general manager of each site has a similar responsibility at site level.

ENVIRONMENTAL PERFORMANCE BOUNDARY

Energy efficiency performance and underlying performance indicators contribute to reducing our impact on the environment, for example through an expected reduction of our carbon footprint of lower impact or the metal emissions on air and water.

SOCIAL PERFORMANCE

GOALS AND PERFORMANCE 2016-2020

As set out in The Umicore Way, we strive to be a preferred employer for both current and potential employees and to act and operate in line with the expectations of society. We have defined three social objectives within the context of our Horizon 2020 strategy: reducing losttime accidents to zero, further reducing occupational exposure to specific metals and increasing our diversity, talent attraction and retention and employability. We also have objectives which relate to our broader social impact and these can be found in our Management Approach to Value Chain and Society, later in this chapter. These objectives were defined as material topics in the materiality assessment both by internal and external stakeholders. Talent management is key to reaching our desired business growth.

Attracting, developing and retaining talent in competitive labour markets support the business units in their growth plans. In addition, while increasing the diversity of our workforce is in line with expectations from society, it should also increase our chance of success. Given the ageing population and the need for longer careers, we are also putting programmes in place to increase the employability of our workforce. The performance review of these material topics, including zero accident and reducing occupational exposure, is reported in Great Place to Work(p. 54).

While Umicore's social objectives determine a special focus through 2020, we believe it is equally important to continuously monitor, control and report our social performance in other areas. We do that using the same measurement tools indicated in our General Management Approach.

These underlying performance indicators, detailed in the Social Statements(p. 198) section, include:

- Monitoring of workforce demographics, note S2(p. 200)
- Monitoring of human rights, compliance and risk, note S4(p. 204)
- Monitoring of employee health aspects beyond metal exposure, notes S5(p. 204)-S6(p. 205)
- Monitoring of contractor safety, note S7(p. 208) The following specific management approach applies to both materials topics and the underlying performance indicators.

SOCIAL PERFORMANCE POLICY

Our approach to social performance derives from the vision, values and organisational principles found in The Umicore Way. An internal Group Social Reporting Guidance Note provides detailed guidance on measuring and reporting on social performance. Specific internal policies have been developed to frame specific elements of our social management approach including Safety, Human Rights and Working Conditions and Training & Development. In addition, Umicore has a Global Framework Agreement on Sustainable Development in place with international trade unions.

SOCIAL PERFORMANCE RESPONSIBILITY

Umicore's social performance and impact accountability lies with the executive committee.

In the executive committee, the CEO has oversight responsibilities for Umicore's Human Resources issues and is supported by the Senior Vice President Human Resources. The Executive Vice-Presidents are responsible for the social aspects of their business group. At business unit level, the head of the business unit is responsible for the overall social performance.

The general manager of each site has a similar responsibility at site level. A regional Human Resources organisation exists to manage social aspects at regional and country level, and to provide structural support to the business units in all aspects of human resources management.

SOCIAL PERFORMANCE BOUNDARY

Social performance and the underlying performance indicators have a direct impact on Umicore's workforce (enhanced engagement and well-being at all levels and attracting and retaining the right skills).

Managing risk effectively

M. Ko and Y. Kang at Cheonan

Each business unit operates in an environment which carries specific growth expectations and differing degrees of market and technological uncertainty that could impact strategic objectives. As such, the primary source of risk and opportunity identification lies within the business units.

Similarly, each business unit is responsible for mitigation of its own risks. Mitigating actions are systematically reported corresponding to the respective strategic objectives and identified risks.

Specific corporate departments are also tasked with managing and mitigating certain risks under the auspices of the Management Board. These risks cover Group-wide elements that extend beyond the purview of individual business units. These include environmental risks, financial risks, etc.

OUR INTERNAL CONTROL SYSTEM

Internal control mechanisms exist throughout Umicore to provide management with reasonable assurance of our ability to achieve our objectives. They cover:

- Effectiveness and efficiency of operations
- Reliability of financial processes and reporting
- Compliance with laws and regulations
- Mitigation of errors and fraud risks

Umicore adopted the COSO framework for its Enterprise Risk Management and has adapted its various constituents within its organization and processes. "The Umicore Way" and the "Code of Conduct" are the cornerstones of the Internal Control environment; together with the concept of management by objectives and through the setting of clear roles and responsibilities they establish the operating framework for the company.

Specific internal control mechanisms have been developed by business units at their level of operations, while shared operational functions and corporate services provide guidance and set controls for cross-organizational activities. These give rise to specific policies, procedures and charters covering areas such as supply chain management, human resources, information systems, environment, health and safety, legal, corporate security and research and development.

Umicore operates a system of Minimum Internal Control Requirements (MICR) to specifically address the mitigation of financial risks and to enhance the reliability of financial reporting. Umicore's MICR framework requires all Group entities to comply with a uniform set of internal controls in 12 processes.

Within the Internal Control framework, specific attention is paid to the segregation of duties and the definition of clear roles and responsibilities. MICR compliance is monitored by means of self-assessments to be signed off by senior management. The outcome is reported to the Management Board and the Audit Committee.

Out of the 12 control cycles, 2 cycles (Procure To Pay, Information Technology Management) were assessed in the course of 2020 by the 99 control entities currently in scope. Risk assessments and actions taken by local management to mitigate potential internal control weaknesses identified through prior assessments are monitored continuously. The Internal Audit department reviews the compliance assessments during its missions.

The aim of our risk management system is to enable the company to identify risks in a proactive and dynamic way and manage or mitigate risks to an acceptable level wherever possible.

The aim of our risk management system is to enable the company to identify risks in a proactive and dynamic way and manage or mitigate risks to an acceptable level wherever possible.

BUSINESS UNITS

Carry out a risk scan to identify all significant risks (financial and non-financial)

Detail each risk on an "uncertainty sheet" outlining potential impact, likelihood, status of management action or mitigation, and ownership

Report bottom up to the Management board member responsible for that business unit

MANAGEMENT BOARD MEMBER

Identify, evaluate and mitigate risks

MANAGEMENT BOARD

Successfully exploit business opportunities

Assess market conditions, competitor positioning, technology developments or regulatory changes against the business strategy execution

Manage and mitigate possible business risks

SUPERVISORY BOARD

Assesses the risk profile of the company within the context of the Company strategy and external factors

Ensure adequate risk management and internal control processes are in place

AUDIT COMMITTEE (ON BEHALF OF THE SUPERVISORY BOARD)

Monitor and review internal control and risk management system, investigating specific aspects on an ongoing basis

EXTERNAL AUDIT

Independent assurance

KEY RISKS AND OPPORTUNITIES

WE TAKE A BALANCED APPROACH TO MANAGING RISK AND SEIZE OPPORTUNITIES TO DELIVER ON OUR STRATEGIC GOALS

	1	2	3	4	5	6	7	8
RISK & OPPORTUNITY	REGULATORY & LEGAL CONTEXT	SUSTAINABLE & ETHICAL SUPPLY	TECHNOLOGY & SUBSTITUTION	CYBER SECURITY	MARKET	METAL PRICE & AVAILABILITY	TALENT ATTRACTION & RETENTION	CLIMATE & ENVIRONMENT
STRATEGIC FOCUS AREA	ECONOMIC PERFORMANCE VALUE CHAIN AND SOCIETY ECO-EFFICIENCY	ECONOMIC PERFORMANCE VALUE CHAIN AND SOCIETY	ECONOMIC PERFORMANCE VALUE CHAIN AND SOCIETY ECO-EFFICIENCY	ECONOMIC PERFORMANCE	ECONOMIC PERFORMANCE VALUE CHAIN AND SOCIETY	ECONOMIC PERFORMANCE	GREAT PLACE TO WORK	ECONOMIC PERFORMANCE VALUE CHAIN AND SOCIETY ECO-EFFICIENCY
CHANGE IN RISK PROFILE	↑	→	↑	↑	↑	→	↑	↑
CHANGE IN OPPORTUNITY PROFILE	↑	↑	↑	↑	↑	→	↑	↑

Key: ↑ increase → no change

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE | VALUE CHAIN AND SOCIETY | ECO-EFFICIENCY

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

1 REGULATORY AND LEGAL CONTEXT

POTENTIAL IMPACT

Umicore is exposed to changes in the regulatory environment in the countries or regions where it operates. Umicore's businesses stand to benefit from certain regulatory trends, notably those regarding more stringent emission controls for vehicles, low carbon mobility, electrification and enforced recycling of end-of-life products.

Some regulations, such as environmental or product-related laws, can present operational challenges, higher costs and a potentially uneven competitive environment.

Data protection, IP and IP protection-related matters impact technology-driven businesses.

CHANGE IN CONTEXT

Worldwide, changes to existing product-related legislation and the introduction of new legislation might impact our business. Although the European REACH regulation is still the most relevant for Umicore, Korean REACH is gaining importance. For more information, see note V4(p. 185).

The push towards clean mobility is stronger than ever, with various governments including green recovery measures and stimuli for cleaner mobility in their crisis recovery packages, in particular in Europe and China, and regulatory initiatives to protect air quality and reduce greenhouse gas emissions in several regions. Europe recently reconfirmed its ambition to achieve zero-emission mobility and remains committed to increasingly more stringent CO2 emission targets. In China, the Ministry of Industry and Information Technology announced an extension of the New Energy Vehicle (NEV) subsidy plan from 2020 until end 2022. It also confirmed its long-term commitment to achieve a target penetration rate of 20% NEVs in 2025 and 50% by 2035, which is likely to boost electrification in the coming years.

Geopolitical conditions, trade and tariffs continue to be a factor in Umicore's trans-border activities.

MEASURES TAKEN BY UMICORE

Umicore provides continuous training on regulatory requirements to ensure compliance with applicable legislation.

To ensure ongoing compliance with environmental legislation on our industrial sites, Umicore has a well-established EHS compliance audit program and constantly monitors changes in legal requirements where we operate. For more information, see Statements, note E8.

Umicore continues to play an active role in informing legislators of various emission control technologies for both diesel and gasoline powered vehicles, to help legislators make informed decisions about future emission and testing norms.

We monitor that our products have the freedom to operate and we proactively manage our patent portfolio. Umicore trade compliance closely follows and responds to global trade conditions.

Umicore monitors closely all changes in interpretation as well as guidance documents that might affect its REACH implementation strategy. In 2020 we submitted 27 additional substances for registration under REACH due to new business developments. As part of regular maintenance, we updated 76 REACH dossiers. Umicore has submitted 2 registrations in Korea in 2020 for priority chemical substances.

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE | VALUE CHAIN AND SOCIETY

CHANGE IN RISK PROFILE

No change

CHANGE IN OPPORTUNITY PROFILE

Increase

2 SUSTAINABLE AND ETHICAL SUPPLY

POTENTIAL IMPACT

Umicore requires certain metals or metal-containing raw materials to manufacture its products and feed its recycling activities. Some of these raw materials are comparatively scarce and require very specific sourcing strategies. Obtaining adequate supplies of these materials is important for the ongoing success and growth of our business.

Some metals are also found in regions facing social challenges. Trading in precious metals and minerals can be used to finance armed conflict, cause human rights abuses, draw upon forced or child labor and support corruption and money laundering. We ensure that procurement of minerals from conflict-affected and high-risk areas is in line with Umicore's values, while providing an advantage to our customers.

CHANGE IN CONTEXT

Existing and upcoming laws aiming to drive the responsible sourcing of conflict minerals (tin, tantalum, tungsten and gold), have increased the visibility and concern on the conditions around conflict mineral sourcing in public discourse.

COVID-19 and the measures taken to contain contagion could have an impact on the availability of materials and in general on the supply chain.

MEASURES TAKEN BY UMICORE

Only limited and temporary impacts due to COVID-19 were reported on Umicore's supply chain.

Umicore implemented policies and measures covering human rights, the right for workers to organize, collective bargaining, equal opportunities and non-discrimination, banning of child labor, banning of forced labor, consistent with International Labour Organisation (ILO) standards. These commitments are supported through a Global Framework Agreement on Sustainable Development with IndustriALL Global Union which was renewed in 2019.

In addition to existing policies and charters such as the Umicore Code of Conduct, Human Rights Policy and Sustainable Procurement Charter, Umicore also has a specific policy for "Responsible global supply chain of minerals from conflict-affected and high-risk areas".

In 2020, Umicore again received third-party validation for the application of its Sustainable Procurement Framework for Cobalt, which is aligned with the OECD 'Due Diligence Guidance for Responsible Supply Chains from Conflict-Affected and High-Risk Areas'. Umicore continues to ensure that its production operations are certified as conflict-free and receives site and metal-specific responsible sourcing certifications from the LBMA and RJC. For more information, see note V3(p. 184).

Umicore remains the first cathode material producer to offer certified materials from a clean and ethical origin to its customers.

In 2020, Umicore achieved a Platinum EcoVadis rating, placing the group among the top 1% of their industry peers.

We use our long-standing and growing experience in sustainable sourcing to advocate for more responsible practices in industry. To read more about some of our advocacy work, see Stakeholder Engagement(p. 21).

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE | VALUE CHAIN AND SOCIETY | ECO-EFFICIENCY

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

3 TECHNOLOGY AND SUBSTITUTION

POTENTIAL IMPACT

Umicore is a materials technology group with a strong focus on the development of innovative materials and processes. The choice and development of these technologies for existing and new markets represents the single biggest opportunity and risk for Umicore.

Achieving the best cost-performance balance for materials is a priority for Umicore and its customers. There is always a risk that customers will seek alternative materials for their products should those of Umicore not provide this optimum balance. The risk is especially present in businesses producing materials containing expensive metals (especially those with historically volatile pricing characteristics).

CHANGE IN CONTEXT

Trends in rechargeable battery materials for automotive applications have underscored that NMC material platforms with increasing nickel content as well as medium nickel low cobalt content are the technologies of choice for customers in current and upcoming electrified vehicle platforms. Besides the focus on high performing battery materials, novel processes are being developed to decrease cost and environmental impact across the entire battery value chain.

In vehicle emission control, regulatory debates have reinforced the need for a broad spectrum of technologies for both gasoline and diesel applications. These technologies need to be optimized for performance and for cost.

MEASURES TAKEN BY UMICORE

Every year, the Management Board identifies innovation projects which are key to achieving our short term and long-term growth ambitions and cover product and process developments. These technologies are followed up closely by management to ensure on time delivery of new and innovative products to the market.

Previous years' R&D investments have brought great success and created a space to expand R&D positioning to adjacent and new markets within Umicore's field of expertise. In 2020, overall spend was equivalent to 6.9% of revenues. The Innovation Fit for Future program focusing on innovation excellence best practices protects Umicore's technology leadership and future growth.

Umicore patents disruptive technologies. In 2020, Umicore registered 63 new patent families.

For more information, see Research, development & innovation(p. 49).

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

4 CYBER SECURITY

POTENTIAL IMPACT

Umicore's production plants and services highly depend on the availability of IT services.

Unavailability of services, disruption of the supply chains or interruption of our production facilities due to cyber-attacks could have a major impact on our customers. A compromise in the confidentiality of intellectual property would negatively impact our competitive advantage. Unauthorized modification of financial data would jeopardize accurate reporting to shareholders.

CHANGE IN CONTEXT

Cyber-attacks may be very focused and advanced. The expanding threat landscape and expanding digital footprint is leading to an increase in cyber-attacks. Several cases of industrial manufacturing businesses being interrupted for several weeks as the result of a cyber incident have been extensively covered in the media. In addition, due to the increased use of a digital work environment (on site and at home), the role of IT services in delivering seamless access to all corporate resources as well as ensuring information security is more important than ever.

MEASURES TAKEN BY UMICORE

Umicore continues to regularly assess and improve its information security, and the state of cyber resilience of its IT landscape, against evolving threats.

A security roadmap is being implemented which includes projects in preparation for an ISO27001/2 certification and initiatives to increase awareness across the Group on the importance of information and cyber security. Third party expert security assessments are made and the corporate cyber security team is being expanded. Umicore increases its investments in security-related IT systems and applications such as backup processes, virus and access protection, authentication and encryption tools. Security-related IT controls are being extended and are tested as part of Umicore's external audit process.

The state of cyber security is reported to the Management Board semi-annually and is followed-up by the Audit Committee.

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE | VALUE CHAIN AND SOCIETY

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

5 MARKET

POTENTIAL IMPACT

The main industries served by Umicore are automotive (clean mobility materials, recycling), consumer electronics (rechargeable battery materials, recycling, coating and electroplating solutions) and non-ferrous metal mining and refining industries (recycling activities). Umicore is sensitive to any major growth or global reduction in activity levels or market disruptions in these industries.

CHANGE IN CONTEXT

In 2020, the global automotive industry was significantly impacted by the COVID-19 pandemic with a marked contrast between the first and the second half of the year.

In the first half of 2020, car OEMs had to shut down their production plants and close their dealerships in several key regions as a result of government imposed lock-downs. Global car demand started to pick up again in the second half of 2020, albeit with discrepancies between the regions in terms of timing, speed and intensity of the recovery.

Car production in the second half grew by more than 40% sequentially (yet declined by 2% compared to the second half of 2019), with China being the clear driving force behind the global recovery. Other key markets started to pick up later and more gradually and still recorded negative growth for the second half of the year.

The sharp economic contraction and the lower industrial production induced by COVID-19 also had a significant and a more prolonged impact on the heavy-duty diesel market segment in 2020 except in China.

The global EV market was profoundly affected by the COVID-19 pandemic in the first half of the year and rebounded in the second half of the year, primarily driven by strong EV growth in Europe and, later in the year and to a lesser extent, by increasing EV sales in China.

In China, battery demand for EVs remained bleak until the summer and turned positive in the second half of the year, albeit compared to a depressed second half in 2019. The demand for cathode materials for EVs has lagged the anticipated growth in 2019 and 2020, resulting in significant excess capacity and pressure on the pricing environment.

In Europe, battery demand for EVs recorded strong momentum throughout 2020, in particular in the second half of the year, and doubled compared to 2019. This growth was driven by new models launched by car OEMs to comply with the more stringent CO2 directive, local incentives for EV buyers in several countries as part of their recovery plans and more environmentally-friendly choices by consumers when purchasing a new car.

The slowdown in consumer electronics demand continued along with a reduced demand for NMC cathode materials used in energy storage applications.

In recycling, our process remains unique, supported by high metal prices and high activity levels with favorable trading conditions in 2020, despite the COVID-19 crisis. The overall supply of industrial by-products remained favorable over the period, despite the temporary shutdowns of certain mining activities in response to COVID-19. Also the supply of end-of-life materials remained strong.

MEASURES TAKEN BY UMICORE

Umicore is delivering on its growth strategy in clean mobility materials and recycling.

Despite the severe disruption brought by the COVID-19 pandemic in its end-markets, Umicore posted its strongest financial performance ever, boosted by an exceptional metals price environment. This underscores Umicore's resilience and the merits of the Horizon 2020 strategy that builds on the complementarity of our activities. After a solid performance in the first half of 2020, with a strong result in Recycling offsetting the impact of the automotive industry downturn, the second half of the year was marked by a strong sequential improvement in revenues and earnings. This has been driven by continued robust operational performance and buoyant metal prices, and strong growth in Catalysis, thanks to Umicore's strong market position in gasoline technologies for light-duty vehicles, particularly in China and Europe, as well as higher sales of heavy-duty diesel and fuel cells catalysts.

Umicore should continue to benefit disproportionally from the accelerating penetration of electromobility given our broad portfolio of material technologies certified for the most stringent automotive requirements and our industrial-scale production capabilities.

For more information, see Economic Review(p. 29).

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE

CHANGE IN RISK PROFILE

No change

CHANGE IN OPPORTUNITY PROFILE

No change

6 METAL PRICE AND AVAILABILITY

POTENTIAL IMPACT

Umicore's earnings are exposed to risks relating to the prices of the metals which we process or recycle. These risks relate mainly to the impact that metal prices have on the surplus metals recovered from materials supplied for recycling, and concern platinum, palladium, rhodium, gold, silver and a wide range of base and specialty metals. For some metals quoted on futures markets, Umicore hedges a proportion of its forward metal exposure to cover part of the future price risks.

Umicore also faces transactional price risks on metals. The majority of its metal-based transactions use global metal market references. If the underlying metal price were constant, the price Umicore pays for the metal contained in the raw materials purchased would be transferred to the customer as part of the price charged for the product. However, because of the lapse of time between the conversion of purchased raw materials into products and the sale of products, the volatility in the reference metal price creates differences between the price paid for the contained metal and the price received. Accordingly, there is a transactional exposure to any fluctuations in price between the time raw materials are purchased (when the metal is "priced in") and the time the products are sold (when the metal is "priced out"). The Group's policy is to hedge the transactional risk to the maximum extent possible, primarily through forward contracts.

For more information on the structural risk and on the transactional and inventory risk related to the metal prices, see note F3(p. 123).

Materials produced by Umicore contain precious or scarce metals which are partly sourced from in house recycling operations and, for the balance, procured from primary metal producers. Umicore's ability to procure the required quantity of such metals is key to determine its ability to produce the materials which have been ordered by the customers.

CHANGE IN CONTEXT

Prices for precious metals strengthened further in 2020, reaching historically high levels for precious metals and PGMs. The price of rhodium in particular increased significantly in the second half of the year, in a context of tight supply and high demand from the car industry.

Demand for cobalt containing products was mixed in 2020, severely hit by the COVID-19 crisis in the first half of the year, showing first signs of recovery in the second half. , Cobalt price remained stable over the course of the year.

MEASURES TAKEN BY UMICORE

Over the course of 2020 and early 2021, Umicore entered into additional forward contracts securing a substantial portion of its structural price exposure for certain precious metals in 2021, 2022 and 2023, thereby increasing earnings predictability. For 2021 and 2022, approximately two thirds of the expected gold and palladium exposure and somewhat less than half of the expected silver exposure have been locked-in. In addition, close to one third of the expected platinum exposure for 2021 has been hedged. In spite of the absence of a liquid futures market, Umicore has entered into forward contracts locking in a minority of its expected 2022 and 2023 rhodium exposure.

Umicore is continuously increasing production of precious and scarce metals from its recycling capabilities, thereby securing a significant proportion of its metals needs. In addition, the group maintains close commercial relationships with leading primary metals producers from which it procures metals through annual or evergreen contracts.

STRATEGIC FOCUS AREA

GREAT PLACE TO WORK

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

7 TALENT ATTRACTION AND RETENTION

POTENTIAL IMPACT

The attraction and retention of skilled people are important factors in enabling Umicore to fulfil its strategic ambitions and to build further expertise, knowledge and capabilities in the business. Being unable to do so would compromise our ability to deliver on our goals.

The Horizon 2020 strategy was predicated on growth for Umicore, especially in Asia where labor markets are highly competitive and fluid. Umicore's challenge is to attract and retain talent at all sites and in all regions on a sufficient scale and at an appropriate pace.

CHANGE IN CONTEXT

In 2020 the novel coronavirus (COVID-19) pandemic severely affected people, society and industries globally.

MEASURES TAKEN BY UMICORE

In response to the COVID-19 outbreak, Umicore rolled out its business continuity plans and took precautionary measures to keep its people healthy and to ensure that the workplace is safe. Umicore rapidly adjusted its production capacity where needed and furloughed part of its workforce; when all production plants resumed operations, most furloughed employees returned to work. In administrative positions, working from home was adopted.

Umicore introduced strict hygiene and other precautionary measures in its facilities worldwide in response to the COVID-19 pandemic and delivered surgical masks for private use to the homes of all employees worldwide at a time when they were unavailable on the open market. A dedicated task force continues to monitor its operations globally with a focus on protecting employees' health.

To meet recruitment needs in this COVID-19 context, we moved to virtual recruitment and virtual onboarding wherever possible. Operators were recruited and onboarded with utmost safety and health measures.

Umicore ensured continued safety trainings, both virtually and in small groups to respect health measures. Other trainings, including on leadership and development, were delayed while adjusting the offering to the digital delivery in a virtual context but did continue in the second half of 2020.

STRATEGIC FOCUS AREA

ECONOMIC PERFORMANCE | VALUE CHAIN AND SOCIETY | ECO-EFFICIENCY

CHANGE IN RISK PROFILE

Increase

CHANGE IN OPPORTUNITY PROFILE

Increase

8 CLIMATE AND ENVIRONMENT

POTENTIAL IMPACT

Climate and environment impacts are mostly related to our supply of primary raw materials or to our suppliers' extraction of these primary raw materials. Easy-to-mine deposits are becoming increasingly scarce and ore bodies poorer. Many specialty metals required for new, environmentally-friendly technologies can only be obtained as a by-product of other metals. Treating complex materials from above-ground sources, such as industrial residues and end-of-life materials, is increasingly important.

Climate change causes extreme natural events, chronic deviations in mean temperatures and precipitation patterns, and rising sea levels. This could impact our sites or supply chain.

Increasingly stringent regulations on energy use and emissions can induce higher operational costs.

Our license to operate is predicated on managing the impact of our operations in the communities where we operate. Historical industrial activity requires active management and remediation.

CHANGE IN CONTEXT

Civil society and political discourse are increasingly demanding that business takes an active role in mitigating climate change. In the context of COVID-19, the attention on environmental and climate-related performance of private sector and industry has increased, as has attention around developing a "green recovery".

The ongoing transition to a lower carbon economy continues to present Umicore with opportunities to expand and develop processes in ways that can mitigate or address climate change and environmental risks.

MEASURES TAKEN BY UMICORE

Umicore plays a key role in the transition to a low-carbon future as our materials tackle global trends for clean air and e-mobility, and our closed loop business model tackles resource stewardship.

Our facility in Hoboken is the world's largest and most complex precious metals recycling operation, processing over 200 types of raw material and recovering over 20 different metals. We ensure that a high volume of our metals come from secondary sources – production scraps, residues and end-of-life materials. We can also recycle customers' residues and production scrap to help them maximize their material efficiency and then transform the recovered materials into new products. In total we recover 28 metals from our closed loop activities and we continue to adapt our processes to recycle new and more complex end-of-life products. Our high yield recycling process continues to be a driving force in resource efficiency and contributing to the circular economy.

Our global footprint and diverse site locations reduce our exposure to physical risks. New sites have been chosen considering proximity to customers, access to skilled workforce, excellent logistics, infrastructure and green energy.

Umicore performs life cycle assessments on all products and services on a rolling and ongoing basis to sharpen insight on environmental performance, through the right choice of the chemistry, energy mix, and raw materials, including recycled materials. For the new battery production plant in Poland, Umicore maintains the commitment that electricity will be from renewable sources.

We ensure that our current activities keep to the most stringent environmental standards for air and water and work every year to improve our energy efficiency and environmental footprint despite our growth and increased production. For more information, see Environmental Statements(p. 188) .

Umicore manages its historical environmental legacy, ensuring adequate financial provisions that are reviewed twice a year. For more information, see notes E7(p. 195) and F29(p. 162).

In 2020 Umicore continued strategic preparation work on climate and environment-related impact.

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G1 CORPORATE GOVERNANCE FRAMEWORK

During the financial year 2020, Umicore (also the "**Company**") was subject to the Belgian Code on Corporate Governance 2020 (the "**CG Code 2020)**, which entered into force on 1 January 2020.

The English, Dutch and French versions of the CG Code 2020 can be found on the website of the Belgian Corporate Governance Committee (www.corporategovernancecommittee.be).

Following the entry into force of the CG Code 2020, the Company's supervisory board adopted a new corporate governance charter (the "**CG Charter**") on 30 July 2020. The CG Charter was further amended by the supervisory board on 9 December 2020. It describes in detail the governance structure of the Company and the policies and procedures of the Umicore group. The CG Charter is available on the Umicore website (https://www.umicore.com/storage/group/2020-07-30-cg-charter-en.pdf) or may be obtained on request from Umicore's Group Communications Department.

Umicore has articulated its mission, values and basic organizational philosophy in a document called "*The Umicore Way*". This document spells out how Umicore views its relationship with its customers, shareholders, employees and society. It is supplemented by detailed company codes and policies, the most significant of which is the Code of Conduct (see G9).

In terms of organizational philosophy, Umicore believes in decentralization and in entrusting a large degree of autonomy to each of its business units. The business units in turn are accountable for their contribution to the group's value creation and for their adherence to group strategies, policies, standards and sustainable development approach.

In this context, Umicore is convinced that a sound corporate governance structure constitutes a necessary condition to ensure its long-term success. This implies an effective decision-making process based on a clear allocation of responsibilities. Such approach must ensure an optimal balance between a culture of entrepreneurship at the level of the business units and effective steering and oversight processes. The CG Charter deals in more detail with the responsibilities of the shareholders, the supervisory board, the CEO, the management board and the specific role of the audit committee and of the nomination & remuneration committee. The present statements provide information on governance issues which relate primarily to the financial year 2020.

G2 CORPORATE STRUCTURE

The Company's corporate structure underwent an important change during 2020 following the resolutions of the extraordinary shareholders' meeting held on 30 April 2020, which resulted in a full alignment of the Company's articles of association to the new Belgian Code of companies and associations (the "**BCCA**") and to the adoption of a genuine two-tier board structure.

Prior to the above extraordinary shareholders' meeting of 30 April 2020, the board of directors ("*raad van bestuur*"/"*conseil d'administration*") was the ultimate decision-making corporate body of Umicore, subject only to matters explicitly reserved to the shareholders' meeting by the old Code of companies or the articles of association.

Following the adoption of a two-tier board structure, as provided the BCCA, by the extraordinary shareholders' meeting held on 30 April 2020, the management board ("*directieraad*"/"*conseil de direction*") has now become competent for all matters not specifically reserved to the supervisory board ("*raad van toezicht*"/"*conseil de surveillance*") or the shareholders' meeting by the BCCA or Umicore's articles of association.

The supervisory board is responsible for the general policy and the strategy of Umicore, as well as for all actions that the BCCA reserves specifically for the board of directors in a one-tier system. It appoints and dismisses the CEO and the other members of the management board and it also supervises the management board. The supervisory board is assisted in its role by an audit committee and a nomination & remuneration committee.

The day-to-day management of Umicore has been delegated to the CEO, who also chairs the management board.

The management board, under the leadership of the CEO, is responsible for proposing the overall strategy of Umicore to the supervisory board and for Umicore's operational management. It also approves the strategies of the individual business units and monitors their implementation. The management board is furthermore responsible for screening the various risks and opportunities that Umicore may encounter in the short, medium or longer term (p. 76) and for ensuring that adequate systems are in place to address these. The management board is responsible for defining and applying Umicore's approach to sustainable development.

Umicore is organized in business groups which in turn comprise business units that share common characteristics in terms of products, technologies and end-user markets. Some business units are further subdivided into market-focused business lines. In order to provide a group-wide support structure, Umicore has regional management platforms in China, North America, Japan and South America. Its corporate headquarters are based in Belgium (Brussels). This centre provides a number of corporate and support functions in the areas of legal, finance, human resources, tax, internal audit, public and investor relations.

G3 SHAREHOLDERS

3.1 ISSUED SHARES – CAPITAL STRUCTURE

On 31 December 2020 there were 246,400,000 Umicore shares in issue.

The identity of shareholders having declared a participation of 3% or more as of 31 December 2020 can be found in the chapter "*parent company separate summarized financial statements*" (Financial statements)

Also on 31 December 2020, Umicore owned 5,733,685 of its own shares representing 2.33% of its capital. Information concerning the shareholders' authorization for Umicore to buy back its own shares and the status of such buy-backs can be consulted in the CG Charter and on Umicore's website.

During the year, 1,024,435 own shares were used in the context of the exercise of employee stock options and 66,430 shares were used for share grants, of which 10,000 to the members of the supervisory board, 52,000 to the management board members and 4,430 following a partial conversion into shares of the bonus of a member of the management board.

3.2 DIVIDEND POLICY AND PAYMENT

Umicore's policy is to pay a stable or gradually increasing dividend, save for exceptional circumstances.

In 2020, Umicore paid a gross dividend of € 0.375 per share relating to the financial year 2019. This was a decrease by € 0.375 compared to the gross dividend paid in 2019 in respect of the financial year 2018.

In July 2020 the supervisory board, in line with the Umicore dividend policy, decided to pay a gross interim dividend of € 0.25 per share, which was paid on 25 August 2020.

3.3 SHAREHOLDERS' MEETINGS 2020

The (annual, special and extraordinary) shareholders' meetings were held on 30 April 2020 and were subject to amended, restricted participation modalities, in line with the Belgian Royal Decree nr. 4 of 9 April 2020 containing various provisions on co-ownership as well as on company and associations law in the framework of the fight against the Covid-19 pandemic. As a result, the shareholders were not allowed to physically participate to these meetings but only by means of postal or proxy voting. The shareholders' meeting could be viewed via a live (or differed) webcast.

On the occasion of the annual shareholders' meeting, the shareholders approved the resolutions regarding the annual accounts, the appropriation of the results and the discharges to the directors and to the statutory auditor regarding their respective 2019 mandates. At the same meeting, the shareholders appointed Mr Mario Armero as new director[1] for a period of 3 years. Furthermore, the mandates of Mrs Ines Kolmsee and Mrs Liat Ben-Zur as independent directors[2] was renewed for 3 years. The annual shareholders' meeting also approved the remuneration of the board of directors[3] for 2020. Details of the fees paid to the members of the board of directors[4] in 2020 are disclosed in the remuneration report.

The special shareholders' meeting approved a change of control clause in accordance with the article 556 of the old Belgian Companies Code.

Finally, the extraordinary shareholders' meeting approved various amendments to the articles of association in view of fully aligning it with the provisions of the BCCA and introducing a genuine two-tier board structure. As a result, all members of the former board of directors, save the CEO, became members of the supervisory board. The members of the former executive committee, including the CEO, became members of the management board following resolutions adopted by the supervisory board on the same date.

G4 SUPERVISORY BOARD

4.1 INTRODUCTION

As above mentioned, the extraordinary shareholders' meeting held on 30 April 2020 has adopted a two-tier board structure, as provided under the BCCA. As a result, the Company's board of directors was replaced by a supervisory board as of the same date. All members of the former board of directors, save the CEO, were appointed members of the supervisory board, also as of the same date.

Any reference in this chapter to the supervisory board should be read as a reference to the former board of directors, insofar it relates to events having taken place before the above extraordinary shareholders' meeting of 30 April 2020.

4.2 COMPOSITION

The supervisory board, whose members are appointed by the shareholders' meeting resolving by a simple majority of votes without any attendance requirement, is composed of at least 6 members. The members' term of office may not exceed 4 years. In practice, supervisory board members are elected for a (renewable) period of 3 years. A member of the supervisory board cannot at the same time be member of the management board.

Members of the supervisory board can be dismissed at any time following a resolution of a shareholders' meeting, deciding by a simple majority of the votes cast. There are no attendance requirements for the dismissal of supervisory board members. The BCCA provides for the possibility for the supervisory board

[1] Member of the supervisory board after the extraordinary shareholders' meeting held on 30 April 2020.
[2] Independent members of the supervisory board after the extraordinary shareholders' meeting held on 30 April 2020.
[3] Supervisory board after the extraordinary shareholders' meeting of 30 April 2020.
[4] Members of the supervisory board after the extraordinary shareholders' meeting of 30 April 2020.

to appoint members of the supervisory board in the event of a vacancy. The next general meeting must decide on the definitive appointment of the above member of the supervisory board. The new member completes the term of office of his or her predecessor.

On 31 December 2020, the supervisory board was composed of 9 members. On the same date, 6 supervisory board members were independent in accordance with the criteria laid down in article 3.5 of the CG Code 2020.

In terms of gender and cultural diversity, the supervisory board counted 3 women and 6 different nationalities among its 9 members on 31 December 2020. Diversity also arises from the supervisory board members' educational backgrounds which include engineering, law, economics, finance and applied languages. The supervisory board's cumulative industry experience is broad, covering automotive, electronics, chemicals, metals, energy, finance and scientific/educational sectors. It also includes people experienced in the public and private sector and members with experience in the different regions in which Umicore is active. Collectively, the supervisory board possesses strong experience of managing industrial operations and counts 8 active or former CEOs in its ranks. The supervisory board also has collective experience in disciplines that are specifically relevant to Umicore's non-financial Horizon 2020 goals such as health and safety, talent attraction and retention and supply chain sustainability.

The composition of the supervisory board underwent the following changes in 2020:

- Mr Mario Armero was appointed director (and, hence, supervisory board member) for a period of three years at the annual shareholders' meeting held on 30 April 2020;
- Mr Gérard Lamarche resigned as director with effective date 30 April 2020;
- Following the incompatibility between the mandates of management board member and supervisory board member, Mr Marc Grynberg, who was a member of the old board of directors until the adoption of the new two-tier board structure by the extraordinary shareholders' meeting, was not appointed supervisory board member by the same extraordinary shareholders' meeting.

Furthermore, the mandates of Mrs Ines Kolmsee and Mrs Liat Ben-Zur as independent directors (and hence, independent supervisory board members) were renewed for three years on 30 April 2020.

Finally, Mr Koenraad Debackere was appointed vice-chairperson of the supervisory board on 30 July 2020.

4.3 MEETINGS AND TOPICS

The supervisory board held eleven regular meetings in 2020. Ten of these meetings were held by means of a videoconference due to the covid-19 pandemic. On two occasions, the supervisory board also took decisions by unanimous written consent.

The matters reviewed by the supervisory board in 2020 included the following:

- financial performance of the Umicore group;
- approval of the annual and half-year financial statements;
- adoption of the statutory and consolidated annual accounts and approval of the statutory and consolidated annual reports (including the remuneration report and the remuneration policy);
- approval of the agenda of an ordinary, a special and an extraordinary shareholders' meeting and calling of these meetings;
- Covid-19 updates;
- investment and divestment projects;
- issuance of convertible bonds (and approval of ancillary documents and reports in that context);
- audit committee reports;
- strategic opportunities and operational challenges;
- business and technology reviews, and market updates;
- corporate governance (including the adoption of the new CG Charter);
- metal price sensitivity and net working capital evolution;
- mergers & acquisitions projects and updates;
- annual performance review of the CEO and the other members of the management board;
- performance review of the supervisory board and its committees;
- succession planning at the level of the supervisory board and the management board;
- interim dividend distribution.

4.4 PERFORMANCE REVIEW OF THE SUPERVISORY BOARD AND ITS COMMITTEES

The supervisory board undertakes at least every three years an evaluation of its own performance and its interaction with the CEO and the management board, as well as its size, composition, functioning and that of the board committees.

The last performance review took place in 2020 and included a preliminary feedback round and an in-depth discussion during a supervisory board meeting held in July 2020.

4.5 AUDIT COMMITTEE

The audit committee's composition and the qualifications of its members are fully in line with the requirements of article 7:99 of the BCCA and of the CG Code 2020.

The audit committee is composed of three members of the supervisory board, two of them being independent. It is chaired by Mrs Ines Kolmsee.

The composition of the audit committee remained unchanged in 2020.

All the members of the audit committee have extensive experience in accounting and audit matters as demonstrated by their curriculum.

The committee met four times in 2020, including three videoconference calls. Apart from the review of the 2019 full year and the 2020 half year accounts, the audit committee reviewed reports and discussed matters related to internal audit, financial reporting, internal controls, cyber security, group auditor succession and other audit-related matters. The 2021 internal audit plan was validated. The committee met with the group's auditor and reviewed and approved provided non-audit services. Members of the audit committee also discussed ad hoc matters with senior management.

4.6 NOMINATION & REMUNERATION COMMITTEE

The composition of the nomination and remuneration committee's composition is fully in line with the requirements of article 7:100 of the BCCA and of the CG Code 2020.

On 31 December 2020, the nomination & remuneration committee was composed of five members, all members of the supervisory board, three of them being independent. The committee is chaired by the chairman of the supervisory board.

The composition of the nomination & remuneration committee underwent the following changes in 2020:

- Mr Mario Armero was appointed member of the committee with effective date 9 December 2020;
- Mr Koenraad Debackere was also appointed member of the committee with effective dated 9 December 2020.

Five nomination & remuneration committee meetings were held in 2020, including three videoconference calls. During the same period the committee discussed the remuneration policy for the supervisory board members, the supervisory board committee members and management board members, and the rules of the stock grant and option plans offered in 2020. The committee also discussed the succession planning at the level of the supervisory board and the management board.

G5 MANAGEMENT BOARD

5.1 INTRODUCTION

Following the adoption of a two-tier board structure, as foreseen in the BCCA, by the extraordinary shareholders' meeting held on 30 April 2020, the Company's executive committee was replaced by a management board as of the same date. All seven members of the former executive committee, including the CEO, were appointed members of the management board as of the same date.

Any references to the management board in this chapter should be read as references to the former executive committee, insofar they relate to events having taken place before the above extraordinary shareholders' meeting of 30 April 2020.

5.2 COMPOSITION

The management board is composed of at least four members. It is chaired by the CEO. All members of the management board, including the CEO, are appointed by the supervisory board upon recommendation of the nomination & remuneration committee.

The composition of the management board remained unchanged in 2020.

On 31 December 2020 the management board was composed of 7 members, including the CEO.

5.3 PERFORMANCE REVIEW

The management board regularly reviews and assesses its own performance. The valuation is also discussed at the nomination and remuneration committee and presented to the supervisory board.

The last performance reviews of the CEO and the other members of the management board took place on 6 February 2020.

G6 RELEVANT INFORMATION IN THE EVENT OF A TAKEOVER BID

6.1 RESTRICTIONS ON TRANSFERRING SECURITIES

Umicore's articles of association do not impose any restriction on the transfer of shares or other securities.

The Company is furthermore not aware of any restrictions imposed by law except in the context of the market abuse legislation and of the lock-up requirements imposed on some share grants by the BCCA.

The options on Umicore shares as granted to the CEO, to the members of the management board and to designated Umicore employees in execution of various Umicore incentive programs may not be transferred inter vivos.

6.2 HOLDERS OF SECURITIES WITH SPECIAL CONTROL RIGHTS

There are no such holders.

6.3 VOTING RIGHT RESTRICTIONS

Umicore's articles of association do not contain any restriction on the exercise of voting rights by shareholders, providing the shareholders concerned are admitted to the shareholders' meeting and their rights are not suspended. The admission rules to shareholders' meetings are articulated in article 20 of

the articles of association. Pursuant to article 7 of the articles of association, if a share is the subject of concurrent rights, the rights attached to these shares are suspended until one person is designated as owner vis-à-vis the Company.

To the supervisory board's best knowledge, none of the voting rights attached to the shares issued by the Company were suspended by law on 31 December 2020, save for the 5,733,685 shares held by the Company itself on that date (article 7:217 §1 of the BCCA).

6.4 EMPLOYEE STOCK PLANS WHERE THE CONTROL RIGHTS ARE NOT EXERCISED DIRECTLY BY THE EMPLOYEES

Umicore has not issued any such employee stock plans.

6.5 SHAREHOLDERS' AGREEMENTS

To the supervisory board's best knowledge, there are no shareholders' agreements which may result in restrictions on the transfer of securities and/or the exercise of voting rights.

6.6 AMENDMENTS TO THE ARTICLES OF ASSOCIATION

Save for capital increases decided by the supervisory board within the limits of the authorized capital, only an extraordinary shareholders' meeting is authorized to amend Umicore's articles of association. A shareholders' meeting may only deliberate on amendments to the articles of association – including capital increases or reductions, mergers, de-mergers and a winding-up – if at least 50% of the subscribed capital is represented. If the above attendance quorum is not reached, a new extraordinary shareholders' meeting must be convened, which will deliberate regardless of the portion of the capital represented. As a general rule, amendments to the articles of association are only adopted if approved by 75% of the votes cast. The BCCA provides for more stringent majority requirements in specific instances, such as the modification of the corporate object or the company form.

The Company's articles of association were amended once in 2020, following the resolutions of the extraordinary shareholders' meeting held on 30 April 2020 in order to bring them in line with the provisions of the BCCA (including the adoption of a two-tier board structure).

6.7 AUTHORISED CAPITAL – BUY-BACK OF SHARES

The Company's capital may be increased following a decision of the supervisory board within the limits of the so-called "*authorized capital*". The authorization must be granted by an extraordinary shareholders' meeting; it is limited in time and amount and is subject to specific justification and purpose requirements.

The extraordinary shareholders' meeting held on 26 April 2018 (resolutions published on 29 May 2018) renewed the authorization granted to the supervisory board[5] to increase the Company's share capital. The supervisory board is authorized to increase the capital in one or more times by a maximum amount of € 55,000,000. The authorization will lapse on 28 May 2023 but it can be renewed.

Up until 31 December 2020, the supervisory board has once made use of its powers under the above authorized capital, i.e. when it resolved on 15 June 2020 to issue senior unsecured convertible bonds due 2025 for an aggregate principal amount of € 500,000,000. These convertible bonds carry a zero-coupon and their initial conversion price amounts to € 55.32 per share. In connection with the issuance of these convertible bonds, the supervisory board resolved to disapply the preference subscription right of existing shareholders in accordance with articles 7:191 *juncto* 7:198 of the BCCA. The terms of the convertible bonds provide that the bonds can be converted in to new shares and/or existing shares; in case of new shares, they will be issued in the framework of the authorized capital. The above terms also provide for specific cases of early redemption at the option of the Company and/or the bondholders.

The exact amount to be allocated on the above authorized capital limit of € 55,000,000 will be determined, as the case may be, upon (full or partial) conversion of the convertible bonds into new shares.

Following a resolution of the extraordinary shareholders' meeting held on 26 April 2018, the Company is authorized to acquire own shares on a regulated market within a limit of 10% of the subscribed capital, at a price per share comprised between € 4 and € 100 and until 31 May 2022 (included). The same authorization was also granted to the Company's direct subsidiaries. The Company acquired 1,200,000 own shares in 2020 in implementation of the above authorization.

6.8 AGREEMENTS BETWEEN THE COMPANY AND ITS DIRECTORS OR EMPLOYEES PROVIDING FOR COMPENSATION IF THEY RESIGN, OR ARE MADE REDUNDANT WITHOUT VALID REASON, OR IF THEIR EMPLOYMENT CEASES BECAUSE OF A TAKE-OVER-BID

All the senior vice-presidents of the Umicore group are entitled to a compensation equivalent to 36 months base salary in the event of a dismissal within 12 months after a change of control over the Company. As far as the members of the management board are concerned, reference is made to the remuneration report (Remnueration Report).

G7 CONFLICTS OF INTERESTS (ART. 7:115 THROUGH 7:117 BCCA AND ART. 523 – 524TER OLD COMPANIES CODE)

On 6 February 2020, prior to the board of directors discussing or taking any decision, Marc Grynberg, who at that time was still a member of the board of directors, declared that he had a direct conflicting interest of a proprietary nature in the implementation of the decisions taken by the board relating to his performance assessment and to his remuneration (including the grant of shares and options). In

[1] The authorization was originally granted to the former board of directors, but this authorization was automatically vested in the supervisory board following the adoption of the two-tier board structure by the extraordinary shareholders' meeting held on 30 April 2020.

accordance with the then applicable article 523 of the old Belgian Companies Code, Marc Grynberg did not take part in the board's discussions concerning this decision and he did not take part in the voting.

The above decisions had/will have the following financial consequences:

A FIXED AND VARIABLE REMUNERATION

The CEO received a fixed gross remuneration of € 720,000 in 2020. Also in 2020, he received a gross variable cash remuneration totalling € 87,500 as non-deferred part of his variable cash remuneration for the reference year 2019.

Furthermore he received in 2020 a gross amount of € 256,500 as deferred part of his variable remuneration for the reference year 2017 based on (1) the 3-year average Umicore group profitability criterion, i.e. the average return on capital employed (ROCE) for the reference years 2017, 2018 and 2019 (i.e. 14.4% giving rise to a percentage pay-out of 69%) and (2) the 3-year average EBIT growth for the same reference years 2017, 2018 and 2019 multiplied by 2 (i.e. 13.2% giving rise to a percentage pay-out of 26%).

The ROCE range is set between a minimum of 7.5% (= pay-out of 0%) and a maximum of 17.5% (= pay-out of 100% of the target). When the achieved ROCE percentage falls between the minimum and the maximum, the pay-out will be pro-rated. The impact of the EBIT growth is calculated by multiplying the average percentage of the EBIT growth for the reference years by 2. The Group EBIT growth incentive only applies for a minimum compounded average adjusted EBIT growth of 10%.

B GRANT OF SHARES AND STOCK OPTIONS

The financial consequences for Umicore consist of: either 1) as long as Umicore decides to keep the shares it holds today: the financing and opportunity cost of maintaining such shares in its portfolio until the delivery date of the shares granted or the option's exercise date, or 2) if and to the extent that Umicore sells such shares at a later date: the difference on the date of exercise of the options between the exercise price and the market value of the shares that Umicore would have to buy on that date.

During 2020, no specific transactions or contractual commitments occurred between a member of the supervisory board or of the management board[6] on the one hand, and Umicore or one of its affiliated companies on the other hand.

G8 STATUTORY AUDITOR

At the annual shareholders' meeting held on 30 April 2020, the statutory auditor's mandate of PricewaterhouseCoopers Bedrijfsrevisoren/Réviseurs d'Entreprises BV/SRL was renewed for a period of 3 years. The statutory auditor is represented by Mr Kurt Cappoen for the exercise of this mandate.

The Umicore policy detailing the independence criteria for the statutory auditor may be requested from Umicore.

G9 CODE OF CONDUCT

Umicore operates a Code of Conduct for all its employees, representatives and supervisory or management board members. This Code of Conduct is fundamental to the task of creating and maintaining a relation of trust and professionalism with its main stakeholders namely its employees, commercial partners, shareholders, government authorities and the public.

The main purpose of Umicore's Code of Conduct is to ensure that all persons acting on behalf of Umicore carry out their activities in an ethical way and in accordance with the laws and regulations and with the standards Umicore sets through its present and future policies, guidelines and rules. The Code of Conduct contains a specific section on complaints and expressions of concern by employees and "whistle-blower" protection.

The Code of Conduct is published in Appendix 6 to the CG Charter.

G10 MARKET MANIPULATION AND INSIDER TRADING

Umicore's policy related to market abuse including insider trading is spelled out in the Umicore Dealing Code, which can be found under Appendix 7 to the CG Charter.

G11 COMPLIANCE WITH THE CG CODE 2020

During the financial year 2020, Umicore's corporate governance systems and procedures were in line with the CG Code 2020, with one exception related to the grant of stock options to the CEO. As explained in the remuneration policy, which was approved by the shareholders' meeting held on 30 April 2020, the stock options granted to the CEO vest immediately upon grant, as contractually agreed. This deviates from provision 7.11 of the CG Code 2020. However, even if they vest immediately, the options can only be exercised after three years, which is in line with the above provision 7.11.

[1] Or a member of the board of directors or the executive committee until the extraordinary shareholders' meeting of 30 April 2020.

G12 REMUNERATION POLICY

On 6 February 2020 the nomination and remuneration committee presented the remuneration policy (the "**Policy**") to the board of directors for discussion and approval. This Policy outlines the remuneration principles for the members of Umicore's supervisory board and management board[1] and is effective as of 1 January 2020. The Policy was approved at Umicore's annual shareholders' meeting on 30 April 2020 with 82.07% of the votes cast (disregarding the abstention votes, as provided under Belgian company law). The Policy is available on Umicore's website:

https://www.umicore.com/en/investors/governance/documents/remuneration-policy/

G13 REMUNERATION REPORT[2]

REMUNERATION FOR THE MEMBERS OF THE SUPERVISORY BOARD

The remuneration of the members of the supervisory board is in accordance with the Policy and unchanged versus the previous year, with exception of one small change in relation to the additional attendance fee for members of the supervisory board residing outside Belgium. This additional attendance fee also applies as of 2020 for the committee meetings, attended in person and not combined with a supervisory board meeting.

Supervisory board

- **Chairman**: annual fixed fee: € 60,000 + € 5,000 per meeting attended + 2,000 Umicore shares + company car
- **Member**: annual fixed fee: € 27,000 + € 2,500 per meeting attended + € 1,000 per meeting attended in person (for foreign-based members) + 1,000 Umicore shares

Audit committee

- **Chairman**: annual fixed fee: € 10,000 + € 5,000 per meeting attended
- **Member**: annual fixed fee: € 5,000 + € 3,000 per meeting attended + € 1,000 per meeting attended in person (for foreign-based members)

Nomination and remuneration committee

- **Chairman**: € 5,000 per meeting attended
- **Member**: € 3,000 per meeting attended + € 1,000 per meeting attended in person (for foreign-based members)

2020 Remuneration overview members of the supervisory board

All components of the remuneration of the members of the supervisory board for the reported year are detailed in the table below.

[1] Respectively board of directors and executive committee for the period between 1 January 2020 and 30 April 2020.

[2] Any references in this remuneration report to the supervisory board or the management board of Umicore should be read as references to respectively the board of directors and the executive committee of Umicore when relating to events or circumstances having occurred prior to the extraordinary shareholders' meeting of 30 April 2020, as referred to in the above corporate governance review.

13.1 REMUNERATION OVERVIEW MEMBERS OF THE SUPERVISORY BOARD

in (€)

Name Mandate	Start date	End date	Fixed Fee	Shares[1]	Attendance Fee	Number of meetings attended Online/In person	Other (Car)	Total
LEYSEN T.								**217,385**
Chairman of the supervisory board	19-11-2008		60,000	74,660	55,000	10 / 1	2,725	
Chairman of the nomination & remuneration committee	19-11-2008				25,000	4 / 1		
ARMERO M.								**63,548**
Member of the supervisory board	30-4-2020		18,074	24,974	17,500	7 / 0		
Member of the nomination & remuneration committee	9-12-2020				3,000	1 / 0		
BEN-ZUR L.								**76,830**
Member of the supervisory board	25-4-2017		27,000	37,330	12,500	5 / 0		
CHOMBAR F.								**99,330**
Member of the supervisory board	26-4-2016		27,000	37,330	20,000	7 / 1		
Member of the nomination & remuneration committee	26-4-2018				15,000	4 / 1		
DEBACKERE K.								**109,330**
Member of the supervisory board	26-4-2018		27,000	37,330	25,000	9 / 1		
Member of the audit Committee	26-4-2018		5,000		12,000	3 / 1		
Member of the nomination & remuneration committee	9-12-2020				3,000	1 / 0		

in (€)

GARRETT M.							**106,330**
Member of the supervisory board	28-4-2015		27,000	37,330	26,000	9 / 1	
Member of the nomination & remuneration committee	25-4-2017				16,000	4 / 1	
KOLMSEE I.							**120,330**
Member of the supervisory board	26-4-2011		27,000	37,330	26,000	9 / 1	
Chairman of the audit Committee	28-4-2015		10,000		20,000	3 / 1	
LAMARCHE G.							**32,282**
Member of the supervisory board	25-4-2017	30-4-2020	8,926	12,356	11,000	3 / 1	
MEURICE E.							**87,830**
Member of the supervisory board	28-5-2015		27,000	37,330	23,500	8 / 1	
RAETS L.							**108,830**
Member of the supervisory board	25-4-2019		27,000	37,330	27,500	10 / 1	
Member of the audit Committee	25-4-2019		5,000		12,000	3 / 1	

1 The share grant relates to the services rendered in the reported year. The shares were granted on 15 May 2020 and were valued at the fair market value of the share at € 37.33, equivalent to the closing share price on 14 May 2020 (share value is set at the lowest of the closing share price on the day before the delivery date and the average closing price of the last 30 calendar days before delivery date).

