ANNUAL REPORT 2022

JUNGHEINRICH

Contents

About this report

We have optimised the PDF version of our annual report for PCs and tablets. The landscape format with individual page view is better suited for viewing on a monitor. The links in the table of contents enable the reader to navigate all chapters quickly and easily. Useful links and standardised function buttons on each page make it easier for the reader to reference content and the reporting in a more user-friendly and transparent manner.

Navigating the report

- To the full table of contents
- Search document
- Page forward
- Page backward
- Back to previous view

More information

- [ ] Page reference in this report
- Reference to website

Contact

- Corporate Communications
- Corporate Investor Relations

Company profile

As a globally leading provider of intralogistics solutions, Jungheinrich has been advancing the development of innovative and sustainable products and solutions for material flows for 70 years. As a pioneer in the sector, the Hamburg-based family business is committed to creating the warehouse of the future.

With its portfolio of material handling equipment, automated systems, digital solutions and matching services, Jungheinrich offers its customers tailor-made solutions from a single source to support them in mastering the growing challenges in intralogistics and achieving their sustainability goals. The company has energy expertise that is unique in the industry with over one million battery-powered trucks in use and especially energy-efficient lithium-ion technology solutions. The company creates fully automated intralogistics workflows with a comprehensive range of automated warehouse systems, mobile robots and software. Uniting economic, environmental and social responsibility is the focus of all its business activities, and the corporate strategy 2025+ pursues the aim of creating sustainable value for all stakeholders.

In 2022, Jungheinrich and its workforce of around 20,000 employees generated revenue of €4.76 billion. The global network covers eleven production plants and 41 service and sales companies. The share is listed on the MDAX.

Key figures at a glance

Jungheinrich Group		2022	2021	Change in %
Incoming orders	units	128,800	162,400	–20.7
	€ million	4,791	4,868	–1.6
Orders on hand 31/12	€ million	1,595	1,519	5.0
Revenue	€ million	4,763	4,240	12.3
thereof Germany	€ million	1,106	1,014	9.1
thereof abroad	€ million	3,657	3,226	13.4
Foreign ratio	%	77	76	–
Earnings before interest and income taxes (EBIT)	€ million	386	360	7.2
EBIT return on sales (EBIT ROS)	%	8.1	8.5	–
ROCE[1]	%	16.3	20.2	–
Earnings before taxes (EBT)	€ million	347	349	–0.6
EBT return on sales (EBT ROS)	%	7.3	8.2	–
Profit or loss	€ million	270	267	1.1
Free cash flow	€ million	–239	89	<–100
Capital expenditure[2]	€ million	73	71	2.8
Research and development expenditure	€ million	128	102	25.5
Balance sheet total 31/12	€ million	6,164	5,769	6.8
Shareholders' equity 31/12	€ million	2,051	1,803	13.8
thereof subscribed capital	€ million	102	102	0.0
Employees 31/12	FTE[3]	19,807	19,103	3.7
thereof Germany	FTE[3]	8,251	7,995	3.2
thereof abroad	FTE[3]	11,556	11,108	4.0
Earnings per preferred share[4]	€	2.65	2.62	1.1
Dividend per share – ordinary share	€	0.66[5]	0.66	0.0
– preferred share	€	0.68[5]	0.68	0.0

1 EBIT of the "Intralogistics" segment as a percentage of average capital employed of the "Intralogistics" segment.

2 Property, plant and equipment and intangible assets without capitalised development expenditure and right-of-use assets.

3 FTE = full-time equivalents.

4 Based on share of earnings attributable to the shareholders of Jungheinrich AG.

5 Proposal.

Board of Management

"Jungheinrich performed very well in 2022. With new highs in revenue and EBIT, we have proven ourselves to be extremely resilient in a difficult market environment."

Dr Lars Brzoska
Chairman of the Board of Management

"With the PowerCube, we presented a highly innovative product in 2022 that sets new standards in terms of the utilisation of space and flexibility in automated warehousing systems."

Christian Erlach
Member of the Board of Management Sales

"Our powerful financing ability and solid balance sheet safeguard the implementation of Strategy 2025+ and guarantee the flexibility for further growth."

Dr Volker Hues
Member of the Board of Management Finance

"Together we continuously guaranteed our ability to deliver in 2022 in the face of the adverse conditions affecting the supply chains and secured our position in the market despite massive price hikes."

Sabine Neuß
Member of the Board of Management Technics

Foreword from the Chairman

Dear shareholders,

From the outset, 2022 turned out to be another year of crisis for the world. Russia's attack on Ukraine marked the return of war to Europe and we have all been painfully reminded that peace cannot be taken for granted. In such difficult times, it is important to be aware of one's own values and to live by them. That is what we at Jungheinrich have done. Our employees in particular have shown impressive commitment. Firstly through their wide-ranging help for colleagues and their families in Ukraine, and secondly through their great service to our company. Not least because of this, Jungheinrich once again proved to be extremely resilient in the face of an extremely challenging global political and macroeconomic environment. We were able to achieve new highs in revenue and EBIT despite the tense market situation. Group revenue amounted to €4.76 billion, growing by 12 per cent compared to the previous year. EBIT improved by 7 per cent to €386 million and even slightly exceeded the range we forecast in September. At €4.79 billion, we were nearly able to match the previous year's good level of incoming orders.

What contributed to this positive development? Above all, we have learned from the years of the coronavirus pandemic, drawn the necessary conclusions from what we have learned and taken the right action. In this way, we have ensured that Jungheinrich has consistently maintained its production and delivery capabilities despite profound disruptions in global supply chains and that we have been able to successfully hold our own on the market even in the face of substantial cost increases. Once again, this has shown how important it is to act quickly, consistently and with foresight in uncertain times. For several years now we have been placing much more emphasis on profitability and cash flow in order to sustainably increase the value and resilience of our company. A decision that has paid off. "Creating sustainable value for all stakeholders" is the guiding principle of our Strategy 2025+. Not least thanks to this focus have we emerged stronger from the crises of recent years and gained strength and self-confidence as a whole team.

The sense of responsibility with which we meet the major challenges of our time, such as climate change, grows out of a perspective that spans generations. As a family business, sustainability has always been an established part of our DNA and is therefore also a central field of action in our Strategy 2025+. We have elaborated on this in the reporting year and, among other things, set ourselves clear goals for climate action. All Jungheinrich sites are to achieve net zero greenhouse gas emissions by 2030. The fact that we have once again been awarded the highest sustainability certificate (platinum) by the rating agency EcoVadis proves that we are on the right track. We are also conducting a large number of projects and measures in the other fields of action of our strategy. These include our innovations in the areas of automation, digitalisation and electric mobility. One example here is the highly innovative PowerCube compact storage system for containers, which we presented at the LogiMAT intralogistics trade fair.

Our successful acquisition in North America, announced at the start of January this year, marks an important step towards our strategy: by acquiring the Storage Solutions Group, we are creating a strategic base in the fast-growing market for storage equipment and automation in the USA and reinforcing our global presence and market position. This brings us already very close to our goal of generating 20 per cent of our revenue outside Europe through inorganic growth.

As promising as Jungheinrich's outlook may be at present – after a year like 2022, what remains above all is the desire for peace and good health. Our thoughts are especially with the people in Ukraine. On behalf of the entire Board of Management, I wish to thank you – our shareholders, customers and business partners – for the trust you have placed in us over the past year. My special thanks go to our shareholder families Lange and Wolf, to the Supervisory Board for the trusting and constructive cooperation and to our employees for the outstanding commitment they have shown in the past financial year. They all have made Jungheinrich what it is today: resilient and successful in the face of crisis.

Sincerely yours,

Dr Lars Brzoska
Chairman of the Board of Management

TO OUR SHAREHOLDERS

Report of the Supervisory Board

Hans-Georg Frey
Chairman of the Supervisory Board

Under markedly difficult economic and geopolitical circumstances, Jungheinrich performed extremely well in the year under review. Along with the challenges caused in the previous years by the coronavirus pandemic and the fragile supply chains worldwide, Russia's war against Ukraine added another event with a global impact and far-reaching consequences, not just in terms of raw materials and energy supply, but for the entire global economy. Jungheinrich was able to overcome these challenges with rapid and targeted action.

FOCAL POINTS OF SUPERVISORY BOARD ACTIVITY

Once again, we were able to manage the ongoing situation regarding the pandemic, particularly at the beginning of 2022, by building on the flexible forms of working and communication established in previous years, coupled with preventive health measures. We were also able to overcome the global bottlenecks in the supply chains, which dominated the 2021 financial year and continued to impact business in 2022, in such a way that we did not suffer any significant interruptions to production. Rises in material prices, some of them considerable, were largely cushioned by appropriate measures. This enabled the company, despite difficult geopolitical and market circumstances, to reach the end of the 2022 financial year with solid earnings once more.

The Board of Management continued its work to implement Strategy 2025+ in the 2022 financial year, and with it consistently drive related projects concerning the company's future strategic alignment, notably with regards to processes, digitalisation, products and the organisation, forward. One important milestone in this context is the presentation of the new PowerCube compact container warehouse at the LogiMAT 2022. With the acquisition of a former sales partner in New Zealand, now Jungheinrich New Zealand Limited, Jungheinrich has strengthened its presence in the vital growth market that is the Asia-Pacific region. Jungheinrich was also able to conclude a contract in January 2023 for the acquisition of a storage solutions group in the USA. By doing so, Jungheinrich has expanded its access to the attractive market for storage and automation in the USA. The transaction is still due to be completed within the first quarter of 2023. As part of its remit, the Supervisory Board also closely inspected a completed project and discussed its findings, working together with the Board of Management, in a number of meetings. The Supervisory Board was also closely involved in efforts to implement and adapt individual points of Strategy 2025+ in the reporting year.

As in the past, the Supervisory Board accompanied and supported the Board of Management in all projects in an advisory capacity, and exchanged information closely with the Board of Management. In addition to the economic challenges, the focus was also on implementing regulatory requirements and further developing corporate governance.

For instance, the Supervisory Board dealt in depth with the remuneration report, which is due to be published for the first time, as well as with the latest version of the German Corporate Governance Code and the overarching issue of IT security (cyber security), which has gained in significance in light of the war in Ukraine.

Due to the improvements in technology and positive experiences garnered during the pandemic, the majority of the Supervisory Board's meetings in the 2022 financial year were again hybrid meetings. The Annual General Meeting was held as a virtual event without the physical presence of shareholders, in line with the possibilities provided for under the law, for the third time in May 2022.

COOPERATION BETWEEN THE SUPERVISORY BOARD AND THE BOARD OF MANAGEMENT

Once again, the Supervisory Board and the Board of Management worked together very closely and in a spirit of trust during the year under review. The Board of Management involved the Supervisory Board early on and extensively in all relevant aspects of its work, as well as the business activities of the company and all Group companies. This enabled the Supervisory Board to discuss aspects that required attention promptly and satisfy itself at all times of the legality, appropriateness and correctness of the company's management. The Supervisory Board was also kept informed in a timely manner by means of detailed written and oral reports, in particular on the following topics: the market situation and demand, the current and expected economic development in the individual regions of the world, the business development and financial situation in the individual Group companies (in particular by analysing key indicators such as incoming orders, revenue, EBIT and margin), development in the number of employees, the status of capital expenditure, the current challenges relating to supply chains and material procurement, the reactions to this, including through price-related measures on the market, and the effects of the war in Ukraine and the coronavirus pandemic on the company, its employees, customers and suppliers. Furthermore, after careful review and deliberation, the Supervisory Board approved numerous transactions requiring its approval and presented by the Board of Management, the most important of which are listed in this report.

The Supervisory Board and the Finance and Audit Committee also examined the risk management system, the effectiveness of the internal control system, the monitoring of accounting and accounting procedures, the internal audit system and compliance within the company. The Supervisory Board did not identify any irregularities or objections in any of these areas in the 2022 financial year. The Board of Management fully complied with all its reporting obligations. This means that the Supervisory Board did not need to exercise its statutory rights to request and inspect. The Finance and Audit Committee recommended that the Supervisory Board again propose that PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Hamburg (PwC), be selected as the auditor for the 2022 financial year at the Annual General Meeting on 10 May 2022. The Supervisory Board and Annual General Meeting agreed with this proposal.

The Chairman of the Supervisory Board (acting simultaneously in his role as Chairman of the Personnel Committee) and the Chairman of the Finance and Audit Committee also reviewed important topics outside of the meetings in regular discussion with the Board of Management, in particular with the Chairman of the Board of Management and the Member of the Board of Management for Finance, and prepared points to be decided on in plenary sessions.

MAIN ISSUES ADDRESSED IN SUPERVISORY BOARD MEETINGS

The Supervisory Board convened on a total of nine occasions in the 2022 financial year, two of which were extraordinary, and four resolutions were passed by written procedure. One meeting was held as a video conference, one meeting was held in person, and seven meetings were hybrid events, at which the majority of members were physically present and individual members were connected via video. In almost every meeting, the Supervisory Board discussed individual agenda items alone, i.e. without the presence of the members of the Board of Management. The Board of Management reported on the Group's current state of business in the ordinary meetings. The Supervisory Board's Personnel Committee and the Finance and Audit Committee reported regularly and on an ad hoc basis on current topics regarding the committee's work. Resolutions were passed in numerous meetings on proposals of the Board of Management, of which only the most important are mentioned below.

The Supervisory Board initially resolved per written procedure to reappoint Sabine Neuß to the Board of Management in January 2022.

In an extraordinary meeting held on 4 March 2022, the Supervisory Board endorsed the remuneration report, drafted for the first time for the 2021 financial year, pursuant to Section 162 of the German Stock Corporation Act. It also gave its approval for the completion of a control and profit and loss transfer agreement with arculus GmbH, which was also approved at the Annual General Meeting on 10 May 2022.

The Supervisory Board held an accounts meeting for the 2021 financial year on 30 March 2022. This was to review and approve Jungheinrich AG's annual financial statements and consolidated financial statements together with the combined management report as of 31 December 2021. The Supervisory Board also endorsed the Board of Management's proposal for the appropriation of profits for the 2021 financial year to the Annual General Meeting, and approved the 2021 combined separate non-financial report for Jungheinrich AG and the Group. Moreover, the Supervisory Board passed a resolution on the actual values for calculating the variable remuneration for the members of the Board of Management for the 2021 financial year. Proposals for Board of Management decisions on individual projects, namely in relation to the development of a new model of truck and to a joint venture capital increase, were also approved at the meeting, while a concept for future capital market communications was noted and approved.

In an extraordinary meeting on 30 May 2022, the Supervisory Board prepared the project review previously mentioned.

At the meeting held on 27 June 2022, the main focus was on the company's strategies for individual regions of the world market, which were introduced and then discussed in detail.

In the meeting on 28 June 2022, the Supervisory Board approved the strategies discussed the previous day. The Supervisory Board also approved several decision proposals by the Board of Management regarding individual projects, including a commercial paper programme, taking out new promissory notes, and investing in a start-up fund for high-tech companies. The date for the 2023 Annual General Meeting was also approved.

At another strategy meeting of the Supervisory Board on 26 September 2022, the current status as regards implementing Strategy 2025+ was presented and discussed in detail, as was a strategy update with an updated target system for 2025, among other matters.

In the ordinary meeting held on 26 and 27 September 2022, a number of the Board of Management's decision proposals for individual projects were approved, including with regard to the expansion of a development project in the field of automation, various development programmes in the field of lithium-ion batteries, energy modules and battery management systems, and another truck development project. The Supervisory Board also approved the Board of Management's proposal to hold the 2023 Annual General Meeting as a virtual Annual General Meeting, as before. Furthermore, the Supervisory Board also voted to apply for the court order necessary to appoint Ms Kathrin Elisabeth Dahnke as a member of the Supervisory Board from 1 December 2022 to the end of the 2023 Annual General Meeting. This was due to the resignation of Dr Ulrich Schmidt as of 30 November 2022.

In three written resolutions in October and November 2022, the Supervisory Board approved the Strategy 2025+ update discussed on 26 September 2022, resolved to reappoint Dr Lars Brzoska as Chairman of the Board of Management, and elected Ms Dahnke, subject to the court order to appoint her to the Supervisory Board as of 1 December 2022, as a member of the Finance and Audit Committee.

In a meeting on 19 December 2022 regarding the DEEP programme, the Supervisory Board was shown further details of this ongoing long-term programme to realign structures, processes and the IT architecture against the backdrop of the digital transformation, and the current status of the work to implement it.

In the meeting on 20 December 2022 the status of the preparations for the 2022 financial year remuneration report was communicated and the Supervisory Board both resolved to adjust the fixed remuneration for members of the Board of Management as of 1 January 2023 and determined the targets for the Board of Management's variable remuneration. Due to the release of a new version of the German Corporate Governance Code and the Act to Strengthen Financial Market Integrity (Gesetz zur Stärkung der Finanzmarktintegrität (FISG)), updated rules of procedure were adopted for the Supervisory Board and the planning for 2023 was approved. Ms Antoinette P. Aris was re-elected as a non-voting member of the Personnel Committee for the 2023 financial year due to her expertise in matters of remuneration. In addition, the decision was taken to form a M&A working group in the Supervisory Board and the Board of Management's decision regarding the handling of business activities in Russia was noted and approved. The Supervisory Board also approved further decision proposals from the Board of Management, including regarding the long-term development of one of the main plants, the introduction of new software in the after sales department, various donations made by the company for charitable purposes, and changes to the articles of association to continue to allow virtual Annual General Meetings from 2024. Finally, the Supervisory Board resolved on the annual declaration pursuant to Section 161 of the German Stock Corporation Act ("declaration of compliance") based on the recommendation of the Finance and Audit Committee.

ACTIVITY OF THE SUPERVISORY BOARD COMMITTEES

The Finance and Audit Committee convened on eight occasions in the reporting year, one of which was extraordinary. Four meetings were held as video conferences and four meetings as hybrid events, with individual members physically present and individual members connected via video link. Some of the issues the committee considered were non-financial reporting, capital market communications, how to handle business activities in Russia, and all topics related to the annual and consolidated financial statements of Jungheinrich AG and the audit services (fee and order preparation, focal points of the audit, audit results, additional audit services). The committee also carefully completed the tasks entrusted to it, including monitoring accounting and accounting processes, the effectiveness of the internal control system, risk management and internal auditing. The Committee also discussed the regular oral and written reports submitted by the Compliance Officer in detail and dealt with various compliance issues. In an extraordinary meeting in December 2022, the planning for the 2023 financial year was also discussed in detail and prepared for the Supervisory Board plenary meeting. The committee also met regularly without the Board of Management in the year under review.

The Personnel Committee convened five times in the year under review; one occasion was an extraordinary meeting. One meeting was held as a video conference, one meeting was held in person, and three meetings were hybrid events, where individual members were physically present and individual members were connected via video link. The committee dealt with all tasks assigned to it on behalf of the entire Supervisory Board – particularly contract and remuneration issues for members of the Board of Management, including the remuneration report for the 2022 financial year. The Personnel Committee focused its attention on senior executives of interest who were responsible for important tasks in the Group.

The Joint Committee, according to Section 27, Paragraph 3 of the German Co-Determination Act, did not convene.

OTHER INFORMATION

With the exception of one meeting of the Finance and Audit Committee, which Mr Steffen Schwarz was unable to attend, all meetings of the Supervisory Board and its committees were always attended by all members of the respective committee. In the reporting year, there were no conflicts of interest of Board of Management or Supervisory Board members that would have had to be immediately disclosed to the Supervisory Board.

The members of the Supervisory Board take responsibility for the training and further education measures required for their tasks, such as those pertaining to changes in the legal framework or new technologies, and receive support here from the company, as do new members when they take up their position.

ANNUAL AND CONSOLIDATED FINANCIAL STATEMENTS AS OF 31 DECEMBER 2022

The annual financial statements prepared by the Board of Management, the consolidated financial statements as of 31 December 2022, and the combined management report of Jungheinrich AG, were audited by PwC. The auditors had no objections regarding the financial statements or the accounting, and confirmed this in their unqualified audit report.

The results of the audit performed by the auditors were the topic of meetings of the Finance and Audit Committee and of the Supervisory Board. The members of the Supervisory Board checked the Board of Management documents for the annual and consolidated financial statements in great detail using PwC's audit reports. As is also regularly the case, the majority of members of the Supervisory Board attended the Finance and Audit Committee meeting for the preparation of the entire Supervisory Board's resolution regarding the 2022 financial statements. All members of the Supervisory Board approved the Board of Management's proposal for the appropriation of profits for the 2022 financial year. According to the audit's results, there are no objections to the internal control system, the risk management system or the compliance management system. There were also no objections to the declaration of compliance pursuant to Section 161 of the German Stock Corporation Act.

Following its detailed inspection of the annual financial statements, consolidated financial statements and combined management report, the Supervisory Board had no objections to the financial statements and agreed with the results of the audit performed by the auditors in its accounts meeting on 30 March 2023. The Supervisory Board therefore authorised Jungheinrich AG's annual financial statements and consolidated financial statements for the period ending 31 December 2022. Jungheinrich AG's annual financial statements as of 31 December 2022 are therefore finalised.

In its meeting on 30 March 2023, the Supervisory Board also seconded the Board of Management's proposal for the appropriation of profits for the 2022 financial year.

The Finance and Audit Committee and the Supervisory Board also considered the combined separate non-financial report as of 31 December 2022, which was prepared by the Board of Management. The Supervisory Board approved this report, which was audited by PwC.

PERSONNEL

On 26 September 2022, the Chairman of the Supervisory Board, Mr Hans-Georg Frey, notified the company of his intention to resign as a member of the Supervisory Board, and thus also as Chairman of the Supervisory Board, with effect from the end of the Annual General Meeting on 11 May 2023. The Lange and Wolf shareholding families expressed their regret at this decision and thanked Mr Frey for his successful and committed work for Jungheinrich over the last 16 years, of which he spent around twelve years as Chairman of the Board of Management and almost four years as Chairman of the Supervisory Board.

Dr Ulrich Schmidt, a shareholder representative on the Supervisory Board and Chairman of the Finance and Audit Committee, has resigned from the Supervisory Board with effect from 30 November 2022. The Supervisory Board thanks Dr Schmidt sincerely for the long, trust-based relationship he has maintained with the company, and especially for his work as Chairman of the Finance and Audit Committee. Ms Kathrin Elisabeth Dahnke, a self-employed management consultant and former CFO in several renowned companies, was appointed by a court to the Supervisory Board with effect from 1 December 2022 to replace Dr Schmidt. Ms Dahnke was also elected by the Supervisory Board to sit on the Finance and Audit Committee, and was in turn elected by the committee's members as its Chairwoman.

The election of the employee representatives to the Supervisory Board, which was interrupted before the Annual General Meeting on 11 May 2021 due to the coronavirus pandemic, was resumed in the second half of 2022 and completed on 31 January 2023. All previous employee representatives were re-elected with effect from the end of the Annual General Meeting on 11 May 2023.

Dr Lars Brzoska was reappointed as a Member of the Board of Management, Labour Director and Chairman of the Board of Management with effect from the end of his current appointment on 31 August 2023. Sabine Neuß was reappointed as a Member of the Board of Management responsible for Technics with effect from the end of her current appointment on 31 December 2023.

The Supervisory Board acknowledges the exceptional performance of the Board of Management, senior executives and all employees in meeting the tough challenges of 2022, and would like to thank them all very much for their successful efforts.

Hamburg, 30 March 2023

On behalf of the Supervisory Board

H. G. Frey

Hans-Georg Frey
Chairman

Members of the Supervisory Board

Hans-Georg Frey
Chairman
Membership of other Supervisory Boards/ regulatory committees:
- Fielmann AG, Hamburg/Germany
- HOYER GmbH, Hamburg/Germany
- Blanc & Fischer Familienholding GmbH, Oberderdingen/Germany (Chairman since 20 May 2022)
- Gottfried Schultz Automobilhandels SE, Ratingen/Germany

Markus Haase[1]
Deputy Chairman
Service Consultant at Jungheinrich Vertrieb Deutschland AG & Co. KG
Chairman of the Group Works Council

Dipl.-Ing. Antoinette P. Aris, MBA
Senior Affiliate Professor of Strategy at INSEAD (Fontainebleau, France)
Membership of other Supervisory Boards/ regulatory committees:
- ASML N.V., Veldhoven/Netherlands
- Randstad N.V., Diemen/Netherlands
- Rabobank Group, Utrecht/Netherlands (until 7 December 2022)

Dagmar Karin Bieber[1]
Business Manager
Quality Coordinator at Jungheinrich Service & Parts AG & Co. KG
Deputy Chairwoman of the Works Council at Jungheinrich Service & Parts AG & Co. KG (since 17 March 2022)
Member of the Group Works Council (until 17 March 2022)
Member of the European Works Council

Dipl.-Ing. Rainer Breitschädel[1]
Head of Kaltenkirchen location at Jungheinrich Service & Parts AG & Co. KG
Executive Staff Representative

Kathrin Elisabeth Dahnke (since 1 December 2022)
Self-employed Management Consultant
Membership of other Supervisory Boards/ regulatory committees:
- B. Braun SE, Melsungen/Germany
- Knorr-Bremse AG, Munich/Germany
- Aurubis AG, Hamburg/Germany (since 16 February 2023)

Beate Klose
Business Graduate

Wolff Lange
Businessman
Managing Director of LJH-Holding GmbH, Wohltorf/Germany
Membership of other Supervisory Boards/ regulatory committees:
- HANSA-HEEMANN AG, Rellingen/Germany (Chairman) (until 31 January 2022)
- Wintersteiger AG, Ried/Austria (Chairman)

Mike Retz[1]
Trade Union Secretary
IG Metall branch office for the region of Hamburg

Dr Ulrich Schmidt (until 30 November 2022)
Business Manager, economics graduate

Steffen Schwarz[1]
Assembly worker at Jungheinrich Norderstedt AG & Co. KG
Deputy Chairman of the Group Works Council

Kristina Thurau-Vetter[1]
Trade Union Secretary IG Metall District Management Küste
Membership of other Supervisory Boards/regulatory committees:
- Premium AEROTEC GmbH, Augsburg/Germany (since 7 November 2022)

Andreas Wolf
Business Manager
Managing Director of WJH-Holding GmbH, Aumühle/Germany
Managing Director of Sachsenwald Management GmbH, Aumühle/Germany

COMMITTEES OF THE SUPERVISORY BOARD

Finance and Audit Committee
Dr Ulrich Schmidt (Chairman) (until 30 November 2022)
Kathrin Elisabeth Dahnke (since 1 December 2022) (Chairwoman since 5 December 2022)
Antoinette P. Aris (Deputy Chairwoman)
Steffen Schwarz[1]

Personnel Committee
Hans-Georg Frey (Chairman)
Markus Haase[1] (Deputy Chairman)
Wolff Lange
Steffen Schwarz[1]
Andreas Wolf
Antoinette P. Aris (non-voting member)

Joint Committee
Hans-Georg Frey (Chairman)
Markus Haase[1] (Deputy Chairman)
Mike Retz[1]
Andreas Wolf

[1] Employee representative.

Members of the Board of Management

The members of the Jungheinrich AG Board of Management also sit on the following Supervisory Boards (the formation of which is a statutory requirement) and similar regulatory bodies in and outside of Germany:

Dr Lars Brzoska
Chairman of the Board of Management
Corporate
Labour Director

Christian Erlach
Member of the Board of Management
Sales
Membership of other Supervisory Boards/ regulatory committees:
- Jungheinrich Heli Industrial Truck Rental Co., Ltd., Shanghai/China[1]
- MCJ Supply Chain Solutions LLC, Houston, Texas/USA[1]

Dr Volker Hues
Member of the Board of Management
Finance
Membership of other Supervisory Boards/ regulatory committees:
- A.S. Création Tapeten AG, Gummersbach/Germany

Sabine Neuß
Member of the Board of Management
Technics
Membership of other Supervisory Boards/ regulatory committees:
- Continental AG, Hanover/Germany
- Valmet Automotive Inc., Uusikaupunki/Finland (since 1 October 2022)
- JULI Motorenwerk CZ s.r.o., Moravany/Czechia[1]
- Schwerter Profile GmbH, Schwerte/Germany (until 11 March 2022)[1]
- Magazino GmbH, Munich/Germany[1]

[1] Group or associated company.

Combined separate non-financial report

IN ACCORDANCE WITH THE CSR DIRECTIVE IMPLEMENTATION ACT

SUSTAINABILITY STRATEGY

Sustainability is in Jungheinrich's DNA. As a family-owned listed company, our business activities revolve around our environmental, social and economic responsibilities. Jungheinrich is also committed to meeting the demands of its stakeholders. Jungheinrich keeps the impact of its business activities on people and the environment as low as possible. To do this, it follows the Precautionary Principle, which is enshrined in all its company guidelines and processes.

As a Sustainability Enabler, Jungheinrich's products and solutions are contributing to the sustainable transformation of the intralogistics sector. This is why sustainability is one of our six fields of action and an integral part of the corporate strategy 2025+; one with an important role to play in shaping the future development of the company.

ABOUT THIS REPORT

In this chapter, entitled "Combined separate non-financial report in accordance with the CSR Directive Implementation Act" Jungheinrich is publishing the non-financial information required by law for the 2022 financial year (1 January to 31 December). Pursuant to Sections 289(3) and 315(3) of the German Commercial Code (HGB), this is the combined separate non-financial report for the Jungheinrich Group and Jungheinrich AG. Jungheinrich AG does not have any separate concepts in this regard, and is managed by the Group. Jungheinrich uses the GRI management approaches as its framework for the combined separate non-financial report in line with Section 289d of the German Commercial Code (HGB). In publishing this report, Jungheinrich is also meeting the requirements of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable capital expenditure, and regarding the amendment of Regulation (EU) 2019/2088 (hereafter EU Taxonomy Regulation) [page 37 ff.]. All fully consolidated companies of the Jungheinrich Group according to the consolidated financial statements (as of 31 December 2022) are included. Deviations are indicated in the document. The report is published annually and is based on the 2021 non-financial report, which was published as part of the annual report on 31 March 2022. This combined separate non-financial report was subject to a limited audit in accordance with ISAE 3000 (Revised) by independent auditors PricewaterhouseCoopers, Hamburg (PwC), and was issued with an unqualified audit opinion.

[1] CSR: Corporate Social Responsibility.

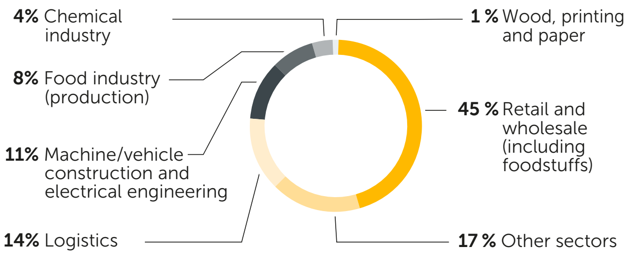
Integrated business model and customer structure

With a comprehensive portfolio of material handling equipment, automated systems and services, Jungheinrich is able to offer customers solutions to the challenges posed by Industry 4.0.

The integrated business model encompasses the development, production and sale of material handling equipment and the planning and realisation of automated systems, the short-term rental of new and used material handling equipment, the refurbishment and sale of used forklifts, and after-sales services. Jungheinrich also supplies stacker cranes and load handling equipment. In addition, the customer receives their entire factory and office equipment from a single source. The material handling equipment consists almost exclusively of battery-powered trucks. In addition to electric engines and drive controls, Jungheinrich also manufactures matching lithium-ion batteries and battery chargers. Almost all of our trucks are available with a lithium-ion battery. Digital products, such as the Jungheinrich warehouse management system (WMS) and the fleet management system, which is itself based on the latest generation of the Jungheinrich Internet of Things platform in the cloud, complement the portfolio. We also offer our customers a comprehensive range of financial services.

Jungheinrich is currently represented in around 120 countries via a combination of its own direct sales and service network and its partner companies.

Customers by sector 2022[1]



Sustainable development highlights in 2022

As part of its corporate strategy 2025+, Jungheinrich announced measurable sustainability targets, including with regard to greenhouse gas emissions, waste management and occupational health and safety, in November 2022. This supports the company's long-term goal of becoming a Sustainability Enabler.

Short and medium term sustainability targets

Contribute to climate neutrality[3]
CO_2e neutral business activities[4] in Scope 1 and 2 by 2030

Reduce resource & energy consumption
0 per cent landfill waste in German plants by 2025

Promote the health & safety of our employees
Improvement of lost time injury rate (LTIR) to 12.5 by 2025

Transparent and sustainable procurement
80 per cent of globally relevant procurement volume from sustainable suppliers by 2025

Top ratings as proof of our sustainability performance
EcoVadis / CDP / MSCI ESG Ratings / ISS ESG

Sustainable products & solutions for intralogistics
Boost revenue with sustainble products in line with the EU Taxonomy Regulation

1 Incoming orders in units

2 There are a number of greenhouse gases that have various impacts on the climate. These include CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3. In order for these gases to be compared, they are indexed as CO_2 equivalents (CO_2e).

3 The term "Climate neutrality" describes a state in which human activities have no net impact on the climate system. In addition to greenhouse gas emissions, such man-made impacts also include biogeophysical aspects, for example the contamination of soil and water, the consumption of raw materials or the loss of biodiversity. Achieving this state requires, among other things, that the remaining CO_2e emissions be compensated. Jungheinrich pursues climate neutrality as its vision. The focus here is currently on achieving the target of net zero greenhouse gas emissions along the entire value chain.

4 Jungheinrich understands this to mean balancing out emissions of the greenhouse gases CO_2, CH_4, N_2O, SF_6, HFCs, PFCs and NF_3, which are listed in the Kyoto Protocol. Jungheinrich will achieve net zero greenhouse gas emissions by implementing all feasible measures to reduce CO_2e emissions in the Group, the value chain and its own product portfolio. The remaining unavoidable CO_2e emissions will be at least balanced out in terms of volume through capital expenditure on carefully selected climate protection projects.

The following measures were implemented in 2022 as part of the sustainability strategy:

- A comprehensive greenhouse gas balance has been prepared for the first time for the entire Jungheinrich Group. It takes into account all greenhouse gases listed in the Kyoto Protocol and covers the entire value chain (Scopes 1 to 3).
- Almost 100 per cent of trucks produced were electric.
- A series of lithium-ion trucks that is CO_2e-neutral[1] upon arrival with the customer (POWERLiNE) was introduced to market.
- CO_2e-neutral after sales were introduced to market in the pilot countries (Norway, the United Kingdom and the Netherlands).
- A new plant was opened in Romania to expand refurbishment capacity for used trucks.
- An internal Human Rights Council was established to support the introduction of a human rights management system.
- Sustainable procurement was expanded by establishing a Group-wide team for the further implementation of supply chain measures. The team is also responsible for expanding the management system to include the requirements of the Act on Corporate Due Diligence in Supply Chains (LkSG).
- An external quality control audit was performed by an external auditor in the Corporate Compliance, Audit & Data Protection division in 2022 and 2023.

RATINGS AND RANKINGS IN 2022

EcoVadis Platinum award

EcoVadis is the largest corporate sustainability ratings company in the world. Jungheinrich has once again received the Platinum award, as it is among the top 1 per cent of companies globally in the fields of environment, ethics, labour rights, human rights and sustainable procurement.

CDP rating B

CDP is a global non-governmental organisation that rates companies with regard to their environmental management in the categories of climate, forests and water security. The ratings scale ranges from A to F. CDP awarded Jungheinrich a rating of B in the climate category for its transparent and dedicated commitment to climate protection.

ISS ESG C+ rating

The ISS ESG Corporate Rating provides investors with relevant, material and future-oriented environmental, social and governance data, along with performance evaluations. The twelve-grade scale ranges from A+ to D-. Jungheinrich received a C+ rating and the “Prime” status in its sector.

INITIATIVES AND MEMBERSHIPS IN 2022

Jungheinrich is involved in a number of initiatives and is a member of various sustainability networks. These include:

The Science Based Targets Initiative (SBTi)

The SBTi is a partnership between CDP, the Global Compact, the World Resources Institute (WRI) and the World Wide Fund for Nature (WWF). SBTi supports companies in setting out scientifically based pathways to reduce their emissions in line with the 1.5 degree target.

The Climate Pledge

The Climate Pledge is an initiative by Amazon and Global Optimism in which participating companies have committed to achieving the targets of the Paris Agreement, including the 1.5 degree target, by 2040.

50 Sustainability & Climate Leaders

The 50 Sustainability & Climate Leaders initiative is a group of leading global corporations who are collaborating to achieve the United Nations’ 17 Sustainable Development Goals (SDGs).

B.A.U.M. (Bundesdeutscher Arbeitskreis für Umweltbewusstes Management) and econsense

B.A.U.M. e.V. is a network for sustainable business. econsense – Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V. is a forum of global companies and organisations in the German economy who have integrated the guiding principle of sustainable development into their corporate strategies.

[1] For reasons of clarity, Jungheinrich uses the adjective “CO_2e-neutral” in certain contexts interchangeably with “net zero greenhouse gas emissions”.

STAKEHOLDER DIALOGUE

Internal and external stakeholders of relevance for Jungheinrich

As part of the sustainability strategy development process at Jungheinrich, the material internal and external stakeholders were identified and prioritised by a team of internal experts from the Corporate Sustainability, Health & Safety, Marketing and Corporate Communications divisions. Stakeholders are weighted according to the relevance of their business operations to Jungheinrich. They include those who have direct contact with our products, those affected by processes at our locations or those who have any other connection to our company. The analysis highlighted the following stakeholders for Jungheinrich:

- Employees
- Management and executives
- Customers
- Job applicants
- Suppliers
- Investors and analysts.

The dialogue with stakeholders takes a variety of different forms, such as direct conversations, exchanges over online platforms, and surveys.

The strategy development process — sustainability as part of the 2025+ corporate strategy

In the year under review, the sustainability strategy was developed further within the 2025+ corporate strategy, as part of a structured process. The following aspects were included in the resulting definition of sustainability initiatives under the sustainability strategy:

- Findings of the dialogues with key internal and external stakeholders
- Results of the materiality analysis
- Analysis of existing business processes and management systems:
  - Ratings and rankings requirements
  - Regulatory requirements
  - Insights from benchmark analyses

Six sustainability strategy initiatives

The central aim of the 2025+ corporate strategy is to create sustainable value. The corporate strategy comprises six fields of action[1], one of which is sustainability. The sustainability strategy is therefore a fundamental part of the corporate strategy, and plays a decisive role in achieving our corporate goals.

The sustainability field of action is also divided into six strategic initiatives that apply to all of the company's divisions:

1. Climate neutrality
2. Eco efficiency and circular economy
3. Employees and societies
4. Governance
5. Sustainable business models, products and services
6. Sustainability in the brand

The existing materiality analysis, which was checked and confirmed to be up to date in 2022, serves as the foundation for the sustainability strategy. Various sources of information[2] were used for the original materiality analysis to determine which topics are material for Jungheinrich in terms of sustainability. The topics identified as part of this process were evaluated by the key stakeholders and internal experts with regard to their business relevance and consequences, and approved by the Board of Management.

[1] The 2025+ corporate strategy consists of six fields of action (automation, digitalisation, energy systems, efficiency, global footprint and sustainability). Further information on the 2025+ corporate strategy can be found in the combined management report [page 56 ff.].

[2] The following external sources were used: customer enquiries, EcoVadis, the German commercial Code, ILO core labour standards, ISO 14001, ISO 50001, ISO 45001, benchmark analyses, MSCI and the UN Principles for Responsible Investments. The following internal sources were used: experts in the environment, health and safety at work, development, innovation and IT security.

17 of 33 topics were determined to be especially relevant to the company. These 17 topics were then grouped into five focus areas.

During preparation of the combined separate non-financial report in accordance with the CSR Directive Implementation Act (CSR-RUG), issues evaluated by the materiality analysis as being material or very material were checked and prioritised with regard to both their relevance to the business and their degree of impact, in line with the principle of double materiality pursuant to Section 289c, Paragraph 3 of the German Commercial Code.

The following table describes the six sustainability strategy initiatives and shows how they are assigned to the material topics. It also shows the initiatives' targets.

Initiative	Description	Focal points	Requirements in accordance with Section 289c (3) HGB	Material topics	Targets
1. Climate neutrality	Sustainable transformation [page 20 f.] and, in addition, supporting customers in achieving their climate targets and contributing to regulatory requirements.	▪ Environment and energy	▪ Environmental concerns	▪ Energy (consumption and renewable energy)	▪ Net zero greenhouse gas emissions in Scopes 1 and 2 by 2030 ▪ Net zero greenhouse gas emissions in the value chain (Scopes 1 to 3) by 2040 pursuant to The Climate Pledge commitments ▪ Setting measurable targets that will allow us to reach net zero greenhouse gas emissions as a company (in Scopes 1 to 3) by 2050, in accordance with SBTi
2. Eco efficiency and circular economy	Global resource scarcity is driving the decoupling of economic growth from linear consumption of resources.	▪ Environment and energy ▪ Environmentally friendly and safe products	▪ Environmental concerns	▪ Energy (consumption and renewable energy) ▪ Waste and recycling ▪ Materials (resource-saving products) ▪ Environmentally friendly products ▪ Material compliance	▪ 0 per cent landfill waste from the German production plants by 2025 ▪ Worldwide 0 per cent landfill waste generated by internal work processes, at sites in countries with established recycling systems by 2030
3. Employees and societies	Laying the foundation for effective, healthy and satisfied employees.	▪ Secure and good jobs	▪ Employee concerns, social concerns & respect for human rights	▪ Occupational health and safety ▪ Training and education ▪ Good employer	▪ Improving LTIR to 12.5 by 2025
4. Governance	Making sustainability part of the corporate DNA using transparent processes, data and management systems, at the same time as acting responsibly at all stages of the value chain on the basis of ethical principles (e.g. safeguarding human rights).	▪ Economic responsibility ▪ Transparency and responsibility in supply chains	▪ Environmental concerns ▪ Social concerns ▪ Respecting human rights ▪ Combating corruption and bribery	▪ Compliance and anti-corruption ▪ Responsible management ▪ Norms and standards ▪ Transparency in supply chains	▪ 80 per cent of global relevant purchasing volume to be sustainable spend by 2025 ▪ Continual improvement in ratings as proof of the efficacy of sustainability initiatives (EcoVadis/CDP/MSCI ESG ratings/ISS ESG)
5. Sustainable business models, products and services	Sustainability as the basis for new business opportunities and an opportunity to boost Jungheinrich's unique selling points.	▪ Environmentally friendly and safe products	▪ Environmental ▪ Social concerns	▪ Customer satisfaction ▪ Competitiveness ▪ Research and development ▪ Product quality and enhancement	▪ Increasing revenue with sustainable products pursuant to the EU Taxonomy Regulation
6. Sustainability in the Jungheinrich brand	Creating proven added value for customers and society.	–	–	–	▪ Internal and external perception of Jungheinrich as a Sustainability Enabler

Contribution to the Sustainable Development Goals (SDGs)

The SDGs are a framework for social development that applies globally. As such, they enable companies to show how they contribute to sustainable development within their core business. Jungheinrich is committed to contributing to the achievement of the 17 goals.

With the focal points of its sustainability strategy, and as a Sustainability Enabler in intralogistics, Jungheinrich sees an opportunity to have a particular impact on the following SDGs:

SDG	Definition	Areas where Jungheinrich can make an impact
3 Good health and well-being	Ensure healthy lives and promote well-being for all at all ages.	Solutions and assistance systems to contain potential hazards and prevent accidents in warehouses (360-degree protection).
9 Industry, innovation and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.	Innovative approaches to decarbonise the industry, for instance by switching to electric in the agricultural and construction machinery sectors (referred to as Jungheinrich Powertrain Solutions) and through the development of solutions for sustainable agriculture (referred to as Vertical Farming).
12 Responsible consumption and production	Ensure sustainable consumption and production patterns.	Ensuring sustainable production and procurement by developing products in accordance with eco design criteria, refurbishing used trucks, and waste management.
13 Climate action	Take urgent action to combat climate change and its impacts.	Sustainable business models, products and services to increase efficiency and decarbonisation within intralogistics, for instance through energy-efficient lithium-ion trucks which are CO_2e-neutral upon delivery (POWERLiNE).

Expanding sustainability organisation

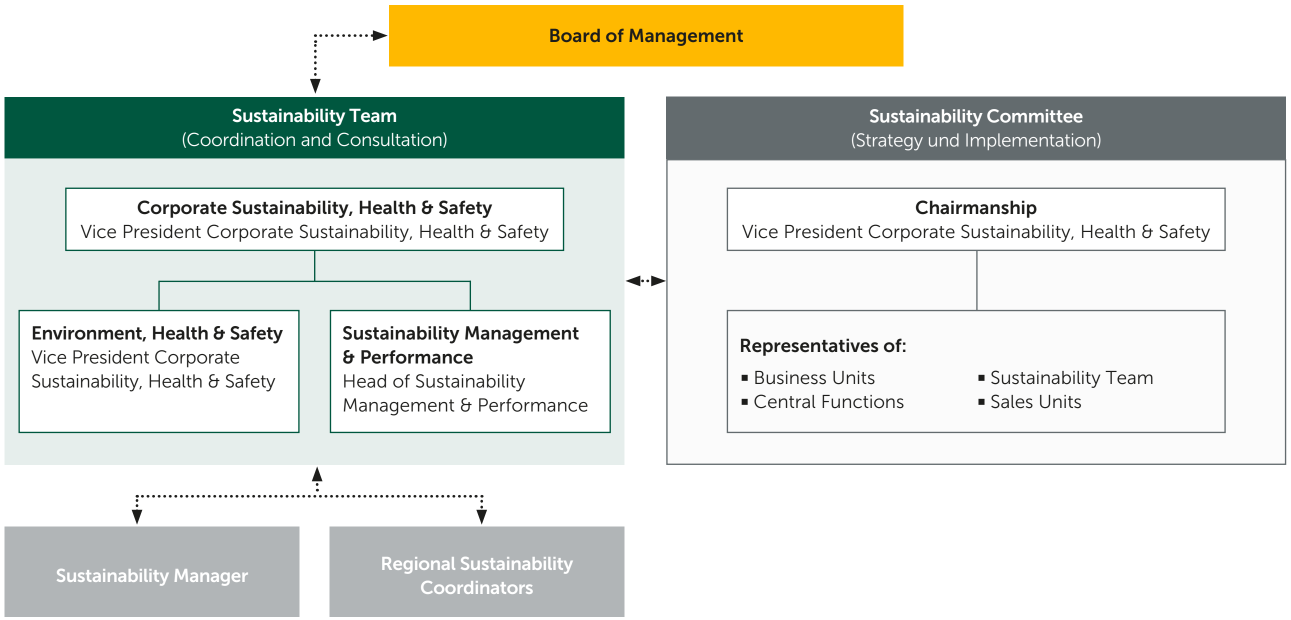
In order to implement the developed targets, focus areas and programmes of Jungheinrich's sustainability strategy, management with standardised processes and clearly defined centralised and decentralised responsibilities is required.

Jungheinrich expanded its sustainability organisation further in the 2022 financial year. In addition to the Corporate Sustainability, Health & Safety division, the organisation also comprises the Sustainability committee and the local networks in the regions.

Sustainability Team

The Sustainability Team, consisting of the Corporate Sustainability, Health & Safety division, coordinates the integration of the sustainability strategy in the company and reports directly to the Chairman of the Board of Management. The Environment, Health & Safety and Sustainability Management & Performance departments are in direct contact with the Sustainability Managers and the regional Sustainability Coordinators. Our Sustainability Managers act as disseminators for central company functions and divisions. Our regional Sustainability Coordinators act as disseminators for our regional businesses.

Sustainability organisation



Sustainability Committee

The Sustainability Committee was established in 2022, and it meets every quarter. It consists of representatives from central Group functions and areas, from the regional sales units and from the Sustainability Team. Material decisions, such as the final approval of the sustainability strategy targets, are the responsibility of the Board of Management and are ultimately approved by the Supervisory.

The committee's central responsibilities include forwarding sustainability-related decisions and directives to the organisations, such as requests to implement programmes, initiatives and projects within the various Group divisions.

In light of the adoption of ethical targets, the newly established Human Rights Council is particularly important. Accordingly, it has been integrated into the Sustainability Committee.

Material impacts, risks and opportunities arising from sustainability

Non-financial risks pursuant to Section 289c(3) Items 3 and 4 of the German Commercial Code (HGB)

Non-financial risks for Jungheinrich's business operations are reviewed and evaluated as part of the regular risk management. The detailed risk and opportunity report [page 75 ff.] can be found in our combined management report. Pursuant to Section 289c(3) Items 3 and 4 of the German Commercial Code, no material risks with highly likely serious negative impacts in the aspects outlined in the CSR Directive Implementation Act were identified for business operations, business relationships, products or services. No reportable correlations with the figures in the consolidated financial statements were discovered.

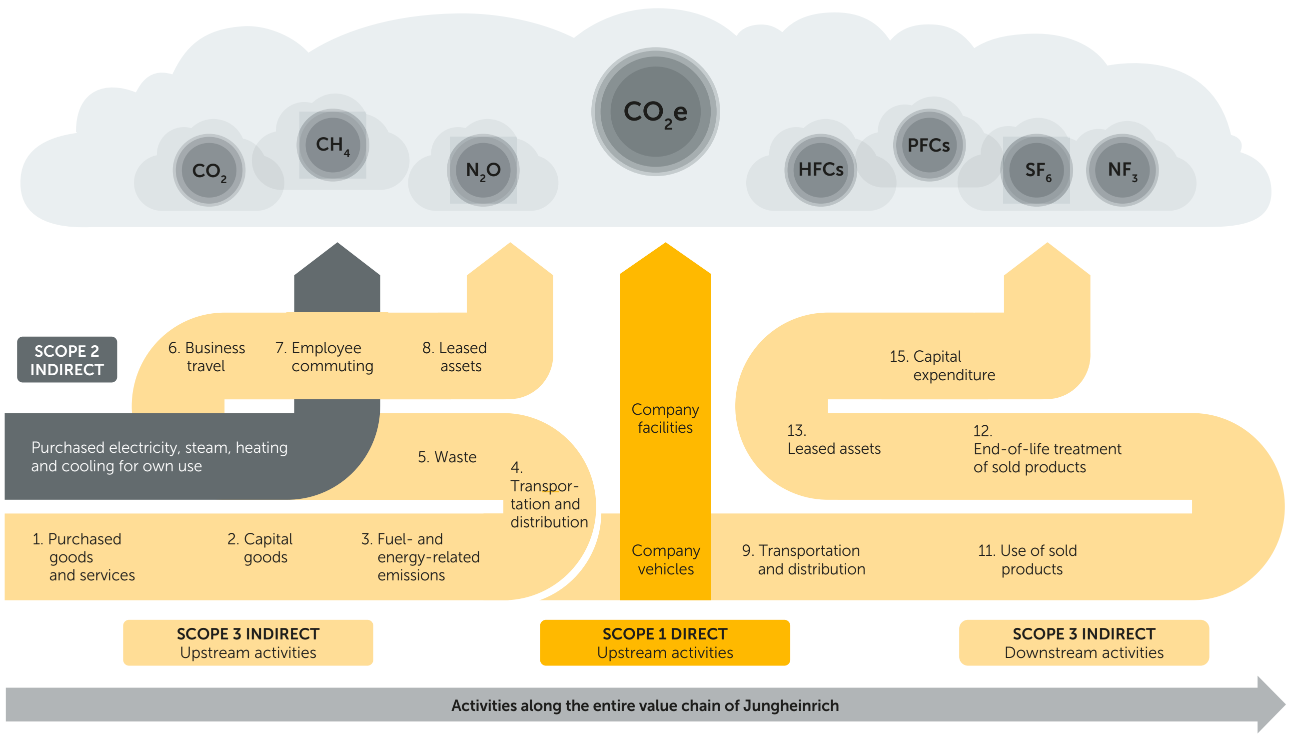
CLIMATE NEUTRALITY INITIATIVE

In the 2015 Paris Climate Agreement, 195 nations committed to restrict the man-made[1] global increase in temperatures to 1.5 degrees Celsius in comparison with pre-industrial levels.

In line with the SBTi requirements, Jungheinrich has committed itself to contributing to the attainment of the 1.5 degree target and to setting targets that will allow the company to achieve net zero greenhouse gas emissions by 2050 at the latest. By 2040, we plan to introduce reduction and compensation measures within the value chain to achieve net zero greenhouse gas emissions in accordance with the requirements of The Climate Pledge. This commitment differs from SBTi in that there are no scientifically derived specifications regarding measures to reduce and compensate for emissions.

Jungheinrich is pursuing a multidimensional approach in order to achieve this target. On the one hand, the company will address the reduction and prevention of the greenhouse gases it is directly responsible for, as well as those originating in supply chains. On the other, Jungheinrich will offer climate-friendly products and services to customers in several industries, and thus also support its partners in reducing their greenhouse gas emissions, or to prevent them completely wherever possible.

Greenhouse gas emissions in the Jungheinrich Group in accordance with GHGP



Group-wide greenhouse gas balance forms the foundation for climate neutrality

The main foundation for meeting the net zero target and active climate management is knowledge regarding our own greenhouse gas balance. The Greenhouse Gas Protocol (GHGP) serves as the basis for determining Group-wide greenhouse gas emissions at Jungheinrich.

Jungheinrich uses the control approach to record greenhouse gas emissions. All companies in which Jungheinrich holds a voting and capital share of more than 50 per cent are accounted for separately. All other companies are accounted for as investments.

Greenhouse gas emissions are fully recorded in accordance with Scopes 1 to 3. Scope 1 includes all greenhouse gas emissions caused directly by Jungheinrich. Examples of central emissions that fall into this category are the consumption of natural gas, heating oil and diesel. Scope 2 covers all greenhouse gas emissions that Jungheinrich causes indirectly through the purchase of energy. Scope 3 covers all the greenhouse gas emissions, in 15 subcategories, that are created indirectly along the value chain (upstream and downstream). The graphic summarises the different emissions "scopes" used at Jungheinrich.

[1] Cf. IPCC (2021): Sixth IPCC Assessment Report. Working Group I Contribution: The Physical Science Basis.

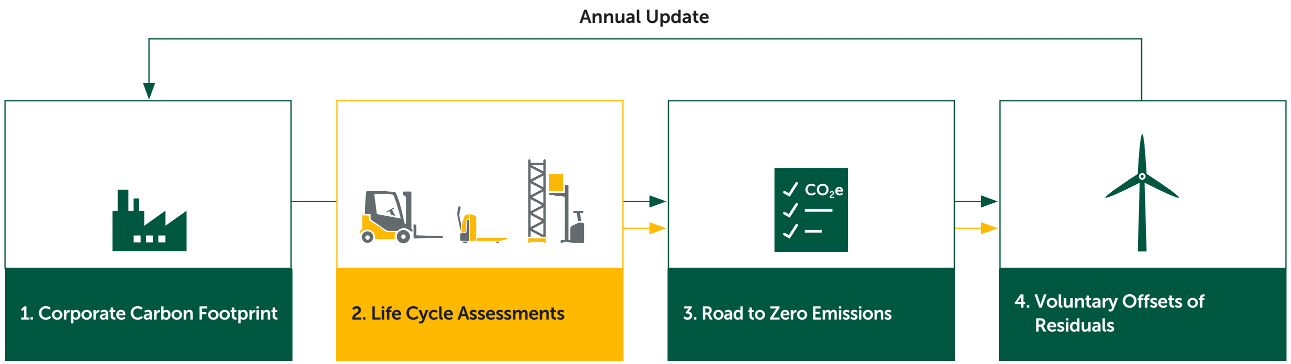
Jungheinrich's climate neutrality targets [1]

Jungheinrich has set itself the following interim targets for reaching the net zero target[2]:

- Net zero greenhouse gas emissions in Scopes 1 and 2 by 2030
- Net zero greenhouse gas emissions in the value chain (Scopes 1 to 3) by 2040 pursuant to The Climate Pledge commitments
- Set validated targets that will allow us to reach net zero greenhouse gas emissions as a company (in Scopes 1 to 3) by 2050, in accordance with SBTi

As an interim target to achieving CO_2e-neutral business activities in Scope 1 and 2, Jungheinrich is aiming to reduce its direct and indirect greenhouse gas emissions in Scope 1 and 2 by around a quarter by 2025 (baseline: 2019).

Structure of climate management at Jungheinrich



Climate management: Achieving climate neutrality in four steps

Jungheinrich's climate management activities are aimed at achieving its net zero greenhouse gas emissions and are divided into four main steps:

1 and 2: Jungheinrich records greenhouse gas emissions that are damaging to the environment during the annual calculation of the corporate carbon footprint and the analysis of product life cycle assessments [page 24]. The correctness and completeness of the corporate carbon footprints for 2020 and 2021 were verified by the independent certification body TÜV Nord pursuant to DIN EN ISO 14064-3.

3: The Group-wide road to zero emissions strategy is refined and constantly updated using this data. In addition to the main milestones and targets, it includes all the measures designed to systematically lower Jungheinrich's greenhouse gas emissions.

4: The remainder of unavoidable greenhouse gas emissions is compensated for in terms of volume through voluntary capital expenditure on climate protection projects.

Climate management activity is coordinated centrally at Jungheinrich, and implemented in close cooperation with all relevant departments and Group companies. A large proportion of the Group-wide greenhouse gas emissions are created in the value chain. In order to influence these greenhouse gas emissions, which are only indirectly caused by the company, Jungheinrich remains in close contact with customers, suppliers and other partners.

[1] The term "Climate neutrality" describes a state in which human activities have no net impact on the climate system. In addition to greenhouse gas emissions, such man-made impacts also include biogeophysical aspects, for example the contamination of soil and water, the consumption of raw materials or the loss of biodiversity. Achieving this state requires, among other things, that the remaining CO_2e emissions be compensated. Jungheinrich pursues climate neutrality as its vision. The focus here is currently on achieving the target of net zero greenhouse gas emissions along the entire value chain.

[2] Jungheinrich understands this to mean balancing out emissions of the greenhouse gases CO_2, CH_4, N_2O, SF_6, HFCs, PFCs and NF_3, which are listed in the Kyoto Protocol. Jungheinrich will achieve net zero greenhouse gas emissions by implementing all feasible measures to reduce CO_2e emissions in the Group, the value chain and its own product portfolio. The remaining unavoidable CO_2e emissions will be at least balanced out in terms of volume through capital expenditure on carefully selected climate protection projects.

Corporate carbon footprint

Jungheinrich's corporate carbon footprint amounted to approximately 2,945.8 thousand tonnes of CO_2e in 2022. Of this figure, 1.7 per cent were Scope 1 emissions, 0.3 per cent Scope 2 (market-based)[1] and 98.0 per cent Scope 3. The intensity of Jungheinrich's total greenhouse gas emissions[2] comes to 0.62 thousand tonnes of CO_2e per million euros (2021: 0.62).

Greenhouse gas emissions in thousand tonnes of CO_2e[3]	**2022**	2021	2020
Scope 1	51.2	55.7	52.5
Scope 2 market-based	7.8	9.3	22.9
Scope 2 location-based	26.7	24.6	25.1
Scope 3	2,886.8	2,555.9	2,066.8
Greenhouse gas emissions (Scopes 1 to 3)	2,945.8	2,620.9	2,142.2

The 37.5 per cent increase in greenhouse gas emissions in 2022 in comparison with 2020 is partially due to the positive development of the business and the end of coronavirus pandemic restrictions. In addition to travel and mobility restrictions, trade barriers were also reduced, for instance.