REMUNERATION FOR THE CEO AND THE OTHER MEMBERS OF THE MANAGEMENT BOARD

The remuneration of the CEO and the other members of the management board was reviewed by the supervisory board on 6 February 2020, on the basis of recommendations from the nomination and remuneration committee following a comparison survey with BEL20 and European peer companies.

The remuneration for the CEO and other members of the management board included in 2020 the following components: fixed remuneration, variable compensation, share-based compensation, pension plans and other benefits.

Remuneration CEO

On proposal of the nomination and remuneration committee, the supervisory board of 6 February 2020 decided to set the fixed remuneration of the CEO at € 720,000 as of 1 January 2020 and to maintain the annual variable cash remuneration potential of € 700,000 for the reported year. 140,000 stock options were granted for 2020 as part of the annual Umicore Incentive Stock Option Plan.

In addition, the board of 10 February 2021 decided to grant 10,000 Umicore shares for services rendered in the reported year. These shares are subject to a 3 year lock-up and are not subject to forfeiture conditions.

All components of the remuneration earned by the CEO for the reported year are detailed in the table below.

Remuneration other members of the management board

On proposal of the nomination and remuneration committee, the supervisory board of 6 February 2020 decided to set the fixed remuneration of each other member of the management board at € 440,000 as of 1 January 2020 and to maintain the annual variable cash remuneration potential of € 380,000 for the reported year. 30,000 stock options per person were granted for 2020 as part of the annual Umicore Incentive Stock Option Plan. Mr. Goffaux received 10,000 additional stock options following his foreign assignment in South Korea.

In addition, the supervisory board of 10 February 2021 decided to grant 7,000 Umicore shares per person for services rendered in the reported year. These shares are subject to a 3 year lock-up and are not subject to forfeiture condition All components of the remuneration earned by the other members of the management board for the reported year are detailed in the table below.

13.2 REMUNERATION OVERVIEW MEMBERS OF THE MANAGEMENT BOARD

in (€)

Name Position	Mandate Start date End date	Fixed Compensation (1)[1]	Undeferred Variable 50% (2)[2]	Deferred Variable 50% (3)[3]	Shares (4)[4]	Stock Options (5)[5]	Pension Plans (6)[6]	Other (7)[7]	Total	Ratio fixed (8)[8]	Ratio variable (9)[9]
Grynberg M.	19/11/2008	720,000	315,000	159,300	470,800	904,400	214,677	54,332	2,838,509	83%	17%
CEO											
Csoma S.	01/11/2012	440,000	190,000	88,500	329,560	193,800	128,089	40,447	1,410,396	80%	20%
EVP											
Goffaux D.	01/07/2010	440,000	95,000	88,500	334,273	258,400	128,196	162,352	1,506,721	88%	12%
EVP											
Kiessling R.	01/02/2019	440,000	190,000	0	329,627	193,800	91,872	23,306	1,268,605	85%	15%
EVP											
Nolens G.	01/07/2015	440,000	190,000	88,500	329,560	193,800	131,857	16,517	1,390,234	80%	20%
EVP											
Platteeuw F.	01/11/2012	440,000	190,000	88,500	329,560	193,800	132,421	23,823	1,398,104	80%	20%
CFO											
Steegen A.	01/10/2018	440,000	190,000	22,125	329,560	193,800	91,872	21,922	1,289,279	84%	16%
EVP											
Reymondet P.	01/08/2003	-	-	88,500	-	-	-	-	88,500	0%	100%
EVP	31/01/2019										
Van Sande M.	01/09/1998	-	-	22,125	-	-	-	-	22,125	0%	100%
EVP	31/03/2018										

1 The fixed compensation includes the fixed remunerations from Umicore entities.
2 The undeferred variable has been determined in accordance with the Policy and relates to the reported year 2020. The pay-out was done in 2021 in cash.
3 The deferred variable relates to the reference year 2018 and takes into account, over the years 2018-2019-2020, an average ROCE of 13.4%, resulting in a pay-out of 59% of the 2018 deferred target, and a compounded average EBIT growth% of 9.4%, which is lower than the 10% threshold and therefore not resulting in an additional variable payment. The pay-out was done in 2021 in cash.
4 The share grant relates to the services rendered in the reported year 2020. The shares were granted on 11 February 2021 and were valued at the fair market value of the share at € 47.08, equivalent to the lowest of the closing share price on the day before the delivery date and the average closing price of the last 30 calendar days before delivery date. For German and Korean tax purposes, the shares were valued at respectively € 47.09 (lowest market quotation of the shares on the delivery date), € 48.00 (the closing share price on the delivery date).
5 The stock option grant relates to the services rendered in the reported year 2020. The stock options were granted on 10 February 2020 and were valued at a notional value of € 6.46 per option according to the Black & Scholes formula.
6 Includes DC and DB contributions (service cost).
7 Includes the representation allowance, benefit in kind company car, insurance benefits and additional benefits for Mr. Goffaux D. following his foreign assignment in South Korea (housing, mobility premium, medical insurance).
8 (1)+(4)+(5)+(6)+(7)/Total remuneration
9 (2)+(3)/Total remuneration

COMPARITIVE INFORMATION ON THE CHANGE OF REMUNERATION – PAY RATIO

Below table provides an overview on the annual change of remuneration for the CEO, the other members of the management board (in aggregate), the mandates within the supervisory board and the committees, the average employee remuneration on a full-time equivalent basis and the performance of the Company. Incomplete years of remuneration due to a start or end of the mandate in the course of the reference year, have been adjusted to an annual base. The number of shares in the table represents for all years the number of shares taken into account the share split of 16 October 2017.

The average employee remuneration relates to Umicore (Belgium), in accordance with applicable legal provisions.

13.3 COMPARATIVE TABLE ON THE CHANGE OF REMUNERATION AND COMPANY PERFORMANCE OVER THE LAST FIVE REPORTED FINANCIAL YEARS

Annual Change		2016 vs 2015	2017 vs 2016	2018 vs 2017	2019 vs 2018	2020 vs 2019	Comments
Remuneration management board	**Type of remuneration**						
CEO	Fixed	0.0%	3.0%	2.9%	0.0%	2.9%	
	Variable	2.8%	27.0%	-24.8%	-5.6%	37.9%	
	Number of shares	0.0%	0.0%	0.0%	-3.8%	0.0%	
	Number of options	0.0%	0.0%	0.0%	-6.7%	0.0%	
	Pension + other	-42.8%	4.8%	1.1%	8.2%	13.0%	
Members of the management board (excl. CEO)	Fixed	0.1%	2.5%	3.3%	0.4%	4.5%	
	Variable	7.0%	31.1%	-28.0%	18.3%	10.6%	
	Number of shares	0.0%	0.0%	0.0%	-5.4%	0.0%	
	Number of options	0.0%	0.0%	0.0%	-14.3%	5.6%	(1)[1]
	Pension + other	-2.1%	-7.4%	-2.3%	1.9%	13.8%	(2)[2]
REMUNERATION SUPERVISORY BOARD	**Type of remuneration**						
Chairman supervisory board	Fixed	0.0%	0.0%	50.0%	0.0%	0.0%	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	0.0%	0.0%	0.0%	0.0%	0.0%	
Chairman audit committee	Fixed	0.0%	0.0%	0.0%	0.0%	0.0%	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	-	-	-	-	-	
Chairman nomination & remuneration committee	Fixed	-	-	-	-	-	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	-	-	-	-	-	
Member supervisory board	Fixed	0.0%	35.0%	0.0%	0.0%	0.0%	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	0.0%	0.0%	0.0%	0.0%	0.0%	
Member audit committee	Fixed	0.0%	0.0%	0.0%	0.0%	0.0%	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	-	-	-	-	-	
Member nomination & remuneration committee	Fixed	-	-	-	-	-	
	Attendance fee/meeting	0.0%	0.0%	0.0%	0.0%	0.0%	
	Number of shares	-	-	-	-	-	
AVERAGE EMPLOYEE REMUNERATION ON A FULL TIME EQUIVALENT BASIS							
% change versus previous year		2.5%	5.1%	3.6%	3.7%	2.7%	
COMPANY'S PERFORMANCE	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	
ROCE	**13.7%**	**14.6%**	**15.1%**	**15.4%**	**12.6%**	**12.1%**	
EBIT M€	**330**	**351**	**410**	**514**	**509**	**536**	
% ROCE change versus previous year		6.6%	3.4%	2.0%	-18.2%	-4.0%	
% EBIT change versus previous year		6.4%	16.8%	25.4%	-1.0%	5.4%	

1 The increase versus 2019 relates to the additional stock options granted to Mr. Goffaux D. following his foreign assignment in South Korea.
2 The increase versus 2019 relates to the foreign assignment benefits provided to Mr. Goffaux D. for the entire reported year (mobility premium, housing, medical insurance).

The pay ratio 2020 between the highest and lowest pay level at Umicore (Belgium) was equal to 62.

SHARE AND SHARE OPTION PLANS AND TRANSACTIONS 2020

Management board share option transactions 2020

The below table provides an overview on the number of stock options granted, exercised and expired in the course of the reported year, as well as the main provisions of the outstanding stock option plans.

13.4 MANAGEMENT BOARD SHARE OPTION TRANSACTIONS

Transactions in the reported year 2020

Name Position	Options Granted		Options Exercised		Options Expired
Grynberg M.	ISOP 2020	140,000	ISOP 2014	150,000	0
CEO			ISOP 2015	75,000	
Csoma S.	ISOP 2020	30,000			0
EVP					
Goffaux D.	ISOP 2020	40,000	ISOP 2015	7,500	0
EVP					
Kiessling R.	ISOP 2020	30,000	ISOP 2015	9,000	0
EVP			ISOP 2016	9,000	
Nolens G.	ISOP 2020	30,000			0
EVP					
Platteeuw F.	ISOP 2020	30,000	ISOP 2015	15,000	0
CFO			ISOP 2016	5,000	
Steegen A.	ISOP 2020	30,000			0
EVP					

MAIN PROVISIONS OF THE OUTSTANDING STOCK OPTION PLANS

ISOP PLAN	Grant Date	Exercise Price *1	Exercise window Start End
2020	10/02/2020	42.050	10/02/2023 - 09/02/2027
2019	11/02/2019	34.080	01/03/2022 - 10/02/2026
2018	09/02/2018	40.900	01/03/2021 - 08/02/2025
2017	13/02/2017	25.500	01/03/2020 - 12/02/2024
2016	05/02/2016	16.632	01/03/2019 - 04/02/2023
2015	09/02/2015	17.289	01/03/2018 - 08/02/2022
2014	10/02/2014	16.143	01/03/2017 - 09/02/2021

1 The exercise prices take into account the share split of 16 October 2017

Details of all options exercised and other share-related transactions can be found on the FSMA website.

Management board share grant 2020

The below table provides an overview of the number of shares granted in 2020 to the CEO and the other members of the management board for the services rendered in 2019. The shares were granted on 10 February 2020 and were valued at the fair market value of the share at € 42.05, equivalent to the closing share price on 7 February 2020 (share value is set at the lowest of the closing share price on the day before the delivery date and the average closing price of the last 30 calendar days before delivery date). For German and Korean tax purposes, the shares were valued at respectively € 41.41, € 43.75. The shares are subject to a 3 year lock-up until 9 February 2023 included, and are not subject to forfeiture conditions.

Mr. Goffaux D. decided to receive part of his variable cash compensation in Umicore shares, resulting in 4,430 additional shares, granted on 2 March 2020 and valued at the fair market value of the share at € 37.77, equivalent to the closing share price on 28 February 2020 (share value is set at the lowest of the closing share price on the day before the delivery date and the average closing price of the last 30 calendar days before delivery date). For Korean tax purposes the shares were valued at € 38.26. These shares are subject to a 2 year lock-up until 1 March 2022 included.

13.5 MANAGEMENT BOARD SHARE GRANT

Name Position	Nombre d'actions reçues en 2020	Comment
Grynberg M.	10,000	
CEO		
Csoma S.	7,000	
EVP		
Goffaux D.	11,430	
EVP		
Kiessling R.	6,417	Pro rata the services in 2019
EVP		as of 01/02/2019
Nolens G.	7,000	
EVP		
Platteeuw F.	7,000	
CFO		
Reymondet P.	583	Pro rata the services in 2019
EVP		until 31/01/2019
Steegen A.	7,000	
EVP		

As per the Policy, the CEO is required to build up, within 3 years from the date of appointment, and to retain minimum 30,000 Umicore shares throughout his tenure. This requirement is also applicable to the other members of the management board, in respect of a minimum of 15,000 shares.

On 31 December 2020 the CEO and the other members of the management board reached this minimum shareholder requirement, with exception of Mr. Kiessling R. and Mrs. Steegen A. being both still in the 3 years' time frame to build up the required minimum.

The members of the management board collectively hold a total number of 1,144,097 shares on 31 December 2020.

Supervisory board share grant 2020

The below table provides an overview of the number of shares granted in 2020 to the members of the supervisory board for the services rendered in 2020. The shares were granted on 15 May 2020 and were valued at the fair market value of the share at € 37.77, equivalent to the closing share price on 14 May 2020 (share value is set at the lowest of the closing share price on the day before the delivery date and the average closing price of the last 30 calendar days before delivery date). The shares have to be held until at least one year after the member leaves the supervisory board and until at least three years after the delivery date.

13.6 SUPERVISORY BOARD SHARE GRANT

Name Mandate in the supervisory board	Number of shares received in 2020	Comment
Leysen T.	2,000	
Chairman		
Armero M.	669	Pro rata the services in 2020
Member		as of 30/04/2020
Ben-Zur L.	1,000	
Member		
Chombar F.	1,000	
Member		
Debackere K.	1,000	
Member		
Garrett M.	1,000	
Member		
Kolmsee I.	1,000	
Member		
Lamarche G.	331	Pro rata the services in 2020
Member		until 30/04/2020
Meurice E.	1,000	
Member		
Raets L.	1,000	
Member		

The members of the supervisory board collectively hold a total number of 960,387 shares on 31 December 2020.

APPROVAL OF THE 2019 REMUNERATION REPORT

The 2019 remuneration report was approved by the shareholders' meeting with a majority of 82.46% of the votes cast (disregarding the abstention votes, as provided under Belgian company law).

CHANGES TO REMUNERATION SINCE THE END OF 2020

Remuneration for the members of the supervisory board

Based on the review of the overall compensation of the members of the supervisory board and of each element of the compensation, the nomination and remuneration committee concluded on 5 February 2021 that the compensation is appropriate.

Remuneration for the CEO

On 5 February 2021, the nomination and remuneration committee reviewed the remuneration of the CEO based on a comparison survey with European peer companies and BEL20 index companies.

On proposal of the nomination and remuneration committee, the supervisory board of 10 February 2021 decided to maintain the annual fixed and the annual variable cash remuneration potential at the same level. 80,000 stock options were granted for 2021 as part of the annual Umicore Incentive Stock Option Plan. These changes are in accordance with the Policy.

Remuneration for the other members of the management board

On 5 February 2021, the nomination and remuneration committee reviewed the remuneration of the other members of the management board based on a comparison survey with European peer companies and BEL20 index companies.

On proposal of the nomination and remuneration committee, the supervisory board of 10 February 2021 decided to maintain the annual fixed remuneration at € 440,000 but to increase the annual variable cash remuneration potential from € 380,000 to € 400,000 as of the year of performance 2021. The number of stock options granted for 2021 as part of the annual Umicore Incentive Stock Option Plan, were maintained at the same level. These changes are in accordance with the Policy.

Economic statements

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1 Group

KEY FIGURES

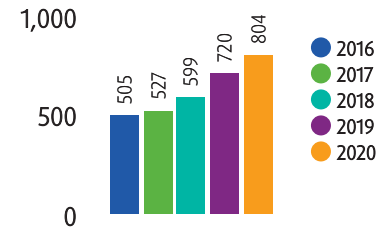
		2016	2017	2018	2019	2020
Total turnover		11,086	12,277	13,717	17,485	20,710
Total revenues (excluding metal)		2,667	2,916	3,271	3,361	3,239
Adjusted EBITDA	F9	527	599	720	753	804
Adjusted EBIT	F9	351	410	514	509	536
of which associates	F9	18	30	5	11	8
EBIT adjustments	F9	(110)	(46)	(14)	(30)	(237)
Total EBIT	F9	232	343	500	479	299
Adjusted EBIT margin		12.5	13.1	15.5	14.8	16.3
Return on Capital Employed (ROCE) (in %)	F31	14.6	15.1	15.4	12.6	12.1
Effective adjusted tax rate (in %)	F13	25	25.7	24.4	24.7	24.2
Adjusted net profit, Group share	F9	233	267	326	312	322
Net profit, Group share	F9	131	212	317	288	131
R&D expenditure	F9	156	175	196	211	223
Capital expenditure	F34	287	365	478	553	403
Net Cash flow before financing	F34	141.9	(381)	(604)	(271)	99
Total assets, end of period		4,146	5,116	6,053	7,023	8,341
Group shareholders' equity, end of period	F24	1,790	1,803	2,609	2,593	2,557
Consolidated net financial debt, end of period		296	840	861	1,443	1,414
Gearing ratio, end of period		13.8	31.1	24.4	35.2	35.0
Net debt / LTM adjusted EBITDA		0.56x	1.40x	1.19x	1.92x	1.76x
Capital employed, end of period		2397	3,003	3,802	4,442	4,457
Capital employed, average		2399	2710	3,344	4,048	4,451

DATA PER SHARE

	Note	2016	2017	2018	2019	2020
Basic adjusted EPS	F39	1.07	1.22	1.36	1.30	1.34
EPS – basic	F39	0.60	0.97	1.33	1.20	0.54
EPS – diluted	F39	0.60	0.96	1.31	1.19	0.54
Gross annual dividend for the year		0.65	0.70	0.75	0.375	0,75
Net cash flow before financing, basic	F34	0.65	(1.74)	(2.53)	(1.13)	0,41
Total assets, end of period		18.96	23.31	25.11	29.17	34.66
Group shareholders' equity, end of period		8.18	8.21	10.83	10.77	10.63
Shareprice						
High		29.36	39.88	53.14	43.85	47.49
Low		16.19	24.28	34.17	25.11	29.76
Average		23.89	31.45	45.01	34.24	39.02
Close		27.08	39.46	34.86	43.36	39.29

ADJUSTED EBITDA

Millions of Euros

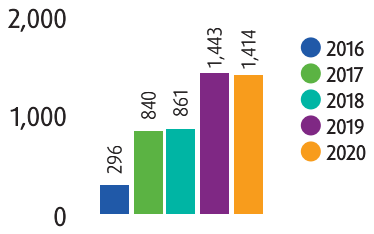


REVENUES (EXCLUDING METAL)

Millions of Euros

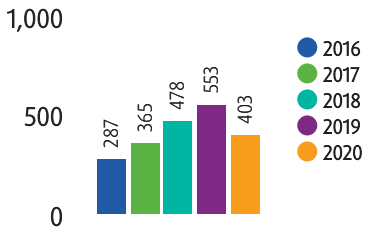
NET DEBT / LTM ADJUSTED EBITDA

Millions of Euros



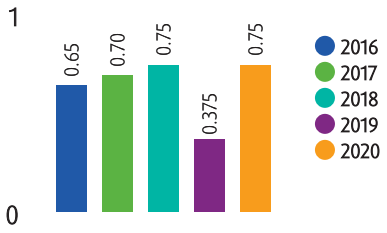
CAPITAL EXPENDITURE

Millions of Euros



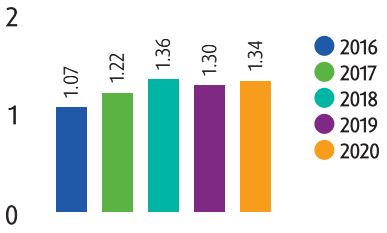
GROSS DIVIDEND

Euros



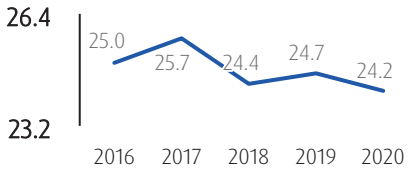
BASIC ADJUSTED EPS

Euros



EFFECTIVE ADJUSTED TAX RATE

%

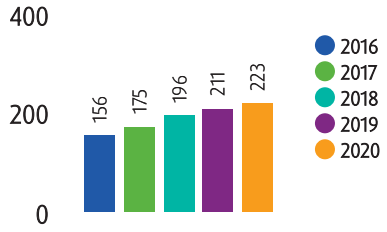


RETURN ON CAPITAL EMPLOYED (ROCE)

%

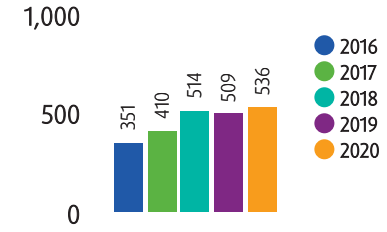
R&D EXPENDITURE

Millions of Euros



ADJUSTED EBIT

Millions of Euros



SHARE PRICE

Euros

GEARING RATIO

%

2 Catalysis

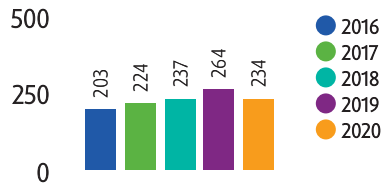
KEY FIGURES

Millions of Euros unless stated otherwise

	2016	2017	2018	2019	2020
Total turnover	2,779	3,091	3,311	4,539	5,917
Total revenues (excluding metal)	1,163	1,253	1,360	1,460	1,364
Adjusted EBITDA	203	224	237	264	234
Adjusted EBIT	152	165	168	185	154
of which associates	9.2	0.4	0	0	0
Total EBIT	126	161	162	185	96
Adjusted EBIT margin	12.3	13.2	12.4	12.7	11.3
R&D expenditure	102	120	135	147	139
Capital expenditure	46	45	79	104	64
Capital employed, end of period	911	1,150	1,265	1,537	1,727
Capital employed, average	918	1,014	1,200	1,358	1,596
Return on Capital Employed (ROCE) (in %)	16.6	16.3	14	13.6	9.6
Workforce, end of period (fully consolidated)	2,464	2,952	3,070	3,190	3,073
Workforce, end of period (associates)	177	-	-	-	-

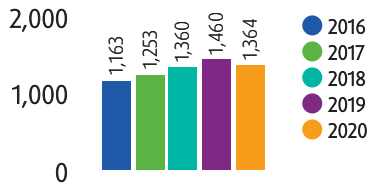
ADJUSTED EBITDA

Millions of Euros



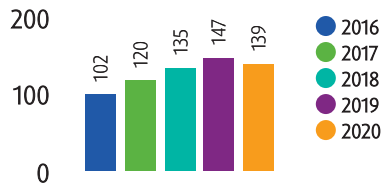
REVENUES (EXCLUDING METAL)

Millions of Euros



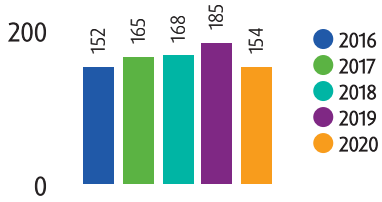
R&D EXPENDITURE

Millions of Euros



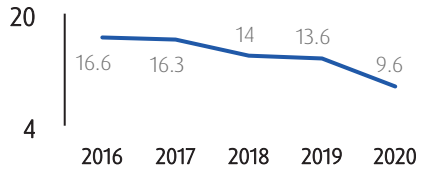
ADJUSTED EBIT

Millions of Euros



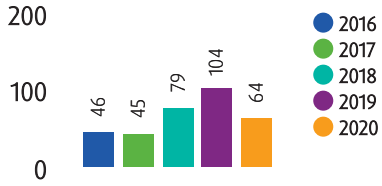
RETURN ON CAPITAL EMPLOYED (ROCE)

%



CAPITAL EXPENDITURE

Millions of Euros



3 Energy and Surface Technologies

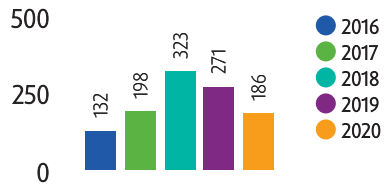
KEY FIGURES

Millions of Euros unless stated otherwise

	2016	2017	2018	2019	2020
Total turnover	1,469	2,392	3,650	2,938	2,811
Total revenues (excluding metal)	610	894	1,289	1,225	1,045
Adjusted EBITDA	132	198	323	271	186
Adjusted EBIT	82	141	257	183	75
of which associates	1.0	10.5	0.9	5	5
Total EBIT	74	110	251	154	(36.2)
Adjusted EBIT margin	13.2	14.6	19.8	14.5	6.7
R&D expenditure	20	30	39	46	58
Capital expenditure	144	225	316	348	252
Capital employed, end of period	752	1,206	1,769	2,324	2,133
Capital employed, average	695	978	1,469	2,014	2,209
Return on Capital Employed (ROCE) (in %)	11.7	14.4	17.5	9.1	3.4
Workforce, end of period (fully consolidated)	2,357	2,716	3,447	3,997	3,761
Workforce, end of period (associates)	847	917	782	751	727

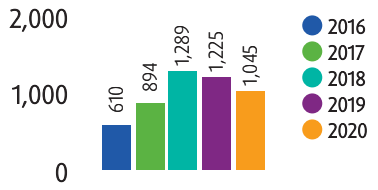
ADJUSTED EBITDA

Millions of Euros



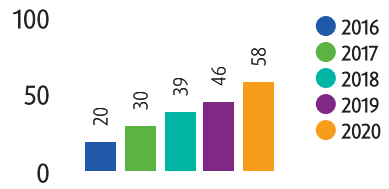
REVENUES (EXCLUDING METAL)

Millions of Euros



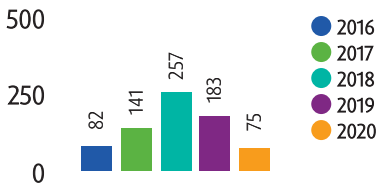
R&D EXPENDITURE

Millions of Euros



ADJUSTED EBIT

Millions of Euros

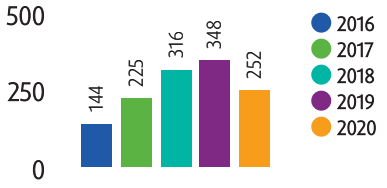


RETURN ON CAPITAL EMPLOYED (ROCE)

%

CAPITAL EXPENDITURE

Millions of Euros



4 Recycling

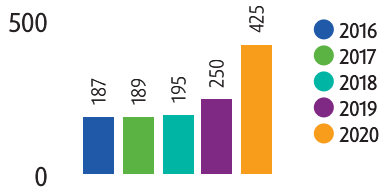
KEY FIGURES

Millions of Euros unless stated otherwise

	2016	2017	2018	2019	2020
Total turnover	6,886	7,327	7,625	11,320	13,904
Total revenues (excluding metal)	641	650	626	681	836
Adjusted EBITDA	187	189	195	250	425
Adjusted EBIT	125	128	135	188	362
Total EBIT	115	121	126	190	311
Adjusted EBIT margin	19.5	19.7	21.5	27.6	43.3
R&D expenditure	23	19	15	8	10
Capital expenditure	72	79	68	82	72
Capital employed, end of period	498	474	546	405	447
Capital employed, average	474	495	483	479	502
Return on Capital Employed (ROCE) (in %)	26.3	25.8	27.9	39.3	72
Workforce, end of period (fully consolidated)	3,170	3,092	2,832	2,849	2,769

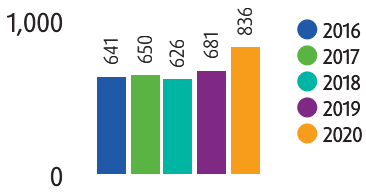
ADJUSTED EBITDA

Millions of Euros



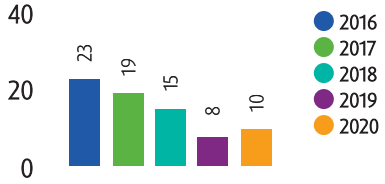
REVENUES (EXCLUDING METAL)

Millions of Euros



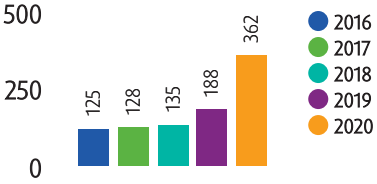
R&D EXPENDITURE

Millions of Euros



ADJUSTED EBIT

Millions of Euros

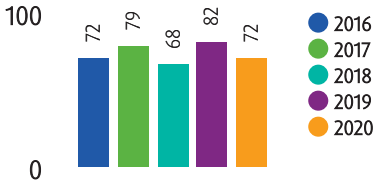


RETURN ON CAPITAL EMPLOYED (ROCE)

%

CAPITAL EXPENDITURE

Millions of Euros



5 Distribution of economic benefits

The most significant portion of Umicore's total income was used to secure the metal component of raw materials (the cost of which is passed on to the customer). After subtracting other raw materials costs, energy-related costs and depreciation, the remaining economic benefits available for distribution stood at € 1.13 billion.

The biggest portion (€ 798 million) was distributed to employees. The bulk of employee benefits was in the form of salaries, with the balance going to national insurance contributions, pensions and other benefits.

Net interest to creditors totaled € 57 million, while taxes to the governments and authorities in the places where we operate, totaled € 79 million. The earnings attributed to minority shareholders were € 4.8 million.

Subject to approval by shareholders at the AGM in April 2021, Umicore's Supervisory Board will propose a gross annual dividend of € 0.75 per share for the full year 2020. This compares to a full dividend of € 0.375 per share paid out for the financial year 2019. Taking into account the interim dividend of € 0.25 per share paid out on 25 August 2020 and subject to shareholder approval, a gross amount of € 0.50 per share will be paid out on 5 May 2021. This is in line with Umicore's policy of paying a **steady** or gradually-increasing dividend.

In 2020, Umicore charitable donations amounted to € 1.5 million.

DISTRIBUTION OF ECONOMIC BENEFITS

Millions of Euros

	unit	2020
Economic value distributed (including contibution from associates)	MILLIONS OF EUROS	20,785.4
Raw materials cost (excluding water, gas & electricity)	MILLIONS OF EUROS	18,719.6
Water, gas & electricity cost	MILLIONS OF EUROS	99.7
Depreciation & impairments	MILLIONS OF EUROS	362.5
Other costs (net)	MILLIONS OF EUROS	532.8
Direct economic value generated	MILLIONS OF EUROS	**1,131.9**
Total taxes	MILLIONS OF EUROS	78.5
Creditors	MILLIONS OF EUROS	57.9
Minority Shareholders	MILLIONS OF EUROS	4.8
Shareholders (dividends only)	MILLIONS OF EUROS	60.2
Retained by the company	MILLIONS OF EUROS	130.5
Charitable donations	MILLIONS OF EUROS	1.5
Employee compensation & benefits	MILLIONS OF EUROS	798.5

Financial statements

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CONSOLIDATED INCOME STATEMENT

Thousands of Euros	Notes	2019	2020
Turnover	F9	17,485,080	20,710,116
Other operating income	F9	121,078	80,602
OPERATING INCOME		**17,606,158**	**20,790,718**
Raw materials and consumables	F9	(15,639,139)	(18,819,323)
Payroll and related benefits	F10	(775,919)	(798,481)
Depreciation and impairments	F9	(307,567)	(362,497)
Other operating expenses	F9	(413,795)	(506,587)
OPERATING EXPENSES		**(17,136,420)**	**(20,486,887)**
Income (loss) from other financial assets	F12	706	761
RESULT FROM OPERATING ACTIVITIES		**470,444**	**304,592**
Financial income	F11	4,808	4,044
Financial expenses	F11	(56,427)	(77,801)
Foreign exchange gains and losses	F11	(31,618)	(30,445)
Share in result of companies accounted for using the equity method	F17	8,705	(5,332)
PROFIT (LOSS) BEFORE INCOME TAX		**395,912**	**195,057**
Income taxes	F13	(96,692)	(59,131)
PROFIT (LOSS) FROM CONTINUING OPERATIONS		**299,220**	**135,927**
Profit (loss) of the period		299,220	135,927
of which minority share		11,429	5,397
of which Group share		287,791	130,530

(EUR)			
Basic earnings per share from continuing operations	F39	1.20	0.54
Diluted earnings per share from continuing operations	F39	1.19	0.54
Dividend pay-out per share		0.75	0.25

On 30 April 2020 the ordinary shareholders' meeting approved to reduce the dividend for 2019 to € 0.375 per share, which corresponded to the amount of the interim dividend for 2019 which had been already paid out in the second half of 2019. Therefore, there was no dividend payout in the first half of 2020. The Supervisory Board will propose a gross annual dividend for the financial year 2020 of € 0.75 per share at the Annual General Meeting on 29 April 2021. This compares to a full dividend of € 0.375 p.s. paid out for the financial year 2019. Taking into account the interim dividend of € 0.25 per share paid out on 25 August 2020 and subject to shareholder approval, a gross amount of € 0.50 per share will be paid out on 5 May 2021.

The notes F1(p. 113) through Parent company separate summarized financial statements(p. 178) are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

Thousands of Euros	Notes	2019	2020
Profit (loss) of the period from continuing operations		**299,220**	**135,927**
Items in other comprehensive income that will not be reclassified to P&L			
Changes due to remeasurements of post employment benefit obligations		(71,921)	(25,198)
Changes in deferred taxes directly recognized in other comprehensive income		19,869	7,258
Items in other comprehensive income that may be subsequently reclassified to P&L			
Changes in financial assets at FV through OCI reserves		(9)	(4,193)
Changes in cash flow hedge reserves		(27,958)	17,321
Changes in deferred taxes directly recognized in other comprehensive income		8,897	(3,456)
Changes in currency translation differences		9,444	(122,258)
OTHER COMPREHENSIVE INCOME FROM CONTINUING OPERATIONS	**F23**	**(61,678)**	**(130,525)**
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		**237,541**	**5,402**
of which Group share		225,312	2,952
of which minority share		12,230	2,450

The deferred tax impact on the consolidated statement of comprehensive income is due to the cash flow hedge reserves for € -3.5 million and to employee benefit reserves for € 7.3 million.

The notes F1(p. 113) through Parent company separate summarized financial statements(p. 178) are an integral part of these consolidated financial statements

CONSOLIDATED BALANCE SHEET

Thousands of Euros	Notes	31/12/2019	31/12/2020
Non-current assets		**2,810,228**	**2,895,694**
Intangible assets	F14, F15	370,859	346,888
Property, plant and equipment	F16	2,094,672	2,163,661
Investments accounted for using the equity method	F17	150,642	139,839
Financial assets at fair value through Other Comprehensive Income	F18	10,897	8,352
Loans granted	F18	2,192	3,252
Trade and other receivables	F20	12,038	11,765
Deferred tax assets	F21	168,927	221,938
CURRENT ASSETS		**4,213,162**	**5,445,199**
Loans granted	F18	2	80
Inventories	F19	2,462,330	2,718,092
Trade and other receivables	F20	1,433,659	1,677,167
Income tax receivables	F21	45,447	39,553
Cash and cash equivalents	F22	271,724	1,010,307
TOTAL ASSETS		**7,023,390**	**8,340,893**

Thousands of Euros	Notes	31/12/2019	31/12/2020
EQUITY OF THE GROUP		**2,660,464**	**2,621,856**
Group shareholders' equity		2,593,474	2,557,182
Share capital and premiums		1,384,273	1,384,273
Retained earnings		1,678,355	1,749,655
Currency translation differences and other reserves	F23	(284,453)	(367,825)
Treasury shares		(184,701)	(208,921)
Minority interest		66,998	64,674
NON-CURRENT LIABILITIES		**1,686,801**	**2,359,901**
Provisions for employee benefits	F27	392,651	426,356
Financial debt	F24	1,151,083	1,705,154
Trade and other payables	F25	24,120	23,505
Deferred tax liabilities	F21	11,461	22,846
Provisions	F29, F30	107,487	182,040
CURRENT LIABILITIES		**2,676,124**	**3,359,136**
Financial debt	F24	564,063	719,177
Trade and other payables	F25	1,916,348	2,418,929
Income tax payable	F21	131,483	160,734
Provisions	F29, F30	64,230	60,296
TOTAL EQUITY & LIABILITIES		**7,023,390**	**8,340,893**

The notes F1(p. 113) through Parent company separate summarized financial statements(p. 178) are an integral part of these consolidated financial statements

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

Thousands of Euros	Share capital & premiums	Reserves	Currency translation & other reserves	Treasury shares	Minority interest	Total for continuing operations
Balance at the beginning of 2019	**1,384,273**	**1,610,882**	**(227,644)**	**(158,103)**	**49,927**	**2,659,336**
Change in accounting policies	-	(34,110)	-	-	544	(33,566)
RESTATED BALANCE AT THE BEGINNING OF 2019	**1,384,273**	**1,576,772**	**(227,644)**	**(158,103)**	**50,471**	**2,625,770**
Result of the period	-	287,791	-	-	11,428	299,220
Other comprehensive income for the period	-	-	(62,480)	-	802	(61,678)
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	**-**	**287,791**	**(62,480)**	**-**	**12,231**	**237,543**
Changes in share-based payment reserves	-	-	8,211	-	-	8,211
Capital increase	-	-	-	-	15,541	15,541
Dividends	-	(186,394)	-	-	(11,246)	(197,640)
Transfers	-	179	(2,540)	2,361	-	-
Changes in treasury shares	-	-	-	(28,959)	-	(28,959)
BALANCE AT THE END OF 2019	**1,384,273**	**1,678,348**	**(284,453)**	**(184,701)**	**66,997**	**2,660,464**
Result of the period	-	130,530	-	-	5,397	135,927
Other comprehensive income for the period	-	-	(127,578)	-	(2,947)	(130,525)
TOTAL COMPREHENSIVE INCOME FOR THE PERIOD	**-**	**130,530**	**(127,578)**	**-**	**2,450**	**5,402**
Changes in share-based payment reserves	-	-	10,108	-	-	10,108
Convertible Bond - conversion rights*	-	-	37,743	-	-	37,743
Capital increase	-	-	-	-	27	27
Dividends	-	(60,141)	-	-	(4,800)	(64,941)
Transfers	-	917	(3,645)	2,727	-	-
Changes in treasury shares	-	-	-	(26,947)	-	(26,947)
BALANCE AT THE END OF 2020	**1,384,273**	**1,749,655**	**(367,825)**	**(208,921)**	**64,674**	**2,621,856**

The legal reserve of € 55.0 million which is included in the retained earnings is not available for distribution. The share capital of the Group as at 31 December 2020 was composed of 246,400,000 shares with no par value.

*The conversion rights embedded in the € 500 million convertible bond issued on 23 June 2020 were valued at € 37.7 million net of transaction costs and deferred taxes. This value according to IFRS rules will not be remeasured over time, nor at conversion nor at maturity.

The notes F1(p. 113) through Parent company separate summarized financial statements(p. 178) are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOW

Thousands of Euros	Notes	2019	2020
Profit (loss) from continuing operations		299,220	135,927
Adjustments for profit of equity companies		(8,705)	5,332
Adjustment for non-cash transactions	F34	207,302	449,023
Adjustments for items to disclose separately or under investing and financing cashflows	F34	129,568	116,051
Change in working capital requirement	F34	(78,441)	(103,756)
Cashflow generated from operations		**548,946**	**602,576**
Dividend received		11,454	2,026
Tax paid during the period		(86,661)	(78,955)
Government grants received		5,444	2,673
NET OPERATING CASHFLOW	**F34**	**479,182**	**528,320**
Acquisition of property, plant and equipment	F16	(529,487)	(391,475)
Acquisition of intangible assets	F14	(58,362)	(44,060)
Acquisition of new subsidiaries, net of cash acquired	F8	(188,138)	(156)
Acquisition of financial assets	F18	(2,375)	(1,633)
New loans extended	F18	(126)	(752)
SUB-TOTAL ACQUISITIONS		**(778,489)**	**(438,076)**
Disposal of property, plant and equipment		11,777	1,475
Disposal of intangible assets		9,329	6,619
Disposal of subsidiaries and associates, net of cash disposed		910	518
Repayment of loans	F18	6,442	0
SUB-TOTAL DISPOSALS		**28,457**	**8,613**
NET CASHFLOW GENERATED BY (USED IN) INVESTING ACTIVITIES	**F34**	**(750,032)**	**(429,463)**
Capital increase (decrease) minority		15,541	27
Own shares		(28,959)	(26,947)
Change in lease liability	F24	(16,536)	(19,801)
Interest received		4,608	3,392
Interest paid		(44,158)	(59,689)
New loans and repayments	F24	517,106	806,036
Dividends paid to Umicore shareholders		(186,387)	(60,141)
Dividends paid to minority shareholders		(11,246)	(4,800)
NET CASHFLOW GENERATED BY (USED IN) FINANCING ACTIVITIES	**F34**	**249,969**	**638,076**
Effect of exchange rate fluctuations		2,997	25,465
TOTAL NET CASHFLOW OF THE PERIOD		**(17,884)**	**762,399**
Net cash and cash equivalents at the beginning of the period for continuing operations	F22	**257,114**	**239,230**
Net cash and cash equivalents at the end of the period for continuing operations	F22	**239,230**	**1,001,630**
of which cash and cash equivalents		271,724	1,010,307
of which bank overdrafts		(32,493)	(8,678)

The notes F1(p. 113) through Parent company separate summarized financial statements(p. 178) are an integral part of these consolidated financial statements.

Notes of the financial statements

The company's consolidated financial statements and the management report prepared in accordance with article 3:33 of the Belgian Companies and Associations Code set forth in the sections labelled About us(p. 3) through Management Responsibility Statement(p. 180) for the year ended 31 December 2020 were authorized for issue by the Supervisory Board on 12 March 2021. They have been prepared in accordance with the legal and regulatory requirements applicable to the consolidated financial statements of Belgian companies. They include those of the company, its subsidiaries and its interests in companies accounted for using the equity method.

F1 BASIS OF PREPARATION

The Group presents its annual consolidated financial statements in accordance with all International Financial Reporting Standards (IFRS) adopted by the European Union (EU).

The consolidated financial statements are presented in thousands of euros, rounded to the nearest thousand, and have been prepared on a historical cost basis, except for those items that are measured at fair value.

F2 ACCOUNTING POLICIES

2.1 PRINCIPLES OF CONSOLIDATION AND SEGMENTATION

2.1.1 SUBSIDIARIES

Subsidiaries are all entities (including structured entities) over which the group has control.

The group controls an entity when the group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the group. They are deconsolidated from the date that control ceases.

Note F5 lists all significant subsidiaries of the company at the closing date.

The group applies the acquisition method to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred to the former owners of the acquiree and the equity interests issued by the group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The group recognizes any minority interest in the acquiree on an acquisition-by-acquisition basis, either at fair value or at the minority interest's proportionate share of the recognized amounts of acquiree's identifiable net assets. Acquisition-related costs are expensed as incurred.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measurement are recognized in profit or loss.

Any contingent consideration to be transferred by the group is recognized at fair value at the acquisition date. Subsequent changes to the fair value of the contingent consideration that is deemed to be an asset or liability is recognized in profit or loss. Contingent consideration that is classified as equity is not re-measured, and its subsequent settlement is accounted for within equity.

Inter-company transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated. When necessary, amounts reported by subsidiaries have been adjusted to conform with the group's accounting policies. The line "other operating income" and "other financial income" of the income statements include, depending on the nature of the underlying transactions, the currency translation differences due to intercompany transactions to be translated from the transaction currency into functional currency which may differ from euro for some entities and regions.

IFRS 5 (Non-current Assets Held for Sale and Discontinued Operations) does not specify the treatment for the elimination of inter-company transactions between discontinued and continued operations. As an accounting policy Umicore opts not to eliminate the intercompany transactions within the income statement between the discontinued and continued operations. For the balance sheet presentation however, IFRS 10 (Consolidated Financial Statements) overrides IFRS 5 and requires all intercompany balances to be eliminated including between the discontinued and continued operations.

2.1.2 CHANGES IN OWNERSHIP INTERESTS IN SUBSIDIARIES WITHOUT CHANGE OF CONTROL

Transactions with minority interests that do not result in loss of control are accounted for as equity transactions – that is, as transactions with the owners in their capacity as owners.

The difference between fair value of any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to minority interests are also recorded in equity.

2.1.3 DISPOSAL OF SUBSIDIARIES

When the group ceases to have control, any retained interest in the entity is remeasured to its fair value at the date when control is lost, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

2.1.4 ASSOCIATES

Associates are all entities over which the group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. Investments in associates are accounted for using the equity method of accounting. Under the equity method, the investment is initially recognized at cost, and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition.

The group's investment in associates includes goodwill identified on acquisition. If the ownership interest in an associate is reduced but significant influence is retained, only a proportionate share of the amounts previously recognized in other comprehensive income is reclassified to profit or loss where appropriate. The group's share of post-acquisition profit or loss is recognized in the income statement, and its share of post-acquisition movements in other comprehensive income is recognized in other comprehensive income with a corresponding adjustment to the carrying amount of the investment. When the group's share of losses in an associate equals or exceeds its interest in the associate, including any other unsecured receivables, the group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the associate. The group determines at each reporting date whether there is any objective evidence that the investment in the associate is impaired. If this is the case, the group calculates the amount of impairment as the difference between the recoverable amount of the associate and its carrying value and recognizes the amount adjacent to "share of profit/(loss) of associates" in the income statement.

Profits and losses resulting from upstream and downstream transactions between the group and its associate are recognized in the group's financial statements only to the extent of unrelated investor's interests in the associates. Unrealized losses are eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates have been changed where necessary to ensure consistency with the policies adopted by the group. Dilution gains and losses arising in investments in associates are recognized in the income statement.

2.1.5 JOINT ARRANGEMENTS

The group applies IFRS 11 to all joint arrangements. Under IFRS 11 investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations each investor. The group has assessed the nature of its joint arrangements and determined them to be joint ventures. Joint ventures are accounted for using the equity method. Under the equity method of accounting, interests in joint ventures are initially recognized at cost and adjusted thereafter to recognize the group's share of the postacquisition profits or losses and movements in other comprehensive income.

When the group's share of losses in a joint venture equals or exceeds its interests in the joint ventures (which includes any long-term interests that, in substance, form part of the group's net investment in the joint ventures), the group does not recognize further losses, unless it has incurred obligations or made payments on behalf of the joint ventures.

Unrealized gains on transactions between the group and its joint ventures are eliminated to the extent of the group's interest in the joint ventures. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of the joint ventures have been changed where necessary to ensure consistency with the policies adopted by the group.

2.1.6 SEGMENT REPORTING

Note F7 provides the Company's segment information, in line with IFRS 8. Umicore is organized in business units. Operating segments under IFRS 8 at Umicore are differentiated by their growth drivers in the areas of Catalysis, Energy & Surface Technologies, and Recycling.

The Catalysis segment provides automotive catalysts for gasoline and diesel light and heavyduty diesel applications, including on-road and non-road vehicles. The business group also offers stationary catalysis for industrial emissions control and produces precious metalsbased compounds and catalysts for use in the pharmaceutical and fine chemicals industries.

The Energy & Surface Technologies segment is focused on products that are found in applications used in the production and storage of clean energy and in a range of applications for surface technologies that bring specific properties and functionalities to end products. All the activities offer a closed loop service for the customers. The Recycling segment treats complex waste streams containing precious and other specialty metals. The operations can recover 20 of these metals from a wide range of input materials ranging from industrial residues to end-oflife materials. Other activities include production of precious metals-based materials that are essential for applications as diverse as high-tech glass production, electrics and electronics.

Corporate covers corporate activities, shared operational functions and the Group's Research, Development & Innovation unit. Umicore's minority share in Element Six Abrasives and Ieqsa is also included in Corporate.

Operating segments are reported in a manner consistent with the internal reporting provided to the supervisory board and the management board.

The segment results, assets and liabilities include items directly attributable to the segment as well as those elements that can reasonably be allocated to a segment.

The pricing of inter-segment sales is based on an arm's length transfer pricing system. In the absence of relevant market price references, 'cost plus' mechanisms are used.

Associate companies are allocated to the business group with the closest fit from a market segment perspective.

2.2 INFLATION ACCOUNTING

For the reported period, there is one subsidiary in the Umicore Group having a functional currency belonging to a hyperinflationary economy in Argentina. However, in view of significance to the Group, this is not material for IAS 29 to be applied.

2.3 FOREIGN CURRENCY TRANSLATION

Functional currency: items included in the financial statements of each entity in the Group are measured using the currency that best reflects the economic substance of the underlying events and circumstances relevant to that entity. The consolidated financial statements are presented in euros which is the functional currency of the parent. To consolidate the Group and each of its subsidiaries, the financial statements are translated as follows:

- Assets and liabilities at the year-end rate as published by the European Central Bank.
- Income statements at the average exchange rate for the year.
- The components of shareholders' equity at the historical exchange rate.

Exchange differences arising from the translation of the net investment in foreign subsidiaries, joint ventures and associated entities at the period-end exchange rate are recorded as part of the shareholders' equity under "currency translation differences".

When a foreign operation is partially disposed of or sold, exchange differences that were recorded in equity are recognized in the income statement as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as local currency assets and liabilities of the foreign entity and are translated at the closing rate.

2.4 FOREIGN CURRENCY TRANSACTIONS

Foreign currency transactions are recognized during the period in the functional currency of each entity at exchange rates prevailing at the date of transaction. The date of a transaction is the date at which the transaction first qualifies for recognition. For practical reasons a rate that approximates the actual rate at the date of the transaction is used at some operations, for example, an average rate for the week or the month in which the transactions occur.

Subsequently, monetary assets and liabilities denominated in foreign currencies are translated at the closing rate at the end of the reporting period.

Gains and losses resulting from the settlement of foreign currency transactions, and from the translation of monetary assets and liabilities denominated in foreign currencies, are recognized in the income statement as a financial result.

In order to hedge its exposure to certain foreign exchange risks, the Company has entered into certain forward contracts (see Note F2.21, Financial instruments).

2.5 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment is recorded at historical cost, less accumulated depreciation and impairment losses. Cost includes all direct costs and appropriate allocation of indirect costs incurred to bring the asset to working condition for its intended use.

Borrowing costs that are directly attributable to investments are capitalized together with the costs of the assets in accordance with IAS 23. All borrowing costs that cannot be linked directly to an investment are recognized as expenses in the period when incurred.

The straight-line depreciation method is applied through the estimated useful life of the assets.

Useful life is the period of time over which an asset is expected to be used by the company.

Repair and maintenance costs are expensed in the period in which they are incurred, if they do not increase the future economic benefits of the asset. Otherwise they are classified as separate components of items of property, plant and equipment. Those major components of items of property, plant and equipment that are replaced at regular intervals are accounted for as separate assets as they have useful lives different from those items of property, plant and equipment to which they relate. Umicore's PPE, being complex and highly customized industrial assets, typically do not have an individual resale value if

put outside the overall context of the operations. Therefore, no residual value is taken into account when determining the depreciable value.

The typical useful life per main type of property, plant and equipment are as per table below. For material newly acquired or constructed assets, the useful life is separately assessed at the moment of the investment request and can deviate from the above standards.

Management determines the estimated useful lives and related depreciation charges for property, plant and equipment. Management uses standard estimates based on a combination of physical durability and projected product life or industry life cycles. These useful lives could change significantly as a result of technical innovations, market developments or competitor actions. Management will increase the depreciation charge where useful lives are shorter than previously estimated, or it will write-off or write-down technically obsolete or non-strategic assets that have been abandoned or sold.

Land use rights are part of the Property, Plant and Equipment and are typically amortized over the contractual period.

	years
Land	Non-depreciable
Buildings	
- Industrial buildings	20
- Improvements to buildings	10
- Other buildings such as offices and laboratories	40
- Investment properties	40
Plant, machinery and equipment	10
- Furnaces	7
- Small equipment	5
Furniture and vehicles	
- Vehicles	5
- Mobile handling equipment	7
- Computer equipment	3 - 5
- Furniture and office equipment	5 - 10

2.6 INTANGIBLE ASSETS & EQUITY TRANSACTION EXPENSES

2.6.1 EQUITY TRANSACTION EXPENSES

Expenses for formation and capital increase are deducted from the share capital.

2.6.2 GOODWILL

Goodwill represents the excess of the cost of an acquisition of a subsidiary, associate or jointly controlled entity over the Group's share in the fair value of the identifiable assets and liabilities of the acquired entity at the date of acquisition. Goodwill is recognized at cost less any accumulated impairment losses.

Goodwill from associates and joint ventures is presented in the balance sheet on the line "Investments accounted for under the equity method", together with the investment itself.

To assess impairment, goodwill is allocated to a cash generating unit (CGU). At each balance sheet date, these CGUs are tested for impairment, meaning an analysis is performed to determine whether the carrying amount of goodwill allocated to the CGU is fully recoverable.

If the carrying amount is not fully recoverable, an appropriate impairment loss is recognized in the income statement. These impairment losses are never reversed.

The excess of the Group's interest in the fair value of the net identifiable assets acquired over the cost of acquisition is recognized in the income statement immediately.

2.6.3 RESEARCH AND DEVELOPMENT

Research costs related to the prospect of gaining new scientific or technological knowledge and understanding are recognized in the income statement as an incurred expense.

Development costs are defined as costs incurred for the design of new or substantially improved products and for the processes prior to commercial production or use. They are capitalized if, among others, the following conditions are met:

- the intangible asset will give rise to future economic benefits, or in other words, the market potential has been clearly demonstrated.
- the expenditures related to the process or product can be clearly identified and reliably measured.

In case it is difficult to clearly distinguish between research or development costs, the costs are considered as being research. If development costs are capitalized they are amortized using a straight-line method over the period of their expected benefit, in general five years.

2.6.4 CO_2 EMISSION RIGHTS

Within the framework of the Kyoto protocol, a third emission trading period started, covering 2013-2020. Therefore, the Flemish Government granted emission rights to the Flemish sites of certain companies, including Umicore. Each year, at the end of February, one fifth of these emission rights is put on an official registry account. The release of emission rights to this registry account entails the capitalization in the

intangible assets, which is in line with the guidance of the Belgian Accounting Standards Commission. Gains on the recognition of emission rights at fair value are deferred until the certificates are used. Emission rights owned are subject to impairment testing but are not depreciated. If, at a certain closing date, it appears that the closing market price is below the carrying value, a write-down is booked. At each closing date, the group estimates the actual use of rights for the period and recognizes a provision for the rights that will have to be restituted to the Government. The charge related to the impairment loss or the recognition of provisions are fully compensated in the income statement by the release of deferred revenue. Historically, Umicore owns the required rights to ensure its normal operating activities.

2.6.5 OTHER INTANGIBLE ASSETS

All the following types are recorded at historical cost, less accumulated amortization and impairment losses:

- Concessions, patents, licenses: are amortized over the period of their legal protection with a minimum of 5% (in general over 5 years).
- Customer portfolios: are typically amortized over a period of five years.
- ERP software is typically amortized over a period of ten years.
- Smaller software is typically amortized over a period of five years.

In case of an earn-out component, a remeasurement is foreseen, adapting the carrying amount of the asset and the amortization accordingly.

Umicore has currently no intangible asset with an indefinite useful live.

2.7 LEASE

IFRS 16 sets out the principles for the recognition, measurement, presentation, and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model, similar to the accounting for finance leases under IAS 17. At the commencement date of a lease, lessees recognize a lease liability (i.e. a liability to make lease payments), and a right-of-use asset (i.e. an asset representing the right to use the underlying asset over the lease term).

The lease liabilities are recognized at the present value of the remaining lease payments (see note F24).

The right-of-use asset is depreciated over the term of the lease (see note F16). Interest expense is recognized on the lease liability (see note F11). The lease liability is remeasured upon the occurrence of certain events (e.g. a change in the lease term or a change in future lease payments resulting from a change in index). Such remeasurements of the lease liability will generally be recognized as an adjustment to the right-of-use asset.

The Group applies the lease recognition exemptions for short-term leases and leases for which the underlying asset is of low value. The Group elects, by class of underlying asset, not to separate non-lease components from lease components and instead accounts for each lease component and any associated non-lease component as one single lease component.

The group leases metals to and from third parties for specified periods for which the group receives or pays fees. Metal lease contracts are typically concluded for less than one year.

The metal leases from and to third parties are still reported as off-balance sheet commitments, as not in the scope of IFRS 16.

2.8 FINANCIAL ASSETS AT FAIR VALUE THROUGH OCI, LOANS AND NON-CURRENT RECEIVABLES

All movements in financial assets at fair value through OCI, loans and receivables are accounted for at trade date.

Financial assets at fair value through OCI are carried at fair value. Unrealized gains and losses from changes in the fair value of such assets are recognized in equity as financial assets at fair value through OCI reserves (Other Comprehensive Income). When the assets are sold or impaired, the accumulated fair value adjustments are also included in the OCI. Financial assets are derecognized when the rights to receive cash flows from the investments have expired or have been transferred and the group has transferred substantially all risks and rewards of ownership.

Loans and receivables are carried at amortized cost less any impairment.

All write-downs are recorded on a separate account and are netted with the carrying amounts when all chances of recovery are depleted. Own shares are deducted from equity.

2.9 INVENTORY

Inventories are classified as:

1. Base products (gross values)
   a. Permanently tied up metal inventories (not hedged)
   b. Commercially available metal inventories (hedged)
   c. OTher base products inventories (not hedged)
2. Consumables (gross values)
3. Write down and impairments
4. Advances paid
5. Contracts in progress

Inventories are carried at cost. Cost comprises direct purchase or manufacturing costs and an appropriate allocation of overheads.

Base products (gross values) are mostly metal-containing products on which Umicore is exposed to price fluctuation risks. Most of these inventories follow Umicore's metal accounting rules and are classified in two inventory categories that reflect their specific nature and business use: the permanently tied up metal inventories and the commercially available metal inventories. The latter inventories are subject to an active and systematic hedging process to minimize the effects of market price fluctuations on the financial performance of the Group. Conversely, the permanently tied up metal inventories are typically not hedged. Next to these categories, the other base product inventories consist of materials used in the manufacturing processes to obtain the marketable basis products. These inventories are also typically not hedged. More details on the hedging mechanisms can be found in note F3.

Individualized or weighted average valuation is applied on the initial at cost valuation per category of inventory complemented with the following fair value principles:

- On the permanently tied up metal inventories : In view of their permanent nature, Umicore opted to apply the measurement and recognition rules of Property, Plant and Equipment (IAS 16) and Impairment of Assets (IAS 36). The valuation is based on the "historical cost less any accumulated depreciation and accumulated impairment" principle. As the inventories are considered to have an unlimited useful life, no depreciations are applied. Instead they are subject to Umicore's annual impairment testing of the CGUs carrying these inventories. Any impairments booked are classified under the caption Write downs & Impairments.
- On the commercially available metal inventories : as they are hedged, see note F3, Umicore applies the mark-to-market valuation principles. The classification of these mark-to-markets depends if Umicore obtained IFRS 9 Fair Value hedge accounting, see note F2.21.1 transactional risks – fair value hedging.
- On the other Base products, LOCOM (lower of cost or net realizable value, meaning the estimated selling price less the estimated costs of completion and the estimated cost necessary to make the sale) and slow moving principles are applied. Any write-downs booked are classified under the caption Write downs & Impairments.

Consumables (gross values) are products that are not used in a direct way in the manufacturing processes (for example: packaging material). They are valued using the weighted-average cost method and are submitting to LOCOM. Any write-downs booked are classified under the caption Write downs & Impairments

Write-downs & Impairments are any impairments or write downs booked on the Base products and Consumables are captured under this line item.

Advances paid are down-payments on transactions with suppliers for which the physical delivery has not yet taken place and are booked at nominal value.

Contracts in progress are valued using the percentage-of-completion method.

2.10 TRADE AND OTHER RECEIVABLES

Trade and other receivables are measured at amortized cost, i.e. at the net present value of the receivable amount. Unless the impact of discounting is material, the nominal value is taken. Receivables are written down for irrecoverable amounts. All write-downs are recorded on a separate account and are netted with the carrying amounts when all chances of recovery are depleted.

Trade receivables of which substantially all the risks and rewards have been transferred are derecognized from the balance sheet. The positive fair value of derivative financial instruments is included under this heading.

Trade and other receivables are subject to a new impairment methodology, referred to as the Expected Credit Loss (ECL) model, measuring the expected credit losses based on shared credit risk characteristics. Umicore has established an allowance matrix based on different customer and sector ratings, ageing balances, macro-economic and regional factors and historical loss patterns.

The Group may undertake certain linked contracts to sell or buy metal and commit to repurchase or sell the metal in the future. An asset representing the metal which the Groups has committed to sell or a liability representing the obligation to repurchase the metal are recognized in trade and other receivables or trade and other payables, respectively. Accordingly, principal cash flows in respect of sale and repurchase agreements are shown as cash flows from operating activities in the cash flow statement rather than cash flows from financing activities as long the financing is short term in time and the underlying transactions are not rolled over. Consistently interest paid and received are shown as cash flows from operating activities and presented as other income in the income statement in line with lease and factoring fees. No revenues are recognized in respect of the sale leg or costs are recognized in respect of the purchase leg if it regards the same metals and quantities engaged with the same party.

2.11 CASH AND CASH EQUIVALENTS

Cash includes cash-in-hand and cash with banks. Cash equivalents are short-term, highly liquid investments that are readily convertible into known amounts of cash, have maturity dates of three months or less and are subject to an insignificant risk of change in value.

These items are carried in the balance sheet at nominal value or amortized cost. Bank overdrafts are included in the current liabilities on the balance sheet.

2.12 IMPAIRMENT OF NON-FINANCIAL ASSETS

Property, plant and equipment and other non-current assets, including intangible assets and financial assets not held for trading, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If any such indication exists, the recoverable amount of the asset is estimated.

The recoverable amount is the higher of an asset's net selling price and value in use. To estimate the recoverable amount of individual assets the company often determines the recoverable amount of the cash-generating unit (CGU) to which the asset belongs.

Whenever the carrying amount of an asset exceeds its recoverable value, an impairment loss is recognized as an expense immediately.

A reversal of impairment losses is recognized when there is an indication that the impairment losses recognized for the asset or for the CGU no longer exist or have decreased. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

2.13 SHARE CAPITAL AND RETAINED EARNINGS

A. Repurchase of share capital: When the company purchases some of its own shares, the consideration paid, including any attributable transaction costs net of income taxes, is deducted from the total shareholders' equity as treasury shares. No gain or loss shall be recognized in profit or loss on the purchase, sale, issue or cancellation of own shares. When such shares are subsequently sold or reissued, any consideration received is included in shareholders' equity.

B. Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction from the proceeds of the issue, net of tax.

C. Dividends of the parent company payable on ordinary shares are only recognized as a liability following approval by the shareholders.

2.14 MINORITY INTERESTS

Minority interests include a proportion of the fair value of identifiable assets and liabilities recognized upon acquisition of a subsidiary that is attributable to third parties, together with the appropriate proportion of subsequent profits and losses.

In the income statement, the minority share in the Group's profit or loss is presented separately from the Group's consolidated result.

2.15 PROVISIONS

Provisions are recognized in the balance sheet when:

- There is a present obligation (legal or constructive) as a result of a past event.
- It is probable that an outflow of resources will be required to settle the obligation.
- A reliable estimate can be made on the amount of the obligation.

A constructive obligation is an obligation that derives from company actions where, by an established pattern of past practice or published policies, the company has indicated that it will accept certain responsibilities and, as a result, the company has created a valid expectation that it will discharge those responsibilities.

The amount recognized as a provision is the best estimate of the expenditure required to settle the present obligation at the end of the reporting period and taking into account the probability of the possible outcome of the event. Where the effect of the time value of money is material, the amount of a provision is the present value of the expenditure expected to be required to settle the obligation. The result of the yearly discounting of the provision, if any, is accounted for as a financial result.

The main types of provision are the following:

1. PROVISIONS FOR EMPLOYEE BENEFITS (SEE NOTE F2.16, EMPLOYEE BENEFITS)

2. ENVIRONMENTAL OBLIGATIONS

Environmental provisions are based on legal and constructive obligations from past events, in accordance with the company's environmental approach and applicable legal requirements.

The full amount of the estimated obligation is recognized at the moment the event occurs.

When the obligation is production/activity related, the provision is recognized gradually depending on normal usage/production level.

3. OTHER PROVISIONS

These include provisions for litigation, onerous contracts, warranties, exposure to equity investments and restructuring. A provision for restructuring is recognized when the company has approved a detailed and formal restructuring plan and the restructuring has either commenced or has been announced publicly before the end of the reporting period. Any restructuring provision only includes the direct expenditure arising from the restructuring which is necessarily entailed and is not associated with the ongoing activities of the Company.

2.16 EMPLOYEE BENEFITS

2.16.1 SHORT-TERM EMPLOYEE BENEFITS

These include wages, salaries and social security contributions, paid annual leave and sick leave, bonuses and non-monetary benefits, and are taken as an expense in the relevant period.

All company managers are eligible for bonuses that are based on indicators including personal performance and key financial targets. The amount of the bonus is recognized as an expense, based on an estimation made at the end of the reporting period.

2.16.2 POST-EMPLOYMENT BENEFITS (PENSIONS, MEDICAL CARE)

The company has various pension and medical care schemes in accordance with the conditions and practices of the countries it operates in. The schemes are generally funded through payments to insurance companies or trustee-administered funds.

2.16.2.1 DEFINED BENEFIT PLANS

The company has accounted for all legal and constructive obligations both under the formal terms of defined benefit plans and under the company's informal practices.

The amount presented in the balance sheet is based on actuarial calculations (using the projected unit credit method) and represents the present value of the defined benefit obligations netted with the fair value of the plan assets.

The past service costs are immediately recognized in the income statement since IAS 19 revised.

All remeasurements as a result of changes in the actuarial assumptions of post-employment defined benefit plans are recognized through other comprehensive income (OCI) in the period in which they occur and are disclosed in the statement of comprehensive income as post-employment benefit reserves.

In Belgium, in line with the Belgian legislation applicable to 2nd pillar pension plans (so-called "Law Vandenbroucke"), all Belgian Defined Contribution plans, for which the legal minimum guaranteed return is applicable have to be considered under IFRS as Defined Benefit plans. Liabilities and costs of these plans are therefore calculated following the Projected Unit Credit Method.

In Germany two defined contribution pension plans exist which are externally financed via the "Pensionskasse Degussa" (PKD) or the support fund "Unterstützungskasse Degussa" (RUK).The PKD and RUK plans secures the inflation and guaranteed interest rate adjustments of the benefits. In recent years, due to the low interest rate environment, there is a risk of shortfalls in the self-funding at the DKP and RUK to honor these adjustments. In case of such shortfalls the PKD and RUK would call upon Umicore to contribute the extra funding required. For this reason, the PKD and RUK plans are recognized as defined benefit obligation plans under IFRS. Management applied a best estimate simplified method to calculate the shortfall risk and recognized this as an additional obligation.

2.16.2.2 DEFINED CONTRIBUTION PLANS

The company pays contributions to publicly or privately administered insurance plans.

The payments are recognized as expenses as they fall due and as such are included in personnel costs.

2.16.3 OTHER LONG-TERM EMPLOYEE BENEFITS (JUBILEE PREMIUMS)

These benefits are accrued for their expected costs over the period of employment using an accounting methodology similar to that for defined benefit pension plans. These obligations are in general valued annually by independent qualified actuaries. All remeasurements as a result of changes in the actuarial assumptions are immediately recognized in the income statement.

2.16.4 TERMINATION BENEFITS (PRE-RETIREMENT PLANS, OTHER TERMINATION OBLIGATIONS)

These benefits arise as a result of the company's decision to terminate an employee's employment before the normal retirement date or of an employee's decision to accept voluntary redundancy in exchange for those benefits. When they are reasonably predictable in accordance with the conditions and practices of the countries the company operates in, future obligations are also recognized.

These benefits are accrued for their expected costs over the period of employment, using an accounting methodology similar to that for defined benefit pension plans. In general, these obligations are valued annually by independent qualified actuaries. All remeasurements as a result of changes in the actuarial assumptions are immediately recognized in the income statement.

2.16.5 EQUITY AND EQUITY-RELATED COMPENSATION BENEFITS (SHARE-BASED PAYMENTS IFRS 2)

Different stock option and share programs allow company employees and company senior management to acquire or obtain shares of the company.

The option or share exercise price equals the market price of the (underlying) shares at the date of the grant. When the options are exercised, shares are delivered to the beneficiaries from existing own shares. For the share programs, shares are delivered to the beneficiaries from existing own shares. In both cases, the equity is increased by the amount of the proceeds received corresponding to the exercise price.

The options and shares are typically vested at the moment of the grant and their fair value is recognized as an employee benefit expense with a corresponding increase in equity as share based payment reserves. For the options, the expense to be recognized is calculated by an actuary, using a valuation

model which takes into account all features of the stock options, the volatility of the underlying stock and an assumed exercise pattern.

As long as the options granted have not been exercised, their value is reported in the Statement of Changes in Equity as 'share based payments reserve'. The value of the options exercised during the period is transferred to 'retained earnings'.

2.16.6 PRESENTATION

The impact of employee benefits on results is booked under operating results in the income statement, except for the interest and discount rate impacts which are classified under financial results.

2.17 FINANCIAL LIABILITIES

All movements in financial liabilities are accounted for at trade date.

Borrowings are initially recognized as proceeds received, net of transaction costs.

Subsequently they are carried at amortized cost using the effective interest rate method.

Amortized cost is calculated by taking into account any issue costs, and any discount or premium on issue. Any differences between cost and redemption value are recognized in the income statement upon redemption.

As from 2019, the financial debt also contains the lease liability as per IFRS 16 (see note F2.23.1).

The convertible bond is considered as a compound instrument. It contains a liability and a equity component. This instrument is convertible into shares at the option of the holder. Each component is, therefore, accounted for separately. The liability element is determined by fair valuing the cash flows excluding any equity component. The residual is assigned to equity. The equity component is not remeasured, nor at conversion nor at maturity. Note, finally, that the convertible bond is a zero coupon instrument.

2.18 TRADE AND OTHER PAYABLES

Trade payables are measured at amortized cost, i.e. at the net present value of the payable amount. Unless the impact of discounting is material, the nominal value is taken.

The Group may undertake certain linked contracts to sell or buy metal and commit to repurchase or sell the metal in the future. An asset representing the metal which the Groups has committed to sell or a liability representing the obligation to repurchase the metal are recognized in trade and other receivables or trade and other payables, respectively. Accordingly, principal cash flows in respect of sale and repurchase agreements are shown as cash flows from operating activities in the cash flow statement rather than cash flows from financing activities as long the financing is short term in time and the underlying transactions are not rolled over. Consistently interest paid and received are shown as cash flows from operating activities and presented as other income in the income statement in line with lease and factoring fees. No revenues are recognized in respect of the sale leg or costs are recognized in respect of the purchase leg if it regards the same metals and quantities engaged with the same party.

The negative fair value of derivative financial instruments is included under this heading.

2.19 INCOME TAXES

Taxes on profit or loss of the year include current and deferred tax. Such taxes are calculated in accordance with the tax regulations in effect in each country the company operates in.

Current tax is the expected tax payable on the taxable income of the year, using tax rates enacted at the end of the reporting period, and any adjustment to tax payable (or receivable) in respect of previous years.

The tax payable is determined based on tax laws and regulations that apply in each of the numerous jurisdictions in which the Group operates. The income tax positions taken are considered by the Group to be supportable and are intended to withstand challenge from tax authorities. However, it is accepted that some of the position can be uncertain and include interpretation of complex tax laws.

Tax provisions are recognized where the precise impact of the tax law and regulations on taxes payable with respect to profit arising in those jurisdiction is unclear and could trigger a tax adjustment represented by a future flow of funds to a tax authority or a consequent adjustment to a deferred tax asset. Uncertain tax positions are assessed periodically, implying a detail assessment following the interpretation of IFRIC 23, considering uncertainties individually or collectively, based on which approach provided the best predictions of the resolution of the uncertainties with the tax authorities; assuming that the tax authority will examine the position (if entitled to do so) and will have full knowledge of all the relevant information; and recognizing an Uncertain Tax Position or UTP (or group of UTPs) using either the most likely amount or the expected value, depending on which is thought to give a better prediction of the resolution of each (group of) UTP(s), to reflect the likelihood of an adjustment being realised on examination. The estimation and judgements in relation to uncertain tax positions are reassessed if the facts and circumstances on which those estimates and judgements were based have changed or as a result of new information that affects the initial assessments. In the measurement of the Uncertain tax positions, the Group considers the statute of limitation applicable in each jurisdiction, addionally interest and penalties are included in the assessment.

Deferred taxes are calculated using the liability method on temporary differences arising between the tax base of assets and liabilities and their carrying amounts in the financial statements. These taxes

are measured using the rate prevailing at the end of the reporting period or future applicable tax rates formally announced by the government in the country the Company operates in.

Deferred tax assets are only recognized to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilized.

Deferred tax assets and liabilities are offset and presented net only if they relate to income taxes levied by the same taxation authority on the same taxable entity.

2.20 REVENUE RECOGNITION

2.20.1 REVENUE RECOGNITION FROM CONTRACTS WITH CUSTOMERS

Despite the complexity of several processes within each business unit, the performance obligations are rather straightforward, those being:

- Catalysis: the delivery of the goods in accordance with contract specifications. These specifications have been predefined and validated through samples. This latter is not considered as a significant stream for further analysis under IFRS 15.
- Recycling: the return of the refined metals back to the client in accordance with the contract either in their pure metal content or as part of a (semi)finished product and the sale of metal (including boni) towards the customers.
- Energy and Surface Technologies: the delivery of the products according to specification agreed in the sales order received.

Umicore has carefully considered the satisfaction of the performance obligation and concludes that for sales within Catalysis the revenue is recognized at a point of time when the control transfers to the customer. Despite the products being customized, the considerations for over time have not been met given that the customer does not control the production process nor has the Group the entitlement to be paid prior to delivery of the goods. The control is therefore transferred based upon the usual delivery terms (incoterms) and the customer accepting the goods upon delivery.

For sales within Recycling, the revenue is recognized at a point in time when the control of the refined products or metal is back in the hands of the customers (refinery) or in the hands of the customers (sale of metal, including boni), embarked by the delivery.

For sales within Energy and Surface Technologies the revenue is recognized at a point in time when the control is transferred to the customer, this moment being driven by the delivery of the products according to the incoterms.

Some of the contracts do contain commercial discounts and rebates, however frequency is relatively low, and magnitude is not significant. If applicable, these are recognized in the same period the sale is established.

There are no additional warranty agreements sold to clients on top of legal requirements, therefore these are not considered as a separate performance obligation.

Consequently, the transaction price identified within the agreement is allocated in full to the performance obligation.

There are no significant contract balances where either the Group has performed the performance obligation for which no billing occurred yet, or alternatively has received advance payments for which the performance obligation has not been satisfied.

The revenue from contracts with customers is further detailed in note F7 and F9.

The assessment in view of impairment losses is captured under the expected credit loss model as detailed in note F20.

2.20.2 GOVERNMENT GRANTS

A government grant is accounted for in the balance sheet initially as deferred income when there is reasonable assurance that it will be received and that the company will comply with the conditions attached to it. Grants are recognized in the income statement over the period necessary to match them with the costs they are intended to compensate.

2.21 FINANCIAL INSTRUMENTS

The company uses derivative financial and commodity instruments primarily to reduce the exposure to adverse fluctuations in foreign exchange rates, commodity prices, interest rates and other market risks. The company uses mainly spot and forward contracts to cover the metal and currency risk, and swaps to hedge the interest rate risk. The operations carried out on the futures markets are not of a speculative nature.

2.21.1 TRANSACTIONAL RISKS – FAIR VALUE HEDGING

Derivative financial and commodity instruments are used for the protection of the fair value of underlying hedged items (assets, liabilities and firm commitments) and are recognized initially at fair value at trade date. The hedged items (physical commitments and commercially available inventory, primarily) are, under Umicore's economical hedging policies, initially valued at fair value by applying mark-to-market.

Where possible Umicore documents hedge accounting according to the criteria set out in IFRS 9. The bottom layer or the net position approach for the fair value hedge on groups of closed portfolios of foreign exchange risk and commodity risk exposures are applied. Under the bottom layer approach, a layer representing the nominal amount of an exposure that has historically been present on a constant and continuous basis is defined. This layer is further split into smaller unit of accounts, sublayers, which are designated as hedged items. The sublayers are then hedged by hedging instruments that are designated as hedging multiples of such sublayers

Under the net position approach, hedging is applied based on a group of items with offsetting risk positions, the net position being the hedged item hedged by a hedging instrument.

In both approaches, it regards closed hedged portfolios in which items cannot be added, removed or replaced without treating each change as the transition to a new portfolio. In both approaches, the exposures cover a group of both on balance and off balance foreign exchange and commodity positions, that is, either trade payables, inventories and purchase commitments or trade receivables and sales commitments exposed to the variability of foreign currencies or commodity prices.

In the absence of reaching the IFRS 9 bottom layer criteria or the net position criteria for closed portfolios or in the absence of market-based derivatives and so obtaining fair value hedge accounting at inception as defined under IFRS 9, the hedged items are kept at cost and are subject to IAS 37 principles. In practice this means that Umicore offsets any initially booked material positive mark-to-markets with provisions for onerous contracts and reclassifies the negative mark-to-markets under the provisions for onerous contracts.

When there is a consistent practice of trading of commodities through the use of commodity contracts by a dedicated subsidiary or a cash generating unit (CGU) of the Group and by which the entity takes delivery of the underlying commodity to sell it within a short period after delivery for the purpose of generating a profit from short-term fluctuations in price or trading margins, the inventory is valued at fair value through the income statement and the related physical and / or commodity commitments are classified as derivatives and measured at fair value through the income statement.

2.21.2 STRUCTURAL RISKS – CASH FLOW HEDGING

Derivative financial and commodity instruments used for the protection of future cash flows are designated as hedges under cash-flow hedge accounting. The effective portion of changes in the fair value of hedging instruments which qualify as cash flow hedges are recognized in the shareholders equity as hedging reserves until the underlying forecasted or committed transactions occur (i.e. affect the income statement). At that time the recognized gains and losses on the hedging instruments are transferred from equity to the income statement.

When the underlying hedged transactions are no longer probable or the hedges become ineffective, the corresponding hedging instrument will immediately be terminated and all profits or losses including those which were deferred in equity, are immediately recognized in the income statement.

In the absence of obtaining cash-flow hedge accounting at inception as defined under IFRS 9, then the fair value of the related hedging instruments is recognized in the income statement instead of the equity and this prior to the occurrence of the underlying forecasted or committed transactions.

2.21.3 EMBEDDED DERIVATIVES

Executory contracts (the "host contract") may sometimes contain embedded derivatives.

Embedded derivatives cause some or all of the cash flows that would otherwise be expected from the host contract, to be modified according to a specified interest rate, financial instrument price, commodity price, foreign exchange rate, or another variable. If it is concluded that such a derivative is not closely related to the host contract, it is separated from the host contract and accounted for under the rules of IFRS 9 (fair value through profit or loss). The host contract is accounted for using the rules applicable to executory contracts, which effectively means that such a contract is not recognized in the balance sheet or profit and loss before delivery on the contract takes place.

2.22 ADJUSTMENTS

The adjustments to the result relate to restructuring measures, impairment of assets linked to restructuring measures and other income or expenses arising from events or transactions that are clearly distinct from the ordinary activities of the company such as discontinuation of activities and environmental provisions that relate to historical pollution or linked to non-active sites.

F3 FINANCIAL RISK MANAGEMENT

Each of the Group's activities is exposed to a variety of risks that are financial or non-financial in nature but have the potential to impact the financial performance of the Group. Financial risks include changes in metal prices, in foreign currency exchange rates, in certain market-defined commercial conditions, and in interest rates as well as credit and liquidity risks. The Group's overall risk management program seeks to mitigate risks and potential adverse effects on the financial performance of the Group, including through the use of hedging and insurance instruments.

3.1 CURRENCY RISK

Umicore's currency risk can be split into three distinct categories: structural, transactional and translational risks.

3.1.1 STRUCTURAL RISK

A portion of Umicore's revenues are structurally denominated in US dollar (USD), while many of the related operations are located outside the USD zone (particularly in Europe and Asia).

Any change in the USD exchange rate against the EUR or other currencies which are not pegged to the USD will have an impact on the results.

A large portion of such structural currency exposure derives from US dollar denominated metal prices linked to the recycling and refining operations.

An increasing portion of the structural risk exposure stems from non-metal related revenues denominated in USD such as product premiums and refining charges. This increase is particularly related to the accelerating growth in battery materials activities in Asia.

Next to the sensitivity USD vs EUR, there is also a structural and increasing sensitivity to certain other currency pairs such as the USD and EUR vs the Korean won (KRW), the Chinese yuan (CNY), the Canadian dollar (CAD), the South African rand (ZAR) and the Brazilian real (BRL).

Structural currency hedging

Umicore's hedging policy allows for hedging forward its structural currency exposure, either in conjunction with the hedging of structural metal price exposure or in isolation, typically when a currency exchange rate or a metal price denominated in EUR is above its historical average and at a level where attractive margins can be secured.

In relation to the structural risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (future probable cash flows) and the hedging instrument including amount and maturity. The Group applies a prudent approach in the application of structural hedging, never up to 100 %, avoiding thereby ineffectiveness arising from difference in maturity between hedged item and hedging instrument or changes in exposure amounts.

At the end of 2020, Umicore had structural currency hedging in place relating to its non-metal related currency sensitivity including the following pairs of currencies: EUR/USD, USD/KRW, USD/CNY, EUR/CNY, EUR/ZAR and USD/CAD.

3.1.2 TRANSACTIONAL RISK

The company is also subject to transactional risks in respect of currencies, i.e. the risk of currency exchange rates fluctuating between the time the price is fixed with a customer or supplier and the time the transaction is settled. The Group's policy is to hedge the transactional risk to the maximum extent possible, primarily through forward contracts.

In relation to the transactional risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (Balance sheet items and commitments) and the hedging instrument including amount and maturity. The Group hedges transactional risks to the maximum extent up to 100 %. Any ineffectiveness can arise from difference in maturity between hedged item and hedging instrument or changes in exposure amounts, but this is not expected to be material.

3.1.3 TRANSLATIONAL RISK

Umicore is an international company and has foreign operations which do not have the EUR as their functional currency. When the results and the balance sheets of these operations are consolidated into Umicore's Group accounts the translated amount is exposed to variations in the value of such local currencies against the EUR, predominantly the KRW, CNY, USD, BRL and ZAR. While Umicore does not systematically hedge its translational currency exposures, it may enter into ad hoc translational hedges.

3.2 METAL PRICE RISK

Umicore's metal price risk can be split into three distinct categories: structural, transactional and inventory risks.

In relation to the structural and transactional risk, for the purpose of assessing our hedge effectiveness we apply a critical terms match between the hedged item and the hedging instrument including in terms of quantity and maturity. Hedge ratio is 100% whereby our sources of ineffectiveness could be a difference in maturity between hedged item and financial instrument or a change in exposure.

3.2.1 STRUCTURAL RISK

Umicore is exposed to structural metal related price risks. Those risks relate mainly to the impact that metal prices have on surplus metals recovered from materials supplied for treatment or any other revenue component that fluctuates with the metal price. Umicore's policy allows hedging of such metal price exposure, typically if forward metal prices expressed in the functional currency of the concerned businesses are above their historical average and at a level where attractive margins can be secured. The extent to which metal price risk can be hedged depends on the availability of hedging instruments and sufficient associated market liquidity.

The Recycling segment recycles platinum, palladium, rhodium, gold and silver and a wide range of other base and specialty metals. In this segment the short-term sensitivity of revenues and operating profits to metals prices is particularly material. However, given the variability of the raw-material feed over time and the variable duration of the supply contracts negotiated, it is not suitable to provide a fixed sensitivity to any particular metal. In general terms, higher metals prices tend to be earnings enhancing

for the Recycling business (and vice versa). Umicore also has a metal price sensitivity in its other business segments (Catalysis, Energy & Surface Technologies) linked primarily to the revenue components that are metal price related and depending on the metals used in these segments. Also, in these cases a higher metal price tends to carry short term benefits for the profitability of each business (and vice versa). However, other commercial conditions which are largely independent of the metal price, such as product premiums, are also significant and independent drivers of revenues and profitability. Finally, sustained high metal prices could in some cases increase other risks such as the risk of substitution or the risk of supply chain disruptions.

Structural metal price hedging

For some metals Umicore hedges part of its forward metal exposure. This hedging is based on documentation demonstrating a high probability of future metal price based cash flows originating from commercial contracts. Umicore hedged part of its forward metal exposure. Over the course of 2020 and early 2021, Umicore entered into additional forward contracts, thereby securing a substantial portion of its structural future price exposure to certain precious metals and providing increased earnings visibility. For 2021 and 2022, approximately two thirds of the expected gold and palladium exposure and somewhat less than half of the expected silver exposure have been locked-in. In addition, close to one third of the expected platinum exposure for 2021 has been hedged. In spite of the absence of a liquid futures market, Umicore entered in recent months into forward contracts locking in a minority of its expected 2022 and 2023 rhodium exposure. Finally, Umicore also hedged the majority of its expected lead exposure for 2021 and 2022.

In relation to the structural risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (future probable cash flows) and the hedging instrument amongst others amount and maturity. The Group applies a prudent approach in the application of structural hedging, never up to 100 %, avoiding thereby ineffectiveness arising from difference in maturity between hedged item and hedging instrument or changes in exposure amounts.

3.2.2 TRANSACTIONAL RISK

The Group faces transactional price risks on metals. The majority of its metal-based transactions use third party metal market references, such as the London Metal Exchange. If the underlying metal price were to be constant, the price Umicore pays for the metal contained in the raw materials purchased would be passed through to the customer as part of the price charged for the product. However, because of the lapse of time between the conversion of purchased raw materials into products and the sale of products, the volatility in the reference metal price creates differences between the price paid for the contained metal and the price received.

Accordingly, there is a transactional exposure to any fluctuations in price between the moment raw materials are purchased (i.e., when the metal is "priced in") and the moment the products are sold (i.e. when the metal is "priced out").

The Group's policy is to hedge the transactional risk to the maximum extent possible, primarily through forward contracts.

In relation to the transactional risk, the Group assesses the hedge effectiveness through a critical terms match between the hedged item (Balance sheet items and commitments) and the hedging instrument amongst others amount and maturity. The Group hedges transactional risks to the maximum extent up to 100 %. Any ineffectiveness of such hedges can arise from difference in maturity between hedged item and hedging instrument or changes in exposure amounts, but this is not expected to be material.

The accelerating growth in battery materials in recent years substantially increased the exposure to specific related metals such as cobalt or nickel. Increasing volumes, the vulnerability to the associated price volatility and in the case of certain metals such as cobalt the absence of a liquid paper forward market result in increased metal risks. For cobalt, Umicore's transactional hedging policy aims to match to a maximum extent the pricing in and pricing out of the contracted metal. Such physical back-to-back hedging allows management of transactional risks related to cobalt in a volatile market.

The Group's economical transactional metal hedging policy prescribes that mark-to-market valuation principles are initially applied on all elements of the transactional hedging position, hedging instruments as well as hedged items. Where possible this happens under IFRS 9 hedge accounting criteria.
When IFRS 9 hedge accounting cannot be applied or obtained, Umicore offsets any material positive mark-to-markets with provisions for onerous contracts and reclassifies the negative mark-to-markets under the provisions for onerous contracts.

3.2.3 METAL INVENTORY RISK

The group faces metal price risks on its permanently tied up metal inventories. This risk is related to the market metal price moving below the carrying value of these inventories.

Umicore tends not to hedge against this risk.

3.3 INTEREST RATE RISK

Interest rate risks arise from changes in prevailing market interest rates, which can lead to changes in the fair value of fixed-rate debt instruments and in changes in interest payments for variable-rate debt instruments. This risk is managed by regularly assessing the debt profile of the Group and by entering into interest rate swaps. At the end of December 2020, the Group's gross financial debt stood at

€ 2,424 million, of which 1,609 million carrying a fixed interest rate. The outstanding interest rate swaps totaled € 40 million and will expire in 2023.

3.4 CREDIT RISK

Credit risk and concentration of credit risk

Credit risk is the risk of non-payment by any counterparty in relation to sales of goods or metal lease operations. In order to manage its credit exposure, Umicore has determined a credit policy with credit limit requests, approval procedures, continuous monitoring of the credit exposure and dunning procedure in case of delays. The credit risk resulting from sales is, to a certain extent, covered by credit insurance, letters of credit or similar secure payment means. Umicore entered into several credit insurance agreements with different insurers. One global credit insurance contract has been put in place on a world-wide basis. This contract protects the insured activities against insolvency, political and commercial risks with an individual deductible per invoice of 5% and foresees an indemnification cap set at regional or country levels. Umicore has determined that in a certain number of cases where the cost of credit insurance is disproportionate in relation to the risk to be insured, no such global credit insurance coverage will be sought. For those businesses, characterized by a significant level of customer concentration or by a specific and close relationship with the customers, specific insurance contracts may be set up for a certain period. It should be noted that some sizeable transactions, such as the sales of precious metals by Recycling, have a limited credit risk as payment before delivery is a widely accepted practice. Umicore may further limit selected credit risks by entering into without recourse receivables discounting arrangements or particularly in China by without recourse bank draft discounting. Regarding its risk exposure to financial institutions such as banks and brokers, Umicore is also establishing internal credit lines. Specific limits are set, per financial instrument, covering the various risks to which the Group is exposed when transacting with such counterparties. In accordance with IFRS 9, impairments for expected credit losses on receivables are measured and recognized, applying a simplified approach.

3.5 LIQUIDITY RISK

Liquidity risk relates to the ability to service and refinance debt (including notes issued) and to fund operations. The Group manages liquidity risk by maintaining adequate sources of funding, by ensuring a sufficient diversification of such funding sources, by matching as close as possible the maturity profiles of financial assets and liabilities and by staggering the maturities of financing sources. Sources of funding include a.o. operating cash flows, committed and uncommitted bank facilities including Chinese bank draft lines, metal lease lines, commercial paper issuance and long term private debt placements.

3.6 TAX RISK

The tax charge included in the financial statements is the Group's best estimate of its tax liability but, until such time as audits by tax authorities are concluded, there is a degree of uncertainty regarding the final tax liability for the period. The Group's policy is to submit tax returns within the statutory time limits and engage tax authorities to ensure that the Group's tax affairs are as current as possible and that any differences in the interpretation of tax legislation and regulation are resolved as quickly as possible. Given the scale and the international nature of the Group's business, VAT, sales tax and intra- Group transfer pricing are an inherent tax risk as it is for other international businesses. Changes in tax laws or in their application with respect to matters such as transfer pricing, VAT, foreign dividends, R&D tax credits and tax deductions, could increase the Group's effective tax rate and adversely affect its net results. Based on these tax risks described, management performed a detailed assessment for uncertain tax positions which resulted in provisions recorded for these uncertainties in line with IFRIC 23.

3.7 CAPITAL RISK MANAGEMENT

The Group's objectives when managing capital are to safeguard its ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders, and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may for example adjust the amount of dividends paid to shareholders, return capital to shareholders, buy back its own shares or issue new shares.

The Group monitors its capital structure primarily on the basis of the gearing ratio and the net financial debt over adjusted EBITDA ratio. The gearing ratio is calculated as net financial debt divided by the sum of net financial debt and total Group equity. Net financial debt is calculated as non-current financial debt plus current financial debt less cash and cash equivalents.

The figures for the presented periods are detailed under the note F24 on Financial Debt.

In an ordinary course of business operating environment, the group aims for a capital structure equivalent to investment-grade credit rating status. The group could consider temporarily exceeding the equivalent level of indebtedness in the case of an extraordinary event, such as for example a major acquisition.

3.8 STRATEGIC AND OPERATIONAL RISKS

Umicore faces certain strategic and operational risks that are not necessarily financial in nature but which have the potential to impact the financial performance of the Group. These include a.o. technology risks, supply risks, the risk of product substitution by customers, security of supply related risks (such as for selected critical metals), operational risks related to critical production installations, information system availability and cyber security risks, risks from legal disputes and proceedings, risks related to metal trading activities, asset impairment risks due to a change in the asset's underlying business context & outlook, etc. In some cases a direct link exists between financial and operational risks. For example, a potential continuity of supply risk for certain critical raw materials or metals due to sudden or extreme physical supply tightness could substantially enhance financial risks and in particular metal price-related

risks. In the past, certain metals such as for example rhodium or cobalt showed high price volatility related to supply tightness considerations. Please refer to the chapter about Managing Risk Effectively(p. 76) for a description of some of these risks and an outline of Umicore's general approach to risk management.

Umicore does not expect a material direct financial impact from the Brexit.

3.9 COVID-19 RELATED RISKS

The COVID-19 outbreak in 2020 resulted in higher financial risks for Umicore. In response to decreased volumes in certain business segments, the recoverable amounts of some individual non-current assets (PPE, IP and capitalized development costs) within such segments was assessed and impairments on these individual assets were accounted for. In addition, Umicore assessed its production footprint resulting in some restructuring measures. We refer to the Adjustments section of note F9 for more details. COVID-19 also triggered potentially higher liquidity and credit risks that the Group managed effectively in 2020. Umicore's sources of funding were increased and further diversified and we refer to note F24 Financial debt for more details. Credit risks were closely monitored and the Group faced no material credit losses in 2020; we refer to note F20 Trade and other receivables for more details. As the COVID-19 pandemic extends into 2021, related risks remain relevant.

F4 CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

Estimates and judgments used in developing and applying the consolidated entity's financial statements are continually evaluated and are based on historical experience and other factors, including the expectations of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results.

Assumptions and estimates are applied when:

- Assessing the need for and measurement of impairment losses.
- Accounting for pension obligations.
- Recognizing and measuring provisions for tax, environmental, warranty and litigation risks, product returns, onerous contracts and restructuring.
- Determining inventory write-downs.
- Assessing the extent to which deferred tax assets will be realized.
- Useful lives of Property, Plant and Equipment and Intangible assets excluding goodwill.

The critical estimates and judgments that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are listed below.

4.1 IMPAIRMENT TESTING

The Group performs an impairment test on the carrying value of its cash generating units whenever certain external or internal triggering events suggest a potential impairment risk for such unit. The Group performs annual impairment tests on the goodwill carried by its cash generating units. An impairment loss is recognized when the carrying value exceeds the recoverable amount in a structural way. The recoverable amount is the higher of the fair value less costs to sell and its value in use in accordance with the accounting policy. This value in use is calculated by discounting related future free cash flows (DCF model) to calculate their present value. These calculations require the use of and are sensitive to estimates and assumptions such as discount rates, exchange rates, commodity prices, future capital requirements and future operating performance. Internal estimates of future business performance are based on an analysis of a combination of factors including: market growth projections, market share estimates, competitive landscape, pricing and cost evolution. Such analysis combines both internally-generated estimates and data from external sources.

As at 31 December 2020, the carrying amount of the goodwill for the consolidated entity was € 156.0 million (€ 156.7 million in 2019). We refer to note F15 Goodwill for more details on the annual goodwill impairment testing.

4.2 REHABILITATION OBLIGATIONS

Provision is made for the anticipated costs of future rehabilitation of industrial sites and surrounding areas to the extent that a legal or constructive obligation exists in accordance with accounting policy 2.15. These provisions include future cost estimates associated with reclamation, plant closures, waste site closures, monitoring, demolition, decontamination, water purification and permanent storage of historical residues. These future cost estimates are discounted to their present value. The calculation of these provision estimates requires assumptions such as application of environmental legislation, plant closure dates, available technologies and engineering cost estimates and specifically related to the Hoboken Green Zone, the purchase cost of houses. A change in any of the assumptions used may have a material impact on the carrying value of rehabilitation provisions.As at 31 December 2020, the carrying amount of rehabilitation provisions was € 108.2 (€ 58.0 million in 2019). We refer to note F29 Environmental provisions for more details.

4.3 DEFINED BENEFIT OBLIGATIONS

An asset or liability in respect of defined benefit plan is recognized on the balance sheet in accordance with accounting policy 2.16. The present value of a defined benefit obligation is dependent upon a number of factors that are determined on an actuarial basis.

The consolidated entity determines the appropriate discount rate to be used at the end of each year. The consolidated entity's employee benefit obligations are discussed in more detail in Note F27. At

31 December 2020, a liability with respect to employee benefit obligations of € 426.4 million was recognized (€ 392.6 million in 2019).

4.4 RECOVERY OF DEFERRED TAX ASSETS

Deferred tax assets are recognized for deductible temporary differences, unused tax losses and fair value reserves entries only if it is probable that future taxable profits (based on Group operational plans) are available to use those temporary differences and losses. The actual tax results in future periods may differ from the estimate made at the time the deferred taxes are recognized.

Other assumptions and estimates are disclosed in the respective notes relevant to the item where the assumptions or estimates were used for measurement.

4.5 PROVISIONS FOR OTHER LIABILITIES AND CHARGES

As mentioned under notes 2.21.1 and 3.2.2., Umicore's policy is to hedge to the maximum extent possible its transactional metal price risk, applying IFRS 9 based fair value hedge accounting to the extent there are market-based derivatives available.

In the absence of such market-based derivatives or in the absence of obtaining fair value hedge accounting at all, the hedged items are kept at cost and are subject to the IAS 37 principles, in particular the onerous contract judgment.

The onerous contract provision decisions related to replicate maximally the IFRS 9 fair valuation on Umicore's metal transactional positions are based on the one hand on an assessment of the level of commitment expected from a third party to honor its contractual obligations towards Umicore (in the event the metal price at the close would be substantially higher (lower) than the contracted metal price in the case of Umicore purchases (sales)) and on the other hand on the commitment of Umicore to honor itself contractual transactional metal obligations out of the money

Both in 2019 and 2020, the market volatility in the cobalt price and in 2020 as well in the nickel price triggered such risk assessments.

The amount of such onerous contract provisions stood at € 20.0 million end 2020 (€ 24.1 million end 2019).

The fast growth of Umicore's battery materials sales for transport applications in particular is increasing the group's exposure to the automotive industry end market. This industry has a practice of applying warranty and recall settlements related to potential product quality events (irrespective of whether any legal obligation exists). In view thereof, Umicore continued in 2020 its dedicated provisioning model for battery materials as introduced in 2018.

As at 31 December 2020, the carrying amount of the provisions for other liabilities and charges amount to € 80.1 million (€ 80.7 million in 2019).

4.6 PROVISIONS FOR UNCERTAINTY OVER INCOME TAX TREATMENTS

As mentioned under the note F.2.19, Umicore makes a detail assessment of all tax uncertainties within the group as per IFRIC 23. In the measurement of the uncertain tax positions, the Group has considered the statute of limitation taking into account the tax law and regulations that are applied in the correspondent country, resulting in a range of three to seven years. The resolution of the tax positions taken by the Group can take considerable period of time to conclude and, in some cases, it is difficult to predict the outcome. The estimates made reflects where the Group: is involved in routine tax audits; has identified potential tax exposures related to transfer pricing ; or is involved in discussions with tax authorities. The estimation of the tax liability and income tax expense includes the corresponding penalties and late payment interests. Most of the uncertain tax positions are measured using the the expected value, consisting to the sum of the probability - weighted outcome of a range of potential outcomes, nevertheless the most likely amount has also been used in a limited number of uncertain tax positions. Group provision for uncertainty over tax treatments at December 2020 amounting to € 114.9 million (2019 : € 91.4 million) results in an increase of those liabilities by € 23.5 million. This provision was booked under Income Tax Payable in the consolidated balance sheet. The movement of the year corresponds from remeasurement and roll-forward of existing uncertaint tax positions; reversal of uncertain tax position based on mitigation actions taken and on the expiration of the statute of limitation; and the recognition of newly uncertain tax positions.

F5 GROUP COMPANIES

Below is a list of the main operating companies included in the consolidated financial statements

		% INTEREST IN 2019	% INTEREST IN 2020
For continuing operations			
Argentina	Umicore Argentina S.A.	100.00	100.00
Australia	Umicore Marketing Services Australia Pty Ltd.	100.00	100.00
Austria	Oegussa GmbH	91.29	91.29
Belgium	Todini (BE 0834.075.185)	100.00	100.00
-	Umicore Financial Services (BE 0428.179.081)	100.00	100.00
-	Umicore Marketing Services Belgium (BE 0402.964.625)	100.00	100.00
-	Umicore Specialty Materials Brugge (BE 0405.150.984)	100.00	100.00
-	Umicore Holding Belgium (BE 0731.571.921)	100.00	100.00
Brazil	Coimpa Industrial Ltda	100.00	100.00
-	Umicore Brasil Ltda	100.00	100.00
-	Clarex	100.00	100.00
-	Umicore Shokubai Brasil Industrial Ltda	60.00	60.00
-	Umicore Catalisadores Ltda.	100.00	100.00
Canada	Umicore Canada Inc.	100.00	100.00
-	Umicore Autocat Canada Corp.	100.00	100.00
-	Umicore Precious Metals Canada Inc.	100.00	100.00
China	Umicore Marketing Services (Shanghai) Co., Ltd.	100.00	100.00
-	Umicore Marketing Services (Hong Kong) Ltd.	100.00	100.00
-	Umicore Autocat (China) Co. Ltd.	100.00	100.00
-	Umicore Changxin Surface Technology (Jiangmen) Co., Ltd.	80.00	80.00
-	Jiangmen Umicore Changxin New Materials Co., Ltd.	90.00	90.00
-	Umicore Shokubai (China) Co Ltd	60.00	60.00
-	Umicore Platinum Engineered Materials (Suzhou) Co., Ltd.	100.00	100.00
-	Umicore Catalyst (China) Co., Ltd.	100.00	100.00
Denmark	Umicore Denmark ApS	100.00	100.00
Finland	Umicore Finland OY	100.00	100.00
France	Umicore France S.A.S.	100.00	100.00
-	Umicore IR Glass S.A.S.	100.00	100.00
-	Umicore Autocat France S.A.S.	100.00	100.00
-	Umicore Specialty Powders France S.A.S.	100.00	100.00
-	Umicore Marketing Services France	100.00	100.00
-	Todini France S.A.S.	100.00	100.00
Germany	Umicore AG & Co. KG (*)	100.00	100.00
-	Allgemeine Gold- und Silberscheideanstalt AG	91.21	91.21
-	Umicore Galvanotechnik GmbH	91.21	91.21
-	Todini Deutschland GmbH	100.00	100.00
-	Umicore Shokubai Germany GmbH	60.00	60.00
Italy	Todini and CO. S.P.A.	100.00	100.00
India	Umicore Autocat India Pvt LTD	100.00	100.00
-	Umicore India Private Limited	100.00	100.00
-	Todini Metals and Chemicals India Private Limited	70.00	70.00
Japan	Umicore Japan KK	100.00	100.00
-	Umicore Shokubai Japan Co Ltd	60.00	60.00
South Korea	Umicore Korea Ltd.	100.00	100.00
-	Umicore Marketing Services Korea Co., Ltd.	100.00	100.00
-	Ordeg Co.,Ltd.	100.00	100.00
Liechtenstein	Umicore Thin Film Products AG	100.00	100.00
Luxemburg	Umicore International	100.00	100.00
-	Umicore Autocat Luxembourg	100.00	100.00
Mexico	Todini Atlántica S.A. de C.V.	70.00	70.00
Netherlands	Schöne Edelmetaal BV	91.21	91.21
Philippines	Umicore Specialty Chemicals Subic Inc.	78.20	78.20
Poland	Umicore Autocat Poland sp. z o.o.	100.00	100.00
-	Todini Europe sp. z o.o.	70.00	70.00
-	Umicore Poland Sp. z o.o.	100.00	100.00

		% INTEREST IN 2019	% INTEREST IN 2020
Portugal	Umicore Marketing Services Lusitana Metais Lda	100.00	100.00
South Africa	Umicore Marketing Services Africa (Pty) Ltd.	100.00	100.00
-	Umicore Catalyst South Africa (Pty) Ltd.	65.00	65.00
Spain	Todini Quimica Ibérica, S.L.	100.00	100.00
Sweden	Umicore Autocat Sweden AB	100.00	100.00
Switzerland	Allgemeine Suisse SA	91.21	91.21
Taiwan	Umicore Thin Film Products Taiwan Co Ltd	100.00	100.00
Thailand	Umicore Precious Metals Thailand Ltd.	91.21	91.21
-	Umicore Autocat (Thailand) Co., Ltd.	100.00	100.00
-	Umicore Shokubai (Thailand) Co., Ltd.	60.00	60.00
United Kingdom	Umicore Coating Services Ltd.	100.00	100.00
-	Umicore Marketing Services UK Ltd	100.00	100.00
USA	Umicore USA Inc.	100.00	100.00
-	Umicore Autocat USA Inc.	100.00	100.00
-	Umicore Precious Metals NJ LLC	100.00	100.00
-	Umicore Precious Metal Chemistry USA LLC	100.00	100.00
-	Umicore Precious Metals USA Inc.	100.00	100.00
-	Umicore Optical Materials USA Inc.	100.00	100.00
-	Umicore Shokubai USA Inc	60.00	60.00
-	Palm Commodities International	100.00	100.00
-	Umicore Electrical Materials USA Inc.	100.00	100.00
-	Umicore Specialty Materials Recycling, LLC.	100.00	100.00
-	Umicore Catalyst USA, LLC	100.00	100.00

(*) Umicore AG & Co. KG, with its registered office in Hanau, Germany, is exempt from its obligation to prepare, audit and publish annual and consolidated financial statements and a management and group management report in accordance with sections 264b and 291 of the German Commercial Code (HGB).

F6 FOREIGN CURRENCY MEASUREMENT

For the main currencies applicable within the Group's consolidated entities and investments, the prevailing rates used for translation into the Group's presentation currency (€), are as set out below. All subsidiaries, associates and joint-ventures have as functional currency the currency of the country in which they operate, except for Element Six Abrasives (United Kingdom) where the functional currency is the US dollar.