Scope 1 CO_2e emissions declined by 8.1 per cent compared to 2021. This is partially due to sparing use of fossil fuels like heating oil and natural gas in the current energy crisis. The consistent reduction in Scope 2 (market-based) greenhouse gas emissions in comparison with 2020 was also achieved through the gradual transition to electricity from renewable energy sources in locations around the world.

The 12.9 per cent increase in Scope 3 CO_2e emissions, both upstream and downstream, against 2021 is primarily due to Group growth.

Road to zero emissions

The measures to reduce greenhouse gas emissions that Jungheinrich identifies, plans and implements based on the findings of the corporate carbon footprint and product life cycle assessments [page 24] are largely guided by the GHGP emissions scopes [image page 20].

In relation to Scope 1, these measures include switching the company's own vehicle fleet to electric drive systems or optimising production processes to reduce natural gas consumption, for example.

In relation to Scope 2, switching to electricity from renewable energy sources at its own company locations represents a major milestone for Jungheinrich. For German locations with their own electricity registrations, this was completed in 2021. The transition for all other locations worldwide — where electricity from renewable energy sources is available — should be completed as quickly as possible, and by 2030 at the latest. The Norderstedt production plant has also been using CO_2e-neutral district heating since 2021. We have also been able to switch our German production plants largely to energy-saving LED lighting. Suitable locations worldwide also began having photovoltaic equipment installed in 2022.

Jungheinrich is also addressing the reduction of Scope 3 emissions. For instance, we are aiming to continuously reduce the energy consumption of material handling equipment (Scope 3.11) and to ensure that these products are designed with ease of disassembly in mind from the outset. By refining its requirements for eco design, Jungheinrich is also aiming to test the viability of circular economy or climate friendly alternative materials [page 23 f.]. Further measures along the entire value chain are continually being evaluated and systematically implemented.

Voluntary compensation for unavoidable residual emissions

In order to reach its net zero target from 2030, Jungheinrich has decided to invest voluntarily in climate protection projects to compensate for unavoidable CO_2e emissions.

In preparation for this, a comprehensive criteria catalogue was developed in 2022. In future, it will help to identify climate protection projects that satisfy commonly acknowledged quality standards and Jungheinrich's high standards for voluntary compensation. The main focus will be on the quality and efficacy of the climate protection projects and their connection to Jungheinrich. In addition, internal requirements were identified that enable a central system for implementing and managing compensation capital expenditure within the Group.

[1] Scope 2 emissions can be calculated using two methods: location-based and market-based. In the location-based method, energy consumption is calculated using average national emissions factors. In the market-based method, the CO_2e emissions are calculated using the individual emissions factors of the company's own energy provider. This method is therefore more specific, and thus more relevant to Jungheinrich.

[2] The intensity of greenhouse gas emissions is calculated by dividing absolute greenhouse gas emissions by Group revenue. The scope of consolidation for Group revenue differs slightly from that of the corporate carbon footprint.

[3] The emissions factors used correspond to the standard sources (e.g. IEA, DEFRA, EPA). The key figures listed apply to all companies in which a share of more than 50 per cent is held by Jungheinrich. In some cases, the key figures are based on standard extrapolation logic. For example, some key figures were calculated pro rata using comparable companies or types of companies. Depending on the situation, information regarding full-time equivalents (FTE), revenue and/or surface area was used.

ECO EFFICIENCY AND CIRCULAR ECONOMY INITIATIVE

Jungheinrich is aware of the impact on the environment and the limits of available resources as a result of increasing global demand for resources. The systematic improvement of the products' ecological efficiency and promoting circular economies are therefore of vital importance to Jungheinrich. The use and preservation of resources in a circular economy and the development of resource- and energy-efficient products also contribute on the way to climate neutrality [page 20 ff.].

The general scarcity of resources is increasing the necessity for a circular economy in which every single end product of a consumption or production process is the basis for other processes. Ideally, this results in no waste or emissions.

Eco design and product life cycle assessment

1. Eco design

Product design has an economic and ecological role to play as early as the development phase, as the largest share of the environmental impact of the product's life cycle is determined in this phase. Jungheinrich therefore takes into account the principles of circular economies and the environmental efficiency of new trucks using predetermined criteria for eco design.

Using environmental compatibility assessments, Jungheinrich can explore the potential to achieve energy and resource efficiency from the beginning of the product development process. Defined milestones in the product development process ensure that the various eco design criteria are recorded, evaluated and implemented. During the eco design process, both resource efficiency and performance are

Eco design criteria in product development

New products

Product improvements

Eco design criteria

Natural resources

- Resource consumption/emissions
- Energy consumption/efficiency
- Material/raw material selection
  - Recycled material
  - Recyclable material
  - Hazardous and critical ingredients
- Packaging

Performance

- Lifetime/durability
- Recyclability/recoverability
- Disassembly & assembly capability
- Service capability/service efficiency
- Procurement (global vs. local)
- Design for refurbishment

considered. In future, the existing eco design guidelines will be expanded to include the aspects shown in the illustration, with input from the relevant departments.

The developmental design of new products is increasingly defined by requirements relating to critical substances. Jungheinrich ensures material compliance by taking the following criteria into consideration:

- Jungheinrich fulfils the relevant legal requirements, such as the REACH regulations[1] (Registration, Evaluation, Authorization and Restriction of Chemicals) and the RoHS Directive[2] (Restriction of Hazardous Substances) and adheres to bans, restrictions and declaration obligations regarding regulated hazardous substances.
- The company wants to ensure that its products contain no substances that are criticised from a social or environmental point of view, even if they are not subject to any regulations.
- Jungheinrich requires suppliers to procure conflict-free materials.

As part of a comprehensive multi-stage material compliance project, which was launched in 2020, Jungheinrich is working on a central approach to cover legal and internal product development process requirements and to safeguard the procurement, availability and assessment of information. In this project, transparency regarding regulated substances is created by including the relevant suppliers of materials directly used in production. With this in mind, Jungheinrich is currently developing a centralised IT system to document the material compliance status of all its suppliers.

[1] REACH Regulation (EC) No. 1907/2006 is an EU chemicals regulation that came into force on 1 June 2007. REACH stands for Registration, Evaluation, Authorisation and Restriction of Chemicals.

[2] The RoHS Directive 2011/65/EU relates to restrictions on the use of certain hazardous substances in electrical and electronic equipment. It regulates the use and circulation of hazardous substances in electrical equipment and electronic devices.

Relevant regulations are listed in the supplier manual so that Jungheinrich communicates these requirements to suppliers at an early stage of the development process. This means the use of prohibited materials in supply chains can be ruled out and the procurement of restricted or hazardous substances avoided. For new suppliers, recognition of the requirements relating to material compliance has been systematically integrated into the supplier qualification process.

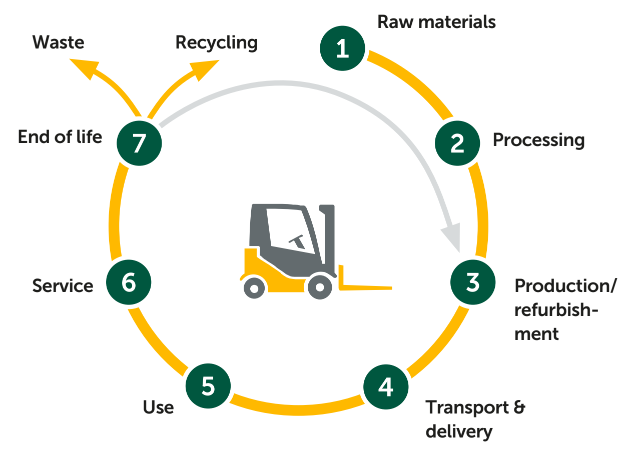
2. Product life cycle assessment

Jungheinrich has been working on improving its products' ecological efficiency for a number of years, and especially that of material handling equipment. The company uses product life cycle assessments to evaluate and measure how the performance of its products is progressing with regard to sustainability. These products are developed and constructed in accordance with criteria for eco design. Product life cycle assessments help Jungheinrich to implement future regulatory requirements. Jungheinrich also takes into consideration customers' interests in reviewing the sustainability performance of its products in this manner.

The company has been preparing product life cycle assessments[1] for a cross-section of its products since 2010. These products have been certified in accordance with DIN EN ISO 14040/14044. So far, the product life cycle assessments have focused specifically on CO_2e efficiency in the manufacturing, deployment and refurbishment stages. By using these product life cycle assessments, Jungheinrich is able to depict a significant amount of the CO_2e emissions associated with products and processes in a structured way. In 2022, Jungheinrich prepared product life cycle assessments with the greatest possible scope for the following products: a forklift truck (ETV 216i), two comparable batteries for material handling equipment (lithium-ion and lead-acid) and a stacker crane. These product life cycle assessments were also performed and certified in accordance with the principles of DIN EN ISO 14040/14044. In addition to the inclusion of CO_2e emissions, further relevant environmental factors shown in the infographic were included in the product life cycle assessment. The analysis was further intensified within the various life cycle phases of the products concerned (see following image "Life-cycle phases of the trucks"). Through the detailed analysis and evaluation of all product components and life phases from cradle to grave, Jungheinrich has been able to create transparency in its value chain and gain useful knowledge for future product developments.

The product life cycle assessments performed by Jungheinrich have shown that the majority of CO_2e emissions for material handling equipment occur in the use phase, and that they are highly dependent on the battery used, which is the relevant drive technology. In this context, a comparable battery system was designed featuring a lithium-ion battery and a lead-acid battery, and compared in a product life cycle assessment.[2] This showed that lithium-ion batteries cause 20 per cent less CO_2e emissions in the life phase reviewed in the comparison than the system with the lead-acid battery, while CO_2e emissions in the use phase alone are reduced by around 15 per cent. This result confirms the relevance of Jungheinrich's target of achieving a target of ensuring that 70 per cent of material handling equipment is equipped with lithium-ion batteries by 2025. Jungheinrich's POWERLiNE series will make a decisive contribution to achieving this target. These series-produced trucks are fitted with an integrated lithium-ion battery and CO_2e-neutral upon delivery by Jungheinrich to the customer.

Life cycle phases of the trucks



[1] Product life cycle assessments are today commonly referred to among specialists simply as life cycle assessments.

[2] The functional unit for this assessment was based on the average lifespan of the lithium-ion battery used in the ETV 216i truck (15,000 operating hours). Based on this functional unit, the comparable battery systems are defined as follows: a functional battery system with a lithium-ion battery and a functional battery systems with 2.3 lead-acid batteries.

Establishing a circular economy

Switching to a circular economy within the company will require changes to both operations and products. Jungheinrich has developed a number of programmes to encourage a circular economy and to keep optimising it in the future, including:

- Truck rental models: Offering models for rental enables customers to use material handling equipment flexibly and in accordance with their needs, and helps preserve resources, while Jungheinrich retains ownership rights to the raw materials and materials.
- Used trucks: Jungheinrich has been refurbishing its own trucks at the refurbishment plant in Dresden since 2006. These trucks are then brought back to market under the brand name Jungstars. The demand for refurbished trucks as a climate- and resource-friendly alternative to new trucks has led to the opening of a second refurbishment plant in Ploiești, Romania, in 2022. In the same year, 5,588 Jungstar forklift trucks were refurbished (2021: 5,921). The high quality and design of the products enables an average recycling rate for material handling equipment of around 93 per cent. The share of replaced components that is recyclable is 6 per cent on average, meaning that around 99 per cent of a used truck can be returned to the circular economy. Through refurbishment, which saves raw materials and energy, Jungheinrich can extend the life cycle of material handling equipment and minimise the use of new parts.
- Optimised battery life cycles: The extension of battery life phases by refurbishing the battery or re-purposing it as stationary energy store is included among the optimisation fields. Lithium-ion batteries that have previously been used in a new truck are refurbished for use in a used truck by a partner company. Jungheinrich also provides batteries whose capacity is no longer sufficient for use in material handling equipment for installation in stationary energy stores, before they are recycled at the end of their useful life.

Definition of environmental standards in the environmental and energy programme

In 2022, 12 Jungheinrich companies implemented and certified an environmental management system in line with ISO 14001, and another six companies implemented and certified an energy management system that complied with ISO 50001.

The principles of energy efficiency and waste prevention were implemented based on Jungheinrich's own environmental standards, which exceed local legal requirements in some cases. The options for local energy generation though renewable energy sources were examined for locations that consume significant amounts of energy.

The environmental and energy programme also covers the following topics:

- Water and effluent management
- Preserving biodiversity
- Hazardous substance management
- Waste and recycling management
- Energy management

1. Water and effluent management

The Group's environmental management system covers water-related environmental factors, environmental conditions and the associated risks and opportunities. Jungheinrich is committed to handling water efficiently in order to continually reduce water consumption and the volume of effluent produced. The company believes that solutions based on the circular economy are essential in this regard. The company operates facilities at all major locations to recycle the water used in production, and thus to promote circular economy solutions.

The Group's water withdrawal amounts to 315.2 megalitres[1]. Of this amount, 193.8 megalitres are drawn from ground water sources and 121.2 megalitres are drawn from third-party water sources, such as municipal water suppliers. The remaining 0.2 megalitres are drawn from surface water, seawater and produced water. The volume of water drawn from groundwater sources is primarily used in cooling systems at the Moosburg and Degernpoint plants. This water is used within, and returned to, a circular economy.

[1] As they are being reported for the first time in 2022, no key figures are provided for the previous year. These apply to the fully consolidated companies and are based on commonly-used extrapolation logic. For example, some values have been extrapolated for the whole of the year under review based on actual figures available for part of the year. Additionally, some key figures have been calculated pro rata using comparable companies or types of companies (share of around 1.5 per cent).

2. Preserving biodiversity

To support the biological diversity of ecosystems and agricultural systems Jungheinrich has launched a variety of initiatives at a local level in numerous countries, and encourages employees to take action in their own local areas. This action includes providing nesting aids and the conversion of grassy areas near buildings for wild bees and other insects at German locations, for instance. Supporting reforestation efforts in the rainforests of Brazil and implementing biodiversity measures in the implementation and planning for our new production plant buildings, such as a 1.5 hectare green space with native trees and bushes at our production plant in Czechia, are also part of our efforts to conserve biodiversity.

3. Hazardous substance management

The use of hazardous substances is currently unavoidable in order to develop, produce and operate material handling equipment. Due to their damaging impact on the environment and human health, handling hazardous substances requires adherence to strict regulatory requirements.

Jungheinrich has laid out which hazardous substances can be used in the Group. These hazardous substances are approved using a double-check principle as part of a predefined process involving experts from the Health and Safety and Environment divisions. Affected employees receive regular training on the correct handling of hazardous substances.

4. Waste and recycling management

Jungheinrich aims to continually increase its ability to recycle resources. The waste hierarchy principle applies in this regard, meaning prevention before recycling, recycling before disposal.

This has resulted in the following targets:

- No landfill waste from German plants by 2025.
- Landfill waste from global locations to be reduced by a third by 2025.
- No landfill waste to be created by internal work processes at locations in countries with established recycling systems by 2030.

In order to achieve the waste reduction and prevention targets, a national project team made up of members from various locations is working on introducing a central waste management system. One of their tasks is to perform a potential analysis with a view to increasing the transparency of value and waste flows, and to derive appropriate measures from this analysis.

The waste statistics show that the majority of waste is recycled and/or recovered. The statistics show that thermal recovery ranks second among the different methods of dealing with waste. The share of waste that is disposed of, which also includes landfill waste, has declined in comparison with the previous year, despite the expansion of the report's scope. This is due to disposal processes being changed at certain locations.

Total amount of waste[1,2]

in tonnes	**2022**	2021	2020
Total hazardous waste	7,696	5,239	4,311
Recycling of materials	6,087	3,791	3,300
Thermal recovery	812	353	312
Disposal (including landfill)	797	1,095	699
Total non-hazardous waste	13,473	11,036	10,277
Recycling of materials	11,527	8,801	8,050
Thermal recovery	1,119	1,057	1,105
Disposal (including landfill)	827	1,178	1,122

1 The key figures for 2020 and 2021 do not include all fully consolidated companies in line with the 2021 combined separate non-financial report, and therefore are only comparable with the figures for 2022 to a limited extent. For 2020 and 2021, the production plants in Norderstedt, Lüneburg, Moosburg, Degernpoint, Landsberg, Dresden and Qingpu (China), the spare parts centre in Kaltenkirchen, the Group headquarters in Hamburg, the IT office in Hamburg and the sales companies in Australia, Austria, Belgium, Brazil, Czechia, France, Germany, Italy, the Netherlands, Poland, Russia, Spain, Switzerland and the UK are included. Only locations with more than 50 employees are included.

2 The 2022 figures apply to the fully consolidated companies and are based on commonly-used extrapolation logic. For example, some values have been extrapolated for the whole of the year under review based on actual figures available. Additionally, some key figures have been calculated pro rata using comparable companies or types of companies (share of around 4.2 per cent).

5. Energy management

Jungheinrich's efforts in the field of sustainable energy solutions, and specifically in terms of energy selection and procurement, have become more important as a result of the Russia-Ukraine war. Important factors in making efficient energy management decisions include increasing security of supply, optimising the economic utility of technical equipment, and increasing independence from price fluctuations and supply bottlenecks through the use of a decentralised energy supply. Jungheinrich has implemented energy management systems at relevant locations and stipulated that the use of electricity, either in the form of energy from renewables or green energy providers, or through capital expenditure in decentralised energy generation plants, will be consistently promoted. Another aim is to reduce energy consumption, including by implementing targeted savings measures or the use of efficient equipment and technical devices. Internal and external audits will be performed to ensure the continual improvement of energy management.

In the year under review, Jungheinrich's energy consumption amounted to 292,221 MWh[1] and was composed of the items listed in the table below. Measured against Group revenue, Jungheinrich's energy consumption corresponds to an energy intensity of 61.3 MWh/€ million.

Energy consumption[2,3]

	2022	2021	2020
Natural gas in kWh[4]	52,099,655	50,393,583	44,536,444
Heating oil in kWh	1,346,004	1,514,197	1,724,908
Diesel in l	13,366,426	10,094,990	9,765,251
Petrol in l	2,815,367	450,141	226,717
Ethanol in l	75,457	48,365	52,571
LPG in kg	43,934	–	–
Public electricity in kWh	68,503,026	56,333,950	54,151,080
District heating in kWh	12,784,725	11,563,197	9,596,340

EMPLOYEE INITIATIVE

As a Group with a presence around the world and around 20,000 employees in Germany and abroad, and despite the growth recorded in recent years, Jungheinrich has preserved its traditional values of being a family business. Our unique attitude towards leadership, based on the deep trust in our employees, has always characterised Jungheinrich.

Company founder Dr Friedrich Jungheinrich encouraged his employees to try out their suggestions and ideas, and to be active members of the company.

Low staff turnover and long periods of employment

The labour market has faced challenges in the current decade due to demographic changes and the associated shortage of qualified staff. Jungheinrich's aim as an employer is to maintain the existing loyalty and identification with the Group felt by employees, and to recruit potential employees to the company.

The average period of employment of 9.8 years, and low staff turnover is evidence of the high level of stability the Group offers employees[5,6,7,8] (2021: 10.0 years). Global staff turnover stands at 6.6 per cent[5,6,7,10,11] (2021: 5.3 per cent). In absolute terms, this equates to 1,273 departures (2021: 970).

[1] The key figure provided is based on commonly-used conversion factors and does not include any self-generated renewable energy consumption.

[2] The key figures for 2020 and 2021 do not include all fully consolidated companies in line with the 2021 combined separate non-financial report, and therefore comparability with the figures for 2022 is restricted. They apply to the production plants in Norderstedt, Lüneburg, Moosburg, Degernpoint, Landsberg, Dresden and Qingpu (China), the spare parts centre in Kaltenkirchen, the Group headquarters in Hamburg, the IT office in Hamburg and the sales companies in Australia, Austria, Belgium, Brazil, Czechia, France, Germany, Italy, the Netherlands, Poland, Russia, Spain, Switzerland and the UK. Only locations with more than 50 employees are included.

[3] The key figures provided for 2022 cover all fully consolidated companies. The key figures are partially based on commonly-used extrapolation logic. For example, some values have been extrapolated for the full year based on actual figures available over the course of the year. In addition, some key figures have been calculated pro rata using comparable companies or types of companies (share of around 0.2 per cent).

[4] Including natural gas consumption for the production of electricity through the cogeneration unit in Degernpoint.

[5] Outside Germany, excluding MIAS USA, MIAS Holding Asia, JFS United Kingdom, JFS Spain and JFS Italy as these companies have fewer than 10 employees.

[6] Excluding New Zealand and the Chomutov plant, as these only became part of the Group in 2022.

[7] Number of employees, excluding temporary agency workers and trainees.

[8] As of 1 December 2022.

[9] Staff turnover refers to voluntary departures.

[10] Average number of employees excluding temporary agency workers, apprentices and trainees.

[11] As of 31 December 2022.

The increase in employee departures is due to the changes in the labour market previously described. Overall, the number of employees has increased by 704[1,2] in comparison with the previous year (2021: 1,000).

A number of measures help to keep employment stable, such as enrolling employees in personal development programmes and supporting work-life balance to the fullest extent possible. Flexible working-time models, company pensions and training all serve to increase employee loyalty and make Jungheinrich attractive to new recruits. The positive working atmosphere in the Group is a particular attraction. This includes a constructive feedback culture that is firmly established as part of the annual employee appraisal and promotes trust between managers and employees. The high proportion of employees of 97.9 per cent[1,2] (2021: 98.2 per cent) who have permanent employment contracts is evidence of the long-term nature of the Group's planning.

The Jungheinrich International Graduate (JIG) Programme pursues the aim of recruiting young talented individuals around the globe. Six German trainees joined the programme in spring 2022. In November, four more German trainees joined, along with two international trainees – one from Romania and one from Sweden – coming to a total number of twelve new trainees in 2022 (2021: 20).

Employees by region and gender

	FTE 2022[1,2]	FTE 2021[1,2]	**Headcount female 2022[2,3,4,5]**	Headcount female 2021[2,3,4,5]
Germany	8,251	7,995	1,587	1,522
France	1,242	1,204	273	265
Italy	1,113	1,099	287	283
United Kingdom	781	781	131	123
Poland	618	597	145	140
Spain	533	520	127	128
Rest of Europe	4,482	4,327	916	859
China	919	877	219	213
Other countries	1,868	1,703	367	343
Total	**19,807**	**19,103**	**4,052**	**3,876**

Fair working conditions and promoting occupational health and safety

Jungheinrich has adopted a number of measures to achieve its overarching target of preserving and furthering employees' health and satisfaction. The employee health ratio reached 96.5 per cent across the Group in 2022[3,4,5,6] (2021: 95.9 per cent).

Following the outbreak of the coronavirus pandemic, working conditions became much more flexible, with the switch to working from home and hybrid working models. Jungheinrich implemented the following measures in this regard in 2022:

- Amending employment contracts to allow employees in suitable positions to work remotely on a long-term basis for up to 50 per cent of their contracted hours.
- Providing operational equipment for remote working, such as height-adjustable desks and office chairs.
- Equipping meeting rooms with hardware to facilitate hybrid meetings, allowing virtual collaboration.

The Group's current measures designed to encourage employees to take responsibility for a healthy lifestyle include:

- Ergonomically equipped workspaces, including for staff working at home
- Subsidised occupational health check-ups
- Vaccination advice, and checking circulation and mobility
- Company sports programmes, dependent on location
- Regular health awareness days, each on a specific topic, and expert advice on fitness and health issues, all delivered decentrally
- Access to the "Balloon" app, which features a growing library of audio meditations on topics such as stress, sleep, calm and happiness
- Promoting mental health by adding mindfulness to the range of training available
- Continuing our series of "Yes I Care" workshops for managers to raise awareness of employee health issues

Jungheinrich is currently working on expanding the range of health services it offers to employees.

1 Employees in FTE, including temporary employees and apprentices, excluding temporary agency workers and trainees.
2 Reporting date 1 December 2022.
3 Outside Germany, excluding MIAS USA, MIAS Holding Asia, JFS United Kingdom, JFS Spain and JFS Italy as these companies have fewer than 10 employees.
4 Excluding New Zealand and the Chomutov plant as these only became part of the Jungheinrich Group in the course of 2022.
5 Number of employees excluding temporary agency workers and trainees.
6 As of 31 December 2022.

Occupational safety

Protecting employees' health is Jungheinrich's top priority. Employees are — not least from a sustainability point of view — the prerequisite for securing the company's ability to deliver, and form the foundation of the company's success.

Jungheinrich has drawn up central programmes and processes in the field of safety and health management. For example, safety inspections, hazard assessments, training, and occupational health and safety guidelines have been integrated into workflows, and health and safety tools and reporting structures have been harmonised. Occupational health and safety training, which is also available in electronic formats, is performed annually at Jungheinrich by all senior executives. In addition, e-learning offerings support employees in implementing occupational safety targets.

With the aim of continually and holistically optimising working conditions, more in-depth training, particularly with regards to conditions in the workplace, is coordinated at relevant individual locations. This training includes training safety officers, first aiders, and fire safety and evacuation assistants.

A project was launched in 2022 to develop a health and safety training concept that is not location dependent and that is to be implemented globally in the medium-term. This also contributes to anchoring sustainability in the company culture even more firmly.

Jungheinrich is striving to prevent serious accidents in the long term and minimise the average time lost, including by conducting systematic analyses of accidents and their causes. Safety-relevant incidents are also taken into consideration as part of this analysis. Health and safety monitoring pursues a preventive approach, based on (near-miss) accidents and the active reporting of relevant incidents.

The company's zero-accident target, known as Vision Zero, requires the input of all Group employees, including trainees and apprentices, dual-studies students and temporary employees, to continually reinforce the principles of health and safety at work.

The measures listed above contributed to increased occupational safety in 2022.

- The LTIR in 2022 was 13.8[1,2,3,4,5] (2021: 14.8). The aim is to lower LTIR to 12.5 by 2025.
- There were a total of 471 accidents in the workplace throughout the Group in the year under review[1,2,3,4] (2021: 464).
- Each accident in the workplace resulted in an average of 15.2 lost days[1,2,3,4] (2021: 17.3).

Its duties relating to the environment, health & safety (EHS) are among the Jungheinrich Group's top priorities. The planned establishment of standardised responsibilities and tasks, the formation of an EHS steering committee, the digitalisation of EHS processes and the plan to combine the topics of occupational safety, environmental protection and energy in EHS teams by 2025 emphasise this commitment. Another target the company is striving to achieve is to combine the documents and processes that have already been drawn up into occupational safety management systems in accordance with DIN ISO 45001.

Employee personal development through a comprehensive range of training

Jungheinrich supports employee personal development with a comprehensive and, in some cases, cross-functional range of training, for instance:

- The Jungheinrich Academy enables employees to gain needs-based qualifications through both online e-training courses and on-site training courses. Jungheinrich's specific sales and additional training needs are fulfilled worldwide in its own training centres. The comprehensive catalogue of specialist training courses also includes finance, IT and production training courses as well as personal development measures.
- A total of 6,688 employees took part in on-site training courses and attended training courses in virtual classrooms in 2022 (2021: 9,465 participants).
- The range of training on offer is complemented by Jungheinrich CAMPUS, an internal learning management portal that features learning content in modular and digital training formats.
- During annual appraisals, one of the agreements employees reach with their managers is regarding development measures to ensure their employability and promote their personal development.

[1] Employees, including temporary employees, apprentices, temporary agency workers, trainees and working students. Employees excluding employees on parental leave, partial retirement (passive phase) and employees that have been signed off as unfit for work.

[2] Outside Germany, excluding MIAS USA, JFS United Kingdom, JFS Spain and JFS Italy as these companies have fewer than 10 employees.

[3] Excluding New Zealand and the Chomutov plant, as these only became part of the Jungheinrich Group in the course of 2022.

[4] Accidents in the workplace with at least one lost day.

[5] The LTIR is measured in terms of the frequency of accidents at work resulting in at least one lost day per million hours worked. The calculation methodology was refined in 2022 so that, if they are available, the actual hours worked are used as the basis for calculating the LTIR. If they are not available, target working hours per average FTE headcount are used instead.

[6] Number of Jungheinrich Academy training participants, including Corporate HR Development.

Training managers and personnel developers provide employees with advice on their professional development needs so that they can secure long-term learning success with the support of their managers.

Equal opportunity and diversity form the foundation of the company's success

For Jungheinrich, diversity in the workforce is fundamental to the company's success. Diversity allows for different points of view, ideas and solutions to be heard in teams and as part of collaboration between individuals in an open and tolerant atmosphere. It is important to Jungheinrich that all employees receive comparable salaries that are appropriate to their position and in line with the market. Compliance with minimum pay regulations is mandatory.

Within Germany, the Jungheinrich Group employs people from 76 (2021: 71) countries, all with different cultural and religious backgrounds. The Jungheinrich workforce naturally also includes people with disabilities. The average employee age in the Group is 41.5 years[1,2,3,4] (2021: 41.5 years).

The company's international outlook reinforces the importance of anchoring the common values of all Jungheinrich locations internationally. Therefore, we regularly send senior executives from Group headquarters to our companies abroad. Our long-term goal is to fill senior management level posts in our companies outside Germany with local managers, as they are more familiar with the local conditions and the national culture.

In light of the increased drive towards internationalisation, Jungheinrich has set itself the target of expanding the share of non-German managers in the Group workforce as part of Strategy 2025+. In 2022, 86.6 per cent of managers outside Germany were natives of the country they were working in (2021: 86.1 per cent).

The share of female employees at the Jungheinrich Group came to 20.5 per cent worldwide in 2022[1,2,3,4] (2021: 20.5 per cent) and decreased to 19.4 per cent in Germany (2021: 19.5 per cent). Nevertheless, this figure still exceeds the most recent comparison figure for the German mechanical engineering sector of 17.0 per cent[5]. The share of women on the Board of Management remains constant compared to the previous year, at 25 per cent, while the Supervisory Board has a 41.7 per cent share of female members (2021: 33.3 per cent). The share of women in management positions was 15.3 per cent in the year under review (2021: 16.1 per cent). According to the target we have set ourselves in the 2025+ corporate strategy, this should come to 20 per cent.

SOCIAL INITIATIVE

In the 2025+ corporate strategy, Jungheinrich has set itself the target of creating sustainable value. This includes assuming social responsibility as a company. The focus is on promoting initiatives that are in harmony with the company's values and that, in addition to financial support or donations in kind, need intralogistics expertise. Jungheinrich will be concentrating primarily on long-term cooperation and projects concerned with humanitarian emergency relief and education.

- The Group has maintained a partnership with the German medical aid organisation ↗ action medeor e.V. for ten years now. The organisation is committed to sustainably improving the health of people living in the world's poorest regions. In addition to donating money and supplies, Jungheinrich also provides its expertise in intralogistics. With Jungheinrich's support, the organisation has been able to establish multiple drug storage facilities in Tanzania and Malawi, and has expanded its storage facilities at the action medeor headquarters in Tönisvorst, Germany. One project to which Jungheinrich's financial aid contributed in 2022 was a project for the procurement of laboratory equipment for reagents, also in Tanzania. Another existing project that the company supported was a project to promote mother and child health in the Democratic Republic of the Congo.
- In addition, Jungheinrich employees regularly collect donations for action medeor as part of the company's internal "Donate your Pennies" campaign. Since the launch of this campaign, participating employees have donated the change behind the decimal point from their monthly pay and thereby supported projects, chosen every year, to the tune of more than €260 thousand. In the year under review, the money raised through this campaign primarily provided humanitarian aid for those affected by the Russia-Ukraine war. Other sums from the money raised went to reconstruction projects following an earthquake in Haiti and the training of healthcare professionals in the Democratic Republic of the Congo.
- Jungheinrich has also been working with ARCHE – Christliches Kinder- und Jugendwerk (a Christian charity for children and youths based in Hamburg) for a full decade. The charity's objective is to improve the learning opportunities and quality of life of children and youths in the local area. Jungheinrich regularly provides financial donations and donations in kind, and its employees also contribute through voluntary work, such as at the summer festival in June 2022.

[1] Number of employees, excluding temporary agency workers, apprentices and trainees.

[2] Outside Germany, excluding MIAS USA, MIAS Holding Asia, JFS United Kingdom, JFS Spain and JFS Italy as these companies have fewer than 10 employees.

[3] Excluding New Zealand and the Chomutov plant, as these only became part of the Jungheinrich Group in the course of 2022.

[4] As of 1 December 2022.

[5] Source: Federal Employment Agency, German Engineering Association (VDMA); as of 31 December 2021.

In addition to its long-term partnerships, Jungheinrich also provides support in extraordinary, unforeseeable emergency situations. In 2022 the company provided help to people affected by the Russia-Ukraine war in particular.

This included:

- A financial donation to Germany's Relief Coalition ("Aktion Deutschland Hilft") of €100 thousand of immediate aid, as well as donating to local aid organisations in countries bordering Ukraine to support refugees.
- Organising a central donation and solidarity campaign known as "One Yellow Team", consisting of:
  - Providing direct help from employees for colleagues who had fled Ukraine, in the form of help finding accommodation and providing transport, food and basic everyday necessities.
  - An ongoing donation campaign in which Jungheinrich employees donate money to charities of their choice, through which over €150 thousand has been collected so far. Jungheinrich then supports more organisations by doubling the amount donated.
- Participating in local charity events, such as the "Pact for Solidarity and the Future" between Hamburg and Kyiv, or making donations in kind, such as a forklift truck for the German Red Cross in Hamburg.

Besides the donation activities initiated centrally in the Group, local Group units around the world are also involved in a variety of initiatives. Here are few examples:

- Jungheinrich Brazil — tree planting campaign
  In light of the heavy use of IC engine-powered forklift trucks in Brazilian companies, Jungheinrich Brazil plants 20 trees for every electric forklift that replaces an IC engine-powered truck. Jungheinrich customers also have the chance to get involved with this project. 7,740 trees have been planted since the project was launched in 2021.
- Jungheinrich France — employees' voluntary work
  Jungheinrich France has been working with the charity "Les Restos du Cœur" ("Restaurants of the heart") for several years, an initiative for which employees can volunteer their time and for which they are granted one day off a year. Other examples include participation in the national food collection scheme (Collecte Nationale Alimentaire) for disadvantaged people, or campaigns such as "A Christmas present" which funds Christmas presents for children from disadvantaged families.
- Jungheinrich Singapore — truck donation
  The sales company in Singapore donated towards the cost of an EFG 320 electric forklift truck for "Willing Hearts". "Willing Hearts" is a local non-profit organisation that is primarily run by volunteers and focusses on providing meals for underprivileged population groups. The truck will make this organisation's work easier.

GOVERNANCE INITIATIVE

Jungheinrich believes in value-orientated governance. The aim is to make decisions and conduct operations efficiently, responsibly, sustainably and with a view to long-term corporate success. The company's understanding of corporate governance is orientated towards the regulatory frameworks relevant to the company and to best practices, including the German Corporate Governance Code. This represents an important guideline for both inwardly and outwardly orientated corporate governance.

In addition to the company's quest to create value as a family-owned business, the foundations of Jungheinrich's entrepreneurial activity also include the clear and balanced distribution of tasks, rights and responsibilities, open internal and external corporate communications and responsible risk management. Accordingly, suitable and effective internal control and risk management systems, including a compliance management system (CMS), occupy a key role in corporate governance.

Responsible business practices apply to Jungheinrich's entire value chain and especially include the company's procurement processes. This serves to ensure that Jungheinrich's customers, suppliers, employees, shareholders and all other stakeholders perceive and respect us as a reliable partner.

Further details regarding corporate governance at Jungheinrich, such as the remuneration of the Board of Management and Supervisory Board and more information about the nomination and selection of the Supervisory Board and its committees, are published on the company's website ↗ www.jungheinrich.com/en/investor-relations/corporate-governance.

Compliance with clearly defined responsibilities

Compliance ensures adherence to statutory regulations and internal guidelines and rules within a systematic structure. Jungheinrich's CMS, which sets out clear responsibilities for all locations covers all organisational structures and processes, which are themselves continually adapted to take account of new developments.

It requires correct behaviour and integrity from the workforce in everyday business, based on the principle "Prevent. Discover. React". This principle corresponds to the aspects of preventing violations and risks in the company, keeping communication channels open in case of suspected or actual violations, and fair and confidential processing of incidents both before and after the event.

Jungheinrich has acted in accordance with these compliance principles for many years, meaning no significant official investigations resulting in fines have been launched against the company and its executive bodies. Over the 2022 and 2023 financial years, the Corporate Compliance, Audit & Data Protection division will undergo an external quality control audit performed by an external auditor. The aim is to ensure that the processes and structures at Jungheinrich continue to fulfil the growing regulatory requirements. In addition, the Jungheinrich AG Supervisory Board is regularly informed of compliance-relevant issues.

Various tools and measures for handling Group rules and regulations are at the core of the CMS, including:

- A consistent Code of Conduct that is binding for all employees, the Board of Management and the Supervisory Board.
- Clear reporting channels, for instance via Jungheinrich's compliance portal OpenLine.
- Group-wide compliance trainings for all employees, including members of the Board of Management.
- Ongoing audits performed by the Corporate Compliance Audit & Data Protection division.
- Compliance along the value chain, which also extends to external suppliers and sales partners.

1. Consistent Code of Conduct

Jungheinrich makes all obligatory rules, guidelines and standards available centrally to all employees. This includes the Group guidelines, which lay out all compliance-relevant issues, detailing responsibilities, processes, structures and the co-applicable documents and rules. The guidelines also outline the procedure for suspected or actual breaches of legal requirements and internal rules. The guidelines were substantially revised in the year under review, working together with the affected divisions, before being adopted by the Board of Management and communicated to all Group units.

These guidelines include a Code of Conduct, which is applicable throughout the company and requires all employees to observe legal regulations and standards. The Code covers ten different compliance topics:

- Avoiding conflicts of interest
- Dealing with external business partners
- Avoiding bribery and corruption
- Antitrust regulations
- The environment
- Data protection and information security
- Confidentiality and non-disclosure
- Human resources compliance
- Financial compliance
- Capital market compliance

How to handle donations and sponsorship is also relevant when it comes to compliance. Jungheinrich is committed to transparency when it comes allocating funds, as well as to ensuring all funds are correctly authorised and accounted for. In this context it has also been determined that the company will not support any political parties or projects, or any organisations or persons with a political background.

In order to comply with local and international laws, Jungheinrich does not tolerate any arranged or inappropriate structures for tax avoidance within its sphere of responsibility. Finally, the company applies the arm's-length principle, which requires that Group companies act as they would if they were they doing business with third-parties. This means they must comply with local transfer-price regulations. In line with this principle, taxes are paid in the country in which Jungheinrich has generated the earnings.

Complying with privacy rights and protecting company secrets are of fundamental importance to Jungheinrich. We have guidelines in place to ensure that protection standards are maintained and legal regulations, in particular the EU General Data Protection Regulation (GDPR), are observed when handling personal data. In addition, responsibilities have been regulated and a Group Data Protection Officer appointed to ensure our standards are met.

Active participation in standardisation processes and associations is important to Jungheinrich, as standards provide legal security, facilitate exports and ensure fair competition. Sustainable practical standards, developed together with other stakeholders, for example from the fields of occupational safety and sustainability, promote innovation through sustainable product optimisation. Standardisation processes create an important basis for increasing Jungheinrich products' safety and reliability even further.

Taking these aspects into consideration, Jungheinrich actively participates in these processes by sending experts to the standardisation and association process committees. These committees include:

- DIN standardisation committees (German Institute for Standardisation), European standardisation bodies (CEN/CENELEC), and bodies of the globally active International Organization of Standardization (ISO).
- Verein Deutscher Ingenieure (VDI – Association of German Engineers), which creates guidelines for the use of material handling equipment and intralogistics systems.
- Verband Deutscher Maschinen- und Anlagenbau (VDMA – Mechanical Engineering Industry Association) and European Materials Handling Federation (FEM) committees, which is involved with the creation of practice-oriented European guidelines and regulations.

Jungheinrich also observes competition law regulations when participating in standardisation processes and associations.

2. Clear reporting channels for violations

Reports relating to compliance issues or suspected violations are made using a firmly defined, clearly communicated and globally applicable procedure. The Jungheinrich OpenLine portal, created in the CMS in 2017, has been added to the existing established reporting channels of reporting to a direct supervisor, the local compliance officer and the central compliance team. Unresolved questions and violations can be discussed or reported personally or anonymously via the portal. The portal has also been available on the Jungheinrich website for external notifications since 2019 ↗ www.whistleblow.org/JungheinrichAG/. Other languages are being added to the existing reporting channels within the company in order to meet upcoming legal requirements.

In light of public awareness and rising legal requirements for whistleblowing, as well as our corporate due diligence obligations within our supply chains, Jungheinrich began evaluating existing notification options for tip-offs and complaints and examining development possibilities in 2021. One result of this examination is the expansion of the available languages on Jungheinrich OpenLine in the current financial year. This is in order to reflect the variety of languages spoken within the Group, but also for the benefit of the international group of employees, customers and suppliers. This will improve and develop access to reporting compliance violations for employees and third parties, and eliminate language barriers.

3. Group-wide compliance training

To encourage proper and appropriate conduct amongst our employees, Corporate Compliance, Audit & Data Protection holds training courses for employees on site. In the 2022 financial year, there were 24 compliance briefings (2021: 25). In addition to on-site events, Jungheinrich has also made various compliance e-learning modules available through the Jungheinrich learning platform "CAMPUS". The course content includes competition law, data protection, anti-corruption, information security and the Jungheinrich Code of Conduct. The aim is to continuously expand the training approach and ensure training success.

Basic compliance trainings were rolled out as mandatory training courses in 2021 and 2022 to all employees who have access to Jungheinrich CAMPUS. As an alternative option, needs-based training documents were made available for on-site training. These measures will ensure that the full workforce is aware of the Group's compliance principles. In this way, the Group provides information regarding particularly relevant issues such as anti-corruption, data protection and antitrust, for instance. Finally, more in-depth informational events on topics relevant to specific locations are held at individual production plants and sales locations. Business partners, who are obliged to adhere to the compliance regulations, have also had access to the relevant training through Jungheinrich CAMPUS since 2019.

4. Ongoing audits

To ensure that the processes during and after the reporting of suspected violations of legal or internal requirements are handled in a fair and confidential manner, they are first appraised by the Chief Compliance Officer and the Head of the Corporate Compliance, Audit & Data Protection division. Further steps are taken if necessary, such as receipt audits, interviews and disciplinary measures. Over the course of the reporting year, there were no reports of any incidents which, following an internal investigation, would have to have been classified as significant cases of corruption (2021: 0).

In order to prevent corruption, all Jungheinrich locations are audited by Corporate Compliance, Audit & Data Protection for risk indicators on a revolving basis. A standard part of the process is checking documents and financial transactions, as well as the corresponding internal controls. The way donations and sponsorship are handled within the Group is also regularly examined.

In 2022, the pandemic-related restrictions of the previous years were lifted. This means the standard audit plan has been back in place since the middle of the year, with some of the audits being performed digitally or in hybrid form. In the 2022 reporting year, 20 audits were conducted (2021: 5).

The appropriate documentation and traceability of the audits performed is an important part of the processes in terms of compliance reporting and fulfils the regulatory requirements.

5. Compliance along the value chain

Jungheinrich also expects the same high compliance and data protection standards from its external suppliers and sales partners. The Group expects them to behave ethically and apply the same high standards as Jungheinrich does. This includes guaranteeing the basic principles of free and fair competition, ensuring data is protected, and preventing corruption. Suppliers' compliance and standards in terms of the environment and labour rights and working conditions are laid out in the Supplier Code of Conduct. In 2022, Jungheinrich moved on a process of adapting the supplier framework agreement and having its compliance with applicable laws and regulations confirmed [page 35 f.].

Respecting human rights

Jungheinrich is firmly committed to respecting human rights. Human rights due diligence obligations are established both within the business processes at Jungheinrich's own locations and within the supply chains. In determining the nature of its obligations the company follows international guidelines and standards such as the UN Human Rights Charter, the United Nations Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Business and the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work. In accordance with these guidelines, Jungheinrich obliges its employees, customers and business partners worldwide to act in a responsible, ethical and legal manner.

In practice, this means, for instance:

- The prohibition of child labour
- The prohibition of forced labour and slavery
- Ensuring occupational safety
- The freedom to form coalitions in trade unions and employers' associations
- The prohibition of unequal treatment in employment relationships
- Fair working conditions and working hours and the payment of appropriate wages
- Preventing environmental risks and prohibiting any activity that affects human populations through environmental changes
- Making demands on private and state security forces
- The prohibition of forced evictions and expropriation of natural resources
- Respecting the right to data protection and privacy

In 2021, the Group published the Jungheinrich Code of Human Rights and Occupational Health and Safety. In conjunction with this, the Group also began implementing the requirements of the LkSG and adapting existing processes in the past financial year. These activities related to the following measures:

- Appointing a Human Rights Officer and internal human rights experts, along with establishing a Human Rights Council
- Performing risk analyses in the Group's own business and for supply chains
- Drafting preventive and remedial measures in case of (potential) human rights violations
- Setting up an established, ready-to-use complaints procedure for (potential) human rights violations and environmental risks
- Establishing internal guidelines to lay out responsibilities and tasks for all aspects relating to human rights

In the coming financial years, Jungheinrich will implement further measures relating to its human rights due diligence obligations, including:

- Annual publication of a Jungheinrich Human Rights Declaration, which will outline the priority of risks and the approach to managing them
- Expanding and embedding the management approach
- Checking the efficacy of the measures and procedures introduced
- Creating a global organisational structure in the Group to implement the measures
- Training Group employees, customers and business partners to raise awareness regarding human rights and how to handle human rights issues in business practices

Jungheinrich sees fulfilling its human rights due diligence obligations as an ongoing process. Regulatory developments, such as the LkSG and the planned EU Directive on human rights due diligence obligations will therefore be translated into appropriate internal measures.

Establishing sustainable procurement

Sustainable procurement is an integral part of the sustainability strategy. Including suppliers within the framework of a holistic and proactive supplier management process is of vital importance, and also constitutes an important contribution to ensuring stability of supply. This was shown clearly in the past financial year, as production interruptions were largely avoided at Jungheinrich, despite the coronavirus pandemic, gas shortages and supply chain bottlenecks for electronic components resulting from China's zero-COVID strategy.

Carefully selecting suppliers that share Jungheinrich's attitude to sustainability, and that support the company in establishing sustainable products and its positioning as a sustainable business, is a basic prerequisite of our supplier management. Before a company becomes a Jungheinrich supplier, it has to meet approval criteria that are consistent throughout the entire Group. The most important pillars here are the internally developed Supplier Code of Conduct, the supplier manual, and the sustainability self-assessment described below. The supplier manual was adapted in 2022 to reflect new requirements, and clarified for the suppliers in practical terms.

The task of establishing sustainable procurement in internal processes, organisation and with suppliers was continued in 2022. New requirements arising from the LkSG were integrated into Jungheinrich processes, for instance. Jungheinrich also expanded the existing sustainable procurement management system in 2022 and created the necessary organisational conditions for it.

As a rule, both existing and new suppliers are risk-classified with regard to environmental, economic and social criteria. Depending on the supplier risk category, measures are drawn up ranging from acceptance of the Supplier Code of Conduct referred to above to the performance of sustainability self-assessments and internal or external audits. The Group supply chain risk analysis, created in 2019, was revised in 2022 and important risk factors were added, particularly those focused on strengthening the attention paid to human rights. By using a differentiated classification drawn from the supply chain risk analysis, Jungheinrich is able to concentrate on the key suppliers. This means that they are relevant for the Group's sustainability due to the size of their revenue and/or the potential risks associated with them. This analysis provides the basis for the Sustainable spend key figure mentioned below. The supply chain risk analysis concept was also introduced at the subsidiaries MIAS Group and Profishop in 2022.

In order to increase key-supplier transparency, they undergo a sustainability self-assessment, which is carried out with the support of the Integrity Next platform ↗ www.integritynext.com. Currently, more than 700 of the approximately 1,500 key suppliers are participating in the sustainability self-assessment.[1] The number of participating suppliers currently equates to more than 75 per cent of global purchasing volume.

The sustainability self-assessment comprises the following topics:

- Anti-corruption and anti-bribery
- Occupational safety
- Energy management
- Conflicts of interest
- Human and labour rights
- Environmental protection
- Responsibility in the supply chains

The results are analysed and evaluated by internal experts. Based on this analysis, further measures may be agreed upon with the suppliers and the departments responsible.

[1] Due to changes in business relationships, these figures are only a snapshot at a given point in time; they may fluctuate over time.

Jungheinrich introduced the Sustainable spend key figure for the first time in 2021. The basis for calculating this figure is the evaluations from the sustainability self-assessment, conducted using Integrity Next. A supplier is deemed to be sustainable if it is classified as in conformity according to the Integrity Next rating system. The aim is to have at least 80 per cent of relevant purchasing volume qualifying as Sustainable spend by 2025. In 2022, this figure stood at approximately 70 per cent.

In the near future, the primary focus of sustainable procurement will be on the following measures:

- Training courses and raising awareness of sustainability issues for purchasers, along with supplier training
- Analysing risks with regard to direct suppliers and the development of suitable risk minimisation strategies
- Expanding the analyses and evaluation of the Integrity Next assessments, along with increased use of goods-group-specific evaluations and physical audits
- Focussing on the contribution made in supply chains to reducing CO_2e across the Group

SUSTAINABLE BUSINESS MODELS, PRODUCTS AND SERVICES INITIATIVE

Jungheinrich sees sustainability as both an obligation and an opportunity. Our sustainable orientation releases potential to increase the company's innovativeness, expand the portfolio of solutions and create competitive advantages, for example. Sustainable business models, products and services are an important driver for Jungheinrich, as they support customers in achieving their climate and other sustainability targets and contribute to customer retention. Product quality and safety also play an important role when it comes to customer satisfaction. Jungheinrich develops integrated intralogistics solutions based on close cooperation with customers. These solutions optimise economic factors, as well as promoting climate-friendly principles, the circular economy and social issues in warehouse operations. These system-based solutions increasingly supplement the range of stand-alone product solutions.

Sustainability as a growth driver

With sustainability as a growth driver, Jungheinrich is working on the systematic transformation and expansion of its range of products and services. Its 70 years of expertise in electric mobility and more than ten years of experience in lithium-ion technology help the company in this endeavour. The share of electric trucks produced in 2022 was almost 100 per cent. The expansion of the remaining portfolio of CO_2e-neutral products, solutions and services will continue.

Jungheinrich already offers a variety of products and services that support customers in implementing sustainability targets in their businesses.

- Jungheinrich has introduced a series of lithium-ion trucks that is CO_2e-neutral upon arrival with the customer (POWERLiNE). These trucks are produced using electricity from renewable energy sources and consume around 20 per cent less energy during daily use than forklift trucks with lead-acid batteries.
- Jungheinrich has begun establishing a CO_2e-neutral after-sales service, which was launched in 2022 and initially covered Norway, the United Kingdom and the Netherlands. Expansion to other countries is scheduled to take place in 2023.
- Jungheinrich reconditions used trucks in two proprietary refurbishment plants. The recyclability of the trucks is 99 per cent (93 per cent reuse plus 6 per cent recycling).
- Jungheinrich can offer its customers advice regarding energy efficiency and optimum warehouse design (material flow consultancy).
- Jungheinrich sells digitalisation and automation solutions to increase efficiency.
- Jungheinrich has expanded its range of solutions and assistance systems to promote customer safety as part of its 360-Degree Protection Programme.
- Jungheinrich produces its own lithium-ion batteries.

Jungheinrich is also transferring its expertise in intralogistics to other sectors and markets:

- Under the name Jungheinrich Powertrain Solutions, the company offers customised consulting and drive train components for the agricultural and construction machinery sectors from a single source, from the engine to the control units and including lithium-ion batteries and battery chargers.
- For the sustainable agriculture sector, Jungheinrich has developed food supply solutions for the future under the name Vertical Farming Solutions. Together with a partner, Jungheinrich has developed a fully automated solution for fruit and vegetable farming in vertical greenhouses. The vertical farm set-up requires significantly less water than traditional farming. Moreover, farming in the vertical greenhouses requires virtually no pesticides.

Product quality and customer safety

The Group applies a quality management system based on the ISO 9001 standard in the majority of its domestic and international plants in order to attain the best possible results in product quality and customer satisfaction while focussing on the sustainable use of products and solutions. A centralised quality organisation in the Group standardises processes using a holistic approach, and defines the consistent quality levels expected of suppliers. This ensures that all production materials purchased are of a high standard.

The dense Jungheinrich service network ensures customer safety, with direct on-site support for customers enabling rapid reactions if a product is affected by disruption. The essential share of all service reports of the after-sales service technicians is evaluated with the support of our system. This allows us to identify optimisation measures to improve safety and reduce downtimes for our products. In the event of accidents involving Jungheinrich products, appropriate processes are initiated and after-sales service staff get in touch with the customers affected as soon as possible.

EU TAXONOMY REGULATION

In order to achieve the EU target of carbon neutrality by 2050, the EU Commission created an action plan to redirect capital flows to a more sustainable economy. One material component of this action plan is the EU Taxonomy Regulation, which provides a classification system for environmentally sustainable economic activities. In accordance with this year’s requirements (see Article 8 of the EU Taxonomy Regulation and Article 8 and Article 10 (4) of the Delegated Act on reporting obligations under Article 8), the following section contains the required disclosures for the first two environmental targets (“climate change mitigation” and “climate change adaptation”) of the Climate Delegated Act. Here, amongst other figures, Jungheinrich presents the taxonomy-aligned, taxonomy-eligible but not taxonomy-aligned, and non-taxonomy-eligible shares of Group turnover (turnover), as well as capital expenditure (CapEx) and operating expenses (OpEx) for the 2022 financial year. The disclosures on the key figures are aggregated, meaning that no distinction is made with regard to the relevant economic activities.

Taxonomy-eligible economic activities at Jungheinrich

Economic activities that are described in the Climate Delegated Act are taxonomy-eligible. Jungheinrich has examined and assigned the relevant taxonomy-eligible economic activities based on its a group that is active in the mechanical engineering sector. During this examination, it was determined that Jungheinrich could potentially make a substantial contribution in the field of climate change mitigation. Corresponding impacts on the “climate change adaptation” target could not be determined. Jungheinrich has consequently assigned all taxonomy-eligible economic activities to the “climate change mitigation” environmental target.

Jungheinrich's taxonomy-eligible economic activities are assigned in the following table pursuant to Annex I of the Climate Delegated Act.

Taxonomy-eligible economic activities "climate change mitigation" environmental target

Number/Name	Description
3.4.: Manufacture of batteries	▪ Manufacture of lithium-ion batteries and chargers
3.6.: Manufacture of other low carbon[1] technologies	▪ Development, manufacture and sale of new and used battery-powered material handling equipment ▪ Leasing of new and used battery-powered material handling equipment ▪ Development, manufacture and sale of components to electrify mobile industrial machinery (Jungheinrich Powertrain Solutions)
6.5.: Transport using motorbikes, passenger cars and light commercial vehicles	▪ Leasing and operating passenger cars and light commercial vehicles
7.1.: Construction of new buildings	▪ New construction of non-residential buildings
7.2.: Renovation of existing buildings	▪ Major facade and roof renovation
7.3.: Installation, maintenance and repair of energy efficiency equipment	▪ Insulation and renovation of outer components ▪ Replacement and maintenance of energy-efficient windows ▪ Installation of LED lighting ▪ Installation and maintenance of heating, ventilation and air conditioning (HVAC) systems
7.4.: Installation, maintenance and repair of charging stations for electric vehicles in buildings (and on parking spaces belonging to buildings)	▪ Installation and maintenance of e-charging stations
7.5.: Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	▪ Installation and maintenance of building management technology and sensor technology ▪ Installation of sensor technology
7.6.: Installation, maintenance and repair of renewable energy technologies	▪ Installation of photovoltaic equipment
7.7.: Acquisition and ownership of buildings	▪ Rental of buildings
8.1.: Data processing, hosting and related activities	▪ Data processing via a data centre[2]

[1] In contrast to the combined separate non-financial report in accordance with the CSR Directive Implementation Act, the chapter on the EU Taxonomy Regulation uses the term "carbon" (CO_2) as carbon equivalents (CO_2e) are not considered in the EU Taxonomy Regulation.

[2] The description of the economic activity 8.1 in Annex 1 of the Climate Delegated Act contains no clear definition of the term "data centre". In line with its assessment of relevance, Jungheinrich defines a data centre as an IT room from which more than a third of users in the Jungheinrich Group are provided with IT services.

Assessment of the taxonomy eligibility of economic activities

Economic activity 3.6.: Manufacture of other low carbon technologies

The description of the economic activity 3.6 in Annex 1 of the Climate Delegated Act contains no clear definition of the term "low carbon technologies" and is therefore open to interpretation. In line with the EU Taxonomy Regulation and the Communication in the Official Journal of the European Union (C 385/1) dated 6 October 2022, the economic activity must aim to significantly reduce greenhouse gas emissions in other economic sectors. In addition, Jungheinrich has turned to NACE Code C.28, which takes mechanical engineering into account, to define this term. The definition of the economic activity thus relates to mechanical engineering technology that aims to significantly reduce direct greenhouse gas emissions (Scope 1 emissions) in other economic sectors.

The electric material handling equipment manufactured by Jungheinrich enables a reduction in direct greenhouse gas emissions during its use phase in other sectors, such as logistics, retail or wholesale. This electric material handling equipment also encompasses mobile robots. Mobile robots are battery-powered automated guided vehicles (AGV) and autonomous mobile robots (AMR).

With Jungheinrich Powertrain Solutions, the company delivers electric drive technology, which electric vehicle manufacturers use in the production of electric vehicles. The complete electrification package contains four interconnected components: control units, batteries, battery chargers and motors. The aim is to turn mobile industrial machines into emission-free vehicles. According to Communication C 385/1, components can also fall under economic activity 3.6.

We again refer to NACE Code C.27, which includes the manufacture of electric engines and batteries. Since the Jungheinrich Powertrain Solutions enable a significant reduction in greenhouse gas emissions in another economic sector, they are taxonomy-eligible within the meaning of economic activity 3.6.

Assessment of the taxonomy alignment of economic activities

Following the identification of taxonomy-eligible economic activities, it was examined whether they were taxonomy-aligned pursuant to Article 3 of the EU Taxonomy Regulation. Taxonomy-aligned economic activities fulfil the following requirements:

1) Compliance with the technical screening criteria for a substantial contribution to the "climate change mitigation" environmental target,
2) Compliance with the technical screening criteria for preventing significant harm to one or more of the environmental targets (also known as "Do No Significant Harm" (DNSH) criteria),
3) Compliance with minimum safeguards.