		CLOSING RATES		AVERAGE RATES	
		2019	2020	2019	2020
American Dollar	USD	1.123	1.227	1.119	1.142
UK Pound Sterling	GBP	0.851	0.899	0.878	0.890
Canadian Dollar	CAD	1.460	1.563	1.485	1.530
Swiss Franc	CHF	1.085	1.080	1.112	1.071
Japanese Yen	JPY	121.940	126.490	122.006	121.846
Brazilian Real	BRL	4.528	6.377	4.416	5.889
South African Rand	ZAR	15.777	18.022	16.176	18.765
Chinese Yuan	CNY	7.821	8.023	7.735	7.875
Thai Baht	THB	33.415	36.727	34.757	35.708
Korean Won (100)	KRW	12.963	13.360	13.053	13.456

F7 SEGMENT INFORMATION

BUSINESS GROUP INFORMATION 2019

Thousands of Euros	Notes	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated	Eliminations	Total Continued
Total segment turnover		**4,539,213**	**2,938,485**	**11,319,935**	**58,778**	**(1,371,330)**	**17,485,081**
External turnover		4,444,620	2,877,280	10,104,403	58,778	-	17,485,081
Inter-segment turnover		94,593	61,205	1,215,532	-	(1,371,330)	-
Total segment revenues (excluding metals)		**1,459,902**	**1,225,408**	**680,981**	**-**	**(5,667)**	**3,360,624**
External revenues		1,458,227	1,225,242	677,155	-	-	3,360,624
Inter-segment revenues		1,675	166	3,826	-	(5,667)	-
Operating result	F9	**184,884**	**149,065**	**190,086**	**(53,588)**	**-**	**470,447**
Adjusted		185,270	177,164	188,069	(52,371)	-	498,131
Adjustments		(386)	(28,099)	2,017	(1,217)	-	(27,684)
Equity method companies	F9	**-**	**5,382**	**-**	**3,323**	**-**	**8,705**
Adjusted		-	5,382	-	5,407	-	10,789
Adjustments		-	-	-	(2,084)	-	(2,084)
EBIT	F9	**184,884**	**154,447**	**190,086**	**(50,265)**	**-**	**479,152**
Adjusted		185,270	182,546	188,069	(46,964)	-	508,920
Adjustments		(386)	(28,099)	2,017	(3,301)	-	(29,768)
Depreciation and amortisation	F9	**78,507**	**88,300**	**62,313**	**14,918**	**-**	**244,038**
Adjusted		78,507	88,300	62,313	14,918	-	244,038
EBITDA	F9	**263,390**	**242,747**	**252,399**	**(35,346)**	**-**	**723,190**
Adjusted		263,776	270,846	250,382	(32,045)	-	752,959
Consolidated total assets		**2,747,773**	**3,781,786**	**1,345,517**	**808,926**	**(1,660,612)**	**7,023,390**
Segment assets		2,747,773	3,747,271	1,345,517	692,799	(1,660,612)	6,872,748
Investments in associates		-	34,515	-	116,127	-	150,642
Consolidated total liabilities		**1,254,284**	**1,435,241**	**947,340**	**2,386,672**	**(1,660,612)**	**4,362,925**
Capital Employed at 31/12 of previous year	F31	1,264,885	1,769,135	546,396	221,997	-	3,802,413
Capital Employed at 30/06	F31	1,314,779	1,982,482	481,776	195,514	-	3,974,551
Capital Employed at 31/12	F31	1,536,950	2,323,770	405,422	175,849	-	4,441,991
Average Capital Employed in first half year	F31	1,289,832	1,875,809	514,086	208,756	-	3,888,482
Average Capital Employed in second half year	F31	1,425,864	2,153,126	443,599	185,682	-	4,208,271
Average Capital Employed in the year	F31	**1,357,848**	**2,014,467**	**478,842**	**197,219**	**-**	**4,048,377**
ROCE	F31	13.64%	9.06%	39.28%	-23.81%	0.00%	12.57%
Capital expenditure	F34	**103,960**	**348,217**	**82,023**	**18,990**	**-**	**553,189**
Total R&D expenditure	F9	**146,624**	**45,619**	**8,313**	**9,989**	**-**	**210,546**
R&D recognized in operating expenses	F9	132,011	30,687	8,313	4,875	-	175,885
R&D capitalized as intangible assets	F34	14,614	14,933	-	5,114	-	34,660

BUSINESS GROUP INFORMATION 2020

Thousands of Euros	Notes	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated	Eliminations	Total Continued
Total segment turnover		**5,916,870**	**2,811,050**	**13,903,640**	**25,676**	**(1,947,120)**	**20,710,116**
External turnover		5,783,840	2,750,410	12,150,190	25,676	-	20,710,116
Inter-segment turnover		133,030	60,640	1,753,450	-	(1,947,120)	-
Total segment revenues (excluding metals)		**1,364,210**	**1,045,040**	**836,000**	**-**	**(6,530)**	**3,238,720**
External revenues		1,362,640	1,044,940	831,140	-	-	3,238,720
Inter-segment revenues		1,570	100	4,860	-	(6,530)	-
Operating result	F9	**96,338**	**(41,118)**	**310,900**	**(61,528)**	**-**	**304,592**
Adjusted		153,688	70,422	361,815	(57,894)	-	528,030
Adjustments		(57,350)	(111,539)	(50,915)	(3,634)	-	(223,438)
Equity method companies	F9	**-**	**4,874**	**-**	**(10,206)**	**-**	**(5,332)**
Adjusted		-	4,874	-	3,457	-	8,331
Adjustments		-	-	-	(13,663)	-	(13,663)
EBIT	F9	**96,338**	**(36,244)**	**310,900**	**(71,734)**	**-**	**299,260**
Adjusted		153,688	75,295	361,815	(54,437)	-	536,361
Adjustments		(57,350)	(111,539)	(50,915)	(17,297)	-	(237,101)
Depreciation and amortisation	F9	**80,496**	**110,457**	**62,949**	**14,040**	**-**	**267,941**
Adjusted		80,496	110,457	62,949	14,040	-	267,941
EBITDA	F9	**176,834**	**74,213**	**373,849**	**(57,694)**	**-**	**567,201**
Adjusted		234,184	185,752	424,764	(40,397)	-	804,302
Consolidated total assets		**3,447,098**	**3,376,191**	**1,643,894**	**1,568,336**	**(1,694,627)**	**8,340,892**
Segment assets		3,447,098	3,337,762	1,643,894	1,466,927	(1,694,627)	8,201,054
Investments in associates		-	38,429	-	101,410	-	139,839
Consolidated total liabilities		**1,814,687**	**1,260,177**	**1,215,316**	**3,123,485**	**(1,694,627)**	**5,719,038**
Capital Employed at 31/12 of previous year	F31	1,536,950	2,323,770	405,422	175,849	-	4,441,991
Capital Employed at 30/06	F31	1,560,188	2,189,523	578,205	124,696	-	4,452,611
Capital Employed at 31/12	F31	1,727,443	2,133,138	446,861	149,138	-	4,456,580
Average Capital Employed in first half year	F31	1,548,569	2,256,646	491,813	150,273	-	4,447,301
Average Capital Employed in second half year	F31	1,643,815	2,161,330	512,533	136,917	-	4,454,596
Average Capital Employed in the year	**F31**	**1,596,192**	**2,208,988**	**502,173**	**143,595**	**-**	**4,450,948**
ROCE	F31	9.63%	3.41%	72.05%	-37.91%	0.00%	12.05%
Capital expenditure	**F34**	**63,798**	**251,688**	**71,577**	**16,105**	**-**	**403,169**
Total R&D expenditure	F9	**138,742**	**58,269**	**10,186**	**15,766**	**-**	**222,964**
R&D recognized in operating expenses	F9	125,275	43,636	10,186	11,499	-	190,596
R&D capitalized as intangible assets	F34	13,468	14,633	-	4,267	-	32,368

GEOGRAPHICAL INFORMATION 2019

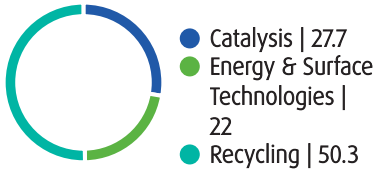
Thousands of Euros	Notes	Europe	of which Belgium	Asia-Pacific	North America	South America	Africa	Total
Total segment turnover		8,061,295	149,183	4,850,973	3,862,500	528,751	181,563	**17,485,081**
Total non current assets		1,311,600	576,778	1,115,273	144,541	48,186	7,438	**2,627,038**
Capital expenditure	F34	206,051	156,049	316,729	18,012	12,395	2	**553,189**

GEOGRAPHICAL INFORMATION 2020

Thousands of Euros	Notes	Europe	of which Belgium	Asia-Pacific	North America	South America	Africa	Total
Total segment turnover		11,115,296	156,181	5,016,465	3,881,278	561,411	135,667	**20,710,116**
Total non current assets		1,389,895	564,209	1,109,045	112,075	45,590	4,726	**2,661,333**
Capital expenditure	F34	274,403	100,914	104,880	8,829	14,750	306	**403,169**

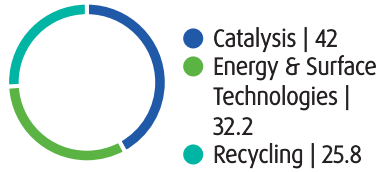
ADJUSTED EBITDA PER BUSINESS GROUP

%



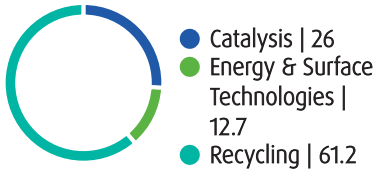
REVENUES (EXCLUDING METAL) PER BUSINESS GROUP

%



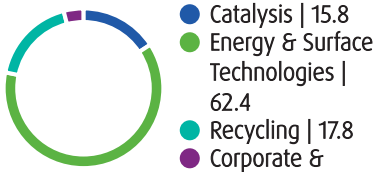
ADJUSTED EBIT PER BUSINESS GROUP

%



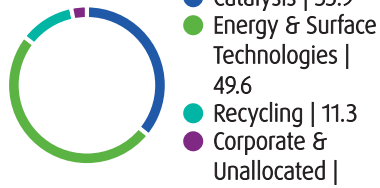
CAPITAL EXPENDITURE PER BUSINESS GROUP

%



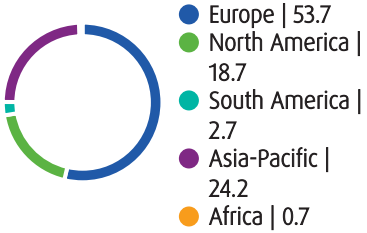
CAPITAL EMPLOYED, AVERAGE PER BUSINESS GROUP

%



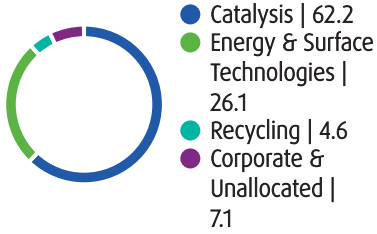
TURNOVER BY REGION

%



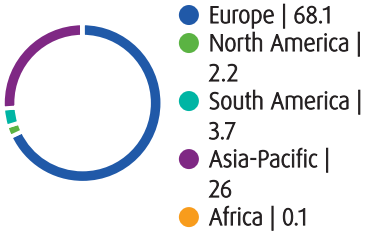
R&D EXPENDITURE PER BUSINESS GROUP

%



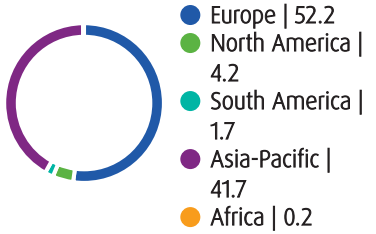
CAPITAL EXPENDITURE BY REGION

%



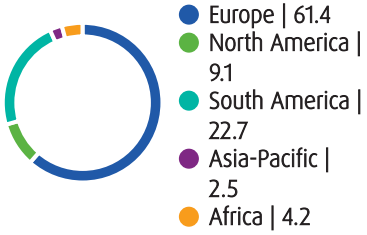
NON-CURRENT ASSETS BY REGION

%



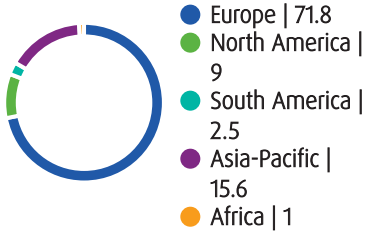
INCOME TAXES BY REGION

%



EMPLOYEE COMPENSATION & BENEFITS BY REGION

%



Segment information is presented in respect of the Group's business segments as defined below.

The segment results, assets and liabilities include items directly attributable to the segment as well as those elements that can reasonably be allocated to a segment.

The pricing of inter-segment sales is based on an arm's length transfer pricing system. In the absence of relevant market price references, 'cost plus' mechanisms are used. Segment turnover and revenue (without metals) is taking into account intragroup operations. Those are mainly related to recycling services and sales of refined metal from the recycling segment to the other group segments and are important to assess the performance of the segments concerned.

Since these transactions cannot be considered as external operations, they are eliminated at the group level, to present a net view.

The Group's business segments have no single external customer that amounts to 10 per cent or more of the Group's revenue.

Umicore determined segments as the accurate level of detail to split the product sales since the underlying business, competences and technologies, application and product characteristics and customer portfolio within each individual segment are similar. Moreover, obtaining information at a more disaggregated level would result in excessive costs and efforts compared to the added value for an external reader of the consolidated financial statements.

BUSINESS GROUPS

The Group is organized into the following reporting segments:

CATALYSIS

The segment in 2020 includes the Automotive Catalysts and Precious Metals Chemistry business units. Catalysis provides automotive catalysts for gasoline and diesel light and heavy-duty diesel applications, including on-road and non-on road vehicles. The business group also offers stationary catalysis for industrial emissions control and produces precious metals-based compounds and catalysts for use in fuel cell applications and in the pharmaceutical and fine chemicals industries.

ENERGY & SURFACE TECHNOLOGIES

The segment includes the Cobalt & Specialty Materials, Electro-Optic Materials, Electroplating and Rechargeable Battery Materials business units. Energy & Surface Technologies' products are found in applications used in the production and storage of clean energy and in a range of applications for surface technologies that bring specific properties and functionalities to end products. All the activities offer a

closed loop service for the customers. This segment includes the associates Ganzhou Yi Hao Umicore Industries and Jiangmen Chancsun Umicore Industry.

RECYCLING
The segment consists of the business units Precious Metals Refining, Jewelry & Industrial Metals and Precious Metals Management. Recycling treats complex waste streams containing precious and other specialty metals. The recycling operations can recover 20 of these metals from a wide range of input materials ranging from industrial residues to end-of-life materials.

Other activities include production of precious metals-based materials that are essential for applications as diverse as high-tech glass production, electrics and electronics.

CORPORATE
Corporate covers corporate activities, shared operational functions and the Group's Research, Development & Innovation unit. Umicore's shareholdings in Element Six Abrasives and Ieqsa are also included in Corporate.

In the geographical segment information, the figures presented as non-current assets exclude the amounts for long term investments, non-current loans granted, deferred tax assets and assets for employee benefits as required by IFRS 8. Performance of the segments is reviewed by the chief operating decision maker based on the adjusted EBIT/ operating result. As illustrated in the table above, the difference between the adjusted operating result and the operating result as presented in the Income Statement consists of the adjustments for which definitions are given in the glossary.

Associate companies are allocated to the business group with the closest fit from a market segment perspective.

F8 BUSINESS COMBINATIONS AND ACQUISITIONS OF ASSOCIATES AND JOINT VENTURES

At the end of November 2019, Umicore completed the acquisition of the cobalt refining and cathode precursor activities in Kokkola, Finland, from Freeport Cobalt. A preliminary opening balance sheet was prepared as of 1 December 2019 but was still subject to adjustments on a number of restatements over the coming 11 months. Following the final opening balance sheet as per the end of November 2019, the net value of the assets bought represented a total of € 226.6 million (€227.3 million in 2019) and the total purchase price has been adjusted to € 242.6 million (€241.9 million in 2019). This results in a goodwill of € 16.0 million (€14.5 million in 2019). The main lines of the balance sheet that have been updated since 2019 are "Property, plant and equipment" (see note F16), "Inventories", Cash", "Provisions for environment" (see note F29) and "Trade payables". Those are reflected under the lines "acquisition through business combinations" of the corresponding impacted notes.

F9 RESULT FROM OPERATING ACTIVITIES

Thousands of Euros	2019	2020
Sales	17,336,517	20,565,648
Services	148,564	144,468
Turnover	**17,485,081**	**20,710,116**
Re-invoicing of costs to third parties	39,283	42,654
Operating grants	10,262	19,865
Royalties and license fees	9,003	6,168
Emission rights income	5,468	5,207
Insurance recovery	27,025	21,580
Various interests and penalties for late payments	1,209	1,167
Gains on disposals of assets	9,744	2,647
Translation difference on intercos Elimination	9,578	(25,567)
Tax incentive	1,645	4,247
Other	7,862	2,633
Other operating income	**121,078**	**80,602**
OPERATING INCOME OF CONTINUING OPERATIONS	**17,606,159**	**20,790,718**
Raw materials and consumables used	**(15,639,139)**	**(18,819,323)**
Payroll and related benefits	**(775,919)**	**(798,481)**
Depreciation of fixed assets	(244,038)	(267,941)
Impairment loss on fixed assets	(23,602)	(87,543)
Inventory and bad debt provisions	(39,926)	(7,013)
Depreciation and impairment results	**(307,567)**	**(362,497)**
Services and outsourced refining and production costs	(404,292)	(370,526)
Royalties, licence fees, consulting and commissions	(41,347)	(41,606)
Taxes other than income taxes	(20,769)	(19,332)
Provisions (increase/use and reversals)	54,871	(74,128)
Capital losses on disposal of assets	(2,258)	(996)
Other operating expenses	**(413,795)**	**(506,588)**
OPERATING EXPENSES OF CONTINUING OPERATIONS	**(17,136,420)**	**(20,486,888)**

Turnover refers to turnover from customers as per IFRS 15. The further disaggregation is detailed in note F7. As described in the accounting policy 2.20, the revenue from contracts with customers are recognized at a point in time. The increase in turnover in 2020 is mainly related to the increase of metal prices.

Services mainly include the revenues from tolling contracts. Some reclassifications have been done between services and sales in 2019 to align with the reclassification done in 2020.

The line "other operating income" of the income statements include the currency translation differences due to intercompany transactions to be translated from the transaction currency into functional currency which may differ from euro for some entities and regions. Those currency translation effects on intercompany eliminations moved substantially this year, mainly related to the variation of the USD compared with the EUR.

The increase in raw materials and consumables used is also mainly related to the increase of metal prices. Raw materials and consumables used include water, gas and electricity for € 99.7 million in 2020 (€ 100.2 million in 2019) for continuing operations.

The impairment losses of fixed assets have increased compared with 2019. Those impairments are mainly related to the restructuring initiatives in Cobalt & Specialty materials and to the consolidation of the North American automotive catalyst production in Catalysis. It also includes in Catalysis some impairments on selected capitalized developments costs and licence agreements.

The line provisions contains the movements in the environmental provisions and in the provisions for other liabilities and charges which are detailed in the notes F29 and F30.

R&D EXPENDITURE

Thousands of Euros	Notes	2019	2020
R&D recognized in Other operating expenses		175,885	190,596
R&D capitalized as intangible assets	F14	34,660	32,368
TOTAL R&D EXPENDITURE FOR CONTINUING OPERATIONS		**210,546**	**222,964**

Total R&D expenditure for continuing operations was € 223.0 million in the fully consolidated companies in 2020 (€ 210.6 million in 2019). The part of the R&D expenditures that is directly recognized in operating expenses amounts to € 190.6 million in 2020 (€ 175.9 million in 2019).

ADJUSTMENTS INCLUDED IN THE RESULT

		2019			2020		
Thousands of Euros	Notes	Total	Adjusted	Adjustments	Total	Adjusted	Adjustments
Turnover		17,485,080	17,485,080	-	20,710,116	20,710,116	-
Other operating income		121,078	118,217	2,861	80,602	79,494	1,108
Operating income		**17,606,158**	**17,603,297**	**2,861**	**20,790,718**	**20,789,611**	**1,108**
Raw materials and consumables used		(15,639,139)	(15,639,139)	-	(18,819,323)	(18,781,872)	(37,451)
Payroll and related benefits		(775,919)	(775,701)	(218)	(798,481)	(798,131)	(350)
Depreciation and impairment results		(307,567)	(283,690)	(23,877)	(362,496)	(274,435)	(88,062)
of which depreciation and amortisation		(244,038)	(244,038)	-	(267,941)	(267,941)	-
Other operating expenses		(413,795)	(407,708)	(6,087)	(506,587)	(407,485)	(99,102)
Operating expenses		**(17,136,420)**	**(17,106,238)**	**(30,182)**	**(20,486,887)**	**(20,261,923)**	**(224,964)**
Income from other financial investments		706	1,069	(363)	761	342	419
Result from operating activities		**470,444**	**498,129**	**(27,684)**	**304,592**	**528,030**	**(223,438)**
Net contribution from equity method companies		8,705	10,789	(2,084)	(5,332)	8,331	(13,663)
EBIT		**479,152**	**508,920**	**(29,768)**	**299,260**	**536,361**	**(237,101)**
EBITDA		**723,190**	**752,959**	**(29,768)**	**567,201**	**804,302**	**(237,101)**
Finance cost	F11	(83,238)	(83,238)	-	(104,202)	(104,202)	-
Income taxes	F13	(96,692)	(102,538)	5,846	(59,131)	(102,729)	43,598
Net result		**299,219**	**323,142**	**(23,923)**	**135,927**	**329,430**	**(193,503)**
of which minority shares		11,428	11,428	-	5,397	7,023	(1,626)
of which group shares		287,791	311,714	(23,923)	130,530	322,407	(191,877)

ADJUSTMENTS PER SEGMENT AND NATURE INCLUDED IN THE RESULT

	2019					2020				
Thousands of Euros	Total	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated	Total	Catalysis	Energy & Surface Technologies	Recycling	Corporate & Unallocated
Other operating income	2,861	-	-	48	2,813	1,108	-	1,108	-	-
Operating income	**2,861**	**-**	**-**	**48**	**2,813**	**1,108**	**-**	**1,108**	**-**	**-**
Raw materials and consumables used	-	-	-	-	-	(37,451)	-	(37,451)	-	-
Payroll and related benefits	(218)	-	-	(218)	-	(350)	-	(350)	-	-
Depreciation and impairment results	(23,877)	(386)	(24,217)	726	-	(88,062)	(36,565)	(51,161)	27	(362)
Other operating expenses	(6,087)	-	(3,882)	1,461	(3,666)	(99,102)	(20,785)	(23,781)	(50,942)	(3,594)
Operating expenses	**(30,182)**	**(386)**	**(28,099)**	**1,969**	**(3,666)**	**(224,964)**	**(57,350)**	**(112,743)**	**(50,915)**	**(3,957)**
Income from other financial investments	(363)	-	-	-	(363)	419	-	96	-	322
Result from operating activities	**(27,684)**	**(386)**	**(28,099)**	**2,017**	**(1,217)**	**(223,438)**	**(57,350)**	**(111,539)**	**(50,915)**	**(3,634)**
Net contribution from equity method companies	(2,084)	-	-	-	(2,084)	(13,663)	-	-	-	(13,663)
EBIT	**(29,768)**	**(386)**	**(28,099)**	**2,017**	**(3,301)**	**(237,101)**	**(57,350)**	**(111,539)**	**(50,915)**	**(17,297)**
Related to restructuring	(26,414)	(386)	(28,099)	2,017	54	(128,190)	(22,702)	(99,960)	-	(5,528)
Related to environment	(907)	-	-	-	(907)	(55,788)	-	-	(50,915)	(4,873)
Related to asset impairments	-	-	-	-	-	(45,303)	(28,628)	(8,219)	-	(8,456)
Other	(2,447)	-	-	-	(2,447)	(7,820)	(6,020)	(3,360)	-	1,560

Adjustments had a negative impact of € 237 million on EBIT in 2020 of which € 72 million were already recognized in the first half. Of this total, € 112 million were related to Energy & Surface Technologies. The latter including € 56 million charges linked to the restructuring initiatives in Cobalt & Specialty Materials, a resulting € 34 million impairment charge linked to the rightsizing of permanently tied up cobalt inventories in that same business unit as well as a € 15 million impairment in Rechargeable Battery Materials due to a site reconfiguration in Korea. Catalysis accounted for € 57 million charges of which € 55 million were already recognized in the first half, linked mainly to the consolidation of the North American automotive catalyst production and some impairments including selected capitalized development costs and license agreements. In Recycling, a charge of € 51 million was accounted for, comprising a € 50 million provision to cover costs related to the intention to buy houses closest to the Hoboken plant and create a green zone.

These costs comprise an estimated purchase value of the houses (based on third party appraisal) to be demolished as well as an estimate of demolition and landscaping costs. Concertation with the city council and residents is ongoing and might result in adjustments to this cost estimate. Finally, EBIT adjustments also include € 14 million charges linked to restructuring, property, plant and equipment and goodwill impairments in Element Six Abrasives, a JV in which Umicore has a 40% stake. Of the total adjustments, € 147 million have a non-cash nature. Restructuring-related charges account for € 128 million of the total, environmental items for € 56 million and selected asset impairments for € 45 million. After tax, the adjustments to net group earnings over the period correspond to - € 192 million.

F10 PAYROLL AND RELATED BENEFITS

Thousands of Euros	2019	2020
Wages, salaries and direct social advantages	(576,097)	(589,707)
Other charges for personnel	(40,318)	(50,594)
Temporary staff	(10,781)	(7,607)
Share-based payments	(8,211)	(10,108)
Employee salaries	**(635,407)**	**(658,016)**
Employer's social security	**(102,364)**	**(97,698)**
Defined benefit contributions	(36,692)	(21,438)
Contribution to defined contribution plan	(11,805)	(10,299)
Employer's voluntary contributions (other)	(4,120)	(4,381)
Pensions paid directly to beneficiaries	(3,974)	(3,486)
Provisions for employee benefits (-increase / + use and reversals)	18,444	(3,164)
Pensions and other benefits	**(38,147)**	**(42,768)**
PAYROLL AND RELATED BENEFITS OF CONTINUING OPERATIONS	**(775,919)**	**(798,481)**

AVERAGE HEADCOUNT IN CONSOLIDATED COMPANIES

	2019	2020
Executives and managerial staff	1,934	2,009
Non managers	8,852	8,997
Total for continuing operations	10,786	11,006

SHARE-BASED PAYMENTS

Thousands of Euros	Notes	2019	2020
Date of grant		11-02-2019	10-02-2020
Share price at the date of grant (Belgium & Other)	F28	34.08	42.05
Share price at the date of grant (France)	F28	36.78	NA
Number of stock options granted	F28	1,221,000	1,168,375
Valuation model		Present Economic Value	
Assumed volatility (% pa)		25.00	25.00
Risk-free interest rate (% pa)		(0.370)	(0.620)
Dividend increase (% pa)		10.00	10.00
Rate of pre-vesting forfeiture (%pa)		NA	NA
Rate of post-vesting leaving (%pa)		7.50	7.50
Minimum gain threshold (% pa)		15.00	15.00
Proportion who exercise given minimum gain achieved (% pa)		100.00	100.00
Fair value per granted instrument determined at the grant date (EUR)		5.09	6.46
TOTAL FAIR VALUE OF OPTIONS GRANTED		**6,211**	**7,548**
52.000 shares granted at 42,05 EUR		-	2,187
10.000 shares granted at 37,33 EUR		-	373
43.700 shares granted at 34,08 EUR		1,489	-
7.400 shares granted at 33,30 EUR		246	-
10.000 shares granted at 26,43 EUR		264	-
TOTAL FAIR VALUE OF SHARES GRANTED		**2,000**	**2,560**
SHARE-BASED PAYMENTS		**8,211**	**10,108**

The Group recognized a share-based payment expense of € 10.1 million during the year for continuing operations.

The part of this expense related to stock options is calculated by an external actuary using the Present Economic Value model which takes into account all features of the stock option plans and the volatility of the underlying stock. This volatility has been determined using the historical volatility of the Group shareholders' return over different averaging periods and different terms. For the calculation of the option value based on the lattice model, weekly steps were introduced, therefore focusing on a weekly term of volatility. The observed volatility calculated over a 5 year period amounted approximately to 25% despite a recent increase. Hence, the retained volatility assumption was maintained at 25%. No other market condition has been included on the basis of calculation of fair market value.

The free share part of the expense is valued at the market price of the shares at the grant date. In 2020, shares have been granted to top management resulting in an extra charge of € 2.6 million for continuing operations.

The defined contribution plans of the Group in some countries like the USA, Canada, South Africa and Germany are directly recognized in the income statement under the line "Contribution to defined contribution plans".

The cash discounts that the authorities give back to Umicore Belgium on the social security contributions, relating to incentives regarding a.o. shift premiums, overtime and R&D are disclosed under the item "Employer's social security".

F11 FINANCE COST – NET

Thousands of Euros	2019	2020
Interest income	4,585	3,749
Interest expenses	(45,627)	(61,659)
Discounting of non-current provisions	(5,942)	(3,146)
Foreign exchange gains and losses	(31,618)	(30,445)
Other financial income	222	295
Other financial expenses	(4,858)	(12,996)
TOTAL OF CONTINUING OPERATIONS	**(83,238)**	**(104,202)**

The net interest charge in 2020 totaled € 57.9 million, in line with the increase of the average financial debt as well as fees and costs linked to the issuance of new debt instruments. The net interest charge contains € 0.8 million interest related to leases as per IFRS 16 and € 5.2 million being the phantom interest component of the convertible bond. These higher net interest charges were partly offset by lower foreign exchange costs and lower discounting expenses.

The discounting of non-current provisions relates mainly to employee benefits provisions and to a lesser extent to environmental provisions. This amount is influenced by the present value of these liabilities, which in turn is influenced by changes in the discount rate, by the cash-out profile and by the recognition of new non-current liabilities. Most of the discounting results in 2020 were booked in Germany and to a lesser extent in Belgium.

Foreign exchange results include realized exchange results and the unrealized translation adjustments on monetary items using the closing rate of the period. In 2020, the forex result is mainly explained by the cost of forward points in hedging instruments and by the impact from metal fixations. They also include fair value gains and losses on other currency financial instruments (see Note F33). Other financial expenses include payment discounts, bank expenses and other financial fees incurred.

F12 INCOME FROM OTHER FINANCIAL INVESTMENTS

Thousands of Euros	2019	2020
Capital gains and losses on disposal of financial investments	547	517
Dividend income	133	230
Interest income from financial assets	26	14
TOTAL FOR CONTINUING OPERATIONS	**706**	**761**

F13 INCOME TAXES

Thousands of Euros	2019	2020
Income tax expense		
Recognized in the income statement		
Current income tax	(113,229)	(115,672)
Deferred income tax	16,537	56,542
TOTAL TAX EXPENSE FOR CONTINUING OPERATIONS	**(96,692)**	**(59,131)**
RELATIONSHIP BETWEEN TAX EXPENSE (INCOME) AND ACCOUNTING PROFIT		
Result from operating activities	470,444	304,592
Financial result	(83,238)	(104,202)
Profit (loss) before income tax of consolidated companies for continuing operations	**387,206**	**200,390**
Weighted average theoretical tax rate (%)	24.81	25.48
INCOME TAX CALCULATED AT THE WEIGHTED AVERAGE THEORETICAL TAX RATE FOR CONTINUING OPERATIONS	**(96,076)**	**(51,055)**
Tax effect of :		
Expenses not deductible for tax purposes	(4,276)	(4,383)
Tax-exempted revenues	4,797	3,457
Dividends from consolidates companies & Associates	(1,596)	(267)
Gains & Losses taxed at a reduced rate	-	37
Tax incentives and tax holidays	15,758	14,563
Tax computed on other basis	(1,377)	(1,657)
Utilisation of previously unrecognized tax losses	1,443	4,349
Write down (or reverse of previous write down) of DTA	(3,817)	6,050
Change in applicable tax rate	3,720	(31)
Other tax credits (excluding R&D tax credits)	585	958
Non recoverable foreign withholding taxes	(11,552)	(12,003)
Previous years adjustments	(114)	988
Other (including IFRIC 23)	(4,187)	(20,135)
TAX EXPENSE AT THE EFFECTIVE TAX RATE FOR THE YEAR	**(96,692)**	**(59,129)**

The weighted average theoretical tax rate evolved from 24.8% in 2019 to 25.5% in 2020 for the continuing operations. Excluding the impact of adjustments, the adjusted effective tax rate for 2020 was 24.2%. This compares to the 24.7% in 2019.

F14 INTANGIBLE ASSETS OTHER THAN GOODWILL

Thousands of Euros	Development expenses capitalized	Concessions, patents, licences, etc.	Software	CO2 emission rights	Other intangible assets	Total
At the beginning of previous year						
Gross value	131,273	107,319	140,054	11,106	60,584	**450,336**
Accumulated amortisation	(83,920)	(37,639)	(114,124)	-	(19,839)	**(255,522)**
Net book value at the beginning of previous year	**47,353**	**69,680**	**25,930**	**11,106**	**40,745**	**194,814**
. acquisition through business combinations	-	-	-	-	8,223	**8,223**
. additions	34,660	1,495	1,115	4,925	16,167	**58,362**
. disposals	-	(6,483)	-	-	-	**(6,483)**
. amortisation charged (included in "Depreciation and impairments")	(11,129)	(9,878)	(9,464)	-	(5,742)	**(36,214)**
. impairment losses recognized (included in "Depreciation and impairments")	(2,771)	-	(497)	-	-	**(3,268)**
. emission rights allowances	-	-	-	3,184	-	**3,184**
. translation differences	282	5	82	(2)	251	**619**
. other movements	(14,627)	(90)	9,783	(0)	(150)	**(5,085)**
AT THE END OF PREVIOUS YEAR	**53,768**	**54,730**	**26,949**	**19,213**	**59,494**	**214,154**
Gross value	151,880	101,229	149,792	19,213	85,216	**507,329**
Accumulated amortisation	(98,113)	(46,499)	(122,842)	-	(25,721)	**(293,176)**
NET BOOK VALUE AT THE END OF PREVIOUS YEAR	**53,768**	**54,730**	**26,949**	**19,213**	**59,494**	**214,154**
. acquisition through business combinations	-	82	40	-	(23)	**98**
. additions	13,784	50	5,404	-	24,821	**44,060**
. disposals	-	(2,336)	(3)	(4,009)	(217)	**(6,564)**
. amortisation charged (included in "Depreciation and impairments")	(12,708)	(9,334)	(8,267)	-	(4,901)	**(35,209)**
. impairment losses recognized (included in "Depreciation and impairments")	(17,299)	(8,529)	(1,485)	-	-	**(27,313)**
. emission rights allowances	-	-	-	697	-	**697**
. translation differences	(450)	(6)	(346)	(3)	(908)	**(1,712)**
. other movements	1,422	50	4,401	(0)	(3,186)	**2,687**
AT THE END OF THE YEAR	**38,517**	**34,707**	**26,694**	**15,898**	**75,081**	**190,897**
Gross value	157,704	98,840	150,989	15,898	103,637	**527,068**
Accumulated amortisation	(119,187)	(64,134)	(124,295)	-	(28,556)	**(336,172)**
NET BOOK VALUE FOR CONTINUING OPERATIONS	**38,517**	**34,707**	**26,694**	**15,898**	**75,081**	**190,897**

The line "Additions" for € 44.1 million mainly contains capitalized expenses in internally generated developments for € 32.4 million (see note F9), of which € 18.6 million are still shown under the category "Other intangible assets" as "Intangible assets under construction". The "Additions" also contain capitalized expenses in new information systems for around € 10.3 million.
The acquisitions through business combination are related to the subsequent opening balance sheet adjustments in Finland (see note F8). Impairment losses have been taken mainly in Catalysis and are related to selected capitalized development costs and license agreements.

The line 'other movements' mainly includes the transfer between intangible assets in progress (included under "other intangible assets") and the other categories of intangible assets and to a lesser extent transfer from tangible assets.
The other intangible assets category contain intangible assets in progress for € 53.9 million (mainly capitalized development costs and in less extent the information systems) but also some business portfolio and customers' list acquired during the business combinations for € 20.6 million.
There are no pledges on, or restrictions to, the title on intangible assets, other than disclosed in note F35.

F15 GOODWILL

Thousands of Euros	31/12/2019	31/12/2020
At the end of the previous year		
Gross value	158,457	169,915
Accumulated impairment losses	(15,966)	(13,210)
NET BOOK VALUE AT THE END OF PREVIOUS YEAR	**142,491**	**156,705**
. acquisition through business combinations	14,549	1,499
. impairment losses (included in "Depreciation and impairment results")	(1,422)	-
. translation differences	1,087	(2,214)
AT THE END OF THE YEAR	**156,705**	**155,990**
Gross value	169,915	165,627
Accumulated impairment losses	(13,210)	(9,637)
NET BOOK VALUE FOR CONTINUING OPERATIONS	**156,705**	**155,990**

This table includes goodwill related to fully consolidated companies only. Goodwill relating to companies accounted for by the equity method is detailed in note F17.

The change of the period relates mainly to the final adjustment of the goodwill in Finland following the finalization of the opening balance sheet exercise (see note F8).

The goodwill accounted in each of the primary segments is as follows:

Thousands of Euros	Catalysis	Energy & Surface Technologies	Recycling	Total
31/12/2019	50,037	88,357	18,311	156,705
31/12/2020	49,999	87,737	18,254	155,990

Management tests annually whether goodwill has suffered any impairment in accordance with the accounting policy stated in note F2. Such impairment tests are performed at a cash generating unit level, which may vary in scope from a total business unit to an individual plant but never a full segment scope. The recoverable amounts of cash-generating units to which goodwill is allocated have been determined based on value-in-use calculations by means of discounted cash flow modelling on the basis of the Group's operational plans which typically look forward 5 years, followed by a long term projection. On macroeconomic and external indicators such as currency and metal prices, the testing uses typically prevailing market conditions at the time the plans are drafted. The rates used are typically the ones observed on international exchanges in the last quarter of the year unless a normalization is considered appropriate. The 2020 goodwill impairment testing indicated sufficient headroom in the respective cash generating units and hence no goodwill impairments were recognized. The 2020 impairment testing used an average tax rate of 25.0% (unchanged versus 2019) and a weighted average cost of capital post-tax of 7% which was reviewed down from the 8.5% used in 2019 and prior years to reflect the Group's lowered weighted cost of funding driven a.o. by the decrease in market interest rates in recent years. A uniform WACC rate was applied across cash generating units with unit-specific risk factors considered to be reflected in the underlying cash flow projections. Terminal values were determined on the basis of a perpetual growth rate of on average 2% (same as in 2019). Inflation rates were based on guidance from national and international institutes such as the NBB or ECB.

F16 PROPERTY, PLANT AND EQUIPMENT

Thousands of Euros	Land and buildings	Plant, machinery and equipment	Furniture and vehicles	Other tangible assets	Construction in progress and advance payments	Total
At the beginning of previous year without leasing						
Gross value	973,873	2,090,262	226,496	14,678	388,791	**3,694,100**
Accumulated depreciation	(491,424)	(1,431,137)	(158,858)	(13,715)	-	**(2,095,133)**
NET BOOK VALUE AT THE BEGINNING OF PREVIOUS YEAR WITHOUT LEASING	**482,450**	**659,125**	**67,638**	**964**	**388,791**	**1,598,967**
. acquisition through business combinations	31,638	75,142	517	-	20,426	**127,724**
. additions	16,393	36,164	9,535	69	467,326	**529,487**
. disposals	(1,509)	(2,772)	(419)	(10)	(2,369)	**(7,079)**
. depreciations (included in "Depreciation and impairments")	(37,030)	(135,690)	(18,086)	(228)	-	**(191,035)**
. net impairment losses recognized (included in "Depreciation and impairments")	(2,454)	(16,169)	(289)	-	-	**(18,911)**
. translation differences	1,642	944	71	12	(1,844)	**825**
. other movements	168,212	231,710	16,534	314	(410,962)	**5,809**
AT THE END OF PREVIOUS YEAR WITHOUT LEASING	**659,342**	**848,457**	**75,500**	**1,120**	**461,368**	**2,045,788**
At the beginning of the year without leasing						
Gross value	1,189,490	2,402,378	242,362	15,070	461,369	**4,310,669**
Accumulated depreciation	(530,148)	(1,553,922)	(166,862)	(13,950)	-	**(2,264,881)**
NET BOOK VALUE AT THE BEGINNING OF THE YEAR WITHOUT LEASING	**659,343**	**848,457**	**75,500**	**1,120**	**461,369**	**2,045,788**
. acquisition through business combinations	3,510	(798)	548	-	876	**4,136**
. additions	20,663	32,588	7,852	364	330,009	**391,475**
. disposals	(10)	(938)	(176)	(20)	(134)	**(1,278)**
. depreciations (included in "Depreciation and impairments")	(43,501)	(148,434)	(19,154)	(194)	-	**(211,282)**
. net impairment losses recognized (included in "Depreciation and impairments")	(15,053)	(44,416)	(654)	(312)	-	**(60,435)**
. translation differences	(18,017)	(20,505)	(2,321)	(54)	(16,266)	**(57,164)**
. other movements	88,832	154,714	20,807	-	(267,820)	**(3,466)**
AT THE END OF THE FINANCIAL YEAR WITHOUT LEASING	**695,767**	**820,668**	**82,403**	**903**	**508,033**	**2,107,775**
Gross value	1,242,294	2,478,662	260,590	23,522	508,033	**4,513,101**
Accumulated depreciation	(546,526)	(1,657,994)	(178,187)	(22,619)	-	**(2,405,326)**
NET BOOK VALUE FOR CONTINUING OPERATIONS WITHOUT LEASING	**695,767**	**820,668**	**82,403**	**903**	**508,033**	**2,107,775**

Thousands of Euros	Land and buildings	Plant, machinery and equipment	Furniture and vehicles	Other tangible assets	Construction in progress and advance payments	Total
Gross value	3,300	43	31	-	-	3,374
Accumulated depreciation	(399)	(20)	(31)	-	-	(450)
NET BOOK VALUE AT THE BEGINNING OF PREVIOUS YEAR FOR LEASING	**2,901**	**23**	**-**	**-**	**-**	**2,924**
. change in accounting policies	25,788	77	11,396	-	-	37,262
. acquisition through business combinations	2,681	-	-	500	-	3,181
. additions	15,466	21	6,780	-	-	22,266
. depreciations (included in "Depreciation and impairments")	(11,063)	(44)	(5,722)	-	-	(16,829)
. translation differences	72	0	8	-	-	80
AT THE END OF PREVIOUS YEAR FOR LEASING	**35,845**	**77**	**12,462**	**500**	**-**	**48,884**
Leasing at begining of the year						
Gross value	47,341	135	18,175	500	-	66,152
Accumulated amortisation	(11,496)	(58)	(5,713)	-	-	(17,268)
NET BOOK VALUE AT THE BEGINNING OF THE YEAR FOR LEASING	**35,845**	**77**	**12,462**	**500**	**-**	**48,884**
. additions	17,901	1,034	8,578	144	-	27,657
. depreciations (included in "Depreciation and impairments")	(12,726)	(724)	(6,765)	(142)	-	(20,357)
. translation differences	(1,133)	(10)	(99)	(0)	-	(1,242)
. transfer	979	(35)	-	-	-	944
AT THE END OF THE FINANCIAL YEAR FOR LEASING	**40,866**	**342**	**14,176**	**502**	**-**	**55,886**
Gross value	67,193	1,055	24,865	637	-	93,750
Accumulated amortisation	(26,327)	(713)	(10,689)	(135)	-	(37,864)
NET BOOK VALUE FOR LEASING	**40,865**	**342**	**14,176**	**502**	**-**	**55,886**
Tangible asset including leasing						
Gross value	1,309,486	2,479,718	285,456	24,159	508,033	4,606,851
Accumulated amortisation	(572,854)	(1,658,707)	(188,876)	(22,754)	-	(2,443,190)
NET BOOK VALUE FOR CONTINUING OPERATIONS INCLUDING LEASING	**736,633**	**821,010**	**96,580**	**1,405**	**508,033**	**2,163,661**

The reduction in capital expenditures (line "Additions") compared to 2019 reflects the decision taken shortly after the start of the COVID-19 outbreak to postpone selected investment projects with the exception of safety and license to operate investments, awaiting more clarity on market outlook. Taking into account the continued investment in Rechargeable Battery Materials' greenfield plant in Poland, Energy & Surface Technologies accounted for close to two thirds of the Group's capex. Spending for this strategic project will continue into 2021.

The acquisitions through business combination are related to the subsequent adjustments of the opening balance sheet of the acquired cobalt refining and cathode precursor activities at Kokkola at the end of December 2019 (Finland) (see note F8).

The changes in accounting policies in 2019 are related to the introduction of IFRS 16.

Impairments on property, plant and equipment are mainly related to the restructuring initiatives in Cobalt & Specialty Materials and in Catalysis the consolidation of the North American automotive catalyst production.

The line 'other movements' mainly includes the transfer between tangible assets in progress and the other categories and to a lesser extent transfer to intangible assets.
There are no pledges on, or restrictions to, the title on property, plant and equipment, other than disclosed in note F35.

F17 INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

The investments in companies accounted for using the equity method are composed mainly of the following associates and joint ventures:

	Country	Measurement currency	Percentage 2019	Percentage 2020
For continuing operations				
Associates				
IEQSA	Peru	PEN	40.00	40.00
Ganzhou Yi Hao Umicore Industries	China	CNY	40.00	40.00
Element Six Abrasives	United Kingdom	USD	40.22	40.22
Jiangmen Chancsun Umicore Industry Co.,LTD	China	CNY	40.00	40.00

The elements recognized in Other Comprehensive Income for investments accounted for using the equity method are mainly related to employee benefits reserves and translation reserves.

Investments in associates are accounted for in accordance with the equity method and represent approximately 1.7% of Umicore's consolidated balance sheet total. Umicore has no individual material investments in associates. Considering the objectives of the IFRS 12 disclosure requirements, the most significant associate is Element Six Abrasives, in which Umicore holds 40.22%. Element Six Abrasives is a synthetic diamond materials group, part of De Beers Group, its majority shareholder. The group operates worldwide with primary manufacturing facilities in Ireland, Germany, the UK, the US and South Africa. Element Six Abrasives is on an adjusted results basis a profitable group, generating positive cash flow. The group's functional currency is USD. Umicore is represented in the Board of Directors and the audit committee of Element Six Abrasives. Besides its equity share in this company, Umicore has no other commitments, guarantees or obligations arising from its involvement in this associate. Adjustments and material contingencies, if any, in respect of the financial statements of Element Six Abrasives, are separately disclosed under the relevant captions of Umicore's consolidated financial statements (see note F36 for pending file qualified as contingent liability at Element Six Abrasives and note F9 for adjustments).

Thousands of Euros	Net book value	Goodwill	Total
At the end of previous year	104,653	45,989	150,642
. profit for the year	(5,332)	-	(5,332)
. dividends	(1,796)	-	(1,796)
. change in other reserves	1,536	-	1,536
. translation differences	(4,379)	(833)	(5,210)
AT THE END OF THE YEAR FOR CONTINUING OPERATIONS	94,683	45,156	139,839

Umicore's share in the aggregated balance sheet and profit and loss items of the associates and joint ventures would have been as follows:

Thousands of Euros	31/12/2019	31/12/2020
Assets	231,747	214,719
Liabilities	108,620	101,894
Turnover	251,313	195,889
Net result	8,705	(5,332)

In the above table, there are no more assets and liabilities related to joint ventures.

F18 FINANCIAL ASSETS AT FAIR VALUE THROUGH OCI AND LOANS GRANTED

Thousands of Euros	Financial assets at FV through OCI	Loans granted
Non-current financial assets		
AT THE BEGINNING OF PREVIOUS YEAR	8,028	2,627
. increase	2,375	126
. decrease	-	(114)
. translation differences	3	72
. fair value recognized in equity	(9)	-
. other movements	500	(520)
AT THE END OF PREVIOUS YEAR	10,897	2,192
. increase	1,633	753
. reversals of impairment losses (included in "Income from other financial instruments")	2	-
. translation differences	(45)	(79)
. fair value recognized in equity	(4,193)	-
. other movements	59	386
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	8,352	3,252
CURRENT FINANCIAL ASSETS		
. increase	-	92
. decrease	-	(1)
. translation differences	-	(12)
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	-	80

The increase and fair value recognized in equity of the financial assets at fair value through OCI are related to movements in non-consolidated entities. The new loans granted are related to convertible loans to non-consolidated entities.

F19 INVENTORIES

Thousands of Euros	31/12/2019	31/12/2020
Analysis of inventories		
Base products - gross value	2,469,632	2,706,918
.Permanently tied up metal inventories (not hedged)	862,215	775,213
.Commercially available metal inventories (hedged) (*)	1,176,095	1,477,096
.Other base products inventories (not hedged)	431,322	454,609
Consumables - gross value	87,030	102,163
Write-downs	(101,960)	(105,715)
Advances paid	6,173	7,222
Contracts in progress	1,454	7,503
TOTAL INVENTORIES FOR CONTINUING OPERATIONS	**2,462,330**	**2,718,092**

* applying Umicore's transactional metal hedging - see note F2.21.1 and F3.2.2

Inventories have increased by € 255.8 million compared with December 2019. This increase is mainly due to higher metal prices impacting the value of the commercially available metal inventories. The decrease of the permanently tied up metal inventories is predominantly linked to the rightsizing of the cobalt permanently tied up metal inventories linked to the restructuring initiatives in Cobalt & Specialty Materials. This rightsizing brought a € 34 million impairment charge classified under Adjustments.

The total gross book value of Umicore's permanently tied-up metal inventories at 31 December 2020 compares to a value of € 3,008 million when applying the 31 December market prices (€ 2,135 million at end December 2019).

As per the accounting policy with regards to permanently tied-up metal inventories (see Chapter 2.9), the permanently tied-up metal inventories are considered to have an unlimited useful life (no depreciations are applied) and are instead subject to Umicore's annual impairment testing of the CGU's carrying these inventories. Applying the LOCOM principle on permanently tied-up metal inventories on 31 December 2020 would have given rise to a non-cash impairment charge of € 110.5 million for the Group.

The change in inventory recognized in Raw Materials and Consumables in the income statements is a positive amount of € 378 million (representing the cash movements on inventory balances).

There are no pledges on, or restrictions to, the title on inventories.

F20 TRADE AND OTHER RECEIVABLES

Thousands of Euros	Notes	31/12/2019	31/12/2020
Non current			
Cash guarantees and deposits		8,893	8,370
Other receivables maturing > 1 year		1,972	2,574
Assets employee benefits		1,173	820
TOTAL FOR CONTINUING OPERATIONS		**12,038**	**11,764**
Current			
Trade receivables (at cost)		1,171,835	1,366,686
Trade receivables (write down)		(22,983)	(22,319)
Other receivables (at cost)		180,336	177,008
Other receivables (write down)		(207)	(207)
Interest receivable		156	495
Fair value receivable financial instruments held for cash-flow hedging	F33	19,699	45,091
Fair value receivable - financial instruments related to FV hedging	F33	47,495	23,442
Deferred charges and accrued income		37,327	86,973
TOTAL FOR CONTINUING OPERATIONS		**1,433,658**	**1,677,167**

Compared to 31 December 2019, trade receivables substantially increased driven mainly by a substantial increase in Catalysis, fueled by higher metal prices.

Thousands of Euros	Total	Not due	Overdue between 0-30 days	30-60 days	60-90 days	> 90 days
Ageing balance analysis at the beginning of the year						
Trade receivables (w/o doubtful and securitized receivables) - at cost	**1,131,666**	928,369	160,856	22,261	5,549	14,632
Other receivables - at cost	**180,336**	179,925	595	(340)	-	157
Loss allowance	**12,794**	5,431	901	17	1,497	4,948
Expected loss rate	**0.98%**	0.49%	0.56%	0.08%	26.98%	33.46%
Ageing balance analysis at the end of year						
Trade receivables (w/o doubtful and securitized receivables) - at cost	**1,328,476**	1,161,303	137,088	21,569	4,384	4,131
Other receivables - at cost	**177,007**	176,020	(0)	-	223	765
Loss allowance	**14,888**	9,412	1,291	334	240	3,611
Expected loss rate	**0.99%**	0.70%	0.94%	1.55%	5.21%	73.75%

CREDIT RISK – TRADE RECEIVABLES

Thousands of Euros	Trade receivables (write-down)	Other receivables (write-down)	Total
At the beginning of previous year	**(22,577)**	**(247)**	**(22,824)**
. Impairment losses recognized in P&L	(9,373)	-	**(9,373)**
. Reversal of impairment losses	9,705	39	**9,744**
. Impairment written off against asset carrying amount	83	-	**83**
. Other movements	(850)	(0)	**(850)**
. Translation differences	30	1	**31**
AT THE END OF PREVIOUS YEAR	**(22,983)**	**(207)**	**(23,190)**
AT THE BEGINNING OF THE FINANCIAL YEAR	**(22,983)**	**(207)**	**(23,190)**
. Impairment losses recognized in P&L	(3,943)	342	**(3,602)**
. Reversal of impairment losses	4,328	-	**4,328**
. Impairment written off against asset carrying amount	48	-	**48**
. Other movements	(408)	(346)	**(755)**
. Translation differences	639	5	**644**
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**(22,320)**	**(207)**	**(22,526)**

The group applies the IFRS 9 simplified approach to measure expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due. The expected loss rates are based on historical payment profiles of sales and the corresponding credit losses experienced. The historical loss rates are adjusted to reflect current and forward-looking information on macro-economic factors affecting the ability of the customers to settle the receivables. The group has identified macro-economic factors, Probability of Default (PD) and Loss Given Default (LGD) to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors.

In principle, Umicore uses credit insurance as a means to mitigate the credit risk related to trade receivables. In 2020, two credit insurance policies with two different insurers were in place. At closing, € 355 million of the group's outstanding invoices were covered by a policy where indemnification in case of non-payment amounts to 95% with an indemnification cap set at regional or country level. The other policy covered € 272 million of trade invoices with a global annual deductible of € 5 million, a maximum indemnity per year of € 70 million and an indemnification in case of non-payment of 90%. The Group also managed credit exposure by selling invoices to financial institutions without recourse (and hence derecognized) (€ 301 million end of 2020 compared to € 213 million end of 2019), partly covered by the above credit insurance policies.

Specifically in China, Umicore reduces credit risk by discounting bank acceptance drafts it receives from its customers without recourse (and hence derecognized) (€ 245 million end of year 2020 compared to € 185 million end of 2019).

Finally, some of our businesses function without credit insurance and instead internal credit limits are set based on available financial information and business knowledge. Theses limits are duly reviewed and approved by management.

F21 TAX ASSETS AND LIABILITIES

Thousands of Euros	31/12/2019	31/12/2020
Tax assets and liabilities		
Income tax receivables	45,447	39,553
Deferred tax assets	168,927	221,938
Income tax payable	(131,483)	(160,734)
Deferred tax liabilities	(11,461)	(22,846)

	Assets		Liabilities		Net	
Thousands of Euros	2019	2020	2019	2020	2019	2020
At the end of preceding financial year	**132,855**	**168,927**	**(6,225)**	**(11,461)**	**126,630**	**157,466**
Change in accounting policies	(39)	-	-	-	(39)	-
Deferred tax recognized in the P&L	15,207	59,688	1,330	(3,146)	16,537	56,542
Deferred tax recognized in equity	21,502	(12,208)	7,276	3,632	28,778	(8,576)
Acquisitions through business combination	-	-	(14,972)	(359)	(14,972)	(359)
Translation adjustments	142	(6,199)	(152)	218	(10)	(5,981)
Transfer	(1,201)	11,722	1,201	(11,722)	-	-
Other movements	461	8	81	(8)	542	-
AT THE END OF FINANCIAL YEAR FOR CONTINUING OPERATIONS	**168,927**	**221,938**	**(11,461)**	**(22,846)**	**157,466**	**199,092**

	Assets		Liabilities		Net	
Thousands of Euros	2019	2020	2019	2020	2019	2020
Deferred tax in respect of each type of temporary difference						
Intangible assets	16,412	22,144	(17,894)	(11,043)	(1,482)	11,101
Goodwill on fully consolidated companies	-	-	(561)	(514)	(561)	(514)
Property, plant and equipment	11,554	11,506	(33,516)	(29,644)	(21,962)	(18,138)
Long term receivables	1,087	1,371	(31)	(181)	1,056	1,190
Inventories	72,552	41,534	(37,403)	(33,159)	35,149	8,375
Trade and other receivables	8,424	8,212	(11,930)	(25,600)	(3,506)	(17,388)
Group Shareholder's equity	-	-	(4,032)	(6,148)	(4,032)	(6,148)
Long Term Financial Debt and other payable	9,109	11,688	(5,172)	(18,023)	3,937	(6,335)
Provisions Employee Benefits	81,392	89,764	(8,245)	(8,267)	73,147	81,497
Provisions for Environment	12,697	26,150	(384)	(378)	12,313	25,772
Provisions for other liabilities and charges	9,480	12,968	(463)	(583)	9,017	12,385
Current Financial Debt	539	40	(344)	(1,080)	195	(1,040)
Current Provisions for Environment	2,323	1,969	-	-	2,323	1,969
Current Provisions for Other Liabilities & Charges	9,079	9,952	(8)	(8)	9,071	9,944
Trade and other payables	36,431	67,076	(5,262)	(1,309)	31,169	65,767
TOTAL DEFERRED TAX DUE TO TEMPORARY DIFFERENCES	**271,079**	**304,374**	**(125,245)**	**(135,937)**	**145,834**	**168,437**
Tax losses to carry forward	**56,598**	**70,257**	**-**	**-**	**56,598**	**70,257**
Investments deductions	1,156	867	-	-	1,156	867
Other	5,002	3,389	-	-	5,002	3,389
Deferred tax assets not recognized	(51,124)	(43,858)	-	-	(51,124)	(43,858)
TOTAL TAX ASSETS/LIABILITIES	**282,711**	**335,029**	**(125,245)**	**(135,937)**	**157,466**	**199,092**
Compensation of assets and liabilities within same entity	(113,784)	(113,091)	113,784	113,091	-	
NET AMOUNT	**168,927**	**221,938**	**(11,461)**	**(22,846)**	**157,466**	**199,092**

Thousands of Euros	2019 Base	2020 Base	2019 Tax	2020 Tax
Amount of deductible temporary differences, unused tax losses or tax credits for which no deferred tax asset is recognized in the balance sheet				
Expiration date with no time limit	187,883	158,635	51,124	43,858

The changes of the period in temporary differences are charged to the income statement except those arising from events that were recognized directly in the other comprehensive income.