In the event that one of these criteria is not fulfilled, the other criteria are not checked, as all criteria mentioned in Article 3 for taxonomy alignment must be fulfilled for an economic activity to be regarded as environmentally sustainable according to the EU Taxonomy Regulation.

In order to take cost-benefit aspects into consideration in line with the publication from the Institute of Public Auditors in Germany (IDW) from 7 November 2022, Jungheinrich has defined a fundamental threshold for checking taxonomy alignment. This threshold was set at 0.5 per cent, based on data regarding taxonomy-eligible turnover, CapEx and OpEx. Accordingly, the taxonomy-eligible turnover, CapEx and OpEx of an economic activity must equate to at least 0.5 per cent of the respective denominator before it will be checked for taxonomy alignment. This threshold value also ensures that, cumulatively speaking, no material items remain unconsidered following an internal check.

Compliance with minimum safeguards

Jungheinrich must ensure that minimum safeguards are adhered to in order to achieve taxonomy alignment. The Platform on Sustainable Finance's (PSF) Final Report on Minimum Safeguards outlines the following topics to take into consideration with regard to compliance with minimum safeguards: human rights (including labour and consumer rights), (anti-) corruption and bribery taxation and fair competition. The Final Report on Minimum Safeguards also contains advice for companies on how to comply with minimum safeguards.

The PSF's recommendations on complying with minimum safeguards relate to the introduction of appropriate procedures for each topic to comply with minimum safeguards, and to court-established liability. Due to the lack of official guidelines from the European Commission, Jungheinrich has followed the PSF's recommendations for the practical implementation of the minimum safeguards.

As part of the analysis regarding compliance with minimum safeguards, the criteria for each topic were analysed, working together with the relevant points of contact from the Corporate Sustainability, Health & Safety, Corporate Compliance, Audit & Data Protection, Corporate Tax, Corporate Legal Affairs & Insurances and Corporate Controlling divisions.

When introducing appropriate procedures for complying with human rights in its own business divisions and within supply chains, Jungheinrich takes into consideration the OECD Guidelines for Multinational Business, among other guidelines. The company performs risk analyses to identify negative impacts on its human rights due diligence obligations. The company has also introduced preventative measures and designed remedial measures in the event of (potential) human rights violations, and established a complaints procedure. Other measures will be implemented as part of the Act on Corporate Due Diligence in Supply Chains in 2023 [page 34 f.].

Compliance is important to the company and its committees. Jungheinrich has a compliance management system in place to ensure compliance with statutory regulations, as well as internal guidelines and rules. It focusses on the prevention and discovery of corruption and compliance with applicable competition and tax laws and regulations. Appropriate systems and processes have been established within the company to comply with tax laws and regulations, among other things. Corruption, antitrust, tax and other risks are integrated into the Group risk management system [page 74 ff.].

In order to prevent corruption, the Corporate Compliance, Audit & Data Protection division audits all Jungheinrich locations on a revolving basis. Suspected cases can be reported via the Jungheinrich OpenLine portal; reports are then investigated using a predefined process. Jungheinrich trains employees and managers according to target groups using various training formats, including on the compliance-related topics of anti-corruption, antitrust and tax law.

Further information on compliance at Jungheinrich can be found in the chapter “Governance initiative” [page 31 ff.].

The analysis shows that Jungheinrich has implemented appropriate measures for complying with minimum safeguards on human rights, corruption, taxation and fair competition, and that there have been no serious violations that suggest deficient procedures. Jungheinrich therefore complies with the minimum safeguards requirements pursuant to Article 18 of the EU Taxonomy Regulation.

Compliance with technical screening criteria

Compliance with the technical screening criteria for a substantial contribution to the “climate change mitigation” environmental target and preventing significant harm to one or more of the other environmental targets is determined based on the Delegated Acts that supplement the EU Taxonomy Regulation (i.e. the current Climate Delegated Act).

Taxonomy-eligible turnover associated with lithium-ion batteries (economic activity 3.4.) does not meet the threshold of 0.5 per cent of the consolidated net turnover. Accordingly, this turnover is not checked for taxonomy alignment, due to cost-benefit aspects. The economic activities 7.2., 7.3., 7.4., 7.5. and 7.6. are not checked for taxonomy alignment due to cost-benefit aspects. The associated taxonomy-eligible CapEx and OpEx do not reach the denominator threshold of 0.5 per cent.

Economic activity 3.6.: Manufacture of other low carbon technologies

Low carbon technologies must be proven to significantly reduce the life cycle greenhouse gas emissions in other economic sectors in comparison with alternative technologies available on the market in order to be considered as making a substantial contribution to climate change mitigation.

The reduction is considered substantial by Jungheinrich if greenhouse gas emissions are reduced by at least 5 per cent. According to the product life cycle assessments performed in the 2022 financial year [page 24], Jungheinrich has the greatest impact on reducing the life cycle greenhouse gas emissions in other economic sectors during the use phase of battery-powered material handling equipment.

In this context, a battery system featuring a lithium-ion battery was compared to lead-acid battery in a product life cycle assessment.[1] This showed that the lithium-ion battery produced around 15 per cent fewer carbon emissions in the use phase. On this basis, the lithium-ion battery is considered a low-carbon alternative to the lead-acid battery, which represents the highest-performance alternative technology available on the market. With this in mind, all battery-powered material handling equipment fitted with a lithium-ion battery aims to substantially reduce life cycle greenhouse gas emissions.

According to the EU Taxonomy Regulation, the reduction in life cycle greenhouse gas emissions must be calculated and verified using specific standards such as ISO 14067. The product life cycle assessments described were performed based on ISO 14044 and ISO 14040 and verified externally. Accordingly, they currently do not fulfil the technical screening criteria for compliance with the EU Taxonomy Regulation. Further criteria were not checked, as all criteria must be fulfilled for taxonomy alignment to be determined.

The taxonomy-eligible battery-powered material handling equipment pursuant to economic activity 3.6. are therefore not taxonomy-aligned in the 2022 financial year.

Economic activity 6.5.: Transport by motorbikes, passenger cars and light commercial vehicles

Jungheinrich leased and operated both passenger cars and light commercial vehicles in the classes M1 and N1 in the 2022 financial year. These are used as company or after-sales service vehicles.

In accordance with Annex I of the Climate Delegated Act the vehicles must comply with certain carbon emissions threshold values in order to make a substantial contribution to climate change mitigation. The first assessment step determined that some taxonomy-eligible vehicles do fulfil these criteria and therefore make a substantial contribution to climate change mitigation.

Whether the vehicles prevented significant harm to one or more environmental targets could not be verified. In analysing some of the criteria, Jungheinrich is dependent on disclosures from lessors, retailers or manufacturers, and they have not provided comprehensive evidence regarding the fulfilment of the criteria. As a result, economic activity 6.5 is not taxonomy-aligned in the 2022 financial year.

[1] The functional unit for this assessment was based on the average lifespan of the lithium-ion battery used in the ETV 216i truck (15,000 operating hours). Based on this functional unit, the comparable battery systems are defined as follows: a functional battery system with a lithium-ion battery and a functional battery system with 2.3 lead-acid batteries.

Economic activity 7.1.: Construction of new buildings
New construction projects do not fulfil the required overall building energy performance requirements. Economic activity 7.1 is therefore not taxonomy-aligned in the 2022 financial year.

Economic activity 7.7.: Acquisition and ownership of buildings
The rented premises concerned do not meet the required standard for overall building energy efficiency. This means that economic activity 7.7. is not taxonomy-aligned in the 2022 financial year.

Economic activity 8.1.: Data processing, hosting and related activities
Jungheinrich rents data centre premises to process data. Jungheinrich currently has no evidence that the lessor implements the procedures required by Annex I of the Climate Delegated Act. Accordingly, the technical assessment criteria cannot be considered fulfilled, and economic activity 8.1 is not taxonomy-aligned in the 2022 financial year.

Assigning turnover, CapEx and OpEx to one environmental target

Jungheinrich's taxonomy-eligible and taxonomy-aligned economic activities are assigned entirely to the environmental target "climate change mitigation", which prevents any double counting. Furthermore, double counting of taxonomy-eligible and taxonomy-aligned turnover, CapEx and OpEx is prevented beyond the defined economic activities by applying appropriate demarcation logic when the data is recorded at the level of the companies.

KPIs AND PRINCIPLES OF PRESENTATION

Our key performance indicators (KPIs) include turnover, CapEx and OpEx. The share of turnover for the 2022 financial year that is generated with products or services connected with the economic activities classified as environmentally sustainable (taxonomy-aligned) must be reported. The share of capital expenditure (and, where applicable, the share of operating expenses) connected with the assets or processes associated with the environmentally sustainable economic activities must also be reported.

In comparison with the previous reporting period, the calculation has changed in that the KPI relating to the taxonomy-aligned economic activities (numerator) is reported for the 2022 financial year.

Data collection and validation process

In order to report on the taxonomy-aligned economic activities in the 2022 financial year, Jungheinrich has:

- Established a project team, including experts from Corporate Controlling and Corporate Sustainability and Health & Safety, to implement the requirements of the EU Taxonomy Regulation throughout the Group, support the companies to the full extent possible, and consolidate and verify the reported data.
- Examined the Group's economic activities and identified eligible activities.
- Performed centralised and decentralised detailed analyses of turnover, CapEx and OpEx in relation to the taxonomy-eligible economic activities, and checked the taxonomy alignment of these economic activities.
- Performed a "dry run" for the first half of 2022 to test the Group-wide implementation of the EU Taxonomy Regulation requirements and to make the process for the 2022 financial year as efficient as possible.

In short, this means that all material turnover, CapEx and OpEx that were identified as being taxonomy-eligible or taxonomy-aligned were reported.

Allocation keys were used in some cases during the collection of the capital expenditure and operating expenses figures for economic activity 3.6, if a plant produced both battery-powered and IC engine-powered trucks (applies to the Moosburg plant). In this case, the number of battery-powered units produced was used to determine the share of taxonomy-eligible CapEx and OpEx.

Turnover KPI

For the purposes of the turnover KPI, the relevant financial year is considered. The turnover KPI is derived from the numerator and denominator ratios as defined below:

- The denominator of the turnover KPI is based on consolidated net turnover pursuant to IAS 1.82(a). Additional details regarding the presentation of the consolidated net turnover can be found on [page 93, 100 f., and 114 ff.].
- Turnover KPI numerators are split into taxonomy-aligned turnover, on the one hand, and taxonomy-eligible but not taxonomy-aligned turnover, on the other hand.
  - Taxonomy-eligible or -aligned turnover is defined as the net turnover generated with the products and services associated with the taxonomy-eligible or -aligned economic activities.

CapEx KPI

The CapEx KPI is defined as the eligible capital expenditure (numerator) according to the EU Taxonomy Regulation divided by the total capital expenditure (denominator) described below:

- The denominator consists of additions to intangible assets and property, plant and equipment during the financial year before depreciation, amortisation and any remeasurements. This also includes those resulting from revaluations and impairments for the relevant financial year and excluding fair value changes. The acquisition of property, plant and equipment (IAS 16), intangible assets (IAS 38), right-of-use assets (IFRS 16) and investment property (IAS 40) are also included. Additions from business combinations also constitute part of total capital expenditure. Goodwill is not included in capital expenditure as it is not considered an intangible asset according to IAS 38. The denominator represents the sum of the additions to intangible assets [page 120 ff.] and property, plant and equipment [page 123 ff.] as presented in the notes to the consolidated financial statements.
- The CapEx KPI numerator is split into taxonomy-aligned CapEx, on the one hand, and taxonomy-eligible but not taxonomy-aligned CapEx, on the other hand.
  – Taxonomy-eligible and -aligned CapEx consists of the following categories:
    a) Capital expenditure in connection with assets or processes associated with the taxonomy-eligible or -aligned economic activities (category A in accordance with Annex I, Section 1.1.2.2. of the Delegated Act to the Reporting Obligations pursuant to Article 8 of the Regulation 2020/852): Jungheinrich assumes that economic goods and processes are associated with taxonomy-eligible or -aligned economic activities if they are necessary for performing the economic activity as a material component.
    b) Capital expenditure that is part of investment planning to realign taxonomy-eligible economic activities to be classified as taxonomy-aligned or to expand a taxonomy-aligned economic activity (category B). Capital expenditure plans within the meaning of the EU Taxonomy Regulation were not created and so no capital expenditure was recorded in terms of this section.
    c) Capital expenditure related to the acquisition of finished goods from taxonomy-eligible or -aligned economic activities and individual measures that enable certain target activities (usually economic activities that are non-taxonomy-aligned) to become low carbon or lead to a reduction in greenhouse gas emissions (category C). These are also considered as taxonomy-eligible or -aligned capital expenditure according to the EU Taxonomy Regulation if the finished goods purchased or the individual measure match the technical screening criteria of the particular economic activity. In order to avoid double listings in the CapEx KPI, Jungheinrich only counts the capital expenditure in connection with taxonomy-eligible or -aligned finished goods and individual measures once. They are already listed under category A (for example, capital expenditure in connection with assets or processes associated with taxonomy-aligned economic activities, especially production buildings).

OpEx KPI

The OpEx KPI is defined as eligible operating expenses according to the EU Taxonomy Regulation (numerator) divided by the operating expenses described below (denominator):

- The denominator consists of direct, non-capitalised costs related to research and development, building renovation measures, short-term rental agreements, maintenance and repairs, and other direct expenses for the ongoing maintenance of property, plant and equipment. This includes:
  – Non-capitalised expenses for research and development presented as they are in the notes to the consolidated financial statements pursuant to IAS 38.126 [page 121].
  – Maintenance and repair expenses for property, plant and equipment.
  – Expenses for short-term and low-value leases determined in accordance with IFRS 16 as presented in the notes to the consolidated financial statements [page 124]. Even if low-value leases are not specifically mentioned in Article 8 of the Climate Delegated Act, Jungheinrich has interpreted the legislation as including these leases.

- The KPI operating expenses' numerators are split into taxonomy-aligned OpEx, on the one hand, and taxonomy-eligible but not taxonomy-aligned OpEx, on the other hand.
  - Taxonomy-eligible and -aligned OpEx consist of the following categories:
    a) Operating expenses in connection with assets or processes associated with the taxonomy-eligible or -aligned economic activities (category A in accordance with Annex I, Section 1.1.3.2. of the Delegated Act to the Reporting Obligations pursuant to Article 8 of the Regulation 2020/852): Jungheinrich assumes that economic goods and processes are associated with taxonomy-eligible or -aligned economic activities if they are necessary for performing the economic activity as a material component.
    b) Operating expenses that are part of investment planning to realign taxonomy-eligible economic activities to be classified as taxonomy-aligned or to expand a taxonomy-aligned economic activity (category B). Capital expenditure plans within the meaning of the EU Taxonomy Regulation were not created and so no operating expenses were recorded in terms of this section.
    c) Operating expenses related to the acquisition of finished goods from taxonomy-eligible or -aligned economic activities and individual measures that enable certain target activities (usually economic activities that are non-taxonomy-aligned) to become low carbon or lead to a reduction in greenhouse gas emissions (category C). These are also considered as taxonomy-eligible or -aligned operating expenses according to the EU Taxonomy Regulation if the finished goods purchased or the individual measure match the technical screening criteria of the particular economic activity. In order to avoid double listings in the OpEx KPI, Jungheinrich only counts the operating expenses in connection with taxonomy-eligible or -aligned finished goods and individual measures once. They are already listed under category A (for example, operating expenses in connection with assets or processes associated with taxonomy-aligned economic activities, especially production buildings).

ECONOMIC ACTIVITIES AND KPIs AT JUNGHEINRICH

The share of taxonomy-eligible revenue amounts to 47 per cent (2021: 55 per cent). Due to Jungheinrich's business model, economic activity 3.6. is material within the EU Taxonomy Regulation.

The draft version of Communication C 385/1, published by the EU Commission on 2 February 2022, had to be implemented at short notice for the 2021 financial year, which led to deviations in the interpretations of individual legal requirements. As these requirements were published during the period in which the previous year's report was being prepared, they could not fully be taken into account for the complex and quality-assured collection of the necessary disclosures in relation to CapEx and OpEx. Taking these changes into account in the data collection for the 2022 financial year has led to some marked changes in the taxonomy-eligible CapEx and OpEx.

The share of taxonomy-eligible CapEx amounts to 13 per cent (2021: 2 per cent). The share of taxonomy-eligible OpEx amounts to 49 per cent (2021: 4 per cent). The deviation in comparison with the previous year is the result of the publication described previously. This publication makes clear that products are assigned to economic activity 3.6. if they fulfil the description of this activity. This allows the development, manufacture, sale and rental of new and used battery-powered material handling equipment and Jungheinrich Powertrain Solutions to be taken into account that otherwise do not fall under any other economic activity described in the Climate Delegated Act.

Since Jungheinrich does not perform any of the economic activities in connection with natural gas or nuclear power (economic activities 4.26–4.31), Jungheinrich does not use the special templates that were introduced with the supplemental Delegated Act for activities in certain energy sectors.

Proportion of turnover from products or services associated with taxonomy-aligned economic activities Disclosure covering year 2022

				Substantial contribution criteria						DNSH criteria ("Does Not Significantly Harm")										
Economic activities (1)	Code(s) (2)	**Absolute turnover (3)**	Proportion of turnover (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of turnover, 2022 (18)	Taxonomy-aligned proportion of turnover, 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
		EUR thousand	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (taxonomy-aligned)																				
Turnover of environmentally sustainable activities (taxonomy-aligned) (A.1)		0	0%	0%	0%												0%	0%		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
3.4. Manufacture of batteries	C.27.2	680	0%																	
3.6. Manufacture of other low carbon technologies	C.27; C.28	2,232,968	47%																	
Turnover of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		2,233,647	47%																	
Total (A.1 + A.2)		**2,233,647**	**47%**														**0%**			
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
Turnover of taxonomy-non-eligible activities (B)		2,529,647	53%																	
Total (A + B)		**4,763,294**	**100%**																	

Proportion of CapEx from products or services associated with taxonomy-aligned economic activities
Disclosure covering year 2022

				Substantial contribution criteria						DNSH criteria ("Does Not Significantly Harm")										
Economic activities (1)	Code(s) (2)	**Absolute CapEx (3)**	Proportion of CapEx (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economies (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of CapEx 2022 (18)	Taxonomy-aligned proportion of CapEx 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
		EUR thousand	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (taxonomy-aligned)																				
CapEx of environmentally sustainable activities (taxonomy-aligned) (A.1)		0	0%	0%	0%												0%	0%		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
3.4. Manufacture of batteries	C.27.2	3,675	1%																	
3.6. Manufacture of other low carbon technologies	C.27; C.28	27,348	4%																	
6.5. Transport by motorbikes, passenger cars and light commercial vehicles	N.77.11	33,221	5%																	
7.1. Construction of new buildings	F.41.2	13,481	2%																	
7.2. Renovation of existing buildings	F.43	211	0%																	
7.3. Installation, maintenance and repair of energy efficiency equipment	F.43	2,035	0%																	
7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings (and on parking spots belonging to buildings)	C.27	1,766	0%																	
7.5. Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	C.26	445	0%																	
7.6. Installation, maintenance and repair of renewable energy technologies	C.26	988	0%																	
7.7. Acquisition and ownership of buildings	L.68.1	4,408	1%																	
8.1. Data processing, hosting and related activities	J.63.11	1,116	0%																	
CapEx of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		88,693	13%																	
Total (A.1 + A.2)		**88,693**	**13%**														**0%**			
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
CapEx of taxonomy-non-eligible activities (B)		595,989	87%																	
Total (A + B)		**684,681**	**100%**																	

Proportion of OpEx from products or services associated with taxonomy-aligned economic activities Disclosure covering year 2022

				Substantial contribution criteria						DNSH criteria ("Does Not Significantly Harm")										
Economic activities (1)	Code(s) (2)	**Absolute OpEx (3)**	Proportion of OpEx (4)	Climate change mitigation (5)	Climate change adaptation (6)	Water and marine resources (7)	Circular economies (8)	Pollution (9)	Biological diversity and ecosystems (10)	Climate change mitigation (11)	Climate change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biological diversity and ecosystems (16)	Minimum safeguards (17)	Taxonomy-aligned proportion of OpEx, 2022 (18)	Taxonomy-aligned proportion of OpEx, 2021 (19)	Category (enabling activity) (20)	Category (transitional activity) (21)
		EUR thousand	%	%	%	%	%	%	%	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	%	E	T
A. TAXONOMY-ELIGIBLE ACTIVITIES																				
A.1. Environmentally sustainable activities (taxonomy-aligned)																				
OpEx of environmentally sustainable activities (taxonomy-aligned) (A.1)		0	0%	0%	0%												0%	0%		
A.2 Taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities)																				
3.4. Manufacture of batteries	C.27.2	19,847	11%																	
3.6. Manufacture of other low carbon technologies	C.27; C.28	58,291	33%																	
6.5. Transport by motorbikes, passenger cars and light commercial vehicles	N.77.11	7,207	4%																	
7.2. Renovation of existing buildings	F.43	18	0%																	
7.3. Installation, maintenance and repair of energy efficiency equipment	F.43	432	0%																	
7.4. Installation, maintenance and repair of charging stations for electric vehicles in buildings (and on parking spots belonging to buildings)	C.27	16	0%																	
7.5. Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	C.26	73	0%																	
7.6. Installation, maintenance and repair of renewable energy technologies	C.26	43	0%																	
8.1. Data processing, hosting and related activities	J.63.11	2,273	1%																	
OpEx of taxonomy-eligible but not environmentally sustainable activities (not taxonomy-aligned activities) (A.2)		88,202	49%																	
Total (A.1 + A.2)		**88,202**	**49%**														**0%**			
A. TAXONOMY-NON-ELIGIBLE ACTIVITIES																				
OpEx of taxonomy-non-eligible activities (B)		90,431	51%																	
Total (A + B)		**178,633**	**100%**																	

GRI-INDEX[1]

General information

GRI indicator	Indicator name	Page	Topic from materiality analysis
The organisation and its reporting practices			
2-1	Organisation profile	98	
2-2	Entities included in the organisation's sustainability reporting	13, 111	
2-3	Reporting period, reporting frequency and point of contact	13	
2-5	External assurance	13, 50 f.	
Activities and employees			
2-6	Activities, value chain and other business relationships	14, 24	
2-7	Salaried employees	27 f.	Good employer
Corporate governance			
2-10	Nomination and selection of the highest governance body	32	Responsible management
2-12	Role of the highest governance body in overseeing the management of impacts	19	Responsible management
2-13	Delegation of responsibility for managing impacts	19	Responsible management
2-14	Role of the highest governance body in sustainability reporting	19	Responsible management
2-19	Remuneration policies	32	Responsible management
2-20	Process for determining remuneration	32	Responsible management

GRI indicator	Indicator name	Page	Topic from materiality analysis
Strategy, policies and practices			
2-22	Statement on sustainable development strategy	4	
2-24	Embedding policy commitments	31 ff.	Compliance and anti-corruption
2-27	Compliance with laws and regulations	32	Compliance and anti-corruption
2-28	Membership of industry and associations	33	Compliance and anti-corruption
Stakeholder engagement			
2-29	Stakeholder engagement	16	Norms and standards

Disclosures on material topics

GRI indicator	Indicator name	Page	Topic from materiality analysis
Material topics			
3-2	List of material topics	17	
3-3	Management of material topics	16 f.	

[1] Not part of PwC audit

Topic standards — economy

GRI indicator	Indicator name	Page	Topic from materiality analysis
Material topics			
Market presence			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	30	Good employer
202-2	Proportion of senior executives hired from the local community	30	Good employer
Anti-corruption			
205-1	Locations assessed for risks related to corruption	34	Compliance and anti-corruption
205-2	Communication and training about anti-corruption policies and procedures	47 ff.	Compliance and anti-corruption
205-3	Confirmed incidents of corruption and actions taken	34	Compliance and anti-corruption
Tax			
207-1	Approach to tax	32	Compliance and anti-corruption

Topic standards — the environment

GRI indicator	Indicator name	Page	Topic from materiality analysis
Materials			
301-2	Recycled input materials used	25	Materials (resource-saving products)
Energy			
302-1	Energy consumption within the organisation	27	Energy (consumption and renewable energies)
302-3	Energy intensity	27	Energy (consumption and renewable energies)
302-5	Reduction in energy requirements of products and services	23 f.	Environmentally friendly products/ Customer satisfaction, competitive standing, R&D
Water and effluents			
303-3	Water withdrawal	25	
Emissions			
305-1	Direct (Scope 1) greenhouse gas emissions	22	Energy (consumption and renewable energies)
305-2	Energy (Scope 2) greenhouse gas emissions from energy	22	Energy (consumption and renewable energies)
305-3	Other indirect (Scope 3) greenhouse gas emissions	22	Energy (consumption and renewable energies)
305-4	greenhouse gas emissions intensity	22	Energy (consumption and renewable energies)
305-5	Reduction of greenhouse gas emissions	22	Energy (consumption and renewable energies)
Waste			
306-4	Waste diverted from disposal	26	Waste and recycling
306-5	Waste directed to disposal	26	Waste and recycling
Supplier environmental assessment			
308-1	New suppliers that were screened using environmental criteria	35	Transparency in supply chains

Topic standards — social

GRI indicator	Indicator name	Page	Topic from materiality analysis
Employment			
401-1	New employee hires and employee turnover	27	Good employer
Occupational health and safety			
403-1	Occupational health and safety management system	28 f.	Occupational health and safety
403-3	Occupational health services	28	Occupational health and safety
403-4	Worker participation, consultation, and communication on occupational health and safety	29	Occupational health and safety
403-5	Worker training on occupational health and safety	29	Occupational health and safety
403-6	Promotion of worker health	28 f.	Occupational health and safety
403-9	Work-related injuries	29	Occupational health and safety
Training and education			
404-2	Programmes for improving employee skills and transition assistance	29 f.	Training and development
Diversity and equal opportunities			
405-1	Diversity in governance bodies and among salaried employees	30	Good employer
405-2	Ratio of basic salary and remuneration of women to men	30	Good employer

GRI indicator	Indicator name	Page	Topic from materiality analysis
Child labour			
408-1	Locations and suppliers at significant risk of child labour incidents	34 f.	Transparency in supply chains
Forced or compulsory labour			
409-1	Locations and suppliers at significant risk of incidents of forced or compulsory labour	34 f.	Transparency in supply chains
Supplier social assessment			
414-1	New suppliers that were screened using social criteria	35	Transparency in supply chains
Public policy			
415-1	Political donations	32	Economic responsibility
Customer health and safety			
416-1	Assessment of the health and safety impacts of product and service categories	37	Product quality and enhancement/ Customer health and safety
Socioeconomic compliance			
419-1	Non-compliance with laws and regulations in the social and economic area	32 ff.	Compliance
Supply chains			
Own indicator	Material compliance	23 f.	Material compliance

INDEPENDENT PRACTITIONER'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT ON NON-FINANCIAL REPORTING

To Jungheinrich Aktiengesellschaft, Hamburg

We have performed a limited assurance engagement on the combined separate non-financial report of Jungheinrich Aktiengesellschaft, Hamburg, (hereinafter the "Company") for the period from 1 January to 31 December 2022 (hereinafter the "Combined Separate Non-financial Report").

Not subject to our assurance engagement are the external sources of documentation or expert opinions mentioned in the Combined Separate Non-financial Report.

Responsibility of the Executive Directors

The executive directors of the Company are responsible for the preparation of the Combined Separate Non-financial Report in accordance with §§ (Articles) 315c in conjunction with 289c to 289e HGB ("Handelsgesetzbuch": "German Commercial Code") and Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2020 on establishing a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder, as well as for making their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder, as set out in section EU Taxonomy Regulation of the Combined Separate Non-financial Report.

This responsibility includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures of the Group that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal controls as the executive directors consider necessary to enable the preparation of a Combined Separate Non-financial Report that is free from material misstatement whether due to fraud or error.

The EU Taxonomy Regulation and the Delegated Acts issued thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section EU Taxonomy Regulation of the Combined Separate Non-financial Report. They are responsible for the defensibility of this interpretation. Due to the immanent risk that indeterminate legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

Independence and Quality Control of the Audit Firm

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis – IDW QS 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.

Responsibility of the Assurance Practitioner

Our responsibility is to express a conclusion with limited assurance on the Combined Separate Non-financial Report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's Combined Separate Non-financial Report, other than the external sources of documentation or expert opinions mentioned in the Combined Separate Non-financial Report, are not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by the executive directors disclosed in section EU Taxonomy Regulation of the Combined Separate Non-financial Report.

In a limited assurance engagement the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgement of the assurance practitioner.

In the course of our assurance engagement, we have, amongst other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the Group's sustainability organisation and stakeholder engagement
- Inquiries of the executive directors and relevant employees involved in the preparation of the Combined Separate Non-financial Report about the preparation process, about the internal control system relating to this process and about disclosures in the Combined Separate Non-financial Report
- Identification of likely risks of material misstatement in the Combined Separate Non-financial Report
- Analytical procedures on selected disclosures in the Combined Separate Non-financial Report
- Reconciliation of selected disclosures with the corresponding data in the consolidated financial statements and group management report
- Evaluation of the presentation of the Combined Separate Non-financial Report
- Evaluation of the process to identify taxonomy-eligible and taxonomy-aligned economic activities and the corresponding disclosures in the Combined Separate Non-financial Report
- Inquiries on the relevance of climate-risks

In determining the disclosures in accordance with Article 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance Opinion

Based on the assurance procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Combined Separate Non-financial Report of the Company for the period from 1 January to 31 December 2022 is not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by the executive directors disclosed in section EU Taxonomy Regulation of the Combined Separate Non-financial Report.

We do not express an assurance opinion on the external sources of documentation or expert opinions mentioned in the Combined Separate Non-financial Report.

Restriction of Use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. Consequently, it may not be suitable for any other purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company. We do not accept any responsibility to third parties. Our assurance opinion is not modified in this respect.

Hamburg, 6 March 2023

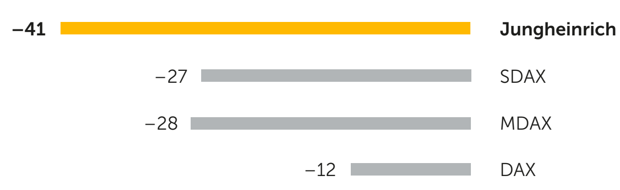
PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Alexander Fernis	Theres Schäfer
Wirtschaftsprüfer	Wirtschaftsprüferin
[German public auditor]	[German public auditor]

Jungheinrich share

In terms of the stock markets, the war in Ukraine was the dominant influencing factor in 2022. Like other shares, the Jungheinrich share was unable to resist the negative impact the war had on the market and ended the year with a 41 per cent loss in value. Nevertheless, holders of preferred shares will once again participate in the company's success with a dividend of €0.68 per share in accordance with our policy of continuous dividend payments.

Share price performance 2022 in %



EQUITY MARKETS UNDER PRESSURE

Overall, stock market activity in 2022 was characterised by a noticeable downward trend. Both German and international stock markets were essentially dominated by two themes: the Russia-Ukraine war and the ongoing rises in prices and interest rates. Stock indices fell over the course of the first quarter, initially due to the lockdown caused by the coronavirus in Shanghai and later due to the war in Ukraine. They eventually reached their lowest point for the year by the end of the third quarter. Over the course of the fourth quarter, the indices recovered slightly. However, they still declined noticeably over the year as a whole. Geopolitical uncertainties, further increases in interest rates and energy prices, fundamental inflation concerns and fears of recession all undermined investor sentiment globally and led to much more cautious behaviour on the part of investors.

The most important German stock indices showed double-digit percentage losses at the end of the year. The DAX ended 2022 with a comparatively small drop of 12 per cent, at 13,924 points (previous year: 15,885 points). The MDAX and SDAX closed the year with more significant losses in value, of 28 and 27 per cent respectively, at 25,118 points (previous year: 35,123 points) and 11,926 points (previous year: 16,415 points).

A MIXED YEAR FOR THE JUNGHEINRICH SHARE ON THE STOCK MARKETS

Starting from a closing price of €44.88 on the last trading day of 2021, the Jungheinrich share began the year under review at €45.22 and reached its high for the year of €46.18 on 5 January 2022. In light of the uncertainties regarding the consequences of the war in Ukraine, which started on 24 February 2022, the Board of Management released an ad hoc announcement on 24 March 2022 detailing its qualified comparative forecast. Despite the difficult macroeconomic environment, Jungheinrich's business development proved to be robust in the first half of 2022. However, the Jungheinrich share was unable to avoid the impact of the negative market environment, and the share price ended the first half of the year on 30 June 2022 at €20.80.

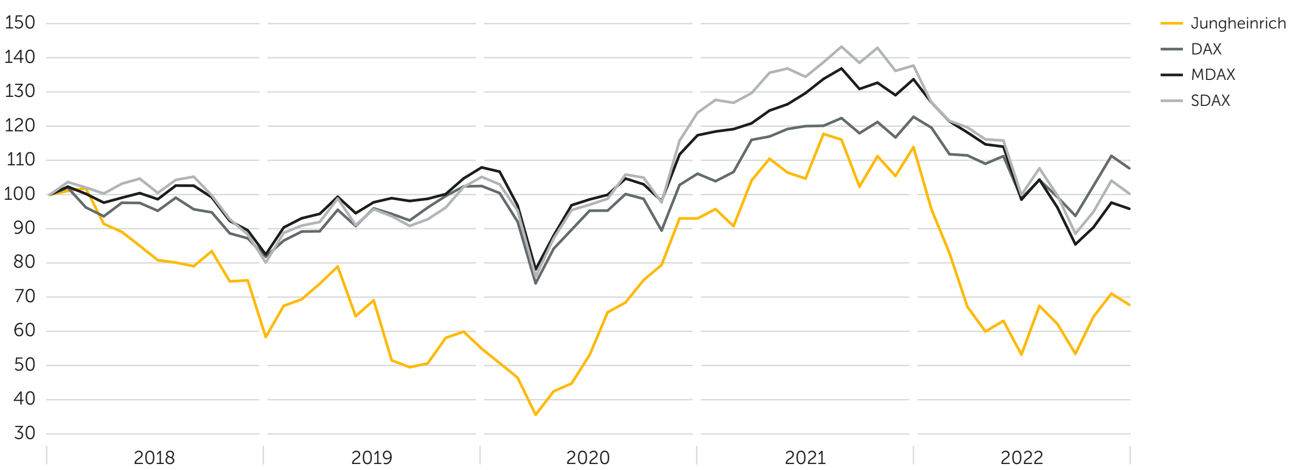
The Jungheinrich share reached its annual low point on 16 September 2022, at €20.20. As business development continued to prove to be robust in the third quarter, the Board of Management substantiated its forecast for the 2022 financial year, and provided forecast ranges, in an ad hoc announcement on 23 September 2022. Boosted by reduced tension on the stock markets in October and November, the Jungheinrich share ended the fourth quarter with a 27 per cent increase in value. Seen over the course of the year, Jungheinrich shares ended trading for 2022 at €26.58, thus recording a 41 per cent loss over the previous year. Market capitalisation declined accordingly by €1,867 million over the year and stood at €2,711 million (31 December 2021: €4,578 million).

With market capitalisation of €1,318 million (previous year: €2,111 million), which is relevant for index calculation, the Jungheinrich preferred share ranked 88th in the Deutsche Börse ranking list (previous year: 77th) at the end of December 2022. According to Deutsche Börse's definition of free float, this includes all stock-market-listed shares of Jungheinrich AG. Of the total number of Jungheinrich AG shares (102 million), only the 48 million no-par-value preferred shares are listed and widely distributed. The 54 million ordinary shares are not listed, and are held equally by the families of each of company founder Dr Friedrich Jungheinrich's two daughters.

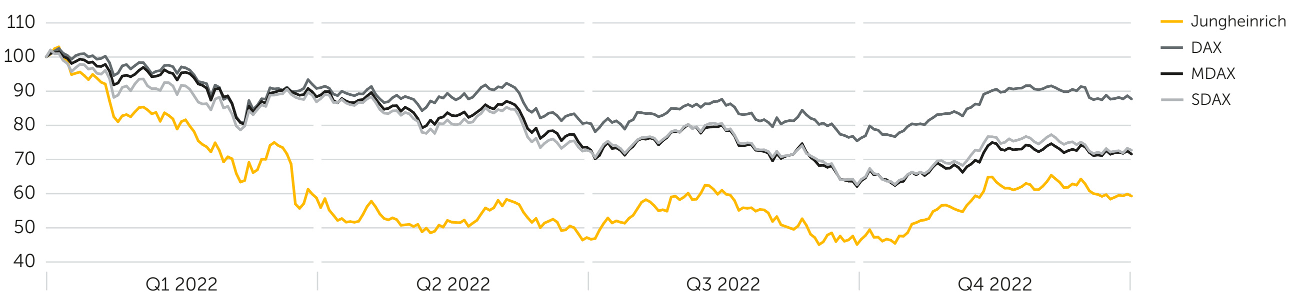
The shareholdings in Jungheinrich AG reportable pursuant to Sections 33 et seq. of the German Securities Trading Act (WpHG) have been published in accordance with Section 40 of the German Securities Trading Act (WpHG) in the notes to the annual financial statements of Jungheinrich AG and on the company's website ↗www.jungheinrich.com/en/investor-relations/notifications.

SHARE PRICE DEVELOPMENT OVER TIME

Share price performance 2018 to 2022 in %



Share price performance 2022 in %



TRADING VOLUME DOUBLES

The Jungheinrich share is listed in the Prime Standard quality segment of the Deutsche Börse. It is traded on all German stock exchanges. The trading volume (Xetra and Frankfurt) amounted to 39.3 million shares in 2022, more than double the volume recorded in the previous year (19.3 million). The average number of shares traded per trading day (Xetra and Frankfurt) also more than doubled compared to the previous year (75.8 thousand shares) to 152.8 thousand shares. The average daily trading volume amounted to €4.0 million (previous year: €3.2 million).

DIVIDEND: HISTORIC HIGH MAINTAINED

Jungheinrich's dividend policy is fundamentally geared towards continuous dividend payments. The aim is to distribute between 25 per cent and 30 per cent of the profit attributable to the shareholders of Jungheinrich AG.

Based on the solid profit for the 2022 financial, the Board of Management and Supervisory Board of Jungheinrich AG will propose to the Annual General Meeting on 11 May 2023 that a dividend of €0.68 (previous year: €0.68) per no-par preferred share and €0.66 (previous year: €0.66) per no-par ordinary share be distributed. Subject to approval at the Annual General Meeting, this will result in a total payment of €68 million as in the previous year.

The dividend payment will be made on the third working day after the Annual General Meeting. The payment ratio, which is calculated as the percentage of the total dividend in relation to the profit attributable to the shareholders of Jungheinrich AG, will thus reach 25 per cent (previous year: 26 per cent).

GROWTH OVER THREE AND TEN YEARS SIGNIFICANTLY BETTER THAN DAX, MDAX AND SDAX

The Jungheinrich share proves to be an attractive capital investment over the long term and recorded a significantly better performance over both a ten- and three-year period than the DAX, MDAX and SDAX. However, given the way the share price developed over the course of 2018 and in the reporting year, a contrasting picture emerges over a five-year period.

Long-term performance of the Jungheinrich share

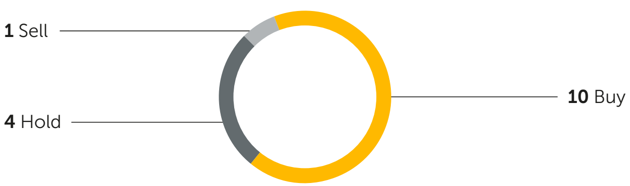
Investment period	10 years	5 years	3 years
Investment date	01/01/2013	01/01/2018	01/01/2020
Portfolio value at end of 2022	€31,558	€7,379	€12,798
Average return p. a.	12.2%	−5.8%	8.6%
Comparable return of German share indices p. a.:			
DAX	6.0%	1.6%	1.3%
MDAX	7.5%	−0.8%	−4.2%
SDAX	8.4%	0.0%	−1.9%

Please note: based on an initial investment of €10 thousand; assuming that annual dividends received were reinvested in additional preferred shares.

BROAD ANALYST COVERAGE CONTINUES

Equity research is important for making investors aware of share issuances, as it serves as a vital foundation when deciding to invest. The Jungheinrich share was regularly analysed and assessed by a total of 15 financial analysts (2021: 15) from German and international banks and research houses at the end of 2022, meaning that the scope of coverage remained unchanged compared with the previous year. Nord LB, which cooperated with SRH AlsterResearch on equity research, discontinued its coverage of Jungheinrich shares on 31 December 2021. BNP Paribas Exane and ODDO BHF began covering Jungheinrich shares in January 2022. Morgan Stanley dropped its coverage over the course of the year. At the end of the year under review, ten analysts recommended buying the share, four recommended holding and one recommended to sell. Based on the key analysts' valuations, the average target share price was €33. The lowest value was €21, and the highest was €43.

Analysts' recommendations As of: 31/12/2022



2022 Analyst coverage

Baader Bank	Citigroup
Berenberg	Kepler Cheuvreux
BNP Paribas Exane	Morningstar
DZ Bank	Stifel
Hauck Aufhäuser	
HSBC Trinkaus & Burkhardt	Bank of America
Landesbank Baden-Württemberg	
Metzler	
M. M. Warburg	
ODDO BHF	

INVESTING IN VALUABLE RELATIONSHIPS

The aim of Jungheinrich's investor relations work is to achieve a fair valuation of the Jungheinrich share through reliable, up-to-date and continuous communication. The key topics for capital market communication in 2022 were the business development in light of the war in Ukraine and the resulting fears of recession, supply shortages for production materials, rising energy and materials prices, and progress on implementing Strategy 2025+.

The company informed the capital markets about particularly significant developments through ad hoc announcements as follows:

- Announcement on 24 March 2022:
  "Jungheinrich forecast for 2022 financial year below market expectations due to economic uncertainty"

- Announcement on 23 September 2022: "Jungheinrich substantiates forecast for 2022, which is now above current market expectations"
- Announcement on 26 September 2022: "Change in the Supervisory Board"

Face-to-face meetings with capital market participants were still subject to restrictions at the beginning of the year. Nevertheless, we held a good mix of virtual and in-person events over the course of the full year. For instance, the analyst conference for the 2021 financial year was held as a video conference on 31 March 2022. Due to the uncertainty regarding the further course of the pandemic at the time of planning the event, and to protect the health of the staff and visitors, the Annual General Meeting on 10 May 2022 was held virtually. Conferences and roadshows with national and international participants were organised both as virtual events and as physical events during the year, with digital exchanges via video conferences and conference calls allowing for greater flexibility in terms of regional coverage of investor contacts. At the same time, face-to-face meetings increased personal exchanges and shored up trust. With regard to the publication of its quarterly and half-year figures, Jungheinrich reported as usual in detail on the current business development of the Group in conference calls.

During the conference call on the business development as of 30 September 2022 on 11 November 2022, the Board of Management also presented its Strategy 2025+ progress report. The main focus was on providing specifics regarding relevant initiatives and defining targets in the field of sustainability, along with the product launch of the PowerCube in the field of automation. Over 300 investors had contact with the company during the year. Further information on Strategy 2025+ can be found in the combined management report [page 61 ff.] onwards.

Basic information about the Jungheinrich share

Securities identification numbers	ISIN: DE0006219934 / WKN: 621993
Ticker symbol Reuters/Bloomberg	JUNG_p.de / JUN3 GR
Stock exchanges	Hamburg and Frankfurt stock exchanges and all other German stock exchanges
Designated Sponsor	ODDO BHF Corporates & Markets AG
IPO	30 August 1990

Comprehensive information regarding the Jungheinrich share is published on the Jungheinrich AG website ↗ www.jungheinrich.com/en/investor-relations/about-our-share. Along with financial reports, presentations, ad-hoc statements and press releases, the website also contains a total return calculator, analysts' recommendations, important IR dates, and contact details for Corporate Investor Relations.

Capital market key figures

			2022	2021
Dividend per share	Ordinary share	€	0.66[1]	0.66
	Preferred share	€	0.68[1]	0.68
Dividend yield	Preferred share	%	2.6	1.5
Earnings per share	Ordinary share	€	2.63	2.60
	Preferred share	€	2.65	2.62
Shareholders' equity per share		€	20.10	17.68
Share price[2]	High	€	46.18	47.32
	Low	€	20.20	34.20
	Closing price at end of year	€	26.58	44.88
Share price performance		%	−41	23
Market capitalisation		€ million	2,711	4,578
Stock exchange trading volume[3]		€ million	1,025	806
Average daily turnover		thousand shares	152.8	75.8
P/E[4]		ratio	10.0	17.1
Number of shares	Ordinary share	million shares	54	54
	Preferred share	million shares	48	48
	Total	million shares	102	102

[1] Proposal.
[2] Xetra closing price.
[3] Xetra and Frankfurt.
[4] P/E = closing price/earnings per preferred share.

COMBINED MANAGEMENT REPORT

Group principles

BUSINESS ACTIVITIES AND ORGANISATIONAL STRUCTURE

Integrated business model

Jungheinrich is one of the world's leading solutions providers for the intralogistics sector. With a comprehensive portfolio of material handling equipment, automated systems and services, Jungheinrich is able to offer customers solutions to the challenges posed by Industry 4.0.

The integrated business model encompasses the development, production and sale of new material handling equipment and the planning and realisation of automated systems, the short-term rental of new and used material handling equipment, the reconditioning and sale of used forklifts and after-sales services. Jungheinrich also supplies stacker cranes and load handling equipment. In addition, the customer receives their entire factory and office equipment from a single source. The material handling equipment consists almost exclusively of battery-powered trucks. In addition to electric engines and drive controls, Jungheinrich also manufactures matching lithium-ion batteries and battery chargers. Almost all of our trucks are available with a lithium-ion battery. Digital products based on the latest generation of the Jungheinrich Internet of Things platform in the cloud, complement our portfolio. We also offer our customers a comprehensive range of financial services. We aim to create sustainable value at Jungheinrich.

Production and reconditioning

The Group has eleven plants, six of them primarily for the production of material handling equipment, three for stacker cranes and two for the industrial reconditioning of used trucks. In addition, Jungheinrich covers almost all demand for electric motors in a joint venture with another manufacturer of material handling equipment in Moravany (Czechia) and Putian (China).

Jungheinrich manufactures stacker trucks, reach trucks and horizontal order pickers in Norderstedt. In addition to truck production, the plant also manufactures electronic control units, lithium-ion batteries and battery chargers. The Lüneburg plant produces light-duty vertical order pickers, tow tractors and automated guided vehicles in addition to small-series and customised trucks. The Moosburg plant manufactures counterbalanced trucks, while the neighbouring factory in Degernpoint manufactures narrow-aisle trucks, heavy-duty vertical order pickers and automated guided vehicles. The production focus at the Landsberg/Saale plant is on low-lift trucks and double-decker trucks. The Qingpu plant in China produces low-lift and stacker trucks, battery-powered counterbalance trucks and reach trucks, as well as control units and batteries. The MIAS Group manufactures stacker cranes and load handling equipment at its locations in Munich, Gyöngös (Hungary) and Kunshan (China).

Production at the new plant in Chomutov (Czechia), where reach trucks are to be manufactured, is scheduled to begin in mid-2023.

Used equipment is industrially reconditioned in a plant close to Dresden and in a plant in Ploiești, Romania. Jungheinrich also reconditions used material handling equipment in Qingpu (China) and Bangkok (Thailand).

The development of digital products is concentrated at the locations in Graz (Austria), Hamburg and Madrid (Spain). In the reporting year, a centre of excellence was opened in Zagreb (Croatia), which focuses on software and hardware development services.

Changes to the portfolio

Effective 27 April 2022, Triathlon Holding GmbH (Triathlon), Jungheinrich's partner in JT Energy Systems GmbH (JTES), increased its share in JTES, which was active in the production and reconditioning of lithium-ion batteries as a fully consolidated company in the Group, from 30 per cent to 60 per cent following a capital increase. Accordingly, Jungheinrich's share was reduced to 40 per cent and inclusion of the company in the consolidated financial statements is based on the equity method.

International sales with a focus on the direct sales and service network

Jungheinrich has established a global direct sales and service network with locations in now 41 countries to offer the best-possible customer service. Most recently, the global market presence was boosted in May 2022 through the acquisition of a former sales partner in New Zealand, Industrial Truck Sales New Zealand Ltd., Auckland (now renamed Jungheinrich New Zealand Ltd.). The Jungheinrich Group is also represented in approximately 80 other countries through partner companies. The Group's core market is Europe, where 84 per cent of Group revenue is generated. Of the European revenue, 28 per cent is generated in Germany.

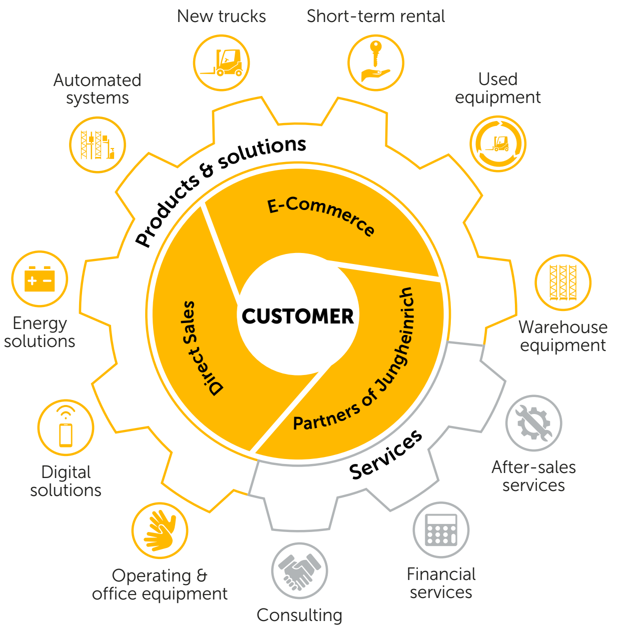
In North America, Jungheinrich cooperates with Mitsubishi Logisnext Americas Inc. (MLA), a sales partner with a comprehensive dealership footprint. Firstly, equipment manufactured by Jungheinrich in Germany is marketed via MLA's sales organisation in North America. Secondly, MLA produces trucks in its plants that are developed by Jungheinrich locally in Houston. A joint venture is focused on direct sales of automated guided vehicles in North America (MCJ Supply Chain Solutions LLC, Houston).

Furthermore, on 25 January 2023 Jungheinrich announced that it would acquire the Indiana (USA) based Storage Solutions Group (Storage Solutions), a leading provider of racking and warehouse automation solutions in the US, thereby expanding its access to the warehousing equipment and automation market. The completion of the acquisition is subject to customary closing conditions, including receipt of the merger control clearance in the US and is expected to be completed in the first quarter of 2023.

In China, Jungheinrich serves the metropolitan regions of Shanghai, Changzhou, Guangzhou and Tianjin through a joint venture with Anhui Heli Co. Ltd., leasing material handling equipment via four subsidiaries.

To cover the constantly growing after-sales services business, Jungheinrich operates a modern spare parts centre in Kaltenkirchen. With this warehouse, and others in Lahr, Bratislava (Slovakia), Shanghai (China), Birmingham (United Kingdom) and Singapore (Singapore), Jungheinrich can guarantee the global supply of spare parts for its after-sales services. The contract with the third-party operator of the spare parts warehouse in Moscow (Russia) was not renewed in light of the Russia-Ukraine war that began on 24 February 2022. As a result, operations at this spare parts warehouse site were discontinued on 30 April 2022.

Business model of Jungheinrich



Through the joint venture TREX.PARTS GmbH & Co. KG, Jungheinrich is tapping into additional market potential in the spare parts market. The company offers a comprehensive product range with original manufacturer spare parts and alternative parts of original equipment quality or comparable quality.

Organisation and Group management

Jungheinrich AG is the listed management holding company of the Group. It controls company activities and is responsible for overarching functions such as strategy, financing, M&A, accounting, controlling, human resources, sustainability, corporate communications, information technology, legal, tax, internal audit and compliance. The operating business is divided into the two reportable segments under IFRS: "Intralogistics" and "Financial Services". The "Intralogistics" segment comprises the business fields of new truck business, short-term rental and used equipment, as well as after-sales services. New truck business consists of material handling equipment, automated systems and warehouse equipment, stacker cranes and load handling equipment, factory and office equipment, energy solutions and digital products. There is no further subdivision of the "Financial Services" reporting segment into business fields. Moreover, Jungheinrich has a centre of excellence in Braşov (Romania) that pools intragroup services for administrative areas.

The Board of Management is responsible for the Group's strategic management and operational leadership. This includes determining and monitoring company targets, taking responsibility for leadership, management and controlling processes – including the internal compliance management system and the internal control and risk management systems – and resource allocation. The key figures and reports regularly presented to the entire Board of Management are based on Group-wide, economic performance parameters.

The supervisory and advisory body for the Board of Management is the Supervisory Board, which consists of twelve people, pursuant to the requirements of the German Co-Determination Act. There are an equal number of shareholder representatives and employee representatives on the Supervisory Board.

As the parent company, Jungheinrich AG holds shares directly and indirectly in both domestic and foreign subsidiaries and affiliates. The managing directors of the subsidiaries are responsible for operations and economic performance in the local markets. The companies receive support from the management of the holding company, but are independent from a legal perspective. The consolidated financial statements cover 94 fully consolidated companies – including Jungheinrich AG. The complete shareholdings in Jungheinrich AG can be found in the notes to the consolidated financial statements [page 164 ff.].

Important key performance indicators

The Jungheinrich Group uses selected key figures to determine budget targets as well as medium- and long-term company targets. The Board of Management considers key financial indicators predominantly in order to manage the Group. The return on capital employed (ROCE) and, since the first half of 2022, the free cash flow are used for management purposes, in addition to incoming orders and revenue, earnings before interest and taxes (EBIT) or EBIT return on sales (EBIT ROS) and earnings before taxes (EBT) or EBT return on sales (EBT ROS). In the context of implementation of Strategy 2025+, free cash flow has replaced net debt / net credit as a key performance indicator. Another performance parameter is the ratio of trucks equipped with lithium-ion batteries.

The financial key figure ROCE represents the rate of return based on the EBIT generated in the “Intralogistics” segment in relation to the capital employed that can be attributed to this segment. This means returns can be determined regardless of whether a customer has financing from the Jungheinrich Group’s Financial Services segment. Capital employed is calculated from fixed assets (without trucks for short-term rental and trucks for lease) plus trucks for short-term rental and working capital less other provisions. Working capital includes inventories as well as trade accounts receivable and contract assets less trade accounts payable and contract liabilities. The average of capital employed is calculated by including the figures as at the balance sheet date of the current quarter and the three quarters before this balance sheet date in order to prevent fluctuations in the capital employed on the balance sheet date. For interim reporting, the EBIT of the period is annualised and viewed in relation to the average capital employed. ROCE is not reported for the “Financial Services” segment as the EBIT return on capital employed (ROCE) is not a control parameter for this segment.

As part of Strategy 2025+, free cash flow was reported as a new key performance indicator for the first time as of 30 June 2022. Due to its more informative nature in terms of financing power, free cash flow will ensure the best possible management of liquidity and financing for the Jungheinrich Group. The new key performance indicator provides the parameter for the possibility of employing strategic capital expenditure and making liquid funds available for dividend payouts and the repayment of borrowings. The free cash flow in a reporting period is the sum of cash flows from operating activities and investing activities. Cash flow from investing activities is adjusted for payments for acquisitions and proceeds from the sale of securities as well as payments for and proceeds from time deposits. As a rule, securities and time deposits are assigned to Group liquidity (cash and cash equivalents and securities reported in the balance sheet). Changes in these items are therefore not part of the Jungheinrich Group’s free cash flow.

In addition to this, the equipment ratio of trucks with lithium-ion batteries as part of both the short-term and long-term variable remuneration of the Board of Management is a material non-financial control parameter for the Jungheinrich Group. It symbolises the company’s commitment to sustainability and is an integral part of the corporate strategy. It is also one of the central targets of Strategy 2025+. The equipment ratio of lithium-ion batteries is calculated from the ratio of incoming orders for lithium-ion battery-powered trucks (units; excluding purchased electric trucks with built-in batteries) to incoming orders for battery-powered trucks, regardless of type of battery (units; excluding purchased electric trucks with built-in battery).

The Board of Management follows developments in the figures indicated above as part of the regular reporting process. Where necessary, appropriate measures are launched and significant deviations analysed based on constant monitoring of target and actual figures.

Changes in various early indicators are monitored and evaluated in order to recognise possible future developments within the company in good time and to maintain a basis on which to base business policy decisions. These are primarily prognoses from economic experts on developments in gross domestic product in Jungheinrich’s core markets, indices for evaluating the economic situation in the sector, and continual monitoring of incoming orders and orders on hand.

Successful supply chain management ensures stability in production

The bottlenecks in global supply chains that first developed at the beginning of the coronavirus pandemic have been further exacerbated in 2022 by the Russia-Ukraine war. Many intermediate products and components – especially electronic components – were affected along with the steel market and the energy supply situation in Europe in the reporting year. Consequently, the steel shortage brought about by the war led to significant price rises across the entire steel market. Thus far it has been possible to avoid serious supply chain disruption.

The supply of electronic components remained very tight in the reporting year. The stabilisation of logistics capacities observed over the year as a whole was very hesitant, which is why intensive supply chain support was still required.

Due to the global interconnections in supply chains, the effects of the supply bottlenecks spread throughout the entire supplier and materials portfolio, as well as the associated logistics capacities. The task forces in place since 2020 at Jungheinrich have come to play a vital role in securing supplies. Supply range, capacity, delivery times and delivery routes were also monitored on a daily basis as part of consistent supplier risk management in 2022, which includes sub-suppliers. In addition to these preventative measures, we also pushed forward with setting up alternative supplier and materials portfolios and far-reaching support materials purchases were made and different types of transport used.

In addition, extensive preventative measures were taken to secure demand to the greatest extent possible and to prepare for a potential shortage of gas and energy. The longer-term goal is to reduce dependence on gas supply and to substitute gas as an energy source. In this context, Jungheinrich relies on the use of alternative fossil and renewable energy sources for both process heat and heating, in addition to focused savings in consumption, in order to aid the decoupling from the gas supply. In light of the uncertain energy supply situation, a contingency plan was developed which, in addition to purely organisational measures, involves in particular the equipping of production plants with alternative technical solutions in order to be adequately prepared for any power outages.

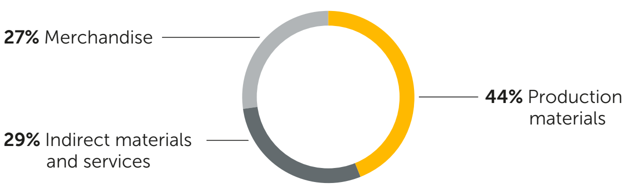
Overall, as in the previous year the tense situation on the market has led to considerable increases in material prices and logistics costs. As a consequence, this resulted in a higher procurement volume for production materials and project orders as well as all directly and indirectly related services.

Against the backdrop of building up high safety stock levels and increased material prices, the purchasing volume at the Jungheinrich Group rose to €3,118 million in the 2022 financial year, up from €2,597 million in the previous year.