The main movements in deferred tax recognized directly in the other comprehensive income are deferred taxes generated by temporary differences included within the lines "Trade and other receivables" (negative by € 6.1 million), "Provisions for employee benefits" (positive by € 8.0 million), long-term financial debt (negative by 12.6 million) and "Trade and other payables" (positive by € 2.8 million).

Deferred tax assets are only recognized to the extent that their utilization is probable, i.e. if a tax benefit is expected in future periods. The Group assesses a recoverability in a range of 5 to 10 years. The actual tax results in future periods may differ from the estimate made at the time the deferred taxes are recognized.

Unrecognized deferred tax assets of € 43.9 million mainly arise from tax losses (€ 39.6 million).

In accordance with IAS 12, a deferred tax liability on untaxed reserves of the Belgian companies, amounting potentially to € 37.5 million, has not been recognized as management anticipates that this liability will not be incurred in a foreseeable future.

Group current income tax payable at December 2020 amounting € 160,7 million (2019 : € 131,5 million) include uncertain tax positions of € 114.9 million (€ 91.4 million in 2019).

F22 NET CASH AND CASH EQUIVALENTS

Thousands of Euros	31/12/2019	31/12/2020
Cash and cash equivalents		
Short-term investments : bank term deposits	25,524	373,904
Short-term investments : term deposits (other)	7	5
Cash-in-hands and bank current accounts	246,192	636,397
TOTAL CASH AND CASH EQUIVALENTS	**271,724**	**1,010,307**
Bank overdrafts	32,493	8,678
NET CASH AS IN CASH FLOW STATEMENT FOR CONTINUING OPERATIONS	**239,231**	**1,001,629**

All cash and cash equivalents are fully available for the Group.

Liquidity risk management implies maintaining sufficient cash and marketable securities, the availability of funding through an adequate amount of committed and uncommitted credit facilities and the ability to close out market positions.

Due to the dynamic nature of the underlying businesses, the group aims to maintain funding flexibility through committed credit lines. Excess liquidities are invested for very short periods and are spread over a limited number of banks, all enjoying a satisfactory credit rating.

The increase in term deposit amount mainly stems from the cash proceeds of the convertible bond issuance (€ 500 million nominal).

F23 CURRENCY TRANSLATION DIFFERENCES AND OTHER RESERVES

The detail of the Group's share in currency translation differences and other reserves is as follows:

Thousands of Euros	Conversion rights recognized in equity	Financial assets at FV through OCI reserves	Cash flow hedge reserves - Commodities	Cash flow hedge reserves - Currencies	Cash flow hedge reserves - IRS	Deferred taxes directly recognized in OCI	Changes in post employment benefits, arising from changes in actuarial assumptions	Share-based payment reserves	Currency translation differences	Total
Balance at the beginning of previous year	**-**	**1,150**	**(3,925)**	**3,411**	**(586)**	**58,663**	**(226,884)**	**31,600**	**(91,073)**	**(227,644)**
Remeasurements recognized in other comprehensive income	-	(129)	(28,728)	1,937	(101)	28,587	(70,605)	8,211	-	(60,828)
Remeasurements derecognized out of other comprehensive income	-	-	(1,212)	174	-	(145)	-	-	-	(1,183)
Transfer from/to retained earnings	-	-	-	-	-	-	-	(2,540)	-	(2,540)
Other movements	-	120	-	-	-	-	-	-	-	120
Exchange differences	-	-	-	(29)	-	(11)	(539)	-	8,200	7,621
BALANCE AT THE END OF PREVIOUS YEAR	**-**	**1,141**	**(33,865)**	**5,493**	**(687)**	**87,094**	**(298,028)**	**37,271**	**(82,873)**	**(284,454)**
Balance at the beginning of the year	**-**	**1,141**	**(33,865)**	**5,493**	**(687)**	**87,094**	**(298,028)**	**37,271**	**(82,873)**	**(284,454)**
Remeasurements recognized in other comprehensive income	50,324	(4,198)	(20,951)	7,972	(84)	(513)	(27,632)	10,108	-	15,026
Remeasurements derecognized out of other comprehensive income	-	-	27,054	2,707	-	(8,057)	-	-	-	21,704
Transfer from/to retained earnings	-	-	-	-	-	-	-	(2,737)	-	(2,737)
Other movements	-	-	-	-	-	868	(1,775)	-	-	(908)
Exchange differences	-	5	74	549	-	(204)	2,403	-	(119,284)	(116,457)
BALANCE AT THE END OF THE YEAR	**50,324**	**(3,052)**	**(27,688)**	**16,721**	**(771)**	**79,187**	**(325,033)**	**44,642**	**(202,157)**	**(367,826)**

The net losses recognized in the OCI regarding cash flow hedges (€ 13.1 million) are the changes in fair value of new cash flow hedging instruments or existing ones at opening but which have not yet expired at year end. The net losses derecognized from OCI (€ 29.8 million) are the fair values of the cash-flow hedging instruments existing at the opening which expired during the year. The total impact incurred at expiration of the cash-flow hedges during the year represents a loss of € 54.8 million, recognized in the income statement. This amount includes the mentioned net losses derecognized from OCI (€ 29.8 million) and the fair value changes incurred in the course of the year on expired existing cash-flow hedges and on new instruments contracted during the year (€ 25.0 million).

New net remeasurements as a result of changes in the actuarial assumptions on the defined post-employment benefit plans have been recognized in OCI for € -27.6 million. The 2020 shares and stock option plans have led to a share-based payment reserve increase of € 10.1 million (refer to note F10 on employee benefits). € 2.7 million, linked to exercised options and free shares plans, have been transferred to retained earnings.

The conversion rights embedded in the € 500 million convertible bond issued on 23 June 2020 were valued at € 50.3 million net of transaction costs and have been recognized in equity (see note F2.17).

F24 FINANCIAL DEBT

Thousands of Euros	Bank loans	Lease liability	Other loans	Total
Non-current				
AT THE BEGINNING OF PREVIOUS YEAR	**705,004**		**3,843**	**708,846**
. Change in accounting policies	-	37,262	-	**37,262**
. Acquisition through business combinations	-	3,181	-	**3,181**
. Increase	400,579	22,266	6	**422,851**
. Decrease	-	(16,536)	(291)	**(16,827)**
. Translation differences	37	89	-	**126**
. Transfers	(4,354)		1	**(4,353)**
AT THE END OF PREVIOUS YEAR	**1,101,266**	**46,262**	**3,555**	**1,151,083**
. Increase	125,000	27,657	494,360	**647,017**
. Decrease	-	(19,801)	(304)	**(20,105)**
. Translation differences	(146)	(1,251)	5	**(1,392)**
. Transfers	(21,120)	-	(4)	**(21,124)**
. Conversion rights recognized in equity	-	-	(50,324)	**(50,324)**
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**1,205,000**	**52,865**	**447,289**	**1,705,154**
Current portion of long-term financial debts				
At the end of the preceding financial year	**3,545**	**-**	**154**	**3,700**
. Increase / decrease	(12,151)	-	0	**(12,151)**
. Translation differences	(526)	-	(0)	**(526)**
. Transfers	30,922	-	4	**30,926**
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**21,790**	**-**	**158**	**21,948**

Thousands of Euros	Short term bank loans	Bank overdrafts	Short term loan : commercial paper	Other loans	Total
Current					
AT THE END OF THE PRECEDING FINANCIAL YEAR	**244,933**	**32,493**	**282,936**	**-**	**560,363**
. Increase / decrease	346,873	(22,392)	(148,654)	914	176,742
. Transfers	(9,802)	-	-	-	(9,802)
. Translation differences	(27,738)	(1,424)	-	(910)	(30,072)
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**554,266**	**8,678**	**134,282**	**4**	**697,230**

Net financial debt at 31 December 2020 stood at € 1,414.0 million, slightly down compared with € 1,443,4 million at the start of the year.

On June 15, 2020, Umicore and the European Investment Bank ("EIB") concluded a € 125 million loan agreement (fair value of €126 million). The proceeds of the loan, which has a maturity of eight years, will finance part of Umicore's investment in cathode materials plant in Nysa, Poland. Once completed, this greenfield plant will supply the European operations of Umicore's global battery cell and automotive customers.

On June 16, 2020, Umicore issued senior unsecured convertible bonds (the "Bonds") with a contractual maturity of 5 years, under Umicore's authorized capital, for an aggregate principal amount of € 500 million. The net proceeds will be used for general corporate purposes and to fund Umicore's strategic developments in the areas of clean mobility and materials recycling. Unless previously converted, redeemed or repurchased and cancelled, the Bonds will be redeemed at 100% of their principal amount on June 23, 2025. At inception, Umicore determined the bonds met the IFRS definition of a compound financial instrument. At the date of issuance, the equity portion of the Bonds representing the option to convert the instrument into ordinary shares is valued € 50.3 million (net of transaction costs).

The transaction costs that relate to the issuance of the Bonds were allocated to the liability and equity components of the instrument in proportion to the allocation of the proceeds.

The fair value of the financial liability component of the convertible bond as of December 31,2020 amounted to€ 444.1 million.

On October 2, 2020, Umicore received confirmation from Banque de France, as foreseen by art. D.213-2 of "Code monétaire et financier" of the French law, that the conditions as described in the financial documentation of its NEU commercial paper (no longer than 1 year maturity) and NEU medium term note (maximum 3 years maturity), for a maximum amount of € 600 million each, fulfill the requirements of the law.

On December 31, 2020, an amount of € 45 million was outstanding on the NEU CP program and no amount was outstanding on the NEU MTN program.

An amount of €89,75 million was outstanding on the Belgian Commercial Paper programme (out of € 600 million available under the program).

The financial debt includes the US private debt placements issued in 2019 (€ 390 million; fair value of € 413.8 million) and in 2017 (€ 360 million; fair value € 394.0 million) and also the Schuldschein issued in 2017 (€ 330 million; fair value € 342.2 million).

On 31 December 2020, there were no outstanding advances under the € 300 million Syndicated Bank Credit Facility maturing in October 2022 and no outstanding advances under the € 495 million Syndicated Bank Credit Facility maturing in April 2025.

The aforementioned Syndicated Bank Credit Facilities and the long term debt instruments require the Company to comply with certain financial covenants. Umicore has not faced any breach of those covenants in 2020 or in previous years.

The long-term debts mainly include debt instruments in EUR.

The average interest rate on the average gross debt amounted to 1.91% for full year 2020 (2.11% for full year 2019).

The line "new loans and repayment of loans" in the consolidated statement of cash flow do not include the movements on bank overdrafts and the currency translation differences.

The net gearing ratio end of 2020 of 35.0% (35.2% in 2019) and the net financial debt over adjusted EBITDA ratio of 1.76x (compared to 1.92x end of 2019) position the Group well within its targeted capital structure limits.

Thousands of Euros	Type of Interest	Due within 1 year	Due between 1 and 5 years	Due beyond 5 years	Total
Gross Financial debt of previous year					
Lease Liabilities		-	38,087	8,174	46,262
Credit Institutions	Fixed/Floating	281,126	24,820	-	305,946
Commercial Papers	Floating	282,936	-	-	282,936
Schuldschein	Fixed/Floating	-	287,000	43,000	330,000
US Private Placement	Fixed	-	-	750,000	750,000
TOTAL		**564,062**	**349,907**	**801,174**	**1,715,144**

Thousands of Euros	Type of Interest	Due within 1 year	Due between 1 and 5 years	Due beyond 5 years	Total
Gross Financial debt of the year					
Lease Liabilities		-	40,478	12,387	52,865
Credit Institutions	Fixed/Floating	584,895	3,190	-	588,085
Commercial Papers	Floating	134,282	-	-	134,282
Schuldschein	Fixed/Floating	-	287,000	43,000	330,000
US Private Placement	Fixed	-	-	750,000	750,000
EIB Loan	Fixed	-	-	125,000	125,000
Convertible Bond	Fixed	-	444,100	-	444,100
TOTAL		**719,177**	**774,768**	**930,387**	**2,424,332**

Thousands of Euros	EUR	Other currencies	Total
Analysis of long term debts by currencies (including current portion)			
Bank loans	1,205,000	21,790	1,226,790
Other loans	447,445	2	447,447
NON-CURRENT FINANCIAL DEBTS (INCLUDING CURRENT PORTION)	**1,652,445**	**21,792**	**1,674,237**

Thousands of Euros	2019	2020
Non current financial debt	1,151,083	1,705,154
Current portion of non current financial debt	3,700	21,948
Current financial debt	560,363	697,230
Cash and cash equivalents	(271,724)	(1,010,307)
NET FINANCIAL DEBT	**1,443,422**	**1,414,024**

Gross outstanding debt	
Short term bank loans	23.8%
Long term bank loans	49.7%
Commercial paper	5.5%
Bank overdrafts	0.4%
Lease liability	2.2%
Convertible Bond	18.3%
Other bank facilities	0.1%

Millions of Euros	2019	2020
Net financial debt	1,443.4	1,414.0
Equity	2,660.5	2,621.9
Total	4,103.9	4,035.9
Gearing ratio (%)	35.2	35.0

F25 TRADE DEBT AND OTHER PAYABLES

Thousands of Euros	Notes	31/12/2019	31/12/2020
Non-current			
Long-term trade payables		2,579	-
Other long-term debts		5,520	5,682
Investment grants and deferred income from grants		16,021	17,823
TOTAL FOR CONTINUING OPERATIONS		**24,120**	**23,505**
Current			
Trade payables		1,466,140	1,896,099
Advances received on contracts in progress		15,448	32,180
Tax payable (other than income tax)		26,190	38,317
Payroll and related charges		125,252	135,835
Other amounts payable		56,399	39,733
Dividends payable		11,657	11,618
Accrued interest payable		7,856	9,109
Fair value payable financial instrument held for cash flow hedging	F33	48,829	57,957
Fair value payable - financial instruments related to FV hedging	F33	18,670	38,296
Accrued charges and deferred income		139,907	159,784
TOTAL FOR CONTINUING OPERATIONS		**1,916,348**	**2,418,928**

Compared to 31 December 2019, trade payables increased, driven mainly by a substantial increase in Catalysis, fueled by higher metal prices. Trade payables include bank acceptance drafts issued by Umicore in China. Bank acceptance drafts are a commonly used form of payment in China, often preferred by suppliers in view of their transferrability, their use as financing collateral or their ability to be discounted. End of 2020, Umicore issued € 280 million of bank acceptance drafts in China (compared to € 196 million end of 2019). Trade payables end of 2020 include contracted metals to be repurchased for an amount of € 230 million (compared to € 206 million end of 2019). The tax payables (other than income tax) mainly include VAT payables.

F26 LIQUIDITY OF THE FINANCIAL LIABILITIES

PREVIOUS FINANCIAL YEAR

	Earliest contractual maturity					
Thousands of Euros	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	> 5 years	Total
Financial debt	**153,186**	**192,344**	**218,525**	**349,908**	**801,174**	**1,715,137**
CURRENT	**153,186**	**192,344**	**218,525**	**-**	**-**	**564,055**
Short term bank loans	130,764	56,370	57,799	-	-	**244,933**
Bank overdrafts	21,188	-	11,305	-	-	**32,493**
Short-term loan: commercial paper	-	134,155	148,781	-	-	**282,936**
Other loans	(7)	-	0	-	-	**(7)**
Current portion of long-term bank loans	1,229	1,793	523	-	-	**3,545**
Current portion of other long-term loans	13	26	116	-	-	**154**
NON-CURRENT	**-**	**-**	**-**	**349,908**	**801,174**	**1,151,082**
Bank loans	-	-	-	308,267	793,000	**1,101,267**
Lease liability	-	-	-	38,087	8,174	**46,261**
Other loans	-	-	-	3,554	-	**3,555**
TRADE AND OTHER PAYABLES	**1,343,059**	**323,292**	**231,717**	**29,510**	**12,891**	**1,940,469**
CURRENT	**1,343,059**	**323,292**	**231,717**	**18,281**	**-**	**1,916,349**
Trade payables	1,113,438	216,335	136,367	-	-	**1,466,140**
Advances received on contracts in progress	5,092	8,720	1,636	-	-	**15,448**
Tax payable (other than income tax)	22,491	3,700	(0)	-	-	**26,190**
Payroll and related charges	43,063	26,409	55,780	-	-	**125,252**
Other amounts payable	25,106	16,656	14,638	-	-	**56,400**
Dividends payable	11,657	-	-	-	-	**11,657**
Accrued interest payable, third parties	6,165	1,390	300	-	-	**7,856**
Fair value payable financial instrument held for cash flow hedging	399	9,372	20,778	18,281	-	**48,829**
Fair value payable - financial instruments related to FV hedging	8,198	8,252	2,219	-	-	**18,670**
Accrued charges and deferred income	107,450	32,457	0	-	-	**139,907**
NON-CURRENT	**-**	**-**	**-**	**11,229**	**12,891**	**24,120**
Long-term trade payables	-	-	-	-	2,579	**2,579**
Other long-term debts	-	-	-	1,192	4,328	**5,520**
Investment grants and deferred income from grants	-	-	-	10,037	5,984	**16,021**

FINANCIAL YEAR

	Earliest contractual maturity					
(EUR thousand)	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	> 5 years	Total
Financial debt	**274,765**	**90,870**	**353,542**	**774,766**	**930,387**	**2,424,330**
Current	**274,765**	**90,870**	**353,542**	**-**	**-**	**719,177**
Short term bank loans	231,384	55,590	267,293	-	-	**554,266**
Bank overdrafts	8,678	-	-	-	-	**8,678**
Short-term loan: commercial paper	25,000	35,250	74,032	-	-	**134,282**
Other loans	-	4	-	-	-	**4**
Current portion of long-term bank loans	9,691	-	12,099	-	-	**21,790**
Current portion of other long-term loans	13	26	119	-	-	**158**
Non-current	**-**	**-**	**-**	**774,766**	**930,387**	**1,705,153**
Bank loans	-	-	-	287,000	918,000	**1,205,000**
Lease liability	-	-	-	40,478	12,387	**52,865**
Other loans	-	-	-	447,288	0	**447,288**
Trade and other payables	**1,377,057**	**362,626**	**659,330**	**32,008**	**11,409**	**2,442,430**
Current	**1,377,057**	**362,626**	**659,330**	**19,912**	**-**	**2,418,925**
Trade payables	1,105,279	246,622	544,198	-	-	**1,896,099**
Advances received on contracts in progress	13,586	18,199	395	-	-	**32,180**
Tax payable (other than income tax)	35,188	2,591	539	-	-	**38,317**
Payroll and related charges	38,663	41,765	55,407	-	-	**135,835**
Other amounts payable	28,760	4,627	6,346	-	-	**39,733**
Dividends payable	11,618	-	-	-	-	**11,618**
Accrued interest payable, third parties	6,960	1,653	496	-	-	**9,109**
Fair value payable financial instrument held for cash flow hedging	471	9,324	28,631	19,527	-	**57,953**
Fair value payable - financial instruments related to FV hedging	16,119	17,902	3,890	385	-	**38,296**
Accrued charges and deferred income	120,413	19,943	19,428	-	-	**159,784**
Non-current	**-**	**-**	**-**	**12,096**	**11,409**	**23,505**
Other long-term debts	-	-	-	1,182	4,500	**5,682**
Investment grants and deferred income from grants	-	-	-	10,914	6,909	**17,823**

F27 PROVISIONS FOR EMPLOYEE BENEFITS

The Group has various legal and constructive defined benefit obligations, the vast majority of them being "final pay" plans linked to the Belgian and German operations

Thousands of Euros	Post-employment benefits, pensions and similar	Post-employment benefits - other	Termination benefits early retirement & similar	Other long-term employee benefits	Total
At the end of the previous year	347,160	3,806	26,546	15,137	392,650
. Increase (included in "Payroll and related benefits")	27,668	(106)	6,157	1,335	35,054
. Reversal (included in "Payroll and related benefits")	(63)	-	-	(7)	(70)
. Use (included in "Payroll and related benefits")	(25,943)	(170)	(4,985)	(723)	(31,820)
. Interest and discount rate impacts (included in "Finance cost - Net")	3,175	9	23	110	3,317
. Translation differences	(72)	(282)	(444)	(24)	(822)
. Transfers	747	(467)	(210)	(26)	44
. recognized in other comprehensive income	28,162	(159)	(0)	0	28,004
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**380,834**	**2,633**	**27,087**	**15,802**	**426,356**

Thousands of Euros	31/12/2019	Movements 2020	31/12/2020
Belgium	67,478	28,095	95,573
Germany	297,653	3,090	300,743
SUBTOTAL	**365,131**	**31,185**	**396,316**
Other entities	27,519	2,522	30,040
TOTAL FOR CONTINUING OPERATIONS	**392,650**	**33,707**	**426,356**

The first table shows the balances and the movements in provisions for employee benefits of the fully consolidated subsidiaries only.

The termination benefits mainly concern mainly Belgian pre-retirement plans and some severance pay schemes in Korea. Other long-term benefits mainly concern jubilee premium in Belgium and Germany.

The lines "Increase", "Reversal" and "Use" of employee benefits provisions can be linked with the line "Provisions for employee benefits" of the note F10. The amount recognized in OCI originates mainly from a decrease in discount rates on the pension plans. A reconciliation with the note F23 and the Statement of Comprehensive income is provided in the tables below.

The defined contribution plans of the Group in some countries like in the USA, Canada, South Africa and Germany are not part of this note as the amounts are directly recognized in the income statement under the line "Contribution to defined contribution plans" (see note F10).

The following disclosure requirements under IAS 19 amended were derived from the reports obtained from external actuaries.

Umicore defined benefit pension schemes for the 2 major countries are the following:

BELGIUM	**Characteristics of the Defined Benefit plans**Umicore companies in Belgium operate defined benefit plans that provide retirement or long-term employee benefits which are related to salary and age or length of service. These retirement and long term benefit plans represent a defined benefit obligation of € 314.0 million and assets for € 218.5 million. They foresee in lump sum or monthly payments upon retirement or pre-retirement and benefits in case of reaching a number of years of service or in case of death or disability prior to retirement. The net provisions for pension of € 95.5 million can be broken down in post-employment defined benefit plans (€ 67.2 million of which € 172.9 million is the obligation and € 105.7 million relates to plan assets), termination benefits plan (€ 6.3 million of obligation not funded), jubilee premium (€ 3.5 million, not funded) and post-employment defined contributions plans and bonus saving plans with guaranteed return and therefor treated as Defined Benefit plans (€ 18.6 million of which € 131.3 million is the obligation and € 112.7 million relates to plan assets). **Funding** The post-employment plans are externally funded through either insurance companies or a self-administrated institution for occupational retirement provision ("IORP"). For the IORP, the necessary governance processes for risk management are in place. One of the risk measures is to perform on a regular basis a "Continuity Test" in which the consequences of strategic investment policies are analyzed in terms of risk- and-return profiles and solvency measures. A statement of investment principles and funding policy are derived from this. The purpose is to have a well-diversified asset allocation to control the risk. **Fair values of plan assets** The fair values of the equity and debt instruments are determined based on quoted market prices in active markets (level 1 fair value classification). The plans hold no direct positions in Umicore shares or bonds, nor do they own any property used by an Umicore entity. Investments are well diversified so that the failure of any single investment would not have a material impact on the overall level of assets.
GERMANY	**Characteristics of the Defined Benefit plans**The post-employment benefits are mainly unfunded pension plans of defined benefit type providing retirement, disability and death benefits. All benefit plans are based on final or final average pay excluding the deferred compensation plans. The benefits of the deferred compensation plan are based on annual converted salary and provide a guaranteed interest of 3.0% p.a. (6.0% p.a. for salary conversions before 2014). All post-employment plans represent a defined benefit obligation of € 308.3 million and assets for € 7.6 million. The net provisions for pension of € 300.7 million mainly includes the Degussa pension defined benefit plans, including the contribution plan where the inflation and interest rate adjustments of the benefits are guaranteed (€ 224.1 million), the closed and open compensation plans (€ 62.0 million), a jubilee premium plan (€ 7.0 million) and other termination benefits (€ 7.8 million). **Funding** As mentioned above, the post-employment benefits are mainly unfunded plans. A minor part is funded by pledged reinsurance contracts. **Fair values of plan assets** All plan assets relate to pledged insurance contracts and have no quoted market price.

The most significant risks related to the defined benefit plans are:

- Asset volatility: The plan liabilities are calculated using a discount rate set with reference to corporate bond yields; if plan assets underperform this yield, this will create a deficit.
- Changes in bond yields: A decrease in corporate bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plan's bond holdings.
- Salary risk: The majority of the plans' benefit obligations are calculated by reference to the future salaries of plan members. As such, any salary increase of plan members higher than expected will lead to higher liabilities.
- Longevity risk: All pension plans beside the new deferred compensation plan as from 2014 provide life annuities which involve the risk of longevity i.e. the risk that the payment period of the pension increases due to the increase in life expectancy. The company uses mortality rates which depend on the year of birth to include this risk in the pension obligation.
- Risk of cash outflow: Since death as active and disability benefits are provided there is a risk of cash outflow before retirement.
- Legislation risks: If the law which define the benefit changes, it can result in a change of the obligations.

Some additional risks are related to Germany only:

- In Germany two defined contribution pension plans exist which are externally financed via the "Pensionskasse Degussa" (PKD) or the support fund "Unterstützungskasse Degussa" (RUK). With respect to the required pension adjustments of pensions paid by these plans, there is a risk that these adjustments cannot be fully borne by the PKD or RUK and therefore can result in additional unfunded pension obligations. This part of the PKD and RUK plans is therefore considered as a Defined Benefit Plan and the risk of the additional obligation expected until end of 2023 has been included in the defined benefit obligation and is yearly reviewed (additional obligation of € 5.1 million for PKD and € 0.9 million for RUK at the end of 2020).
- The closed deferred compensation plan provides a guaranteed interest rate of 6% which increases the risk for a pension cost in addition to the converted salary. The plan was closed at 31 December 2013 and replaced by a plan with no significant risk in this respect.

And some risks are related to Belgium only:

- Because of the Belgian legislation applicable to 2nd pillar pension plans (so-called "Law Vandenbroucke"), all Belgian Defined Contribution plans have to be considered under IFRS as Defined Benefit plans. Law Vandenbroucke states that in the context of defined contribution plans, the employer must guarantee a minimum return of 3.75% on employee contributions and 3.25% on employer contributions. However, shortly before year-end 2015, a change in the Belgian Law was enacted resulting in a decrease of the guaranteed return from 3.25 % to a minimum interest rate defined based upon the Belgian 10-year interest rate but within the range 1.75% – 3.25%. The new rate (currently 1.75%) applies for the years after 2015 on future contributions and also on the accumulated past contributions as at 31 December 2015 if the financing organization does not guarantee a certain

result on contributions until retirement age. If the organization does guarantee such a result, the rates 3.25/3.75% still apply. Because of this minimum guaranteed return, the employer is exposed to a financial risk: further contributions could be required if the return on assets would not be sufficient to reach the minimum benefits to be paid. The group has plans that are financed through insurance contract as well as one plan financed through an IORP. The related defined benefit obligations have been aggregated with the other obligations for defined benefit plans. The Projected Unit Credit (PUC) methodology has been used. Total defined benefit obligations related to those plans amounts to € 131.3 million as at the end of December 2020 and related plan assets to € 112.7 million.

Thousands of Euros	2019	2020
Change in benefit obligation		
Benefit obligation at beginning of the year	**549,052**	**651,685**
Current service cost	32,958	34,591
Interest cost	9,908	6,246
Plan Participants' Contributions	946	905
Remeasurements - changes in demographic assumptions	1,133	1,556
Remeasurements - changes in financial assumptions	81,769	29,185
Remeasurements - experience adjustments	3,032	2,942
Benefits paid from plan/company	(24,272)	(26,873)
Expenses paid	(3,773)	(1,819)
Plan combinations	74	157
Exchange rate changes	858	(1,353)
BENEFIT OBLIGATION AT END OF THE YEAR	**651,685**	**697,222**

Thousands of Euros	2019	2020
Change in plan assets		
Fair value of plan assets at the beginning of the year	**216,101**	**259,952**
Expected return on plan assets	3,740	2,349
Remeasurements on plan assets	17,138	5,398
Employer contributions	49,291	32,473
Member contributions	946	905
Benefits paid from plan/company	(24,272)	(26,873)
Expenses paid	(3,823)	(1,870)
Net transfer in/(out) (including the effect of any business combinations/divestitures)	87	(76)
Exchange rate changes	744	(568)
FAIR VALUE OF PLAN ASSETS AT THE END OF THE YEAR	**259,952**	**271,690**

Pension plans mainly in Belgium, Korean, Liechtenstein,and Japan are wholly or partly funded with assets covering a substantial part of the obligations. All other plans have no material funding or are unfunded.

Thousands of Euros	2019	2020
Amount recognized in the balance sheet		
Defined benefit obligations	651,685	697,222
Fair value of plan assets	259,952	271,690
FUNDED STATUS	**391,733**	**425,532**
NET LIABILITY (ASSET)	**391,733**	**425,532**
Components of pension costs		
Amounts recognized in profit and loss statement		
Current service cost	32,958	34,591
Interest cost	9,908	6,246
Interest income on plan assets	(3,740)	(2,349)
Remeasurement of Other Long Term Benefits	(1,890)	277
Administrative expenses and taxes	51	51
TOTAL PENSION COST RECOGNIZED IN P&L ACCOUNT	**37,287**	**38,816**
Amounts recognized in other comprehensive income		
Cumulative remeasurements at opening	**199,949**	**270,082**
Remeasurements of the year	70,882	28,004
Minorities	(772)	37
Other movements	-	1,775
Exchange differences	23	(69)
TOTAL RECOGNIZED IN THE OCI AT SUBSIDIARIES	**270,082**	**299,829**
Remeasurements at associates and joint ventures	27,944	25,202
TOTAL RECOGNIZED IN THE OCI	**298,026**	**325,030**
Remeasurements recognised in Other comprehensive income as per Note F23 (w/o Minorities)	(70,605)	(27,632)
Currency translation differences as per Note F23 (w/o Minorities)	(539)	2,403
Reameasurements related to Minorities (including ctd's on Minorities)	(776)	32
TOTAL REMEASUREMENT SHOWN IN OCI	**(71,921)**	**(25,198)**
.Currency translation differences as per Note F23 (w/o Minorities)	539	(2,403)
.Currency translation differences related to Minorities	4	5
.Remeasurements related to equity companies	496	(409)
TOTAL REMEASUREMENTS SHOWN IN NOTE F27	**(70,882)**	**(28,004)**
Remeasurements (recognized in other comprehensive income)		
Effect of changes in demographic assumptions	1,070	1,433
Effect of changes in financial assumptions	80,772	29,124
Effect of experience adjustments	5,859	2,677
(Return) on plan assets (excluding interest income)	(17,015)	(5,230)
TOTAL REMEASUREMENTS INCLUDED IN OTHER COMPREHENSIVE INCOME	**70,686**	**28,004**

The interest cost and return on plan assets as well as the discount rate impact on the nonpost-employment benefit plans, are recognized under the finance cost in the income statement (see note F11). All other elements of the expense of the year are classified under the operating result in the "wages, salaries and direct social advantages".

Remeasurements of the year recognized in OCI originate mainly from a change in discount rates on the pension plans and differences between the expected and actual return on plan assets.

	2019	2020
PRINCIPAL ACTUARIAL ASSUMPTIONS		
Weighted average assumptions to determine benefit obligations at year end		
Discount rate (%)	0.95	0.78
Rate of compensation increase (%)	2.60	2.55
Rate of price inflation (%)	1.78	1.75
Rate of pension increase (%)	1.30	1.30
Weighted average assumptions used to determine net cost		
Discount rate (%)	1.85	0.95
Rate of compensation increase (%)	2.85	2.60
Rate of price inflation (%)	1.78	1.78
Rate of pension increase (%)	1.36	1.30

	2020	
	Fair value of all plan assets	Fair Value of plan assets with quoted market price
Plan assets		
Cash and cash equivalents	25,629	25,624
Equity instruments	37,215	37,204
Debt instruments	104,902	104,786
Real estate	6,083	6,078
Assets held by insurance company	92,047	79,106
Other	5,814	4,542
TOTAL PLAN ASSETS	**271,690**	**257,340**

Assumptions are recommended by the local actuaries in line with the IAS19 revised. The standard reference for the Eurozone is iBOXX AA Index yield and similar indexes are used for the other regions. Mortality tables used are country specific.

Other plan assets are predominantly invested in insurance contracts and bank term deposits. The expected long-term rate of return on assets assumptions is documented for the individual plans as recommended by the local actuaries.

	2020	
	Valuation trend +0,25%	Valuation trend -0,25%
Sensitivity to trend rate assumptions on discount rate		
Present value of defined benefit obligation	658,818	709,792
Weighted average duration of benefit obligation (in years)	14.18	15.63
Sensitivity to trend rate assumptions on inflation rate		
Present value of defined benefit obligation	672,805	642,411
Sensitivity to trend rate assumptions on salary increase rate		
Present value of defined benefit obligation	691,403	670,934

Thousands of Euros	2019	2020
BALANCE SHEET RECONCILIATION		
Balance sheet liability (asset) as of previous year	**332,951**	**391,734**
Pension expense recognized in P&L in the financial year	37,287	38,816
Amounts recognized in SoCI	70,686	28,004
Employer contributions via funds in the financial year	(37,964)	(20,633)
Employer contributions paid directly in the financial year	(11,327)	(11,840)
Amounts recognized due to plan combinations	(13)	233
Exchange rate adjustment - (gain)/loss	114	(785)
BALANCE SHEET LIABILITY (ASSET) AS OF END OF THE YEAR	**391,734**	**425,529**
Provisions for employee benefits in non current liabilites as per Balance Sheet	392,651	426,356
Asset employee benefit in non current asset (note F20)	(744)	(820)
Other	(173)	(7)
NET OBLIGATION ON BALANCESHEET	**391,734**	**425,529**

At 31 December Thousands of Euros	2016	2017	2018	2019	2020
Present value of defined benefit obligation	521,153	552,021	549,052	651,685	697,222
Fair value of plan assets	183,246	209,774	216,101	259,952	271,690
DEFICIT (SURPLUS) IN THE PLAN	**337,907**	**342,247**	**332,951**	**391,733**	**425,532**
Experience adjustments on plan assets	(16,036)	(5,286)	4,410	(17,138)	(5,398)
Experience adjustments on plan liabilities	14,861	4,611	5,967	3,032	2,942

Thousands of Euros	2020
EXPECTED CASH FLOWS FOR FOLLOWING YEAR	
Expected employer contributions	34,132
Expected total benefit payments	
Year 1	31,359
Year 2	25,960
Year 3	25,600
Year 4	20,150
Year 5	29,209
Next 5 years	160,840

F28 STOCK OPTION PLANS GRANTED BY THE COMPANY

Plan	Expiry date	Exercise	Exercise price EUR (the exercise price may be higher in certain countries)	Number of options still to be exercised
ISOP 2014	10/02/2021	all working days of Euronext Brussels	16.14	101,750
			15.80	3,000
			16.49	7,875
				112,625
ISOP 2015	09/02/2022	all working days of Euronext Brussels	17.29	344,315
			18.90	10,000
			19.50	24,750
				379,065
ISOP 2016	04/02/2023	all working days of Euronext Brussels	16.63	720,750
				720,750
ISOP 2017	13/02/2024	all working days of Euronext Brussels	25.50	977,000
			27.04	23,750
				1,000,750
ISOP 2018	08/02/2025	all working days of Euronext Brussels	40.90	1,182,625
				1,182,625
ISOP 2019	10/02/2026	all working days of Euronext Brussels	34.08	1,216,000
			36.78	5,000
				1,221,000
ISOP 2020	09/02/2027	all working days of Euronext Brussels	42.05	1,168,375
				1,168,375
TOTAL				**5,785,190**

ISOP refers to "Incentive Stock Option Plan" (worldwide plan for managers).

The stock options, which are typically vested at the time of the grant, are foreseen to be settled with treasury shares. Options which have not been exercised before the expiry date elapse automatically.

	2019		2020	
	Number of share options	Weighted average exercise price	Number of share options	Weighted average exercise price
DETAILS OF THE SHARE OPTIONS OUTSTANDING DURING THE YEAR				
Outstanding at the beginning of the year	**5,356,854**	**24.14**	**5,641,250**	**27.42**
Granted during the year	1,221,000	34.09	1,168,375	42.05
Exercised during the year	936,604	17.37	1,024,435	18.25
OUTSTANDING AT THE END OF THE YEAR	**5,641,250**	**27.42**	**5,785,190**	**32.00**
Exercisable at the end of the year	5,641,250	27.42	5,785,190	32.00

The options outstanding at the end of the year have a weighted average contractual life until January 2025.

The details concerning the calculation of the fair value of the options granted are detailed under note F10 on Payroll and related Benefits.

F29 ENVIRONMENTAL PROVISIONS

Thousands of Euros	Provisions for soil clean-up & site rehabilitation	Other environmental provisions	Total
At the end of previous year	**57,992**	**10,089**	**68,081**
. Acquisition through business combinations	-	2,079	2,079
. Increase (included in "Other operating expenses")	54,479	7,703	62,182
. Reversal (included in "Other operating expenses")	(353)	(197)	(550)
. Use (included in "Other operating expenses")	(1,777)	(6,501)	(8,278)
. Discounting (included in "Finance cost - Net")	53	-	53
. Translation differences	(2,156)	-	(2,156)
. Other movements	(0)	(38)	(38)
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**108,238**	**13,136**	**121,374**
Of which - Non Current	105,093	7,165	112,258
Of which - Current	3,145	5,971	9,116

Provisions for environmental legal and constructive obligations are recognized and measured by reference to an estimate of the probability of future cash outflows as well as to historical data based on the facts and circumstances known at the end of the reporting period. The actual liability may differ from the amounts recognized.

Provisions increased overall by € 53.3 million, with additional provisions which are higher than the uses and reversals of existing provisions.

The acquisitions through business combinations are related to the subsequent corrections of the opening balance sheet in Finland during the course of 2020 (note F8).

The new provisions for soil and groundwater remediation are mainly related to new provisions taken in Belgium at the Hoboken and Olen sites. In Recycling, a charge of € 50.9 million was accounted for, comprising a € 50.0 million provision to cover costs related to the intention to buy houses closest to the Hoboken plant and create a green zone. These costs comprise an estimated purchase value of the houses (based on third party appraisal) to be demolished as well as an estimate of demolition and landscaping costs. Concertation with the city council and residents is ongoing and might result in adjustments to this cost estimate.

Most of the uses of provisions for soil and groundwater remediation for the period are linked to the realization of site remediation programs in France, in the USA and in Belgium.

Early 2020, the Federal Agency for Nuclear Control issued guiding principles for the permanent remediation and storage of the legacy radioactive material related to Umicore's Olen site in Belgium. Joint working groups have been established, including governmental agencies such as NIRAS/ONDRAF, OVAM, FANC and Umicore to elaborate a roadmap describing the different steps that need to be taken to reach a permanent storage solution. This exercise will include an update of the estimated future remediation and storage costs and the dedicated existing environmental provisions once the technical aspects will have been determined. Developing and implementing this detailed roadmap is currently expected to take several years. Umicore will in the meantime continue the monitoring works to guarantee that no risks are emanating from those remnants, neither for the workers on site, nor for the surrounding population.

The movements of the other environmental provisions are mainly related to the need for and adjustment of CO2 emission rights in Belgium.

Management expects the most significant cash outflows on these projects for non-current elements to take place within 10 years.

F30 PROVISIONS FOR OTHER LIABILITIES AND CHARGES

Thousands of Euros	Provisions for reorganisation & restructuring	Provisions for litigation	Provisions for onerous contracts IFRS 9	Provisions for other liabilities and charges	Total
At the end of the previous year	22,945	3,288	24,105	53,293	103,631
. Increase (included in "Other operating expenses")	39,590	-	-	24,819	64,409
. Reversal (included in "Other operating expenses")	(3,111)	-	(2,650)	(16,552)	(22,313)
. Use (included in "Other operating expenses")	(9,888)	(569)	(528)	(9,190)	(20,175)
. Translation differences	(2,100)	(32)	(964)	(1,489)	(4,585)
. Transfers	(6,581)	-	-	6,572	(9)
AT THE END OF THE FINANCIAL YEAR FOR CONTINUING OPERATIONS	**40,856**	**2,686**	**19,963**	**57,454**	**120,958**
Of which - Non Current	29,154	945	-	39,683	69,782
Of which - Current	11,703	1,741	19,963	17,773	51,180

Provisions for reorganization and restructuring and other liabilities and charges are recognized and measured by reference to an estimate of the probability of future outflow of cash as well as to historical data based on the facts and circumstances known at the end of the reporting period. The actual liability may differ from the amounts recognized.

Provisions increased overall by € 17.3 million.

Additional provisions for reorganization and restructuring have been taken for the restructuring initiatives in Cobalt & Specialty Materials in Belgium, in the USA and in France for € 9.4 million. € 14.7 million have been booked as well in Rechargeable Battery Materials linked to a site reconfiguration in Korea and € 13.9 million in Catalysis related to the consolidation of the North American automotive catalysts production.

The uses of provisions for reorganization and restructuring relate to the execution of the previously announced restructurings in the USA and in Germany.

The provisions for litigation are not including the tax provisions related to IFRIC 23 as those are booked under the line Income tax payable.

The provisions for onerous contracts related to IFRS 9 are linked to the introduction of IFRS 9 for fair value hedging. The Group's economical transactional metal hedging policy prescribes that mark-to-market valuation principles are initially applied on all elements of the transactional hedging position, hedging instruments as well as hedged items. Where possible this happens under IFRS 9 hedge accounting criteria. When IFRS 9 hedge accounting cannot be applied or obtained, Umicore offsets under IAS 37 principles any material positive mark-to-markets with provisions for onerous contracts and reclassifies the negative mark-to-markets under the provisions for onerous contracts (see also Notes F2.21.1, F3.2.2 and F4.5). The movement in 2020 on the IFRS 9 related onerous contract provisions amounted to net decrease of € 4.1 million.

The other provisions for liabilities and charges include other onerous contracts provisions of € 12.7 million (net increase of € 9.5 million compared with 2019) and provisions for warranty and quality recall risks of € 32.8 million (net decrease of € 10.3 million compared with 2019) that are mainly linked to risks related to automotive end market applications in both Catalysis and Energy & Surface Technologies (the latter referring to the dedicated provisioning model for battery materials introduced in 2018).

No reliable estimation could be made regarding the expected timing of cash outflows related to the non-current part of the provisions for other liabilities and charges.

F31 CAPITAL EMPLOYED

Thousands of Euros	Notes	31/12/2019	30/06/2020	31/12/2020
Intangible assets	F14,F15	370,859	345,630	346,888
Property, plant and equipment	F16	2,094,672	2,082,292	2,163,661
Investments accounted for under the equity method	F17	150,642	144,233	139,839
Financial assets at FV through OCI	F18	10,897	10,480	8,352
Inventories	F19	2,462,330	2,516,570	2,718,092
Non current receivable (excluding assets employee benefits)	F20	10,865	9,815	10,945
Adjusted current accounts receivable		1,405,810	1,281,869	1,611,461
Income tax receivable		45,447	39,076	39,553
ASSETS INCLUDED IN CAPITAL EMPLOYED		**6,551,521**	**6,429,964**	**7,038,790**
Non-current trade and other payables	F25	24,120	21,246	23,505
Adjusted current accounts payable		1,867,518	1,807,704	2,360,975
Translation reserves	F23	(82,870)	(154,151)	(202,148)
Non-current provisions	F29,F30	107,487	106,666	182,040
Current provisions	F29,F30	64,230	50,721	60,296
Income tax payable		131,483	147,874	160,734
LIABILITIES INCLUDED IN CAPITAL EMPLOYED		**2,111,969**	**1,980,060**	**2,585,401**
Capital employed		**4,439,552**	**4,449,904**	**4,453,389**
Eliminations		2,439	2,707	3,191
CAPITAL EMPLOYED AS PUBLISHED		**4,441,991**	**4,452,611**	**4,456,580**
Average Capital Employed in half year preceding closing date		4,208,271		4,454,596
Average Capital Employed in year preceding closing date		**4,048,377**		**4,450,948**
Adjusted EBIT in year preceding closing date	F9	508,920		536,361
ROCE in year preceding closing date		**12.57%**		**12.05%**

The adjusted current account receivables included in the "Capital Employed" do not take into account the margin calls (€ 20.6 million at the end of 2020) and the gains booked on the mark-to-market value of strategic hedging instruments (€ 45.1 million in 2020). The adjusted current account payables included in the "Capital Employed" do not take into account the losses booked on the mark-to-market value of strategic hedging instruments (€ 58.0 million at the end of 2020).

Average capital employed for the half years is calculated as the average of the capital employed at the end of the period and at the end of the preceding period. Average capital employed for the year is calculated as the average of the capital employed of both half years.

F32 FINANCIAL INSTRUMENTS BY CATEGORY

AS AT THE END OF PREVIOUS YEAR

					Carrying amount	
Thousands of Euros	Level	Fair value	Fair value hedge accounting (*)	Cash Flow hedge accounting	Loans, receivables and payables	Financial assets at FV through OCI
ASSETS						
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		**10,897**	**-**	**-**	**-**	**10,897**
Financial assets at fair value through Other Comprehensive Income - Shares	1	10,897	-	-	-	10,897
LOANS GRANTED		**2,192**	**-**	**-**	**2,192**	**-**
Loans to associates and non consolidated affiliates		2,192	-	-	2,192	-
TRADE AND OTHER RECEIVABLES		**1,445,696**	**47,495**	**19,699**	**1,378,502**	**-**
Non-current						
Cash guarantees and deposits		8,893	-	-	8,893	-
Other receivables maturing in more than 1 year		1,972	-	-	1,972	-
Assets employee benefits		1,173	-	-	1,173	-
Current						
Trade receivables (at cost)		1,171,835	-	-	1,171,835	-
Trade receivables (write-down)		(22,983)	-	-	(22,983)	-
Other receivables (at cost)		180,336	-	-	180,336	-
Other receivables (write-down)		(207)	-	-	(207)	-
Interest receivable	2	156	-	-	156	-
Fair value of financial instruments held for cash-flow hedging	2	19,699	-	19,699	-	-
Fair value receivable - financial instruments related to FV hedging		47,495	47,495	-	-	-
Deferred charges and accrued income		37,327	-	-	37,327	-
CASH AND CASH EQUIVALENTS		**271,723**	**-**	**-**	**271,723**	**-**
Short-term investments: bank term deposits		25,524	-	-	25,524	-
Short-term investments: term deposits (other)		7	-	-	7	-
Cash-in-hand and bank current accounts		246,192	-	-	246,192	-
TOTAL OF FINANCIAL INSTRUMENTS (ASSETS)		**1,730,508**	**47,495**	**19,699**	**1,652,417**	**10,897**

Thousands of Euros	Level	Fair value	Fair value hedge accounting (*)	Cash Flow hedge accounting	Carrying amount: Loans, receivables and payables	Carrying amount: Financial assets at FV through OCI
Liabilities						
FINANCIAL DEBT		**1,753,145**	**-**	**-**	**1,715,146**	**-**
Non-current						
Bank loans		1,139,266	-	-	1,101,266	-
Lease liability		46,262	-	-	46,262	-
Other loans		3,555	-	-	3,555	-
Current						
Short term bank loans		248,478	-	-	248,478	-
Bank overdrafts		32,493	-	-	32,493	-
Short term loan: commercial paper		282,936	-	-	282,936	-
Other loans		155	-	-	155	-
TRADE AND OTHER PAYABLES		**1,940,468**	**18,670**	**48,829**	**1,872,969**	**-**
Non-current						
Long term trade payables		2,579	-	-	2,579	-
Other long term debts		5,520	-	-	5,520	-
Investments grants and deferred income from grants		16,021	-	-	16,021	-
Current						
Trade payables		1,466,140	-	-	1,466,140	-
Advances received on contracts in progress		15,448	-	-	15,448	-
Tax - other than income tax - payable		26,190	-	-	26,190	-
Payroll and related charges		125,252	-	-	125,252	-
Other amounts payable		56,399	-	-	56,399	-
Dividends payable		11,657	-	-	11,657	-
Accrued interest payable		7,856	-	-	7,856	-
Fair value financial instrument held for cash flow hedging	2	48,829	-	48,829	-	-
Fair value payable - financial instruments related to FV hedging	2	18,670	18,670	-	-	-
Accrued charges and deferred income		139,907	-	-	139,907	-
TOTAL OF FINANCIAL INSTRUMENTS (LIABILITIES)		**3,693,613**	**18,670**	**48,829**	**3,588,115**	**-**

(*) see note F33.2 paragraph 1 for IFRS 9 classification of financial instruments for currency and commodity hedging.

AS AT THE END OF THE FINANCIAL YEAR

Thousands of Euros	Level	Fair value	Fair value hedge accounting (*)	Cash Flow hedge accounting	Carrying amount: Loans, receivables and payables	Carrying amount: Financial assets at FV through OCI
Assets						
FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME		**8,352**	**-**	**-**	**-**	**8,352**
Financial assets at fair value through Other Comprehensive Income - Shares	1	8,352	-	-	-	8,352
LOANS GRANTED		**3,332**	**-**	**-**	**3,332**	**-**
Loans to associates and non consolidated affiliates		3,332	-	-	3,332	-
TRADE AND OTHER RECEIVABLES		**1,688,931**	**23,442**	**45,091**	**1,620,398**	**-**
Non-current						
Cash guarantees and deposits		8,370	-	-	8,370	-
Other receivables maturing in more than 1 year		2,574	-	-	2,574	-
Assets employee benefits		820	-	-	820	-
Current						
Trade receivables (at cost)		1,366,686	-	-	1,366,686	-
Trade receivables (write-down)		(22,319)	-	-	(22,319)	-
Other receivables (at cost)		177,008	-	-	177,008	-
Other receivables (write-down)		(207)	-	-	(207)	-
Interest receivable		495	-	-	495	-
Fair value of financial instruments held for cash-flow hedging	2	45,091	-	45,091	-	-
Fair value receivable - financial instruments related to FV hedging	2	23,442	23,442	-	-	-
Deferred charges and accrued income		86,973	-	-	86,973	-
CASH AND CASH EQUIVALENTS		**1,010,306**	**-**	**-**	**1,010,306**	**-**
Short-term investments: bank term deposits		373,904	-	-	373,904	-
Short-term investments: term deposits (other)		5	-	-	5	-
Cash-in-hand and bank current accounts		636,397	-	-	636,397	-
TOTAL OF FINANCIAL INSTRUMENTS (ASSETS)		**2,710,921**	**23,442**	**45,091**	**2,634,036**	**8,352**

Thousands of Euros	Level	Fair value	Fair value hedge accounting (*)	Cash Flow hedge accounting	Carrying amount Loans, receivables and payables	Carrying amount Financial assets at FV through OCI
Liabilities						
FINANCIAL DEBT		**2,495,431**	**-**	**-**	**2,424,331**	**-**
Non-current						
Bank loans		1,276,100	-	-	1,205,000	-
Lease liability		52,865	-	-	52,865	-
Other loans		447,289	-	-	447,289	-
Current						
Short term bank loans		576,056	-	-	576,056	-
Bank overdrafts		8,678	-	-	8,678	-
Short term loan: commercial paper		134,282	-	-	134,282	-
Other loans		162	-	-	162	-
TRADE AND OTHER PAYABLES		**2,442,433**	**38,296**	**57,957**	**2,346,180**	**-**
Non-current						
Other long term debts		5,682	-	-	5,682	-
Investments grants and deferred income from grants		17,823	-	-	17,823	-
Current						
Trade payables		1,896,099	-	-	1,896,099	-
Advances received on contracts in progress		32,180	-	-	32,180	-
Tax - other than income tax - payable		38,317	-	-	38,317	-
Payroll and related charges		135,835	-	-	135,835	-
Other amounts payable		39,733	-	-	39,733	-
Dividends payable		11,618	-	-	11,618	-
Accrued interest payable		9,109	-	-	9,109	-
Fair value financial instrument held for cash flow hedging	2	57,957	-	57,957	-	-
Fair value payable - financial instruments related to FV hedging	2	38,296	38,296	-	-	-
Accrued charges and deferred income		159,784	-	-	159,784	-
TOTAL OF FINANCIAL INSTRUMENTS (LIABILITIES)		**4,937,864**	**38,296**	**57,957**	**4,770,511**	**-**

(*) see note F33.2 paragraph 1 for IFRS 9 classification of financial instruments for currency and commodity hedging.

Loans and debt have been issued at market rates which would not create any major differences with effective interest expenses. All categories of financial instruments of Umicore are at fair value except the non-current bank and other loans for which the carrying amounts differ from the fair value (see note F24). The fair value of financial instruments traded in active markets is based on quoted market prices at the end of the reporting period. The fair value of financial instruments that are not traded in an active market is determined using valuation techniques, mainly discounted cash-flow, using market assumptions prevailing at the end of the reporting period. In particular, the fair value of interest rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange, metal and energy contracts is determined using quoted forward exchange, metal and energy rates at the end of the reporting period. The fair value of quoted financial assets held by the Group is their quoted market price at the end of the reporting period. The fair value of financial liabilities is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments. The carrying value less impairment provision of trade receivables and payables are assumed to approximate their fair values.