The purchasing volume can generally be divided into:

- Production materials, including post-production materials
- Indirect materials and services
- Merchandise

Breakdown of purchasing volume in 2022



in € million	2022	2021	Change %
Production materials	1,387	1,178	17.7
Indirect materials and services	903	748	20.7
Merchandise	828	670	23.6
Total	**3,118**	**2,597**	**20.1**

Table contains rounding differences.

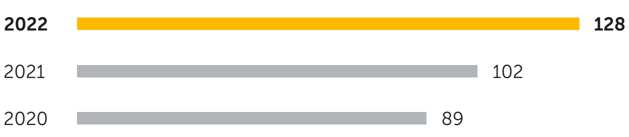
Once again, in the reporting year, around 90 per cent of the Group's purchasing volume, which was higher than in the 2021 financial year, was attributable to Europe as a result of Jungheinrich's strong presence in this market and the production plants being primarily located in Germany.

The top-selling commodity groups were batteries, warehouse equipment, steel components, logistics services and electric drive trains.

Research and development

The main research and development (R&D) activities in the 2022 financial year focussed on the further development of efficient lithium-ion technology-based energy storage systems, the associated improvements in terms of constructing new material handling equipment and digital products. In addition, the development of mobile robots and the optimisation of automated systems were another development focus.

Research and development expenditure in € million



R&D expenditure consists primarily of internal services. Including the use of third-party services, it stood at €128 million in the Group, 25 per cent higher than in the previous year (€102 million). This corresponded to a 2.7 per cent (previous year: 2.4 per cent) share of Group revenue. The increase in important product development work meant that the capitalisation ratio rose to 24 per cent (previous year: 18 per cent).

In the reporting period, depreciation, amortisation and impairment losses on capitalised development expenditure included impairment losses of €3 million. They concerned products developed in China and already in series production.

R&D received a personnel boost in the reporting year; the number of employees involved in development projects across the Group stood at an average of 885 in the reporting period (previous year: 661). Development capacities were expanded in accordance with Strategy 2025+. Jungheinrich AG, which is responsible for Group-wide basic and product development, accounted for 130 (previous year: 97) employees.

Research and development

in € million	2022	2021	Change %
Total R&D expenditure	128	102	25.5
thereof capitalised development expenditure	30	18	66.7
Capitalisation ratio	24%	18%	–
Depreciation, amortisation and impairment losses on capitalized development expenditure	16	11	45.5
R&D costs (statement of profit or loss)	113	95	18.9
Total R&D expenditure/ Group revenue	2.7%	2.4%	–
Average number of R&D employees (FTE)	885	661	33.9
Number of patent applications	99	96	3.1
Number of patents granted	165	104	58.7

Table contains rounding differences.

STRATEGY 2025+

Continued focussed implementation of Strategy 2025+

With the aim of creating sustainable value for all stakeholders, Jungheinrich has been consistently implementing its Strategy 2025+ since autumn 2020. Since the start of the war in Ukraine in February 2022, the international business activities of the Jungheinrich Group have been subject to economic, political and social circumstances that are materially different to those at the time of publication of Strategy 2025+ in November 2020. Nevertheless, progress has been achieved in all six fields of action of the corporate strategy – automation, digitalisation, energy systems, efficiency, global footprint and sustainability. All current and planned initiatives and measures were continued in a focussed manner as planned and taking into account the deterioration in circumstances.

Central targets reviewed and supplemented on a regular basis

The Group's target system includes central key figures and target values that were largely defined in 2020 and have since been used to evaluate the implementation of the strategy. In 2021 and in the reporting year, we added further target values, redefined individual figures and adjusted certain values following regular reviews.

We continue to expect Group revenue to grow organically to €5.5 billion by 2025 and EBIT return on sales (EBIT ROS) to come in between 8 per cent and 10 per cent. We are striving for a share of revenue from outside of Europe of 20 per cent, which we primarily aim to achieve via inorganic growth. ROCE is anticipated to be between 21 per cent and 25 per cent. We are aiming for 70 per cent of our trucks to be fitted with lithium-ion batteries by the year 2025. Based on EBIT per employee, our productivity target is approximately €23,000. We want the number of female managers to steadily climb to 20 per cent by 2025. We reported on the key performance indicator free cash flow, with which we measure our financing power, for the first time in the half-year report on 30 June 2022. In light of the uncertainties at present, and also in terms of further economic development, we have set a minimum target of over €100 million for free cash flow by 2025. We will review this minimum target over the course of 2023. We have defined various targets for the sustainability field of action in 2022: we want to reduce Scope 1 and Scope 2 greenhouse gas emissions to net zero by 2030. To this end, we plan to save around one quarter of our direct and indirect CO_2e emissions in Scope 1 and 2 by 2025 (baseline: 2019). We consider net zero greenhouse gas emissions to be a neutral balance of greenhouse gases in accordance with the Kyoto Protocol. We also aim to generate zero landfill waste in our German plants from 2025. We measure the level of work safety based on the frequency of work accidents per one million working hours (lost time injury rate, LTIR). Our 2025 LTIR target is a maximum of 12.5.

Implementation progress in the automation division through new products

The automation strategic field of action focuses on mobile robots, as well as automated warehouse systems and software.

One strategically significant example of the progress we are making in the field of automated warehouse systems is the PowerCube, an automated compact storage system for containers, for the storage and order picking of small parts and break bulk, which was introduced in 2022. This system gained its first customer in the reporting year, the Swiss dealer M. Schönenberger AG. The PowerCube is intended to set new standards for our customers in terms of efficiency, flexibility, performance and IT connectivity.

We also follow the same strategic claim in the field of mobile robots, i.e. both Automated Guided Vehicles (AGV) and Autonomous Mobile Robots (AMR). The AMR arculee launched on the market in the reporting year is particularly important in this field. We believe the arculee to be a pioneering solution for underload transport and goods-to-person order picking. The first customers for this solution were also acquired in the reporting year.

We increased our participation in Magazino by another 3.5 per cent of shares to a total of 21.7 per cent in March of the reporting year. Magazino develops and manufactures smart order-picker robots characterised by a high degree of autonomy and capable of operating in a mixed human-machine environment, for example when picking boxes from racks or in production when preparing containers.

Hybrid cloud as the basis for continued digitalisation

Our hybrid cloud is the technological linchpin for the digitalisation of our own processes, for interface management with our customers and for the digitalisation of our customers' intralogistics processes. We firmly integrated the cloud platform into our processes in 2022 during the new construction of our IT plant, which will continue until the end of 2023. Cloud Governance and Cloud Compliance were effectively established at the same time. We will complete the new IT plant project in 2023 to increase connectivity and optimise access to applications.

The Jungheinrich FMS digital fleet management system is our cloud-based telematics and service platform available in 22 countries by this point. The expansion to further countries and continual migration of customers of the predecessor system to the new system are planned. We added new software modules to the Jungheinrich FMS in 2022. It is worth noting that, as of this year, our customers have the option of integrating data from the FMS directly into their own systems: the Jungheinrich FMS API (Application Programming Interface) is a modern IT interface that, among other things, delivers more up-to-date data, provides noticeable efficiency gains and significantly improves utilisation rates for our customers.

Further expansion of expertise in energy systems with new POWERLiNE trucks

Electric mobility is one of our core competencies, which we will continue to expand in the energy systems field of action. Series-produced trucks for intralogistics with lithium-ion batteries have been an established part of Jungheinrich's portfolio for more than ten years. In the reporting year, we delivered our 100,000th lithium-ion forklift truck.

We attach strategic importance to material handling equipment with lithium-ion batteries fully integrated into the truck design. This makes the trucks significantly more compact than their predecessor models. We call this series of material handling equipment POWERLiNE. We added to the product range in 2021 and 2022 and set further developments in motion. As a matter of strategic significance, our POWERLiNE trucks have been CO_2e-neutral until delivery to the customer since 2022.

Furthermore, we have the strategic goal to take our energy expertise into new application areas outside warehouse logistics by providing integrated energy solutions (Jungheinrich Powertrain Solutions). We have noted an increasing number of series and project customers here.

Efficiency gains with new plant in Czechia, continued implementation of the DEEP programme and nearshoring

Efficiency gains are necessary if we are to achieve our strategic goals by 2025. Among other projects, we are currently building a new plant for reach truck production in Chomutov (Czechia), which will create roughly 350 new jobs. A number of measures will make the new building CO_2-optimised. Start of production is scheduled to be mid-2023. The project budget for the new location amounts to approximately €60 million.

We manage key measures to increase efficiency in the Jungheinrich Group, including the digital transformation of the company, through the DEEP programme ("Digital End-to-End Processes"). In 2022, we transferred more than 80 projects to the design and implementation phase as part of this strategic programme. Commissioning the central data distribution platform as the basis for the microservice architecture, as well as rolling out central master data management were notable focal points and mandatory prerequisites for the continued successful implementation of the DEEP programme. Development work on the group-wide ERP system was started along with the implementation of other important applications, for example a new internal service management solution for the after-sales service business. DEEP is designed to achieve customer-focussed and lean, automated processes.

Nearshoring is another aspect in the strategic field of action of efficiency. As a result, we have now opened three Business Service Centers (BSC). The centres of excellence in Spain, Romania and Croatia work with globally aligned experts. The BSC in Madrid (Spain) mainly provides internal IT services and development services for digital products.

The Braşov (Romania) site pools and optimises intragroup services for administrative areas. The BSC in Zagreb (Croatia) focuses on services related to software and hardware development.

Jungheinrich broadens global footprint

During the 2022 financial year, we consistently continued to methodically screen and evaluate potential acquisitions and strategic partnerships. On 25 January 2023, we signed an agreement to acquire 100 per cent of the share capital of Storage Solutions, Indiana (USA), a leading provider of solutions for racking systems and warehouse automation in the US. The acquisition expands our global footprint in the North America region and provides us with a strategic platform for future growth in warehouse automation in the US. Based on a technology-agnostic business model, the company offers vertically integrated services with its own logistics and installation teams. This ensures projects are delivered on time and enables value-added services, including workflow optimisation and services in engineering and approval procedures. The complete acquisition is subject to customary closing conditions, including approval in accordance with merger control regulations in the US and is expected to be completed in the first quarter of 2023. Storage Solutions has 170 empoyees and is expected to generate revenue of approximately $290 million and report an adjusted EBIT of approximately $34 million for the 2022 financial year. The total consideration agreed in the share purchase agreement consists of a purchase price of approximately $375 million (which is subject to customary closing adjustments) and a flexible, performance-based component in the mid to high single-digit percentage range relative to the purchase price.

With the acquisition of a former sales partner in New Zealand, we have strengthened our presence in the vital growth market that is the Asia-Pacific region in the reporting year.

Our goal is to continue to grow through targeted acquisitions and strategic partnerships in the regions of North America and Asia on the one hand and by seeking a suitable addition and/or strengthening our presence, especially in the strategic field of action of automation, on the other hand. In an economic and political environment that has become increasingly tense since the end of February 2022, we consider the implementation of this target to be much more challenging than at the start of 2022.

Sustainability as a benchmark for the company's entire value chain

Jungheinrich's corporate strategy is built around the central goal of creating sustainable value, which encompasses all measures. Projects in the sustainability field of action therefore span all areas of the company and are divided into six strategic initiatives as follows:

1. Climate neutrality
2. Eco efficiency and circular economy
3. Sustainable business models, products and services
4. Employees and society
5. Governance
6. Sustainability in the brand

In order to reduce greenhouse gas emissions, we have defined and in some cases already established measures that relate to our entire value chain. We implement the targets for the CO_2e reduction of our direct and indirect emissions in Scope 1 and Scope 2 primarily through the purchase of green electricity and the use of electric trucks in our after sales and company vehicle fleet. Currently all Jungheinrich sites in Germany are supplied with green electricity and we aim to have completed the conversion of all other sites by 2030 at the latest. By 2025, we aim to source 80 per cent of the relevant global purchasing volume from sustainable suppliers. From our range of products and solutions through to consulting, we are gearing our entire portfolio towards sustainability in terms of energy efficiency and aim to increase the share of revenue from sustainable products in accordance with EU taxonomy. We are establishing sustainability governance throughout the company by means of a number of packages of measures. Material aspects include: comprehensive and secure goal-setting and reporting processes and reinforcing relationships with external stakeholders. This is how we intend to firmly enshrine sustainability within Jungheinrich's corporate culture. In doing so, we want not only to strengthen and improve intracompany cross-national cooperation and close relationships with our customers but also want to actively assume our responsibility as a local partner at our sites worldwide.

The success of our increasingly sustainable alignment is visibly expressed in ratings. Jungheinrich is rated in good or excellent categories by EcoVadis, CDP (formerly the "Carbon Disclosure Project"), MSCI ESG Ratings and ISS ESG. We consider the continued improvement of ratings and deliberately raising the awareness of all stakeholders with regard to Jungheinrich's comprehensive and resiliently sustainable alignment as essential components of our future brand identity.

We provide extensive information regarding our sustainability activities in the combined separate non-financial report in this annual report in accordance with the CSR Directive Implementation Act [page 13 ff.].

Economic report

ECONOMIC AND SECTOR ENVIRONMENT

The regional focus of Jungheinrich's activities lies in Europe. Outside Europe, the focus is on North America and Asia. Each country's gross domestic product (GDP) as an economic indicator is key to evaluating business developments in these regions.

War and inflation slow world economic growth

The strong global upswing of the previous year gave way in 2022 to a slowdown in global economic growth. High inflation rates, rising costs of living and interest rates, the lockdown in Shanghai caused by the coronavirus and the Russia-Ukraine war contributed to noticeably lower economic growth in all countries and regions of the world in the reporting year.

Growth rates for selected economic regions

Gross domestic product in %	**2022**	2021
World	3.4	6.2
USA	2.0	5.9
China	3.0	8.4
Eurozone	3.5	5.3
Germany	1.9	2.6

Source: International Monetary Fund (estimates as of 30 January 2023 with updated prior-year figures compared to the 2021 combined management report)

With a GDP increase of 3.5 per cent, the eurozone showed noticeably lower growth in economic output in 2022 than in the previous year (5.3 per cent). The export-oriented German economy also recorded reduced growth in gross domestic product of 1.9 per cent compared to the previous year (2.6 per cent). Based on a GDP increase of 6.8 per cent in the previous year, the French economy only recorded an increase in economic growth of 2.6 per cent in the reporting year. The Italian economy recorded a gain of 3.9 per cent in the reporting year, after it had achieved noticeably higher GDP increase of 6.7 per cent in the previous year. The UK economy performed along similar lines, growing by 7.6 per cent in the previous year and recording GDP increase of 4.1 per cent in 2022. Jungheinrich generates almost half of its Group revenue in the four countries mentioned above.

STATEMENT FROM THE BOARD OF MANAGEMENT AND TARGET ACHIEVEMENT

Jungheinrich performed very well in the 2022 financial year, especially in light of the macroeconomic conditions worsened by the Russia-Ukraine war. Despite various detrimental effects from the continued challenges in supply chains and significant material price rises, the Jungheinrich Group's revenue and EBIT rose in 2022. Revenue almost reached the upper value of the forecast range published in September 2022, while EBIT even slightly exceeded it. The target of sustainable profitable growth was achieved in 2022 with an EBIT ROS of 8.1 per cent, which is also just above the forecast range.

Despite the economic uncertainty, which was significantly intensified by the start of the Russia-Ukraine war on 24 February 2022, the Board of Management expected to see generally good market demand by the end of March 2022 and therefore assumed that the Group would continue to grow profitably. However, the internal corporate plan for 2022 at that time was no longer in line with the assessments of professional market participants at the time.

Against this backdrop, we issued a qualified comparative forecast for 2022 in an ad hoc announcement on 24 March 2022 before publication of the annual report for 2021, which usually contains the forecast for the coming year.

In another ad hoc announcement on 23 September 2022, we substantiated our forecast figures (with the exception of free cash flow) by stating specific ranges. At that time, internal expectations of the company's performance were higher than the estimates of professional market participants on account of the robust business performance in the first half of 2022, which continued in the third quarter of 2022.

This substantiation was based on strong demand and targeted, successful supply chain management, so that production standstills could be largely avoided and cost increases could be somewhat absorbed thanks to appropriate measures.

In the 2022 financial year, the value of incoming orders reached €4,791 million and was therefore in the middle of the forecast range (€4.6 billion to €4.9 billion). Group revenue amounted to €4,763 million and almost reached the upper value of the forecast range (€4.6 billion to €4.8 billion).

EBIT climbed considerably in the 2022 financial year to €386 million, slightly exceeding the upper value of the forecast range (€340 million to €380 million). Despite slightly lower overall plant utilisation compared to the previous year, thanks to appropriate measures to safeguard margins we were able to achieve an EBIT ROS of 8.1 per cent, which was also just above the range of 7.2 per cent to 8.0 per cent.

At €347 million, EBT only slightly exceeded the upper value of the expected range (€305 million to €345 million). The EBT ROS amounted to 7.3 per cent and was therefore exactly at the upper value of the anticipated range (6.5 per cent to 7.3 per cent).

Due to the sharp increase in working capital caused by the build up of inventories and the increase in trade accounts receivable, as well as the addition of trucks for short-term rental to fixed assets, the ROCE of 16.3 per cent was in the upper half of the forecast range (14.0 per cent to 17.0 per cent).

Working capital rose significantly due to the build up of inventories in part to safeguard delivery capability, as well as the increase in trade account receivable. Furthermore, there were cash outflows from additions of trucks for short-term rental to fixed assets. As forecast, this resulted in a clearly negative free cash flow of €–239 million.

Target-to-actual comparison

		Forecast		actual 2022
		March 2022[1]	September 2022[2]	
Incoming orders	in € billion	slightly < previous year	4.6 to 4.9	4.79
Revenue	in € billion	slightly > previous year	4.6 to 4.8	4.76
EBIT	in € million	significantly < previous year	340 to 380	386
EBIT-ROS	in %	significantly < previous year	7.2 to 8.0	8.1
EBT	in € million	significantly < previous year	305 to 345	347
EBT-ROS	in %	significantly < previous year	6.5 to 7.3	7.3
ROCE	in %	significantly < previous year	14.0 to 17.0	16.3
Free cash flow	in € million	–	significantly negative	–239

[1] Ad hoc release from 24 March 2022 and annual report 2021.

[2] Ad hoc release from 23 September 2022 and interim report as of 30 September 2022.

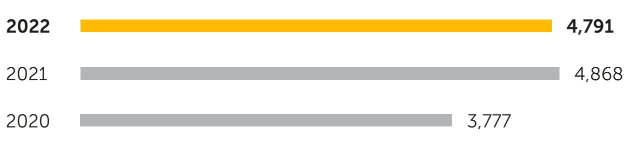
BUSINESS TREND AND EARNINGS POSITION

Orders on hand remain at a high level

At 129 thousand trucks, incoming orders in the new truck business, based on units, which includes orders for both new forklifts and trucks for short-term rental, fell by 20 per cent (previous year: 162 thousand trucks). By value, incoming orders for the business fields of new truck business, short-term rental and used equipment, as well as after-sales services were on a par with the previous year's level at €4,791 million (previous year: €4,868 million).

Orders on hand in the new truck business amounted to €1,595 million as of 31 December 2022 (previous year: €1,519 million). The reason for the ongoing very high number of orders on hand was the continued restricted availability of production materials for further processing.

Incoming orders in € million



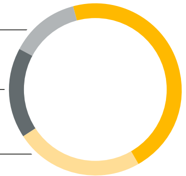
Incoming orders in the reporting year and orders on hand as of 31 December 2022 were adjusted for orders from Russia. Against the backdrop of the Russia-Ukraine war, no more trucks or spare parts were delivered to Russia or Belarus in the reporting year from the beginning of March.

Robust revenue growth despite strained material supply

Group revenue exceeded the previous year's figure (€4,240 million) by 12 per cent or €523 million and amounted to €4,763 million. Europe accounted for 84 per cent (previous year: 87 per cent) of revenue. In addition to Germany, revenue increased in Poland, the Netherlands and the United Kingdom, among other countries. Foreign revenue increased by 13 per cent to €3,657 million (previous year: €3,226 million). The foreign ratio was 77 per cent (previous year: 76 per cent).

Revenue generated outside of Europe amounted to €746 million (previous year: €556 million). This corresponds to a 34 per cent increase and a Group revenue share of 16 per cent (previous year: 13 per cent). Jungheinrich achieved strong growth in the countries of the Asia region and in South America.

Revenue in 2022 by region



in € million	2022	2021	Change %
Germany	1,106	1,014	9.1
Western Europe	2,113	1,963	7.6
Eastern Europe	798	707	12.9
Other countries	746	556	34.2
Total	**4,763**	**4,240**	**12.3**

The main driver of Group revenue was the new truck business with revenue growth of €436 million. This was due to higher revenue from new trucks and very strong growth in the automated systems business. Revenue in the short-term rental and used equipment business also increased and amounted to €710 million (previous year: €639 million). This development was mainly the result of increased demand for trucks for short-term rental. After sales increased significantly with revenue of €1,310 million in the reporting period (previous year: €1,190 million). The after-sales services share of Group revenue was unchanged from the previous year at 28 per cent. The supply chain situation remained challenging, especially as a result of the Russia-Ukraine war and the lockdown in Shanghai caused by the coronavirus. Due to the global interconnections in supply chains, the effects of the supply bottlenecks spread throughout the entire supplier and materials portfolio, as well as the associated logistics capacities. Revenue in the financial service business remained roughly on a par with the previous year in the reporting year at €1,131 million (€1,132 million).

Breakdown of revenue

in € million	2022	2021	Change %
New truck business	2,858	2,422	18.0
Short-term rental and used equipment	710	639	11.1
After-sales services	1,310	1,190	10.1
“Intralogistics” segment	**4,878**	**4,251**	**14.7**
“Financial Services” segment	**1,131**	**1,132**	**–0.1**
Reconciliation	–1,245	–1,143	8.9
Jungheinrich Group	**4,763**	**4,240**	**12.3**

Table contains rounding differences.

Gross profit benefits from higher revenue

Gross profit on sales increased by €150 million to €1,473 million (previous year: €1,323 million). In the reporting period, it benefited from the higher sales and appropriate measures to safeguard margins. The significantly higher material and logistics costs compared to the previous year had a negative impact. The gross margin fell from 31.2 per cent in the same period of the previous year to 30.9 per cent.

Cost structure (statement of profit or loss)

in € million	2022	2021	Change %
Cost of sales	3,290	2,916	12.8
Gross profit	1,473	1,323	11.3
Selling expenses	834	741	12.6
R&D costs	113	95	18.9
General administrative expenses	161	136	18.4

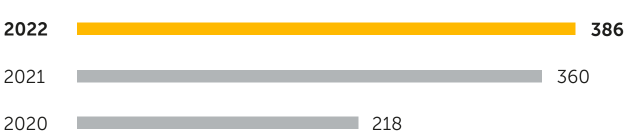
The increase in selling expenses was roughly proportional to revenue growth. This was due in part to the increase of personnel in Sales and the associated increase in personnel expenses. Unchanged from the previous year, selling expenses represented 17.5 per cent of Group revenue.

Research and development costs climbed significantly by €18 million to €113 million in the reporting period (previous year: €95 million). This item contained full-year arculus expenses for the first time, whereas in the previous year expenses were taken into consideration pro rata (acquisition in the fourth quarter of 2021).

At 3.4 per cent of Group revenue, administrative expenses were only slightly higher than the previous year's level (3.2 per cent). The administrative expenses included expenses associated with strategic projects on ongoing process optimisation, efficiency optimisation and digitalisation projects – including expenses for building up human resource capacities – which also climbed compared to the previous year.

Other operating income increased by €10 million to €17 million (previous year: €7 million). This figure contained net income of €5 million from the transitional consolidation of shares in JTES. Effective 27 April 2022, Triathlon increased its share in the company to 60 per cent. Therefore, Jungheinrich's share was reduced to 40 per cent. The company left the group of fully consolidated companies on this date and since then has been consolidated according to the equity method. In addition, €6 million was generated from the sale of land in the course of an optimisation of sites in the United Kingdom.

Earnings before interest and income taxes in € million

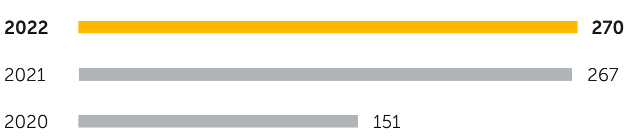


Increased EBIT despite challenging environment

At €386 million, EBIT exceeded the previous year's figure (€360 million) by €26 million, or 7 per cent. At 8.1 per cent, EBIT ROS was slightly below the previous year's figure (8.5 per cent).

The financial income totalled €–39 million (previous year: €–11 million) and was particularly influenced by the evaluation of the securities and derivatives held in special funds. High valuation losses were recorded here in the year under review; however, a profit was recorded in the previous year. Moreover, the financial loss includes the monetary loss from the now required first-time application of IAS 29 "Financial Reporting in Hyperinflationary Economies" for the subsidiary in Turkey, as well as higher negative exchange rate effects from the reporting date-related valuation of loans to affiliated companies and from other valuation effects. At €347 million, EBT almost reached the previous year's level (€349 million). EBT return on sales amounted to 7.3 per cent (previous year: 8.2 per cent).

Profit or loss in € million



Income tax expense declined in line with the development in earnings to €78 million (previous year: €82 million). The Group tax rate amounted to 22 per cent following 23 per cent in the previous year. The main reason for the lower tax rate in the reporting year was that, compared to the previous year, a higher share of profits was generated outside Germany, where lower tax rates were applied than in Germany. Profit or loss of €270 million (previous year: €267 million) was thus generated. The earnings per preferred share (based on share of earnings attributable to the shareholders of Jungheinrich AG) came to €2.65 (previous year: €2.62).

ROCE fell to 16.3 per cent (previous year: 20.2 per cent). This was due to the sharp increase in average capital employed in the "Intralogistics" segment as a result of the building up of inventories, an increase in trade accounts receivable and the addition of trucks for short-term rental to fixed assets.

Dividend: previous year's record maintained

The Jungheinrich AG Board of Management will propose to the Annual General Meeting on 11 May 2023 a dividend of €0.66 (previous year: €0.66) per ordinary share and €0.68 (previous year: €0.68) per preferred share. This dividend proposal will result in a total payout of €68 million, unchanged from the previous year. The payment ratio of 25 per cent (previous year: 26 per cent) is in the company's target range of paying between 25 per cent and 30 per cent of profit to shareholders. Jungheinrich follows a policy of consistent dividend payments.

FINANCIAL AND ASSET POSITION

Principles and targets of financial management

The parent company, Jungheinrich AG, is responsible for the Group's financial management. It ensures that sufficient financial resources are available to cover strategic and operational requirements.

The Group treasury is primarily responsible for cash and currency management. It aims to provide Group companies with financial resources at the best interest and currency conditions, and to control cash flows. All financing possibilities provided by international money and capital markets are exploited in order to procure the short, medium and long-term financial resources that are required.

Ensuring that incomethe Group has sufficient liquidity reserves is particularly important so that the Group is able, even in economically difficult times, to implement all necessary strategic measures and guarantee financial independence.

The Group takes a conservative approach to investing in order to ensure sufficient liquidity. The objective is not to maximise profit, but – considering current conditions in the international money and capital markets – to preserve assets.

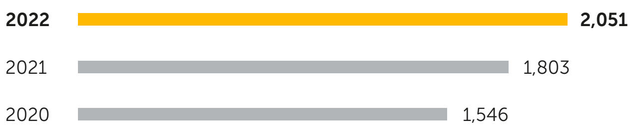
A central working capital management system is in place to strengthen internal financing that ensures the optimisation and standardisation of material processes and systems.

Jungheinrich AG's capital requirements are covered through operating cash flows and short and long-term financing. Jungheinrich maintains a solid liquidity reserve. As of 31 December 2022, the medium-term credit agreements in place amounted to €305 million. These were supplemented by short-term bilateral credit lines amounting to €185 million and a commercial paper programme amounting to €300 million. This was set up in the reporting year. The medium-term credit agreements, the short-term credit lines and the commercial paper programme were only used to a small extent. In addition, separate guarantee facilities totalling €156 million were available, almost half of which were utilised, as well as promissory notes in the total amount of €160 million. Credit or promissory note agreements do not contain financial covenants.

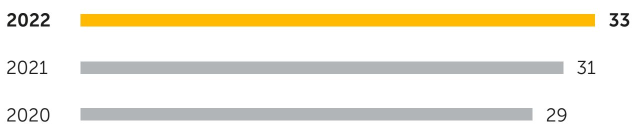
Stable financial position with strengthened capital structure

At €535 million at the end of 2022, cash and cash equivalents and securities were €219 million below the prior-year figure (€754 million). Cash and cash equivalents were used to a considerable extent to build up working capital in order to safeguard Jungheinrich's delivery capability. Furthermore, financing for trucks for short-term rental in individual European countries was repaid. As at 31 December 2022, net debt amounted to €75 million (previous year: net credit of €222 million). The significant reduction of €297 million was primarily attributable to the negative free cash flow in the reporting year.

Shareholders' equity in € million



Equity ratio in %



Capital structure

in € million	31/12/2022	31/12/2021	Change %
Shareholders' equity	**2,051**	**1,803**	**13.8**
Non-current liabilities	**2,130**	**1,982**	**7.5**
Provisions for pensions and similar obligations	159	228	−30.3
Financial liabilities	420	282	48.9
Liabilities from financial services	1,416	1,344	5.4
Other liabilities	135	128	5.5
Current liabilities	**1,983**	**1,985**	**−0.1**
Other provisions	292	287	1.7
Financial liabilities	189	250	−24.4
Liabilities from financial services	576	552	4.3
Trade accounts payable	556	533	4.3
Other liabilities	370	363	1.9
Balance sheet total	**6,164**	**5,769**	**6.8**

Table contains rounding differences.

The €248 million increase in equity was the result firstly of profit or loss and secondly of the adjustment recognised directly in equity of retirement benefit obligations as at the balance sheet date amounting to €69 million. This increase in shareholders' equity was offset by the dividend payment of €68 million (previous year: €43 million). The equity ratio increased to 33 per cent (previous year: 31 per cent). Adjusted for all effects from the "Financial Services" segment, the shareholder's equity for "Intralogistics" amounted to 50 per cent (previous year: 48 per cent).

Provisions for pensions and similar obligations declined to €159 million (previous year: €228 million). The decrease resulted to a significant extent from the effects of the remeasurement of pension obligations in Germany, which in turn were the result of a rise in the discount rate from 1.3 per cent at the end of 2021 to 4.2 per cent as at the balance sheet date. Non-current and current financial liabilities rose by €77 million to €609 million (previous year: €532 million), despite the repayment of financing for trucks for short-term rental in individual European countries. Non-current and current liabilities from financial services of €1,992 million were up by €96 million on the 31 December 2021 figure (€1,896 million) due to the increase in new contracts.

At €292 million, other current provisions were slightly above the figure reported on 31 December 2021 (€287 million). Trade accounts payable rose primarily due to the expansion of measures to hedge risks in material orders to €556 million (previous year: €533 million). At €370 million (previous year: €363 million), other current liabilities remained roughly in line with the previous year.

Free cash flow, the key performance indicator used to manage the Group's liquidity and financing, is determined as follows using the cash flow from operating activities and investing activities reported in the statement of cash flows:

Reconciliation free cash flow

in € million	2022	2021
Cash flows from operating activities	**–136**	**251**
Cash flows from investing activities	79	–115
Adjustment for payments for acquisitions and proceeds from the sale of securities as well as payments for time deposits and proceeds from time deposits	–182	–48
Cash flows from investing activities (adjusted)	**–103**	**–163**
Free cash flow	**–239**	**89**

Statement of cash flows[1]

in € million	2022	2021
Profit or loss	270	267
Depreciation, amortisation and impairment losses	401	377
Changes in trucks for short-term rental and trucks for lease (excluding depreciation) and receivables from financial services	–465	–351
Changes in liabilities from financing trucks for short-term rental and financial services	19	38
Changes in working capital	–364	–81
Other changes	4	1
Cash flows from operating activities	**–136**	**251**
Cash flows from investing activities (adjusted)	**–103**	**–163**
Cash flows from financing activities	**37**	**–322**
Net cash changes in cash and cash equivalents	**–202**	**–234**

Tables contain rounding differences.

[1] Exchange rate effects were eliminated in the cash flow statement. Therefore the changes in balance sheet items shown there cannot be reproduced in the statement of financial position.

Cash flow from operating activities reflects necessary increase in working capital

Cash flow from operating activities was €–136 million for the reporting year, a decrease of €387 million compared with the previous year (€+251 million). The significant decrease was largely attributable to the large increase in working capital of €283 million, which can be attributed to the building up of inventories to safeguard delivery capability and the increase in finished goods as well as the increase in trade accounts receivable in particular. Cash flow was also down due to the higher cash outflows for the addition of trucks for short-term rental as well as the changes in the underlying financing. These changes related to the repayment of financing for trucks for short-term rental in individual European countries. Increased depreciation, amortisation and impairment losses had the opposite effect.

At €–103 million, cash flow from investing activities in the reporting year was higher than the previous year's figure (€–163 million) and included payments for the acquisition of the former sales partner in New Zealand in addition to the investments in expansion and replacements, as well as an initial instalment for the new plant in Czechia. The previous year figure includes the acquisition of arculus at €71 million.

Free cash flow, the sum of cash flows from operating activities and investing activities, declined markedly to €–239 million (previous year: €+89 million).

Higher cash flow from financing activities to cover capital requirements

Cash flow from financing activities of €37 million in the reporting year increased significantly by €359 million compared to the previous year (€–322 million). After long-term loans of €198 million were repaid in the previous year, long-term financing was taken out in the reporting year, partly in the form of promissory notes of €100 million in total.

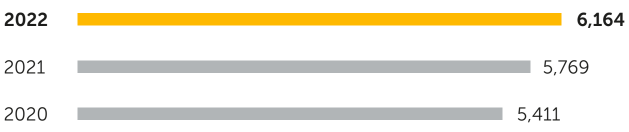
Growth-related increase in non-current and current assets

The carrying amounts for intangible assets and property, plant and equipment declined by €4 million from €922 million in the previous year to €918 million as at the balance sheet date. This includes property, plant and equipment of €17 million disposed of as part of the transitional consolidation of shares in JTES. Capitalised development expenditure performed in the opposite direction, increasing by €14 million due to intensified development activities and the completion of corresponding projects.

Due to the increase in the number of trucks, the carrying amounts for trucks for short-term rental and lease increased by €163 million to €1,026 million (previous year: €863 million). The carrying amounts for trucks for short-term rental amounted to €459 million as at the balance sheet date, compared with €363 million in the previous year. The carrying amounts for trucks for lease from financial services increased from €500 million in the previous year to €567 million in the reporting year. Non-current and current receivables from financial services increased slightly by €56 million to €1,463 million compared with €1,407 million for the previous year.

In order to ensure delivery capability, inventories were increased significantly by €230 million to €994 million (previous year: €764 million). This includes finished products, which increased by €79 million from €208 million in the previous year to a total of €287 million as at the balance sheet date. Current trade accounts receivable rose by €144 million to €899 million (previous year: €755 million) due to business-related factors. The increase of €28 million in other current assets from €80 million in the previous year to €108 million in the reporting year was primarily due to the increase in VAT credits and income tax receivables. The decrease in cash and cash equivalents and current securities by €214 million to €506 million as at the balance sheet date (previous year: €720 million) was primarily caused by the negative free cash flow in the 2022 financial year.

Balance sheet total in € million



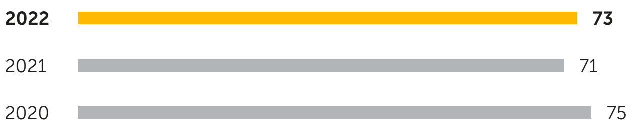
Asset structure

in € million	31/12/2022	31/12/2021	Change %
Non-current assets	**3,251**	**3,079**	**5.6**
Intangible assets and property, plant and equipment	918	922	–0.4
Trucks for short-term rentaland trucks for lease	1,026	863	18.9
Receivables from financial services	1,057	1,036	2.0
Other assets (including financial assets)	221	224	–1.3
Securities	29	34	–14.7
Current assets	**2,913**	**2,690**	**8.3**
Inventories	994	764	30.1
Trade accounts receivable	899	755	19.1
Receivables from financial services	406	371	9.4
Other assets	108	80	35.0
Cash and cash equivalents and securities	506	720	–29.7
Balance sheet total	**6,164**	**5,769**	**6.8**

Capital expenditure remains on par with previous year's level

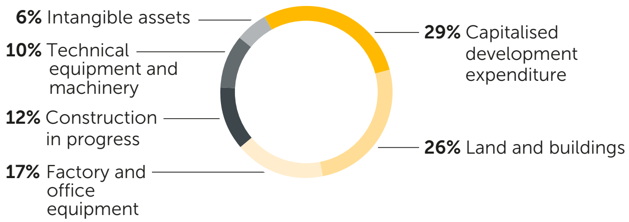
As a result of the ongoing restrained investments in expansion and replacements, the Group's capital expenditure remained on a par with the previous year at €73 million. This includes an initial instalment for the new plant in Czechia. As at the balance sheet date, purchase commitments for property, plant and equipment alone amounted to €23 million. All capital expenditure was financed with the company's own resources.

Capital expenditure[1] in € million



[1] Property, plant and equipment and intangible assets excluding capitalised development expenditure and right-of-use assets.

Distribution of capital expenditure in 2022[2]



[2] Property, plant and equipment and intangible assets excluding right-of-use assets.

FINANCIAL SERVICES

Financial services business secures long-term customer loyalty

All of the company's financial services activities are pooled in the "Financial Services" segment. This segment provides individual transfer of use and sales financing to promote the sale of trucks. The financial service agreements offered are always combined with full service or maintenance agreements. This business model's objective is to provide customer service for the entire duration of a truck's use and achieve long-term customer loyalty.

All risks and opportunities that result from the financial service agreements are assigned to the operating sales units of the "Intralogistics" segment, with the exception of customer receivable default risks and refinancing risks.

Jungheinrich is represented by its own financial services companies in eight countries, namely in Germany, Italy, France, the UK, Spain, the Netherlands, Austria and Australia.

The "Financial Services" segment's uniform structural and procedural organisation throughout the Group enables a financing structure with powerful domestic and foreign banks. The refinancing company Elbe River Capital S.A., Luxembourg, also enables us to take advantage of refinancing through the capital market. The volume placed through this financing platform amounted to €301 million as of 31 December 2022 (previous year: €332 million).

Key figures for financial services

in € million	31/12/2022	31/12/2021	Change %
Original value of new contracts[1]	851	777	9.5
Original value of contracts on hand	3,821	3,563	7.2
Trucks for lease from financial services	712	643	10.7
Receivables from financial services	1,476	1,420	3.9
Shareholders' equity	120	94	27.7
Liabilities	2,418	2,291	5.5
Revenue[1]	1,131	1,132	–0.1
EBIT[1]	25	18	38.9

[1] 1 January–31 December.

In addition to the SAP standard software used by the financial services business to record and balance lease agreements, there is a software solution that uses a database ("Global Lease Center") for smaller sales units.

Refinancing with matching terms and interest rates

Jungheinrich companies conclude financial service agreements either directly with customers or indirectly via leasing companies or banks (also known as vendor contracts). Agreements concluded directly with customers are reported as operating leases or finance leases pursuant to IFRS accounting regulations. These long-term customer agreements are refinanced with matching terms and interest rates and are reported under liabilities from financial services. Payments from customer agreements cover at least the refinancing payments to credit institutes for the transactions. For vendor agreements, deferred revenue stemming from sales proceeds already generated with an intermediate leasing company are stated under deferred income.

Revenue from financial services stable at over €1 billion

New long-term financial service agreements rose by €74 million in 2022 (previous year: €22 million). In terms of regions, Poland, Brazil, South Africa, Singapore, India and Colombia are noteworthy with an increase in the value of new agreements of more than 80 per cent. Of the increase in agreements, 61 per cent was attributable to the eight countries with Jungheinrich financial services companies (previous year: 68 per cent).

At the end of 2022, existing agreements totalled 217 thousand units, 5 per cent more than the previous year (207 thousand units). This represents an original value of €3,821 million (previous year: €3,563 million).

As in the previous year, 40 per cent of the number of new trucks sold were sold with financial service agreements.

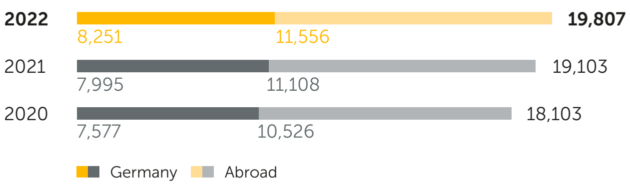
At €1,131 million, revenue in the "Financial Services" segment reached the level of the previous year (€1,132 million), therefore remaining above the €1 billion mark.

EMPLOYEES

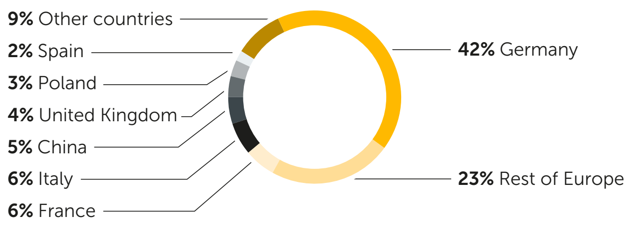
Number of employees worldwide rises to around 20,000

The number of employees worldwide increased by 704 net due to the consistent implementation of Strategy 2025+ and taking into account two portfolio changes (addition of Jungheinrich New Zealand and removal of JTES from the group of fully consolidated companies). As of 31 December 2022, the Group had 19,807 (previous year: 19,103) employees (measured in full-time equivalents).

Employees in FTE; always on 31/12



Employees by region As of 31/12/2022



in FTE	2022	2021	Change %
Germany	8,251	7,995	3.2
France	1,242	1,204	3.2
Italy	1,113	1,099	1.3
United Kingdom	781	781	0.0
Poland	618	597	3.5
Spain	533	520	2.5
Rest of Europe	4,482	4,327	3.6
China	919	877	4.8
Other countries	1,868	1,703	9.7
Total	**19,807**	**19,103**	**3.7**

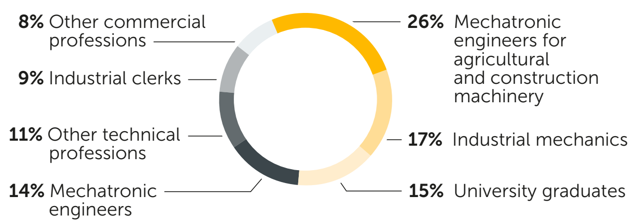
In order to be able to react more flexibly to workload fluctuation, temporary workers are employed alongside the permanent workforce in production plants. In the reporting year, the number of temporary workers increased to an annual average of 635 (previous year: 443). As of 31 December 2022, the Group employed 681 temporary workers (previous year: 606).

After-sales services accounted for 43 per cent of the workforce or 8,497 of our employees (previous year: 8,081). Of this figure, 6,022 were after-sales service technicians located around the world (previous year: 5,707).

Jungheinrich offers 24 different apprenticeships

As of 31 December 2022, the Group employed 496 (previous year: 509) trainees and apprentices, of which 334 (previous year: 354) were based in Germany. The Jungheinrich Group offers 24 different apprenticeships in Germany, and dual study courses in cooperation with universities. The number of trainees and apprentices on dual study courses was 15 per cent in 2022 – based on the number of trainees and apprentices in Germany (previous year: 14 per cent).

Apprenticeable professions[1] As of 31/12/2022



[1] Basis: 334 apprentices in Germany.

Personnel changes

Dr Ulrich Schmidt, a shareholder representative on the Supervisory Board and Chairman of the Finance and Audit Committee, resigned from the Supervisory Board with effect from 30 November 2022. Ms Kathrin Elisabeth Dahnke was appointed by a court to the Supervisory Board with effect from 1 December 2022 to replace Dr Schmidt. Ms Dahnke was also elected to sit on the Finance and Audit Committee by the Supervisory Board and was chosen to chair the said committee by its members.

Legal disclosure

CORPORATE GOVERNANCE STATEMENT PURSUANT TO SECTIONS 289F AND 315D OF THE GERMAN COMMERCIAL CODE (HGB)

Pursuant to Sections 289f and 315d of the HGB, as a listed stock corporation, Jungheinrich AG is obligated to issue a Corporate Governance Statement for the Group. This statement has been published on the company's website ↗ www.jungheinrich.com/en/investor-relations/corporate-governance.

COMBINED SEPARATE NON-FINANCIAL REPORT IN ACCORDANCE WITH THE CSR DIRECTIVE IMPLEMENTATION ACT

In accordance with the CSR Directive Implementation Act, which aims to regulate non-financial corporate reporting, the Jungheinrich Group and Jungheinrich AG are obliged to report on non-financial aspects, including at least environmental, employee and social aspects, along with respect for human rights and combating corruption and bribery.

The Jungheinrich Group and Jungheinrich AG fulfil this obligation in the form of a combined separate non-financial report in accordance with Sections 289b Paragraph 3 and 315b Paragraph 3 of the German Commercial Code. This report is published as a separate chapter in the annual report. The annual report is published on the company's website ↗ www.jungheinrich.com/en/investor-relations/reports-publications-6224.

Internal control and risk management system

INTERNAL CONTROL SYSTEM

Jungheinrich considers the Internal Control System[1] (ICS) to cover all principles, processes and guidelines introduced to ensure the achievement of business objectives. The objective of the ICS is to ensure the functional capacity, safety and efficiency of all business processes and the reliability of financial reporting and compliance of all activities with laws and guidelines. The ICS put in place considers all material business processes and exceeds the requirements of an ICS in terms of accounting. An effective and efficient ICS is crucial for managing risks in business processes.

All Jungheinrich companies are part of the ICS. The extent of the implemented controls varies and depends in part on the materiality of the companies for the Group and the specific risks associated with the company. The management of the respective company is obliged to establish an appropriate and effective ICS within its sphere of responsibility.

Overall responsibility for the ICS lies with the Jungheinrich Board of Management, which is therefore responsible for ensuring an appropriate and effective ICS. The Group Board of Management keeps the Supervisory Board and the Audit Committee informed on a continuous basis. It is supported in this task by the internal audit, which assesses the ICS in all audited companies for appropriateness and effectiveness within the context of the approved audit plan. The Supervisory Board monitors the effectiveness of internal audit, risk management and the ICS.

At Jungheinrich, the assessment of the ICS with respect to the effectiveness and efficiency of the process-dependent controls comprises process controls, in particular with respect to the implemented segregation of functions, the transparency of target processes, the minimum requirements for employees and the dual control principle. Appropriate segregation of functions and the application of the dual control principle reduce the risk of fraudulent activity. The mutually aligned processes, systems and controls provide reasonable assurance that business is conducted in accordance with relevant regulations and laws and is reliable.

Moreover, the Jungheinrich Group has guidelines that define powers, workflow and controls for all material processes. All employees can access these guidelines on the intranet.

System backups are regularly created for relevant IT systems in order to avoid data loss as far as possible. This backup concept also includes technical system controls, manual random checks by experienced employees and personalised permissions and access restrictions.

To complete the controls and monitoring activities conducted during the year, the legal representatives of the companies within the scope of consolidation and the persons responsible for the specialist and functional departments confirm at year closing that there were no violations of laws or regulations and no irregularities within the framework of the internal control systems. They also confirm the accuracy and completeness of the ICS documentation for their respective spheres of responsibility. Jungheinrich continuously develops the requirements for the ICS and adapts the control mechanisms to changing processes and requirements.

INTERNAL CONTROL SYSTEM FOR THE GROUP ACCOUNTING PROCESS

The following describes the key features of the internal control and risk management system with respect to the Jungheinrich Group accounting process:

- The Jungheinrich Group has a diverse organisational and corporate structure that ensures appropriate performance checks.
- The holistic analysis and management of earnings-critical risk factors and risks jeopardising the company's existence are handled by Group-wide governance, budgeting and controlling processes as well as a risk management and early risk detection system, which is described below.

[1] Disclosure unrelated to the management report that is not subject to audit of the financial statements.

- The functions of all Group accounting process departments (e.g. Corporate Accounting, Corporate Controlling and Group Treasury) are clearly assigned.
- IT systems employed in Corporate Accounting are protected from unauthorised access and are largely off-the-shelf software (primarily SAP systems).
- The Jungheinrich Group has guidelines in place determining accountabilities, workflow and controls for all material processes. All employees can access these guidelines on the intranet.
- A comprehensive Group accounting manual regulates the Group accounting process of the individual companies and consolidation at Group level, ensuring that business transactions are accounted for, measured and uniformly reported throughout the Group. The manual is updated regularly and made available to the areas involved in the Group accounting process. Regular sample inspections and plausibility checks are performed both decentrally and centrally to verify the Group accounting data's completeness and correctness. This is done either manually or using software.
- Material processes of relevance to accounting are subject to regular reviews. The establishment of the early risk detection system is examined as part of the statutory annual audit of the annual financial statements and consolidated financial statements. Findings derived from this audit are taken into account when considering the continual improvement of the Group-wide, Jungheinrich-specific system. The Corporate Compliance, Audit & Data Protection division reviews the effectiveness of the accounting-related internal controls.
- The Supervisory Board or its Finance and Audit Committee is responsible for, among other issues, dealing with material issues pertaining to Group accounting and risk management, compliance and the audit assignments and focal points of audits conducted by the independent auditors and the Corporate Compliance, Audit & Data Protection division.

Another core element of risk governance is the audit of the companies by internal audit on the basis of a risk-oriented audit plan. Taking into account the external and internal audits of the ICS carried out in 2022, no matters arose that would have led the Jungheinrich AG Board of Management to conclude that the ICS was not appropriate and effective in all material respects in the 2022 financial year.[1]

RISK AND OPPORTUNITY REPORT

The early identification of risks and opportunities and the steps to be taken in response are an important element of corporate governance at Jungheinrich. The basic principles and courses of action are defined as part of the risk management system in a Group guideline and a risk management manual, which are continually checked and developed further.

Objectives of the risk management system and risk culture

Risks and opportunities are a fundamental component of all business activities. In a complex, global market in particular there are a number of external as well as internal influences on Jungheinrich's business activities. The objective of the company's risk management system is to recognise and evaluate the risks as well as the opportunities arising from these influences so that adequate control measures can be initiated. Another aim – in addition to creating transparency on risks and opportunities – is to actively promote a corporate culture with a consistent understanding of risks and opportunities throughout the Group.

Risks and opportunities include all future developments or events that could lead to a negative (risk) or positive (opportunity) deviation from targets. The Jungheinrich risk management system is based on the points of the auditing standard 981 of the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW) and it is integrated into a binding Group-wide guideline that is available to all employees.

Risk management system organisation and processes

The Jungheinrich Board of Management is responsible for the development and maintenance of an effective risk management system. Group risk management, a unit assigned to Corporate Controlling, defines and develops the risk management system's methods and processes on an ongoing basis and is also responsible for Group-wide quality assurance, coordination and analyses. All those involved with risk management processes continually receive training in the form of courses, at information events and through communication initiatives about the risk management system requirements, methods and news. The risk management system covers the length of the organisational structure at the Jungheinrich Group including decentral organisational units.

[1] Disclosure unrelated to the management report that is not subject to audit of the financial statements.

Identification
The managers of the central and decentral organisational units are responsible for identifying, evaluating and managing risks and opportunities. In addition to identifying risks and opportunities at regular management meetings, the risk managers perform a comprehensive inventory of risks and opportunities three times a year during the planning and projection processes. The risks and opportunities identified are assigned to predetermined risk areas that are based on the business environment and Jungheinrich's corporate targets.

Evaluation and management
Risks and opportunities are evaluated based on planned business development or the current projection. In addition to the current financial year, the period under consideration for evaluating the risks and opportunities includes the two following financial years. The likelihood of occurrence and the financial impact of the corporate risk on Group EBIT or the profit or loss for risks with a direct impact on the financial result or income taxes is estimated using standardised methods for each of the years considered. The financial impact is considered both before (gross) and after (net) any management measures. Management measures are systematically documented and monitored. Qualitative impacts on reputation, compliance, corporate strategy and operations are also recorded.

Analysing risks
All Corporate Controlling organisational units and designated risk managers perform a multi-stage quality assurance process for the risks and opportunities reported in each risk area. This allows the plausibility of the reported risks to be checked and any redundancies or interdependencies to be identified. Finally, the reported risks and opportunities are analysed by the corporate risk manager for impacts on the Group. Aggregating all substantial risks and opportunities through a stochastic simulation process allows potential impacts on earnings and Group-wide developments, and any interdependencies, to be identified early on. The key figure value at risk (VaR)[1] is determined for the entire risk portfolio with a confidence level of 99 per cent.

Monitoring the Group's risk-bearing capacity
To evaluate Jungheinrich's ability to bear risks, all risks identified are checked against the risk-bearing capacity, which takes into account both shareholders' equity and cash and cash equivalents. Other early warning indicators serve to continually monitor risk-bearing capacity and early risk detection.

Communication
The findings of risk analyses are reported in the Group Risk Committee, which is attended by the Board of Management. This includes statements on the ability to bear risks, substantial risks and opportunities and potential management measures. Ad-hoc reporting is also used to inform Group risk management and the Board of Management of all probable and highly probable risks and opportunities that would have a moderate impact or higher.

Monitoring effectiveness
The risk and opportunity situation is an integral part of the planning and projections reported to the Supervisory Board by the Board of Management. The Supervisory Board monitors the efficacy of the risk management system and whether risks and opportunities are handled appropriately. The Corporate Compliance, Audit & Data Protection department, as an independent authority, is tasked with checking that the risk management system functions and is effective.

Overall assessment of risks and opportunities
There were no risks identified in the reporting period that could jeopardise the Jungheinrich Group's continued existence.

The Russia-Ukraine war had a significant impact on the overall risk situation of the Group in the 2022 financial year. The war and its humanitarian, political and economic consequences result in diverse risks for Jungheinrich. In addition to the potential negative impact on the business activities of the local sales companies in Russia and Ukraine, the company may be affected by sanctions and counter-sanctions, as well as any resulting potential loss of gas or electricity supply. This poses a particular risk to Jungheinrich's production, procurement and logistics processes.

[1] The value-at-risk indicates the maximum value that may not be exceeded before the end of a predetermined period with a certain probability (confidence level).

Supply shortages and delays originating on the procurement side, along with increases in the cost of materials remain central risks that can impact production stability through the value chain and delivery times to customers. Furthermore, uncertainties arise in terms of energy supply costs, both for Jungheinrich companies and on the supplier side.

Jungheinrich created a central crisis team and established additional local crisis teams in its organisational units and factories in order to identify upcoming risks caused by the Russia-Ukraine war and supply-side shortages at an early stage and keep the impact of these risks as minimal as possible through timely, appropriate and coordinated measures. The company has also taken measures to reduce its dependence on natural gas.

Risks from the coronavirus pandemic declined significantly in 2022.

Due to Jungheinrich's international operations, cyclical fluctuations involve risks for business development. Economic developments are continually observed and analysed based on regular market analyses for material handling equipment and automated systems, the competitive environment and capital markets, especially regarding fluctuations in exchange rates and interest rates. The objective is to discover information that could be relevant to future order development. Production plans are continually adapted to incoming orders in order to achieve the best-possible production capacity utilisation. Jungheinrich counters the risk of a downturn in business by continually enhancing the Group's product portfolio, expanding the scope of services, further intensifying marketing and sales, offering financing solutions and implementing efficiency measures.

Cyber attacks also pose risks that are mitigated through security precautions, particularly the continual and targeted expansion of the information technology security management system.

Taking into account the external and internal audits of the risk management system and the compliance management system carried out in 2022, no matters became known that would have led the Jungheinrich AG Board of Management to conclude that the risk management system or the compliance management system was not appropriate and effective in all material respects in the 2022 financial year.

Risk and opportunity situation

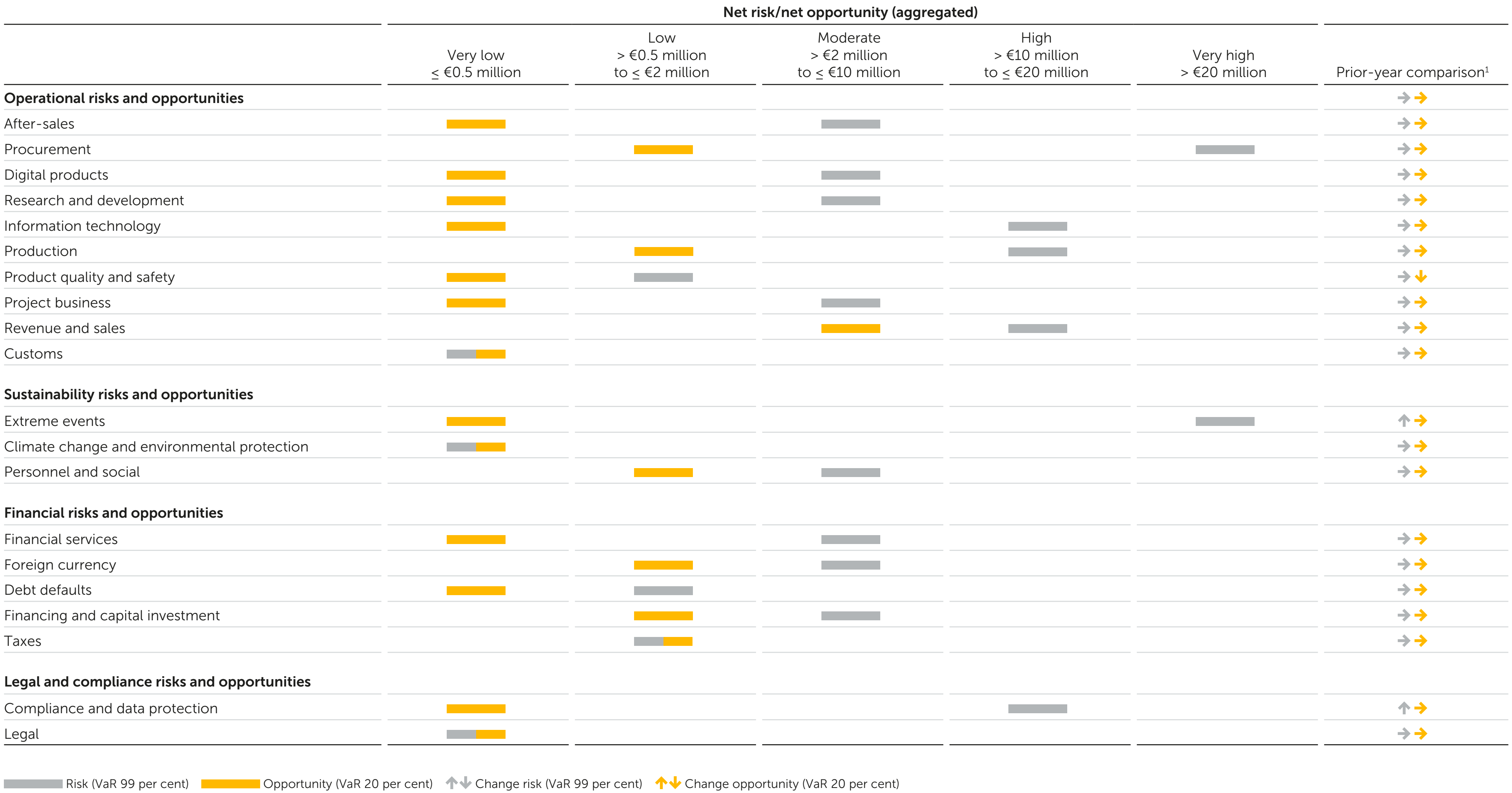
The table on the following page gives an overview of the substantial risks and opportunities and their potential impact on the Jungheinrich Group for the next two financial years as well as the change compared to the previous year. The net impacts of risks and opportunities are presented separately and not offset against each other. Risks and opportunities are aggregated in risk areas at Jungheinrich, with risks classified according to their negative impact on the result based on VaR 99 per cent (loss value) and opportunities according to their positive impact on the result based on VaR 20 per cent (gain value). The prior-year comparison presented here refers to a change in the assignment to the impact class as of a minimum change of €2 million.

Risks and opportunities are divided into the following impact classes based on their net impact:

Very low	≤ €0.5 million
Low	> €0.5 million to ≤ €2 million
Moderate	> €2 million to ≤ €10 million
High	> €10 million to ≤ €20 million
Very high	> €20 million

[1] Disclosure unrelated to the management report that is not subject to audit of the financial statements.

Risk areas of Jungheinrich Group



[1] The prior-year comparison presented here refers to a change in the assignment to the impact class as of a minimum change of €2 million.

The impact of the individual risks or opportunities are assigned to impact classes based on maximum value.

The description of the probability of occurrence for individual risks and opportunities is based on the following classes:

Improbable	≤ 25 per cent
Possible	> 25 per cent to ≤ 50 per cent
Probable	> 50 per cent to ≤ 75 per cent
Highly probable	> 75 per cent to 100 per cent

The risk areas are described separately in the following section. Material individual risks and opportunities with moderate or higher net impacts from €5 million upwards in each risk area are described.

Operational risks and opportunities

After-sales

The risk area after-sales consists of risks and opportunities that could occur as part of our work with customers during the product life cycle. Jungheinrich continues to class the impact of after-sales risks as moderate overall.

There is still a fundamental risk of potential supplier failures or delays due to material availability in spare parts operations. There is also a risk that material costs will rise further and these costs cannot be passed on to the customer. In order to avoid supplier risks in spare parts operations, despite the tense conditions on the market, regular task force meetings monitor the risk. A detailed description of the supplier risks is presented below in the procurement risk area. Materials are also stockpiled to ensure that materials are available despite any volatility.

Procurement

Risks and opportunities in the field of procurement include disruptions in the supply chain and fluctuations in the cost of raw materials, equipment and energy. Overall, procurement risks continue to be classified as very high, while the corresponding opportunities are aggregated and still classified as low.

General deterioration of the already-tense market situation and trade restrictions along with potential supply chain disruptions due to production and logistics restrictions can result in materials shortages and a collapse in supply. Moreover, supplier insolvencies, cyber attacks on suppliers and geopolitical developments, especially with regard to China, represent further risks. The probability of occurrence is still deemed possible. In pessimistic scenarios, the impacts remain very high and may lead to production downtimes and significantly higher costs for alternative procurement or necessary services.

To take preventive action against supply chain disruptions, Jungheinrich relies on control systems as part of its consistent supplier management system to monitor and analyse the financial health of the suppliers, the stability of the supply chains and transport routes. A task force also analyses developments in the supply chains on a daily basis in order to react early to prevent possible materials shortages and developments in materials supply to guarantee the stability of the global supply chains to the greatest possible extent. Supply reach is also continually determined and alternative procurement sources and products are introduced.

Details with regard to a potential gas shortage or an under-supply of electricity grids are detailed in the extreme events risk area [page 82 f.].

Furthermore, there are high levels of uncertainty in the price trends of raw materials and energy as well as in general inflationary tendencies.

This is particularly evident in relation to the volatility of the gas and energy markets, including potential state intervention, for example in the form of a gas price cap. Significant price increases, including those affecting alternative energy sources, are accepted at considerably higher costs in order to avoid a supply-side collapse in production. This concerns both the supply of energy to Jungheinrich's own sites and to suppliers' passing on higher energy costs to Jungheinrich. Negative impacts are classified as possible with a high to very high impact.

The price of raw materials on the global market remains volatile, resulting in uncertainties when planning material costs. Procurement uncertainties for production materials and spare parts primarily affect electronic components, lithium-ion batteries and steel. For electronic components, fluctuations around the budgeted costs are considered very probable. Compared to the previous year, the impact has decreased on the risk side and increased on the opportunity side and is classified as a moderate impact compared to the planned value. Raw material costs for lithium-ion batteries are expected to remain at a high level on account of the continued expansion of electric mobility and significantly rising demand as a result thereof. In terms of steel prices, there may be a high impact in improbable scenarios.

Digital products

Jungheinrich develops and distributes digital products, such as the warehouse management systems (WMS), steering software for conveyor systems and other digital solutions for material handling equipment. Jungheinrich operates a cloud-based fleet management system (FMS) to connect the material handling equipment. Risks from digital products are again classified as moderate. On the opportunity side, the impact has been reduced from low to very low.

A certified Information Security Management System in accordance with ISO/IEC 27001 has been put in place to enable the continuous improvement and maintenance of information security. The certification covers a large part of the development, maintenance and – insofar as it is Jungheinrich's responsibility – the operation of the end-customer software solutions. Further details on this certification are given in the information technology risk area. Jungheinrich received a successful assessment according to the industry standard TISAX (Trusted Information Security Assessment Exchange) in November 2022.

Jungheinrich is also working continually on the strategic expansion of its digital products. This includes the ongoing expansion of expertise in the field, which is accompanied by the Group's central functions.

Research and development

The research and development risk area covers both risks and opportunities from development projects and results. Overall, risks from research and development continue to be classified as moderate.

One fundamental risk exists in patent disputes; therefore innovations from research and development are protected by patents. Observance is monitored systematically and centrally and legal steps are taken whenever necessary.

Information technology

Risks in the field of information technology cover the general stability of the information infrastructure and include possible risks to information security and in particular the resilience of IT systems to cyber attacks. Overall, information technology risks continue to be classified as high.

The potential impact of the Group-wide risk of cyber attacks can be far-reaching if availability is affected, or confidentiality is breached or the integrity of information and IT systems is threatened due to security violations. Information technology systems are constantly reviewed and refined in order to limit IT risks and ensure that business processes are carried out securely, reliably and efficiently. Besides its effective IT emergency management system, Jungheinrich uses industry standards, redundant network connections and a mirror computing centre with a view to reducing failures of application-critical systems and infrastructure components. Jungheinrich mitigates the risk of unauthorised access to corporate data and of tampering with or sabotaging IT systems with Group-wide information security standards, the use of modern backup systems and regular reviews of the protective measures' effectiveness. Jungheinrich's Information Security Management System (ISMS) has been certified since November 2021 in key parts of the organisation in accordance with the international standard

ISO/IEC 27001:2013. The scope was again expanded in November 2022. The above-mentioned measures are supported effectively by modern monitoring and analysis systems and are constantly monitored and developed by a dedicated cyber security team. Furthermore, the state of cyber security for the areas of IT, production and digital products is subject to an annual external maturity assessment. The probability of substantial damage occurring continues to be classed as improbable due to the comprehensive measures to mitigate the risk. As in the previous year, the range of potential impacts is very large, however, ranging from very low in the best-case scenario to very high in extreme situations.

The company transferred more than 80 projects to the design and implementation phase in 2022 as part of the DEEP programme ("Digital End-to-End Processes") for digital transformation and efficiency gains. Detailed control mechanisms are applied throughout the DEEP programme to reduce uncertainties in the planned project costs. These include weekly operational steering meetings, regular steering committee meetings and detailed programme controlling. Risks from a delay of the DEEP programme and associated moderately increased costs are classified as possible.

Production

Risks and opportunities in production relate to deviations in the product manufacturing process, such as a deviation from the capacity utilisation of production machinery or the planned production volume. Overall, the impacts of production risks continue to be deemed high.

The stability of production is largely dependent on supply chains. Risks in the supply chain, such as the availability of raw materials, possible cyber attacks or supplier insolvency all constitute risks to the product manufacturing process. A task force therefore analyses developments in supply chains on a daily basis in order to be able to initiate countermeasures early on. This significantly reduces the probability of production downtimes, but as in the previous year does not completely eliminate it. The range of potential impacts of production downtime and the resulting number of units produced being below forecasts is very large, ranging from very low in the best-case scenario to very high in extreme situations. Furthermore, in improbable scenarios, production may be severely affected by interruptions to operations (for example, fires). However, comprehensive preventive safeguarding steps as well as insurance cover in the event of loss mean the impact of this risk is only very low.

Risks of a failure in the power or gas supply also affect the product manufacturing process. These risks are assessed in detail in the extreme events risk area.

Product quality and safety

Product quality and safety risks cover risks and opportunities from expected deviations in product quality and the associated obligations. The classification of opportunities has been downgraded to very low compared to the previous year, while risks continue to be classified as low.

Product quality obligations are associated with warranties and guarantees as well as additional expenses for goodwill gestures. The obligations also include adhering to applicable standards. In order to manage risks, product risk management observes individual cases closely and uses these to find opportunities to minimise risks, for instance through insurance policies, technical analyses and legal action.

Project business

In relation to the project business, risks and opportunities especially revolve around staying within budget, sticking to schedule and to the agreed product specifications. Overall, project business risks are still classified as moderate.

For complex, wide-ranging, international projects in particular, there may be some deviation from the project targets or promised product specifications, which in turn can lead to additional expenses for corrections or any compensation payments from breaches of contact. Jungheinrich counters this risk through targeted project risk management, which aims to recognise, manage and systematically monitor project risks at an early stage.

Revenue and sales

The risk area revenue and sales consists of risks and opportunities from the sale and rental of Jungheinrich trucks and associated services. Overall, revenue and sales risks are still deemed to be high.

The volatile market situation on both the procurement and sales sides and the general uncertainty about the future economic situation, especially in the eurozone, entail risks in the forecasting of incoming orders. These developments are continually analysed so that appropriate steps can be taken at an early stage. Nevertheless, fluctuations in the forecast number of incoming orders can have a moderate impact on the risk side and a high impact on the opportunity side.

Transparency on the demand side, which has been on the rise for years, supports the possibilities to pass on rising procurement costs to end customers, but also requires a comprehensible and fair calculation basis. Jungheinrich has established a project team and a monthly reporting schedule to analyse and act on opportunities to optimise price adjustments. The product and service offers are also continually checked against the market and individual, custom-made customer solutions are added. Temporary sales promotion measures have been and are being developed and implemented to protect incoming orders. The result is better market penetration, price penetration and the incoming orders required for optimum utilisation of the plants, along with increased customer loyalty. However, uncertainties remain regarding the extent to which the price level is feasible on the market. Fluctuations in the planned value could be associated with high impacts for both risks and opportunities.

Customs

The customs risk area includes risks and opportunities that could arise in relation to customs tariffs for goods. The company has established operational processes for all customs and export control issues. These processes are monitored and continuously developed by a central customs department. Customs risks are closely monitored by Jungheinrich and have decreased slightly compared to the previous year. They are assessed as very low.

Sustainability risks and opportunities

Extreme events

Risks resulting from extreme events relate to unusual events, such as natural disasters, pandemics or acute geopolitical conflicts, and their consequences. The severity can lead to strategic risks and opportunities that would impact all areas of the company. The risks arising directly from the Russia-Ukraine war have also been included in the extreme events risk area. The risks in this risk area are therefore rated much higher than compared to the previous year and are classified as very high overall.

At the beginning of the war in Ukraine in February 2022, Jungheinrich created a central crisis team in order to identify upcoming risks at an early stage and keep the impact of these risks as minimal as possible through timely, appropriate and coordinated measures. Local and topic-specific crisis teams also analyse various scenarios and underlying legal conditions every day so that the Group is as well prepared as possible to face the constantly changing situation. The Jungheinrich Group has subsidiaries in Russia and Ukraine.

One focus of the measures of the crisis team is protecting the staff and their families. The war and its humanitarian, political and economic consequences result in diverse risks for the Jungheinrich Group.

There are economic risks for Jungheinrich in terms of its business activities in Russia. The embargoes and sanctions against Russia by the European Union and the USA as well as Russia's counter-sanctions have resulted in a shrinking Russian market for European companies and may even make the market completely inaccessible to Jungheinrich. In addition to the resulting potential deviations in the forecast earnings of the Russian Jungheinrich company, which may have a moderate impact on the opportunity side and a high impact on the risk side, this may develop into a complete expropriation risk. The improbable scenario of impairment loss through expropriation is assessed as having a very high impact.

In Ukraine we are primarily facing a humanitarian risk. The focus is on protecting and supporting Jungheinrich employees and their families as well as the local population to the best of our ability.

Sanctions and counter-sanctions may lead to disruptions in the supply of materials or energy to Jungheinrich or Jungheinrich suppliers. The suspension of Russian gas supplies has resulted in uncertainty for the gas supply in Germany and Europe. The risk of gas supply no longer being sufficient for production and the associated production disruptions is assessed as possible and may lead to very high impacts in extreme scenarios. An undersupply of power grids may also cause potential disruptions in production. This risk is classified as improbable, but may lead to high to very high impacts in extreme scenarios. Jungheinrich has devised and put in place measures to reduce plants' dependence on natural gas and continues to expand these measures. Jungheinrich is also in constant contact with production material suppliers.

Risks from the coronavirus pandemic declined significantly compared to the previous year. The coronavirus pandemic and potential new pandemics continue to pose a risk with regard to individual markets and in terms of local infection figures, which has an impact on Jungheinrich's business activities and global trade and supply chains.

Climate change and environmental protection

Jungheinrich supports various climate change mitigation and environmental protection measures and has enshrined key sustainability objectives as a central area of its corporate strategy as part of Strategy 2025+. Risks and opportunities in the risk area of climate change and environmental protection continue to be classified as very low overall.

Jungheinrich's sustainability strategy consists of six initiatives that are backed by concrete targets and give consideration to economic, environmental and social aspects.

The defined targets set out Jungheinrich's ambition to reduce emissions and preserve the environment and resources. At the same time, the initiatives promote the expansion of sustainable products and solutions and improve the health and safety of employees.

The implementation and achievement of these targets are crucial for the Jungheinrich Group. Failure to achieve this will have an impact on the corporate strategy and on Jungheinrich's reputation. In response, targeted measures have been introduced at the level of the initiatives. As the sustainability strategy covers risk areas beyond just climate change and environmental protection, the measures also have an impact on the social and compliance risk areas. Jungheinrich considers itself to be well positioned to continue making important contributions to protecting the environment and the climate.

Further information can be found in the combined separate non-financial report in accordance with the CSR Directive Implementation Act [page 13 ff.].

Personnel and social

The personnel and social risk area includes risks and opportunities that have a direct impact on the availability, quality and costs of personnel, occupational safety and compliance with human rights. Overall, personnel and social risks continue to be classified as moderate.

Personnel risks may arise if a company fails to recruit or retain qualified employees in sufficient numbers. This can impact the achievement of strategic and operational targets. In order to recruit junior engineers and IT specialists, both of which are vital to Jungheinrich, the company maintains good contacts with universities through university marketing. Jungheinrich responds to the fierce competition for skilled labour and executives and mitigates the associated risk of a loss of know-how caused by staff turnover by offering attractive qualification options and a performance-based remuneration system. A high number of trainee positions will be maintained or even expanded Group-wide in order to ensure that all future needs for skilled workers can be met. Jungheinrich employs temporary workers in order to avoid capacity utilisation risks and uses location-specific flexible working time accounts. The company has also opened three Business Service Centers (BSC) in Spain, Romania and Croatia, where it works with highly trained, globally aligned experts.

The continual increase in regulatory requirements with an emphasis on sustainability and human rights, as well as other social aspects along the value chain, poses risks in the event of non-compliance. Continuous monitoring of regulatory changes and compliance with existing requirements is essential for the Jungheinrich Group. Failure to comply with regulatory requirements can result in penalties. Any deviation can have a negative impact on Jungheinrich's reputation and impair its strategic goals or operational processes. In addition to the LkSG, considerable relevance in this respect has been identified in the Batteries Act 2, Material Compliance, the EU taxonomy and the Corporate Sustainability Reporting Directive (CSRD).

In order to comply with the LkSG, the Group supply chain risk analysis, put in place in 2019, was revised in 2022 and important risk factors were added, particularly those focused on strengthening the attention paid to human rights. In addition, the schedule of legal provisions database, including the monitoring of the measures and initiatives derived therefrom, was expanded for the LkSG and for all other relevant regulations. Jungheinrich therefore considers itself well positioned to comply with the regulatory requirements for sustainability.

Financial risks and opportunities

Due to regulations governing the international financial markets, such as the European Market Infrastructure Regulation (EMIR), Jungheinrich must observe comprehensive guidelines and reporting duties for all financial transactions. A Group-wide process is in place to ensure that regulations are observed. This process guarantees that reporting obligations and risk mitigation requirements are met. Building on statutory requirements, Jungheinrich has laid out control mechanisms for the use of financial instruments in a procedural guideline. This includes clear differentiation between trading, processing, accounting and controlling and the stipulation that derivative financial instruments are only used to hedge existing underlying transactions against risks from changes in interest and exchange rates.

Financial services

Risks associated with financial services arise particularly from the leasing business and include risks and opportunities from changing residual values of leased items and the corresponding interest rate. Financial services risks continue to be deemed to be moderate overall. Detailed rules governing the identification and assessment of risks are documented in Group-wide guidelines and the financial service companies' internal process descriptions.

The risks and opportunities arising from the resale of truck returns from the financial services business are borne by the operating sales units. The residual value guarantees are calculated on the basis of a conservative uniform Group standard for maximum permissible residual values. The residual values of all individual contracts are subjected to a quarterly evaluation using the central financial services contracts database on the basis of their current fair value. If the originally calculated residual value is above the current fair value and the end of the term of the contract, this risk is appropriately taken into account depending on the classification of the long-term customer contract by reducing the carrying amounts for "trucks for lease from financial services" or "receivables from financial services" in profit or loss.

The refinancing risk is limited by applying the principle of matching maturities and interest rates for customer and refinancing agreements (no risk of a change in interest rates during the term of the contract) when refinancing financial service agreements. The "Financial Services" segment's Group-wide structural and procedural organisation ensures management of completed financial service agreements with a correlating financing structure and form through domestic and foreign refinancing banks. Moreover, an established financing platform enables us to obtain refinancing on the capital market. Sufficient lines of credit are at the company's disposal for financing the new truck business.

For refinancing, agreements were reached with the financing banks at an early stage in order to react flexibly to market and customer requirements. As at the balance sheet date, the scope of the required customer-specific payment agreements was negligibly small in light of this. The refinancing lines remained available to Jungheinrich in the reporting year as they were at the end of the previous financial year.

Customer defaults on receivables, insolvencies and free early terminations of contracts with break clauses in the financial services business remain at a low level.

Foreign currency

Due to its international activities and affiliates as well as dynamic developments on the financial markets, Jungheinrich is subject to exchange rate fluctuations. Overall, foreign currency risks continue to be classified as moderate. Jungheinrich uses financial instruments such as currency forwards, currency swaps and currency options to manage foreign currency risks.

Debt defaults

The debt default risk area covers risks arising from potential debt defaults on customer payments. These have increased overall for Jungheinrich from very low to low compared to the previous year.

Jungheinrich protects itself against debt default risks by using an IT-based system to permanently monitor customers' creditworthiness and to regularly analyse outstanding receivables and their structure. The majority of foreign revenue generated from business with third parties is covered by credit insurance policies. Comprehensive system-reported creditworthiness checks performed before contracts are concluded, as well as revolving inspections during the terms of agreements, help keep default levels on receivables from customers very low. Forklift trucks prematurely recovered from customers are handed over to the "Intralogistics" segment's operational sales units for marketing. The return conditions are determined centrally.

Financing and capital investment

Financing and capital investment risks include all risks and opportunities that can arise when borrowing or investing capital. Risks in this risk area continue to be classified as moderate overall.

Jungheinrich's good credit rating and solid statement of financial position continue to have a positive influence on obtaining credit. In addition to the high levels of cash and cash equivalents, confirmed medium-term credit facilities and short-term credit lines safeguard the Group's financial flexibility and liquidity. The confirmed credit facilities had only been partially used in the "Intralogistics" segment as at the balance sheet date.

Jungheinrich can also obtain finance through the capital market, as in the past, by issuing promissory notes. A commercial paper programme was also set up in the reporting year in order to obtain short-term financing by issuing commercial paper. The maturities for the credit lines and existing promissory notes are very spread out, giving the company plenty of long-term leeway for arranging financing. Furthermore, none of the credit agreements or promissory note agreements contain financial covenants.

The company's cash and cash equivalents and existing credit agreements ensure that it can always fulfil its payment obligations. There is, therefore, no liquidity risk. The central cash and currency management for the Jungheinrich Group enables the Group-wide, international provision of financial resources at the best possible interest and currency exchange rates, and cash flow management for domestic and foreign Group companies.

Throughout the Group, Jungheinrich takes a conservative approach to investment and generally only invests in certain asset classes with flawless credit ratings and the option of liquidating its investments at any time. Part of the liquidity is invested in a special fund. The value of the capital investments held by Jungheinrich is subject to the normal fluctuations on the international capital markets. The severity of the fluctuation can have a moderate impact on both the risks and opportunities side, depending on the point in time of the sale.

Further information regarding financial instruments can be found in the Jungheinrich AG consolidated financial statement [page 145 ff.].

Impairment risks are constantly monitored by Corporate Finance. This applies in particular to goodwill from company acquisitions, which has an indefinite useful life and is therefore not subject to amortisation. Goodwill is subjected to an impairment test in accordance with IAS 36 at least once a year, or more frequently if there are indications of a reduction in value. In addition, all assets that fall within the scope of IAS 36 are reviewed as part of an asset impairment test if there are such indications of a reduction in value.

Taxes

Tax risks continue to be considered to be low overall. They arise from the constantly changing requirements under tax legislation. Risks also arise when national tax authorities deviate from the international basic rules agreed between tax authorities with regards to cross-border matters. The risk increases when updated authority viewpoints are to be applied as a whole retroactively.

Legal and compliance risks and opportunities

Compliance and data protection

The compliance and data protection risk area covers all risks related to non-compliance with laws and general compliance regulations, especially corruption, fraud and money laundering prevention and data protection regulations. Risks in the compliance and data protection area have increased compared to the previous year and are assessed as high overall.

In both the valid Group guidelines, which apply to all employees, and the company's Code of Conduct, Jungheinrich has set out regulations and measures for the prevention of corruption, fraud and money laundering risks. Compliance with these requirements is regularly reviewed by internal audit. Further information about the Code of Conduct can be found in the combined separate non-financial report in accordance with the CSR Directive Implementation Act [page 13 ff.].

Jungheinrich is subject to the risk of fines in the area of data protection due to the General Data Protection Regulation (GDPR). These are addressed through a number of measures. Group guidelines are continually updated to reflect new data protection regulations. The necessary data protection agreement principles with suppliers and other business partners were also amended. Jungheinrich also ensured compliance with the requirements by implementing stricter technical and organisational measures (TOMs). The data protection challenges in the context of the coronavirus pandemic, in particular due to the increase in mobile working, have been taken into account through corresponding instructions and recommendations. The Board of Management obligates all employees to comply with data protection regulations. Regular Group-wide training is in place. The data protection management system is continually monitored and will be improved further. Risks of fines due to a violation of the EU GDPR are assessed as improbable. The range of potential impacts is very large, however, ranging from very low to very high in the extreme scenario.

The compliance risk assessment was further developed in 2022 with an emphasis on close interaction between the risk management system and compliance risk assessment. The organisation and processes of the risk management system and close dovetailing between compliance risk assessment and the risk management system facilitates a clear reconciliation between the two systems. Further information about the compliance management system can be found in the combined separate non-financial report in accordance with the CSR Directive Implementation Act [page 13 ff.].

Legal

The Jungheinrich Group's companies are exposed to the legal risks that are customary in commercial enterprises, in particular regarding the liability for alleged non-compliance with contractual obligations or public law and for allegedly faulty products. Risks in the legal risk area continue to be assessed as very low for Jungheinrich.

Material general contract risks are eliminated by applying Group-wide guidelines whenever possible. In addition, central support and legal advice is available to the individual departments for material contracts and other transactions with significant legal aspects. Appropriate provisions that are in line with the respective probability of occurrence are established to cover potential financial burdens resulting from risks relating to lawsuits. The Group has adequate insurance coverage for claims filed against Group companies on grounds of allegedly faulty products.

Forecast report

High inflation and weak global economic growth

The IMF anticipates that global growth will be weaker overall in 2023 than in 2022. The main reasons cited for this forecast are rising key interest rates intended to counter inflation, and the Russia-Ukraine war. Inflation worldwide is expected to fall slightly compared to the previous year, but to remain at a high level. For 2023, the IMF expects global economic output to increase by 2.9 per cent (2022: 3.4 per cent). China and the USA in particular are expected to be the main drivers of economic growth. US GDP is expected to grow by 1.4 per cent, which is slower than in the previous year (2.0 per cent). On the other hand, a much stronger increase in economic output of 5.2 per cent (2022: 3.0 per cent) is forecast for the Chinese economy.

According to the IMF, the dominant topics in the eurozone in 2023 will be the development of the European Central Bank's key interest rates, developments in the Russia-Ukraine war and the situation on the energy markets. GDP growth of 0.7 per cent is forecast for this region (2022: 3.5 per cent).

For Germany, the IMF expects economic output to stagnate (0.1 per cent; 2022: 1.9 per cent). In France, after growth of 2.6 per cent in 2022, GDP is expected to be noticeably lower at 0.7 per cent, and the IMF also forecasts very low GDP growth of just 0.6 per cent for Italy in 2023 following an increase in the previous year (3.9 per cent). The story is the same in the United Kingdom: while GDP growth in 2022 was still 4.1 per cent, growth of −0.6 per cent is now expected for 2023.

Growth rates for selected economic regions

Gross domestic product in %	2023 forecast
World	2.9
USA	1.4
China	5.2
Eurozone	0.7
Germany	0.1

Source: International Monetary Fund (as of 30 January 2023).

2023 forecast: Jungheinrich secures profitability despite significant economic and geopolitical challenges and continues to drive forward strategy implementation

Despite the ongoing war in Ukraine and prevailing pronounced economic and geopolitical uncertainties, we expect the Group to continue to grow profitably.

With regard to the agreement signed on 25 January 2023 to acquire Storage Solutions Group (USA), we expect the acquisition to be completed before the end of the first quarter of 2023. Accordingly, we have included Storage Solutions proportionately in our forecast.

The forecast is also based on the assumption that supply chains to maintain production will remain largely intact over the year and that there will be no widespread production standstills. Implementing measures to ensure our capability to deliver will continue to be a priority. In terms of the development of material costs, we expect to see a noticeable increase due to higher energy costs. Furthermore, we have considered a further rise in personnel numbers for the implementation of our Strategy 2025+ as well as higher personnel costs on the basis of the latest collective wage agreements for 2023.

We currently expect incoming orders to range between €4.8 billion and €5.2 billion (2022: €4.8 billion). We have defined a target range of €4.9 billion to €5.3 billion for Group revenue in 2023 (2022: €4.8 billion). EBIT should amount to a value between €350 million and €400 million (2022: €386 million). We anticipate EBIT return on sales of between 7.3 per cent and 8.1 per cent (2022: 8.1 per cent). Based on the assumption of slightly rising interest rates, EBT is currently expected to reach a value between €325 million and €375 million (2022: €347 million). We anticipate EBT return on sales of between 6.6 per cent and 7.4 per cent (2022: 7.3 per cent). The ROCE for the 2023 financial year should be between 13.0 per cent and 16.0 per cent (2022: 16.3 per cent). Free cash flow is expected to improve significantly compared to the previous year (€−239 million) but to remain negative.

Due to competition law, actual and target figures on the equipment ratio of lithium-ion batteries are not reported.

General statement concerning the Jungheinrich Group's anticipated development

We believe that the uncertainties surrounding overall economic developments and the uncertain supply chains will continue to apply in 2023. Material influencing factors are the ongoing war in Ukraine and economic and geopolitical upheavals that negatively affect our market environment. Therefore, our primary goal is to continue to secure the supply of energy and materials to maintain production and consequently safeguard delivery capability. We will also focus on the continued implementation of our Strategy 2025+. A major focal point will be the post-merger integration of Storage Solutions. Furthermore, production at the new plant in Chomutov is scheduled to start in mid-2023.

Opportunities continue to be presented by the intact and growing global trends that will push intralogistics, digital products and services, e-commerce-oriented portfolios and electric mobility and automation offers.

In light of the above-mentioned factors, we are aiming for incoming orders for the 2023 financial year at least on a par with the previous year. Group revenue is expected to increase. Our goal is to achieve a solid EBIT and EBT return on sales. At present, however, we cannot guarantee that the risks plaguing material supplies and high energy costs will not impact profitability. Supply chain disruptions could limit or reduce revenue growth. High exchange rate fluctuations or persistently strong interest rate hikes could also have a negative impact on revenue, EBIT and EBT.

In an environment of geopolitical and economic challenges, we will expand our market position, ensure our profitability and continue to focus on our strategic fields of action of automation, digitalisation, energy systems, efficiency, global footprint and sustainability.

Our business model and our resilient customer structure, combined with our sound balance sheet and liquidity, enables us to continue implementing Strategy 2025+ even in the event that economic and market developments fall short of expectations.

Jungheinrich AG (HGB)

The annual financial statements of Jungheinrich AG follow the provisions of the German Commercial Code (HGB), while the consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS).

Jungheinrich AG is a management holding company and, in addition to the Group's central functions, also comprises Corporate Research & Development and Corporate Real Estate Management. As the parent company, it holds shares directly and indirectly in both domestic and foreign subsidiaries. Jungheinrich AG especially has direct business relations with the subsidiaries in Germany. The positive annual results of the subsidiaries managed in the legal form of AG & Co. KG are recognised in the same phase in the annual financial statements of Jungheinrich AG and reported under income from affiliates. In addition, there are some profit and loss transfer agreements with domestic corporations whose income is reported under a separate item in the statement of profit or loss. The income from associates consisting of these two components are the material control parameter for Jungheinrich AG.

As of 31 December 2022, Jungheinrich AG had a total of 1,338 employees, including 151 trainees and apprentices (previous year: 1,288 employees, including 167 trainees and apprentices).

The overall economic and industry-related conditions correspond to those of the Group as described in the economic report [page 64 ff.].

Business trend and earnings position

The earnings position of Jungheinrich AG is determined by the business trend of the operating subsidiaries in Germany and abroad as well as the resulting income from affiliates. Contrary to the significantly lower investment income forecast for Jungheinrich AG, at €207 million, it remained at the prior-year level (€205 million) despite slightly lower plant capacity utilisation in 2022. The reason was a better business development of the operating subsidiaries compared to the original expectation, in part due to appropriate measures.

Jungheinrich AG's revenue in the 2022 financial year amounted to €259 million, compared to €243 million in the previous year. It includes remuneration for services, revenue from the rental of real estate and revenue from licensing agreements. Revenue from remuneration for services increased due to expansion in business volumes in the domestic operating companies in comparison with the previous year from €147 million to €156 million. Revenue from the rental of real estate to domestic Group companies of €38 million was similar to the previous year (€35 million). Revenue from licence agreements was 7 per cent higher at €65 million compared to the previous year's figure of €61 million.

Other operating income increased significantly from €65 million in the previous year to €94 million in the reporting year. This resulted from compensation payments received on the basis of contractual agreements for transfer pricing adjustments of foreign companies of €36 million (previous year: €35 million). In addition, income from compensation payments received from German production plants amounting to €42 million (previous year: €14 million) was recognised. Furthermore, other operating income includes cost transfers to affiliated companies of €12 million (previous year: €11 million).

Jungheinrich AG's expenses developed as follows:

in € million	2022	2021
Cost of materials	4	3
Personnel expenses	132	130
Depreciation and amortisation of fixed assets	25	22
Other operating expenses	317	279
Depreciation on financial assets and securities under current assets	4	–

The cost of materials mainly includes the energy costs for properties. Personnel expenses and other operating expenses include the administrative costs of the holding company and the central divisions. The increase in personnel expenses by €2 million resulted in part from the higher average number of employees (measured in full-time equivalent, excluding trainees and apprentices) of 1,067 in 2021 by 84 to 1,151 empoyees in the 2022 financial year.

Other operating expenses increased by €38 million from €279 million in the previous year to €317 million. The clear increase was in part driven by an increase of €13 million for the purchase of external services, of €5 million for advertising and trade fairs and of €4 million for rental and lease expenses.

R&D expenditure arises mainly from the use of services provided by affiliated companies. At €82 million, it was up 13 per cent against the previous year (€72 million).

The earnings trend of Jungheinrich AG in the reporting period was thus as follows:

in € million	2022	2021
Earnings before interest and taxes	78	78
Net interest	–3	–2
Earnings before taxes	75	76
Taxes on income and other taxes	–35	–25
Net income	**110**	**101**

With earnings before taxes comparable to the previous year, tax income increased by €10 million over the previous year. This resulted from a €29 million reduction in tax expenses due to higher tax-free income from affiliates as well as a €19 million reduction in income from tax allocations.

A significantly lower net income for the year was forecast for the reporting year compared to the 2021 financial year. Jungheinrich AG closed the 2022 financial year with a higher net income of €110 million compared to the previous year (€101 million). This was due to the better than expected operating results of the subsidiaries as well as the described – net positive – tax effects. In accordance with Section 58, Paragraph 2 of the German Stock Corporation Act (AktG), a total of €42 million of the net income for the year was transferred to other retained earnings.

Capital expenditure

Additions to fixed assets amounted to €24 million in the reporting period and were thus significantly below the previous year's figure (€152 million). As at the balance sheet date, Jungheinrich AG's capital expenditure commitments amounted to €5 million. Capital expenditure was financed with the company's own resources.

The previous year was characterised by the acquisition of arculus and the company's technical know-how totalling €123 million. Given the reduction in the present value capitalised in the year of acquisition of the contingent purchase price payments from the agreed earn-out clauses as part of the acquisition, the carrying amount of the equity investment decreased by €6 million.

Financial and asset position

As the parent company of the Group, Jungheinrich AG is responsible for the financial management of the Group and ensures the availability of sufficient financial resources. Further disclosures are included in the description of the principles and objectives of financial management [page 67 f.].

The asset structure of Jungheinrich AG is as follows:

in € million	2022	2021
Non-current assets	758	766
Receivables from affiliated companies	705	493
Bank balances and securities	337	502
Other assets	51	23
Balance sheet total	**1,851**	**1,784**

The increase of €212 million in receivables from affiliated companies resulted from the higher claims of Jungheinrich AG compared to the previous year from the provision of cash and cash equivalents to Group companies as part of central liquidity management and from compensation payments.

The considerable decrease in bank balances and securities of €165 million to €337 million in the 2022 financial year arose from reduced securities (€73 million) and sight deposits (€57 million) and a decrease in time deposits of €35 million.

The capital structure of Jungheinrich AG is as follows:

in € million	2022	2021
Shareholders' equity	1,186	1,144
Provisions for pensions	37	37
Other provisions	47	62
Liabilities due to banks	320	172
Liabilities to affiliated companies	227	341
Other liabilities	34	28
Balance sheet total	**1,851**	**1,784**

The shareholders' equity of Jungheinrich AG amounted to €1,186 million as at the balance sheet date and was thus €42 million higher than in the previous year (€1,144 million). The net income for the year of €110 million was offset by the dividend payments of €68 million for the previous financial year. The equity ratio remained stable compared to the previous year at 64 per cent.

Other provisions in the reporting year included the present value of a contingent purchase price payment in the amount of €19 million from the agreed earn-out clauses as part of the acquisition of arculus.

Liabilities due to banks increased sharply by €148 million year-on-year. The decisive factors here were the borrowing of promissory note loans of €100 million in total, as well as the increased use of short-term financing, in particular through the commercial paper programme launched in the reporting year (€300 million). The short-term credit lines and the commercial paper programme were only used to a small extent.

At €227 million, liabilities to affiliated companies were €114 million lower than in the previous year (€341 million) and were largely incurred through measures to refinance trucks for short-term rental in Germany and abroad.

The increase in other liabilities was mainly attributable to an increase of €6 million in trade payables.

Risks and opportunities

Jungheinrich AG shares in the risks and opportunities of its subsidiaries. Detailed information is provided in the Risk and opportunity report [page 75 ff.].

Forecast report

We report on our prospects and plans for operations in our forecast report [page 87 f.].

Should revenue develop as we expect, the operating results of the subsidiaries of Jungheinrich AG will be on a par with the previous year in 2023. As a result, the total income from affiliates and Jungheinrich AG's net income for the year should also be on a par with the previous year in 2023.

The explanations above are forward-looking statements that are based on the company management's current expectations, assumptions and assessments for future developments. Such statements are subject to risks and uncertainty that are largely beyond the company's control. This includes changes in the overall economic situation, including impacts from geopolitical conflicts, debt issues, the further course of the coronavirus pandemic, within the intralogistics sector, in materials supply, the availability and price development of energy and raw materials, demand in important markets, developments in competition and regulatory frameworks and regulations, exchange and interest rates and the outcome of pending or future legal proceedings. Should these or other uncertainties or unknown factors apply or the assumptions on which these statements are based prove false, actual results may deviate significantly from the results stated or implied. No responsibility is therefore taken for forward-looking statements. Without prejudice to existing capital market obligations, there is no intention nor do we accept any obligation to update forward-looking statements.

Hamburg, 6 March 2023

Jungheinrich Aktiengesellschaft
The Board of Management

Dr Lars Brzoska	Christian Erlach
Dr Volker Hues	Sabine Neuß

CONSOLIDATED FINANCIAL STATEMENTS

Consolidated statement of profit or loss

in € thousand	Notes	2022	2021
Revenue	(3)	**4,763,294**	**4,239,815**
Cost of sales	(4)	3,290,043	2,916,378
Gross profit on sales		**1,473,251**	**1,323,437**
Selling expenses		833,549	740,691
Research and development costs	(12)	113,103	95,381
General administrative expenses		160,575	135,535
Other operating income	(7)	17,096	6,643
Other operating expenses	(8)	2,040	1,667
Income (expense) from companies accounted for using the equity method	(16)	4,980	2,838
Earnings before interest and income taxes		**386,060**	**359,644**
Interest income	(9)	2,409	668
Interest expense	(9)	13,826	11,420
Other financial income (expense)	(10)	–27,242	241
Financial income (expense)		**–38,659**	**–10,511**
Earnings before taxes		**347,401**	**349,133**
Income tax expense	(11)	77,826	81,737
Profit or loss		**269,575**	**267,396**
thereof attributable to non-controlling interests		407	1,148
thereof attributable to the shareholders of Jungheinrich AG		269,168	266,248
Earnings per share in € (diluted/undiluted) based on profit or loss attributable to the shareholders of Jungheinrich AG	(39)		
Ordinary shares		**2.63**	**2.60**
Preferred shares		**2.65**	**2.62**

Consolidated statement of comprehensive income

in € thousand	Notes	2022	2021
Profit or loss		**269,575**	**267,396**
Items which may be reclassified to the consolidated statement of profit or loss in the future			
Income (expense) from the fair value measurement of derivative financial instruments		**14,854**	**1,108**
Unrealised income (expense)	(24)	16,101	−2,351
Realised income (expense)	(24)	2,323	3,774
Deferred taxes	(24)	−3,570	−315
Income (expense) from currency translation		**1,252**	**15,318**
Unrealised income (expense)		1,252	15,318
Income (expense) from investments measured using the equity method		**684**	**118**
Unrealised income (expense)	(16)	684	118
Items which will not be reclassified to the consolidated statement of profit or loss			
Income (expense) from the remeasurement of pensions		**32,471**	**14,920**
Unrealised income (expense)	(25)	46,601	18,822
Deferred taxes		−14,130	−3,902
Other comprehensive income (expense)		**49,261**	**31,464**
Comprehensive income (expense)		**318,836**	**298,860**
thereof attributable to non-controlling interests		407	1,148
thereof attributable to the shareholders of Jungheinrich AG		318,429	297,712

The consolidated statement of comprehensive income is explained in note (24) [page 135 f.].

Consolidated statement of financial position

Assets

in € thousand	Notes	31/12/2022	31/12/2021
Non-current assets			
Intangible assets	(12)	215,868	201,712
Property, plant and equipment	(13)	702,451	720,003
Trucks for short-term rental	(14)	459,143	362,917
Trucks for lease from financial services	(15)	567,407	500,448
Investments measured using the equity method	(16)	69,749	45,696
Other financial assets	(17)	778	10,925
Trade accounts receivable	(19)	9,697	9,559
Receivables from financial services	(20)	1,056,504	1,036,132
Derivative financial assets	(37)	15,881	1,245
Other receivables and other assets	(21)	17,487	33,753
Securities	(22)	28,930	34,353
Deferred tax assets	(11)	107,621	121,915
		3,251,516	**3,078,658**
Current assets			
Inventories	(18)	993,996	763,853
Trade accounts receivable and contract assets	(19)	898,624	755,052
Receivables from financial services	(20)	406,203	371,338
Income tax receivables		16,074	5,343
Derivative financial assets	(37)	7,093	3,385
Other receivables and other assets	(21)	84,831	71,314
Securities	(22)	169,061	245,574
Cash and cash equivalents	(23)	336,725	474,619
		2,912,607	**2,690,478**
		6,164,123	**5,769,136**

Shareholders' equity and liabilities

in € thousand	Notes	31/12/2022	31/12/2021
Shareholders' equity	(24)		
Subscribed capital		102,000	102,000
Capital reserve		78,385	78,385
Retained earnings		1,920,420	1,719,532
Accumulated other comprehensive income (expense)		–49,353	–98,614
Equity attributable to the shareholders of Jungheinrich AG		2,051,452	1,801,303
Non-controlling interests		–	1,306
		2,051,452	**1,802,609**
Non-current liabilities			
Provisions for pensions and similar obligations	(25)	158,900	227,796
Other provisions	(26)	66,632	65,355
Deferred tax liabilities	(11)	43,895	28,893
Financial liabilities	(27)	420,404	282,420
Liabilities from financial services	(28)	1,416,499	1,344,369
Derivative financial liabilities	(37)	331	826
Deferred income	(32)	23,096	32,074
		2,129,757	**1,981,733**
Current liabilities			
Income tax liabilities		18,032	23,507
Other provisions	(26)	291,705	286,863
Financial liabilities	(27)	189,496	250,523
Liabilities from financial services	(28)	575,949	552,046
Trade accounts payable	(29)	556,196	532,969
Contract liabilities	(30)	209,461	198,428
Derivative financial liabilities	(37)	4,043	4,977
Other liabilities	(31)	115,067	106,923
Deferred income	(32)	22,965	28,558
		1,982,914	**1,984,794**
		6,164,123	**5,769,136**

Consolidated statement of cash flows

in € thousand	2022	2021
Profit or loss	**269,575**	**267,396**
Depreciation, amortisation, impairment losses and reversals of impairment losses (excluding trucks for short-term rental and trucks for lease)	147,604	144,170
Depreciation and impairment losses of trucks for short-term rental and trucks for lease	252,953	232,856
Changes in provisions	−61,321	21,798
Other non-cash-effective expenses	3,826	–
Changes in trucks for short-term rental and trucks for lease (excluding depreciation)	−412,188	−285,210
Income from the disposal of property, plant and equipment and intangible assets	−10,068	−276
Changes deriving from companies accounted for using the equity method and of other financial assets	−3,562	−941
Changes in deferred assets and liabilities	29,359	909
Change		
Inventories	−256,873	−220,367
Trade accounts receivable and contract assets	−152,109	−77,772
Receivables from financial services	−53,301	−66,095
Trade accounts payable	34,455	143,564
Liabilities from financial services	89,167	80,511
Liabilities from financing trucks for short-term rental	−70,013	−42,873
Contract liabilities	10,998	73,370
Other operating assets	−11,607	−30,204
Other operating liabilities	57,012	9,946
Cash flow from operating activities	**−136,093**	**250,782**
Payments for investments in property, plant and equipment and intangible assets	−103,371	−89,458
Proceeds from the disposal of property, plant and equipment and intangible assets	8,603	11,910
Payments for investments in companies accounted for using the equity method and other financial assets	−2,362	−3,193
Proceeds from the disposal of other financial assets	–	12
Payments for the acquisition of companies and business areas, net of acquired cash and cash equivalents	−5,188	−71,308
Proceeds from the disposal of subsidiaries, net of cash and cash equivalents sold	−32	–
Payments for the purchase of securities	−82,529	−351,565
Proceeds from the sale/maturity of securities	149,564	364,273
Proceeds from investments in term deposits	115,000	150,000
Payments for investments in term deposits	–	−115,000
Payments for current loans granted to related parties	−1,822	−10,555
Proceeds from repayments of current loans granted to related parties	1,306	1,078
Cash flow from investing activities	**79,169**	**−113,806**
Dividends paid to the shareholders of Jungheinrich AG	−68,280	−42,780
Changes in short-term liabilities due to banks	42,736	−33,044
Proceeds from obtaining long-term financial loans	214,214	5,572
Repayments of long-term financial loans	−95,551	−198,401
Repayments of lease liabilities	−56,383	−53,307
Cash flow from financing activities	**36,736**	**−321,960**
Net cash changes in cash and cash equivalents	**−20,188**	**−184,984**
Changes in cash and cash equivalents due to changes in exchange rates	−2,720	8,222
Changes in cash and cash equivalents	**−22,908**	**−176,762**
Cash and cash equivalents on 01/01	**350,265**	**527,027**
Cash and cash equivalents on 31/12	**327,357**	**350,265**

Receipts and payments relating to cash flows from operating activities

in € thousand	2022	2021
Interest paid	58,716	48,405
Interest received	86,400	79,383
Dividends received	2,102	2,015
Income tax expense	81,890	73,926

The consolidated statement of cash flows is explained in note (34) [page 150 f.].

Consolidated statement of changes in equity

in € thousand	Subscribed capital	Capital reserve	Retained earnings	Accumulated other comprehensive income (expense)						
				Currency translation	Remeasurement of pensions	Market valuation of derivative financial instruments	At-equity measured interests	Equity attributable to the shareholders of Jungheinrich AG	Non-controlling interests	**Total**
Balance on 01/01/2022	102,000	78,385	1,719,532	−23,134	−75,203	−988	711	1,801,303	1,306	1,802,609
Dividend for the previous year	–	–	−68,280	–	–	–	–	−68,280	–	−68,280
Profit or loss	–	–	269,168	–	–	–	–	269,168	407	269,575
Other comprehensive income (expense)	–	–	–	1,252	32,471	14,854	684	49,261	–	49,261
Comprehensive income (expense)	–	–	269,168	1,252	32,471	14,854	684	318,429	407	318,836
Miscellaneous	–	–	–	–	–	–	–	–	−1,713	−1,713
Balance on 31/12/2022	**102,000**	**78,385**	**1,920,420**	**−21,882**	**−42,732**	**13,866**	**1,395**	**2,051,452**	**–**	**2,051,452**
Balance on 01/01/2021	102,000	78,385	1,496,064	−38,452	−90,123	−2,096	593	1,546,371	158	1,546,529
Dividend for the previous year	–	–	−42,780	–	–	–	–	−42,780	–	−42,780
Profit or loss	–	–	266,248	–	–	–	–	266,248	1,148	267,396
Other comprehensive income (expense)	–	–	–	15,318	14,920	1,108	118	31,464	–	31,464
Comprehensive income (expense)	–	–	266,248	15,318	14,920	1,108	118	297,712	1,148	298,860
Balance on 31/12/2021	**102,000**	**78,385**	**1,719,532**	**−23,134**	**−75,203**	**−988**	**711**	**1,801,303**	**1,306**	**1,802,609**

The consolidated statement of changes in equity is explained in note (24) [page 135 f.].

Notes to the consolidated financial statements

GENERAL INFORMATION

(1) Purpose of the company

The Jungheinrich corporation (Jungheinrich AG) is headquartered at Friedrich-Ebert-Damm 129 in Hamburg (Germany) and is registered with the commercial register kept at the Hamburg District court under HRB 44885.

The Jungheinrich Group operates on an international level – with a main focus on Europe – as an intralogistics solutions provider with an extensive portfolio of material handling equipment, automated systems and services. The integrated business model encompasses the development, production and sale of new material handling equipment and the planning and realisation of automated systems, the short-term rental of new and used material handling equipment, the reconditioning and sale of used forklifts and after-sales services. Jungheinrich also supplies stacker cranes and load handling equipment.

Material handling equipment is manufactured at the production plants in Norderstedt, Moosburg, Degernpoint, Landsberg and Lüneburg (all in Germany) as well as at the production plant in Qingpu/Shanghai (China).

Used material handling equipment is reconditioned in the used equipment centre in Klipphausen/Dresden (Germany) and the used equipment plant in Ploiești (Romania).

Jungheinrich AG maintains a large and close-knit direct sales network, with 28 proprietary sales companies operating in European countries. Additional companies outside Germany are located in Australia, Brazil, Chile, China, Colombia, Ecuador, India, Malaysia, New Zealand, Peru, Singapore, South Africa and Thailand. Jungheinrich product distribution in North America is handled by an exclusive distribution partner.

Furthermore, Jungheinrich products are also distributed via local dealers – especially overseas.

Stacker cranes and load handling equipment are manufactured in plants in Munich (Germany), Gyöngyös (Hungary) and Kunshan (China), and sold under the MIAS brand all over the world.

(2) Accounting principles

Fundamentals

Jungheinrich AG prepared the consolidated financial statements for the financial year ending on 31 December 2022 in compliance with the International Financial Reporting Standards (IFRS). All standards and interpretations of the IFRS Interpretations Committee endorsed by the EU and effective as at the balance sheet date were applied. Regulations under commercial law pursuant to Section 315e of the German Commercial Code (HGB) were complementarily taken into account.

The consolidated financial statements have been prepared in euros (€). Unless indicated otherwise, disclosure is in thousands of euros. The statement of profit or loss has been prepared using the cost of sales accounting method.

The consolidated financial statements for the period ended 31 December 2022 were approved for publication by the Board of Management on 6 March 2023.

Consolidation

Subsidiaries, including structured entities over which Jungheinrich AG, Hamburg, can exercise direct or indirect control, are included in the consolidated financial statements. Control can be exercised if the parent company has control over the subsidiary on the basis of voting rights or other rights, participates in the variable returns and can use its control to influence these returns. Structured entities which are controlled are also included in the scope of consolidation. Structured entities are companies in which the voting rights or comparable rights are not definitive for the determination of control. For example, this is the case if the voting rights only pertain to the administrative responsibilities and the material activities are regulated by way of contractual agreements.

Joint ventures and associated companies are reported using the equity method. A joint venture is a joint arrangement according to which Jungheinrich exercises control together with a partner company, and has rights in the net assets of the investment together with that partner. Associated companies are companies where Jungheinrich AG, Hamburg, has a significant direct or indirect influence on their finance and business policies. A significant influence is said to exist if Jungheinrich holds a share of between 20 per cent and 50 per cent of the voting rights.

Subsidiaries, joint ventures and associated companies which are of subordinated importance to the Group and to the presentation of the actual assets, liabilities, financial position and profit or loss due to their dormancy or minimal business activity are accounted for at fair value.

Subsidiaries are included in the consolidated financial statements starting from the point in time at which Jungheinrich AG obtains control over the company until the point in time at which control by Jungheinrich AG ends.

The financial statements of Jungheinrich AG as the parent company and of included subsidiaries that are to be consolidated are prepared using uniform accounting and valuation methods as at the balance sheet date of the parent company.

The same accounting and valuation methods are used to determine the pro rata shareholders' equity of companies accounted for using the equity method.

Business combinations, or in other words, acquisitions of companies and business areas, are accounted for using the acquisition method in compliance with IFRS 3. Accordingly, the consideration transferred at the acquisition date is offset against the net assets measured at their fair values as of the date of acquisition. Transaction costs associated with business combinations are generally recognised in profit or loss. If the consideration transferred includes conditional consideration, the latter is measured at its fair value at the acquisition date. Identifiable assets acquired and liabilities assumed are also measured at their fair values at the acquisition date. If the acquisition costs are higher than the fair value of the identified net asset, the positive balance is capitalised as goodwill. If the fair value of the acquired net asset is higher than the acquisition costs, the negative balance is recognised as negative goodwill. This is recognised immediately in profit or loss in the year of acquisition. If the fair values of the business combination on the acquisition date can only be determined provisionally until their initial reporting date, the business combination is accounted for on the basis of these provisional figures. In accordance with IFRS 3.45, initial accounting observes the twelve-month measurement period from the acquisition date. All necessary adjustments to the determined fair values are booked against the provisional goodwill or negative goodwill within this measurement period. Non-controlling interests in shareholders' equity are reported under "Non-controlling interests" under shareholders' equity.

All receivables and liabilities, expenses and income as well as intragroup results within the scope of consolidation are eliminated within the framework of the consolidation.

Investments in companies accounted for using the equity method are recognised at their acquisition cost upon initial recognition. Changes in the pro rata shareholders' equity of the investments following acquisition are offset against the investments' carrying amount. The Jungheinrich Group's investments in companies accounted for using the equity method include goodwill arising at the time of their acquisition. Since this goodwill is not stated separately, it does not have to be separately tested for impairment pursuant to IAS 36. Instead, the investment's entire carrying amount is tested for impairment in accordance with IAS 36 as soon as there are indications of the recoverable amount dropping below the investment's carrying amount. If the recoverable amount is lower than the carrying amount of a company accounted for using the equity method, an impairment loss in the amount of the difference is recognised. Write-ups in subsequent reporting periods are recognised in profit or loss.

Currency translation

Cash and cash equivalents, receivables and liabilities in foreign currency in the Group companies' annual financial statements are translated at the exchange rate valid at the balance sheet date and any differences resulting from such translation are recognised in profit and loss.

Key exchange rates for the Jungheinrich Group

		Mean exchange rate at the balance sheet date		Annual average exchange rate	
Currency	Baseline 1 €	**31/12/2022**	31/12/2021	**2022**	2021
CHF		0.9847	1.0331	1.0052	1.0814
CNY		7.3582	7.1947	7.0801	7.6340
CZK		24.1160	24.8580	24.5603	25.6468
GBP		0.8869	0.8403	0.8526	0.8600
PLN		4.6808	4.5969	4.6845	4.5640
RUB		77.9635	85.3004	74.2259	87.2321
USD		1.0666	1.1326	1.0539	1.1835

The annual financial statements of the non-German subsidiaries included in the consolidated financial statements are translated according to the functional currency concept. In each case, this is the local currency if the subsidiaries are integrated into the currency area of the country in which they are domiciled as commercially independent entities. As regards the companies of the Jungheinrich Group, the functional currency is the local currency.

To prepare the consolidated financial statements, assets and liabilities reported in local currency are converted to euros at the mean exchange rate at the balance sheet date. Changes during the year, the items on the statement of profit or loss, and the components of the other comprehensive income (expense) are translated at the annual average exchange rate for the financial year. Shareholders' equity is carried at historic exchange rates. Translation differences are recognised in shareholders' equity under "Accumulated other comprehensive income (expense)" with no effect on profit or loss until the subsidiary is removed from the scope of consolidation. The respective cumulative translation differences are reversed in profit or loss when Group companies are deconsolidated.

Hyperinflation

If the functional currency of a subsidiary included in the consolidated financial statements is the currency of a hyperinflationary economy, the subsidiary applies the provisions of IAS 29 "Financial Reporting in Hyperinflationary Economies" in preparing the annual financial statements.

The carrying amounts of non-monetary assets and liabilities, equity attributable to shareholders of Jungheinrich AG and all comprehensive income (expense) items will be adjusted to the value applicable on the balance sheet date. Under these circumstances, a general price index is applied that reflects the change in purchasing power.

Non-monetary assets adjusted in accordance with IAS 29 remain subject to review for indications of impairment.

The monetary profit or loss from the net result of the monetary items in the year under review is reported under other financial income (expense).

All items in the annual financial statement of an included subsidiary whose functional currency is a hyperinflationary economy currency are converted at the rate applicable as at the balance sheet date.

The impact of inflation on equity is netted against the currency translation effect with no effect on profit or loss and reported as other changes under the item "currency translation" in the consolidated statement of changes in equity.

In the first year for which IAS 29 is applied in the consolidated financial statement, the previous year's figures do not need to be adjusted.

Turkey was classified as a hyperinflationary economy for the first time in 2022. The annual financial statements of the Turkish sales company, whose functional currency is the Turkish lira, included in the consolidated financial statements as of 31 December 2022, were prepared using the provisions of IAS 29 starting from 1 January 2022. The statements are based on the historical acquisition and manufacturing costs method. The consumer price index published by the Turkish national statistics office was used to adjust the annual financial statements to the value applicable as at the balance sheet date. As of 31 December 2022 the price index stood at 1,128.45 (1 January 2022: 686.95). The loss from the net result of the monetary items is reported under other financial income (expense) in 2022.

Revenue recognition

Revenue is recognised after deduction of bonuses, discounts or rebates when control over the goods or services has been transferred to the customer. In general, this is the case when the delivery has been made or the service has been rendered, when the selling price is fixed or determinable and when the receipt of payment is reasonably certain.

Revenue for contracts with customers, particularly in relation to the sale of material handling equipment and the performance of after-sales services, is recognised in the Jungheinrich Group primarily on the basis of individual contracts. Revenue is recognised at the amount of the contractually agreed consideration as soon as the customer has gained control over the goods or uses the services provided. Significant financing components are not included in the contracts with customers as standard market payment targets are agreed as a general rule. A provision is set up for statutory and contractual warranty obligations.

With regard to automation projects in the area of automated systems which are under the control of the ordering party during production and for which the Group has a legal right to payment for the work already performed, including an appropriate margin, Jungheinrich recognises revenue and the cost of sales in accordance with the degree of completion. This means that, for these projects, control is transferred and revenue is recognised over a specific period. The degree of completion results from the relation of the contract-related costs incurred as at the balance sheet date vis-à-vis the estimated total contract-related costs as at the balance sheet date and reflects, according to the management's assessment, the completion progress and the associated transfer of control over the project to the customer to an appropriate extent. If the earnings from a construction contract cannot be determined reliably, revenue is only recognised in the amount of the costs incurred that are likely recoverable.

Revenue from financial service transactions is recognised on a straight-line basis over the term of the contracts if the contract is classified as an "operating lease" in the amount of the lease payments. If the contract is deemed to be a "finance lease", revenue is recognised in the amount of the fair value of the leased item or the present value of the lease payments attributable to the lessor at the start of the contract, whichever is lower. The interest income is realised over the terms of the contracts using the effective interest method. If a leasing company or bank acts as an intermediary, the sales proceeds received, less the agreed residual values, from concluded sales contracts which contain repurchase obligations and are classified as an "operating lease", are recognised under deferred income. They are reversed with an effect on revenue on a straight-line basis over time until the repurchase date contractually agreed with the leasing company/bank. If the contracts are deemed to be "finance leases", revenue is recognised in the amount of the fair value of the leased item or the present value of the lease payments attributable to the lessor at the start of the contract, whichever is lower.