32.1 FAIR VALUE HIERARCHY

The Group adopted the amendment to IFRS 7 for financial instruments which are measured in the balance sheet at fair value, with effect from January 2009. This amendment requires disclosures of fair value measurements by level, based on the following fair value measurement hierarchy:

- Level 1: fair value based on quoted prices in active markets for identical assets or liabilities.
- Level 2: fair value based on inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly.
- Level 3: fair value for the asset or liability valuation are based on unobservable inputs.

In the Group, the fair values on financial assets at fair value through OCI are measured as level 1.

All the metal, energy and foreign currency derivatives are measured as level 2.

32.2 SENSITIVITY ANALYSIS ON FINANCIAL INSTRUMENTS

Umicore is sensitive to commodity prices, foreign currency and interest rate risk on its financial instruments.

32.2.1 COMMODITY PRICES

The fair value on financial instruments related to cash flow hedging sales would have been € 18.2 million lower/higher if the metal prices would strengthen/weaken by 10%.

The fair value on financial instruments related to cash flow hedging purchases would have been € 3.0 million higher/lower if the energy prices would strengthen/weaken by 10%. The fair value on financial instruments related to cash flow hedging purchases would have been € 7.9 million higher/lower if the metal prices would strengthen/weaken by 10%.

The fair value on other commodity sales financial instruments would have been € 32.3 million lower/higher and the fair value on other commodity purchases financial instruments would have been € 3.6 million higher/lower if the metal prices would strengthen/weaken by 10%.

32.2.2 FOREIGN CURRENCY

The fair value of forward currency contracts related to cash flow hedging would have been € 11.7 million higher if the EUR would strengthen against USD by 10% and would have been € 16.1 million lower if the EUR would weaken against USD by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 0.9 million lower if the EUR would strengthen against ZAR by 10% and would have been € 1.1 million higher if the EUR would weaken against ZAR by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 4.0 million lower if the USD would strengthen against KRW by 10% and would have been € 4.9 million higher if the USD would weaken against KRW by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 3.8 million higher if the EUR would strengthen against CNY by 10% and would have been € 4.2 million lower if EUR would weaken against CNY by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 9.0 million lower if the USD would strengthen against CNY by 10% and would have been € 10.6 million higher if USD would weaken against CNY by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 5.4 million lower if the USD would strengthen against BRL by 10% and would have been € 6.9 million higher if USD would weaken against BRL by 10%.

The fair value of forward currency contracts related to cash flow hedging would have been € 2.0 million lower if the USD would strengthen against CAD by 10% and would have been € 2.5 million higher if USD would weaken against CAD by 10%.

The fair value of other forward currency contracts sold would have been € 56.3 million higher if the EUR would strengthen against USD by 10% and would have been € 68.8 million lower if the EUR would weaken against USD by 10%.

The fair value of other forward currency contracts bought would have been € 11.6 million lower if the EUR would strengthen against USD by 10% and would have been € 14.1 million higher if the EUR would weaken against USD by 10%.

The fair value of net position of current assets and liabilities exposed to USD would have been € 18.9 million lower if the EUR would strengthen against USD by 10% and would have been € 23.2 million higher if the EUR would weaken against USD by 10%.

The fair value of other forward currency contracts sold would have been € 36.7 million higher if the EUR would strengthen against CNY by 10% and would have been € 44.9 million lower if the EUR would weaken against CNY by 10%.

The fair value of net position of current assets and liabilities exposed to CNY would have been € 29.8 million lower if the EUR would strengthen against CNY by 10% and would have been € 36.4 million higher if the EUR would weaken against CNY by 10%.

The fair value of other forward currency contracts sold would have been € 18.1 million higher if the CNY would strengthen against USD by 10% and would have been € 22.1 million lower if the CNY would weaken against USD by 10%.

The fair value of other forward currency contracts bought would have been € 12.0 million lower if the EUR would strengthen against PLN by 10% and would have been € 14.6 million higher if the EUR would weaken against PLN by 10%.

The fair value of net position of current assets and liabilities exposed to PLN would have been € 12.3 million lower if the EUR would strengthen against PLN by 10% and would have been € 15.0 million higher if the EUR would weaken against PLN by 10%.

The fair value of other forward currency contracts sold would have been € 7.7 million higher if the EUR would strengthen against HKD by 10% and would have been € 9.4 million lower if the EUR would weaken against HKD by 10%.

The fair value of other forward currency contracts bought would have been € 9.6 million lower if the KRW would strengthen against USD by 10% and would have been € 7.9 million higher if the KRW would weaken against USD by 10%.

The fair value of net position of current assets and liabilities exposed to KRW would have been € 10.0 million lower if the EUR would strengthen against KRW by 10% and would have been € 12.2 million higher if the EUR would weaken against KRW by 10%.

F33 FAIR VALUE OF FINANCIAL INSTRUMENTS (DERIVATIVES)

Umicore hedges its structural and transactional commodity (metal and energy), currency and interest rate risks using respectively commodity derivatives (mainly quoted on the London Metal Exchange), currency derivatives and Interest Rate Swaps with reputable brokers and banks.

33.1 FINANCIAL INSTRUMENTS RELATED TO CASH-FLOW HEDGING

	Notional or Contractual amount		Fair value	
Thousands of Euros	31/12/2019	31/12/2020	31/12/2019	31/12/2020
Forward commodities sales	186,117	131,855	(41,403)	(49,786)
Forward commodities purchases	(76,930)	(86,877)	7,538	22,099
Forward currency contracts sales	319,897	641,320	(829)	12,606
Forward currency contracts purchases	(64,264)	(79,688)	6,250	2,986
Forward IRS contracts	40,000	40,000	(687)	(771)
TOTAL FAIR VALUE IMPACT SUBSIDIARIES			**(29,130)**	**(12,866)**
recognized under trade and other receivables			19,699	45,091
recognized under trade and other payables			(48,829)	(57,957)
Total fair value impact associates and joint ventures			72	1,114
TOTAL			**(29,058)**	**(11,752)**

The principles and documentation on the hedged risks as well as the timing related to the Group's cash flow hedging operations are included in note F3 Financial risk management.

The fair values of the effective hedging instruments are in the first instance recognized in the fair value reserves recorded in equity and are derecognized when the underlying forecasted or committed transactions occur (see note F23).

The forward commodities sales contracts are set up to hedge primarily the following commodities: gold, silver, palladium, platinum nickel, lead and copper. The forward commodity purchase contracts are set up to hedge primarily the electricity, gas and fuel oil price risks and the commodity nickel. The forward currency contracts are set up to hedge USD towards EUR, KRW, CNY, BRL and CAD as well as EUR towards ZAR and CNY. The terms and conditions of the forward contracts are common market conditions. In those circumstances whereby the hedge accounting documentation as defined under IFRS 9 is not available, financial instruments used to hedge structural risks for metals and currencies are measured as if they were held for trading. However, such instruments are being used to hedge future probable cash-flows and are not speculative in nature. Umicore did not face any ineffectiveness on cash flow hedging in P&L in 2019 and 2020.

The fair values of the hedging instruments reflect the difference between the contract rates and the closing rates. The total fair value of financial instruments for cash-flow hedging has a negative impact on the fair value reserves in equity at end of 2020. This negative impact is most significant for commodities sold, while commodities purchased and forward currency contracts offset part of this negative impact. The majority of the hedging instruments have their maturity within the next two years.

33.2 FINANCIAL INSTRUMENTS RELATED TO FAIR VALUE HEDGING

	Notional or Contractual amount		Fair value	
Thousands of Euros	31/12/2019	31/12/2020	31/12/2019	31/12/2020
Forward commodities sales	389,955	303,729	28,666	(19,549)
Forward commodities purchases	(390,761)	(33,687)	(937)	1,891
Forward currency contracts sales	1,346,766	1,532,188	2,818	5,342
Forward currency contracts purchases	(613,466)	(536,554)	(1,723)	(2,539)
TOTAL FAIR VALUE IMPACT SUBSIDIARIES			**28,824**	**(14,854)**
recognized under trade and other receivables			47,495	23,442
recognized under trade and other payables			(18,670)	(38,296)
TOTAL			**28,824**	**(14,854)**

The principles and documentation related to the Group's transactional hedging are included in note F3 "Financial Risk Management". Under Umicore's economical hedging policy, financial instruments for currency and commodity hedging are used to protect the fair value of underlying hedged items (assets, liabilities and firm commitments) and are recognized at fair value at closing date. Umicore obtained for the fair value hedging of its currency risk exposures hedge accounting under the criteria of IFRS 9 (see note F2.21.1). For the fair value hedging of its commodity risk exposures, Umicore did not obtain hedge accounting under the criteria of IFRS 9. In that latter case, the financial instruments are measured at fair value as if they were held for trading. However, such instruments are being used to cover existing transactions, considered as hedged items under Umicore transactional hedging risk policy (primarily inventory and firm commitments) and so these commodity hedging instruments held for trading are not speculative in nature. The accounting treatment of hedged items in absence of IFRS 9 hedge accounting is further described in note F30 on Provisions for other Liabilities and Charges.

The fair values are immediately recognized in the income statement under Other Operating income for the commodity instruments and the Net Finance cost for the currency instruments.

The fair values of the hedging instruments reflect the difference between the contract rates and the closing rates. The booking of the fair value movements on financial instruments under fair value hedging had a negative impact on the operating income at the end of 2020. Most of the fair values of the hedging instruments are not significant as the closing rates do not materially differ from the strike rates. Only for the commodities sold the fair values are significant. These concern metal hedging instruments of which most have their maturity within the next year. However, in view of the intent of the Group policy on transactional hedging, the net impact on operating income of fair value movements on both hedging instruments and hedged items is neutral. The forward commodities sales contracts are set up to hedge primarily the following commodities: gold, silver, palladium, platinum, nickel, lead and copper. The forward commodity purchase contracts are set up to hedge primarily gold, silver, nickel, lead and copper. The forward currency contracts are set up to hedge USD towards EUR, KRW, CNY, BRL and CAD as well as EUR towards CNY, ZAR, CAD, CHF, JPY, THB, DKK and PLN.

AS AT THE END OF PREVIOUS YEAR

	Earliest contractual maturity (undiscounted) - notional amounts					Earliest contractual maturity (undiscounted) - fair value				
Thousands of Euros	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total
FINANCIAL INSTRUMENTS ASSETS (FAIR VALUE)										
Commodity risk										
Total forward sales (CFH)	1,099	2,078	9,231	2,286	**14,694**	119	245	1,002	25	**1,391**
Total forward purchases (CFH)	-	-	-	64,264	**64,264**	-	-	-	9,764	**9,764**
Total forward sales (FV Hedging)	49,076	59,043	131,159	-	**239,279**	8,620	10,327	14,812	-	**33,760**
Total forward purchases (FV Hedging)	16,865	270,499	-	-	**287,364**	233	7,370	-	-	**7,603**
FX Risk										
Forward currency contracts sales (CFH)	3,828	7,480	33,933	67,372	**112,613**	77	153	680	1,383	**2,294**
Forward currency contracts purchases (CFH)	-	-	-	64,264	**64,264**	-	-	-	6,250	**6,250**
Forward currency contracts sales (FV Hedging)	621,600	85,064	170,640	-	**877,304**	3,608	760	1,053	-	**5,421**
Forward currency contracts purchases (FV Hedging)	244,968	9,171	593	-	**254,732**	567	140	4	-	**711**
FINANCIAL INSTRUMENTS LIABILITIES (FAIR VALUE)										
Interest Rate Risk										
Interest rate swaps	-	-	-	40,000	**40,000**	-	-	-	(687)	**(687)**
Commodity risk										
Total forward sales (CFH)	-	26,944	53,907	90,572	**171,423**	-	(8,634)	(16,467)	(17,694)	**(42,795)**
Total forward purchases (CFH)	-	-	10,372	2,295	**12,667**	-	-	(2,125)	(101)	**(2,226)**
Total forward sales (FV Hedging)	20,221	82,057	48,397	-	**150,676**	(372)	(3,303)	(1,418)	-	**(5,094)**
Total forward purchases (FV Hedging)	45,294	38,073	20,030	-	**103,397**	(4,700)	(3,849)	9	-	**(8,540)**
FX Risk										
Forward currency contracts sales (CFH)	15,419	30,481	125,662	35,723	**207,284**	(399)	(738)	(2,186)	200	**(3,123)**
Forward currency contracts sales (FV Hedging)	313,853	145,539	10,071	-	**469,462**	(1,543)	(949)	(110)	-	**(2,603)**
Forward currency contracts purchases (FV Hedging)	237,483	22,170	98,779	301	**358,733**	(1,582)	(151)	(701)	(0)	**(2,434)**

AS AT THE END OF THE FINANCIAL YEAR

	Earliest contractual maturity (undiscounted) - notional amounts					Earliest contractual maturity (undiscounted) - fair value				
Thousands of Euros	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total	< 1 Month	1 to 3 Months	3 Months to 1 Year	1 to 5 Years	Total
Financial Instruments Assets										
Commodity risk										
Total forward sales (CFH)	-	249	661	743	**1,653**	-	6	7	(4)	**9**
Total forward purchases (CFH)	2,719	5,547	35,851	42,760	**86,877**	1,007	2,081	10,155	8,855	**22,099**
Total forward purchases (FV Hedging)	15,741	14,752	-	-	**30,493**	1,151	780	-	-	**1,931**
FX Risk										
Forward currency contracts sales (CFH)	32,269	55,116	260,213	204,150	**551,748**	1,452	2,436	11,856	4,254	**19,997**
Forward currency contracts purchases (CFH)	3,336	6,807	28,824	33,226	**72,194**	103	210	1,042	1,632	**2,986**
Forward currency contracts sales (FV Hedging)	594,604	522,845	173,820	-	**1,291,269**	6,530	5,360	5,008	-	**16,897**
Forward currency contracts purchases (FV Hedging)	98,242	10,145	1,786	630	**110,803**	4,478	124	4	8	**4,614**
Financial Instruments Liabilities										
Interest Rate Risk										
Interest rate swaps	-	-	-	40,000	**40,000**	-	-	-	(771)	**(771)**
Commodity risk										
Total forward sales (CFH)	288	15,247	46,867	67,800	**130,202**	(13)	(8,268)	(24,383)	(17,131)	**(49,795)**
Total forward sales (FV Hedging)	44,004	162,083	97,642	-	**303,729**	(6,675)	(11,827)	(1,047)	-	**(19,549)**
Total forward purchases (FV Hedging)	3,195	-	-	-	**3,195**	(40)	-	-	-	**(40)**
FX Risk										
Forward currency contracts sales (CFH)	3,148	8,156	34,112	39,750	**85,167**	(458)	(927)	(4,381)	(1,626)	**(7,391)**
Forward currency contracts sales (FV Hedging)	92,962	56,711	91,247	-	**240,920**	(7,111)	(3,228)	(1,216)	-	**(11,555)**
Forward currency contracts purchases (FV Hedging)	211,408	144,148	51,452	18,743	**425,751**	(2,293)	(2,847)	(1,628)	(385)	**(7,153)**

F34 NOTES TO THE CASH FLOW STATEMENT

34.1 DEFINITIONS

The cash flow statement identifies operating, investing and financing activities for the period.

Umicore uses the indirect method for the operating cash flows. The net profit and loss is adjusted for:

- the effects of non-cash transactions such as provisions, impairment losses, mark to market, etc., and the variance in operating capital requirements.
- items of income or expense associated with investing or financing cash flows.

Thousands of Euros	2019	2020
Adjustments for non cash transactions		
Depreciations	244,038	267,941
(Reversal) Impairment charges	23,602	87,543
Mark to market of inventories and commitments	(38,277)	464
Exchange difference on long-term loans	(1,946)	(4,169)
Inventories and bad debt provisions	39,926	7,012
Depreciation on government grants	(904)	(199)
Share-based payments	8,211	10,108
Change in provisions	(67,349)	80,323
TOTAL	**207,302**	**449,023**
Adjustments for items to disclose separately or under investing and financing cash flows		
Tax charge of the period	96,691	59,131
Interest (income) charges	41,042	57,910
(Gain) loss on disposal of fixed assets	(8,033)	(760)
Dividend income	(133)	(230)
TOTAL	**129,568**	**116,051**
Change in working capital requirement analysis		
Inventories	(154,236)	(255,762)
Trade and other receivables	(271,357)	(237,694)
Trade and other payables	383,700	531,216
AS IN THE CONSOLIDATED BALANCE SHEET	**(41,893)**	**37,760**
Non-cash items (*)	(10,329)	17,742
Items disclosed elsewhere (**)	(79,639)	(37,822)
Impact of business combination	56,050	(3,136)
Currency translation differences	(2,630)	(118,300)
AS IN THE CONSOLIDATED CASH FLOW STATEMENT	**(78,441)**	**(103,756)**

(*) Non-cash items are mainly linked to mark to market of inventories and commitments, strategic and transactional hedging and inventories, impairments in inventories and bad debt provisions.

(**) Item disclosed elsewhere are mainly due to changes in interest, dividend and tax receivable and payable and government grants.

Thousands of Euros	Net cash and cash equivalent	Loans (w/o bank overdrafts)	Net financial debt
At the end of previous year	239,231	1,682,653	1,443,422
Cash flow of the period	762,398	733,001	(29,397)
AT THE END OF THE FINANCIAL YEAR	**1,001,629**	**2,415,654**	**1,414,025**

34.2 NET CASH FLOW GENERATED BY OPERATING ACTIVITIES

Operating cash flow after tax from continuing operations is € 528.3 million. The net working capital requirements for continuing operations increased with € 103.8 million in 2020 compared to 2019, reflecting a pronounced increase in working capital needs in Catalysis and, to a lesser extent, in Recycling due to strong year-on-year price increases in precious metals, PGM's in particular. Energy & Surface Technologies reported a decrease in working capital needs year on year due to subdued sales volumes and metal prices.

34.3 NET CASH FLOW USED IN INVESTING ACTIVITIES

Net cash used in investing activities for continuing operations decreased by € 320.6 million in 2020. Capital expenditure for continuing operations reached € 403.2 million (compared to € 553.2 million in 2019) if capitalized R&D costs are excluded as per Umicore's definition of capital expenditures (refer to Glossary). This reduction in capital expenditure reflects the decision taken shortly after the start of the COVID-19 outbreak to postpone selected investment projects with the exception of safety and license to operate investments, awaiting more clarity on market outlook. Taking into account the continued investment in Rechargeable Battery Materials' greenfield plant in Poland, Energy & Surface Technologies accounted for close to two thirds of the Group's capex. Spending for this strategic project will continue into 2021. Capitalized development expenses amounted to € 32 million compared to € 35 million in 2019.

34.4 NET CASH FLOW USED IN FINANCING ACTIVITIES

The cash generated in financing activities is mainly the consequence of the net increase of the indebtedness (€ 806.0 million). The cash used in financing activities is mainly related to the purchase and use of own shares to cover the exercise of options (€ 26.9 million), the payment of dividends (€ 65.0 million) and of interest (€ 56.3 million) and the reimbursement of the lease liability (€ 19.8 million).

Thousands of Euros	2019	2020
Acquisition of tangible assets	529,487	391,475
Acquisition of intangible assets	58,362	44,060
ACQUISITIONS OF ASSETS	**587,849**	**435,535**
Capitalized R&D	34,660	32,368
CAPITAL EXPENDITURE FOR CONTINUING OPERATIONS	**553,189**	**403,168**

F35 OFF-BALANCE SHEET RIGHTS AND COMMITMENTS

Thousands of Euros	2019	2020
Guarantees constituted by third parties on behalf of the Group	24,802	30,999
Guarantees constituted by the Group on behalf of third parties	10,903	6,940
Guarantees received	130,005	68,596
Goods and titles held by third parties in their own names but at the Group's risk	515,254	1,513,704
Commitments to acquire and sell fixed assets	567	288
Commercial commitments for commodities purchased (to be received)	679,569	701,475
Commercial commitments for commodities sold (to be delivered)	1,213,465	1,667,126
Goods and titles of third parties held by the Group	3,635,638	4,930,583
Miscellaneous rights and commitments	567	288
TOTAL	**6,210,203**	**8,919,711**

35.1 GUARANTEES CONSTITUTED BY THIRD PARTIES ON BEHALF OF THE GROUP

These are secured and unsecured guarantees given by third parties to the creditors of the group guaranteeing that the Group's debts and commitments, actual and potential, will be satisfactorily discharged.

35.2 GUARANTEES CONSTITUTED BY THE GROUP ON BEHALF OF THIRD PARTIES

These are guarantees or irrevocable undertakings given by the Group in favor of third parties guaranteeing the satisfactory discharge of debts or of existing or potential commitments by the third party to its creditors.

There are no loan commitments given to third parties.

35.3 GUARANTEES RECEIVED

These are pledges and guarantees received guaranteeing the satisfactory discharge of debts and existing and potential commitments of third parties towards the Group, with the exception of guarantees and security in cash.

The guarantees received are mainly related to supplier guarantees backed by bank institutions. Those guarantees are set up to cover the good execution of work by the supplier.

Some guarantees received are related to customer guarantees, received mainly from a customer's mother company on behalf of one of its subsidiaries. A minor part of the received guarantees is related to rent guarantees.

All guarantees are taken at normal market conditions and their fair value is equivalent to the carrying amount. No re-pledge has been done on any of those guarantees.

35.4 GOODS AND TITLES HELD BY THIRD PARTIES IN THEIR OWN NAMES BUT AT THE GROUP'S RISK

These represent goods and titles included in the Group balance sheet for which the Group bears the risk and takes the profit, but where these goods and titles are not present on the premises of the Group. It concerns mainly inventories leased out to third parties or held under consignment or under tolling agreement by third parties.

35.5 COMMERCIAL COMMITMENTS

These are firm commitments to deliver or receive metals to customers or from suppliers at fixed prices.

35.6 GOODS AND TITLES OF THIRD PARTIES HELD BY THE GROUP

These are goods and titles held by the group, but which are not owned by the Group. It concerns mainly third-party inventories leased in or held under consignment or tolling agreements with third parties. It also includes in a much lesser extent some non-metal leases that are not in the scope of IFRS 16 because of lower values or short-term.

The Group leases metals (particularly gold, silver, platinum and palladium) from and to banks and other third parties for specified, mostly short term, periods and for which the group pays or receives fees. As at 31 December 2020, there was a net lease-in position of € 846 million vs. € 1,088 million at end of 2019. This decrease is mainly caused by lower volumes compensating higher metal prices. As detailed in Note F2.7, those metal leases are not under the scope of IFRS 16.

F36 CONTINGENCIES

As previously disclosed, the Group has a pending file that can be qualified as a contingent liability according to the definition of IFRS. A subsidiary of Element Six Abrasives received notice of a local tax assessment for € 25 million to be grossed up with statutory interests, estimated at 31 December 2020 at € 12.5 million. Having taken expert advice, Element Six Abrasives submitted an appeal contesting the assessment and recognised the file as a contingent liability. Umicore retains a 40.22 % interest in Element Six Abrasives and accounts for the company using the equity method.

The Group is the also subject of a number of other claims and legal proceedings incidental to the normal conduct of its business. Management does not believe that such claims and proceedings are likely to have a material adverse effect on the financial condition of Umicore.

F37 RELATED PARTIES

Thousands of Euros	2019	2020
Transactions with joint ventures and associates		
Operating income	109,636	100,444
Operating expenses	(208,746)	(148,888)
Dividends received	(11,321)	(1,796)

Thousands of Euros	2019	2020
Outstanding balances with joint ventures and associates		
Current trade and other receivables	24,457	32,685
Current trade and other payables	34,855	38,779

The transactions with associates and joint ventures are mainly commercial transactions, sales and purchases of goods and services.

There are no transaction with entities held by key management personnel.

Thousands of Euros	2019	2020
Supervisory Board		
Salaries and other compensation	897	1,022
Fixed portion	296	296
Variable portion (based on attended meetings)	334	373
Value of the share grant	264	350
Benefit in kind company car chairman	2	3

No variable or other compensation element (apart from attendance-related fees) is associated with directorship. No loan or guarantees have been granted by the company to members of the supervisory board.

Thousands of Euros	2019	2020
Management Board		
Salaries and other benefits	11,565	7,522
Short-term employee benefits	5,072	1,496
Post-employment benefits	1,002	1,052
Other long-term benefits	1,773	492
Share-based payments	3,718	4,483

The data above shows the accounting view of the supervisory board and management board remuneration and differs from the information provided in the remuneration report in the Corporate Governance section.

In the tables above, the employer social security contributions, if applicable, are included in the short-term employee benefits. These do not feature in the remuneration report.

With regards to share-based incentives the share grant figures included in share-based payments above represent the value of the shares granted in 2020 for services rendered in 2019. The remuneration report shows the value of the shares granted in 2021 for services rendered in the reporting year 2020.

The figures related to the undeferred part of the variable remuneration linked to the individual performance for the reference year 2020, included in short-term employee benefits, represent the level of accruals at balance sheet date. The remuneration report features the actual amounts paid with respect to the reference year 2020.

Accruals booked for the deferred parts of the variable cash remuneration for the reference year 2020 are included in the other long-term benefits. The amounts to be paid in 2023 will depend on long-term performance measures and the exact amounts paid will be included in the remuneration report of 2022.

F38 EVENTS AFTER THE REPORTING PERIOD

The Supervisory Board will propose a gross annual dividend of € 0.75 per share at the Annual General Meeting on 29 April 2021. This compares to a full dividend of € 0.375 p.s. paid out for the financial year 2019. Taking into account the interim dividend of € 0.25 per share paid out on 25 August 2020 and subject to shareholder approval, a gross amount of € 0.50 per share will be paid out on 5 May 2021.

On 11 February 2021, it was announced that the Supervisory Board would start a process to identify a successor to Marc Grynberg, CEO.

F39 EARNINGS PER SHARE

EARNINGS PER SHARE

(EUR)	2019	2020
EPS - basic	1.2	0.54
EPS - diluted	1.19	0.54
Basic adjusted EPS	1.3	1.34

The following earnings figures have been used as the numerator in the calculation of basic and diluted earnings per share:

NUMERATOR ELEMENTS

Thousands of Euros	Notes	2019	2020
Net consolidated profit, Group share	F9		
From continuing operations		287,791	130,530
Adjusted net consolidated profit, Group share	F9	311,714	322,407

The following numbers of shares have been used as the denominator in the calculation of basic and diluted earnings per share:

DENOMINATOR ELEMENTS

	2019	2020
Total shares issued as at 31 December	246,400,000	246,400,000
of which treasury shares	5,624,550	5,733,685
of which shares outstanding	240,775,450	240,666,315
WEIGHTED AVERAGE NUMBER OF OUTSTANDING SHARES	240,558,659	240,589,550
Potential dilution due to stock option plans	1,354,110	1,183,525
Adjusted weighted average number of outstanding shares	241,912,769	241,773,075

Total outstanding shares are after deduction of treasury shares, which are held to cover existing stock option plans or are available for resale. The denominator for the calculation of diluted earnings per share takes into account an adjustment for stock options.

During 2020, no new shares were created as a result of the exercise of stock options with linked subscriptions rights. During the year Umicore used 1,024,435 of its treasury shares in the context of the exercise of stock and 66,430 for shares granted. In the course of 2020, Umicore bought back 1,200,000 own shares. On 31 December 2020, Umicore owned 5,733,685 of its own shares representing 2.33 % of the total number of shares issued as at that date.

F40 IFRS DEVELOPMENTS

There were no new standards, amendments and interpretation to standards issued, and **mandatory** for the first time for the financial year beginning 1 January 2020 with a material impact on the Group's consolidated financial statements .

In case of material, these are developed in the accounting policies section.

For all other new interpretations and standards not yet mandatory as from 1 January 2020, management has no indications that this will result in a material impact on the Group's consolidated financial statements.

F41 AUDITORS' REMUNERATION

The world-wide remuneration for the statutory auditor and its affiliated companies totaled € 2.9 million, including an amount of € 1.8 million for the statutory audit missions (€ 0.5 million for the audit of the mother company) and € 1.2 million for non-statutory audit services including audit-related and other attestation services (€ 0.2 million) and other non-audit related services (€ 1.0 million).

PARENT COMPANY SEPARATE SUMMARIZED FINANCIAL STATEMENTS

The annual accounts of Umicore are given below in summarized form.

In accordance with the Companies code, the annual accounts of Umicore, together with the management report and the statutory auditor's report will be deposited with the National Bank of Belgium.

These documents are also available on request at:

UMICORE
Rue du Marais 31
B-1000 Brussels
(Belgium)

The statutory auditor did not express any reservations in respect of the annual accounts of Umicore.

The legal reserve of € 55.0 million which is included in the retained earnings is not available for distribution.

Thousands of Euros		31/12/2018	31/12/2019	31/12/2020
Summarized balance sheet at 31 December				
1. Assets				
FIXED ASSETS		**2,121,852**	**2,885,295**	**3,172,625**
I.	Formation expenses	8,256	6,066	14,685
II.	Intangible assets	114,447	114,726	99,032
III.	Tangible assets	425,814	467,458	452,430
IV.	Financial assets	1,573,335	2,297,045	2,606,478
CURRENT ASSETS		**1,696,083**	**1,748,153**	**2,060,640**
V.	Amounts receivable after more than one year	362,679	449,366	476,214
VI.	Stocks and contracts in progress	641,452	534,771	617,346
VII.	Amounts receivable within one year	502,354	519,135	620,119
VIII.	Investments	158,103	184,701	290,395
IX.	Cash at bank and in hand	3,937	2,190	4,565
X.	Deferred charges and accrued income	27,558	57,990	52,001
TOTAL ASSETS		**3,817,935**	**4,633,448**	**5,233,265**
2. Liabilities and shareholders' equity				
Capital and reserves		2,148,879	2,268,310	2,177,834
I.	Capital	550,000	550,000	550,000
II.	Share premium account	848,130	848,130	848,130
III.	Revaluation surplus	91	91	91
IV.	Reserves	363,257	389,855	414,075
V.	Result carried forward	152,409	262,604	267,163
Vbis.	Result for the period	227,001	209,258	86,475
VI.	Investments grants	7,991	8,372	11,900
Provisions and deferred taxation				
VII.A.	Provisions for liabilities and charges	125,326	123,600	206,053
CREDITORS		**1,543,730**	**2,241,539**	**2,849,378**
VIII.	Amounts payable after more than one year	692,996	1,082,864	1,707,729
IX.	Amounts payable within one year	758,721	1,076,244	1,063,641
X.	Accrued charges and deferred income	92,013	82,431	78,008
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		**3,817,935**	**4,633,449**	**5,233,265**

Thousands of Euros			31/12/2018	31/12/2019	31/12/2020
Income statement					
	I.	Operating income	3,628,486	3,489,297	4,459,290
	II.	Operating charges	(3,532,944)	(3,494,693)	(4,481,338)
	III.	**Operating result**	**95,542**	**(5,396)**	**(22,048)**
	IV.	Financial income	193,305	259,275	201,457
	V.	Financial charges	(59,393)	(41,210)	(85,500)
	VI.	**Result on ordinary activities before taxes**	**229,454**	**212,669**	**93,908**
	X.	Income taxes	(2,453)	(3,411)	(7,433)
	XI.	**Result for the period**	**227,001**	**209,258**	**86,475**
	XIII.	**Result for the period available**	**227,001**	**209,258**	**86,475**

Thousands of Euros			2018	2019	2020
Appropriation account					
A.		**Profit (loss) to be appropriated**	**641,302**	**588,668**	**558,337**
	1.	Profit (loss) for the financial year	227,001	209,258	86,475
	2.	Profit (loss) carried forward	414,301	379,410	471,862
C.		**Appropriation to equity**	**(81,349)**	**(26,598)**	**(24,220)**
	2.	To the legal reserve	(5,000)		
	3.	To the reserve for own shares	(76,349)	(26,598)	(24,220)
D.		**Profit (loss) to be carried forward (1)**	**379,410**	**471,862**	**353,638**
	2.	Profit (loss) to be carried forward	379,410	471,862	353,638
F.		**Profit to be distributed (1)**	**(180,543)**	**(90,208)**	**(180,479)**
	1.	Dividends			
		ordinary shares	(180,543)	(90,208)	(180,479)

(1) The total amount of these two items will be amended to allow for the amount of the company's own shares held by Umicore on the date of the Annual General Meeting of Shareholders on 29 April 2021 ; the gross dividend of EUR 0.75 will be proposed.

Thousands of Euros				Number of shares
Statement of capital				
A.	**Share capital**			
	1.	Issued capital		
		At the end of the preceding financial year	550,000	246,400,000
		At the end of the financial year	550,000	246,400,000
	2.	Structure of the capital		
	2.1.	Categories of shares		
		Ordinary shares	550,000	246,400,000
	2.2.	Registered shares or bearer shares		
		Registered		48,472,816
		Bearer		197,927,184
E.	**Authorized unissued capital**		55,000	

		% capital	Number of shares	Notification date
G.	**Shareholder base (1)**			
	Family Trust Desmarais, Albert Frère and Groupe Bruxelles Lambert S.A.	18.62	45,871,052	07/12/2018
	BlackRock Investment Management	4.95	12,193,030	08/05/2020
	Baillie Gifford & Co and Baillie Gifford Overseas Ltd.	6.46	15,918,969	07/10/2019
	Others	67.65	166,683,264	31/12/2019
	Own shares held by Umicore	2.33	5,733,685	31/12/2020
		100.00	246,400,000	
	of which free float	100.00	246,400,000	

(1) At 31 December 2020, 5.785.190 options on Umicore shares are still to be exercized. This amount includes 5.785.190 acquisition rights of existing shares held by Umicore.

MANAGEMENT RESPONSIBILITY STATEMENT

We hereby certify that, to the best of our knowledge, the Consolidated Financial Statements as of 31 December 2020, prepared in accordance with the International Financial Reporting Standards (IFRS) as adopted by the European Union, and with legal requirements applicable in Belgium, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and the undertakings included in the consolidation taken as a whole, and that the management report includes a fair review of the development and performance of the business and the position of the group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

15 March 2021,

MARC GRYNBERG
CHIEF EXECUTIVE OFFICER

Value chain statements

V1 Scope of value chain statements 182
V2 CRITICAL RAW MATERIALS 182
V3 INDIRECT PROCUREMENT 184
V4 PRODUCTS AND SERVICES 185
V5 DONATIONS 186

V1 SCOPE OF VALUE CHAIN STATEMENTS

The value chain and society theme focuses on potential impacts on society that we experience as a company through our activities, products and services. For reporting matters, all entities of the Group are considered.

V2 CRITICAL RAW MATERIALS

Securing adequate volumes of raw materials is an essential factor in the ongoing viability of our product and service offering and in achieving our Horizon 2020 growth objectives. The risks and opportunities vary considerably from one business unit to another and for this reason, we have taken a decentralized approach to risk and opportunity management. We have determined to seek a competitive edge in terms of our access to critical raw materials and in our ability to secure these raw materials in an ethical and sustainable manner.

In 2016, each business unit was asked to identify the raw materials that are critical in achieving the Horizon 2020 objectives using a 3-step process. The process consisted of the following elements:

1. Definition of the criteria applicable to the raw materials specific to the business unit's activity

2. Identification of the raw materials with a high probability of restrictions in supply, considering the selected criteria

3. Calculation of the impact of the supply risk identified on the Horizon 2020 objectives

21 supply criteria, covering various aspects of sustainability, have been offered to the business units as input for the mapping. The criteria can be clustered into the following themes:

- EHS or regulatory aspects of the raw materials
- Concentration in the market or restrictions in the country of origin
- Ethical aspects and potential conflicts with the Code of Conduct linked to the raw materials
- Unavailability due to end-of-life of the mineral source
- Physical constraints at origin

As supply risks and opportunities can change, the identification of the critical raw materials is a dynamic process. In 2020 all business units updated their mapping. Over the course of Horizon 2020, 11 raw materials have been identified as being critical in achieving the Horizon 2020 objectives. The type of risks spans over the main clusters provided above.

It is particularly important to define actions to mitigate the risk of critical materials supply disruption. Mitigation actions can vary depending on the materials and the position of the business unit in the market. Action plans and dedicated mitigation measures must be in line with the identified risks and opportunities and are therefore updated regularly. The reviewing frequency and process vary from business unit to business unit depending on the specific supply conditions. Mitigation measures beyond responsible sourcing include due diligence actions, ensuring critical raw materials can be supplied from several reliable suppliers, looking for secondary raw materials sources and ensuring the responsible status of the raw materials. More details about the mitigation actions are provided in the next pages for specific critical raw materials.

Business units purchasing 1 of the 4 conflict minerals to manufacture their products, use the Conflict Mineral Reporting Template from the Responsible Minerals Initiative for their due diligence on the purchased raw materials.

On 1 January 2021, the Conflict Minerals Regulation has come into full force across the EU. This law is similar in scope to the US Dodd Frank Act of 2012. The new law aims to help stem the trade in 4 minerals – tin, tantalum, tungsten and gold (also known as 3TG)– that sometimes finance armed conflict, are mined in unacceptable conditions and/or using forced labor. The way Umicore has been managing supply risks in the past years is fully in line with the requirements of this new law.

In addition to existing policies and charters, such as the Umicore Code of Conduct, Human Rights Policy and Sustainable Procurement Charter, Umicore also has a specific policy regarding Responsible global supply chain of minerals from conflict-affected and high-risk areas.


UMICORE.COM/RESPONSIBLESUPPLYCHAIN-POLICY

Today, responsible mineral sourcing goes beyond conflict minerals. Umicore pursues responsible sourcing certification wherever appropriate to highlight our best practices and to provide the necessary documentation to the increasing number of customers seeking assurance on our products. The Umicore internal "Metals and Minerals" working group streamlines and optimizes the efforts required for this increasing customer demand through best practices sharing.

The London Bullion Market Association (LBMA) manages the accreditation process for all Good Delivery listed refiners for gold and silver. The Responsible Jewelry Council's (RJC) Chain of Custody (CoC) Standard is applicable to gold and platinum group metals (platinum, palladium and rhodium).

The Responsible Minerals Initiative is used by many customers to streamline the process to guarantee conflict-free products in complex supply chains. A typical example is the automotive industry, where a structure has been created to assure that all individual elements of a car can be certified as not containing

conflict minerals sourced from non-certified origins. This procedure is not a ban on those materials (tin, tantalum, tungsten and gold), but a process to create transparency in the supply chain to ensure conflict-free minerals can be sourced. Other industries, such as the electronics industry, implement the same or similar processes

	LBMA Gold	LBMA Silver	RJC Chain of Custody Recycled gold, platinum, palladium and/or rhodium	RMI-Conformant Cobalt Refiners	RMI-Conformant Gold smelters and refiners
Bangkok		X			X
Hoboken	X	X			X
Kokkola				X	
Olen				X	
Pforzheim	X	X	X		X
Vienna			X		X

Both the RJC Chain of Custody and LBMA Good Delivery accreditations qualify the accredited sites for listing in the Responsible Minerals Initiative conformant smelters and refiners.

For more information, please visit:

LBMA.ORG.UK/GOOD-DELIVERY-LIST-REFINERS-GOLD-CURRENT

LBMA.ORG.UK/GOOD-DELIVERY-LIST-REFINERS-SILVER-CURRENT

RESPONSIBLEJEWELLERY.COM

RESPONSIBLEMINERALSINITIATIVE.ORG/GOLD-REFINERS-LIST

RESPONSIBLEMINERALSINITIATIVE.ORG/RESPONSIBLE-MINERALS-ASSURANCE-PROCESS/SMELTER-REFINER-LISTS/COBALT-REFINERS-LIST/CONFORMANT-COBALT-REFINERS

2.1 COBALT

Umicore uses cobalt in materials for rechargeable batteries, tools, catalysts and several other applications. The Sustainable Procurement Framework for Cobalt covers Umicore's cobalt purchases worldwide. The Framework is aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. Umicore obtained, for the sixth year in a row, third party assurance from PwC that its cobalt purchases in 2020 are carried out in line with the conditions set out in the framework. The share of cobalt from recycled origin was also reviewed by PwC as part of the assurance process and was 4.1% for 2020. The figure is reported in the compliance report.

A dedicated cobalt sourcing committee, referred to as the Approval Committee, is responsible for the principles and guidelines in the framework and has overall control and decision-making power. The Approval Committee includes a member of the Umicore Executive Committee and the senior management of Sustainability and Supply.

In May 2019, Umicore Olen was approved as the first Responsible Minerals Initiative-conformant cobalt refinery worldwide. Umicore's newly acquired Kokkola's cobalt operations were the second recognized refinery. The refineries must undergo a yearly certification process. Given the COVID-19 context in 2020, the audit had to be postponed but both sites remain on the list of RMI compliant refiners. The audit will take place as soon as the situation allows for it. As mentioned above the audit related to Sustainable Procurement Framework for Cobalt, which is aligned with OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, has taken place. This audit covers the cobalt supply for Olen and Kokkola.

In 2020, Umicore performed the follow up of the mitigation actions defined as a result of the third-party audit that was performed in 2019 at one of its cobalt suppliers. No new third party audit could be conducted in 2020 due to the COVID-19 pandemic. We did a follow up with our suppliers in DRC on the measures that were put in place to guarantee safe working conditions with respect to COVID-19 pandemic control.

Umicore supported the development of the Cobalt Industry Responsible Assessment Framework (CIRAF) within the Cobalt Institute. The CIRAF is a management framework for risk assessment and mitigation aiming at ensuring responsible cobalt production and sourcing. As part of the CIRAF, risks regarding own operations and supply chain must be analyzed. Following the recommendations of the framework, Umicore performed a risk analysis of its 8 cobalt-related operations considering the risks identified by the CIRAF and the results of our own materiality analysis and of our internal Business Risk Assessment. The material risks for our operations are (1) Air-water-soil pollution & energy efficiency; (2) OHS and working conditions; (3) Conflict & financial crime; (4) Human rights abuses. Umicore has policies and measures in place covering these risk areas (see Management Approach). Key performance indicators are reported yearly (see Environmental and Social statements). With respect to "supply chain", Umicore's approach is aligned with the level 3 requirements of the CIRAF, moving from level 2 in 2019 as all the risks, including biodiversity and resettlement risks, are now covered.

The compliance report for 2020, including the CIRAF report, is available online.

UMICORE.COM/SUSTAINABLE-COBALT

Umicore continued its engagement with the Global Battery Alliance and supported the transition to an independent entity. Via its engagement in the Cobalt Action Partnership, Umicore supports a coordinated approach for local interventions in mining communities in the Democratic Republic of Congo.

Umicore participated in the Battery Passport project of the Global Battery Alliance, which aims to deliver a digital sustainability record for batteries. Together with many stakeholders of the battery value chain, Umicore supported the development of KPIs to represent the sustainability of the battery supply chain (including environment and human rights).

In 2018 Umicore implemented, besides its continued engagement in sustainable cobalt sourcing, due diligence in the supply of the other raw materials for batteries, i.e. nickel, manganese and lithium. The approach is directly inspired by the experience with cobalt and follows the basic steps of the Sustainable Procurement Framework for Cobalt. Specific mitigation actions have been defined for these metals depending on the identified risk.

2.2 GOLD AND SILVER

In 2020, Umicore continued to ensure that operations with a production of gold are certified as conflict-free. Umicore operations in Hoboken, and Pforzheim are certified as conflict-free smelters for gold by the London Bullion Market Association (LBMA). The LBMA also provides certification for responsible silver and the sites of Hoboken, Pforzheim and Bangkok are accredited refiners by the LBMA. The Jewelry & Industrial Metals operations in Pforzheim, Vienna and Bangkok are certified as part of the Responsible Jewelry Council's (RJC) Chain of Custody program for gold.

2.3 PLATINUM, PALLADIUM & RHODIUM

Since 2020, the LBMA audit for compliance against the Responsible Platinum and Palladium Guidance is mandatory for the London Platinum and Palladium Market (LPPM) accredited producers of platinum and palladium plates and ingots. As there is currently no official due diligence certification scheme for platinum and palladium sponge, UPMR went for these precious metals for a voluntary audit based on the requirements of the LBMA responsible sourcing program. The Jewelry & Industrial Metals operations in Pforzheim, Vienna and Bangkok are certified as part of the Responsible Jewelry Council's (RJC) Chain of Custody program for recycled platinum, palladium and/or rhodium.

V3 INDIRECT PROCUREMENT

While the metal-bearing raw materials are purchased directly by the business units (direct procurement, see note V2 for specific sustainable supply related actions), Umicore's worldwide purchasing and transportation teams take care of the energy and other goods and services which are referred to as indirect procurement. In 2020, though indirect procurement spend remained stable compared to the previous year, it was down to roughly 5% of the total spend. Half of indirect procurement spend is handled by the Procurement & Transportation teams in Belgium and Germany.

3.1 SCOPE

The indicators presented are based on 2020 data from our Procurement & Transportation teams in Belgium and Germany and Poland. EcoVadis, a well-known collaborative platform providing Supplier Sustainability Ratings, is also used by the local procurement team in Brazil.

3.2 ASSESSMENT OF SUPPLIERS

Since 2017, a quick scan based on criteria such as size, geographical location and type of product or service provided is systematically used for the assessment of new suppliers. This tool determines the need for an EcoVadis assessment. This tool was first implemented by the teams in Belgium and Germany, and in 2020 it was also used by the team in Poland. In 2020, 484 quick scans have been initiated. The goal is to further roll-out to more teams worldwide in the future.

Sustainability performance of specific suppliers is assessed by EcoVadis.

101 assessment scores were made available to the teams in 2020, including the requests from the Procurement & Transportation teams in Brazil. A total of 417 scores have been received since the start of our collaboration with EcoVadis. This represents the number of unique suppliers that have been assessed and does not consider the regular re-assessment of a supplier.

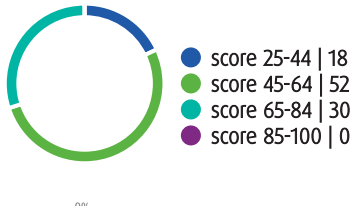
3.3 AVERAGE SCORE OF SUPPLIERS BY TOPIC IN 2020

82% of the assessed suppliers in 2020 reached a score of 45 or higher, suppliers "engaged in CSR" (Corporate Social Responsibility). None of the scores received in 2020 indicates a "high risk".

Suppliers' score in Ecovadis assessment	
1-24: high sustainability risk	0%
25-44: some basic steps made on sustainability issues	18%
45-64: appropriate sustainability management system	52%
65-84: advanced practices on sustainability	30%
85-100: outstanding sustainability management systems	0%

SUPPLIERS' SCORE IN ECOVADIS ASSESSMENT

%



SUPPLIERS' SCORE IN ECOVADIS ASSESSMENT

	Group
Environmental	58.9
Labor and Human Rights	58.8
Fair business practices	52.0
Suppliers	50.1
Overall	**56.6**

The overall score is a weighted average of the 4 theme scores.

More information on Umicore's relationship with suppliers can be found in the Stakeholder Engagement(p. 16) and in the Value Chain and Society performance review(p. 39).

V4 PRODUCTS AND SERVICES

4.1 ECOVADIS CSR RATING

The Umicore Group was re-evaluated by EcoVadis and was awarded its first Platinum Medal in Corporate Social Responsibility (CSR), with a score of 73/100. This result includes our company among the top 1% performers evaluated by EcoVadis.

To see Umicore's EcoVadis CSR scorecard, see: ECOVADIS-SCORECARD-2020.PDF

The 2020 rating is an improvement on Umicore's previous Gold rating (top 5% of peers), demonstrating Umicore's continued commitment and efforts for an improved performance in all four sustainability themes (environment, labor and human rights, ethics and sustainability procurement). Umicore has been assessed by EcoVadis since 2013.

4.2 RESOURCE EFFICIENCY

Primary raw materials: are materials that have a direct relation to their first lifetime hereby excluding streams of by-products

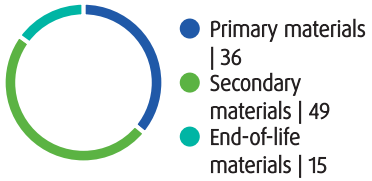
Secondary raw materials: are by-products of primary material streams

End-of-life materials: are materials that have ended at least a first life cycle and will be re-processed through recycling leading to a second, third... life of the substance

Incoming materials are regarded as primary by default if their origin is unknown. The collected data are expressed in terms of total tonnage of incoming material.

RESOURCE EFFICIENCY

%



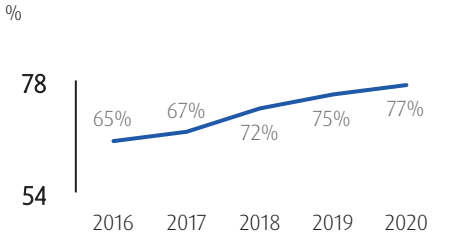
In 2020, 64% of the materials were from end-of-life or secondary origin while 36% were of primary origin, respectively, compared to 60% and 40% in 2019. This ratio results from the combined effect of the COVID-19 on the global automotive industry and higher processed volumes in Recycling.

4.3 PRODUCTS AND SERVICES CONTRIBUTING TO SPECIFIC SUSTAINABILITY ASPECTS

Our primary focus in terms of sustainable products and services is to leverage activities that provide solutions to the megatrends of clean mobility and resource scarcity. For more information, please refer to Value chain and society(p. 39).

We developed an indicator to underline our focus on clean mobility and recycling.

REVENUES FROM CLEAN MOBILITY AND RECYCLING



Business units continue to develop specific solutions for sustainability aspects of our products and their applications in close relationship with customers. Typical subjects dealt with in such developments are the reduction of risks related to the use of products, reduction of the hazard of products or a higher material efficiency in the delivery or the use of our products.

4.4 MANAGEMENT OF PRODUCT REGULATION

Worldwide, Umicore ensures regulatory compliance for the products it puts on the market. Changes to existing product related legislation as well as the introduction of new legislation, might impact our business. In terms of the REACH legislation and the newly proposed concepts such as the Chemical Strategy on Sustainability in the EU, Umicore closely monitors all changes in the regulation, in interpretation as well as guidance documents that might affect its REACH implementation strategy. Umicore is actively involved in industry association working groups to ensure a consistent approach is followed and the metal specifics are understood by the regulators and the companies.

Umicore actively supports the engagement of the metals sector with ECHA in the Metals/inorganics sectorial approach (MISA).

Umicore engaged with the cobalt industry in managing the EU cobalt metal harmonized classification and continues to be engaged in the Annex XV proposal on the restriction of 5 cobalt salts. This process has no final outcome yet and continues into 2021.

In 2020, we submitted 27 additional substances for registration under REACH due to new business developments.

As part of regular maintenance, we updated 76 REACH dossiers among others to change the tonnage band, to reply to ECHA requests and to include new information.

In Korea, Umicore is actively involved in preparation for the first Korea REACH registration deadline end of 2021 including Lead Registrant roles. Umicore has submitted 2 registrations in Korea in 2020 for priority chemical substances.

Umicore prepared for arising international regulations like for Turkey and Russia by submitting pre-registrations/notifications. Umicore is also preparing for compliance with UK-REACH.

V5 DONATIONS

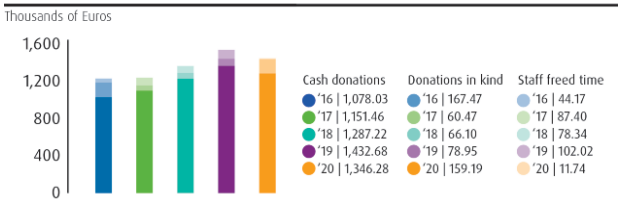
SCOPE

The indicators presented are based on data from fully consolidated companies. The historical numbers (2016 and before) were not restated.

GROUP DATA

	unit	2016	2017	2018	2019	2020
Cash donations	€ thousand	1,078.03	1,151.46	1,287.22	1432.68	1346.28
Donations in kind	€ thousand	167.47	60.47	66.10	78.95	159.19
Staff freed time	€ thousand	44.17	87.40	78.34	102.02	11.74
Total donations	€ thousand	1,289.68	1,299.34	1,431.66	1613.65	1517.21

DONATIONS



Donations are subdivided into cash donations, donations in kind and staff time.

Each business unit is expected to allocate an annual budget that provides sufficient donations and sponsorship support to each site's community engagement program. By way of guidance, this budget should equal to an amount corresponding to one third of 1% of the business unit's average annual consolidated adjusted EBIT (i.e. excluding associates) for the 3 previous years. Most of the donations from the business units go to charity events close to their sites, in support of the local community.

At Group level, the budget is set at the discretion of the CEO and the donations are coordinated and managed by a Group Donations Committee reporting to the CEO. Group donations focus on projects with an international scope with priority given to initiatives that have a clear link with sustainable development and with an educational component.

REGIONAL DATA

	unit	Europe	North America	South America	Asia-Pacific	Africa	Umicore Group
Total donations	€ thousand	1,215.05	86.34	92.19	87.50	36.13	1,517.21

BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Corporate	Umicore Group
Total donations	€ thousand	202.57	244.81	297.27	772.56	1,517.21

In 2020, the Group donations included a substantial contribution to the Fund for the Prevention of Child Labour in Mining Communities – A Global Battery Alliance Collaboration. Other Group donations in 2020 included donations to UNICEF educational projects in Madagascar and in India, projects coordinated by Entrepreneurs for Entrepreneurs in Mali, Ecuador and Bolivia and support for student sustainable mobility projects.

In 2020, Umicore contributed a total of € 1.5 million in donations. This was slightly below the level of donations in 2019, due to a reduced level of local community fundraising activities in the context of the COVID-19 pandemic. This was also the case for the decrease in staff freed time with citizens being asked to stay at home. Donations in kind, however, increased, as Umicore donated ventilator machines to hospitals and supported hospitals, care homes and home nurses with surgical masks and cleaning material in their fight against COVID-19, as well as food baskets for local communities.

Environmental statements

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ENVIRONMENTAL KEY FIGURES

	unit	notes	2016	2017	2018	2019	2020
Metal emissions to water (load)	kg	E2	3,738	1,437	1,861	2,052	2,695
Metal emissions to water (impact units)		E2	339,001	125,688	144,657	174,725	296,432
Metal emissions to air (load)	kg	E2	1,761	1,829	1,564	864	984
Metal emissions to air (impact units)		E2	86,098	84,463	88,044	52,492	57,696
SOx emissions	tonne	E2	892	661	657	531	389
NOx emissions	tonne	E2	365	320	304	280	239
CO2e emissions (scope1+2) - Market based	tonne	E3	662,059	633,704	767,702	791,896	732,543
CO2e emissions (scope1+2) - Location based[1]	tonne	E3	735,065	663,307	785,789	815,175	747,964
Energy consumption	terajoules	E4	6,737	6,532	7,458	7,476	7,591
Renewable energy	%	E4	-	-	-	14	15
Water use	thousand m3	E5	4,851	4,755	5,885	6,208	7,813
Total waste produced	tonne	E7	77,625	72,804	78,778	68,317	99,434
Hazardous waste	tonne	E7	59,437	55,442	58,759	47,589	78,055
of which recycled	%	E7	3.8	4.3	5.3	7.9	5.0
Non hazardous waste	tonne	E7	18,188	17,373	20,018	20,728	21,379
of which recycled	%	E7	57.8	58.2	62.2	59.4	64.7
Compliance excess rate	%	E9	0.95	0.10	0.14	0.10	0.15
Environmental complaints	N°	E9	19	34	29	33	80
Sites ISO 14001 certified	%	E9	88	92	91	95	96

1 CO2e emissions' data for 2015 is an aggregation of market-based and location-based scope 2 emissions. A direct comparison to 2016-2020 data is not possible. If such comparison were to be made, the most meaningful approximation is to use the market-based 2016-2020 figures (see section E3 for details).