Product-related expenses

Expenses for advertising and sales promotion, as well as other sales-related expenses are recognised in profit or loss when they are incurred. Freight and dispatch costs are carried under the cost of sales.

Product-related expenses also include additions to provisions for warranty obligations as well as to provisions for onerous contracts.

Research and development costs

Research costs and development expenses that cannot be capitalised are recognised in profit or loss in the period in which they are incurred.

From the beginning of production, capitalised development expenditure is reduced by straight-line amortisation over the series production's expected duration.

Research costs and non-capitalisable development expenditure, as well as amortisation and impairment of capitalised development expenditure, are stated under research and development costs.

Government grants

Investment grants and subsidies are recognised if there is sufficient certainty that Jungheinrich can satisfy the associated conditions and that the benefits will be granted. Performance-related government grants are recognised in profit or loss as "other operating income" in the period in which the corresponding claim arises. Government grants for assets do not reduce these assets' acquisition and manufacturing costs. Instead, they are generally recognised as deferred income and distributed on schedule over the subsidised assets' useful lives. The reversals are recognised in profit or loss as other operating income on a pro rata temporis basis.

Earnings per share

Earnings per share are calculated based on share of profit or loss attributable to the shareholders of Jungheinrich AG, and this in turn is based on the average number of the respective shares outstanding during a financial year. In the 2022 and 2021 financial years, no equity instruments diluted the earnings per share on the basis of the respective shares issued.

Intangible assets and property, plant and equipment

Purchased intangible assets are measured at acquisition costs, and reduced by straight-line amortisation over their useful lives insofar as their useful lives are limited. The useful lives used as a basis for software licences are 3 to 8 years. Intangible assets with limited useful lives acquired as part of business combinations primarily relate to customer relationships, technologies and customer contracts. The economic useful lives determined are between 4 and 15 years for these customer relationships and technologies, and between 15 and 20 years for the customer contracts. Usage rights in land acquired in China and Singapore are limited to 50 and 36 years respectively.

Development expenses are capitalised if the manufacturing of the developed products is expected to result in an economic benefit for the Jungheinrich Group and is technically feasible and if the costs can be determined reliably. Capitalised development expenditure comprises all costs directly allocable to the development process, including development-related overheads. From the beginning of production, capitalised development expenditure is amortised using the straight-line method over the series production's expected duration, which is normally between 4 and 7 years.

At initial recognition, goodwill from business combinations is measured at acquisition cost and classified as an intangible asset. Acquisition costs are the positive balance of the consideration transferred and the fair value of the acquired net asset. In subsequent periods, goodwill is accounted for at acquisition cost, less accumulated impairment losses where necessary. Goodwill is tested for impairment at least once a year or whenever there is an indication of a potential reduction in value. If the carrying amount of a cash-generating unit (CGU) exceeds the recoverable amount, an impairment loss in the amount of the difference is recognised immediately in profit or loss. Impairment losses, including impairment losses recognised during the current financial year, will not be reversed in subsequent reporting periods. For the purpose of impairment testing, the recoverable amount of the CGU to which the goodwill is allocated needs to be determined. The CGUs are generally identical to the legal Group companies. The MIAS Group is the designated CGU to which goodwill from the acquisition of MIAS has been assigned. The recoverable amount is the higher of the fair value less selling costs and the value in use. The impairment test is performed on the basis of the determined value in use of a CGU using the discounted cash flow method. As a rule, the cash flows budgeted for in the bottom-up five-year budget, made plausible by Jungheinrich AG management, are used. The parameters set are derived from historical information and mirrored by external sources of information. Forecasts for long-term revenue and returns form the basis for cash flows beyond the budget period. A pre-tax interest rate in line with the conditions prevailing on the market is used as the discount rate. The total cost of capital is based on the risk-free interest rate and risk premiums for equity and debt specific to the Group units and countries. If the value in use is lower than the carrying amount, the recoverable amount is also calculated on the basis of fair value less selling costs.

Property, plant and equipment are measured at historical acquisition and manufacturing costs, less accumulated depreciation. The manufacturing costs for self-produced equipment include not only the direct material and manufacturing expenses, but also attributable material and production overheads, as well as production-related administrative expenses and depreciation. Maintenance and repair expenses are stated as expenses. All costs for measures that lead to an extension of the useful life or a widening of the future possibilities for use of the assets are capitalised. Depreciable objects are reduced by straight-line depreciation. If objects are sold or scrapped, property, plant and equipment and intangible assets are derecognised; any resulting profits or losses are recognised in profit or loss.

Useful lives of property, plant and equipment

Buildings	10–50 years
Land improvement, improvements in buildings	10–50 years
Plant facilities	8–15 years
Technical equipment and machinery	5–10 years
Factory and office equipment	3–10 years

Intangible assets and property, plant and equipment with indeterminable or unlimited useful lives are not reduced using depreciation or amortisation.

Jungheinrich enters into contracts as a lessee for the use of property, plant and equipment, primarily properties and trucks. The right-of-use assets reported under property, plant and equipment are measured at acquisition cost, less cumulated depreciation and any necessary impairment, taking into account any remeasurements of the lease liability. The acquisition cost of the right-of-use asset is the present value of contractually agreed lease payments plus contract completion costs, less all lease incentives received. If there is an obligation to restore the underlying asset of the lease to its original state, then these costs are considered part of the acquisition cost. Jungheinrich makes use of the option in property lease contracts to consider payments for non-lease components as lease payments, and in so doing to recognise every lease component and all associated non-lease components as a single lease component. For all other leases, lease and non-lease components are accounted for separately. If ownership of the leased item is transferred to Jungheinrich at the end of the contract's term as a result of the exercise of an option or a contractual agreement, the item is depreciated over its economic useful life. Otherwise, the right-of-use asset is reduced by straight-line depreciation over the lease term.

For leases with a maximum term of twelve months and leases of low-value assets, the rental and lease payments made by Jungheinrich are recognised by Jungheinrich using the straight-line method as an expense over the term of the contract under functional costs. Low-value leases consist of assets whose individual acquisition costs at original value do not exceed €5 thousand.

Trucks for short-term rental

Jungheinrich rents trucks to customers on the basis of short-term agreements. These trucks for short-term rental are capitalised at historical acquisition or manufacturing costs and depreciated over their economic useful lives, which are set at six and nine years respectively according to product group. Depending on the product group, they are depreciated at 30 or 20 per cent of their cost in each of the first two years, after which they are reduced using the straight-line method until the end of their useful lives.

Impairments of intangible assets, property, plant and equipment and trucks for short-term rental

The impairment test for goodwill is explained in the section headed “Intangible assets and property, plant and equipment”.

All other intangible assets, property, plant and equipment and trucks for short-term rental are tested for impairment whenever there is an indication of a potential reduction in value. Besides qualitative criteria, particularly macroeconomic indicators, quantitative criteria are also used to furnish indications that a write-down may occur in a cash-generating unit (CGU). Each legal company generally constitutes one CGU. As its quantitative criterion for assessing the impact of crises on recognised assets, Jungheinrich uses the ratio between the EBIT coverage ratio based on the CGU's current annual forecast and the current total carrying amounts of its fixed assets and net current assets. If the ratio falls below 3 per cent, the relevant CGU's intangible assets, property, plant and equipment, and trucks for short-term rental are tested for impairment.

In such cases, the recoverable amount of the asset is compared with its carrying amount. The recoverable amount is determined for each individual asset unless an asset generates cash flows that are not largely independent of those of other assets or other groups of assets (cash-generating units). The recoverable amount is the higher of fair value of the asset less selling costs and value in use, which is the estimated discounted future cash flow. If the carrying amount exceeds the recoverable amount of the asset, an impairment is performed.

If the reason for an impairment carried out in previous years no longer exists, a write-up to amortised acquisition and manufacturing costs is performed.

Leasing and financial services

Within the framework of their financial services business, Jungheinrich Group companies conclude contracts with customers either directly or with a leasing company or bank acting as an intermediary.

The classification of the leases, and thus the way they are reported in the accounts, depends on the attribution of the economic ownership of the lease object. In the case of “finance lease” contracts, essentially all the risks and rewards incidental to ownership of the leased asset are transferred so that the economic ownership lies with the lessee. At the Jungheinrich Group companies, as the lessor, this leads to identification of such assets as receivables from financial services in the amount of their net investment value. If the contract is deemed to be a “finance lease”, revenue is recognised in the amount of the fair value of the leased item or the present value of the lease payments attributable to the lessor at the start of the contract, whichever is lower. Interest income realised in instalments over the term to maturity ensures that a stable return on outstanding net investments is achieved.

If economic ownership is attributed to Jungheinrich as the lessor, the agreement is classified as an "operating lease". The trucks are then capitalised as "trucks for lease from financial services" at historical acquisition or manufacturing cost and then depreciated over their economic useful lives. Leased items acquired before 1 January 2021 are depreciated over an economic useful life of six or nine years, depending on product group. Depending on the product group, they are depreciated at 30 or 20 per cent of their cost in each of the first two years, after which they are reduced using the straight-line method until the end of their useful lives. Leased equipment acquired from 1 January 2021 onwards is reduced by straight-line depreciation during the term of the customer contract down to the residual value. Lease income is recognised in profit or loss over the terms of the contracts using the straight-line method. Upon termination of the customer lease contract, the trucks are transferred to inventories at their carrying amounts.

These long-term customer contracts ("finance leases" and "operating leases") are generally financed with maturities identical to those of the contracts. Resulting liabilities are recorded on the liabilities side under liabilities from financing as part of the item "liabilities from financial services". In addition to truck-related loan financing, proceeds from the sale of future lease instalments from intragroup usage right agreements in the Jungheinrich Group are deferred as liabilities from financing and released over the period of the usage right using the effective interest method. In addition, Jungheinrich finances itself via Elbe River Capital S.A., Luxembourg, an affiliated company established exclusively for this purpose. This refinancing firm buys all lease instalments from intragroup usage right agreements – and, in Germany and the United Kingdom, from customer contracts, too – that mature in the future, and refinances itself through the issuance of promissory notes.

In addition, the underlying trucks in long-term customer contracts are refinanced using the sale and leaseback method. For sale and leaseback transactions completed prior to the first application of IFRS 16 ("Leases") there was no reassessment regarding the transfer of control to the leasing companies/banks, and the distribution of the profit from the sale from these contracts over the term of the contract is continued in accordance with the transition rules of IFRS 16. For sale and leaseback contracts completed after 1 January 2019, assessments are performed to see if control over the trucks has been transferred to the refinancing partner. As this is usually not the case, the trucks are not considered to have been sold, and are derecognised. They are recognised and measured as either trucks for lease from financial services (operating lease) or receivables from financial services (finance lease) depending on how the customer contract is classified. Refinancing liabilities in the amount of the revenue from the transfer are accounted for as financial liabilities and recognised as "liabilities from financial services".

In the case of customer contracts with a leasing company or bank acting as an intermediary, Jungheinrich concludes sales contracts with the leasing companies/banks for the assets provided to the customer. Jungheinrich is frequently required under these contracts to repurchase the trucks from the leasing company/bank for an agreed residual value when the customer contracts expire. As a result, these contracts satisfy the definition of a lease contract and are classified as an "operating lease" or "finance lease" in accordance with the classification criteria used to classify lease contracts concluded directly with customers. If economic ownership is held by the Jungheinrich Group companies, the trucks sold to leasing companies/banks continue to be recognised in Jungheinrich's statement of financial position in accordance with IFRS. When they are capitalised as "trucks for lease from financial services", sales proceeds less the agreed residual value are recorded as "deferred revenue from financial services" under deferred income. Trucks for lease are depreciated on a straight-line basis over the term of the underlying leases between the leasing companies/banks and the end customer. The sales proceeds recognised as part of deferred income are reversed with an effect on revenue on a straight-line basis over the term of the contract until payment of the agreed residual value is due. The repurchase obligations are reported in the amount of the contractually agreed residual values under the item "liabilities from financial services".

Financial instruments

In accordance with IFRS 9, financial instruments are defined as contracts that, at the same time, lead to financial assets in one company and financial liabilities or equity instruments in the other.

In accordance with IFRS 9, financial assets must be assigned to one of the following three measurement categories:

- At amortised cost
- At fair value through other comprehensive income (expense)
- At fair value through profit or loss

The financial assets are classified based on the Jungheinrich Group's business model for managing financial assets and on the characteristics of the contractually agreed cash flows.

Financial liabilities must be assigned to one of the following two measurement categories:

- At fair value through profit or loss
- Other financial liabilities

Financial instruments carried at amortised cost are primarily non-derivative financial instruments such as trade accounts receivable and payable, contract assets, other receivables and financial assets, other financial liabilities, receivables and liabilities from financial services, as well as financial liabilities.

Non-derivative financial instruments are recognised at the settlement date, i.e. the time at which the asset is delivered to or by Jungheinrich.

Trade accounts receivable and contract assets

Trade accounts receivable and contract assets are held by the Jungheinrich Group primarily for the purpose of realising their nominal value. The contractual conditions result in cash flows at agreed times which exclusively constitute repayments and, if applicable, interest payments on the outstanding receivable amount. As a rule, the Jungheinrich Group's trade accounts receivable and contract assets have contractually agreed short-term payment terms. They are categorised as "at amortised cost" and measured at amortised cost using the effective interest method, whereby the amortised cost corresponds to the nominal value less loss allowances.

Further information on receivables from financial services can be found in the notes on the treatment of leases.

Non-consolidated investments in affiliated companies and joint ventures

Non-consolidated investments in affiliated companies and joint ventures are accounted for at fair value through profit or loss. Non-consolidated investments in affiliated companies and joint ventures are reported under "Other financial assets" in the consolidated statement of financial position.

Other investments

Investments in companies that are neither affiliated companies, associated companies nor joint ventures are recognised under other non-current financial assets. These investments are accounted for at fair value through profit or loss and reported under "Other financial assets" in the consolidated statement of financial position.

Securities

Securities which are held for the purpose of holding them to maturity and realising their contractual cash flows are categorised as "at amortised cost" and measured at amortised cost using the effective interest method. These securities are initially recognised at fair value plus transaction costs. Differences between the original amount and the amount repayable at maturity are distributed over their terms and recognised in financial income (expense). With these securities, the amortised cost corresponds to the nominal value less (plus) any discounts (premiums) and less loss allowances for expected credit losses.

Securities which are held for the purpose of selling or holding in order to realise contractual cash flows but which cannot be assigned to the category "fair value through other comprehensive income (expense)" are categorised as "at fair value through profit or loss". These securities are initially recognised at fair value plus transaction costs that are directly attributable to the purchase of the financial instrument. The fair value corresponds to the market prices quoted on active markets. Gains and losses from these securities resulting from measurement at fair value are recognised directly in profit or loss.

Jungheinrich does not have any securities categorised as "at fair value through other comprehensive income (expense)".

Other financial assets

Other financial assets are categorised as "at amortised cost" and carried at amortised cost using the effective interest method; in other words, at the nominal value less loss allowances for expected credit losses.

Cash and cash equivalents

Cash and cash equivalents are available at short notice and have an original maturity of up to three months. They also include short-term deposits with an original contractual term of up to twelve months. Cash and cash equivalents are carried at amortised cost; in other words, at the nominal amount less valuation allowances for expected credit losses.

Liabilities

Liabilities are measured at amortised cost using the effective interest method. The interest cost is recognised in accordance with the effective interest rate.

Lease liabilities are recognised at the beginning of the lease at present value of the outstanding lease payments using the incremental borrowing rate, and are subsequently measured using the effective interest method at amortised cost. The lease liability's carrying amount increases by accrued interest and decreases by lease payments made. Changes to the carrying amount from remeasurement of the lease liability due to reassessments or adjustments to the lease are also taken into account.

Impairment of financial instruments

For financial instruments in the category "at amortised cost", impairment losses are calculated for expected credit losses and recognised immediately in profit or loss as loss allowances.

In accordance with IFRS 9, loss allowances for expected credit losses must be recognised at the time of initial recognition of financial assets.

Jungheinrich uses the simplified method (two-level model) to calculate loss allowances recognised for trade accounts receivable and contract assets. Due to the predominantly short-term maturity of these financial assets, the expected credit loss resulting from potential defaults relates to the remaining term of the trade accounts receivable and contract assets (Level 2). A transfer from Level 1 to Level 2, as envisaged in the general impairment model (three-level model), is thus not relevant for these financial instruments.

The Jungheinrich Group has established standardised risk categories for ranges of credit rating indices. To calculate the loss allowances in the consolidated financial statements, the upper limit of the range has been specified for each risk group as the Group probability of default for a twelve-month term to maturity. Trade accounts receivable and contract assets existing as at the balance sheet date are assigned to these risk categories in accordance with the individual customer rating. The loss allowances for expected credit losses are determined by applying the Group probability of default to the portfolio of receivables of the individual risk groups, while taking account of the average payment targets agreed by the respective Group companies. In the case of portfolios of receivables for which there is loan insurance, only the contractually agreed deductible is subject to a credit risk. The individual customer ratings contain forward-looking information.

Trade accounts receivable and contract assets are transferred to Level 3 as soon as there are objective indications of impairment affecting these financial instruments. These indications include a clear deterioration in the customer rating, registered insolvencies, and a clear increase in the debtor's overdue payments. Individual event-based loss allowances are recognised for these doubtful trade accounts receivable and contract assets with an impaired credit rating.

Insofar as the objective indications of impairment no longer apply and the trade accounts receivable and contract assets no longer have an impaired credit rating, the impairment losses are reversed. The financial instruments are included again in the calculation of loss allowances at Level 2.

If it can no longer be assumed, based on an appropriate evaluation, that trade accounts receivable or assets are recoverable in whole or in part, they are derecognised in line with local regulations.

Jungheinrich uses the three-level model to calculate potential future impairment losses for all other financial instruments in the category “at amortised cost”. At the time of initial recognition, these financial assets are assigned to Level 1, and loss allowances equal to the expected twelve-month credit losses are recognised. The probabilities of default for a twelve-month period are based on CDS prices containing forward-looking information and the expected loss given default ratio. Parameters for loss given default ratios (LGD) reflect an assumed recoverability rate of 40 to 45 per cent. In this case, the estimated loss is calculated based on the current market price of the financial instruments and the remaining term to maturity. If the credit risk rate increases significantly in subsequent periods, these financial instruments would have to be transferred to level 2, and loss allowances equal to the expected credit loss for the remaining term to maturity would have to be recognised. Were contractual payments to become more than 30 days overdue, this would not by itself signal a significant increase in the credit risk, but it would indicate that a significant increase in the credit risk might have occurred. Jungheinrich’s risk management system treats a downgrading of the counterparty’s external rating below investment grade as a criterion for a significant increase in the credit risk. However, in line with Jungheinrich’s risk management strategy, all other financial instruments are immediately liquidated if there is a significant increase in the creditworthiness risk.

IFRS 9 requires that loss allowances be recognised for expected credit losses. These loss allowances are calculated based on estimated probabilities of default. The credit losses that actually occur in the future may deviate from the amounts recognised in the consolidated financial statements.

Subsequent changes to IAS 1 “Presentation of Financial Statements” resulting from the introduction of IFRS 9 have not been implemented by Jungheinrich. For reasons of materiality, impairment losses are not reported separately in the statement of comprehensive income, but rather in the notes to the financial statements.

Derivative financial instruments

At Jungheinrich, derivative financial instruments are mainly used for hedging purposes.

Jungheinrich has opted to continue to apply the provisions of IAS 39 when accounting for hedges, as permitted by IFRS 9.

Derivative financial instruments are recognised at the trade date, i.e. the time the obligation to buy or sell the asset was entered into.

IAS 39 requires all derivative financial instruments to be accounted for at fair value as assets or liabilities. Depending on whether the derivative is a fair value hedge or a cash flow hedge, gains and losses arising from changes in the fair value of the derivative are recognised in profit or loss or are otherwise recognised in shareholders’ equity (accumulated other comprehensive income (expense)), with no effect on profit or loss. In the case of a fair value hedge, the results from changes in the fair value of derivative financial instruments are recognised in profit or loss. The changes in the fair value of derivatives that are to be classified as cash flow hedges are initially recognised with no effect on profit or loss under shareholders’ equity in the amount of the hedge-effective part. These amounts are transferred to the statement of profit or loss at the same time as the effect on the result of the underlying transaction. The hedge-ineffective part is recognised directly in financial income (expense).

Derivative financial instruments that are not designated as hedging instruments are categorised as “at fair value through profit or loss”. Gains and losses from these derivative financial instruments resulting from measurement at fair value are recognised directly in profit or loss.

Financial instruments measured at fair value are classified and assigned to measurement categories according to the significance of the factors considered in their measurement. Financial instruments are assigned to levels depending on the significance their input factors have on their overall measurement. Assignments are based on the lowest level of substantial or main relevance for the measurement. The fair value hierarchy is based on the input factors used:

Level 1 – (unchanged) market prices quoted on active markets for identical assets or liabilities,

Level 2 – input data other than listed market prices, which can be observed either directly (as a price) or indirectly (derived from prices) for the asset or liability,

Level 3 – referenced input factors used for the measurement of the asset or liability that are not based on observable market data

Jungheinrich records reclassifications between these different measurement levels at the end of the reporting period in which the change occurred.

Inventories

Inventories are measured at the lower of acquisition or manufacturing cost and net realisable value. Manufacturing costs include not only the direct material and manufacturing expenses, but also the attributable material and production overhead costs as well as production-related administrative expenses and depreciation. The average cost method is applied to calculate the acquisition and manufacturing costs of inventories of the same type.

Utilisation risks resulting from storage time are taken into account by way of value reductions on the basis of historical usage. Once the reason for the write-downs ceases to exist, a reversal of the write-down is carried out.

Income taxes

Deferred tax assets and liabilities are recognised in accordance with the balance-sheet-orientated method for all temporary differences between Group and tax-based valuation. This procedure is generally applicable for all assets and liabilities with the exception of goodwill from the consolidation of investments. In addition, deferred tax assets are stated on the statement of financial position to carry forward unused tax losses and unused tax credits if it is probable that they can be utilised. Deferred taxes are valued at the current rates of taxation. If it is expected that the differences will be offset in years with different rates of taxation, then the latter rates valid at that time are applied. If there are any changes in the tax rates, these changes are taken into account in the year in which the relevant changes in tax rates are approved. Actual income tax expense is recorded on the statement of financial position as of the time it was incurred. It is calculated taking into account the respective local tax legislation and current case law. The complexity of these regulations and the resulting potential for them to be interpreted in different ways means that there is uncertainty as to how individual transactions are to be treated for tax purposes. Uncertain tax positions are assessed regularly at the end of the year. These uncertain tax items are measured in accordance with IFRIC 23 by using the most likely amount.

A loss allowance is recognised for deferred tax assets, the recovery of which is improbable.

Other comprehensive income (expense)

Stated in this item are changes in the shareholders' equity with no effect on profit or loss, insofar as these are not based on capital transactions with shareholders. These include the currency translation adjustment, including the impact of inflation on equity that arises as a result of applying the provisions of IAS 29, as well as differences resulting from the remeasurement of defined benefit pension plans. Changes in the year under review are presented in the statement of comprehensive income.

Provisions

Provisions for pensions and similar obligations are valued on the basis of actuarial calculations in accordance with IAS 19 by applying the projected unit credit method for defined benefit obligations from pensions. This method takes into account pensions and vested future benefits known as at the balance sheet date, expected increases in salaries and pensions, and demographic calculation principles. Remeasurements relating to actuarial gains and losses and the return on plan assets at Jungheinrich (excluding amounts included in the net interest on the net defined benefit liability) are recognised in other comprehensive income (expense) as soon as they occur and are thus disclosed directly in the statement of financial position. Remeasurements recognised in other comprehensive income (expense) are a component of accumulated other comprehensive income (expense) and are not transferred to the statement of profit or loss in subsequent periods. The cost component "service cost" is recognised in profit or loss in the personnel costs of the corresponding functional areas. Net interest on the net liability from defined benefit pension plans is recognised in profit or loss in financial income (expense). Pension obligations and similar obligations of some foreign companies are financed by pension funds. These pension funds are qualifying plan assets pursuant to IAS 19.

The defined benefit obligation stated on the consolidated statement of financial position represents the current funding gap of the Jungheinrich Group's defined benefit pension plans.

Termination benefits are recognised if the employee's employment contract is terminated before they reach normal pension age, or if they volunteer to terminate the employment contract in exchange for severance benefits. The Group recognises such benefits only if Jungheinrich is obliged to terminate the employment contract and provide the benefits due to a detailed formal plan (which cannot be revised) or if there is an individual agreement. Termination benefits are accounted for in accordance with IAS 19.

Furthermore, provisions have been accrued to cover employee benefits due pursuant to local statutory regulations in the event of their departure, as well as to cover other employee benefits due over the short or long term. These obligations are accounted for in accordance with IAS 19.

The valuation of the long-term incentive (LTI) as a share-based performance-related component of the Board of Management's remuneration with a long-term incentive effect is carried out at fair value using a Monte Carlo simulation. The obligations are recorded as personnel provisions under other provisions.

Other provisions are accrued in accordance with IAS 37 if a past event results in a present obligation to third parties. It is probable that resources will be used to meet this obligation and the anticipated amount of the required provision can be reliably estimated. Other provisions are accounted for based on the best possible estimate of costs required to meet the present obligation as at the balance sheet date. If the amount of the necessary provision can only be determined within a certain bandwidth, the most probable value is stated. If all amounts are of equal probability, the mean value is stated.

Provisions for restructuring measures are accrued pursuant to IAS 37 if a detailed, formal plan has been established and all the parties involved have been informed of said plan. The measures are implemented without undue delay.

Non-current provisions are discounted and stated at the present value of the expected expense. Provisions are not offset against claims under rights of recourse.

Classification of accounts

Current and non-current assets, as well as current and non-current liabilities, are stated on the statement of financial position as separate classification groups. Assets and liabilities are classified as being current if their realisation or repayment is expected within twelve months from the balance sheet date. Accordingly, assets and liabilities are classified as being non-current if they have a remaining term to maturity of more than one year. Pension provisions are stated in line with their nature under non-current liabilities as benefits due to employees in the long term. Deferred tax assets and liabilities are classified as non-current assets and non-current liabilities.

Individual items in the statement of profit or loss and in the statement of financial position are summarised. They are shown separately in the notes.

Estimates

In the consolidated financial statements, it is necessary to a certain degree to make estimates and assumptions that have an impact on the level and recognition of assets and liabilities stated in the statement of financial position as at the balance sheet date and the level of income and expenses during the reporting period. Estimates and assumptions must be made primarily to determine the economic useful lives of property, plant and equipment, of trucks for short-term rental and of leased equipment uniformly throughout the Group, to conduct impairment tests on assets, and to account for and measure provisions, including those for pensions, guarantee and disposal obligations or legal disputes. Further estimates and assumptions about the expected residual values at the end of the term of long-term customer leases must be made to measure the underlying assets. Assumptions and estimates are also necessary when determining the intrinsic value of deferred tax assets, especially on loss carryforwards, and when recognising tax items that are still uncertain. Estimates and assumptions are made on the basis of the latest knowledge available and historical experience as well as additional factors such as future expectations.

The amounts which actually materialise may deviate from the estimates. When the actual course of events deviates from the expectations, the premises and, if necessary, the carrying amounts of the affected assets and liabilities, are adjusted accordingly.

To identify any impairment of goodwill, it is necessary to calculate the recoverable value of the cash-generating unit (CGU) to which the goodwill has been allocated. Calculating the recoverable amount involves estimating future cash flows from the CGU, a sustainable growth rate and an appropriate discount rate for the calculation of the net present value. Any change in these and other influential factors may lead to impairment losses. Goodwill is tested for impairment once a year or whenever there is an indication of a reduction in value.

All other intangible assets, property, plant and equipment and trucks for short-term rental are tested for impairment whenever there is an indication of a potential reduction in value. Besides qualitative criteria, particularly macroeconomic indicators, quantitative criteria are also used to furnish indications that a write-down may occur in individual cash-generating units (CGU).

The EU and the USA imposed a range of sanctions on Russia in reaction to its invasion of Ukraine in February 2022. Since the beginning of March 2022, Jungheinrich has supplied no new or used trucks or replacement parts to Russia or Belarus in the year under review. New truck orders and financial service agreements that had already been signed with customers in Russia but can no longer be fulfilled have been cancelled. Local business activities – restricted to used equipment and after sales business – have still been carried out by the Russian sales unit, and existing financial service agreements have continued to be fulfilled. The contract with the operator of the warehouse acting as the regional spare parts centre in Russia was not extended, the existing stock of spare parts in the warehouse was sold to the Russian sales company, and the warehouse's operational activities ceased in the second quarter of 2022. At the time the consolidated financial statements as of 31 December 2022 were prepared, Jungheinrich assumed that Jungheinrich companies in Russia and Ukraine would continue to operate.

Due to the ongoing Russia-Ukraine war, the further economic development of the CGUs in both countries is extremely uncertain. The Russia-Ukraine war and the macroeconomic development of the market in connection with the war indicated a significant risk of impairment.

As a result, the carrying amounts of the intangible assets, property, plant and equipment, and trucks for short-term rental were tested for impairment as at the balance sheet date for these CGUs. It was not possible to reflect the extreme rise in the level of uncertainty in relation to future business development in single-scenario planning. The management therefore weighted the probability of various possible scenarios to estimate the expected cash flows. This process reflected the high level of uncertainty in relation to the development of the business model, and also made transparent the sensitivities to financial parameters.

The impairment test identified the need to record impairment losses of €706 thousand in total for the sales company in Ukraine. The impairment assigned entirely to the carrying amounts of intangible assets, property, plant and equipment, and trucks for short-term rental and reported as an impairment loss of €706 thousand in profit and loss under cost of sales and selling expenses for 2022. The estimate of the value in use of €741 thousand was calculated using a pre-tax discount rate of 36.7 per cent.

No impairment was identified for the CGUs in Russia as at the balance sheet date. The risk of penalty payments in connection with non-fulfilment of customer orders that had already been placed was taken into consideration by accruing provisions in the consolidated financial statements as of 31 December 2022.

As a direct consequence of the Russia-Ukraine conflict, Jungheinrich recorded total expenses for risk prevention in the low single-digit-million-euro range in 2022. These were recorded under cost of sales and selling expenses.

Estimates of future costs for legal disputes, warranty and disposal obligations are subject to a number of uncertainties.

It is often impossible to predict the outcome of individual lawsuits with certainty. It cannot be ruled out that, as a result of the final rulings on some of the outstanding lawsuits, Jungheinrich may be faced with costs that exceed the provisions accrued for this purpose. The timing and extent of these costs cannot be predicted with certainty.

Warranty and disposal obligations are subject to uncertainties surrounding the enactment of new laws and regulations, the number of affected trucks and the nature of measures to be initiated. It cannot be ruled out that the expenses actually incurred for these measures may exceed the provisions accrued for them, to an unpredictable extent. Further information can be found in note (26) [page 140].

Although expenses resulting from a necessary adjustment in provisions in the reporting period can have a significant impact on Jungheinrich's results, it is expected that any potentially ensuing obligations will not have a material effect on the Group's economic situation, particularly in light of the provisions already accrued for this purpose.

All significant risks known at the time the consolidated financial statements were prepared and affecting the assets and liabilities stated on the statement of financial position as of 31 December 2022 have been taken into consideration in preparing the statements.

IFRS published, adopted by the EU, and applied for the first time in the 2022 financial year

Jungheinrich applied the mandatory changes to IAS 37 "Provisions, Contingent Liabilities and Contingent Assets", published by IASB in May 2020 and adopted by the EU in June 2021, for the first time from 1 January 2022. These changes now stipulate for the first time that, when it comes to the valuation of provisions for onerous contracts, all costs directly attributable to a contract are to be taken into account as costs of fulfilment. The application of this amended standard had no material impact on the Jungheinrich consolidated financial statements as of 31 December 2022.

None of the other IFRS changes or new provisions which became mandatory in the EU for the first time as of 1 January 2022 had a material effect on Jungheinrich's consolidated financial statements as of 31 December 2022.

Published IFRS adopted by the EU and not yet applied

Jungheinrich currently assumes that standards that have been published and adopted by the EU but have not yet been applied by Jungheinrich will have no material impact on the Jungheinrich Group's assets, liabilities, financial position and profit or loss, and does not plan to apply the standards early.

Published IFRS that are yet to be adopted by the EU and have not yet been applied

The other standards that have been published but not yet adopted by the EU, and have not yet applied by Jungheinrich are not expected to have a material impact on the Jungheinrich Group's assets, liabilities, financial position and profit or loss. If these standards are recognised by the EU, Jungheinrich does not currently plan to apply them until they become mandatory in later financial years.

Scope of consolidation

In addition to the parent company, Jungheinrich AG, Hamburg, the consolidated financial statements included 82 (previous year: 78) foreign and 28 (previous year: 27) domestic (German-based) companies. The scope of consolidation comprised 93 (previous year: 92) fully consolidated subsidiaries, including one structured entity, which were directly or indirectly controlled by Jungheinrich AG. 15 joint ventures (previous year: twelve) and two associated companies (previous year: one) were accounted for using the equity method.

Universal-FORMICA-Fonds, Frankfurt/Main, in which Jungheinrich AG holds 100 per cent of the shares, was included in the scope of consolidation as a structured entity. On the basis of contractual agreements, Jungheinrich is able to steer the activities of the special fund and thus influence the amount of return. The purpose of investments in funds is to take advantage of opportunities to earn returns on the capital market while limiting risk. The special fund is managed to maintain value in order to limit risks.

All of the shareholdings of Jungheinrich AG, Hamburg, are disclosed in note (44) [page 164 ff.].

Changes in the scope of consolidation

	Jungheinrich AG	Subsidiaries		Joint ventures		Associated companies		
	Germany	Germany	Outside Germany	Germany	Outside Germany	Germany	Outside Germany	Total
Balance on 01/01/2022	1	22	70	4	8	1	–	106
Additions	–	–	2	1	2	1	–	6
Disposals	–	1	–	–	–	–	–	1
Balance on 31/12/2022	**1**	**21**	**72**	**5**	**10**	**2**	**–**	**111**
Balance on 01/01/2021	1	23	70	3	8	1	–	106
Additions	–	1	1	1	–	–	–	3
Disposals	–	2	1	–	–	–	–	3
Balance on 31/12/2021	**1**	**22**	**70**	**4**	**8**	**1**	**–**	**106**

Subsidiaries

Jungheinrich Business Services Romania S.R.L., Braşov (Romania), was established in the first quarter of 2022 as an intragroup service company. The first-time consolidation of the newly established company did not result in any difference for balance-sheet purposes.

As part of its expansion of direct sales in the Asia-Pacific region, Jungheinrich gained control over its previous local sales partner in New Zealand, Industrial Truck Sales (NZ) Ltd., Auckland (New Zealand), for a purchase price of €5.4 million on 29 April 2022, and has since held 100 per cent of the voting rights and capital shares in the company. The newly acquired company was renamed Jungheinrich New Zealand Limited in the year under review.

The purchase price was provided in the form of cash and cash equivalents. The transaction-related costs of €0.4 million were primarily recorded in profit or loss under general administrative expenses in 2021 and 2022.

The table below shows the allocation of the purchase price to the net assets acquired.

Purchase price allocation at the date of acquisition

in € million	Fair values
Assets	
Intangible assets	2.5
Property, plant and equipment	0.6
Trucks for short-term rental	0.2
Trucks for lease from financial services	1.5
Inventories	4.8
Trade accounts receivable and contract assets	1.8
Receivables from financial services	2.0
Cash and cash equivalents	0.2
Deferred tax assets	0.0
	13.6
Liabilities	
Financial liabilities	1.0
Liabilities from financial services	3.5
Trade accounts payable	2.7
Other liabilities	0.5
Deferred tax liabilities	0.1
	7.8
Net assets acquired	**5.8**
Transferred consideration	5.4
Differential amount	**–0.4**

Recognisable intangible assets in the amount of €2.5 million were identified as part of the purchase price allocation. The intangible assets primarily related to acquired customer relationships, and had a fair value of €1.6 million with an assumed useful life of 15 years. The fair value of the assumed net assets following completion of the purchase price allocation was €5.8 million. The €0.4 million difference in excess of the acquisition costs was recognised in profit or loss under other operating income for the year 2022.

The receivables acquired were solely comprised of receivables which are expected to be recoverable. The fair values determined take into account the default risk for expected credit losses, which was rated low.

Jungheinrich measured the acquired lease liabilities at the present value of the remaining lease payments at the time of acquisition. The right-of-use assets were measured at the same amount as the lease liabilities.

Since its date of acquisition, Jungheinrich New Zealand Limited, Auckland (New Zealand), has contributed revenue of €12.2 million to the revenue reported in the consolidated statement of profit or loss. Its share of consolidated earnings after taxes for the same period was €0.2 million, including the effects of the purchase price allocation.

Group revenue and consolidated earnings after taxes for 2022 also included revenue and earnings after taxes attributable to transactions with the sales company in New Zealand when it was operating as a local sales partner prior to the acquisition.

If the acquisition date of the business combination had been 1 January 2022, Group revenue and consolidated earnings after taxes for 2022 would have been approximately €4,766 million and approximately €270 million, respectively. When determining these figures, Jungheinrich assumed that the provisionally determined fair value adjustments made as of the date of acquisition would also have been valid in the event of an acquisition on 1 January 2022.

As a result of a unilateral capital increase by former minority shareholder Triathlon Holding GmbH, Pyrbaum (Germany), the share held by Jungheinrich in JT Energy Systems GmbH, Freiberg (Germany) decreased from 70 per cent to 40 per cent, and Jungheinrich lost control of this company effective 27 April 2022. JT Energy Systems' assets and liabilities including non-controlling interests, were derecognised at their carrying amounts on the date control was lost, and the remaining 40 per cent of shares were recognised at fair value. In connection with the loss of control, Jungheinrich reported income of €4,664 thousand under other operating income. €6,456 thousand of this was attributable to the measurement of the remaining Jungheinrich shares at fair value. Since the date control was lost, JT Energy Systems has been consolidated as a joint venture and accounted for using the equity method.

The carrying amounts of the assets and liabilities of JT Energy Systems on the day control was transferred can be seen in the following table:

in € million	Carrying amount
Assets	
Intangible assets	0.3
Property, plant and equipment	17.1
Financial assets	0.7
Inventories	30.5
Trade accounts receivable and contract assets	8.7
Other assets	0.1
Deferred tax assets	0.1
	57.5
Liabilities	
Provisions	1.5
Financial liabilities	20.2
Trade accounts payable	13.2
Other liabilities	16.9
	51.8
Disposal of net assets	**5.7**

Joint ventures and associated companies

On 15 March 2022, Jungheinrich acquired a further 3.5 per cent of the shares in Magazino GmbH, Munich (Germany) against payment of a purchase price of €812 thousand. This increased the amount of shares held by Jungheinrich in the company to a total of 21.7 per cent, giving Jungheinrich significant influence over the company's business and financial policies. The previously held shares in Magazino GmbH were recognised under other financial assets at fair value through profit or loss. The company is consolidated as an associated company as of the date significant influence was gained and accounted for using the equity method.

The joint venture TREX.PARTS GmbH & Co. KG, Sittensen (Germany), in which Jungheinrich holds a 50 per cent stake, established TREX.PARTS SRL, Mouscron (Belgium) and TREX.PARTS SAS, Reims (France) in the first quarter of 2022. The newly established companies are included as joint ventures and accounted for using the equity method.

NOTES TO THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

(3) Revenue

Jungheinrich generates revenue from contracts with customers by providing goods and services, both at a specific point in time and over time. The Group also generates revenue from short-term rental and lease agreements, in respect of which Jungheinrich is the lessor.

Composition of revenue

			2022			2021
in € thousand	Intralogistics	Financial Services	**Jungheinrich Group**	Intralogistics	Financial Services	Jungheinrich Group
New truck business	1,861,114	–	1,861,114	1,554,679	–	1,554,679
Used equipment	279,033	–	279,033	280,563	–	280,563
After-sales services	529,658	–	529,658	471,036	–	471,036
Revenue recognition at a point in time	**2,669,805**	**–**	**2,669,805**	**2,306,278**	**–**	**2,306,278**
After-sales services	593,844	181,226	775,070	541,013	173,352	714,365
Other	122,739	–	122,739	79,736	–	79,736
Revenue recognition over time	**716,583**	**181,226**	**897,809**	**620,749**	**173,352**	**794,101**
Revenue from contracts with customers	**3,386,388**	**181,226**	**3,567,614**	**2,927,027**	**173,352**	**3,100,379**
Revenue from short-term rental and lease agreements	**413,256**	**782,424**	**1,195,680**	**346,008**	**793,428**	**1,139,436**
Revenue	**3,799,644**	**963,650**	**4,763,294**	**3,273,035**	**966,780**	**4,239,815**

Revenue from contracts with customers is broken down by region and reportable segment in the following table.

Revenue from contracts with customers by region and segment

	2022			2021		
in € thousand	Intralogistics	Financial Services	**Jungheinrich Group**	Intralogistics	Financial Services	Jungheinrich Group
Germany	860,612	45,831	906,443	772,425	45,084	817,509
Italy	255,560	48,577	304,137	226,733	46,945	273,678
France	203,058	25,780	228,838	200,498	23,927	224,425
United Kingdom	147,271	26,513	173,784	118,534	24,183	142,717
Rest of Europe	1,325,434	30,349	1,355,783	1,162,362	29,109	1,191,471
Other countries	594,453	4,176	598,629	446,475	4,104	450,579
Revenue from contracts with customers	**3,386,388**	**181,226**	**3,567,614**	**2,927,027**	**173,352**	**3,100,379**

Other revenue generated by the “Intralogistics” segment includes revenue from long-term construction contracts, with the stage of completion of the activity under the relevant contracts taken into account.

Revenue generated by the “Financial Services” segment includes €177,173 thousand (previous year: €167,533 thousand) in lease income from “operating lease” customer contracts and €84,552 thousand (previous year: €78,715 thousand) in interest income from “finance lease” customer contracts.

Of the revenue from contracts with customers realised in the reporting period, contract liabilities comprised revenue in the amount of €160,733 thousand (previous year: €97,426 thousand) as of 1 January 2022.

In addition, contract liabilities as of 1 January 2022 included €13,731 thousand (previous year: €13,094 thousand) for performance obligations fulfilled by Jungheinrich in the previous year and revenue deductions contractually agreed with customers but not yet refunded. In relation to this, contract liabilities of €9,551 thousand (previous year: €9,057 thousand) were paid in the reporting year, and an amount of €1,208 thousand (previous year: €1,637 thousand) was reversed with an effect on revenue.

In the area of after-sales services, Jungheinrich concludes with customers both long-term service contracts with fixed contractual terms and short-term service contracts with the option to extend at standard market prices. With regard to long-term service contracts, the total value of performance obligations not fulfilled was €1,052,383 thousand as of 31 December 2022 (previous year: €996,883 thousand). Jungheinrich will recognise revenue of the same amount over the remaining contractual terms when the agreed services are provided.

Future revenue from performance obligations existing as at the balance sheet date

	31/12/2022			31/12/2021		
in € thousand	After-sales services	Other	**Total**	After-sales services	Other	Total
Revenue recognition within one year	330,439	105,020	435,459	298,962	79,919	378,881
Revenue recognition between one and five years	641,165	60,455	701,620	606,374	104,640	711,014
Revenue recognition in more than five years	80,779	–	80,779	91,547	–	91,547
Total	**1,052,383**	**165,475**	**1,217,858**	**996,883**	**184,559**	**1,181,442**

The other revenue recognition disclosed in the table relates to performance obligations for long-term construction contracts, the revenue from which is recognised over time, and in respect of which the obligations that existed as at the balance sheet date and had not yet been fulfilled.

All of the Jungheinrich Group's other unfulfilled performance obligations existing as at the balance sheet date related to periods of no more than one year. As is permitted under IFRS 15, the transaction price assigned to these unfulfilled performance obligations is not disclosed.

(4) Cost of sales

The cost of sales includes the cost of materials, consisting of expenses for raw materials and supplies as well as for purchased goods and services totalling €2,503,465 thousand (previous year: €2,159,014 thousand).

The cost of materials includes €9,111 thousand in currency losses (previous year: €5,204 thousand) primarily resulting from purchases by non-German sales companies in the Group currency and the associated currency hedges.

The cost of sales includes impairment losses for trade accounts receivable and contract assets totalling €4,248 thousand (previous year: €834 thousand).

The cost of sales includes €44,470 thousand (previous year: €36,382 thousand) in interest expense associated with the matching-term refinancing of long-term customer contracts in the "Financial Services".

(5) Personnel expenses

The following personnel expenses are included in the functional costs within the consolidated statement of profit or loss.

Personnel expenses in the consolidated statement of profit or loss

in € thousand	**2022**	2021
Salaries	1,064,734	990,996
Social security contributions	213,511	197,829
Cost of pensions and other benefits	23,463	20,768
Total	**1,301,708**	**1,209,593**

Average number of employees during the year

in FTEs[1]	**2022**	2021
Hourly-paid employees	8,868	8,476
Salaried employees	10,099	9,533
Trainees and apprentices	465	474
Total	**19,432**	**18,483**

[1] FTE = full-time equivalents.

In addition to personnel expenses, functional costs also included the cost of temporary workers, which amounted to €37,519 thousand (previous year: €29,324 thousand).

(6) Depreciation, amortisation, impairment losses and reversals of impairment losses

The depreciation, amortisation, impairment losses and write-ups of non-current non-financial assets are shown in the development of intangible assets, property, plant and equipment, trucks for short-term rental and trucks for lease. Impairment losses on goodwill are recognised under other operating expenses, while other depreciation, amortisation, impairment losses and write-ups are included in functional costs.

(7) Other operating income

Other operating income in the year under review included €4,664 thousand in income from the transition of the consolidation of shares in JT Energy Systems GmbH, Freiberg (Germany), from subsidiary to joint venture, and €369 thousand in negative goodwill from the acquisition of the sales company in New Zealand. Please see the notes for more details on changes to the scope of consolidation.

Other operating income in the year under review includes €969 thousand (previous year: €1,133 thousand) in government grants. In addition to reversals of deferred investment grants and investment subsidies in the amount of €744 thousand (previous year: €218 thousand) performance-related government grants in the amount of €225 thousand were recognised in profit or loss in 2022 (previous year: €915 thousand). Grants related to income in 2021 and 2022 were primarily the result of government support associated with the coronavirus pandemic.

Other operating income in the year under review also includes income from the disposal of property, plant and equipment and intangible assets in the amount of €6,792 thousand (previous year: €1,129 thousand).

(8) Other operating expenses

Other operating expenses in the reporting year include €1,388 thousand (previous year: €853 thousand) in losses from the disposal of property, plant and equipment and intangible assets.

(9) Net interest

Composition of net interest

in € thousand	**2022**	2021
Interest and similar income on securities[1]	116	101
Other interest and similar income	2,293	567
Interest income	**2,409**	**668**
Interest expense from leases	3,674	3,792
Other interest and similar expense	10,152	7,628
Interest expense	**13,826**	**11,420**
Net interest	**–11,417**	**–10,752**

[1] Assigned to the measurement category "at amortised cost".

Interest expense in connection with the refinancing of long-term customer contracts with identical maturities in the "Financial Services" segment and the financing of trucks for short-term rental are reported under cost of sales.

(10) Other financial income (expense)

Composition of other financial income (expense)

in € thousand	**2022**	2021
Income (expense) from special fund and securities[1]	–13,930	4,742
Income (expense) from derivatives	–7,791	–2,996
Net result of monetary items	–3,826	n/a
Net interest on defined benefit pension plans	–2,208	–1,892
Income (expense) from measurement of other financial assets at fair value through profit or loss	–	1,024
Sundry financial income (expense)	513	–637
Other financial income (expense)	**–27,242**	**241**

[1] Assigned to the measurement category "at fair value through profit or loss".

Details of the income (expense) from the special fund and from securities allocated to the measurement category "at fair value through profit or loss" can be found in the following table:

Breakdown of income (expense) from the special fund and from securities allocated to the measurement category "at fair value through profit or loss"

in € thousand	2022	2021
Currency gains	4,901	10,147
Currency losses	19,143	5,983
Interest and similar income	893	562
Interest expense	83	36
Currency income (expense)	33	638
Other comprehensive income (expense)	–531	–586
Income (expense) from special fund and securities[1]	**–13,930**	**4,742**

[1] Assigned to the measurement category "at fair value through profit or loss".

The price gains and losses presented also included unrealised gains and losses resulting from the measurement at fair value.

The income (expense) from derivatives included price gains in the amount of €5,155 thousand (previous year: €3,643 thousand) and price losses in the amount of €12,946 thousand (previous year: €6,639 thousand). Income from derivatives includes all income from derivative financial instruments that do not relate to supplies and services, are not held in the special fund and were not designated as hedges as at the balance sheet date. These primarily include derivative financial instruments used to hedge foreign exchange rates when concluding intragroup financial transactions. Income from derivatives also includes changes in currency exchange rates pertaining to financing.

The net result of the monetary items in the year under review of €3,826 thousand was in connection with the annual financial statements of the Turkish sales company included in the consolidated financial statements, which were prepared in line with the provisions of IAS 29 for the first time in the year under review. For further details, please refer to the note on "hyperinflation".

Other financial income (expense) includes a change of €–11 thousand (previous year: €158 thousand) in loss allowance recognised in profit or loss for expected credit losses on securities, cash and cash equivalents and other financial assets, and €1,048 thousand (previous year: €–354 thousand) in income (expenses) from accrued interest and changes to discount rates on non-current provisions for personnel.

(11) Income taxes

Composition of tax expense

in € thousand	2022	2021
Current taxes		
Germany	13,164	41,753
Outside Germany	55,569	43,339
Deferred taxes		
Germany	10,248	–4,394
Outside Germany	–1,155	1,039
Tax expense	**77,826**	**81,737**

The current tax expense in Germany was lower than in the previous year due to lower earnings and higher tax-free earnings. Taxes in the previous year resulted in income of €0.6 million in the year under review (previous year: tax expense of €3.5 million).

The current tax expense outside Germany was higher than in the previous year due to higher earnings. Taxes in the previous year resulted in income of €0.5 million (previous year: tax income of €0.0 million).

€10.2 million (previous year: tax income of €4.4 million) of deferred tax expense pertaining to Germany is mainly attributable to the addition of deferred tax liabilities for intangible assets. The deferred tax expense pertaining to business outside Germany, amounting to €1.1 million (previous year: tax expense of €1.0 million) in the year under review was primarily caused by the increase in deferred taxes due to changes in tax rates. The Jungheinrich Group's deferred tax expense in 2022 of €9.1 million (previous year: tax income €3.4 million) was attributable to tax income of €0.3 million (previous year: tax expense of €3.0 million) from changes in loss carryforwards and tax expense of €9.4 million (previous year: tax income of €6.4 million) arising from changes in temporary differences.

The domestic (German) corporate income tax rate for the 2022 financial year was 30.5 per cent (previous year: 30.5 per cent). It continues to comprise the corporate income tax burden of 15.0 per cent along with the solidarity surcharge of 5.5 per cent of the corporate income tax burden and a trade tax rate of 14.6 per cent.

The local income tax rates applied to foreign companies varied between 9.0 per cent (previous year: 9.0 per cent) and 35.0 per cent (previous year: 34.0 per cent).

As of 31 December 2022, the Group had approximately €73 million in corporate tax loss carryforwards (previous year: €66 million). Of this amount, €46 million (previous year: €44 million) related to the loss carryforward in the USA. Deferred tax assets were not recognised in connection with the loss carryforward in view of the future utilisation options. The loss carryforwards accrued in or before 2014 can be carried forward subject to a specific time limit; those accrued later have no such limit on when they can be used.

As of 31 December 2022, the Group had €26.2 million in utilisable corporate tax loss carryforwards (previous year: €21.9 million). These could be carried forward indefinitely. Valuation allowances of €4.0 million (previous year: €3.2 million) was recognised for deferred tax assets in connection with these loss carryforwards. €2.4 million (previous year: €2.3 million) related to the loss carryforward in Australia. As of 31 December 2022, trade tax loss carryforwards also amounted to €12.1 million (previous year: €9.1 million). Impairment losses of €0.8 million (previous year: €0.6 million) were recognised for deferred tax assets in connection with these loss carryforwards.

Income tax receivables and liabilities are recognised in the amount of an expected reimbursement from or payment to tax authorities based on the estimated tax rates valid as at the balance sheet date.

Several years have not yet been conclusively assessed with regard to the Group's taxation. Jungheinrich believes that it has provided sufficiently for these outstanding tax assessment years.

When stating deferred tax assets on the statement of financial position, the extent to which future effective tax relief might result from existing tax loss carryforwards and the differences in accounting and valuation must be assessed. In this context, all factors that could have a positive or negative influence have been taken into account. The current assessment in this regard may alter depending on changes to the earnings position in future years and may therefore result in a higher or lower impairment loss.

Composition of deferred tax assets and liabilities

	Deferred tax assets		Deferred tax liabilities	
in € thousand	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021
Property, plant and equipment and intangible assets	337,723	302,383	118,346	99,162
Inventories	13,981	34,196	9,591	7,314
Receivables and other assets	33,809	45,937	512,427	492,802
Tax loss carryforwards	7,140	4,502	–	–
Provisions for pensions and similar obligations	15,920	34,622	1,837	4,777
Other provisions	20,879	19,037	9,648	10,278
Liabilities	463,740	427,041	149,755	144,488
Deferred income	4,223	4,397	–	–
Other	16,663	23,228	48,748	43,500
Deferred taxes prior to offsetting	**914,078**	**895,343**	**850,352**	**802,321**
of which relating to non-current assets and liabilities	776,098	734,914	677,425	596,921
Offsetting	**–806,457**	**–773,428**	**–806,457**	**–773,428**
Balance sheet recognition	**107,621**	**121,915**	**43,895**	**28,893**

Of the net amount of the deferred taxes, totalling €63,726 thousand (previous year: €93,022 thousand), €14,360 thousand (previous year: €32,061 thousand) was recognised directly in shareholders' equity. The latter figure primarily related to comprehensive income with no effect on profit or loss from the remeasurement of defined benefit pension plans.

No deferred tax liabilities were recognised for temporary differences amounting to €23.1 million (previous year: €23.1 million) between net assets and the tax carrying amount of subsidiaries. This is because Jungheinrich is able to manage the timing of the reversal of temporary differences, and no turnaround is expected with regard to the temporary differences in the near future.

The following table shows the reconciliation of the expected amount with the disclosed tax expense. The expected tax expense reported represents the amount that results from applying the total tax rate of 30.5 per cent (previous year: 30.5 per cent) applicable to the parent company to consolidated earnings before income taxes. The figure for "Change in taxes from the previous year" arose as a result of deviations in assessments and company audits and an adjustment of deferred taxes. The permanent differences were again dominated by tax-free income from depreciation rules designed to boost the economy.

Reconciliation of the expected tax expense to the disclosed tax expense

in € thousand	**2022**	2021
Expected tax expense	105,957	106,490
Change in the tax rate	–1,975	–166
Tax differentials outside Germany	–18,713	–14,354
Change in valuation allowances	–576	–8,305
Change in taxes from the previous year	–5,666	–564
Non-deductible operating expenses and tax-free gains	–1,773	–2,115
Miscellaneous	572	751
Actual tax expense	**77,826**	**81,737**

The Group tax rate in 2022 amounted to 22.4 per cent (previous year: 23.4 per cent).

NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

(12) Intangible assets

Development of intangible assets during the reporting year

in € thousand	Acquired intangible assets	Internally-generated intangible assets	Goodwill	**Total**
Acquisition and manufacturing costs Balance on 01/01/2022	170,694	161,042	102,265	434,001
Changes in currency exchange rates	1,357	–261	–508	588
Additions due to business combinations	2,460	–	–	2,460
Additions	6,071	30,422	–	36,493
Disposals	2,157	8,224	–	10,381
Transfers	885	–	–	885
Balance on 31/12/2022	**179,310**	**182,979**	**101,757**	**464,046**
Amortisation and impairment losses Balance on 01/01/2022	110,925	102,628	18,736	232,289
Changes in currency exchange rates	923	–240	196	879
Amortisation in the financial year	11,837	12,313	–	24,150
Impairment losses in the financial year	–	3,347	–	3,347
Reversal of impairment losses in the financial year	2,737	–	–	2,737
Accumulated amortisation and impairment losses on disposals	1,660	8,090	–	9,750
Balance on 31/12/2022	**119,288**	**109,958**	**18,932**	**248,178**
Carrying amount on 31/12/2022	**60,022**	**73,021**	**82,825**	**215,868**

Development of intangible assets during the previous year

in € thousand	Acquired intangible assets	Internally-generated intangible assets	Goodwill	Total
Acquisition and manufacturing costs Balance on 01/01/2021	143,743	141,770	47,657	333,170
Changes in currency exchange rates	571	810	–139	1,242
Additions due to business combinations	23,151	–	54,747	77,898
Additions	6,570	18,462	–	25,032
Disposals	4,372	–	–	4,372
Transfers	1,031	–	–	1,031
Balance on 31/12/2021	**170,694**	**161,042**	**102,265**	**434,001**
Amortisation and impairment losses Balance on 01/01/2021	103,223	90,857	18,872	212,952
Changes in currency exchange rates	140	280	–136	284
Additions due to business combinations	15	–	–	15
Amortisation in the financial year	9,742	11,038	–	20,780
Impairment losses in the financial year	1,961	453	–	2,414
Accumulated amortisation and impairment losses on disposals	4,156	–	–	4,156
Balance on 31/12/2021	**110,925**	**102,628**	**18,736**	**232,289**
Carrying amount on 31/12/2021	**59,769**	**58,414**	**83,529**	**201,712**

The additions in the item "Acquired intangible assets" were mainly related to software and software licences in the reporting year. The additions from company acquisitions in 2022, totalling €2,460 thousand related exclusively to the acquisition of the shares in Jungheinrich New Zealand Limited, Auckland (New Zealand). Please see the notes for more details on changes to the scope of consolidation.

An event-driven test in 2020 of the intangible assets, property, plant and equipment, and trucks for short-term rental acquired revealed impairment losses on acquired intangible assets in the total amount of €16,435 thousand at the sales companies in Australia, Chile, Ecuador, Malaysia, Peru and Romania. Reversals of impairment losses on intangible assets in the Chilean and Romanian CGUs in the amount of the amortised cost of €1,665 thousand and €1,072 thousand were carried out as of 31 December 2022. This was due to the fact that the business prospects in both countries had improved significantly and the reasons for recording the impairment in 2020 therefore no longer existed. The estimates of the value in use of the Chilean and Romanian CGUs of €27,060 thousand and €24,861 thousand respectively were calculated using a pre-tax discount rate of 14.8 per cent and 17.0 per cent respectively.

Internally-generated intangible assets include the Jungheinrich Group's capitalised development expenditure. In the reporting year, €30,422 thousand in incurred development expenditure (previous year: €18,462 thousand) met the capitalisation criteria under IFRS.

Research and development costs in the consolidated statement of profit or loss

in € thousand	**2022**	2021
Research costs and uncapitalised development expenditure	97,443	83,890
Amortisation of capitalised development expenditure	12,313	11,038
Impairment loss of capitalised development expenditure	3,347	453
Research and development costs	**113,103**	**95,381**

As part of the assessment of whether indications of impairment of a CGU existed as of 31 December 2022, the plant in Qingpu/Shanghai (China) fell below the 3 per cent ratio that is defined as a quantitative criterion of potential impairment affecting a CGU. As a result, the carrying amounts of the CGU's intangible assets and property, plant and equipment were tested for impairment as at the balance sheet date, and a need to record a total impairment of €3,347 thousand was identified. The reason for the impairment is that unit volume of the plant is not increasing as strongly as originally planned. The impairment loss is due to the fact that the production plant's unit figure volume did not increase as much as originally planned. The impairment losses were fully assigned to the carrying amounts of the capitalised development expenditure for products already in series production, and were reported as an impairment loss in the amount of €3,347 thousand in profit or loss under the 2022 research and development costs. The estimate of the value in use, of €53,700 thousand, was calculated using a pre-tax discount rate of 13.3 per cent (previous year: 10.7 per cent).

The table below shows the allocation of goodwill to CGUs.

Allocation of goodwill to the cash-generating units (CGUs)

in € thousand	31/12/2022	31/12/2021
MIAS Group	24,109	24,109
Sales company in:		
Germany	27,702	–
France	6,664	–
United Kingdom	5,009	–
Italy	5,194	–
Sweden	3,536	–
Poland	3,061	111
Spain	2,984	–
Serbia	1,831	1,827
Austria	1,771	1,771
Jungheinrich Systemlösungen GmbH, Graz (Austria)	102	102
ISI Automation GmbH & Co. KG, Extertal (Germany)	862	862
Not assigned to a CGU	–	54,747
Goodwill	**82,825**	**83,529**

After it was determined in the year under review how arculus GmbH, Munich (Germany), acquired in November 2021, would be integrated into the Jungheinrich business model, goodwill of €54,747 thousand that was recorded in 2021 when arculus GmbH, Munich, was combined with the business was allocated to the sales companies in Germany, France, the United Kingdom, Italy, Sweden, Poland and Spain.

In the fourth quarter of 2022, Jungheinrich performed annual impairment tests on the goodwill assigned to CGUs. The review of goodwill did not result in any impairment losses.

The main assumptions on which the calculation of the value in use of a CGU was based were free cash flows, the discount rate and the long-term growth rate.

Value in use and financial assumptions for the purposes of calculating the value in use of the CGUs to which significant amounts of goodwill have been assigned

	Value in use of CGUs in € thousand		Pre-tax discount rate in %		Sustainable growth rate in %	
CGU	30/09/2022	30/09/2021	30/09/2022	30/09/2021	30/09/2022	30/09/2021
MIAS Group	224,218	246,857	11.1	10.2	1.1	1.0
Sales company in:						
Germany	760,371	–	11.4	–	1.4	–
France	226,279	–	12.0	–	1.2	–
Italy	237,938	–	15.3	–	1.1	–
United Kingdom	100,989	–	11.7	–	1.4	–
Spain	93,317	–	14.4	–	1.5	–
Poland	181,502	–	13.0	–	1.8	–
Sweden	49,518	–	10.1	–	1.2	–
Serbia	13,852	13,896	16.5	12.4	1.7	1.2
Austria	84,755	93,579	12.2	10.0	1.6	1.0

A 1.0 per cent increase in the applied discount rates in each case, or a 1.0 per cent decrease in the growth rates, would not have resulted in an impairment loss.

(13) Property, plant and equipment

Development of property, plant and equipment during the reporting year

in € thousand	Land and buildings including buildings on third-party land	Technical equipment and machinery	Factory and office equipment	Construction in progress	Total
Acquisition and manufacturing costs Balance on 01/01/2022	785,852	229,746	454,194	18,451	1,488,243
Changes in currency exchange rates	–835	–119	–517	37	–1,434
Additions due to business combinations	368	80	180	–	628
Additions	40,184	10,826	60,087	17,121	128,218
Disposals	26,335	12,233	30,960	308	69,836
Transfers	5,441	6,668	2,345	–15,333	–879
Balance on 31/12/2022	**804,675**	**234,968**	**485,329**	**19,968**	**1,544,940**
Depreciation and impairment losses Balance on 01/01/2022	297,585	169,229	301,426	–	768,240
Changes in currency exchange rates	129	–104	–296	–	–271
Depreciation in the financial year	49,523	16,049	56,841	–	122,413
Impairment losses in the financial year	–	–	431	–	431
Accumulated depreciation on disposals	13,702	6,075	28,550	–	48,327
Transfers	–1	56	–52	–	3
Balance on 31/12/2022	**333,534**	**179,155**	**329,800**	**–**	**842,489**
Carrying amount on 31/12/2022	**471,141**	**55,813**	**155,529**	**19,968**	**702,451**

Disposals in the year under review related to the disposal of the carrying amount of JT Energy Systems GmbH, Freiberg (Germany), in the amount of €17,101 thousand. Please see the notes for more details on changes to the scope of consolidation.

Impairment in the year under review related to the property, plant and equipment of the sales company in Ukraine. Please refer to the explanation in the section “Estimates”.

Developments in the right-of-use assets recognised under property, plant and equipment can be seen in the following table.

Development in right-of-use assets of property, plant and equipment

	2022				2021			
in € thousand	Land and buildings including buildings on third-party land	Technical equipment and machinery	Factory and office equipment	**Total**	Land and buildings including buildings on third-party land	Technical equipment and machinery	Factory and office equipment	Total
Acquisition and manufacturing costs Balance on 01/01	198,339	209	107,759	306,307	173,891	–	89,244	263,135
Changes in currency exchange rates	–1,268	–	–314	–1,582	2,367	–1	929	3,295
Additions due to business combinations	368	–	–	368	1,247	–	–	1,247
Additions	27,976	–	33,731	61,707	29,469	210	32,666	62,345
Disposals	11,360	48	16,167	27,575	8,635	–	15,080	23,715
Balance on 31/12	**214,055**	**161**	**125,009**	**339,225**	**198,339**	**209**	**107,759**	**306,307**
Depreciation Balance on 01/01	69,144	14	54,774	123,932	48,925	–	41,493	90,418
Changes in currency exchange rates	–287	–	–178	–465	612	–	485	1,097
Depreciation in the financial year	27,759	31	25,863	53,653	25,980	14	26,081	52,075
Accumulated depreciation on disposals	10,229	1	15,802	26,032	6,373	–	13,285	19,658
Balance on 31/12	**86,387**	**44**	**64,657**	**151,088**	**69,144**	**14**	**54,774**	**123,932**
Carrying amount on 31/12	**127,668**	**117**	**60,352**	**188,137**	**129,195**	**195**	**52,985**	**182,375**

The right-of-use assets in the item “factory and office equipment” primarily related to lease contracts for vehicles.

Lessee lease expenses in the consolidated statement of profit or loss

in € thousand	**2022**	2021
Depreciation on right-of-use assets	53,653	52,075
Expenses for short-term leases	749	779
Expenses for low-value leases	1,576	1,002
Earnings before interest and income taxes	**55,978**	**53,856**
Interest expense from leases	3,674	3,792
Earnings before taxes	**59,652**	**57,648**

Development of property, plant and equipment during the previous year

in € thousand	Land and buildings including buildings on third-party land	Technical equipment and machinery	Factory and office equipment	Construction in progress	Total
Acquisition and manufacturing costs Balance on 01/01/2021	745,430	212,314	424,882	33,825	1,416,451
Changes in currency exchange rates	6,025	1,630	2,626	11	10,292
Additions due to business combinations	1,247	–	414	17	1,678
Additions	48,487	10,958	55,883	11,444	126,772
Disposals	19,259	10,528	35,646	484	65,917
Transfers	3,922	15,372	6,035	–26,362	–1,033
Balance on 31/12/2021	**785,852**	**229,746**	**454,194**	**18,451**	**1,488,243**
Depreciation and impairment losses Balance on 01/01/2021	257,338	160,479	275,195	–	693,012
Changes in currency exchange rates	1,899	915	1,632	–	4,446
Additions due to business combinations	–	–	251	–	251
Depreciation in the financial year	46,517	17,465	56,994	–	120,976
Accumulated depreciation on disposals	8,169	9,622	32,653	–	50,444
Transfers	–	–8	7	–	–1
Balance on 31/12/2021	**297,585**	**169,229**	**301,426**	**–**	**768,240**
Carrying amount on 31/12/2021	**488,267**	**60,517**	**152,768**	**18,451**	**720,003**

As at the balance sheet date, land and buildings were put up as collateral to back €63,946 thousand (previous year: €71,609) in liabilities due to banks.

(14) Trucks for short-term rental

Development of trucks for short-term rental

in € thousand	**2022**	2021
Acquisition and manufacturing costs Balance on 01/01	733,855	635,829
Changes in currency exchange rates	5,483	4,003
Additions due to business combinations	193	–
Additions	251,801	203,821
Disposals	100,829	109,800
Transfers	–6	2
Balance on 31/12	**890,497**	**733,855**
Depreciation and impairment losses Balance on 01/01	370,938	346,934
Changes in currency exchange rates	1,707	2,261
Additions due to business combinations	–	–
Depreciation in the financial year	121,241	93,593
Impairment losses in the financial year	276	–
Accumulated depreciation on disposals	62,805	71,851
Transfers	–3	1
Balance on 31/12	**431,354**	**370,938**
Carrying amount on 31/12	**459,143**	**362,917**

Impairment in the year under review was associated with trucks for short-term rental belonging to the sales company in Ukraine. Please refer to the explanation in the section "Estimates".

(15) Trucks for lease from financial services

Development of trucks for lease from financial services

in € thousand	**2022**	2021
Acquisition and manufacturing costs Balance on 01/01	917,903	895,414
Changes in currency exchange rates	–2,518	7,808
Additions due to business combinations	1,598	–
Additions	263,290	182,654
Disposals	200,412	167,973
Balance on 31/12	**979,861**	**917,903**
Depreciation Balance on 01/01	417,455	379,535
Changes in currency exchange rates	–961	3,313
Additions due to business combinations	706	–
Depreciation in the financial year	131,435	139,263
Accumulated depreciation on disposals	136,181	104,656
Balance on 31/12	**412,454**	**417,455**
Carrying amount on 31/12	**567,407**	**500,448**

The additions to carrying amounts from company acquisitions in 2022, totalling €892 thousand, related exclusively to the acquisition of the shares in Jungheinrich New Zealand Limited, Auckland (New Zealand). Please see the notes for more details on changes to the scope of consolidation.

Depreciation in 2021 included €12.6 million for adjustments to the expected residual value at the end of the contract term. As of 31 December 2021, the onerous contract provisions for residual value risks recognised as provisions for customer contracts classified as operating leases at that date were reversed and, at the same time, the carrying amounts of trucks for lease from financial services were recognised as expenses. Since 1 January 2022 changes in residual value expectations have been taken into account directly when determining depreciation.

The breakdown of the carrying amount of trucks for lease from financial services by contract type is presented in the following table:

Composition of trucks for lease from financial services

in € thousand	**31/12/2022**	31/12/2021
"Operating lease" contracts with customers	456,262	406,182
Contracts concluded with a leasing company acting as an intermediary	31,533	32,226
Truck fleets for contracts with selected major customers	79,612	62,040
Trucks for lease from financial services	**567,407**	**500,448**

Within the framework of financial services offered by Jungheinrich Group companies acting as lessors, trucks for which a lease classified as an "operating lease" in accordance with IFRS has been concluded with the end customer are capitalised as trucks for lease.

The "operating leases" existing on the balance sheet date included €13,374 thousand (previous year: €11,267 thousand) for a truck fleet that is made available to customers in Australia so that they can make flexible use of these trucks at short notice.

In relation to the remaining non-cancellable "operating leases" valid as at the balance sheet date, the future lease payments to be paid to Jungheinrich are presented in the following table, broken down by maturity.

Maturities of the outstanding lease payments from "operating lease" customer contracts

in € thousand	**31/12/2022**	31/12/2021
Due in the following year	156,590	148,032
Due in the second year	113,699	108,148
Due in the third year	74,904	67,972
Due in the fourth year	44,065	36,522
Due in the fifth year	18,111	15,056
Due in more than five years	3,316	2,295
Total outstanding lease payments	**410,685**	**378,025**

Customer contracts with a leasing company/bank acting as an intermediary are also capitalised under the item "Trucks for lease from financial services" for sales contracts with agreed repurchase obligations concluded between Jungheinrich and leasing companies/banks if these contracts are classified as "operating leases".

The item "Trucks for lease from financial services" also includes truck fleets whose capacities can be used flexibly by selected large customers.

Trucks for lease with carrying amounts of €314,931 thousand (previous year: €269,860 thousand) were pledged as collateral for liabilities from financial services as at the balance sheet date.

(16) Investments measured using the equity method

Development of investments measured using the equity method

in € thousand	**2022**	2021
Balance on 01/01	45,696	42,242
Additions	20,491	2,513
Pro rata earnings	4,980	2,838
Pro rata other comprehensive income (expense)	684	118
Dividend payments	2,102	2,015
Balance on 31/12	**69,749**	**45,696**

The investments measured using the equity method related to joint ventures in the amount of €53,957 thousand (previous year: €41,109 thousand) and associated companies in the amount of €15,792 thousand (previous year: €4,587 thousand).

The additions in the year under review related to shares held by Jungheinrich in Magazino GmbH, Munich (Germany), in the amount of €10,335 thousand. €812 thousand related to the acquisition of new shares in the year under review, and €9,523 thousand related to the fair value of the shares already held and previously recognised under other financial assets as of 31 December 2021. Please see the notes for more details on changes to the scope of consolidation.

The additions in 2022 included the fair value of the remaining 40 per cent of shares of JT Energy Systems GmbH, Freiberg (Germany), held by the Jungheinrich Group of €8,656 thousand. Please see the notes for more details on changes to the scope of consolidation.

The additions in the reporting year also included a pro rata increase by Jungheinrich in the capital stock of TREX.PARTS GmbH & Co. KG, Sittensen (Germany), in the amount of €1,500 thousand.

Jungheinrich received a dividend in the amount of €2,045 thousand (previous year: €1,964 thousand) from the joint venture JULI Motorenwerk s.r.o., Moravany (Czechia). The measurement of cash flow hedges at fair value resulted in pro rata other comprehensive income (expense) amounting to €684 thousand (previous year: €118 thousand) for this joint venture in 2022.

Jungheinrich received a dividend of €57 thousand from the joint venture Jungheinrich Heli Industrial Truck Rental (Changzou) Co., Ltd, Changzou (China) in the reporting year (previous year: €51 thousand).

Material investments in companies accounted for using the equity method

		Share of capital in %	
Company	Main business	**31/12/2022**	31/12/2021
JULI Motorenwerk s.r.o., Moravany (Czechia)	Development, production and distribution of electric motors	50	50
Schwerter Profile GmbH, Schwerte (Germany)	Development, production and distribution of steel profiles	50	50
Jungheinrich Heli Industrial Truck Rental (China) Co., Ltd., Shanghai (China)	Short-term rental of material handling equipment on the Chinese market	50	50
Cebalog GmbH, Pyrbaum (Germany)	Manufacture and distribution of industrial batteries	40	40
JT Energy Systems GmbH, Freiberg (Germany)	Development, production, reconditioning and distribution of lithium-ion batteries	40	–

Information on the other companies accounted for using the equity method can be found in note (44) [page 164 ff.].

The following table contains summarised financial information on the material individual companies accounted for using the equity method. Note that these disclosures represent not Jungheinrich AG's share, but rather the entire entity.

Summarised financial information of the material companies accounted for using the equity method

	JULI Motorenwerk s.r.o., Moravany (Czechia)[1]		Schwerter Profile GmbH, Schwerte (Germany)		Jungheinrich Heli Industrial Truck Rental (China) Co., Ltd., Shanghai (China)[1]		Cebalog GmbH, Pyrbaum (Germany)		JT Energy Systems GmbH, Freiberg (Germany)	
in € thousand	**2022**	2021	**2022**	2021[2]	**2022**	2021	**2022**	2021	**2022[3]**	2021
Revenue	205,554	173,064	114,303	44,990	50,890	39,896	106,209	91,584	84,836	n/a
Depreciation, amortisation and write-downs	2,540	2,350	1,879	817	26,122	19,960	176	187	1,793	n/a
Interest income	65	38	–	–	4	–	3	–	1	n/a
Interest expense	166	47	1,051	207	2,916	2,037	481	239	628	n/a
Income tax expense	1,666	1,215	495	791	659	201	1,307	899	561	n/a
Profit or loss	6,251	5,116	743	1,054	2,583	1,558	3,410	2,342	1,370	n/a
of which from continuing operations	6,251	5,116	743	1,054	2,583	1,558	3,410	2,342	1,370	n/a
Other comprehensive income (expense)	1,368	236	–	–	–	–	–	–	–	n/a
Comprehensive income (expense)	**7,619**	**5,352**	**743**	**1,054**	**2,583**	**1,558**	**3,410**	**2,342**	**1,370**	**n/a**
in € thousand	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021
Non-current assets	22,374	25,114	5,885	6,783	124,532	99,091	648	669	18,441	n/a
Current assets	50,193	43,726	35,448	29,415	22,453	30,193	29,332	19,276	42,704	n/a
of which cash and cash equivalents	2,753	3,555	6,043	1,071	677	242	–	270	–	n/a
Non-current liabilities	3,131	4,923	21,379	–	34,972	27,952	16	24	24,111	n/a
Current liabilities	32,146	30,335	12,510	30,119	65,596	56,279	21,514	14,880	27,674	n/a
Shareholders' equity	37,290	33,582	7,444	6,079	46,417	45,053	8,450	5,041	9,360	n/a

[1] Including subsidiaries.

[2] Short financial year (July—December 2021).

[3] The information for 2022 only includes the pro rata earnings for the period May—December 2022, as the company was consolidated as a subsidiary up to and including April 2022.

Reconciliation of the summarised financial information with the carrying amount of the material companies accounted for using the equity method in the consolidated financial statements

	JULI Motorenwerk s.r.o., Moravany (Czechia)[1]		Schwerter Profile GmbH, Schwerte (Germany)		Jungheinrich Heli Industrial Truck Rental (China) Co., Ltd., Shanghai (China)[1]		Cebalog GmbH, Pyrbaum (Germany)		JT Energy Systems GmbH, Freiberg (Germany)	
in € thousand	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021
Shareholders' equity	37,290	33,582	7,444	6,079	46,417	45,053	8,450	5,041	9,360	n/a
Pro rata shareholders' equity	18,645	16,791	3,722	3,040	23,209	22,527	3,380	2,016	3,744	n/a
Consolidation	–	–	–	–	–	–	2,571	2,571	–	n/a
Miscellaneous	–2,632	–2,543	1	–	–627	–1,112	–	–	5,460	n/a
Carrying amount calculated using the equity method	**16,013**	**14,248**	**3,723**	**3,040**	**22,582**	**21,415**	**5,951**	**4,587**	**9,204**	**n/a**

[1] Including subsidiaries.

The following table contains aggregated financial information on the individual immaterial companies accounted for using the equity method, whereby the disclosures represent the Jungheinrich Group's share in each case.

Aggregated financial information on immaterial companies accounted for using the equity method

	Other joint ventures		Other associated companies	
in € thousand	**2022**	2021	**2022**	2021
Profit or loss	–1,446	–1,781	–494	n/a
Comprehensive income (expense)	–1,446	–1,781	–494	n/a
At-equity carrying amount as of 31/12	**2,435**	**2,406**	**9,841**	**n/a**

The Group did not recognise pro rata gains of a total of €25 thousand (previous year: €61 thousand) in respect of its investments in joint ventures. This figure related to cumulative losses not recognised in the carrying amount calculated using the equity method as of 31 December 2021.

The impairment test performed on investments in companies accounted for using the equity method as at the balance sheet date in 2022 did not result in any impairment losses.

(17) Other financial assets

Composition of other financial assets

in € thousand	31/12/2022	31/12/2021
Investments in non-consolidated affiliated companies	703	683
Investments in joint ventures not accounted for using the equity method	25	25
Other investments	50	10,217
Other financial assets	**778**	**10,925**

The other financial assets were carried at their fair value. The fair value as of 31 December 2022 was calculated based on amortised cost.

The other investments as of 31 December 2021 primarily consisted of the shares in Magazino GmbH, Munich (Germany), measured at fair value. Following the acquisition of further shares in 2022, the investment was classified as an associated company as of 31 December 2022, and the shares held in Magazino GmbH, Munich (Germany), were reported under "Investments measured using the equity method". Please see the notes for more details on changes to the scope of consolidation.

(18) Inventories

Composition of inventories

in € thousand	31/12/2022	31/12/2021
Raw materials and supplies	300,593	226,738
Work in progress	86,204	71,197
Finished goods	286,617	208,435
Goods	183,180	144,943
Spare parts	100,140	91,792
Prepayments	37,262	20,748
Inventories	**993,996**	**763,853**

€66,155 thousand (previous year: €57,602 thousand) of the inventories are carried at their net realisable value. Valuation allowances recognised for inventories as at the balance sheet date amounted to €73,525 thousand (previous year: €62,994 thousand).

(19) Trade accounts receivable and contract assets

Composition of trade accounts receivable and contract assets

in € thousand	31/12/2022	31/12/2021
Trade accounts receivable (gross carrying amount)	882,473	749,078
Valuation allowances	–20,429	–19,642
Trade accounts receivable	862,044	729,436
Contract assets	46,277	35,175
Trade accounts receivable and contract assets	**908,321**	**764,611**

Trade accounts receivable included receivables from affiliated companies of €7 thousand (previous year: €98 thousand), receivables from joint ventures of €6,674 thousand (previous year: €9,396 thousand) and receivables from associated companies of €4 thousand (previous year: €2 thousand). Details on the composition of trade accounts receivable from related companies can be found in note (42) [page 161 ff.].

The contract assets essentially comprise contract balances from long-term construction contracts, the revenue from which is recognised over time. As of 31 December 2022, impairment losses in the amount of €710 thousand were recognised for expected credit losses on contract assets (previous year: €172 thousand).

Details on the development of loss allowances for expected credit losses on trade accounts receivable and contract assets can be found in note (33) [page 145 ff.].

The following tables contain information on the credit risk and expected credit losses for trade accounts receivable.

Trade accounts receivable: Composition, credit risk and calculated expected credit losses as of 31 December 2022

in € thousand	Credit rating not impaired		Credit rating impaired		**Total as of 31/12/2022**	
Risk categories	Trade accounts receivable (gross carrying amount)	Level 2 valuation allowances	Trade accounts receivable (gross carrying amount)	Level 3 valuation allowances	**Trade accounts receivable (gross carrying amount)**	**Valuation allowances**
Very good credit rating	428,888	87	–	–	428,888	87
Good credit rating	300,419	709	–	–	300,419	709
Average credit rating	65,111	344	–	–	65,111	344
Weak credit rating	20,469	328	67,586	18,961	88,055	19,289
	814,887	**1,468**	**67,586**	**18,961**	**882,473**	**20,429**

Trade accounts receivable: Composition, credit risk and calculated expected credit losses as of 31 December 2021

in € thousand	Credit rating not impaired		Credit rating impaired		Total as of 31/12/2021	
Risk	Trade accounts receivable (gross carrying amount)	Level 2 valuation allowances	Trade accounts receivable (gross carrying amount)	Level 3 valuation allowances	Trade accounts receivable (gross carrying amount)	Valuation allowances
Very good credit rating	325,911	60	–	–	325,911	60
Good credit rating	295,433	757	–	–	295,433	757
Average credit rating	56,582	305	–	–	56,582	305
Weak credit rating	17,936	277	53,216	18,243	71,152	18,520
	695,862	**1,399**	**53,216**	**18,243**	**749,078**	**19,642**

As at the balance sheet date, trade accounts receivable of €12,457 thousand (previous year: €10,877 thousand) were hedged by credit insurance policies for 90 per cent and/or 100 per cent.

(20) Receivables from financial services

Within the framework of the financial services business in which Jungheinrich Group companies act as lessors, the net investment values of customer leases classified as "finance leases" in accordance with IFRS are capitalised as receivables from financial services from the beginning of the lease onwards. If the agreed residual value in the long-term customer contract is above the truck's expected market value at the end of the contract term, this risk is reflected by immediately reducing receivables from financial services recognised in profit or loss. Furthermore, the receivables from financial services reported as at the balance sheet date only include lease payments due in the future, and the carrying amounts are 100 per cent secured by the fair values of the trucks underlying the leases. This is why loss allowances for expected credit losses are not taken into account.

Loss allowances for expected credit losses are determined for the amounts transferred to trade accounts receivable when the lease payments fall due, and they are recognised in note (19) [page 131 f.].

In relation to the "finance lease" customer contracts valid as at the balance sheet date, the future lease payments to be paid to Jungheinrich are presented in the following table, broken down by maturity.

Receivables from financial services: Maturity analysis and reconciliation of total outstanding lease payments with their net investment value

in € thousand	**31/12/2022**	31/12/2021
Due in the following year	457,324	424,850
Due in the second year	368,697	360,253
Due in the third year	281,189	276,804
Due in the fourth year	195,433	188,824
Due in the fifth year	110,375	106,850
Due in more than five years	72,647	70,103
Total outstanding lease payments	**1,485,665**	**1,427,684**
Plus unguaranteed residual value	172,259	156,767
Less unrealised interest income	195,217	176,981
Receivables from financial services	**1,462,707**	**1,407,470**

In the reporting year, Jungheinrich realised income of around €100 million (previous year: around €116 million) from the difference between additions to "finance lease" customer contracts and the carrying amounts of the underlying assets.

Receivables from financial services with carrying amounts of €741,486 thousand (previous year: €747,863) were pledged as collateral for liabilities from financial services as of the balance sheet date.

(21) Other receivables and other assets

Composition of other receivables and other assets

in € thousand	**31/12/2022**	31/12/2021
Receivables from other taxes	41,632	33,130
Assets from the measurement of funded pension plans	6,784	23,901
Deferred income	16,309	14,294
Other financial assets	18,000	12,039
Miscellaneous other assets	19,593	21,703
Other receivables and other assets	**102,318**	**105,067**

Prepaid expenses primarily consisted of deferred prepayments for software usage fees and insurance premiums.

Other financial assets include €2,202 thousand (previous year: €1,337 thousand) in receivables from affiliated companies and €15,364 thousand (previous year: €10,066 thousand) in receivables from joint ventures. Details on the composition of the other financial assets from related companies and further information about them can be found in note (42) [page 161 ff.].

In 2022 and 2021, Jungheinrich helped its suppliers to purchase electronic components with a view to avoiding supply shortages in this area and to safeguard its own ability to deliver to end customers. With this in mind, Jungheinrich absorbed the additional expenses incurred by the suppliers when purchasing electronic parts as a result of price increases. The suppliers use these electronic parts to make electronic components. Jungheinrich will order electronic components from suppliers in 2023 in line with its incoming orders. As regards parts still in supplier inventories as at the balance sheet date, claims vis-à-vis suppliers of €2,091 thousand (previous year: €9,490 thousand) were recorded in miscellaneous other assets as of 31 December 2022.

The credit risk for all other financial assets was rated as very low. As at the balance sheet date, loss allowances totalling €15 thousand were recognised for expected credit losses (previous year: €1 thousand). Details on the development of loss allowances can be found in note (33) [page 145 ff.].

No other receivables and other assets were either past due or impaired. As at the balance sheet date, there was no indication that the debtors could not meet their payment obligations.

(22) Securities

Composition of securities

in € thousand	**31/12/2022**	31/12/2021
Commercial papers, bonds and debenture bonds	131,736	210,349
Investment funds	20,000	35,665
Shares	9,751	15,857
Promissory notes	8,641	10,000
Covered bonds	27,992	8,183
Valuation allowances	–129	–127
Securities	**197,991**	**279,927**

The total portfolio of securities included €53,055 thousand (previous year: €98,337 thousand) in financial instrument assigned to the valuation category “at amortised cost” as of 31 December 2022. These securities were held by Jungheinrich for the purpose of holding them to maturity and realising their contractual cash flows. Jungheinrich’s securities held as of 31 December 2022 will mature between 2023 and 2025. All of Jungheinrich’s securities as of 31 December 2021 that were due to mature in 2022 were redeemed when they matured, as contractually agreed. The credit risk for securities measured at amortised cost was rated as low, with the result that the loss allowances were calculated based on the expected twelve-month credit losses. As at the balance sheet date, loss allowances in the amount of €129 thousand were recognised for expected credit losses in relation to these securities (previous year: €127 thousand). Details on the development of loss allowances can be found in note (33) [page 145 ff.].

As at the balance sheet date, the total portfolio of securities also included €145,065 thousand (previous year: €181,717 thousand) in financial instruments assigned to the valuation category “at fair value through profit or loss”. €119,151 thousand (previous year: €154,130 thousand) of the carrying amount of these financial instruments is attributable to securities held in the special fund.

(23) Cash and cash equivalents

Cash and cash equivalents are available at short notice and have an original maturity of up to three months. They also include fixed-term deposits with an original contractual term of up to twelve months. As at the balance sheet date, cash and cash equivalents included bank balances of €6,814 thousand (previous year: €8,382 thousand) held in the special fund and term deposits with an original term of over three months and without the option of termination at no cost at short notice in the amount of €–thousand (previous year: €115,000 thousand). €9,368 thousand (previous year: €9,354 thousand) in bank balances were pledged to banks as of 31 December 2022. As at the balance sheet date, loss allowances in the amount of €13 thousand (previous year: €40 thousand) were recognised for expected credit losses. Details on the development of loss allowances can be found in note (33) [page 145 ff.].

(24) Shareholders' equity

Subscribed capital

The subscribed capital of Jungheinrich AG, Hamburg (Germany) was fully paid up as at the balance sheet date and amounted to €102,000 thousand (previous year: €102,000 thousand). As in the previous year, it was divided among 54,000,000 ordinary shares and 48,000,000 preferred shares, each accounting for an imputed €1.00 share of the subscribed capital. All of the shares had been issued as at the balance sheet date.

Holders of no-par-value preferred shares will receive a preferential share of the profit of €0.04 per preferred share from the distributable profit that is distributed. On payment of a €0.04 share of the profit per ordinary share, the distributable profit remaining for distribution will be distributed among ordinary and preferred shareholders in line with the pro rata share of subscribed capital attributable to their shares. However, unlike ordinary shareholders, preferred shareholders are entitled to an additional dividend of €0.02 per preferred share.

Capital reserve

The capital reserve includes premiums from the issuance of shares and additional income from the sale of own shares in previous years.

Retained earnings

Retained earnings include undistributed earnings generated by Jungheinrich AG and consolidated subsidiaries in previous years, as well as profit or loss attributable to shareholders of Jungheinrich AG for the reporting period.

In the reporting year, a dividend for the 2021 financial year of €0.66per ordinary share and €0.68 per preferred share was paid to the shareholders of Jungheinrich AG.

Dividend proposal

Jungheinrich AG pays its dividend from the distributable profit stated in the annual financial statements of Jungheinrich AG, which are prepared in accordance with the German Commercial Code. The Board of Management of Jungheinrich AG proposes to use the distributable profit for the 2022 financial year of €68,280 thousand in its entirety to pay a dividend of €0.66 per ordinary share and a dividend of €0.68 per preferred share.

Other comprehensive income (expense)

The development of other changes in equity in the reporting year and in the previous year is presented as other comprehensive income (expense) in the consolidated statement of comprehensive income. Other comprehensive income (expense) was exclusively attributable to shareholders of Jungheinrich AG.

Other changes in equity in the amount of €–42,732 thousand (previous year: €–75,203 thousand) were attributable to the accumulated profit or loss recognised in other comprehensive income (expense) arising from the remeasurement of defined benefit pension plans. Details on the composition of the unrealised income of the reporting year can be found in note (25) [page 136 ff.].

In addition, other comprehensive income (expense) of €13,866 thousand (previous year: €–988 thousand) related to the accumulated profit or loss recognised in other comprehensive income (expense) arising from the measurement at fair value of derivative financial instruments designated as hedging instruments as at the balance sheet date. The following table shows the development of this other comprehensive income (expense), broken down by risk type.

Other comprehensive income (expense) from the market valuation of derivative financial instruments with a hedging relationship: development by risk type

in € thousand	Currency hedging contracts	Interest hedging contracts	Financial instruments with a hedging relationship
Balance on 01/01/2022	–1,673	685	–988
Unrealised income (expense) in the financial year	1,502	14,599	16,101
Realised income (expense) in the financial year	2,874	–551	2,323
Deferred taxes in the financial year	–958	–2,612	–3,570
Balance on 31/12/2022	**1,745**	**12,121**	**13,866**
Balance on 01/01/2021	–469	–1,627	–2,096
Unrealised income (expense) in the financial year	–5,160	2,809	–2,351
Realised income (expense) in the financial year	3,774	–	3,774
Deferred taxes in the financial year	182	–497	–315
Balance on 31/12/2021	**–1,673**	**685**	**–988**

The realised income (expense) in 2022 and 2021 was exclusively associated with amounts that were reclassified to the consolidated statement of profit or loss at the time the hedging relationships were terminated.

Managing capital

Jungheinrich is not subject to any minimum capital requirements pursuant to its articles of association.

The Group manages the way in which its capital is used commercially via the return on capital employed (ROCE).

The financial key figure ROCE represents the rate of return based on the EBIT generated in the "Intralogistics" segment in relation to the capital employed that can be attributed to this segment. Please see the notes for the definition and calculation of ROCE in the combined management report for the 2022 financial year.

ROCE in the year under review was 16.3 per cent (previous year: 20.2 per cent).

EBIT return on capital employed (ROCE) for the "Intralogistics" segment

in € thousand	**2022**	2021
Average capital employed 31/12	2,084,951	1,644,183
EBIT	340,113	332,728
ROCE in %	16.3	20.2

Jungheinrich determines the key figure when preparing its quarterly financial statements. The statements are reported to the Board of Management once a quarter in order to enable it to take action as necessary.

Non-controlling interests

The non-controlling interests in the shareholders' equity related to minority interests in JT Energy Systems GmbH, Freiberg.

(25) Provisions for pensions and similar obligations

Pension plans

Jungheinrich Group company pension schemes are either defined contribution or defined benefit plans. In defined contribution plans, Jungheinrich does not assume any obligation in addition to the contributions made to state-owned or private pension insurers. In the reporting year, expenses of €16,432 thousand for defined contribution plans (previous year: €15,864 thousand) were recognised in functional costs.

In Germany, major obligations have been assumed for defined benefit pension commitments regulated in individual and collective agreements applicable to members of the Board of Management, managing directors and employees of Jungheinrich AG and its German subsidiaries. When pension benefits are committed to within the framework of collective agreements, the amount of the pension claim depends on the individual's number of eligible years of service when pension payments are scheduled to start, as well as on the monthly average salary of the beneficiary. German pension plans are funded by provisions. The company pension plans of Jungheinrich AG and of Jungheinrich Moosburg AG & Co. KG have been closed to managing directors and employees since 1 July 1987 and 14 April 1994 respectively.

In the United Kingdom, major obligations have been assumed to fulfil defined benefit pension commitments regulated in collective agreements and due to employees of Jungheinrich UK Ltd. and former employees of the Boss Manufacturing Ltd. production plant, which was closed in 2004. The pension plans of these companies were merged in 2003. The level of the benefit commitment depends on the average compensation received by the beneficiaries during their years of service. The pension plan is funded by an outsourced fund and has been closed to new employees of the two companies since 1 October 2002 and 18 January 2003 respectively. The pension plan was closed to current employees with effect from 31 July 2020. As a result, since 1 August 2020 employees have not been able to accrue any additional benefit claims by completing more years of service. The benefit claims accrued up until the plan was closed will continue to be adjusted in line with changes in the basis for calculating them.

In other countries outside of Germany, several companies have pension plans for managing directors and employees. The principle pension claims outside Germany are covered by insurance contracts.

Balance sheet development of the net defined benefit liability from defined benefit pension plans in 2022

in € thousand	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liabilities
Balance on 01/01	**538,710**	**334,815**	**203,895**
Changes in currency exchange rates	**–8,369**	**–9,362**	**993**
Changes with an effect on profit or loss	**12,599**	**4,768**	**7,831**
Current service cost	5,647	n/a	5,647
Past service cost	–581	n/a	–581
Settlement gains	12	n/a	12
Net interest	7,521	5,313	2,208
Plan administration costs	n/a	–545	–545
Changes with no effect on profit or loss	**–148,618**	**–102,017**	**–46,601**
Remeasurement of defined benefit obligations as a result of			
changes in financial assumptions	–167,395	n/a	–167,395
changes in demographic assumptions	–720	n/a	–720
experience adjustments	19,497	n/a	19,497
Remeasurement of plan assets	n/a	–102,017	–102,017
Cash-effective changes	**–20,559**	**–6,557**	**–14,002**
Employee contributions	1,464	1,464	–
Employer contributions	n/a	4,084	4,084
Pension payments made using company assets	–9,918	n/a	–9,918
Pension payments made using plan assets	–12,105	–12,105	–
Other changes	**–631**	**–631**	**–**
Balance on 31/12	**373,132**	**221,016**	**152,116**
of which not funded pension plans	154,656	–	154,656
Germany	136,979	–	136,979
Other countries	17,677	–	17,677
of which funded pension plans	218,476	221,016	–2,540
United Kingdom	159,650	166,434	–6,784
Other countries	58,826	54,582	4,244

Balance sheet development of the net defined benefit liability from defined benefit pension plans in 2021

in € thousand	Present value of defined benefit obligations	Fair value of plan assets	Net defined benefit liabilities
Balance on 01/01	**557,413**	**328,258**	**229,155**
Changes in currency exchange rates	**20,438**	**20,953**	**–515**
Changes with an effect on profit or loss	**9,646**	**3,734**	**5,912**
Current service cost	5,819	n/a	5,819
Past service cost	–2,283	n/a	–2,283
Settlement gains	43	n/a	43
Net interest	6,067	4,175	1,892
Plan administration costs	n/a	–441	–441
Changes with no effect on profit or loss	**–18,250**	**572**	**–18,822**
Remeasurement of defined benefit obligations as result of			
changes in financial assumptions	–10,619	n/a	–10,619
changes in demographic assumptions	–3,847	n/a	–3,847
experience adjustments	–3,784	n/a	–3,784
Remeasurement of plan assets	n/a	572	572
Cash-effective changes	**–32,097**	**–18,273**	**–13,824**
Employee contributions	1,362	1,362	–
Employer contributions	n/a	3,973	3,973
Pension payments made using company assets	–9,851	n/a	–9,851
Pension payments made using plan assets	–23,608	–23,608	–
Other changes	**1,560**	**–429**	**1,989**
Balance on 31/12	**538,710**	**334,815**	**203,895**
of which not funded pension plans	212,827	–	212,827
Germany	191,056	–	191,056
Other countries	21,771	–	21,771
of which funded pension plans	325,883	334,815	–8,932
United Kingdom	259,481	283,382	–23,901
Other countries	66,402	51,433	14,969

Of the net defined benefit liability from defined benefit pension plans, €158,900 thousand (previous year: €227,796 thousand) is recorded under the item "provisions for pensions and similar obligations" and €6,784 thousand (previous year: €23,901 thousand) is included under "other receivables and other assets".

Current service costs, past service costs and settlement gains were recognised in the personnel costs of the corresponding functional areas. The net interest and the plan administration costs were included in financial income (expense).

Significant financial assumptions (weighted average) for determining the present value of defined benefit obligations

	Germany		United Kingdom		Other countries	
in %	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021
Discount rate	4.2	1.3	5.0	1.8	3.0	0.8
Expected rate of pension increase	2.0	1.8	3.0	3.3	0.1	0.0

The demographic assumptions for Germany in the 2022 and 2021 financial years were based on Prof. Klaus Heubeck's 2018G reference tables. In the reporting year, the valuation of pension plans in the United Kingdom was based on the SAPS S3PxA CMI 2021 mortality table (1.25 per cent) (previous year: SAPS S3PxA CMI 2020 (1.25 per cent)). The life expectancies used to measure plans in other countries were based on local mortality tables.

Jungheinrich primarily derives the interest rate risk, the pension increase risk and the longevity risk from the pension plans. The sensitivity analyses presented below were performed on the basis of reasonable potential changes in the assumptions as at the balance sheet date, while the other assumptions remained unchanged.

Sensitivity analysis of the significant financial assumptions: impact on the present value of defined benefit obligations

in € thousand	**31/12/2022**	31/12/2021
Discount rate 0.5% higher	–19,753	–39,691
Discount rate 0.5% lower	22,034	44,750
Expected rate of pension increase 0.5% higher	11,477	26,862
Expected rate of pension increase 0.5% lower	–10,287	–25,210

A one-year increase in life expectancy would cause the present value of the defined benefit obligations in Germany and the United Kingdom to rise by approximately 4.2 per cent (previous year: 5.2 per cent) and 2.8 per cent (previous year: 3.5 per cent), respectively.

The actual change in the present value of defined benefit obligations cannot be derived from the aforementioned sensitivity analysis. It is not expected that the deviations will occur in isolation from one another, as some of the assumptions are related to each other.

Furthermore, Jungheinrich is not exposed to any material risks arising from pension obligations.

The weighted average duration of defined benefit obligations on the balance sheet date was around 10 years in Germany (previous year: 13 years), around 13 years in the United Kingdom (previous year: 19 years) and around 9 years in other countries (previous year: 15 years).

Jungheinrich expects to make approximately €9.7 million (previous year: €9.6 million) in pension payments using company assets in the 2023 financial year.

Plan assets

In the reporting year, the actual return on plan assets amounted to €−97,249 thousand (previous year: €4,306 thousand). As in the previous year, there were no effects from a limitation to the asset ceiling.

Plan assets largely comprised the outsourced fund set up to cover pension obligations in the UK. The assets and income from the pension fund are intended exclusively for the payment of benefits and administrative expenses for the pension plan. Jungheinrich works with an external asset manager to invest in the plan assets. Our long-term investment strategy complies with, among other things, minimum capital cover requirements and the goal of maximising income from the plan assets, at the same time as keeping volatility at a reasonable level in order to minimise the long-term costs of defined benefit pension plans. Plan asset investments are made while ensuring that cash and cash equivalents are sufficient to cover benefits that fall due.

Composition of the fair value of the plan assets in the United Kingdom

in € thousand	31/12/2022	31/12/2021
Cash and cash equivalents	**1,494**	**2,099**
Equity instruments	**34,903**	**56,143**
Stock index funds in the United Kingdom	20,614	33,396
Stock index funds in Europe (excluding the United Kingdom)	14,289	22,747
Debt instruments	**130,037**	**225,140**
United Kingdom government bonds	111,592	200,594
Corporate bonds	18,445	24,546
Fair value on 31/12	**166,434**	**283,382**

The fair values of the aforementioned equity and debt instruments were determined on the basis of prices quoted on active markets.

The fair value of plan assets in the other countries totalled €54,582 thousand (previous year: €51,433 thousand). These assets cannot be broken down into asset classes as these plan assets are qualifying insurance policies.

As in the previous year, the outsourced pension funds did not include any own financial instruments or property used by Group companies as at the balance sheet date.

Jungheinrich expects to make cash-effective employer contributions totalling approximately €4.2 million for the 2023 financial year (previous year: €4.6 million) in order to comply with minimum statutory and contractual requirements.

(26) Other provisions

Development of other provisions

in € thousand	Balance as of 01/01/2022	Changes in currency exchange rates	Additions from business combinations	Additions	Utilisations	Releases	**Balance as of 31/12/2022**
Provisions for personnel	188,288	–478	101	142,329	137,546	7,133	185,561
Provisions for warranty obligations	66,418	100	–	86,186	85,522	3,682	63,500
Provisions for onerous contracts	53,114	–36	–	37,313	32,725	2,697	54,969
Other provisions	44,398	–388	–	24,693	8,916	5,480	54,307
Other provisions	**352,218**	**–802**	**101**	**290,521**	**264,709**	**18,992**	**358,337**

Provisions for personnel as of 31 December 2022 primarily related to provisions for obligations arising from phased retirement agreements, anniversary obligations, performance-related remuneration and holiday entitlements.

As at the balance sheet date, obligations arising from phased retirement agreements amounted to €25,937 thousand (previous year: €25,117 thousand), which were netted against €12,956 thousand in financial assets (previous year: €12,612 thousand). Cash and cash equivalents and securities were transferred to an external trust in order to finance these obligations. These trust assets are being exclusively held to secure long-term benefits due to employees within the scope of phased retirement agreements and qualify as plan assets in accordance with IAS 19. The cash and cash equivalents and securities are not freely available due to the hedging role they play for these agreements. Furthermore, €3,300 thousand in provisions were accrued to cover the claims of candidates potentially qualifying for future phased retirement work arrangements commensurate to their probability of occurrence (previous year: €2,226 thousand).

Additions to provisions for personnel included a total of €–1,048 thousand (previous year: €354 thousand) in interest accretions and changes in discount rates. €32,271 thousand (previous year: €32,292 thousand) of the provisions for personnel had a remaining maturity of more than one year.

The Group recognises provisions for warranty obligations based on past experience at the point in time when products are sold, or when new warranty measures are initiated. These provisions relate to the assessment of the extent to which warranty obligations must be met in the future, and to the cost involved. Provisions for warranty obligations contain the expected expense of statutory and contractual warranty claims as well as the expected expense of voluntary concessions and recall actions. Additions to warranty obligations cover the product-related warranty expenses for the 2022 financial year for material handling equipment sold in the year under review.

The provisions for onerous contracts primarily related to impending losses from contracts with customers. Impending losses from cancellations of contracts and other contractual risks were also recognised.

€4,647 thousand (previous year: €2,943 thousand) of the provisions for onerous contracts had a remaining term to maturity of more than one year as at the balance sheet date.

Other provisions contained provisions for disposal obligations, legal disputes, environmental risks and other obligations. €29,714 thousand (previous year: €30,120 thousand) of the other provisions had a remaining term to maturity of more than one year as at the balance sheet date.

(27) Financial liabilities

Composition and maturity of financial liabilities

in € thousand	Liabilities due to banks	Promissory notes/ commercial papers	Liabilities from financing trucks for short-term rental	Lease liabilities	Notes payable	Financial liabilities
31/12/2022						
Total future cash flows	**203,666**	**226,033**	**12,582**	**204,159**	**6,328**	**652,768**
Due within one year	84,785	50,571	5,983	52,847	6,328	200,514
Due in one to five years	89,996	138,991	6,510	110,434	–	345,931
Due in more than five years	28,885	36,471	89	40,878	–	106,323
Present value of future cash flows	**195,978**	**205,299**	**11,650**	**190,645**	**6,328**	**609,900**
Due within one year	82,871	45,299	5,532	49,466	6,328	189,496
Due in one to five years	86,139	125,000	6,032	103,462	–	320,633
Due in more than five years	26,968	35,000	86	37,717	–	99,771
Future interest expense	**7,688**	**20,734**	**932**	**13,514**	**–**	**42,868**
31/12/2021						
Total future cash flows	**194,104**	**77,661**	**81,738**	**198,780**	**7,469**	**559,752**
Due within one year	107,968	14,060	78,551	48,952	7,469	257,000
Due in one to five years	47,673	33,037	3,182	104,363	–	188,255
Due in more than five years	38,463	30,564	5	45,465	–	114,497
Present value of future cash flows	**185,380**	**73,000**	**81,330**	**185,764**	**7,469**	**532,943**
Due within one year	106,001	13,000	78,307	45,746	7,469	250,523
Due in one to five years	43,386	30,000	3,018	97,585	–	173,989
Due in more than five years	35,993	30,000	5	42,433	–	108,431
Future interest expense	**8,724**	**4,661**	**408**	**13,016**	**–**	**26,809**

Financial liabilities that can be repaid any time are disclosed as being “due within one year”.

Details of liabilities due to banks

Currency	Interest rate conditions	Remaining term of the fixed interest rate as of 31/12/2022	Nominal volumes as of 31/12/2022 in € thousand	Range of effective interest rates 2022	**Carrying amounts as of 31/12/2022 in € thousand**	Nominal volumes as of 31/12/2021 in € thousand	Range of effective interest rates 2021	Carrying amounts as of 31/12/2021
EUR	variable	< 1 year	32,876	EURIBOR + margin	32,876	7,987	EURIBOR + margin	7,987
INR	variable	< 1 year	6,159	LIBOR + margin	6,159	11,042	LIBOR + margin	11,042
BRL	variable	< 1 year	14,178	LIBOR + margin	14,178	9,263	LIBOR + margin	9,263
ZAR	variable	< 1 year	7,923	LIBOR + margin	7,923	6,757	LIBOR + margin	6,757
Other	variable	< 1 year	11,839	LIBOR + margin	11,839	7,920	LIBOR + margin	7,920
EUR	fixed	< 1–11 years	91,925	0.8 %–5.2 %	77,608	113,841	1.05 %–5.2 %	92,447
EUR	variable	> 10 years	50,000	EURIBOR + margin	35,000	50,000	EURIBOR + margin	38,333
SGD	variable	> 10 years	9,399	SIBOR + margin	5,541	8,796	SIBOR + margin	5,910
Other	fixed	< 1–3 years	3,010	1.1 %–17.8 %	4,854	7,781	1.1 %–13.4 %	5,721
Liabilities due to banks			**227,309**		**195,978**	**223,387**		**185,380**

Composition of the promissory notes as of 31 December 2022

	Maturity in year	Nominal interest rate	Nominal amount in € thousand
Jungheinrich AG 2017 (I)	2024	Fixed interest	30,000
Jungheinrich AG 2017 (II)	2027	Fixed interest	30,000
Jungheinrich AG 2022 (I)	2025	Fixed interest	15,000
Jungheinrich AG 2022 (II)	2025	EURIBOR + margin	10,000
Jungheinrich AG 2022 (III)	2026	Fixed interest	20,000
Jungheinrich AG 2022 (IV)	2026	EURIBOR + margin	20,000
Jungheinrich AG 2022 (V)	2028	Fixed interest	20,000
Jungheinrich AG 2022 (VI)	2028	EURIBOR + margin	15,000

A further promissory note amounting to €100,000 thousand was taken out in the year under review, with maturity tranches of three, four and six years. An interest rate hedge was used for the variable interest.

A fixed-interest tranche of the promissory note drawn down in 2017 for €13,000 thousand was repaid on schedule in the reporting year upon reaching final maturity.

The nominal amounts of the individual loan tranches correspond to the carrying amounts.

During the reporting year, Jungheinrich Group issued a commercial paper programme with a maximum programme volume of €300,000 thousand to supplement short-term, non-bank-dependent financing. As of 31 December 2022, commercial papers amounting to €45,299 thousand had been issued, with maturities between one and three months.

Liabilities from financing trucks for short-term rental totalled €75,962 thousand as of 31 December 2021, and resulted from refinancing receivables from intragroup rental-purchase agreements by means of a loan. Jungheinrich was given access to a credit facility, which could only be utilised up to the maximum amount of the residual debt from rental-purchase agreements. The liabilities from this type of refinancing existing as of 31 December 2021 were repaid in full in January 2022.

Lease liabilities as of 31 December 2022 were primarily related to long-term leases of properties and vehicles. The right-of-use assets from these leases are reported under property, plant and equipment.

(28) Liabilities from financial services

As of 31 December 2022, repurchase obligations equal to the contractually agreed residual values which related to lease contracts with a leasing company acting as intermediary were recognised under liabilities from financial services in the amount of €15,018 thousand (previous year: €16,420 thousand).

In addition, liabilities from financial services included liabilities from financing in the amount of €1,977,430 thousand (previous year: €1,879,995). They result from the financing of long-term customer contracts with identical securities. Depending on whether commercial ownership is attributed to Jungheinrich Group companies, these contracts are capitalised either as trucks for lease from financial services ("operating leases") or as receivables from financial services ("finance leases").

Liabilities from financing amounted to €267,181 thousand (previous year: €294,094 thousand) in liabilities from the issuance of promissory notes via the consolidated securitisation vehicle in Luxembourg.

Liabilities from financial services: Reconciliation of total future cash flows with their present value

in € thousand	31/12/2022	31/12/2021
Total future cash flows	**2,108,783**	**1,961,724**
Due within one year	619,766	580,747
Due in one to five years	1,394,015	1,295,098
Due in more than five years	95,002	85,879
Present value of future cash flows	**1,977,430**	**1,879,995**
Due within one year	569,956	546,980
Due in one to five years	1,315,586	1,248,704
Due in more than five years	91,888	84,311
Future interest expense	**131,353**	**81,729**

(29) Trade accounts payable

Trade accounts payable as at 31 December 2022 included accounts payable in respect of affiliated companies amounting to €1,624 thousand (previous year: €942 thousand), accounts payable in respect of associated companies amounting to €25,329 thousand (previous year: €25,568 thousand), and accounts payable in respect of joint ventures amounting to €21,876 thousand (previous year: € 5,314 thousand). Details of the composition of trade accounts payable from related companies can be found in note (42) [page 161 ff.].

(30) Contract liabilities

Contract liabilities as of 31 December 2022, included €166,577 thousand (previous year: €167,880 thousand) for advance payments received on orders.

Contract liabilities also essentially related to obligations resulting from revenue deductions contractually agreed with customers and contract balances from long-term construction contracts, the revenue of which is recognised over time.

(31) Other liabilities

Composition of other liabilities

in € thousand	31/12/2022	31/12/2021
Liabilities from other taxes	81,458	76,141
Social security liabilities	12,585	10,745
Other financial liabilities	1,052	6,373
Miscellaneous other liabilities	19,972	13,664
Other liabilities	**115,067**	**106,923**

Other financial liabilities included accounts payable to affiliated companies amounting to €3 thousand (previous year: €3 thousand), and accounts payable to joint ventures amounting to €123 thousand (previous year: €120 thousand).

As of 31 December 2021, €4,500 thousand in other financial liabilities related to liabilities from financing towards the minority shareholders of JT Energy Systems GmbH, Freiberg.

(32) Deferred income

Composition of deferred income

in € thousand	Deferred revenue from financial services	Deferred profit from financial services	Other deferrals	Deferred income
31/12/2022	**26,297**	**12,001**	**7,763**	**46,061**
Thereof maturities of up to one year	9,759	8,341	4,865	22,965
Thereof maturities of more than one year	16,538	3,660	2,898	23,096
31/12/2021	**26,871**	**24,020**	**9,741**	**60,632**
Thereof maturities of up to one year	10,509	12,954	5,095	28,558
Thereof maturities of more than one year	16,362	11,066	4,646	32,074

Deferred revenue from financial services related to lease agreements with a leasing company or bank acting as intermediary. In such cases, due to the contractually agreed repurchase obligations, Jungheinrich Group companies had commercial ownership despite the sale of the trucks to the leasing company/bank. The resultant IFRS obligation to capitalise this ownership led to the deferral of the sales proceeds that have already been received from the leasing company. This deferred income is reversed using the straight-line method with an effect on revenue until the agreed residual value is paid.

Deferred profit from financial services related to sale and leaseback transactions for refinancing trucks for lease that were concluded before the initial application of IFRS 16 “Leases”. Deferred profit is reversed over the remaining terms of the leases.

Other deferrals as of 31 December 2022 included €5,363 thousand (previous year: €5,190 thousand) in government grants.

(33) Additional disclosures on financial instruments

Carrying amounts and fair values of financial instruments by measurement category

in € thousand	Measurement category in accordance with IFRS 9	31/12/2022 Carrying amount	31/12/2022 Fair value	31/12/2021 Carrying amount	31/12/2021 Fair value
Assets					
Cash and cash equivalents	At amortised cost	336,725	336,725	474,619	474,619
Trade accounts receivable and contract assets	At amortised cost	908,321	908,321	764,611	764,611
Receivables from financial services	n/a	1,462,707	1,411,114	1,407,470	1,424,294
Securities	At amortised cost	52,926	53,055	98,210	98,079
Securities	At fair value through profit or loss	145,065	145,065	181,717	181,717
Other financial assets	At fair value through profit or loss	778	778	10,925	10,925
Derivative financial assets					
Derivatives without a hedging relationship	At fair value through profit or loss	3,621	3,621	2,836	2,836
Derivatives with a hedging relationship	n/a	19,353	19,353	1,794	1,794
Other financial assets	At amortised cost	18,000	18,000	12,039	12,039
Shareholders' equity and liabilities					
Trade accounts payable	Other financial liabilities	556,196	556,196	532,969	532,969
Liabilities due to banks	Other financial liabilities	195,978	192,477	185,380	188,358
Promissory notes/commercial papers	Other financial liabilities	205,299	199,745	73,000	74,351
Liabilities from financing trucks for short-term rental	Other financial liabilities	11,650	11,650	81,330	81,330
Lease liabilities	n/a	190,645	n/a	185,764	n/a
Notes payable	Other financial liabilities	6,328	6,328	7,469	7,469
Liabilities from financial services	Other financial liabilities	1,992,448	1,924,394	1,896,415	1,902,690
Derivative financial liabilities					
Derivatives without a hedging relationship	At fair value through profit or loss	2,821	2,821	2,824	2,824
Derivatives with a hedging relationship	n/a	1,553	1,553	2,979	2,979
Other financial liabilities	Other financial liabilities	1,052	1,052	6,373	6,373
Of which aggregated by measurement category:					
Assets:	At amortised cost	1,315,972	1,316,101	1,349,479	1,349,348
	At fair value through profit or loss	149,464	149,464	195,478	195,478
Shareholders' equity and liabilities:	Other financial liabilities	2,968,951	2,891,842	2,782,936	2,793,540
	At fair value through profit or loss	2,821	2,821	2,824	2,824

The carrying amounts of the financial instruments measured at fair value in the consolidated financial statements as at the balance sheet date have been categorised in the table below by their fair value hierarchy level pursuant to IFRS 13, and based on the information and input factors used to determine the carrying amounts.

Hierarchy levels for financial instruments measured at fair value

	31/12/2022				31/12/2021			
in € thousand	Level 1	Level 2	Level 3	**Total**	Level 1	Level 2	Level 3	Total
Assets								
Securities[1]	145,065	–	–	145,065	181,717	–	–	181,717
Other financial assets	–	–	778	778	–	–	10,925	10,925
Derivatives without a hedging relationship	885	2,736	–	3,621	–	2,836	–	2,836
Derivatives with a hedging relationship	–	19,353	–	19,353	–	1,794	–	1,794
Shareholders' equity and liabilities								
Derivatives without a hedging relationship	42	2,779	–	2,821	–	2,824	–	2,824
Derivatives with a hedging relationship	–	1,553	–	1,553	–	2,979	–	2,979

[1] Assigned to the measurement category "at fair value through profit or loss".

The fair value of Level 1 financial instruments was determined on the basis of stock market quotations as at the balance sheet date.