Data for 2015 includes the divested business unit Zinc Chemicals, while data for 2016-2020 does not. Data for 2016 and previous years includes the divested business unit Building Products, while data for 2017-2020 does not.

E1 SCOPE OF ENVIRONMENTAL STATEMENTS

The environmental key figures include data from consolidated industrial sites where Umicore has operational control. The following sites are no longer reported compared to 2019: Beijing (China; Electro-Optic Materials) and Rheinfelden (Germany; Automotive Catalysts). The following sites were added to the environmental reporting scope in 2020: Songdo (South Korea; Precious Metals Chemistry) and Kokkola (Finland; Rechargeable Battery Materials). As in 2019, the total number of consolidated industrial sites that report environmental data in 2020 is 55.

Within the scope of Umicore's reporting framework, most of the sites report their environmental data at the end of the third quarter together with a forecast for the fourth quarter. In January, the forecasted values are checked by the sites for significant deviations and, if needed, corrected. Particular emphasis was put on this data check during 2020 due to the potential impact that COVID-19 may have had on the production rates across the year. The 7 sites with the largest environmental impact for 2020 are: Hanau (Germany; Catalysis, Recycling), Olen (Belgium; Energy & Surface Technologies, Corporate R&D), Hoboken (Belgium; Recycling), Jiangmen (China; Energy & Surface Technologies), Cheonan Site 1, Cheonan Site 2/3 (both Korea; Energy & Surface Technologies), and Kokkola (Finland; Energy & Surface Technologies). With the exception of Kokkola, these sites report their full year figures in 2020. The Kokkola site will also report full year data from 2021 onwards. A sensitivity analysis, undertaken for the 2020 data on energy consumption data, indicates that the potential deviation of the Group environmental performance would be less than 2% in case of a 20% error in the forecasted data.

Please note that due to improved analytical and reporting methods, some of the data published in the 2019 annual report has been restated in the 2020 report. Unless mentioned otherwise, environmental key performance indicators (KPIs) for 2015 include the business unit Zinc Chemicals that was divested during 2016, while 2016-2020 KPIs do not include Zinc Chemicals. Likewise, environmental KPIs for 2015-2016 include the business unit Building Products that was divested during 2017, while 2017-2020 KPIs do not include Building Products.

E2 EMISSIONS TO WATER AND AIR

Umicore's Vision 2015 achievements of reducing our metal emissions to water and air from point sources in terms of impact by 26% and 37%, respectively, marked a great step towards sustainable operations. We consider the emission levels achieved in 2015 as our frame of reference in the context of sustainable operations that include the management of the emissions to water and air.

The aim for Horizon 2020 was to build on the Vision 2015 achievements by reducing the impact of metal emissions while considering growing volumes of production. In practice, this means that we aimed to at

least maintain the level of metals emitted to water and air in terms of impact that we achieved as part of Vision 2015.

Metal emissions to water are defined as the total amount of metals emitted after treatment to surface water from effluent(s) expressed in kg/year. If sites make use of an external wastewater treatment plant, the efficiency of that treatment is considered if known to the site.

Metal emissions to air are defined as the total amount of metals emitted to air in solid fraction by all point sources expressed in kg/year. For mercury and arsenic, additional vapor/fume fractions are counted as well.

For each of the metals emitted to water and air, an impact factor is applied to account for the different toxicity and ecotoxicity levels of the various metals when they are emitted to the environment. The higher the impact factor, the higher the toxicity is to the receiving water body (for water emissions) or to human health (for air emissions).

The impact factors for water emissions are based upon scientific data generated ("predicted no effect concentrations" or PNECs) for the REACH regulation. An impact factor of 1 was attributed to the antimony PNEC of 113 µg/l. The impact factors for emissions to air are based upon the occupational exposure limits (OEL) (reference: American Conference of Industrial and Governmental Hygienists, 2011). An impact factor of 1 was attributed to the zinc (oxide) OEL of 2 mg/m^3. Subsequently, an impact factor for all relevant metals was calculated based upon these references. The metal impact to air and to water is expressed as "impact units/year".

We identified the sites that contribute at least 95% in terms of load (for SOx and NOx) or impact units (for metals emissions to water and air) of the total 2015 Group figures (excluding the divested business unit Zinc Chemicals). For emissions to water and air, data collection for 2020 was restricted to the identified material sites (10 or fewer). All other sites were requested to only submit data in case of significant upward deviations from the 2015 baseline for the site.

The improvement on 2015 levels of metal emissions to water and air is measured by comparing emissions of the current reporting year (i.e., 2020) with those of the reference year 2015 and using the same scope of activities as 2015 for the material sites.

To calculate the change in metal emissions to water and air in comparison with the reference year 2015, a baseline has been established for each site in scope. The baseline is established by multiplying the actual activity level of the current reporting year (i.e., 2020) by the 2015 emission intensity (see example below). The baseline 2015 is then calculated by adding up all site-level baselines for the sites in scope. Examples of activity parameters at sites are: tonnes produced per year, machine hours per year, tonnes of input material in recycling process per year.

Example

In 2015, site A produced 20 t of product X and emitted 5 kg of metal Y (impact factor of Y = 8 impact units/kg) to air, resulting in a metal emissions intensity of 2 impact units/t of product X. In 2020, site A produced 22 t of product X and emitted 5 kg of metal Y, resulting in a metal emissions intensity of 1.8 impact units/ton of product X.

The 2015 baseline reported in 2020 is then: activity level of 2020 (22 t) x 2015 emissions' intensity (2 impact units/t) = 44 impact units.

Therefore, the measured 5 kg – equivalent to 40 impact units – emitted in 2020 represents a reduction of 10% compared to what it would have been under 2015 operating conditions.

The 2015 baseline is recalculated yearly (2016-2020). It is defined as the metal emissions that would have been expected with the activity volumes of the reporting year (i.e., 2020), but with the metal emissions intensity of the reference year 2015. The performance for each year is expressed as a percentage in comparison to the calculated 2015 Group baseline applicable to each year.

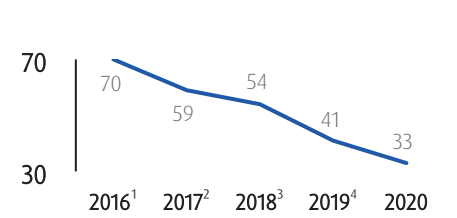
The calculation of metal emissions to water and air covers fully consolidated operations and activities that are part of the Group during the reporting year (2016-2020) and that were also part of the Group in 2015. Performance is reported only for the total of the material sites for each KPI.

SO_x and NO_x emissions are expressed in absolute numbers in tonnes/year.

2.1 GROUP DATA – EMISSION SCOPE METAL EMISSIONS TO AIR AND WATER

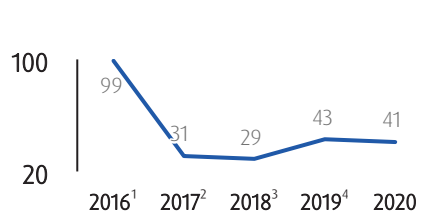
	unit	baseline 2015 in relation to 2020	2016	2017	2018	2019	2020
Metal emissions to water	impact units	352,638	339,001	125,688	131,723	152,105	143,788
Metal emissions to air	impact units	121,392	86,098	84,463	87,664	51,541	40,626

METAL EMISSION REDUCTION PERFORMANCE (TO AIR)



1 Baseline 2015 in relation to 2016 was 123,831, leading to a reduction of 30% in 2016 in comparison with 2015.
2 Baseline 2015 in relation to 2017 was 144,049, leading to a reduction of 41% in 2017 in comparison with 2015
3 Baseline 2015 in relation to 2018 was 163,101, leading to a reduction of 46% in 2018 in comparison with 2015.
4 Baseline 2015 in relation to 2019 was 124,403, leading to a reduction of 59% in 2019 in comparison with 2015.

METAL EMISSION REDUCTION PERFORMANCE (TO WATER)



1 Baseline 2015 in relation to 2016 was 343,649, leading to a reduction of 1% in 2016 in comparison with 2015
2 Baseline 2015 in relation to 2017 was 409,691, leading to a reduction of 69% in 2017 in comparison with 2015.
3 Baseline 2015 in relation to 2018 was 453,075, leading to a reduction of 71% in 2018 in comparison with 2015
4 Baseline 2015 in relation to 2019 was 356,940, leading to a reduction of 57% in 2019 in comparison with 2015

2.2 METAL EMISSIONS TO WATER

The metal emissions to water in 2020, using the defined scope, resulted in 143,788 impact units. Metal emissions to water in 2015, using the defined scope, resulted in 290,714 impact units. To assess progress on our commitment, this 2015 metal emissions level normalized for 2020 activity levels was 352,638 impact units. In 2020, we have therefore achieved a 59% reduction of metal emissions to water in terms of impact for the defined scope compared to 2015.

This evolution between 2015 and 2020 can be largely attributed to our Hoboken plant (Belgium, Recycling), where the increased efficiency of the wastewater treatment plant at the site, due to investments in improvement projects over the last years, has paid off. In addition, some efficiency improvements and scale-effects – after further capacity increase of precursor production at our Cheonan Site 2/3 (Korea, Energy & Surface Technologies) – have contributed to the decrease of the emission intensity in terms of impact by metals emissions to water.

In terms of total absolute load and impact (not activity-corrected) for the Group in comparison with 2019 levels, 2020 metal emissions to water have seen a marked increase by 31% and 70%, respectively. This is for the most part due to the addition of the site in Kokkola (Finland; Rechargeable Battery Materials). While the site is well within their legal discharge limits, the nature of the industrial processes and throughput of water at the site leads to a notable increase of the absolute metal load and impact for the Umicore Group. As this is the first year of reporting of the Kokkola site under Umicore, the site's data on efficiency of wastewater treatment and on metal load effectively discharged to the environment is currently limited. Therefore, a very conservative approach was chosen, leading to an overestimation of the metal load and impact from the site in 2020. Efforts are underway to improve the underlying data and arrive at a more realistic calculation of the metal emissions to water at the site, which is expected to yield lower metal loads in 2021 and thereafter for the Kokkola site.

2.3 METAL EMISSIONS TO AIR

The metal emissions to air in 2020, using the defined scope, resulted in 40,626 impact units. Metal emissions to air in 2015, using the defined scope, resulted in 117,918 impact units. To assess progress on our commitment, this 2015 metal emissions' level normalized for 2020 activity was 121,392 impact units. In 2020, we have therefore achieved a 67% reduction of metal emissions to air in terms of impact for the defined scope.

The reductions are observed across many sites in scope to a varying degree and can be ascribed for the most part to further efforts that improved air filter efficiency and to improvements in overall process efficiency.

2.3.1 LEAD EMISSIONS AT HOBOKEN (BELGIUM, RECYCLING)

In 2015, infrastructure works at the roof of the lead refinery led to increased lead deposition in the surrounding residential area of Moretusburg. Consequently, the biological monitoring results showed an increased number of children with levels of lead in blood above the recommended reference level of 5 microgram/dl blood (Center for Disease Control and Prevention, USA). This biological monitoring campaign is conducted twice a year by the local authorities.

While during the 2020 spring blood sampling campaign, the average lead levels among children in the neighborhood rose to 6.01 microgram/dl blood, this average again decreased during the fall campaign to 4.12 microgram/dl blood. Comparing the fall biological monitoring campaigns, in 2020 26% of the children still had levels of lead in blood above the reference value of 5 µg/dl, compared to 18% in 2019. The site continues its emission reduction action plan to further reduce the number of children who show levels of lead in blood above the reference value in close collaboration with the local and regional authorities

2.4 GROUP DATA – OTHER EMISSIONS

	unit	2016	2017	2018	2019	2020
SOx emissions	tonne	892	661	657	531	389
NOx emissions	tonne	365	320	304	280	239

The SO_x emissions for the Group reduced by 27% from 531 t in 2019 to 389 t in 2020, mainly due to improvements and changes in process setup at Hoboken (Belgium, Recycling). The NO_x emissions decreased from 280 t in 2019 to 239 t in 2020, a 15% reduction.

E3 GREENHOUSE GASES

The introduction of our energy efficiency and carbon footprint policy in 2011 guided us to a 26% reduction in CO_2 equivalent (CO_2e) emissions within the defined scope in Vision 2015 and to permanent attention and awareness of energy efficiency at the sites and in the business units' management processes.

Under Horizon 2020, Umicore's improvement focus is on energy efficiency. The efforts to increase energy efficiency are expected to contribute to further reducing our carbon footprint.

Umicore reports its absolute CO_2e emissions as per the scope outlined in E1. The absolute CO_2e emission volumes are calculated using the Greenhouse Gas Protocol definition and reporting methodology for scope 1 and 2 (WBCSD and WRI 2004 and amendment for scope 2 of 2015). Scope 2 for Umicore includes not only purchased electricity but also steam and compressed air purchased from third parties (e.g., from industrial parks). CO_2e includes the greenhouse gases CO_2, CH4 and N2O for scope 1 and major process emissions. Other greenhouse gases are not relevant in Umicore's operations. The scope 2 emissions take only CO_2 into account.

The calculation of scope 2 emissions for each site is done in 2 ways: once using market-based CO_2 emission factors and once using location-based CO_2 emission factors. The market-based emission factors allow calculating the CO_2 emissions based on the specific contracts that sites have in place with their energy suppliers, considering the relevant energy mix for these contracts (including green energy attributes, where applicable). The location-based CO_2 emission factors facilitate calculating the CO_2 emissions based on the residual energy mix in a country/region (where this data is available), thus explicitly excluding green energy attributes that are sold by the power producers in dedicated supply contracts. The total CO_2 emissions for the Group are then presented as 2 separate values based on this differentiation and the metrics are abbreviated as: CO_2e market-based and CO_2e location-based.

The WBCSD Chemical Sector Working Group on GHG Measurement and Reporting established additional guidance to cope with observed anomalies in GHG reporting. Umicore has implemented these guidelines already since the 2012 reporting. The publication of the sector guidelines can be found on their website.

3.1 GROUP DATA

	unit	2016	2017	2018	2019	2020
CO2e emissions (scope1+2) - Market based	tonne	662,059	633,704	767,702	791,896	732,543
CO2e emissions (scope1+2) - Location based	tonne	735,065	663,307	785,789	815,175	747,964

Total CO_2e market-based emissions in 2020 were 732,543 t. Total CO_2e location-based emissions were 747,964 t. The difference between these 2 figures, 15,421, is due to specific energy contracts with a favorable energy mix that our sites have in place, which result in a lower carbon footprint than the residual energy mix for the country/region that the site is located in.

Total CO_2e market-based emissions in 2019 were 791,896 t, and total CO_2e location-based emissions in 2019 were 815,175 t.

For market-based CO_2e emissions, the 2020 emission levels have decreased by 7% in comparison with 2019. This can be attributed to a large extent to the installation of a nitric acid plant at Hoboken (Belgium; Precious Metals Refining), which reduces the direct process emissions of N_2O. In addition, lower activity levels in the business unit Rechargeable Battery Materials also resulted in reduced CO2 emissions. Changes to process setup and switching to green energy contracts at several sites have also contributed to this trend. Compared with 2015, we observe an increase of 3% in total market-based CO_2e emissions, which is due to a complex interplay of many factors over this 5-year period, among which the acquisition and setup of new sites, divestiture of entire business units, changes to process setup and production capacity and fluctuation in CO_2 emission factors for acquired energy.

3.2 BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Umicore Group
CO2e emissions (scope1+2) - Market based	tonne	133,127	323,829	274,973	732,543
CO2e emissions (scope1+2) - Location based	tonne	151,360	349,276	246,714	747,964

E4 ENERGY

Umicore is committed under Horizon 2020 to an even more efficient use of energy in its operations. In practice, this means that we aim to further increase the energy efficiency level that we achieved as part of Vision 2015.

The WBCSD Chemical Sector Working Group on GHG Measurement and Reporting established additional guidance to cope with observed anomalies in GHG and energy reporting. Umicore has implemented these guidelines already since the 2012 reporting. Publication of the sector guidelines can be found on the WBCSD website.

In the scope of Horizon 2020, a greater emphasis is on those sites that are contributing the most to Umicore's total energy consumption, and certain parameters, such as activity indicators, have been

thoroughly reviewed for those sites and updated where required. Monitoring and reporting of the energy consumption continue to be done at all sites. The larger contributors are additionally encouraged and required to report on their energy efficiency projects.

An analysis of the contributions of the sites to the energy consumption at Group level identified 26 sites that contributed more than 95% to the 2020 total.

4.1 GROUP DATA – IN THE CONTEXT OF THE ENERGY EFFICIENCY OBJECTIVE

The aim of improving on 2015 levels of energy efficiency is measured by way of comparing the energy consumption of the current reporting year (i.e., 2020) with the energy consumption of the reference year 2015 and using the same scope of activities as 2015.

To calculate the change in energy consumption in comparison with the reference year 2015, a baseline has been established for each site in scope. The baseline is established by multiplying the actual activity level of the current reporting year (i.e., 2020) by the 2015 energy intensity (see example below). The baseline 2015 is then calculated by adding up all site-level baselines for the sites in scope. Examples of activity parameters at sites are: tonnes produced per year, machine hours per year, tonnes of input material in recycling process per year.

Example

In 2015, site A produced 200 t of product X and consumed 80,000 GJ, resulting in an energy intensity of 400 GJ/t of product X. In 2020, site A produced 220 t of product X and consumed 80,000 GJ, resulting in an energy intensity of 364 GJ/t of product X.

The 2015 baseline reported in 2020 is then: activity level of 2020 (220 t) x 2015 energy intensity (400 GJ/t) = 88,000 GJ.

Therefore, the 80,000 GJ consumed in 2020 represents an improvement of 10% compared to what it would have been under 2015 operating conditions.

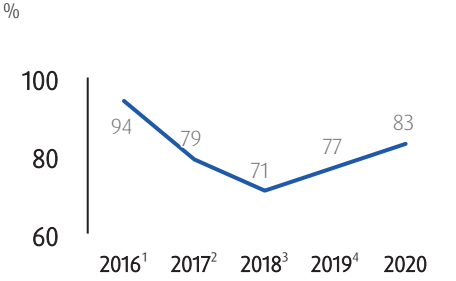
The baseline 2015 is recalculated yearly (2016-2020). It is defined as the energy consumption that would have been expected with the activity volumes of the reporting year (i.e. 2020), but with the energy intensity of the reference year 2015. The performance for each year is expressed as a percentage in comparison to the calculated 2015 Group baseline applicable to each year.

The calculation of this KPI covers fully consolidated operations and activities that are part of the Group during the reporting year (2016-2020) and that were also part of the Group in 2015. Therefore, the sites of the former business units Zinc Chemicals and Building Products and a few other individual sites, none of which are with Umicore anymore, are not in the reporting scope of this KPI. Likewise, several sites that joined Umicore in 2016-2020 are therefore also not included in the reporting scope for this KPI. The energy consumption data also include our corporate headquarters in Brussels (Belgium).

4.2 ENERGY EFFICIENCY OBJECTIVE

	unit	baseline 2015 in relation to 2020	2016	2017	2018	2019	2020
Energy consumption	terajoules	6,900	6,241	6,082	6,183	6,138	5,697

NORMALISED ENERGY CONSUMPTION



1 Baseline 2015 in relation to 2016 was 6,664 TJ, leading to a reduction of 6% in 2016 in comparison with 2015.
2 Baseline 2015 in relation to 2017 was 7,720 TJ, leading to a reduction of 21% in 2017 in comparison with 2015.
3 Baseline 2015 in relation to 2018 was 8,692 TJ, leading to a reduction of 29% in 2018 in comparison with 2015.
4 Baseline 2015 in relation to 2019 was 7,946 TJ, leading to a reduction of 23% in 2019 in comparison with 2015.

The energy consumption in 2020, using the defined scope, was 5,697 TJ. The energy consumption in 2015, using the defined scope, was 5,487 TJ. To assess progress on our commitment, this 2015 energy consumption level normalized for 2020 activity was 6,900 TJ. This means that for equivalent production levels, we consumed 17% less energy. In other words, the energy efficiency has improved by 17% in 2020 compared to the reference year 2015.

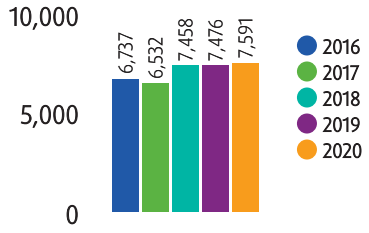
This improvement is mainly due to scale effects in connection with the ongoing capacity increase at our Rechargeable Battery Materials' site in Korea. Further efficiency improvements and consolidations at some other sites also contributed to the overall decrease in energy intensity.

Energy efficiency projects have been implemented at the most important sites in line with foregoing sustainable development objectives since 2006. In 2020, 26 sites represented more than 95% of the Group's energy consumption. At 15 of these sites, 38 energy efficiency projects have been reported as being implemented during 2020 and contributed significant energy savings.

4.3 ABSOLUTE ENERGY CONSUMPTION

ENERGY CONSUMPTION (ABSOLUTE)

terajoules



Total energy consumption in 2020 was 7,591 TJ compared with 7,476 TJ in 2019, a slight increase of 2%. Various changes in production capacity, activity levels and process setup have led to a net balancing of increasing and decreasing energy consumption trends at several sites. Compared with 2015, we observe a decrease of 2% in total energy consumption, which is due to a complex interplay of many factors over this 5-year period, among which the acquisition and setup of new sites, divestiture of entire business units, and changes to process setup and production capacity.

Indirect energy consumption by primary energy source (purchased electricity, steam and compressed air) for production sites and office buildings in 2020 was 3,916 TJ. Direct energy consumption by primary energy source (fuel, gas oil, natural gas, LPG, coal and cokes) was 3,675 TJ.

4.4 BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Umicore Group
Energy consumption	terajoules	1,306	3,831	2,446	7,591

4.5 RENEWABLE ENERGY

As part of Umicore's drive to reduce our environmental footprint in the light of continuously striving for more sustainable operations, Umicore is tracking the contribution of renewable energy sources in purchased energy. While some indicators for renewable energy have been used in previous years for internal evaluation, 2019 marked the first year in which we have systematically obtained information from our sites on the percentage of renewable energy in the energy mix used for purchased electricity, based on the particular purchase agreement in place at each reporting entity.

The definition of renewable energy as given in the Greenhouse Gas Protocol Scope 2 Guidance (2015 amendment) has guided us in defining the scope of this indicator. Only the following energy sources are considered in scope for this KPI: wind energy, solar energy, energy from biomass (including bio- and other naturally produced gas), hydropower (including marine hydro) and geothermal energy.

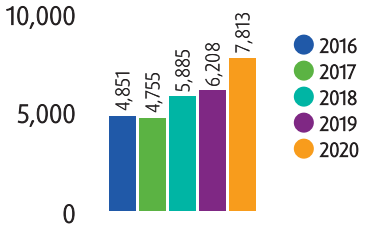
In 2020, the share of renewable energies for purchased electricity was 15%, up from 14% in 2019. We will track and report on this KPI in the coming years.

E5 WATER USE

5.1 GROUP DATA

WATER USE

Thousand m^3



Water use is defined as the total volume of water expressed in thousand m^3/year from domestic water supply, groundwater wells, surface water and rainwater. Groundwater extraction for remediation purposes and cooling water returned to its original water body are not counted.

The total water use for the Group increased from 6,208 thousand m^3 in 2019 to 7,813 thousand m^3 in 2020, an increase of 26%. The increase in water use is mainly due to the addition of the site in Kokkola (Finland; Rechargeable Battery Materials).

5.2 BUSINESS GROUP DATA

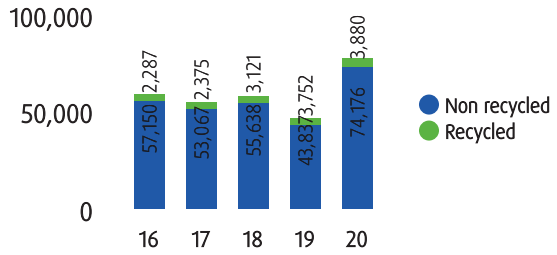
	unit	Catalysis	Energy & Surface Technologies	Recycling	Umicore Group
Water use	thousand m³	561	5,565	1,686	7,813

E6 WASTE

6.1 GROUP DATA

HAZARDOUS WASTE

tonnes



Waste is defined as the total volume of generated waste expressed in tonnes/year.

The waste recycling rate is the ratio of the waste recovered by third parties (including waste recovered as energy through incineration) and the total waste.

The distinction between hazardous and non-hazardous waste is made based on the local regulation for the region where the reporting entity is located.

In 2020, a total of 99,434 tonnes of waste were generated compared to 68,317 tonnes in 2019, an increase of 46%. This increase is due to the addition of the site in Kokkola (Finland; Rechargeable Battery Materials), where the industrial process generates significant amounts of process residue that is classified and disposed of as hazardous waste.

The total volume of hazardous waste increased from 47,589 tonnes in 2019 to 78,055 tonnes in 2020, an increase of 64%, due to the abovementioned addition of the Kokkola site. The recycling rate of hazardous waste has decreased from 8% in 2019 to 5% in 2020.

The total volume of non-hazardous waste slightly increased from 20,728 tonnes in 2019 to 21,379 tonnes in 2020, an increase of 3%. The recycling rate of non-hazardous waste has increased from 59% in 2019 to 65% in 2020.

6.2 BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Umicore Group
Total waste produced	tonne	6,332	58,427	34,675	99,434
Hazardous waste	tonne	3,396	47,263	27,396	78,055
of which recycled	%	21.66%	1.95%	8.10%	4.97%
Non hazardous waste	tonne	2,935	11,164	7,280	21,379
of which recycled	%	50.67%	48.60%	95.10%	64.72%

E7 HISTORICAL POLLUTION

The history of Umicore goes back more than 200 years. It all started with the coming together of a number of mining and smelting companies, which gradually evolved into the materials technology and recycling company Umicore is today. In the mid-1990s, Umicore started a process of divesting its remaining mining rights as part of its strategic reorientation towards added-value materials and recycling

Umicore's predecessor companies operated within the boundaries of national mining legislation and in the context of the environmental standards valid at the time these mines were operational. The closure of the mines and the restitution of mining concessions to the relevant state authorities has consistently been carried out in collaboration with the competent authorities and local stakeholders. This process takes into consideration the specific circumstances of each site. Regarding the downstream industrial smelting and refining installations, remediation projects are developed in close consultation with other stakeholders to reduce any risks to an acceptable level as defined by the authorities.

Active participation in the management and remediation of risks that have resulted from historical operations is an integral part of the Umicore Way. Umicore's proactive program for assessing and remediating, where necessary, soil and groundwater contamination has made significant progress. The following section illustrates the main ongoing programs and the progress made during 2020. Due to the corona pandemic, however, several projects have incurred serious delays.

7.1 BELGIUM

The mining sites in Belgium laid the foundation of our oldest predecessor company, Vieille Montagne. The mining concession of the same name was granted by the Emperor Napoleon Bonaparte in 1805 and 5

more concessions were added over time, all located in eastern Wallonia. The mining activities in Belgium ceased in the 1950s and extensive rehabilitation work to secure the site was carried out at all concessions in close consultation with the competent authorities. Four concessions were officially transferred back to the Government, the retrocession of the others is being processed.

In addition, over a century of non-ferrous metals production in Hoboken, Olen, Balen and Overpelt impacted soil and groundwater on the industrial sites and on neighboring lands. In November 1997, Umicore concluded a voluntary agreement with the Flemish Region of Belgium to deal with this historical contamination. On 23 April 2004, Umicore signed an addendum to the 1997 Covenant with the regional waste authorities (OVAM) and the Regional Minister of the Environment in the Flemish Region of Belgium, in which Umicore committed to spent € 62 million over 15 years for historical pollution remediation on four sites, two of which – Balen and Overpelt – now belong to Nyrstar, a business that was divested by Umicore in 2007. In addition, OVAM and Umicore joined forces to remediate historic pollution in the additional areas surrounding the industrial sites, defined as a 9km perimeter, over 10 years. Both parties contributed €15 million to a new fund for the remediation work. In 2014, OVAM and Umicore agreed to extend the program an additional 5 years. The covenant came to an end in 2019, but the remedial efforts at the Umicore sites will continue as long as is necessary.

In Hoboken, what began as a lead and silver refining operation in 1887 grew to a large industrial plant extracting precious metals from waste. Over the years, Umicore has replaced heavily contaminated topsoil and remediated the historical contamination in the adjacent residential area. In 2017, an agreement was reached with the local authorities to extend the on-site storage facility, so that on-site topsoil remediation work can restart in 2021. A new groundwater remediation system is planned for 2021. The actions in Hoboken suffered from delays due to the corona pandemic.

In Olen, the pollution in and around the site is the result of historical production activities of mainly copper and cobalt. As soon as the Covenant was signed, the remediation work on the Olen site began. An on-site groundwater remediation program started in 2007 is ongoing. In 2020, contaminated soil and buried waste were further excavated at various locations where infrastructure work was needed.

Between 1922 and 1980, radium and uranium were also produced in Olen. The radium produced for cancer treatment purposes at this site was offered to Nobel laureate Marie Curie for her first experiments with radioactive material. The radium production plant was demolished during the 1970s and the radium production waste was confined to an aboveground storage facility, as was the norm at the time. Early 2020, the Federal Agency for Nuclear Control issued guiding principles for the permanent remediation and storage of the legacy radioactive material related to Umicore's Olen site in Belgium. Joint working Groups have been established, including governmental agencies such as NIRAS/ONDRAF, OVAM, FANC and Umicore to elaborate a roadmap describing the different steps that need to be taken to reach a permanent storage solution. This exercise will include an update of the estimated future remediation and storage costs and the dedicated environmental provisions once the technical aspects will have been determined. Developing and implementing this detailed roadmap is currently expected to take several years. Umicore will in the meantime continue the monitoring works to guarantee that no risks are emanating from those remnants, neither for the workers on site, nor for the surrounding population.

7.2 FRANCE

Umicore's predecessor companies operated mines in France since the mid-1800s. The last remaining mining activities were terminated in the late 1960s to early 1970s, and extensive rehabilitation works were carried out at the former mining sites, all located in the south of France, during the 1990s. All former mining concessions in France have been returned to the French government, the last being confirmed by ministerial decree in 2005.

Mining activity in Saint-Félix-de-Pallières began in the 19th century to exploit a subsoil rich in zinc and zinc-derived metals. The former mining concession was closed in 1971 and was secured in full compliance with the applicable legislation. The concession was waived in 2004 after the French authorities acknowledged that all the measures prescribed had been complied with. Despite ending its mining activity, Umicore has never left the area and regularly monitors the state of a landfill containing flotation residues and which is still Umicore's property. To guarantee safe and stable conditions of the landfill on a long-term basis, Umicore has started extensive refurbishment works in 2020, be it with a serious delay due to the corona pandemic. In recent years, more attention has been focused by certain stakeholder groups on the potential health effects linked to the former mining activities. Despite having complied with all the requirements of the administration at the time of the termination of the mining activities, Umicore received in 2018 official injunctions to tackle 3 other areas at Saint-Félix, which are not under the ownership of Umicore. Although Umicore appealed against the notices, at the end of November 2019 it presented a feasibility study to address the 3 areas, as requested At the end of 2020, the Administrative Tribunal in Nîmes annulled all the injunctions on the basis that Umicore complied with all the legal requirements at the time of the transfer of the mining concessions. The tribunal added that all responsibilities are now with the State..

In Viviez, the pollution in and around the site is the result of historical production activities related to zinc production started in 1855. Umicore invested € 40 million in completing a large-scale remediation program from 2011 to the end of 2016 and has transferred the post-remedial obligations to a third party. Although soil contamination results from various sources, Umicore, together with other partners, joined a voluntary program in 2017 to address the soil contamination identified in the private gardens around the Viviez site. Data collection was performed in 2017 and 2018 and appropriate measures have been defined by a dedicated expert panel, put in place by the competent authorities. Umicore is currently preparing the works that will be executed in 2021.

7.3 USA

In 1980, Umicore's predecessor company acquired an abandoned silver-gold mine at Platoro in the Rocky Mountains in Colorado. Subsequent exploration drillings were unsuccessful and any attempts to further exploit the mine were stopped.

Remedial work started in the 1990s, consisting of capping and landscaping waste rock piles and installing a water treatment plant to capture and treat the acid mine drainage that continuously flows out of the mine. The mining site is in a nature recreation area. Umicore continues to manage the site and treat drainage water to meet the stringent environmental requirements. Umicore built a new modern waste water treatment facility in 2018 to further decrease the metal concentration in the discharge and decrease the volume of solid waste produced. Umicore/Union Gold received in 2019 a proposal for a new effluent permit, including very stringent limits for arsenic, to be attained in 2024. Union Gold took immediate action to contest the proposal arguing that reaching such limits is not technically feasible. The competent authorities accepted the arguments and recommended to apply for a less stringent permit modification. At the same time, Union Gold tested extra polishing steps in the waste water treatment plant in preparation to the application of a permit variance by 2023.

From 1980 to 2010, Umicore operated a cobalt-producing facility in Maxton, North Carolina. After the closing and the demolition of the Maxton plant, soil and groundwater contamination was identified. Umicore entered a voluntary remediation program with the authorities to fully address the issue by 2033. A comprehensive groundwater remediation through pump and treat has been put in place and is showing its effectiveness to reach the forecasted end date.

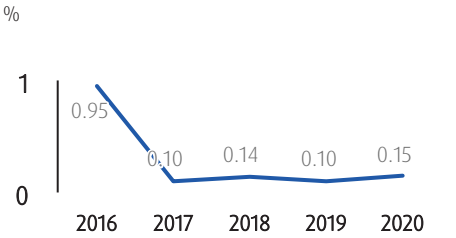
7.4 BRAZIL

Umicore acquired industrial units in the cities of Americana (SP), Guarulhos (SP) and Manaus (AM) in Brazil in 2003. During an environmental assessment that was performed following the acquisition, groundwater pollution was detected at the Guarulhos site. This historical pollution dates from before Umicore's purchase of the operations. Umicore took immediate measures to stop the spreading of this contamination to the neighboring areas by installing a hydraulic barrier that has been in full operation since 2011. Targeted extraction systems were put in place on site to speed up the remediation. The closure of the industrial activities from the Guarulhos site to Americana and the partial demolition of the buildings in 2021, will allow to tackle the core of the contamination even better. Due to the corona pandemic, the move to Americana was delayed, which in turn also delayed the demolition of the building in Guarulhos and the speed up of the groundwater remediation.

E8 REGULATORY COMPLIANCE AND MANAGEMENT SYSTEM

8.1 GROUP DATA

COMPLIANCE EXCESS RATE



The compliance excess rate is the ratio between the total number of excess results and the total number of compliance measurements. An excess result is a monitoring result that violates a limit value defined in a permit, regulation or other relevant regulatory standard.

The total number of measurements is the total number of environmental impact measurements as required by the operational permit, environmental permit, or comparable standard in the region where the reporting entity is operating. The total number means the number of measurement events multiplied by the number of parameters per measurement event.

In 2020, some 54,000 environmental measurements were carried out at all of Umicore's industrial sites, compared to some 49,000 the year before.

The number of measurements that did not meet the regulatory or permit requirements is very low at 0.15% for the Group, compared to 0.13% in 2019.

Of the 55 consolidated industrial sites, 53 have put in place an environmental management system certified against ISO 14001. One of the remaining 2 sites is an acquisition that joined Umicore reporting in 2018, and the sites is planning the implementation of an environmental management system during 2021. The other site was closed down during the course of 2020 and did not undergo recertification during the last months before shutdown. All major sites with significant environmental impacts are certified against the ISO 14001 management system.

In total, 80 environmental complaints were received in 2020, the large majority of which was related to noise and odor. 44 of the complaints are ongoing.

Social statements

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SOCIAL KEY FIGURES

	unit	Notes	2016	2017	2018	2019	2020
Workforce (fully consolidated companies)	N°	S2	9,921	9,769	10,420	11,152	10,859
Temporary contracts	% of workforce	S2	3.45	3.86	3.13	3.31	3.19
Women amongst all employees	% of workforce	S2	21.6	21.92	21.30	20.88	21.68
Women amongst all managers	% of workforce	S2	22.11	22.37	22.98	23.13	23.06
Women amongst senior management	% of workforce	S2	9.09	6.77	9.70	10.96	10.74
Women in 'business operations' management functions	%	S2	14.27	15.55	15.08	14.90	14.43
Non-European representation in senior management functions	%	S2	16.67	18.05	17.91	18.49	20.13
Average training hours per employee	hours/employee	S3	41.49	45.33	43.10	48.73	36.33
Employees having a yearly appraisal	% of workforce	S3	96.03	98.29	96.15	94.00	93.42
Voluntary leavers - ratio	% of workforce	S3	4.10	5.03	7.18	5.99	4.20
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	S4	69.41	65.41	64.49	65.60	66.38
Exposure ratio 'all biomarkers aggregated'[1]	%	S7	3.2	2.7	2.8	1.8	1.6
Number of occupational linked diseases	N°	S7	12	11	12	18	6
People with platinum sensitisation	N°	S7	1	1	3	1	1
Fatal accidents	N°	S8	1	0	1	0	1
Lost Time Accidents (LTA)	N°	S8	59	51	61	90	49
Lost Time Accidents (LTA) for sub-contractors	N°	S8	15	22	21	25	17
LTA frequency rate	LTA/million hours worked	S8	3.3	3.0	3.4	4.6	2.5
LTA severity rate	lost days/thousand hours worked	S8	0.6	0.1	0.1	0.2	0.5

1 Ratio between the number of monitoring results exceeding the Umicore target value, defined for relevant hazardous substances, and the total number of monitoring results.

-

S1 SCOPE OF SOCIAL STATEMENTS

In total, 86 consolidated sites are included in the HR related notes of the social reporting (S2 to S5). This is a decrease of 4 sites from 2019 and attributed to 4 site closures: Beijing (TFP), Wickliffe, Bagnolet which relocated to active site Paris and Brentwood which relocated to active site Hertford. The sites report full year data for the social indicators. The indicators presented are based on data from fully consolidated companies.

S2 WORKFORCE

GROUP DATA

	unit	2016	2017	2018	2019	2020
Workforce (fully consolidated companies)	N°	9,921	9,769	10,420	11,152	10,859
Workforce from associated companies	N°	3,196	3,360	3,180	2,976	2,460
Employees men	N°	7,778	7,628	8,201	8,823	8,505
Employees women	N°	2,143	2,141	2,219	2,329	2,354
Full-time equivalent	N°	9,716	9574	10,224	10,956	10,576
Employees < 30 years	N°	1,620	1697	1,980	2141	1,893
Employees between 30 and 50 years	N°	5,605	5504	5,939	6363	6,339
Employees > 50 years	N°	2,696	2568	2,501	2648	2,627
Temporary contracts	% of workforce	3.45	3.86	3.13	3.31	3.19
Women amongst all employees	% of workforce	21.60	21.92	21.30	20.88	21.68
Women amongst all managers	% of workforce	22.11	22.37	22.98	23.13	23.06
Women amongst senior management	% of workforce	9.09	6.77	9.70	10.96	10.74
Women in 'business operations' management functions	%	14.27	15.55	15.08	14.90	14.43
Non-European representation in senior management functions	%	16.67	18.05	17.91	18.49	20.13

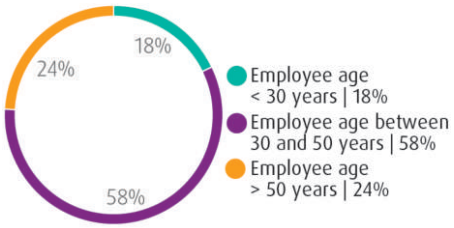
Workforce: Number of employees on Umicore payroll at the end of the period in fully consolidated companies. The number includes part-time and temporary employees but excludes employees with a dormant contract, employees on long-term illness and sub-contracted employees.

Temporary contract: Umicore employees with a temporary contract, included in the workforce of fully consolidated companies.

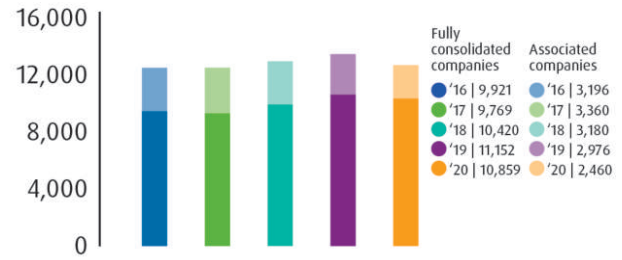
Full time equivalent: The FTE of a worker is calculated by dividing the actual working regime, hours, shifts by the regime, hours, shifts of a full-time worker at the end of the period in fully consolidated companies.

This applies to all hourly paid, monthly paid, managers and interns on Umicore's payroll at the end of the reported semester including part-time and temporary employees but excludes employees with a dormant contract (career interruption, parental leave, etc.), employees on long-term illness (country specific length of continuous absence) and early retirees.

WORKFORCE AGE SPLIT



TOTAL WORKFORCE



TOTAL WORKFORCE

The total workforce decreased by 809 employees to a total of 13,319. For the fully consolidated companies, the workforce decreased by 293 people to 10,859, mainly due to a decrease in the Asia-Pacific and North American regions.

Amongst the associated companies there was a decrease of 516 employees, mainly due to the reductions in personnel at sites in Germany, Ireland, South Africa and United Kingdom in Element Six.

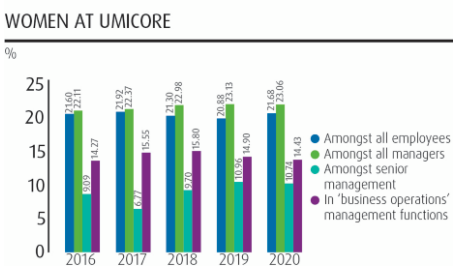
The FTE of 10,576 (consolidated) comes very close to the reported headcount of 10,859, illustrating that most of Umicore employees are working on a full-time basis.

TEMPORARY CONTRACTS

Temporary contracts as a percentage of the workforce of fully consolidated companies decreased slightly to 3.19% in 2020.

GENDER SPLIT

The percentage of women was 21.68% as a proportion of the workforce of fully consolidated companies. It has increased slightly from 2019.



GENDER SPLIT – SENIOR MANAGERS

While the total percentage of women employees has remained rather stable compared to 2016, the percentage of women managers has shown an increase from 22.11% in 2016 to 23.06% in 2020. The percentage of women in senior management dropped slightly from 2019. Overall, in the last five years the percentage increased from 9.09% in 2016 to 10.74% in 2020. While we did not achieve the ambition to reach 15% of women in senior management functions by end of 2020, increasing the number of women in senior management remains a target for the next coming years.

WOMEN IN "BUSINESS OPERATIONS" MANAGEMENT FUNCTIONS

To monitor career development, we have defined the notion of "business operations" management functions, referring to those in the fields of operations, sales and general management. These are functions that present a pipeline of talent to senior management. Within the senior management group, the business operation functions represent 52% of the group in 2020.

We have monitored the share of women managers in "business operations" functions since 2016. In 2020, the share of women within this management group employed in business operations functions decreased slightly to 14.43% compared to 14.9% in 2019. Overall, compared to 14.27% in 2016 it has slightly increased.

NON-EUROPEAN REPRESENTATION IN SENIOR MANAGEMENT FUNCTIONS

Since 2016 we have also monitored the share of non-European representation in senior management functions, as an indicator for diversity. In 2020, this share increased to 20.13%, from 2019 at 18.49%. Over the last five years, the percentage has shown a steady increase from 16.67% in 2016 to 20.13% in 2020.

REGIONAL DATA

	unit	Europe	North America	South America	Asia-Pacific	Africa	Umicore Group
Total workforce	N°	6,980	704	964	4,049	622	13,319
Workforce (fully consolidated companies)	N°	6,102	692	607	3,223	235	10,859
Workforce from associated companies	N°	878	12	357	826	387	2,460
Employees men	N°	4,808	529	454	2,567	147	8,505
Employees women	N°	1,294	163	153	656	88	2,354
Full-time equivalent	N°	5,828.05	686.33	607.00	3,219.50	235.00	10,576
Temporary contracts	% of workforce	3.98	2.46	2.14	2.26	0.00	3.19

BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Corporate	Umicore Group
Total workforce	N°	3,073	4,488	2,769	2,989	13,319
Workforce (fully consolidated companies)	N°	3,073	3,761	2,769	1,256	10,859
Workforce from associated companies	N°		727		1,733	2,460
Employees men	N°	2,428	3,002	2,321	754	8,505
Employees women	N°	645	759	448	502	2,354
Full-time equivalent	N°	3,042.44	3,758.97	2,707.67	1,066.80	10,576
Temporary contracts	% of workforce	5.79	2.29	2.06	1.99	3.19

GENERAL OVERVIEW OF SITES AND EMPLOYEES

	Production sites	R&D | Technical centres	Other sites	Employees
Europe				
Austria	1	-	-	142
Belgium	3	1	1	3,196
Denmark	1	1	-	115
Finland	1	1	-	266
France	3	-	1	257
Germany	4 (1)	3	1	1692 (331)
Ireland	(1)	-	-	(405)
Italy	-	-	2	38
Liechtenstein	1	1	-	77
Luxemburg	-	-	1	10
Netherlands	-	-	1	8
Poland	2	-	1	201
Portugal	-	-	1	6
Russia	-	-	1	6
Spain	-	-	1	5
Sweden	1	-	(1)	39 (1)
United Kingdom	1	(1)	2 (1)	44 (141)
ASIA-PACIFIC				
Australia	-	-	1	7
China	4 (3)	1	5 (1)	1499 (813)
India	1	-	2	88
Japan	2	3	2 (1)	181 (9)
Philippines	1	-	-	89
South Korea	3	2	1	1,170
Taiwan	-	-	2	26
Thailand	2	-	1	163
United Arab Emirates	-	-	(1)	(4)
NORTH AMERICA				
Canada	3	-	-	253
Mexico	-	-	1	1
United States	7	1	3 (1)	438 (12)
SOUTH AMERICA			-	
Argentina	1	-	-	67
Brazil	4	1	-	540
Peru	(1)	-	-	(357)
AFRICA				
South Africa	1 (1)	-	1	235 (387)
TOTAL	**47 (7)**	**15 (1)**	**32 (6)**	**10,859 (2,460)**

Figures in brackets denotes "of which associates and joint venture companies". Where a site has both production facilities and offices (e.g. Hanau, Germany), it is classified as a production site only. Some of our production sites and R&D/technical centers are located on the same site but are counted separately.

S3 PEOPLE ENGAGEMENT

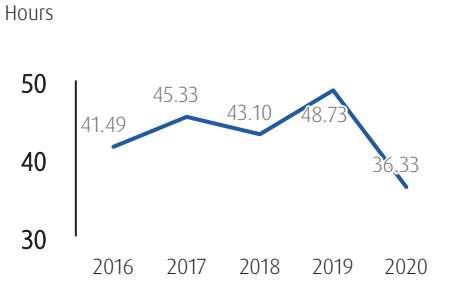
GROUP DATA

	unit	2016	2017	2018	2019	2020
Employees having a yearly appraisal	% of workforce	96.03	98.39	96.15	94.00	93.42
Average number of training hours per employee	hours/ employee	41.49	45.33	43.10	48.73	36.33
Average number of training hours per employee – Men	hours/ employee	42.38	46.53	44.68	48.26	37.11
Average number of training hours per employee – Women	hours/ employee	38.28	41.01	37.29	50.48	33.49
Average number of training hours per employee – Managers	hours/ employee	41.03	38.54	37.59	43.01	26.98
Average number of training hours per employee – Other employee categories	hours/ employee	41.52	46.44	42.94	49.51	38.62
Voluntary leavers ratio	% of workforce	4.10	5.03	7.18	5.99	4.2
Voluntary leavers men	N°	309	404	619	521	372
Voluntary leavers women	N°	97	70	110	126	86

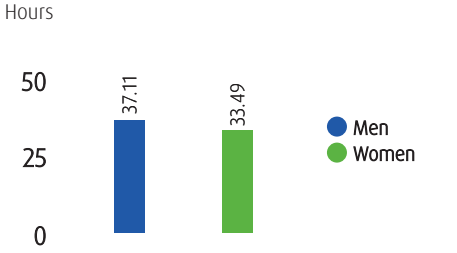
Training hours: Average number of training hours per employee, including all types of training (formal, training on the job, E-learning, etc.) in which the Company provides support, and which are relevant to the business unit or the Company. The total number of training hours is divided by the total workforce of fully consolidated companies.

Voluntary leavers: Number of employees leaving the Company of their own will (excluding retirement and the expiry of a fixed-term contract). This figure is related to the workforce from fully consolidated companies.

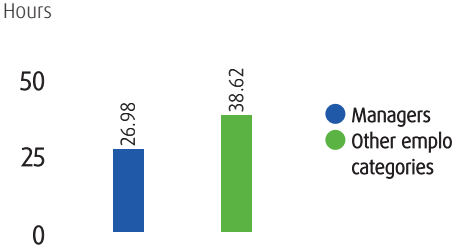
AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE



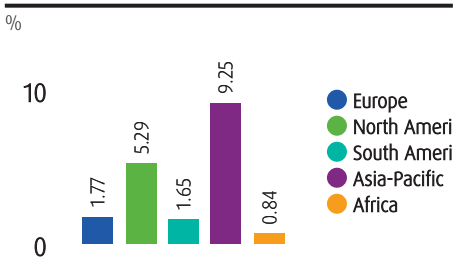
AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE – GENDER SPLIT



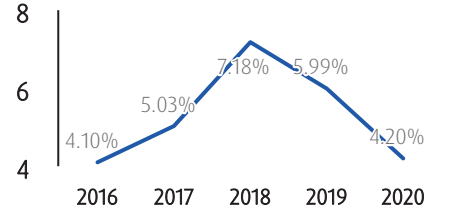
AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE CATEGORY



VOLUNTARY LEAVERS RATIO, BY REGION



VOLUNTARY LEAVERS RATIO



REGIONAL DATA

	unit	Europe	North America	South America	Asia-Pacific	Africa	Umicore Group
Average number of training hours per employee	hours/ employee	28.94	24.20	95.80	43.26	14.83	36.33
Employees having a yearly appraisal	% of workforce	91.71	94.42	100.00	94.80	98.74	93.42
Voluntary leavers ratio	% of workforce	1.77	5.29	1.65	9.25	0.84	4.20

BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Corporate	Umicore Group
Average number of training hours per employee	hours/ employee	32.73	40.11	38.45	28.32	36.33
Employees having a yearly appraisal	% of workforce	97.84	92.43	89.10	95.40	93.42
Voluntary leavers ratio	% of workforce	4.22	6.72	1.73	1.76	4.20

TRAINING HOURS

In 2020, the average training hours per employee decreased to 36.33 hours from the previous year. Globally, training hours were primarily impacted by COVID-19. Where possible, trainings were organised differently: in smaller groups respecting social distancing and online trainings. A part of the trainings were postponed or cancelled. In all regions training hours dropped, except for region South America where it increased in Brazil. This was mainly due to a high number of "on the job" training hours for employees who were hired, changed jobs or took on additional responsibilities in some sites. The amount of "on the job" hours differentiated based on job role, complexity of processes and tasks. The training hours for "on the job learning" are not consistently captured or registered in all sites.

Data shows that managers training hours (26.98 hours) are lower than for other employees (38.62 hours).

YEARLY APPRAISAL

In 2020, 93.42% of all employees from fully consolidated companies had an appraisal interview to discuss their development at least once a year.

VOLUNTARY LEAVERS

In 2020 the voluntary leavers rate decreased to 4.20% from 5.99% in 2019. Although the rate dropped for all regions, still significant regional differences can be observed with Asia Pacific reporting the highest voluntary leaver rate (9.25%) and Africa (0.84%) the lowest. The high voluntary leaver rate in Asia Pacific is not unique to Umicore and can be explained by a highly competitive and fluid labor market.

VOLUNTARY LEAVERS – GENDER

Of the 4.2% of voluntary leavers worldwide, 18.78% were women, down from 19.47% in 2019.

S4 EMPLOYEE RELATIONS

GROUP DATA

	unit	2016	2017	2018	2019	2020
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	69.41	65.41	64.49	65.60	66.38

REGIONAL DATA

	unit	Europe	North America	South America	Asia-Pacific	Africa	Umicore Group
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	86.14	3.32	90.61	40.18	35.74	66.38

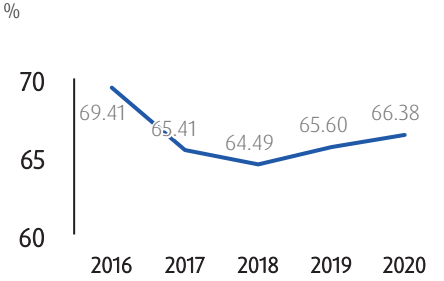
BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Corporate	Umicore Group
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	48.29	61.18	87.69	79.22	66.38

UNION AND COLLECTIVE LABOR AGREEMENT

In total, 66.38% of Umicore employees belong to a trade union organization and/or the level of their wages are negotiated through a collective bargaining agreement. On a regional basis, there are significant differences in union representation, with the highest representation in South America and Europe and the lowest in North America.

EMPLOYEES REPRESENTED BY UNION OR COLLECTIVE LABOUR AGREEMENT (CLA)



SUSTAINABLE DEVELOPMENT AGREEMENT

In 2007, Umicore signed a Sustainable Development Agreement with the International union IndustriALL, which was renewed for 4 years in 2015 and in 2019. In this agreement, Umicore commits to a number of principles including: the banning of child labour and forced labour, recognizing the right to its employees to organize themselves and to participate in collective bargaining.

All sites are screened internally each year. This screening showed that none of Umicore's sites demonstrated a particular risk of infringement in any of the principles of the agreement.

S5 CODE OF CONDUCT

Umicore has a systematic Group-wide internal reporting on Code of Conduct issues since 2011. In 2020 a total of 35 cases were reported, involving a total of 45 employees. The type of action taken varies from a warning letter to dismissal.

S6 APPROACH TO HEALTH & SAFETY

The Group EHS Guidance Note (hereafter 'EHS Guidance Note') is Umicore's central EHS management system. It describes the groupwide environmental, health and safety requirements and expectations. It is based upon 'The Umicore Way' and provides a framework for the business units and sites to putting it into effect. The structure of the guidance note is consistent with the ISO 14001 and OHSAS 18001 management systems and explicitly references those frameworks. The EHS Guidance Note is a basis for the Corporate EHS audit program which focuses both on compliance with the guidance note and compliance with relevant local environmental, health and safety laws and regulations. The business units (BUs) and sites develop a clear action plan on the identified areas for improvement and Corporate EHS follows-up on this action plan to ensure proper progress and timely completion.

As stipulated in the EHS Guidance Note, and in line with Umicore's decentralized organization:

- Umicore's BUs and sites are responsible for translating the EHS Guidance Note into their own EHS management systems and procedures while respecting the requirements and expectations defined in the EHS Guidance Note.
- Umicore's BUs and sites are responsible for identifying risks and impacts of their activities, in normal operational conditions and potential emergencies. These assessments include potential for occupationally-linked health symptoms and diseases, hazards, injuries due to accidents, and toxicity or ecotoxicity of chemical substances. Each site must have a process in place to evaluate and document those aspects and impacts of their operations which are linked to both the workplace and the environment, including the operations of contractors working on Umicore sites.
- Umicore Corporate EHS staff, in consultation with the BUs and sites, advise on company-specific EHS standards including biological target values, safety and occupational exposure targets.
- Each BU and site develops a safety policy in line with the Group Safety Policy. The health and safety management system must ensure that employees, contractors and visitors are protected against harmful effects of working with chemicals, processes or machinery. The system includes: workplace assessments of potential hazards; operating procedures for employees and contractors; training programs on the hazards of chemicals, processes, and on prevention and safety; hazard communication for employees and contractors related to exposure potentials, control systems, emergency situations and specific health risks ; the need for personal protective equipment; ergonomics; storage, loading and unloading of hazardous products; machine-guarding programs to protect workers from exposure to moving parts; electrical safety; work permits and a lock out – tag out programs to protect employees or contractors working around equipment during repair or maintenance activities; etc.
- Umicore has a risk competency practice in place at the sites designed to empower workers to evaluate the hazards and risk at the workplace and feedback to their supervisor. Workers, in coordination with the supervisor, can suggest risk management options which can include stopping a job, having it re-evaluated and adding new measures prior to resuming the job if necessary.
- All sites must have a written occupational hygiene and occupational health programs. Sites are encouraged to implement specific preventative programs, for example around smoking cessation or avoiding workplace risks resulting from use of drugs and alcohol, and must provide access to occupational health services via a licensed occupational physician or another occupational health organization.
- All new employees follow a Group health and safety induction training during the initial phase of their employment. Specific training plans are developed for new and temporary employees (including managers and contractor employees).
- Each accident, incident and significant near miss must be investigated and control measures taken to prevent reoccurrence. Additionally, the investigation needs to include where and why the EHS management system failed and to record recommended appropriate measures. Contractors are required to investigate accidents and incidents on Umicore premises, where not addressed by the Umicore site. The Group Safety Policy includes an incident investigation in a 'no-blame atmosphere'.

Umicore has also committed to worker health and safety in the context of the IndustriALL Global Framework Agreement. To view Umicore's IndustriALL Global Framework Agreement, visit:
umicore.com/industriALL

S7 OCCUPATIONAL HEALTH

All consolidated industrial sites where Umicore has operational control, are included in the scope of the occupational health reporting., In 2020, following Umicore's internal reporting procedure 56 sites were required to report their occupational health data.

The information in this note only relates to Umicore employees. Data on subcontractors' occupational health are not included. Additional information on Umicore's approach to occupational health can be found in the corresponding section of Management Approach(p. 72) and in above note S6.

GROUP DATA

	unit	2016	2017	2018	2019	2020
Exposure ratio 'all biomarkers aggregated'[1]	%	3.2	2.7	2.8	1.8	1.6
Exposure ratio lead (blood)[2]	%	0.5	0.5	2.0	0.9	0.6
Exposure ratio arsenic (urine) 2	%	2.0	1.0	1.2	0.8	0.8
Exposure ratio cobalt (urine) 2	%	9.0	6.0	5.0	3.4	2.7
Exposure ratio cadmium (urine) 2	%	1.4	0.7	0.5	0.2	0.2
Exposure ratio nickel (urine) 2	%	2.0	1.4	2.6	1.8	2.0
Exposure ratio indium (blood) 2	%	11.3	14.2	2.8	1.9	1.6
People with platinum salts sensitisation	N°	1	1	3	1	1
People with noise induced hearing loss	N°	4	0	0	5	3
People with contact dermatitis	N°	0	2	3	4	0
People with occupational asthma other than Pt-salts	N°	0	0	0	0	1
People with muskulo-skeletal ailments	N°	7	8	6	8	1

1 Ratio between the number of monitoring results exceeding the Umicore target value, defined for relevant hazardous substances, and the total number of monitoring results.

2 The exposure ratio of a specific metal is defined as the ratio between the number of employees with a biological monitoring result exceeding the Umicore target value for that specific metal and the total number of employees exposed to that metal. The Umicore target values are based upon recent peer reviewed scientific data and regularly re-evaluated in the context of new evidence.

By 2020, it was Umicore's objective to have no exceedance for the biomarkers of exposure for the metals listed below. The following target values have been defined:

- **Cadmium:** 2 micrograms per gram of creatinine in urine
- **Lead:** 30 micrograms per 100 ml of blood
- **Cobalt:** 15 micrograms per gram of creatinine
- **Indium:** 1 microgram per liter of plasma
- **Arsenic and nickel:** 30 micrograms per gram of creatinine in urine
- **Platinum salts:** no new cases of platinum salt sensitization

The number of occupational diseases is the number of employees with a newly diagnosed occupational disease or occupationally linked symptoms during the reporting year.

While the COVID-19 pandemic has delayed some biological monitoring campaigns in the 1st half year, by the end of 2020, all employees were submitted to a full program as required by Umicore's internal health guidance notes.

In 2020, a total of 7406 biological sampling procedures took place from employees with an occupational exposure to at least one of the metals mentioned above (platinum salts excluded). 122 readings showed a result in excess of the internal target value. This brings the total excess rate to 1.6%, comparable to the 1.8% excess rate of 2019. All occupationally exposed employees are regularly monitored by an occupational health physician in line with regulatory requirements and Umicore occupational health guidance.

LEAD

Occupational lead exposure represents a potential health risk, mainly in the business group Recycling. In total, 8 of the 1,385 occupationally exposed employees exceeded the target value of 30µg/100ml, decreasing as such the excess rate for lead exposure to 0.6% compared to 0.9% in 2019.

The decrease in excess readings is the result of continued improved workplace hygiene measures at the lead refinery at the Hoboken site (Belgium, Recycling). The site improved its ventilation systems, while instructions and training resulted in better compliance with personal protective equipment requirements.

ARSENIC

Occupational exposure to arsenic is possible in the business groups Energy & Surface Technologies and Recycling. In total, 8 employees or 0.8% of the 967 occupationally exposed workers had an excess reading during 2020, the same excess rate as in 2019.

All workers occupationally exposed to arsenic are submitted to a medical surveillance program to closely monitor their health condition.

COBALT

In total, 2,034 employees are occupationally exposed to cobalt, mainly in the business group Energy & Surface Technologies. The number of employees exceeding the target value was further reduced to 55, resulting in an excess rate of 2.7%, down from 3.4% in 2019.

In the business unit Rechargeable Battery Materials we noticed an excess rate of 1.2% in 2020, the same number as in 2019.

The excess readings in the business unit Cobalt & Specialty Materials decreased from 11.1% in 2019 to 10.5% in 2020.

The sites in Cheonan (Korea, Rechargeable Battery Materials) and Jiangmen (China, Rechargeable Battery Materials) continued and maintained their comprehensive 'zero dust' management plan. In the last quarter of 2020, the site in Cheonan achieved a zero-excess rate during the biological monitoring campaign. This 'zero dust' program focuses on equipment improvements and workers' behavior. Concrete actions include awareness programs, regular industrial hygiene campaigns, excellent housekeeping and improved maintenance of critical equipment.

The business unit Cobalt & Specialty Materials continues to further develop their dust reduction program with focus on technical improvements, encapsulation of equipment, enhanced ventilation systems and strict application of personal protective equipment procedures including respiratory mask fit testing for each exposed employee. While over the past years progress has been made,the sites in Olen (Belgium, Energy & Surface Technologies), Fort Saskatchewan (Canada, Energy & Surface Technologies) and Grenoble (France, Energy & Surface Technologies) continue to report the highest excess rates.

For workers exposed to cobalt, both business units Cobalt & Specialty Materials and Rechargeable Battery Materials have implemented Umicore's occupational health guidance for cobalt, including biological monitoring and medical surveillance. For the site in Jiangmen (China, Energy & Surface Technologies), the medical staff of the new occupational health center has been set up and implemented a cobalt health and hygiene program in line with Umicore's internal guidelines and compliant with Chinese regulatory requirements.

CADMIUM

Occupational exposure to cadmium represents a potential health risk in the business groups Energy & Surface Technologies and Recycling. Cadmium in urine is an excellent biomarker for lifetime exposure. In 2020, a total of 449 employees had an occupational exposure to cadmium.

Only 1 employee recorded a cadmium in urine reading in excess of the target value. This resulted in an excess rate of 0.2%, the same as in 2019.

NICKEL

The business groups Energy & Surface Technologies and Recycling have occupational exposure to nickel. In 2020, a total of 2,380 employees were exposed to nickel. In 2020, 47 of the exposed workers exceeded the target level resulting in an excess level of 2.0% compared to 1.8% in 2019.

In the business unit Rechargeable Battery Materials, we noticed an increase in excess readings from 0.9 in 2019 to 2.4% in 2020, mainly related to an increased exposure at the site in Jiangmen (China, Energy & Surface Technologies). Increased production volumes and a reduced compliance with the site's personal protective equipment policy contributed to the increased number of excess readings. The site intensifies its training programs for newcomers and continues to invest in technical improvements.

The excess readings in the business unit Cobalt & Specialty Materials significantly decreased from 12.2% in 2019 down to 5.5 % in 2020. While the closure of the site in Wickliffe (USA, Energy & Surface Technologies) significantly contributed to this reduction, the dust management programs at the sites in Subic (Philippines, Energy & Surface Technologies) further strengthened this trend.

For workers exposed to nickel, both business units Cobalt & Specialty Materials and Rechargeable Battery Materials have implemented Umicore's occupational health guidance for nickel, including biological monitoring and medical surveillance. For the site in Jiangmen (China, Energy & Surface Technologies), the medical staff of the new occupational health center has been set up and implemented a nickel health and hygiene program in line with Umicore's internal guidelines and compliant with Chinese regulatory requirements.

INDIUM

The business group Energy & Surface Technologies has exposure to indium. Indium in plasma is an excellent biomarker for lifetime exposure.

In 2020, 191 employees were exposed to indium. 3 employees had an excess reading for indium in plasma, at the site in Balzers (Liechtenstein, Energy & Surface Technologies) resulting in an excess rate of 1.6% compared to 1.9% in 2019. All these workers had a current or former exposure at the bonding workplace. The working conditions at this workplace have been improved and an extensive medical surveillance program, in line with Umicore occupational health guidelines, has been implemented.

PLATINUM SALTS

The business groups Catalysis and Recycling have workplaces with exposure to platinum salts.

In 2020, we had 1 newly diagnosed employee with a platinum salt sensitization at the site in Hoboken (Belgium, Recycling). The worker has been removed from the workplace. All workers exposed to platinum salts are being monitored through an occupational health program, following a Umicore health guideline and are being regularly checked for platinum salt sensitization.

OTHER OCCUPATIONAL RELATED DISEASES

In 2020, 1 employee developed a musculoskeletal disorder due to his occupation. 3 employees developed a noise-induced hearing loss. All people concerned are being followed-up by an occupational health physician.

Over the past years, Umicore has been confronted with several burn-out cases that led to long-term sickness with impact on both the individual and the organization. The Umicore sites in Belgium continue their program consisting of primary prevention of burn-out combined with early recognition of symptoms and case management support. Concrete actions included awareness campaigns via leaflets, e-learning, workshops, training for supervisors and managers and individual coaching in case of burn-out symptoms. Similar programs have been implemented at Umicore sites in other countries such as Germany.

During the lock-down periods following the pandemic, many office employees had to work from their home office for longer periods. Many sites took measures to ensure the wellbeing of their employees. These measures included regular virtual contacts among team members, leaflets on the company's intranet with tips and tricks to organize your home-working, online social events etc.

S8 OCCUPATIONAL SAFETY

In 2020, 92 consolidated sites, of which 58 are industrial sites, are included in the safety reporting. This number also includes commercial offices.

Additional information on Umicore's approach to safety can be retrieved in the corresponding section of Management Approach(p. 72) and in above note S6.

The Umicore information in this note only relates to Umicore employees. Data on subcontractors' occupational safety are being reported separately. Umicore strives towards an accident-free workplace.

GROUP DATA

	unit	2016	2017	2018	2019	2020
Fatal accidents	N°	1	0	0	0	1
Fatal accidents sub-contractors	N°	0	0	1	0	0
Lost Time Accidents (LTA)	N°	59	51	61	90	49
Lost Time Accidents (LTA) sub-contractors	N°	15	22	21	25	17
LTA frequency rate		3.34	3.01	3.36	4.6	2.5
Calendar days lost	N°	9,848	1,590	1,830	3,893	9,176
LTA severity rate		0.56	0.09	0.10	0.2	0.5
Recordable Injuries (RI)	N°	127	138	158	158	119
Recordable Injuries frequency rate		6.78	8.15	8.70	8.07	6.13
Ratio N° of sites with no LTA / total N° of sites reporting	%	84	84	84	83	83
Sites OHSAS 18001 / ISO 45001 certified	%	41.7	51.0	51.9	52.6	54.4

Umicore employee: a person belonging to Umicore's total workforce. A Umicore employee can be a full-time, part-time or temporary employee

Sub-contractor: a person not belonging to Umicore's total workforce, providing services to Umicore in one of its premises under terms specified in a contract

Fatal accident: a work-related accident with fatal outcome

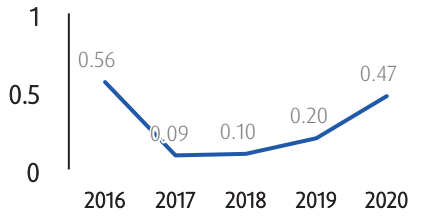
Lost time accident (LTA): a work-related injury resulting in more than one shift being lost from work

Recordable injury (RI): a work-related injury resulting in more than one first aid treatment or in a modified working program but excluding lost time accidents

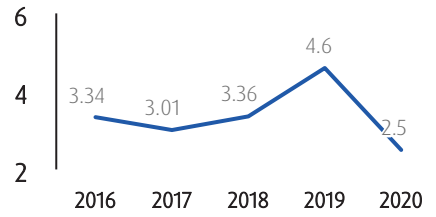
Frequency rate: number of lost time accidents per million hours worked

Severity rate: number of lost calendar days due to a lost time accident per thousand hours worked. Accidents to and from work are not part of the scope of the safety data

SEVERITY RATE



FREQUENCY RATE



REGIONAL DATA

	unit	Europe	North America	South America	Asia-Pacific	Africa	Umicore Group
Lost Time Accidents (LTA)	N°	38	4	1	6	0	49

BUSINESS GROUP DATA

	unit	Catalysis	Energy & Surface Technologies	Recycling	Corporate	Umicore Group
Fatal accidents	N°	0	1	0	0	1
Lost Time Accidents (LTA)	N°	7	8	34	0	49
Calendar days lost	N°	82	7,768	1,326	0	9,176

A sensitivity analysis of the safety numbers demonstrated that the lockdown periods did not change in a significant way the number of hours exposed, an indicator used to calculate both the Group's frequency and severity rates.

In 2020, 49 lost time accidents have been recorded, down from 90 in 2019. This resulted in a frequency rate of 2.52, down from 4.62 in 2019.

Any satisfaction we might have derived from the reduced number of lost time accidents is wiped out by the fatal accident at the site in Subic (Philippines, Energy & Surface Materials). An employee got seriously injured during the operation of a forklift truck. He was transferred to the hospital for emergency surgery but a week later succumbed to his injuries. Immediate actions were taken to prevent this type of forklift handling and a global safety alert has been sent to all business units with clear instructions and deadlines for the implementation of a detailed improvement plan on powered forklift trucks, stationary machinery and equipment.

In total 9,176 calendar days were lost due to lost time accidents including the 7,500 default days lost following the fatal accident. This resulted in a severity rate of 0.47, more than a doubling compared to 2019.

There were 119 reported recordable injuries, down from 158 in 2019. The RI frequency rate for 2020 was 6.13 compared to 8.07 in 2019. 17 lost time accidents were registered for contractors compared to 25 in 2019 .

During 2020, 83% of the reporting sites that were operational throughout the year operated without a lost time accident. 54.4% of the sites were certified using the occupational health and safety management system OHSAS 18001 or ISO 45001.

38 lost time accidents, or 77% of lost time accidents, occurred in Europe. Of these, 28 lost time accidents occurred at Belgian sites and 6 at German sites. The Asia-Pacific sites accounted for 6 accidents. 4 lost time accidents happened in North American sites and 1 in a South American site.

Umicore counted only 14 lost time accidents during the 1st half year (1st of January through the 30th of June). We believe that the COVID-19 pandemic may have led to an increased scrutiny of the workplace conditions by all employees to protect themselves and their fellow co-workers of getting infected at the workplace. In addition, a consistent and a more coaching communication style on the health and hygiene measures to be taken by the sites may also have contributed to an increased risk awareness.

In 2020, the business group Catalysis recorded 7 lost time accidents compared to 11 in 2019. Following a safety culture survey at the end of 2019 the business unit Automotive Catalysts has implemented additional safety behavioral actions including risk competency projects in several of its sites. All Automotive Catalysts production plants are required to be certified against the ISO 45001 or OHSAS 18001 management system. At year-end, the site Tsukuba (Japan) recorded more than 10 years without a lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site. The sites in Port Elizabeth (South-Africa), Himeji (Japan) and Rayong (Thailand), had operated over 5 years without lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site. The sites in Auburn Hills (USA), Karlskoga (Sweden); Shirwal (India) and Tokoname had operated more than 3 years without a lost time accident or recordable injury to Umicore staff and no lost time accident to contractors.

The business group Energy & Surface Technologies recorded 8 lost time accidents, down from 14 in 2019. The sites further deployed their safety actions around 3 main pillars: 'men', 'machines' and 'methods'. At

year end, the sites in Dundee (UK) and Tsukuba (Japan) have been recognized for their excellent and sustained safety performance, recording over 10 years without any lost time accident or recordable injury to Umicore staff and no lost time accident to contractors. Balzers (Liechtenstein) operated more than 5 years without any lost time accident or recordable injury to Umicore staff and no lost time accidents to contractors. The site in Manaus (Brazil), Hsinchu Hsien (Taiwan), La Vergne and Quapaw (USA) operated more than 3 years without any lost time accident or recordable injury to Umicore staff and no lost time accidents to contractors.

The business group Recycling had 34 lost time accidents compared to 62 in 2019. The site in Hoboken (Belgium, Recycling) reported 27 lost time accidents compared to 57 in 2019. The site has continued the implementation of its 'Safety @ Precious Metals Refining' action plan under the leadership of a senior management steering committee. During 2020, the site has among other measures intensified its safety observation tours by all managers and supervisors. At year end, the site in Markham (Canada) and the UMS site in Bangkok (Thailand) operated 3 years without any lost time accident or recordable injury to Umicore staff and no lost time accident to contractors.

There were no lost time accidents in general services and corporate offices, including Corporate Research & Development.

Umicore is reviewing it global safety strategy and actions under the leadership of a newly hired Group Safety Director.

S9 PROCESS SAFETY

In 2020, the Umicore Group process safety activities focused on executing process risk assessment studies to ensure that all our processes are being operated in the acceptable risk zone. At year end, over 70% of the production processes had received specific process hazard and risk assessments compliant with Umicore standards, compared to 60% in 2019. A detailed timeline has been reviewed for completion of the remaining studies in the coming years, giving priority to the processes with high risk profiles.

Due to COVID-19 travel and meeting restrictions in 2020, an alternative audit program of remote process safety compliance audits and quality review of process risk assessments was established.

Umicore continued its process safety training program in 2020 with online HAZOP leader training sessions and hydrogen safety webinars.

Following a major fire incident at the Hoboken production site, a fire investment plan is established in collaboration with independent fire risk experts and the fire insurance company. The site intensified fire inspections and emergency response planning in close collaboration with the local authorities.

About this report

About this report

The Umicore annual report offers a comprehensive and integrated view of our economic, financial, environmental, value chain and social performance for 2020.

This report is divided in 2 parts: an annual review of key performance aspects as they relate to our Horizon 2020 strategy, followed by the full financial, environmental, value chain, social and governance statements and notes. All elements of the Annual Report can be consulted at annualreport.umicore.com

AN INTEGRATED APPROACH

One of the key objectives of this report is to reflect our integrated strategic approach which combines economic, environmental, value chain and social performance targets. This report further refines the approach based on elements from the "International Integrated Reporting Framework" developed by the International Integrated Reporting Council, which requires a more complete disclosure and discussion of the material factors influencing our business and the risks and opportunities linked to our Horizon 2020 strategy.

Umicore has aligned the corporate reporting to the non-financial reporting requirements set out in article 3:32, §2 of the Belgian Companies' and Associations' Code.

REPORTING SCOPE

This report covers our operations for the 2020 calendar year which is also the Umicore fiscal year, and reports on the progress towards our Horizon 2020 objectives. The scope of all objectives and a brief description of the methodology behind all performance indicators are included in the statements section of the report. Where data are available, the performance indicators in the document are reported with a comparison base going back 5 years.

The economic scope of this report covers all fully consolidated operations and the financial contributions of all associate and joint venture companies.

The environmental and social scope is limited to all fully consolidated – any divergence from this scope is explained in the relevant chapter or note in the report.

DATA

The economic and financial data are collected through our financial management and consolidation process. The environmental and social data are collected through environmental and social data management systems and integrated into a central reporting tool, along with the economic and financial data.

ASSURANCE

This report has been independently verified by PwC Bedrijfsrevisoren/Réviseurs d'Entreprises (PwC).

PwC's audit of financial information is based on full set of IFRS consolidated financial statements on which it has expressed an unqualified opinion. For the full set of IFRS consolidated financial statements, see the Financial Staments chapter(p. 108) and the auditor's report thereon(p. 216).The social, value chain and environmental information included in this report has been prepared on the basis of the same recognition and measurement principles that have been used to prepare the social statements chapter(p. 198), environmental statements chapter(p. 188) and value chain statements chapter(p. 181). PwC's report on the social, value chain and environmental statements can be found in the Assurance reports section(p. 216).

This report has been prepared in accordance with the GRI Standards: Core option. A full GRI index can be found on pp. 200 – 202. The Global Reporting Initiative (GRI) is a networkbased organization that pioneered the world's most widely used sustainability reporting framework.

PRESENTATION & FEEDBACK

Umicore seeks to improve its reporting through a continuous process of stakeholder engagement and dialogue. The key social elements of the report are presented to the international trade unions during the joint monitoring committee in March, while the entire document is presented to shareholders at the Annual General Meeting in April.

Umicore also commits to consider all improvement points recommended by the independent auditor (PwC) in its subsequent reporting cycles. General reader feedback is encouraged on both the print and online versions of the report. Feedback received on our previous reports has been considered in the preparation of this report.

To share your feedback on this report, visit: UMICORE.COM/AR-FEEDBACK

GRI index

GRI STANDARDS	DISCLOSURE	PAGE REFERENCE IN ANNUAL REPORT 2020
GRI 102: GENERAL DISCLOSURES		
ORGANISATIONAL PROFILE		
102-1	Name of the organisation	Front cover
102-2	Activities, brands, products, and services	About us(p. 3); Umicore at a glance(p. 5); Business model(p. 10)
102-3	Location of headquarters	Inside back cover; back cover
102-4	Location of operations	Umicore at a glance(p. 5); Social statements: S2(p. 200);
102-5	Ownership and legal form	Back cover
102-6	Markets served	About us(p. 3); Umicore at a glance(p. 5); Economic review(p. 29)
102-7	Scale of the organisation	Umicore at a glance(p. 5); Social statements: S2(p. 200);Financial statements: consolidated balance sheet(p. 110)
102-8	Information on employees and other workers	Social statements: S2(p. 200)
102-9	Supply chain	Value chain and society review(p. 39), 188-191 Value chain statements: V2(p. 182)-V4(p. 185)
102-10	Significant changes to the organisation and its supply chain	Economic review(p. 29), Value chain statements: V4(p. 185)
102-11	Precautionary principle or approach	Managing risk effectively(p. 76); Key risks and opportunities(p. 78)
102-12	External initiatives	COSO; OECD Guidelines; ILO Human Rights; SRI, FTSE; PACI; GRI; IIRC
102-13	Membership of associations	Stakeholder engagement(p. 16)
STRATEGY		
102-14	A statement from the most senior decision-maker of the organisation	CEO and Chairman's review(p. 13)
102-15	Key impacts, risks, and opportunities	Key risks and opportunities(p. 78)
ETHICS AND INTEGRITY		
102-16	Values, principles, standards, and norms of behaviour	The Umicore Way; Code of Conduct; Managing risk effectively(p. 76); Stakeholder engagement;(p. 16)Corporate governance statements: G1(p. 88),G9(p. 93); Social statements: S5(p. 204)
102-17	Mechanisms for advice and concerns about ethics	Code of Conduct; Social statements: S5(p. 204)
GOVERNANCE		
102-18	Governance structure	Corporate governance statements: G2(p. 88), G4(p. 89), G5(p. 91); Management approach(p. 72)
102-19	Delegating authority	Management approach(p. 72)
102-20	Executive-level responsibility for economic, environmental, and social and societal topics	Management board(p. 66);Management approach(p. 72)
102-21	Consulting stakeholders on economic, environmental, and social and societal topics	Stakeholder engagement(p. 16);Materiality(p. 22)
102-22	Composition of the highest governance body and its committees	Supervisory Board(p. 61);Corporate governance statements: G2(p. 88)
102-23	Chair of the highest governance body	Supervisory Board(p. 61);Corporate governance statements: G2(p. 88)
102-24	Nominating and selecting the highest governance body	Corporate governance statements: G4(p. 89)
102-25	Conflicts of interest	Corporate governance statements :G7(p. 92), G9(p. 93)-G11(p. 93); Corporate Governance Charter; Code of Conduct
102-26	Role of highest governance body in setting purpose, values, and strategy	Corporate governance statements: G2(p. 88)
102-27	Collective knowledge of highest governance body	Corporate governance statements: G4(p. 89)
102-28	Evaluating the highest governance body's performance	Corporate governance statements: G4(p. 89)
102-29	Identifying and managing economic, environmental, and social and societal impacts	Stakeholder engagement(p. 16);Materiality(p. 22); Managing risk effectively(p. 76);Key risks and opportunities(p. 78);Management approach(p. 72)
102-30	Effectiveness of risk management processes	Managing risk effectively(p. 76)
102-31	Review of economic, environmental, and Social and societal topics	Key risks and opportunities(p. 78); Management approach(p. 72); Corporate governance statements: G4(p. 89)
102-32	Highest governance body's role in sustainability reporting	Management approach(p. 72)
102-33	Communicating critical concerns	Stakeholder engagement(p. 16); Corporate governance statements: G1(p. 88), G3(p. 89), G9(p. 93), G10(p. 93), G11(p. 93); Corporate Governance Charter; Code of Conduct
102-34	Nature and total number of critical concerns	not reported
102-35	Remuneration policies	Remuneration report;(p. 94) Corporate Governance Charter; Code of Conduct
102-36	Process for determining remuneration	Remuneration report(p. 94); Corporate Governance Charter; Code of Conduct

102-37	Stakeholders' involvement in remuneration	Remuneration report(p. 94); Corporate Governance Charter; Code of Conduct
102-38	Annual total compensation ratio	Remuneration report(p. 94)
102-39	Percentage increase in annual total compensation ratio	not reported
STAKEHOLDER ENGAGEMENT		
102-40	List of stakeholder groups	Stakeholder engagement(p. 16)
102-41	Collective bargaining agreements	Social statements: S4(p. 204)
102-42	Identifying and selecting stakeholders	Stakeholder engagement(p. 16)
102-43	Approach to stakeholder engagement	Stakeholder engagement(p. 16)
102-44	Key topics and concerns raised	Stakeholder engagement(p. 16); Materiality(p. 22)
REPORTING PRACTICE		
102-45	Entities included in the consolidated financial statements	About us(p. 3);Umicore at a glance(p. 5);Performance review(p. 28);Corporate governance statements: G2(p. 88); Financial statements: F5(p. 129), F17(p. 146)
102-46	Defining report content and topic boundaries	Materiality(p. 22);Management approach(p. 72)
102-47	List of material topics	Materiality(p. 22);Management approach(p. 72)
102-48	Restatements of information	Management approach(p. 72);Environmental statements: E1(p. 189); Social statements: S1(p. 199), S7(p. 205), S8(p. 208); Value chain statements: V4(p. 185);About this report(p. 212)
102-49	Changes in reporting	About us(p. 3);Umicore at a glance(p. 5); Environmental statements: E1(p. 189), E2(p. 189), E3(p. 192); Value chain statements: V1(p. 182), V2(p. 182), V4(p. 185); About this report(p. 212)
102-50	Reporting period	Front cover; Inside front cover; About this report(p. 212)
102-51	Date of most recent report	Annual report website
102-52	Reporting cycle	Front cover; Inside front cover; Annual report website
102-53	Contact point for questions regarding the report	Inside back cover; natalia.agueros@eu.umicore.com
102-54	Claims of reporting in accordance with the GRI Standards	Inside front cover; About this report(p. 212)
102-55	GRI content index	This section; About this report(p. 212)
102-56	External assurance	Assurance reports(p. 216)
GRI 103: MANAGEMENT APPROACH		
103-1	Explanation of the material topic and its boundary	Materiality(p. 22); Management approach(p. 72)
103-2	The management approach and its components	Management approach(p. 72)
103-3	Evaluation of the management approach	Management approach(p. 72)

GRI 201: ECONOMIC PERFORMANCE		
201-1	Direct economic value generated and distributed	Umicore at a glance(p. 5); Stakeholder engagement(p. 16);Distribution of economic benefits(p. 107) Financial statements: F8(p. 135), F9(p. 136), F39(p. 177); Key figures(p. 222)
201-3	Defined benefit plan obligations and other retirement plans	Financial statements: F27(p. 157)
201-4	Financial assistance received from government	Consolidated statement of cash flow(p. 112)
GRI 202: MARKET PRESENCE		
202-2	Proportion of senior management hired from the local community	Similar scope covered in Social statements: S2(p. 200)
GRI 203: INDIRECT ECONOMIC IMPACTS		
203-1	Infrastructure investments and services supported	Stakeholder engagement(p. 16); Environmental statements: E7(p. 195);Value chain statements: V5(p. 186); Key figures(p. 222)
GRI 205: ANTI-CORRUPTION		
205-1	Operations assessed for risks related to corruption	Managing risk effectively(p. 76)
205-2	Communication and training about anti-corruption policies and procedures	All employees receive informal training on the Code of Conduct when joining the company
GRI 206: ANTI-COMPETITIVE BEHAVIOR		
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Financial statements: F36(p. 175)
GRI 301: MATERIALS		
301-2	Recycled input materials used	Umicore at a glance(p. 5); Value chain statements: V4(p. 185)
GRI 302: ENERGY		
302-1	Energy consumption within the organisation	Environmental statements: E4(p. 192)
302-3	Energy intensity	Environmental statements: E4(p. 192)
302-4	Reduction of energy consumption	Environmental statements: E4(p. 192)
GRI 305: EMISSIONS		
305-1	Direct Scope 1 GHG emissions	Environmental statements: E3(p. 192)
305-2	Energy indirect Scope 2 GHG emissions	Environmental statements: E3(p. 192)
305-7	Nitrogen oxides NOx, sulphur oxides SOx, and other significant air emissions	Environmental statements: E2(p. 189)

GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT		
308-2	Negative environmental impacts in the supply chain and actions taken	Value chain and society review(p. 39), Value chain statements: V2(p. 182)-V4(p. 185)
GRI 401: EMPLOYMENT		
401-1	New employee hires and employee turnover	Umicore at a glance(p. 5); Great place to work review(p. 54); Social statements: S2(p. 200), S3(p. 202);Key figures(p. 222)
GRI 403: OCCUPATIONAL HEALTH AND SAFETY		
403-1	Occupational health and safety management system	Management approach-social performance(p. 75);Health & Safety(p. 55);Managing risk effectively(p. 76); Social Statements S6(p. 204)S7(p. 205), S8(p. 208),S9(p. 210); Global framework Agreement on Sustainable Development; EcoVadis CSR Scorecard
403-2	Hazard identification, risk assessment, and incident investigation	Managing risk effectively(p. 76); Social Statements S6(p. 204)
403-3	Occupational health services	Social Statements S6(p. 205),
403-4	Worker participation, consultation, and communication on occupational health and safety	Social Statements S6(p. 204)
403-5	Worker training on occupational health and safety	Health & Safety(p. 55);Talent attraction and retention - measures taken by Umicore(p. 85); Social Statements S6(p. 204)S7(p. 205), S8(p. 208),S9(p. 210);
403-6	Promotion of worker health	Social Statements S6(p. 204)
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Sustainable procurement charter Value Chain Staments: V3(p. 184), V4(p. 185) Social Statements S6(p. 204)
403-8	Workers covered by an occupational health and safety management system	Social Statements S6(p. 204) Exposure hours are not reported. The number of LTAs for employees and contractors is more relevant to supporting Umicore's zero LTA target
403-9	Work-related injuries	Great place to work review(p. 54) Social Statements S6(p. 204), S7(p. 208); Key figures(p. 222)
403-10	Work-related ill health	Social Statements S6(p. 204)S7(p. 205), S8(p. 208),S9

GRI 404: TRAINING AND EDUCATION		
404-1	Average hours of training per year per employee	Great place to work review(p. 54); Social statements: S3(p. 202); Key figures(p. 222)
404-2	Programmes for upgrading employee skills and transition assistance programmes	Great place to work review(p. 54); Social statements: S3(p. 202)
404-3	Percentage of employees receiving regular performance and career development reviews	Social statements: S3(p. 202)
GRI 405: DIVERSITY AND EQUAL OPPORTUNITY		
405-1	Diversity of governance bodies and employees	Great place to work review(p. 54); Corporate governance statements: G4(p. 89); Social statements: S2(p. 200)
GRI 408: CHILD LABOR		
408-1	Operations and suppliers at significant risk for incidents of child labour	This element is taken into account as part of the objective on "Sustainable supply"; see Value chain and society review(p. 39), Value chain statements: V2(p. 182)-V4(p. 185); Ensuring sustainable cobalt sourcing online case study
GRI 409: FORCED OR COMPULSORY LABOR		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	This element is taken into account as part of the objective on "Sustainable supply"; see Value chain and society review(p. 39), Value chain statements: V2(p. 182)-V4(p. 185); Ensuring sustainable cobalt sourcing online case study
GRI 414: SUPPLIER SOCIAL ASSESSMENT		
414-2	Negative Social and societal impacts in the supply chain and actions taken	Value chain and society review(p. 39), Value chain statements: V2(p. 182)-V4(p. 185)
GRI 416: CUSTOMER HEALTH AND SAFETY		
416-1	Assessment of the health and safety impacts of product and service categories	Value chain statements: V4(p. 185)
GRI 417: MARKETING AND LABELLING		
417-1	Requirements for product and service information and labelling	Value chain statements: V4(p. 185)
OTHER MATERIAL TOPICS REPORTED		
	Criticality of raw materials	To complement the reporting on GRI 308: Supplier Environmental Assessment and GRI 414: Supplier Social Assessment. See 36-41 Value chain and society review(p. 39), Value chain statements: V2(p. 182)-V3(p. 184)
	Sustainable products and services	To complement reporting on GRI 301: Materials seeValue chain and society(p. 39);Value chain statements: V4(p. 185)
	Process safety	To complement reporting on GRI 403: Occupational Health and Safety see Social statements: S8(p. 210)
	Metal emissions to air and water	To complement reporting on GRI 305: Emissions see Environmental statements: E2(p. 189)

STATUTORY AUDITOR'S REPORT TO THE GENERAL SHAREHOLDERS' MEETING OF THE COMPANY UMICORE ON THE CONSOLIDATED ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2020

We present to you our statutory auditor's report in the context of our statutory audit of the consolidated accounts of Umicore (the "Company") and its subsidiaries (jointly "the Group"). This report includes our report on the consolidated accounts, as well as the other legal and regulatory requirements. This forms part of an integrated whole and is indivisible. We have been appointed as statutory auditor by the general shareholders' meeting of 30 April 2020, following the proposal formulated by the supervisory board and following the recommendation by the audit committee and the proposal formulated by the works' council. Our mandate will expire on the date of the general meeting which will deliberate on the annual accounts for the year ended 31 December 2022. We started the statutory audit of the consolidated accounts of the Company before 1993.

REPORT ON THE CONSOLIDATED ACCOUNTS

Unqualified opinion

We have performed the statutory audit of the Group's consolidated accounts, which comprise the consolidated balance sheet as at 31 December 2020, the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flow for the year then ended, and notes to the consolidated accounts, including a summary of significant accounting policies and other explanatory information, and which is characterised by a consolidated balance sheet total of kEUR 8,340,893 and a profit from continuing operations for the period (Group share) of kEUR 130,530. In our opinion, the consolidated accounts give a true and fair view of the Group's net equity and consolidated balance sheet as at 31 December 2020, and of its consolidated financial performance and its consolidated cash flows for the year then ended, in accordance with International Financial Reporting Standards as adopted by the European Union and with the legal and regulatory requirements applicable in Belgium.

Basis for unqualified opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) as applicable in Belgium. Furthermore, we have applied the International Standards on Auditing (ISAs) as approved by the IAASB which are applicable to the year- end and which are not yet approved at the national level. Our responsibilities under those standards are further described in the "Statutory auditor's responsibilities for the audit of the consolidated accounts" section of our report. We have fulfilled our ethical responsibilities in accordance with the ethical requirements that are relevant to our audit of the consolidated accounts in Belgium, including the requirements related to independence. We have obtained from the supervisory board and Company officials the explanations and information necessary for performing our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated accounts of the current period. These matters were addressed in the context of our audit of the consolidated accounts as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. Provision to cover costs related to the intention to buy houses closest to the Hoboken recycling plant (Belgium) and create a green zone

Description of the key audit matter

As disclosed in Note F29, a provision of EUR 50 million was accounted for to cover costs related to Umicore's intention to buy houses closest to the Hoboken recycling plant and create a green zone. These costs comprise an estimated purchase value of the houses (based on third party appraisal) to be demolished as well as an estimate of demolition and landscaping costs. Concertation with the city council and residents is ongoing and might result in adjustments to this cost estimate. The matter was of most significance to our audit because the assessment process is complex and involves significant management judgement. Assumptions and estimates used in valuing the green zone provision are, amongst others, related to:

- expected number of houses that will be sold by the owners depending on the acceptance of the offer and/or new owners that may offer their houses compared to the current situation;
- expected outflow of resources to settle the obligations with the owners of the houses;
- expected outflow of resources to dismantle the houses and create the green zone.

Changes in assumptions and estimates used to value the provision may have a significant effect on the Group's consolidated balance sheet.

How our audit addressed the key audit matter

As part of our audit procedures, we have assessed management's process to define the expected outflow of resources to create a green zone in Hoboken in compliance with IAS 37 requirements. We assessed the accuracy, valuation and completeness of this provision as per 31 December 2020. This assessment included:

- meeting with the plant manager;
- an analysis of the communication sent to the owners of the houses in Hoboken;
- an analysis of the communication with external parties, including valuation reports of the independent valuation expert, assigned by the Antwerp city authorities and lists of houses offered and confirmed by the city authorities;

- analysis of supplier quotations or internal engineering analyses to estimate the demolition and landscaping costs;
- evaluation of consistency in assumptions and accounting estimates applied by management;
- analysis and recalculation of the cash outflow projections made by management.

Finally, we focused on the adequacy of the Company's disclosures in Note F29 of the consolidated accounts.

Our findings
We found that management's estimates are reasonable and Company's disclosures of environmental provisions are appropriate.

Accounting treatment of hedging transactions

Description of the key audit matter
Umicore uses a number of different derivative financial instruments to hedge against currency and commodity price risks associated with ordinary business activities. Management's hedging policy is documented in corresponding internal guidelines and serves as the basis for these transactions. Currency and commodity price risks arise primarily from revenue, sales and procurement transactions (in particular commodities). The cash flow hedges (also labelled as strategic hedges in the annual report) do meet the criteria for hedge accounting under IFRS 9, consequently the effective portion of the changes in fair value of the underlying derivative financial instruments are recognized directly in equity until the underlying hedged cash flows realise. As of the balance sheet date, a cumulative EUR 12,8 million were recognized in the fair value reserves in equity as disclosed in note F 33.1. A part of the fair value hedges (also labelled as transactional hedges in the annual report) do meet the criteria for fair value hedge accounting under IFRS 9 as disclosed in the accounting policies under note F 2.21.1. The hedged item and the underlying instruments are both recognized at fair value through the income statement. There is a part of the transactional hedging for commodities for which under IFRS 9 no fair value hedge accounting can be applied, consisting mainly of physical back-to-back hedging set-ups without any derivative financial instruments involved. As disclosed under note F 2.21.1, a "lower of cost or market" approach is applied on the physical future sales and purchase commitments with customers and suppliers. We believe that these matters were of most significance in our audit due to the high complexity and number of transactions as well as the extensive accounting and reporting requirements under IFRS 9.

How our audit addressed the key audit matter
As part of our audit and with the help of our internal treasury experts, we assessed the contractual and financial parameters and reviewed the accounting treatment, including the effects on equity and profit or loss, of the various hedging transactions. Together with these experts, we also assessed Umicore's internal control system with regard to derivative financial instruments, including the internal activities to monitor compliance with the hedging policy. Furthermore, we used market data to review the method applied to measure the fair value of the financial instruments. In addition, we obtained bank and broker confirmations in order to assess the completeness and accuracy of the fair values of the recorded hedging transactions. With regard to the expected cash flows and the assessment of the effectiveness of hedges, we essentially reviewed the prospective testing. We verified that hedges were accounted for and measured in accordance with IFRS 9. In view of the transactional hedges we audited the accuracy and completeness of the related derivative financial instruments via external confirmations and the review of the method applied to measure the fair value via market data. Moreover, for the part on which no fair value hedge accounting can be applied, the "lower of cost or market" approach applied on the physical future sales and purchase commitments with customers and suppliers have been audited on a sample basis.

Our findings
Key assumptions and hedge accounting documentation were supported by available evidence. The measurement methods applied for the fair value determination and the disclosures in notes F 33.1 and F. 33.2 are appropriate.

Uncertain tax positions

Description of the key audit matter
Umicore has extensive international operations and is present in many different tax and legal jurisdictions where, amongst others, transfer pricing assessments could be challenged by the tax authorities in the different countries. The accounting for these uncertain tax positions comprise significant judgement by management mainly in the area whether to recognise these uncertain tax positions and to adequately determine provisions. Referring to notes F 2.19, F 3.6 and F 4.6 management performed a detailed assessment of the uncertain tax positions which resulted in an provision for these uncertainties amounting to EUR 114, 9 million. The accounting treatment of uncertain tax positions was a topic of most significance in our audit because the assessment process is complex and the amounts involved are material to the consolidated accounts as a whole.

How our audit addressed the key audit matter
We assessed the process of Umicore to gather the tax exposures of all the legal entities of the Umicore Group. Together with our tax experts we also assessed the probability assessment prepared by Umicore for every new and significant change in exposure identified. Moreover we have analysed the methods applied by management, being the most likely amount or the expected value of the tax treatment when determining taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates if it's not probable that an uncertain tax position will be sustained in full. In this context we have evaluated tax memorandums of management's experts on the respective cases and exposures together with our tax experts. Moreover we have analysed the consistency of tax treatments between subsidiaries and based on experiences of Umicore in the past. We have also tested the completeness and accuracy of the

amounts reported for taxes, including the assessment of audits by tax authorities. In this area our audit procedures included, amongst others, an assessment of correspondence with the relevant tax authorities.

Our findings
Uncertain tax positions have been properly taken into account when assessing the tax provisions in the consolidated accounts in accordance with the requirements of IFRIC 23.

RESPONSIBILITIES OF THE SUPERVISORY BOARD FOR THE PREPARATION OF THE CONSOLIDATED ACCOUNTS
The supervisory board is responsible for the preparation of consolidated accounts that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the European Union and with the legal and regulatory requirements applicable in Belgium, and for such internal control as the supervisory board determines is necessary to enable the preparation of consolidated accounts that are free from material misstatement, whether due to fraud or error. In preparing the consolidated accounts, the supervisory board is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the supervisory board either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

STATUTORY AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED ACCOUNTS
Our objectives are to obtain reasonable assurance about whether the consolidated accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated accounts. In performing our audit, we comply with the legal, regulatory and normative framework applicable to the audit of the consolidated accounts in Belgium. A statutory audit does not provide any assurance as to the Group's future viability nor as to the efficiency or effectiveness of the supervisory board's current or future business management at Group level. Our responsibilities in respect of the use of the going concern basis of accounting by the supervisory board are described below. As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the supervisory board.
- Conclude on the appropriateness of the supervisory board's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our statutory auditor's report to the related disclosures in the consolidated accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our statutory auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated accounts, including the disclosures, and whether the consolidated accounts represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient and appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated accounts. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the audit committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit. We also provide the audit committee with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards. From the matters communicated with the audit committee, we determine those matters that were of most significance in the audit of the consolidated accounts of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS
Responsibilities of the supervisory board
The supervisory board is responsible for the preparation and the content of the directors' report on the consolidated accounts.

Statutory auditor's responsibilities

In the context of our engagement and in accordance with the Belgian standard which is complementary to the International Standards on Auditing (ISAs) as applicable in Belgium, our responsibility is to verify, in all material respects, the directors' report on the consolidated accounts and to report on these matters.

Aspects related to the directors' report on the consolidated accounts and to the other information included in the annual report on the consolidated accounts

In our opinion, after having performed specific procedures in relation to the directors' report on the consolidated accounts, this report is consistent with the consolidated accounts for the year under audit, and it is prepared in accordance with article 3:32 of the Companies' and Associations' Code. In the context of our audit of the consolidated accounts, we are also responsible for considering, in particular based on the knowledge acquired resulting from the audit, whether the directors' report is materially misstated or contains information which is inadequately disclosed or otherwise misleading. In light of the procedures we have performed, there are no material misstatements we have to report to you. The non-financial information required by virtue of article 3:32, §2 of the Companies' and Associations' Code is included in the directors' report on the consolidated accounts. The Company has prepared the non-financial information, based on the reference framework Global Reporting Initiative (GRI) Standards. However, in accordance with article 3:80, §1, 5° of the Companies' and Associations' Code, we do not express an opinion as to whether the non-financial information has been prepared in accordance with the Global Reporting initiative (GRI) Standards as disclosed in the directors' report on the consolidated accounts.

Statement related to independence

- Our registered audit firm and our network did not provide services which are incompatible with the statutory audit of the consolidated accounts, and our registered audit firm remained independent of the Group in the course of our mandate.
- The fees for additional services which are compatible with the statutory audit of the consolidated accounts referred to in article 3:65 of the Companies' and Associations' Code are correctly disclosed and itemized in the notes to the consolidated accounts.

Other statements

This report is consistent with the additional report to the audit committee referred to in article 11 of the Regulation (EU) N° 537/2014.

Sint-Stevens-Woluwe, 22 March 2021
The statutory auditor, PwC Bedrijfsrevisoren BV / PwC Reviseurs d'Entreprises SRL
Represented by Kurt Cappoen, Bedrijfsrevisor / Réviseur d'Entreprises

LIMITED ASSURANCE REPORT FROM THE INDEPENDENT AUDITOR ON THE ENVIRONMENTAL, SOCIAL AND VALUE CHAIN STATEMENTS OF THE INTEGRATED ANNUAL REPORT 2020 OF UMICORE ANDITS SUBSIDIARIES

This report has been prepared in accordance with the terms of our engagement contract dated 3 June 2020 (the "Agreement"), whereby we have been engaged to issue an independent limited assurance report in connection with the Environmental, Social and Value Chain Statements in the Integrated Annual Report 2020 of Umicore and its subsidiaries as of and for the year ended 31 December 2020 (the "Report").

The Directors' Responsibility

The Directors of Umicore (the "Company") are responsible for the preparation and presentation of the information and data in the Environmental, Social and Value Chain Statements set forth in the Integrated Annual Report 2020 of Umicore and its subsidiaries and the declaration that its reporting meets the requirements of the Global Reporting Initiative (GRI) Standards – Core as set out on pages 181 to 210 ("the Subject Matter Information"), in accordance with the criteria stated in the Environmental, Social and Value Chain Statements and with the recommendations of GRI Standards ("the Criteria"). This responsibility includes the selection and application of appropriate methods for the preparation of the Subject Matter Information, for ensuring the reliability of the underlying information and for the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility of the Directors includes the design, implementation and maintenance of systems and processes relevant for the preparation of the Subject Matter Information that is free from material misstatement, whether due to fraud or error.

Our Independence and Quality Control

We have complied with the legal requirements in respect of auditor independence, particularly in accordance with the rules set down in articles 12, 13, 14, 16, 20, 28 and 29 of the Belgian Act of 7 December 2016 organizing the audit profession and its public oversight of registered auditors, and with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our firm applies International Standard on Quality Control (ISQC) n°1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Auditor's Responsibility

Our responsibility is to express an independent conclusion about the "Subject Matter Information" based on the procedures we have performed and the evidence we have obtained. Our assurance report has

been prepared in accordance with the terms of our engagement contract. We conducted our work in accordance with International Standard on Assurance Engagements (ISAE) 3000 (*Rev*ised), *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information*. This standard requires that we comply with ethical requirements and that we plan and perform the engagement to obtain limited assurance as to whether any matters have come to our attention that cause us to believe that the Subject Matter Information does not comply, in all material respects, with the Criteria as set by the Company. In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement, and therefore less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement in the statements of the Supervisory Board. The scope of our work included, among other things, the following procedures:

- assessing and testing the design and functioning of the systems and processes used for data-gathering, collation, consolidation and validation, including the methods used for calculating and estimating the Subject Matter Information;
- conducting interviews with responsible officers including site visits;
- inspecting internal and external documents.

The scope of our work is limited to assurance over the Subject Matter Information. Our assurance does not extend to information in respect of earlier periods or to any other information included in the Integrated Annual Report 2020 of the Company.

Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the Environmental, Social and Value Chain Statements as of and for the year ended 31 December 2020 on pages 181 to 210 of the Integrated Annual Report 2020 of Umicore and its subsidiaries, and Umicore's assertion that the Report meets the requirements of GRI Standards – Core, do not comply, in all material respects, with the Criteria.

Other matter - Restriction on Use and Distribution of our Report

Our report is intended solely for the use of the Company, in connection with their Environmental, Social and Value Chain Statements set forth in the Integrated Annual Report 2020, and should not be used for any other purpose. We do not accept or assume and deny any liability or duty of care to any other party to whom this report may be shown or into whose hands it may come.

Sint-Stevens-Woluwe, 22 March 2021
PwC Bedrijfsrevisoren BV/Reviseurs d'Entreprises SRL
represented by Kurt Cappoen, Registered auditor

References and key links

UMICORE www.umicore.com

ANNUAL REPORT annualreport.umicore.com
ANNUAL REPORT GLOSSARY annualreport.umicore.com/glossary

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BELGIAN CORPORATE GOVERNANCE COMMITTEE www.corporategovernancecommittee.be

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www.responsiblemineralsinitiative.org
www.responsiblemineralsinitiative.org/gold-refiners-list
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ENTREPENEURS FOR ENTREPENEURS ondernemersvoorondernemers.be

Key figures

(in million € unless stated otherwise)	2016	2017	2018	2019	2020
Economic performance					
Revenues (excluding metal)	2,667.5	2,915.6	3,271	3,361	**3,239**
Adjusted EBIT	350.7	410.3	514	509	**536**
Return on Capital Employed (ROCE) (in %)	14.6	15.1	15.4	12.6	**12.1**
R&D expenditure	155.9	175.2	196	211	**223**
Capital expenditure	287.3	365.3	478	553	**403**
Adjusted EPS (in €/share)	1.07	1.22	1.36	1.30	**1.34**
Gross dividend (in €/share)	0.65	0.70	0.75	0.375	**0.75**
Social and environmental performance					
Revenues from clean mobility and recycling (in%)	65	67	72	75	**77**
Total donations, including staff freed time (in thousands of euro)	1,290	1,299	1,432	1,614	**1,467**
CO2e emissions (scope1+2) - Market based (in tonne)	662,059	633,704	767,702	791,816	**732,543**
CO2e emissions (scope1+2) - Location based (in tonne)	735,065	663,307	785,789	815,175	**747,964**
Energy consumption (in terajoules)	6,737	6,532	7,458	7,476	**7,591**
Workforce (fully consolidated companies)	9,921	9,769	10,420	11,152	**10,859**
Lost Time Accidents (LTA)	59	51	61	90	**49**
LTA frequency rate	3.34	3.01	3.36	4.60	**2.50**
LTA severity rate	0.56	0.09	0.10	0.20	**0.47**
Exposure ratio 'all biomarkers aggregated' (in %)	3.2	2.7	2.8	1.8	**1.60**
Average number of training hours per employee	41.49	45.33	43.10	48.73	**36.33**
Voluntary leavers ratio	4.10	5.03	7.18	5.99	**4.20**

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IF MY UNIQUENESS
AND IDEAS
CAN SHAPE OUR
SUSTAINABLE FUTURE

IMAGINE WHAT YOU COULD DO?

FINANCIAL CALENDAR[1]

29 APRIL 2021
General meeting of shareholders
(financial year 2020)

31 JULY 2021
Half year results 2021

UMICORE.COM/INVESTORS

ADDITIONAL INFORMATION

STOCK
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1 Dates are subject to change. Please check the Umicore website for updates to the financial calendar.