The fair value of Level 2 financial instruments was determined in line with generally acknowledged valuation models based on discounted cash flow analyses and using observable current market prices for similar instruments. The fair value of currency forwards is determined using the mean spot rate as at the balance sheet date, adjusted up or down to reflect the remaining term of the futures contract. The fair value of interest rate derivatives is determined on the basis of the market interest rates and interest rate curves on the balance sheet date, taking their maturities into account. Jungheinrich has taken counterparty risks into consideration when measuring fair value.

The fair value of Level 3 financial instruments was determined using the generally accepted evaluation model of discounting future cash flows (discounted cash flow method). A market-oriented approach was used both to determine the discount rate as well as to forecast long-term development. A company-specific discount rate and the planned cash flows from the five year plan, created by the associated companies and checked by the management of Jungheinrich AG, were used. Forecasts for long-term revenue and returns formed the basis for cash flows beyond the budget period. Expectations regarding future market development and assumptions concerning the development of macroeconomic factors were taken into consideration.

No transfers between Levels 1 and 2 took place in the reporting period.

Further information on measurement levels is provided in the chapter on accounting principles.

Current interest rates at which comparable loans with identical maturities as at the balance sheet date could have been taken out were used to determine the fair values of liabilities due to banks, promissory notes and commercial papers, as well as of receivables and liabilities from financial services.

The fair values of interest-bearing securities with maturities categorised as “at amortised cost” corresponded to the fair values available as at the balance sheet date.

Cash and cash equivalents and trade accounts receivable primarily have short terms of maturity. Their carrying amounts as at the balance sheet date therefore roughly corresponded to their fair values.

For non-current other financial assets with variable interest rates, for reasons of simplicity it was assumed that their fair values correspond to their carrying amounts, since the interest rates contractually agreed and realisable on the market were virtually at the same level. For the current other financial assets, their carrying amounts as at the balance sheet date approximated their fair values.

Other financial assets comprise investments in non-consolidated affiliated companies, joint ventures and other investments, and were measured at fair value in the consolidated financial statements. The shares did not have a quoted market price. The fair value as of 31 December 2022 was calculated based on amortised cost as at the balance sheet date. As of 31 December 2021, the fair value of material other investment was determined using a current interest rate as well as the currently available, expected future cash flows of the company. The measurement of other investments at fair value resulted in changes recognised in profit or loss in the amount of €+1,024 thousand, these changes which were recognised in other financial income (expense) for 2021. The fair value of investments in non-consolidated affiliated companies and joint ventures as at the balance sheet date was derived from the amortised costs.

Development of the fair value of Level 3 financial instruments

in € thousand	**2022**	2021
Balance on 01/01	10,925	9,233
Additions	70	693
Net income from measurement at fair value in profit or loss (not realised)	–	1,024
Disposals	10,217	25
Balance on 31/12	**778**	**10,925**

It was assumed that the fair values of trade accounts payable and other financial liabilities corresponded to the carrying amounts of these financial instruments, owing to their short remaining terms to maturity.

As regards liabilities from financing trucks for short-term rental with variable interest rates, it was assumed for reasons of simplicity that their fair values corresponded to their carrying amounts since the interest rates agreed and realisable on the market were almost identical.

The carrying amounts of current, interest-bearing financial liabilities corresponded almost exactly to their fair values.

Hierarchy levels for financial instruments which are not measured at fair value and for which the carrying amounts are not reasonable approximations of fair values

	31/12/2022			31/12/2021		
in € thousand	Level 1	Level 2	**Total**	Level 1	Level 2	Total
Assets						
Receivables from financial services	–	1,411,114	1,411,114	–	1,424,294	1,424,294
Securities[1]	53,055	–	53,055	98,079	–	98,079
Liabilities						
Liabilities due to banks	–	192,477	192,477	–	188,358	188,358
Promissory notes/ commercial papers	–	199,745	199,745	–	74,351	74,351
Liabilities from financial services	–	1,924,394	1,924,394	–	1,902,690	1,902,690

[1] Assigned to the measurement category "at amortised cost".

The net results of financial instruments recognised in the statement of profit or loss are presented by measurement category in the following table.

Net results of financial instruments

	From interest and dividends	From subsequent measurement		Net result	
in € thousand		At fair value	Valuation allowances	**2022**	2021
At amortised cost	2,409	–	–4,237	–1,828	–8
At fair value through profit or loss	810	–17,063	–	–16,253	1,992
Other financial liabilities	–55,559	–	–	–55,559	–44,613

Interest and dividends from financial instruments attributable to the measurement categories "at amortised cost" and "other financial liabilities" were reported in financial income under interest income and interest expense, as well as in cost of sales.

The net income (expense) from securities attributable to the measurement category "at fair value through profit or loss", which includes interest and dividends as well as the net income (expense) from subsequent measurement at fair value, was recognised in other financial income (expense).

Net results from the subsequent measurement of derivative financial instruments at fair value not designated as hedging instruments are included in the cost of sales and in other financial income (expense).

Loss allowances for financial instruments categorised as "at amortised cost" are reported in the cost of sales in the case of trade accounts receivable and contract assets, and in other financial income (expense) in the case of securities, cash and cash equivalents and other financial assets.

The development of loss allowances for financial instruments in 2022 and 2021 is presented in the following table.

Development of loss allowances for financial instruments

in € thousand	Trade accounts receivable and contract assets Level 2	Trade accounts receivable and contract assets Level 3	Securities Level 1	Cash and cash equivalents Level 1	Other financial assets Level 1	Total
Balance on 01/01/2022	**1,571**	**18,243**	**127**	**40**	**1**	**19,982**
Changes in currency exchange rates	6	−268	–	–	–	−262
Utilisations	–	2,661	–	–	–	2,661
Releases	1,562	1,690	59	40	–	3,351
Additions	2,163	5,337	61	13	14	7,588
Balance on 31/12/2022	**2,178**	**18,961**	**129**	**13**	**15**	**21,296**
Balance on 01/01/2021	**1,668**	**20,523**	**233**	**93**	**–**	**22,517**
Changes in currency exchange rates	9	−187	–	–	–	−178
Additions as a result of business combinations	61	–	–	–	–	61
Utilisations	–	3,094	–	–	–	3,094
Releases	1,653	3,961	201	93	–	5,908
Additions	1,486	4,962	95	40	1	6,584
Balance on 31/12/2021	**1,571**	**18,243**	**127**	**40**	**1**	**19,982**

ADDITIONAL INFORMATION

(34) Consolidated statement of cash flows

Cash flows have been presented in the statement of cash flows independently of the structure of the statement of financial position and are broken down into cash flow from operating activities, investing activities and financing activities. Cash flows from investing and financing activities were directly attributed to corresponding cash flows. Cash flow from operating activities was derived indirectly.

Cash flow from operating activities was derived from profit or loss, which was adjusted to exclude non-cash income and expenses, mainly consisting of depreciation, amortisation and impairment losses, along with monetary profit or loss resulting from the application of IAS 29. Changes in working capital are also taken into account. Cash flow from operating activities also included changes in the carrying amounts of trucks for short-term rental and trucks for lease as well as liabilities and deferred revenue and profit stemming from the financing of these assets. Changes to carrying amounts for right-of-use assets on property, plant and equipment, and non-cash changes and the interest portion of lease payments for the corresponding lease liabilities are also reported under cash flow from operating activities.

Cash flow from investing activities included disposals and additions on property, plant and equipment without right-of-use assets capitalised and intangible assets and in particular additions in capitalised development expenditure. In addition, the cash flow from investing activities includes: purchases and sales of securities; inflows and outflows from time deposits with an original term of more than three months and without a short-term, cost-free termination option; inflows and outflows for loans granted to related parties; purchase price payments for business combinations, and payments for investments in companies accounted for using the equity method and other financial assets, as well as inflows from the sale of other financial assets.

Cash flow from financing activities included capital-related transactions, dividend payments, cash flow from obtaining and repaying long-term financial loans including promissory notes and commercial papers, and changes in short-term liabilities due to banks. In addition, the repayment portion of the lease payments were reported under cash flow from financing activities in accordance with the provisions of IFRS 16 “Leases”.

The changes to the balance sheet items shown in the consolidated statement of cash flows cannot be traced directly back to the consolidated statement of financial position, because non-cash effects resulting from currency translations and changes to the scope of consolidation are calculated out.

Cash and cash equivalents at the end of the year correspond to the amount disclosed for cash and cash equivalents on the statement of financial position, less the cash and cash equivalents not freely available to Jungheinrich. The way the balance sheet item for cash and cash equivalents reconciles in respect of the figures for cash and cash equivalents according to the consolidated statement of cash flows can be seen in the table below.

Derivation of cash and cash equivalents according to the consolidated statement of cash flows:

in € thousand	**31/12/2022**	31/12/2021
Cash and cash equivalents according to the consolidated statement of financial position	336,725	474,619
Bank balances (pledged)	–9,368	–9,354
Term deposits[1]	–	–115,000
Cash and cash equivalents according to the consolidated statement of cash flows	**327,357**	**350,265**

[1] Original term of more than 3 months, and with no option to terminate free of charge at short notice.

As before, cash and cash equivalents consisted almost exclusively of bank balances as at the balance sheet date.

Development of financial liabilities from financing activities

in € thousand	Balance as of 01/01	Cash-effective changes	Non-cash-effective changes: Changes to the scope of consolidation	Non-cash-effective changes: Changes in currency exchange rates	Non-cash-effective changes: Other	Balance as of 31/12
2022						
Liabilities due to banks	**185,380**	**29,100**	**–19,599**	**1,097**	**–**	**195,978**
Current bank liabilities	42,969	42,736	–13,278	548	–	72,975
Non-current loans	142,411	–13,636	–6,321	549	–	123,003
Promissory notes/commercial papers	**73,000**	**132,299**	**–**	**–**	**–**	**205,299**
Lease liabilities	**185,764**	**–56,383**	**354**	**–1,121**	**62,031**	**190,645**
Total financial liabilities from financing activities	**444,144**	**105,016**	**–19,245**	**–24**	**62,031**	**591,922**
2021						
Liabilities due to banks	**283,528**	**–98,873**	**41**	**684**	**–**	**185,380**
Current bank liabilities	75,518	–33,044	–	495	–	42,969
Non-current loans	208,010	–65,829	41	189	–	142,411
Promissory notes	**200,000**	**–127,000**	**–**	**–**	**–**	**73,000**
Lease liabilities	**174,762**	**–53,307**	**–**	**2,572**	**61,737**	**185,764**
Total financial liabilities from financing activities	**658,290**	**–279,180**	**41**	**3,256**	**61,737**	**444,144**

(35) Contingent liabilities

No Group companies are involved in ongoing legal or arbitration proceedings that could have a considerable impact on the Group's economic situation, are likely to become involved in such litigation, or had done so within the last two years.

The respective Group companies have accrued provisions sufficient to cover financial burdens potentially resulting from other legal or arbitration proceedings.

As at the balance sheet date, potential liabilities arising from purchase contracts amounted to around €4 million.

As at the balance sheet date, Jungheinrich had issued letters of comfort for joint ventures and associated companies to secure €19,988 thousand in credit lines (previous year: €10,222 thousand). Against the backdrop of the companies' appropriate funding, it was assumed that the underlying obligations would be met; no withdrawals were anticipated.

(36) Other financial obligations

Purchase commitments for capital expenditure exclusively on property, plant and equipment totalled €22,882 thousand as at the balance sheet date (previous year: €15,737 thousand).

Group companies have entered into leases and service agreements for trucks at their various locations. As at the balance sheet date, payment obligations for the non-lease components of these contracts amounted to €20,659 thousand (previous year: €19,729 thousand).

In addition, the Jungheinrich Group incurred payment obligations totalling €76,460 thousand (previous year: €76,951 thousand) for long-term software use and maintenance contracts and leases for low-value assets as at the balance sheet date, as well as other service contracts.

The new plant in Czechia will be built by an external builder using a "Build to Suit" solution. Jungheinrich has contractually agreed to sign a long-term rental agreement for the use of this building with the builder following construction and pay rent in the total amount of at least €31,255 thousand in the future. As at the balance sheet date, this payment obligation existed in full.

(37) Risk management and financial instruments

Risk management principles

The Jungheinrich Group's risk management system is designed to enable the company to identify developments in financial price risks – resulting primarily from interest rate and currency risks – early on and react to them via systematic courses of action both rapidly and effectively. Furthermore, it ensures that the Group only concludes financial transactions for which it possesses the necessary expertise and technical preconditions.

Financial markets present the opportunity to transfer risks to other market participants who have a comparative advantage or a higher capacity for accepting risks. The Jungheinrich Group makes use of these opportunities solely to hedge risks arising from underlying operating transactions and to invest or raise liquidity. Group guidelines do not allow the conclusion of financial transactions that are speculative in nature. As a rule, the Jungheinrich Group's financial transactions may only be concluded with banks or leasing companies as contractual partners.

The Board of Management as a whole bears responsibility for the initiation of organisational measures required to limit financial price risks. Jungheinrich has established a risk controlling and risk management system that enables it to identify, measure, monitor and control its risk positions. Risk management encompasses the development and determination of methods to measure risk and performance, monitor established risk limits and set up the associated reporting system.

Jungheinrich controls financial risks arising from its core business centrally as part of the Group strategy. Risks stemming from the Jungheinrich Group's financial services operations are subject to a separate risk management system.

Risks specific to the financial services business are determined by residual value risks, refinancing risks and counterparty credit risks.

A material element of risk management in the financial service business is a contract database based on SAP-ERP and the "Global Lease Center" (GLC), which is used by smaller sales companies, that allows uniform recording, risk analysis and risk evaluation of financial service agreements throughout the Group.

The contractually agreed residual values are calculated on the basis of a conservative uniform Group standard for maximum permissible residual values. The residual values of all individual contracts are subjected to a quarterly evaluation using the central financial services contracts database on the basis of their current fair value. If the originally calculated residual value is above the current fair value and the end of the term of the contract, this risk is appropriately taken into account, depending on the classification of the long-term customer contract, by reducing the carrying amounts for "trucks for lease from financial services" or "receivables from financial services" in profit or loss.

Financial service agreements are generally refinanced in accordance with the principle of matching maturities and interest rates for customer and refinancing contracts.

Reference is made to the commentary on credit risks as regards general creditworthiness and contingent loss risks in connection with customers.

Break clauses agreed on in customer contracts are limited by central parameters and linked to risk-minimising performance targets. The earnings risk potentially resulting from break clauses is covered by accruing suitable provisions.

Market price risks

Market price risks are risks arising from changes in an item's realisable income or value, with the item being defined as an item on the assets or liabilities side of the statement of financial position. These risks result from changes in interest rates, foreign exchange rates, share prices and other items and factors affecting the formation of prices. These parameters are used to determine the interest rate risk, the currency risk and the share price risk exposure of the Jungheinrich Group. There were no noteworthy risk concentrations in the year under review, as was the case in the previous year.

Interest rate risks

Interest rate risks result from the Group's financing and cash investment activity. Fixed and variable-interest items are regarded separately in order to determine this risk. Net positions are formed from interest-bearing instruments on the assets and liabilities sides and hedges are concluded to cover these net positions, if necessary. Interest rate swaps were used to hedge interest rates in the reporting period.

The interest rate risk from investments is composed of the shares accounted for at fair value through profit or loss, pension futures and pension funds amounting to €112,791 thousand (previous year: €155,568 thousand), which are largely held in a special fund. If going interest rates as at the balance sheet date had been 100 basis points higher (lower), this would have led to a change in the fair value in the amount of €1,027 thousand (previous year: €4,127 thousand).

The Jungheinrich Group's interest rate risks include cash flow risks arising from variable- interest financial instruments for which no interest rate hedges have been concluded. These financial instruments were analysed as follows based on the assumption that the amount of liabilities outstanding at the end of the reporting period was outstanding for the full year.

As at the balance sheet date, the net exposure of variable-interest financial instruments was at €158,516 thousand (previous year: €81,302 thousand). If going interest rates had been 100 basis points higher on 31 December 2022, income would have been €1,589 thousand (previous year: €621 thousand) lower. If going interest rates had been 100 basis points lower, income would have been €1,589 thousand (previous year: €430 thousand) higher.

For interest rate swaps designated as a hedging instrument as at the balance sheet date, such an increase (decrease) in the market interest level would have resulted in a change in fair value of €+7,076 thousand (€–7,285 thousand) recognised in other comprehensive income (expense) with no effect on profit or loss.

A fundamental reform of key benchmark interest rates is currently underway worldwide, including the replacement of some interbank offered rates (IBORs) with alternative, virtually risk-free, rates. This process is referred to as "IBOR reform". On 1 January 2022, SONIA (Sterling Overnight Index Average) replaced GBP-LIBOR as the reference interest rate. The risk positions directly affected by the reform of the reference interest rates were the variable-interest liabilities in GBP existing within the framework of the financing of the financial services business via the Group's own financing company Elbe River Capital S.A., Luxembourg. These liabilities are hedged against interest rate risks by means of interest rate swaps. The GBP-LIBOR rate swaps that were directly affected during the transition phase were closed in January 2022, prior to the nearest rate fixing deadline. Other transactions and product types were not directly affected and so no transactions had to be migrated. The discounting curves for measuring derivative financial instruments were converted based on the new risk-free reference interest rate as of 31 January 2022.

The reference interest rate of the variable rate liabilities and the reference interest rate used in the interest rate hedge both transferred to SONIA simultaneously in January 2022. The changeover to SONIA had no material effect on the Jungheinrich Group. As at the balance sheet date, the nominal volume of the hedging instruments used amounted to GBP 49.6 million (previous year: GBP 51.9 million).

Currency risks

When calculating this risk position, the Jungheinrich Group considers foreign currency inflows and outflows, primarily from revenue and purchases based on fixed and flexible contracts. This risk position reflects the net currency exposure resulting from balancing counteracting cash flows in individual currencies while taking hedges already concluded for the period in question into account. Jungheinrich used currency forwards and currency swaps to manage risks during the reporting period. In accordance with the Jungheinrich Group's risk management principles, a maximum of 75 per cent of the volumes to be hedged are designated as underlying transactions. These, in turn, can be fully hedged.

The Jungheinrich Group applies the value-at-risk approach to quantify its risk position. The value-at-risk indicates the maximum loss that may not be exceeded before the end of a predetermined holding period with a certain probability (confidence level). Parameters such as market volatility, which are used to quantify risk, are calculated based on the standard deviation of logarithmic changes in the last 180 trading days, and are converted to a one-day holding period with a one-sided confidence level of 95 per cent.

To manage risk, a maximum loss limit for the entire Group is determined based on the company's planning. Furthermore, corresponding lower limits are determined at the individual Group company level. These limits are compared to the current value-at-risk for all open positions as part of monthly reporting.

By applying the value-at-risk method as of 31 December 2022, the maximum risk did not exceed €2,345 thousand (previous year: €1,270 thousand) based on a holding period of one day and a confidence level of 95 per cent. In the reporting period, the value-at-risk was between a minimum of €1,342 thousand (previous year: €1,119 thousand) and a maximum of €2,370 thousand (previous year: €1,453 thousand). The average for the year was €2,012 thousand (previous year: €1,302 thousand).

Additionally, hedging of foreign currency risks takes place in the Jungheinrich Group with matching amounts and identical maturities from intragroup financing via currency swaps.

Share price risks

Jungheinrich has invested €125,000 thousand (previous year: €150,000 thousand) in cash and cash equivalents in a special fund. Shares, stock index funds and share derivatives held in this fund expose the Jungheinrich Group to a significant share price risk. On 31 December 2022, the total share price risk exposure of Jungheinrich Group amounted to €8,944 thousand (previous year: €44,199 thousand). If the share price level had been 10 per cent higher (lower) on 31 December 2022, this would have led to additional income (losses) in other financial income (expense) of €894 thousand (previous year: €4,420 thousand).

The special fund is managed to maintain value in order to limit share price risks. The lower value limit specified for the reporting year was not reached at any time.

Credit risks

Jungheinrich's exposure to credit risks stems almost exclusively from its core business. Trade accounts receivable from operations are constantly monitored by the business units responsible for them. Loss allowances for expected credit losses are recognised in order to offset the credit risks.

The entire business is continuously subjected to creditworthiness checks. Given the overall exposure to credit risks, accounts receivable from major customers are not substantial enough to give rise to extraordinary risk concentrations. Agreements made with customers and measures taken within the scope of risk management that minimise the creditworthiness risk largely consist of agreements on prepayments made by customers, the sharing of risks with financing partners and the permanent monitoring of customers via information portals. In addition, selected operating trade accounts receivable are collateralised by federal government credit insurance and private credit insurance covering 90 per cent of the respective receivable amount. Letters of credit are also used for collateral and generally cover 100 per cent of the receivable amount. There were no significant changes to the quality of the collateral during the reporting periods.

Notwithstanding existing collateral securities, in principle the carrying amounts of the financial assets in the balance sheet represent the maximum credit risk. As at the balance sheet date, there were no major agreements that reduced the maximum credit risk such as offsetting arrangements.

Financial assets measured at fair value through profit or loss had carrying amounts totalling €149,464 thousand (previous year: €195,478 thousand) as at 31 December 2022 in the balance sheet. The carrying amounts reflect the maximum credit risk of these financial instruments.

Liquidity risks

A liquidity reserve consisting of lines of credit and of cash is kept in order to ensure that the Jungheinrich Group can meet its payment obligations and maintain its financial flexibility at all times. Medium-term credit lines have been granted by the Group's principal banks and are supplemented by short-term credit lines of individual Group companies awarded by local banks.

Counterparty risks

The Group is exposed to counterparty risks that arise from the non-fulfilment of contractual agreements by counterparties. To mitigate these risks, such contracts are only concluded with selected financial institutions, which meet the internal demands placed on the creditworthiness of business partners. The creditworthiness of contractual partners is constantly monitored on the basis of their credit rating, which is determined by reputable rating agencies, as well as on the basis of additional risk indicators. No major risks ensued for Jungheinrich from its dependence on individual counterparties as at the balance sheet date. The fair values of derivative financial instruments are adjusted by the risk values calculated using analytical tools (credit value adjustment/debit value adjustment).

With regard to cash and cash equivalents and investments in securities, the Group monitors changes to the credit risk by tracking published ratings. To determine whether there are material increases in credit risks as at the balance sheet date which are not reflected in published ratings, the Group also monitors price changes for credit default swaps (CDSs) as well as press releases and regulatory information about the issuer. In accordance with Group investment policies, capital expenditure is only made in financial assets if they have an investment grade rating. Impairment losses for expected credit losses are calculated based on the three-level model in IFRS 9. Potential future impairment losses are calculated for all cash and cash equivalents and securities for the expected 12-month credit loss (Level 1). They are reclassified to Level 2 if the credit risk of a financial instrument has increased significantly compared to its initial recognition. Were contractual payments to become more than 30 days overdue, this would not by itself signal a significant increase in the credit risk, but it would indicate that a significant increase in the credit risk might have occurred. Jungheinrich's risk management system treats a downgrading of the counterparty's external rating below investment grade as a criterion for a significant increase in the credit risk. There were no reclassifications from Level 1 to Level 2 in the 2022 and 2021 financial years.

The general liquidity risk from the financial instruments used, which arises if a counterparty fails to meet its payment obligations or only meets them to a limited extent, is considered to be negligible.

Hedging relationships

The Jungheinrich Group concludes cash flow hedges to secure, among other things, future variable cash flows resulting from revenue and purchases of materials that are partially realised and partially forecasted, but highly probable. Comprehensive documentation ensures the clear assignment of hedges and underlying transactions. A maximum of 75 per cent of the volumes to be hedged are designated as underlying transactions. These, in turn, can be fully hedged.

In order to hedge against interest rate risks, cash flows from tranches of a promissory note with variable interest rates are hedged with a matching maturity and an identical payment schedule by means of suitable interest rate swaps.

Furthermore, the variable-interest liabilities existing for the purpose of financing the financial services business via the Group's financing company Elbe River Capital S.A., Luxembourg, are hedged against interest rate risks via interest rate swaps as cash flow hedges.

The hedging ratio for all risk types is generally 1:1.

The effectiveness of hedging relationships is determined in each case at the beginning of the hedging relationship and through regular prospective assessments to ensure that an economic relationship exists between the hedged item and the hedging instrument.

The hedging relationships can prospectively be classified as highly effective. An assessment of the retrospective effectiveness of hedging relationships is conducted at the end of every quarter using the dollar-offset method together with the hypothetical-derivative method.

Hedging can become ineffective if the counterparty's credit risk changes.

Nominal values of derivative financial instruments

Nominal volume of derivative financial instruments

	Nominal volume of hedging instruments for cash flow hedges		Nominal volume of other derivatives	
in € thousand	Currency hedges	Interest hedges	Currency hedges	Other
31/12/2022				
Total nominal volume	**209,940**	**344,226**	**312,062**	**26,212**
Maturities of up to one year	182,960	83,841	312,062	26,212
Maturities of one to five years	26,980	213,937	–	–
Maturities of more than five years	–	46,448	–	–
31/12/2021				
Total nominal volume	**196,293**	**294,094**	**257,446**	**42,338**
Maturities of up to one year	174,901	87,994	257,446	42,338
Maturities of one to five years	21,392	201,094	–	–
Maturities of more than five years	–	5,006	–	–

The nominal values of the currency hedging contracts primarily contain currency forwards that are used to hedge against rolling twelve-month exposure in individual currencies. The main foreign currency items were hedged at the following average rates as at the balance sheet date:

Average hedging rates of material foreign currency items

	31/12/2022	31/12/2021
EUR/GBP	0.8682	0.8592
EUR/CHF	0.9888	1.0568
EUR/USD	1.0566	1.1461

The nominal values of the interest hedges include interest rate hedges largely concluded to hedge long-term interest rates for variable-interest financing. As at the balance sheet date the average hedging rate was 1.23 per cent (previous year: –0.11 per cent) for interest rate hedges in EUR and 3.41 per cent (previous year: 0.20 per cent) for interest rate hedges in GBP.

Interest hedges: future cash flows that are not discounted

in € thousand	**31/12/2022**	31/12/2021
Due within one year	6,020	–351
Due in one to five years	9,614	1,323
Due in more than five years	365	8
Total future non-discounted cash flows	**15,999**	**980**

The nominal volume of the other derivative financial instruments included listed futures and options in special funds.

The transactions underlying the cash flow hedges are expected to be realised in line with the maturities of the hedges shown in the table.

The fair values of the underlying transactions and hedging instruments are used to measure effectiveness. Hedging measures were not associated with any material ineffectiveness until the balance sheet date.

For the currency forwards from cash flow hedges existing as at the balance sheet date, the change in the fair values of the hedging transactions amounted to €2,674 thousand (previous year: €–1,876 thousand). The change in the fair values of the underlying transactions amounted to €–2,674 thousand (previous year: €1,876 thousand).

For the interest rate hedging contracts existing as at the balance sheet date, the change in the fair values of the hedging transactions as at the balance sheet date was €15,106 thousand (previous year: €913 thousand). The change in the fair values of the underlying transactions amounted to €–15,066 thousand (previous year: €–915 thousand).

Fair values of derivative financial instruments

The fair value of a derivative financial instrument is the price at which the instrument could have been sold on the market as at the balance sheet date. Fair values were calculated on the basis of market-related information available as at the balance sheet date and on the basis of measurement methods stated in note (33) [page 145 ff.] that are based on specific prices. In view of the varying influencing factors, the values stated here may differ from the values realised later on the market.

Fair values of derivative financial instruments

in € thousand	**31/12/2022**	31/12/2021
Derivative financial assets	**22,974**	**4,630**
Derivatives with a hedging relationship	**19,353**	**1,794**
Currency forwards/currency swaps	3,884	549
Interest rate swaps	15,469	1,245
Derivatives without a hedging relationship	**3,621**	**2,836**
Currency forwards/currency swaps	2,736	2,463
Futures	885	373
Derivative financial liabilities	**4,374**	**5,803**
Derivatives with a hedging relationship	**1,553**	**2,979**
Currency forwards/currency swaps	1,520	2,560
Interest rate swaps	33	419
Derivatives without a hedging relationship	**2,821**	**2,824**
Currency forwards/currency swaps	2,779	2,698
Futures	42	126

Details regarding the development of the fair value of derivatives in hedging relationships in the reporting year and previous year can be found in note (24) [page 135 f.].

Offsetting of derivative financial instruments

The Group concludes derivative transactions according to a German framework agreement and similar national framework agreements. These agreements do not fulfil the criteria for offsetting to take place in the consolidated statement of financial position, since they only grant the right to offsetting if future events occur, such as the default or insolvency of the Group or the counterparty. All currency and interest rate hedging contracts belonging to the Jungheinrich Group fall under existing global netting agreements, meaning that, taking into account the counterparty structure, the offsetting potential as of 31 December 2022 would amount to €3,518 thousand (previous year: €3,233 thousand).

As at the balance sheet date, the gross value of derivative financial assets from currency and interest rate hedging contracts amounted to €22,089 thousand (previous year: €4,257 thousand), and the gross amount of derivative financial liabilities from currency and interest rate hedging contracts was €4,332 thousand (previous year: €5,677 thousand). After netting, this would result in receivables in the amount of €18,571 thousand (previous year: €1,024 thousand) and liabilities in the amount of €814 thousand (previous year: €2,444 thousand).

(38) Segment information

The Jungheinrich Group operates on an international level – with a main focus on Europe – as an intralogistics solutions provider with an extensive portfolio of material handling equipment, automated systems and services. The integrated business model encompasses the development, production and sale of new material handling equipment and the planning and realisation of automated systems, the short-term rental of new and used material handling equipment, the reconditioning and sale of used forklifts and after-sales services. Jungheinrich also supplies stacker cranes and load handling equipment.

The Board of Management of Jungheinrich AG acts and makes decisions with overall responsibility for all the Group's business areas. Jungheinrich's business model is designed to serve customers from a single source over a product's entire life cycle.

Segment reporting is in line with the internal organisational and reporting structure, thus encompassing the reportable segments "Intralogistics" and "Financial Services".

The "Intralogistics" segment encompasses the development, production, sale and short-term rental of new material handling equipment and warehousing equipment products including automated systems as well as the sale and short-term leasing of used trucks and after-sales services, consisting of maintenance, repair and spare parts.

Activities undertaken by the "Financial Services" segment encompass the sales financing and usage transfer of material handling equipment and warehousing equipment products. In line with Jungheinrich's business model, this independent business area supports the operating sales units of the "Intralogistics" segment. In this context, the "Financial Services" segment finances itself autonomously.

Segment information is generally subject to the disclosure and measurement methods applied in the consolidated financial statements. One exception is that the segments do not determine or record impairments for expected credit losses pursuant to IFRS 9 "Financial instruments" for intragroup receivables. Business segments were not aggregated.

The segment income (expense) is presented as earnings before taxes (EBT). Income tax expense are not reported and managed by segment at Jungheinrich. Income tax expense is therefore only stated as a summarised item at the Group level. Accordingly, profit or loss is only stated for the Jungheinrich Group.

Capital expenditure, depreciation and amortisation and impairment losses concern property, plant and equipment and intangible assets, excluding capitalised development expenditure and excluding capitalised usage rights on property, plant and equipment. Segment assets and segment liabilities encompass all assets and liabilities allocable to the segment in question. All items on the statement of financial position relating to effective and deferred income tax expense are therefore also included.

The "Intralogistics" segment acquires products from long-term customer lease agreements at the end of the term of these agreements at contractually agreed residual values from the "Financial Services" segment. If the contractually agreed residual value is above the current fair value at the end of an agreement's term, the "Intralogistics" segment will take this residual value risk into consideration by forming appropriate reserves for onerous contracts. Within the Jungheinrich Group, these residual value risks are represented as reductions in either the carrying amounts of trucks for lease from financial services, receivables from financial services and/or the inventories affected, depending on the classification of long-term customer contracts. The figures from this cross-segment offsetting were included in the reconciliation items for 2022 and 2021.

The reconciliation items in the reporting year and 2021 also included the intragroup revenue, interest, interim profits and receivables and liabilities eliminated within the scope of consolidation.

Segment information for 2022

in € thousand	Intralogistics	Financial Services	Segment total	Reconciliation	Jungheinrich Group
External revenue	3,799,644	963,650	4,763,294	–	4,763,294
Intersegment revenue	1,078,123	167,345	1,245,468	–1,245,468	–
Total revenue	4,877,767	1,130,995	6,008,762	–1,245,468	4,763,294
Income (expense) from companies accounted for using the equity method	4,980	–	4,980	–	4,980
Earnings before interest and income taxes (EBIT)	340,113	25,443	365,556	20,504	386,060
Interest income	3,783	248	4,031	–1,622	2,409
Interest expense	13,702	1,746	15,448	–1,622	13,826
Other financial income (expense)	–27,779	537	–27,242	–	–27,242
Segment income (expense) (EBT)	**302,415**	**24,482**	**326,897**	**20,504**	**347,401**
Income tax expense					77,826
Profit or loss					**269,575**
Non-current assets					
Capital expenditure	72,503	79	72,582	–	72,582
Depreciation and amortisation	80,271	326	80,597	–	80,597
Impairment losses	431	–	431	–	431
Reversals of impairment losses	2,737	–	2,737	–	2,737
Intangible assets	215,088	780	215,868	–	215,868
Property, plant and equipment	702,423	28	702,451	–	702,451
Trucks for short-term rental	459,143	–	459,143	–	459,143
Trucks for lease from financial services	–	712,225	712,225	–144,818	567,407
Investments measured using the equity method	69,749	–	69,749	–	69,749
Other financial assets	25,187	–	25,187	–24,409	778
Inventories	934,318	63,264	997,582	–3,586	993,996
Receivables from financial services	–	1,476,244	1,476,244	–13,537	1,462,707
Trade accounts receivable and contract assets	962,580	123,700	1,086,280	–177,959	908,321
Cash and cash equivalents and securities	511,090	23,626	534,716	–	534,716
Other assets	368,572	137,956	506,528	–257,541	248,987
Assets 31/12	**4,248,150**	**2,537,823**	**6,785,973**	**–621,850**	**6,164,123**
Shareholders' equity 31/12	2,117,510	120,252	2,237,762	–186,310	2,051,452
Provisions for pensions	158,704	196	158,900	–	158,900
Other provisions	383,517	437	383,954	–25,617	358,337
Financial liabilities	602,878	7,022	609,900	–	609,900
Liabilities from financial services	–	1,992,448	1,992,448	–	1,992,448
Trade accounts payable	562,744	171,422	734,166	–177,970	556,196
Contract liabilities	209,306	155	209,461	–	209,461
Other liabilities	213,491	245,891	459,382	–231,953	227,429
Liabilities 31/12	2,130,640	2,417,571	4,548,211	–435,540	4,112,671
Shareholders' equity and liabilities 31/12	**4,248,150**	**2,537,823**	**6,785,973**	**–621,850**	**6,164,123**

Segment information for 2021

in € thousand	Intralogistics	Financial Services	Segment total	Reconciliation	Jungheinrich Group
External revenue	3,273,035	966,780	4,239,815	–	4,239,815
Intersegment revenue	977,878	165,337	1,143,215	−1,143,215	–
Total revenue	4,250,913	1,132,117	5,383,030	−1,143,215	4,239,815
Income (expense) from companies accounted for using the equity method	2,838	–	2,838	–	2,838
Earnings before interest and income taxes (EBIT)	332,728	18,136	350,864	8,780	359,644
Interest income	1,848	133	1,981	−1,313	668
Interest expense	11,494	1,239	12,733	−1,313	11,420
Other financial income (expense)	244	−3	241	–	241
Segment income (expense) (EBT)	**323,326**	**17,027**	**340,353**	**8,780**	**349,133**
Income tax expense					81,737
Profit or loss					**267,396**
Non-current assets					
Capital expenditure	70,888	109	70,997	–	70,997
Depreciation and amortisation	78,357	286	78,643	–	78,643
Impairment losses	1,961	–	1,961	–	1,961
Intangible assets	200,693	1,019	201,712	–	201,712
Property, plant and equipment	719,985	18	720,003	–	720,003
Trucks for short-term rental	362,917	–	362,917	–	362,917
Trucks for lease from financial services	–	642,760	642,760	−142,312	500,448
Investments measured using the equity method	45,696	–	45,696	–	45,696
Other financial assets	35,334	–	35,334	−24,409	10,925
Inventories	718,600	49,221	767,821	−3,968	763,853
Receivables from financial services	–	1,419,715	1,419,715	−12,245	1,407,470
Trade accounts receivable and contract assets	811,254	106,163	917,417	−152,806	764,611
Cash and cash equivalents and securities	725,263	29,283	754,546	–	754,546
Other assets	362,329	137,204	499,533	−262,578	236,955
Assets 31/12	**3,982,071**	**2,385,383**	**6,367,454**	**−598,318**	**5,769,136**
Shareholders' equity 31/12	1,910,987	94,325	2,005,312	−202,703	1,802,609
Provisions for pensions	227,556	240	227,796	–	227,796
Other provisions	377,841	875	378,716	−26,498	352,218
Financial liabilities	531,805	1,138	532,943	–	532,943
Liabilities from financial services	–	1,896,415	1,896,415	–	1,896,415
Trade accounts payable	536,954	148,838	685,792	−152,823	532,969
Contract liabilities	198,234	194	198,428	–	198,428
Other liabilities	198,694	243,358	442,052	−216,294	225,758
Liabilities 31/12	2,071,084	2,291,058	4,362,142	−395,615	3,966,527
Shareholders' equity and liabilities 31/12	**3,982,071**	**2,385,383**	**6,367,454**	**−598,318**	**5,769,136**

Alongside the depreciation of property, plant and equipment and trucks for short-term rental, the main non-cash items stated as part of the "Intralogistics" segment income are monetary profit or loss resulting from the application of IAS 29, and changes in provisions for pensions and similar obligations and other provisions with an effect on profit or loss.

In addition, the result for the "Intralogistics" segment over the reporting year included reversals of impairment losses in connection with acquired intangible assets amounting to €2,737 thousand (previous year: €–thousand). It also recognised impairments in connection with capitalised development expenditure amounting to €3,347 thousand (previous year: €453 thousand), as well as for property, plant, equipment and trucks for short-term rental belonging to the Ukranian sales company, amounting to a total of €706 thousand (previous year: €–thousand). In the previous year, the result for the "Intralogistics" segment also included impairment recognised in connection with acquired intangible assets amounting to €1,961 thousand.

The ROCE financial key figure represents the Jungheinrich Group's return based on the EBIT generated in the "Intralogistics" segment (annualised for interim reports) in relation to the capital employed (average of capital employed on current balance sheet date and at the balance sheet date in the last three quarters) that is attributable to this segment. ROCE in the reporting period was 16.3 per cent (previous year: 20.2 per cent).

The following tables report revenue by recipient region and show non-current assets affecting intangible assets and property, plant and equipment, broken down by region.

Revenue by region

in € thousand	2022	2021
Germany	1,106,158	1,013,499
Italy	475,243	454,247
France	369,813	382,598
United Kingdom	264,437	249,019
Other Europe	1,801,394	1,584,213
Other countries	746,249	556,239
Revenue	**4,763,294**	**4,239,815**

The non-current assets by region shown in the following table refer to intangible assets and property, plant and equipment.

Non-current assets by region

in € thousand	31/12/2022	31/12/2021
Germany	492,728	509,235
Other Europe	269,641	261,469
Other countries	74,896	69,253
Consolidation	81,054	81,758
Intangible assets and property, plant and equipment	**918,318**	**921,715**

There were no relationships with individual external customers accounting for a material share of revenue with respect to Group revenue in the 2022 and 2021 financial years.

(39) Earnings per share

The calculations are based on profit or loss attributable to shareholders of Jungheinrich AG, as reported in the consolidated statement of profit or loss.

Earnings per share

		2022	2021
Profit or loss[1]	in € thousand	269,168	266,248
Shares outstanding[2]			
Ordinary shares	in thousand units	54,000	54,000
Preferred shares	in thousand units	48,000	48,000
Earnings per share (diluted/undiluted)			
Earnings per ordinary share	in €	2.63	2.60
Earnings per preferred share	in €	2.65	2.62

[1] Attributable to the shareholders of Jungheinrich AG.
[2] Weighted average.

In the 2022 and 2021 financial years, no equity instruments diluted the earnings per share on the basis of the respective shares issued.

(40) Events after the close of the 2022 financial year

On 25 January 2023 Jungheinrich contractually committed itself to acquire the Indiana (USA)-based Storage Solutions Group (Storage Solutions), a leading provider of solutions for racking systems and warehouse automation in the USA, with a view to expanding its access to the warehousing and automation market. The business combination remains subject to antitrust regulatory approval in the USA. The total consideration under the contract consists of a purchase price of approximately $375 million (subject to customary adjustments at closing of the transaction) and a flexible, performance-based component in the mid to high single-digit percentage range relative to the purchase price.

Jungheinrich expects that the execution conditions agreed under the contract will be fulfilled and that the combination will receive regulatory approval in the USA in a timely manner, allowing it to take effect in the first quarter of 2023.

Storage Solutions is expected to generate revenue of approximately $290 million and report an adjusted EBIT of approximately $34 million in fiscal 2022 with 170 employees.

(41) Fees for the auditor of the consolidated financial statements

Details on the fees charged by the auditor of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, Hamburg, for the year under review and the previous year are presented in the following table.

Fees charged by the auditor

in € thousand	**2022**	2021
Audit services	791	736
Tax services	–	–
Other consulting services	91	57
Other services	10	124
Total	**892**	**917**

Other advisory services provided over the reporting year were associated with auditing non-financial reports. The other services used over the reporting year were associated with checks to ensure the Group's SWIFT-based banking connectivity solution was compliant with the CSCF framework.

(42) Related party disclosures

Jungheinrich AG's major ordinary shareholders are LJH-Holding GmbH, Wohltorf, and WJH-Holding GmbH, Aumühle.

In addition to the subsidiaries included in the consolidated financial statements, Jungheinrich has business relationships with joint ventures, associated companies and affiliated, non-consolidated companies. All the relationships with these companies are the result of normal business activities and are conducted on arm's length terms. The transactions with non-consolidated affiliated companies involved minor amounts.

The volume of trade between fully consolidated companies of the Jungheinrich Group and joint ventures and associated companies are presented in the following table.

Business relations with joint ventures and associated companies

	Products and services provided		Products and services received		Trade accounts receivable from		Trade accounts payable to	
in € thousand	**2022**	2021	**2022**	2021	**31/12/2022**	31/12/2021	**31/12/2022**	31/12/2021
JULI Motorenwerk s.r.o., Czechia[1]	45	45	84,337	67,849	–	–	5,497	4,398
Jungheinrich Heli Industrial Truck Rental (China) Co., Ltd., China[1]	27,104	29,108	1,692	3,218	6,207	9,279	140	489
JT Energy Systems GmbH, Germany[2]	2,972	n/a	47,972	n/a	5	n/a	15,068	n/a
Schwerter Profile GmbH, Germany	–	784	21,125	4,160	–	–	647	233
Other joint ventures	4,658	3,176	3,208	2,451	462	117	524	194
Joint ventures	**34,779**	**33,113**	**158,334**	**77,678**	**6,674**	**9,396**	**21,876**	**5,314**
Cebalog GmbH, Germany	207	238	98,673	84,417	4	2	25,258	25,568
Other associated companies	–	n/a	449	n/a	–	n/a	71	n/a
Associated companies	**207**	**238**	**99,122**	**84,417**	**4**	**2**	**25,329**	**30,882**

[1] Including subsidiaries.

[2] The details for products and services provided/received for 2022 only cover the period May—December 2022, as the company was consolidated as a subsidiary up to and including April 2022.

As of 31 December 2022 there were receivables of €9,241 thousand from a loan granted to Schwerter Profile GmbH, Schwerte, Germany (previous year: €9,979 thousand). The bullet loan, with interest charged at market rates, has a fixed term which ends on 30 June 2026. However, the borrower is entitled to repay the loan early in full or in part, without an early prepayment penalty. The loan agreement contains a subordination agreement.

As of 31 December 2022 there were receivables of €6,035 thousand from a loan granted to JT Energy System GmbH, Freiberg, Germany (previous year: €–thousand. The bullet loan, with interest charged at market rates, has a fixed term, which ends on 24 April 2023. The loan will then continue to run indefinitely. The loan agreement contains a subordination agreement.

On 31 December 2022, other liabilities from financing vis-à-vis Malikon GmbH, Eslarn (Germany) amounted to €88 thousand (previous year: €88 thousand).

On 31 December 2022, other liabilities from financing vis-à-vis Supralift GmbH & Co. KG, Hofheim am Taunus (Germany) amounted to €120 thousand (previous year: €120 thousand), and liabilities from financing vis-à-vis TREX.PARTS GmbH & Co, KG, Sittensen (Germany) amounted to €3 thousand (previous year: €–thousand).

Contingent liabilities of the Jungheinrich Group from letters of comfort issued for joint ventures and associated companies as at the balance sheet date are presented in note (35) [page 151].

Members of the Board of Management or the Supervisory Board of Jungheinrich AG are members of supervisory boards or comparable committees of other companies with which Jungheinrich AG has relationships as part of its operating activities. All transactions with these companies are conducted on arm's length terms.

Information about the remuneration of the Supervisory Board and Board of Management can be found in note (43).

(43) Total remuneration of the Board of Management and the Supervisory Board

Total remuneration of the active members of the Board of Management pursuant to Section 314 (1) Item 6a HGB amounted to €4,930 thousand in 2022 (previous year: €6,713 thousand). In addition to basic remuneration, this included remuneration in kind and fringe benefits, the short-term incentive (STI) and long-term incentive (LTI – a share-based performance-related component with a long-term incentive effect). The appropriateness requirement was taken into consideration when determining the individual variable remuneration.

The LTI has a term of three years and is allocated annually in the form of virtual performance share (VPS) tranches. Settlement occurs exclusively in cash at the end of the relevant performance period. The target amount forms the basis for the allocation and amounts to 55 per cent of the basic remuneration for each member of the Board of Management. At the start of the term, the target amount is divided by Jungheinrich AG's average share price (the arithmetical mean of the closing prices in the last 120 trading days before the start of the performance period) to calculate the number of conditionally allotted virtual shares (VPS). The target values for the performance criteria are set by the Supervisory Board, and the degree to which they have been achieved is decided by the Supervisory Board after the end of the performance period. The number of final VPS is always limited to 150 per cent of the originally allocated VPS.

Based on the remuneration system applicable as at 1 January 2022, a total of 43,046.19 VPS were granted in 2022 for the last financial year's LTI (previous year: 59,969.87). The fair value determined by Monte Carlo simulation at the time when they were granted was €1,624 thousand (previous year: €1,770 thousand). The tranches for 2021–2023 and 2022–2024 have been recognised as cash-settled share-based payment transactions pursuant to IFRS 2. The fair value is calculated at every balance sheet date and recognised as a personnel expense, distributed on a straight-line basis over the vesting period and as a provision in the same amount. As of 31 December 2022, provisions of € 794 thousand (previous year: €720 thousand) existed for the LTI.

The LTI calculation is based on the financial performance criteria of "return on capital employed (ROCE)" and "relative total shareholder return", and on the sustainability-related non-financial performance criterion of "lithium-ion equipment ratio".

On 31 December 2022, provisions amounting to €1,486 thousand (previous year: €2,114 thousand) had been made for active members of the Board of Management for the STI. In addition, provisions amounting to €1,185 thousand (previous year: €2,357) fordeferred variable remuneration system under the system that was applicable until 31 December 2020. The entitlements have been fully awarded with the activities in the 2022 financial year. In this regard, the actual payment will be measured and paid based on target achievement applicable according to the remuneration system for the previous years and from 1 January 2022 by the Supervisory Board in April 2023. The payment of STI is dependent on the weighted degree of overall target achievement, which is determined using "Group EBT return on sales", "increase in Group revenue" and "equipment ratio of lithium-ion".

There were pension commitments for all active members of the Board of Management; the corresponding provisions amount to €2,812 thousand (previous year: €4,050 thousand). The pensions will be paid out at the end of the 63rd year as lifelong monthly pensions as long as there is no active employment relationship with Jungheinrich AG at this point. The provision for dependants for spouses or partners and children entitled to maintenance is restricted to a maximum of 100 per cent of the regular pension claim.

The disclosure of the remuneration of management staff in key positions in the Jungheinrich Group pursuant to IAS 24 includes the remuneration of the Board of Management and the Supervisory Board.

Remuneration of the Board of Management and the Supervisory Board

	Board of Management		Supervisory Board	
in € thousand	**2022**	2021	**2022**	2021
Short-term benefits due	4,856	5,993	1,140	1,121
Post-employment benefits	709	746	–	–
Share-based payments	74	720	–	–
Total	**5,639**	**7,459**	**1,140**	**1,121**

Post-employment benefits include the current service cost resulting from the defined benefit obligations to the members of the Board of Management. As share-based payments, expenses from share-based payments in the 2022 financial year are reported.

The Supervisory Board remuneration includes basic annual remuneration and fixed annual remuneration for sitting on Supervisory Board committees. The full Supervisory Board remuneration is only due after the end of the financial year. As of 31 December 2022, provisions for Supervisory Board remuneration totalled €1,140 thousand (previous year: €1,121 thousand). These will be disbursed early in the next financial year. Employee representatives on the Supervisory Board receive a regular salary from their employment in the Group; the amount represents appropriate remuneration for their role and/or work within the Group.

As in the previous year, no advances or loans to members of the Board of Management or the Supervisory Board of Jungheinrich AG existed on 31 December 2022. Also as in the previous year, the company did not provide any guarantees for members of the Board of Management or Supervisory Board.

Total emoluments of former members of the Board of Management amounted to €993 thousand (previous year: €1,174 thousand).

As of 31 December 2022, Jungheinrich AG had accrued provisions amounting to €11,868 thousand (previous year: €16,391 thousand) for pensions of former members of the Board of Management.

(44) List of equity stakes held by Jungheinrich AG, Hamburg, in accordance with Section 313, Paragraph 2 of the German Commercial Code (HGB).

As of 31 December 2022, the following companies were included in the consolidated financial statements of Jungheinrich AG, Hamburg, by way of full consolidation:

Company name	Domicile, country	Share of voting rights and capital in %
Jungheinrich Vertrieb Deutschland AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Norderstedt AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Export AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Service & Parts AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Beteiligungs-GmbH	Hamburg, Germany	100.0
Jungheinrich Moosburg AG & Co. KG	Moosburg, Germany	100.0
Jungheinrich Degernpoint AG & Co. KG	Moosburg, Germany	100.0
Jungheinrich Logistiksysteme GmbH	Moosburg, Germany	100.0
Jungheinrich Projektlösungen AG & Co. KG	Offenbach am Main, Germany	100.0
Jungheinrich Digital Solutions AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Landsberg AG & Co. KG	Landsberg/Saalekreis, Germany	100.0
Jungheinrich Financial Services AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Rental International AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Financial Services International GmbH	Hamburg, Germany	100.0
Elbe River Capital S.A.	Luxembourg, Luxembourg	100.0
Hemmdal GmbH	Hamburg, Germany	100.0
ISI Automation GmbH & Co. KG	Extertal, Germany	100.0
arculus GmbH	Munich, Germany	100.0
Jungheinrich PROFISHOP AG & Co. KG	Hamburg, Germany	100.0
Jungheinrich Profishop GmbH	Vienna, Austria	100.0
Jungheinrich PROFISHOP AG	Hirschthal, Switzerland	100.0
Gebrauchtgeräte-Zentrum Dresden AG & Co. KG	Klipphausen/Dresden, Germany	100.0
Jungheinrich Finances Holding SAS	Vélizy-Villacoublay, France	100.0
Jungheinrich France SAS	Vélizy-Villacoublay, France	100.0
Jungheinrich Finance France SAS	Vélizy-Villacoublay, France	100.0
Jungheinrich Financial Services SAS	Vélizy-Villacoublay, France	100.0
Jungheinrich UK Holdings Ltd.	Milton Keynes, UK	100.0
Jungheinrich UK Ltd.	Milton Keynes, UK	100.0
Jungheinrich Lift Truck Finance Ltd.	Milton Keynes, UK	100.0

Company name	Domicile, country	Share of voting rights and capital in %
Jungheinrich Financial Services Ltd.	Milton Keynes, UK	100.0
Jungheinrich Italiana S.r.l.	Rosate/Milan, Italy	100.0
Jungheinrich Rental S.r.l.	Rosate/Milan, Italy	100.0
Jungheinrich Fleet Services S.r.l.	Rosate/Milan, Italy	100.0
Jungheinrich de España S.A.U.	Abrera/Barcelona, Spain	100.0
Jungheinrich Fleet Services S.L.	Abrera/Barcelona, Spain	100.0
Jungheinrich Nederland B.V.	Alphen a. d. Rijn, Netherlands	100.0
Jungheinrich Finance B.V.	Alphen a. d. Rijn, Netherlands	100.0
Jungheinrich Financial Services B.V.	Alphen a. d. Rijn, Netherlands	100.0
Jungheinrich AG	Hirschthal, Switzerland	100.0
Jungheinrich n.v./s.a.	Leuven, Belgium	100.0
Jungheinrich Austria Vertriebsges. m.b.H.	Vienna, Austria	100.0
Jungheinrich Fleet Services GmbH	Vienna, Austria	100.0
Jungheinrich Polska Sp. z o.o.	Ozarow Mazowiecki/Warsaw, Poland	100.0
Jungheinrich Norge AS	Oslo, Norway	100.0
Jungheinrich (ČR) s.r.o.	Modletice/Prague, Czechia	100.0
Jungheinrich Chomutov s.r.o.	Modletice/Prague, Czechia	100.0
Jungheinrich Svenska AB	Arlöv, Sweden	100.0
Jungheinrich Hungária Kft.	Biatorbágy/Budapest, Hungary	100.0
Jungheinrich Danmark A/S	Tåstrup, Denmark	100.0
Jungheinrich d.o.o.	Kamnik, Slovenia	100.0
Jungheinrich Portugal Equipamentos de Transporte, Lda.	Mem Martins/Lisbon, Portugal	100.0
Jungheinrich Lift Truck Ltd.	Maynooth, Co. Kildare, Ireland	100.0
Jungheinrich Hellas EPE	Acharnes/Athens, Greece	100.0
Jungheinrich Istif Makinalari San. ve Tic. Ltd. Sti.	Alemdag/Istanbul, Turkey	100.0
Jungheinrich spol. s.r.o.	Senec, Slovakia	100.0
Jungheinrich Lift Truck Singapore Pte Ltd.	Singapore, Singapore	100.0
Jungheinrich Lift Truck Malaysia Sdn. Bhd.	Shah Alam/Kuala Lumpur, Malaysia	100.0
Jungheinrich Lift Truck Comercio de Empilhadeiras Ltda.	Itupeva-SP, Brazil	100.0
Jungheinrich Lift Truck OOO	Moscow, Russia	100.0
Jungheinrich Parts OOO	Moscow, Russia	100.0
Jungheinrich Lift Truck TOV	Kiev, Ukraine	100.0
Jungheinrich Lift Truck SIA	Riga, Latvia	100.0

Company name	Domicile, country	Share of voting rights and capital in %
Jungheinrich Lift Truck UAB	Vilnius, Lithuania	100.0
Jungheinrich Lift Truck Oy	Kerava, Finland	100.0
Jungheinrich (Shanghai) Management Co., Ltd.	Shanghai, China	100.0
Jungheinrich Lift Truck (Shanghai) Co., Ltd.	Shanghai, China	100.0
Jungheinrich Lift Truck Manufacturing (Shanghai) Co., Ltd.	Qingpu/Shanghai, China	100.0
Jungheinrich Lift Truck Ltd.	Samuthprakarn/Bangkok, Thailand	100.0
Jungheinrich Lift Truck India Private Ltd.	Mumbai, India	100.0
Jungheinrich Lift Truck Corporation	Houston/Texas, USA	100.0
Jungheinrich Systemlösungen GmbH	Graz, Austria	100.0
Jungheinrich South Africa (Pty) Ltd.	Edenvale/Johannesburg, South Africa	100.0
Jungheinrich Romania S.R.L.	Aricestii Rahtivani, Romania	100.0
Jungheinrich Reconditionare Romania S.R.L.	Ploiești, Romania	100.0
Jungheinrich Business Services Romania S.R.L.	Brașov, Romania	100.0
Jungheinrich Rentalift SpA	Pudahuel/Santiago de Chile, Chile	100.0
Jungheinrich Colombia SAS	Mosquera/Bogotá, Colombia	100.0
Jungheinrich Ecuador S.A.	Guayaquil, Ecuador	100.0
Jungheinrich Perú S.A.C.	Lurín/Lima, Peru	100.0
Jungheinrich doo	Novi Banovci, Serbia	100.0
MIAS GmbH (formerly: MIAS Maschinenbau, Industrieanlagen & Service GmbH)	Munich, Germany	100.0
MIAS Hungary Kft.	Gyöngyös, Hungary	100.0
MIAS Holding Inc.	Charlotte/North Carolina, USA	100.0
MIAS Property LLC	Charlotte/North Carolina, USA	100.0
MIAS Inc.	Charlotte/North Carolina, USA	100.0
MIAS Singapore Pte. Ltd.	Singapore, Singapore	100.0
MIAS Materials Handling (Kunshan) Co., Ltd.	Kunshan, China	100.0
MIAS Australia Pty Ltd.	Narrabeen/Sydney, Australia	100.0
Jungheinrich Australia Holdings Pty Ltd.	Adelaide, Australia	100.0
Jungheinrich Australia Pty Ltd.	Adelaide, Australia	100.0[1]

1 10.0 per cent of the shares are held indirectly via a trust.

Company name	Domicile, country	Share of voting rights and capital in %
Jungheinrich Fleet Services Pty Ltd.	Adelaide, Australia	100.0[1]
Jungheinrich New Zealand Ltd.	Auckland, New Zealand	100.0
Universal-FORMICA-Fonds[2]	Frankfurt/Main, Germany	0.0

1 10.0 per cent of the shares are held indirectly via a trust.

2 Included as a structured entity in accordance with IFRS 10.

As of 31 December 2022, the following joint ventures were included in the consolidated financial statements of Jungheinrich AG, Hamburg, using the equity method:

Company name	Domicile, country	Share of voting rights and capital in %
JULI Motorenwerk s.r.o.	Moravany, Czechia	50.0
Supralift GmbH & Co. KG	Hofheim am Taunus, Germany	50.0
Fujian JULI Motor Co., Ltd.	Putian, China	50.0
Jungheinrich Heli Industrial Truck Rental (China) Co., Ltd.	Shanghai, China	50.0
Jungheinrich Heli Industrial Truck Rental (Shanghai) Co., Ltd.	Shanghai, China	45.5
Jungheinrich Heli Industrial Truck Rental (Changzhou) Co., Ltd.	Changzhou, China	45.5
Jungheinrich Heli Industrial Truck Rental (Guangzhou) Co., Ltd.	Guangzhou, China	45.5
Jungheinrich Heli Industrial Truck Rental (Tianjin) Co., Ltd.	Tianjin, China	45.5
Malikon GmbH	Eslarn, Germany	50.0
MCJ Supply Chain Solutions LLC	Houston/Texas, USA	50.0
TREX.PARTS GmbH & Co. KG	Sittensen, Germany	50.0
TREX.PARTS SAS	Reims, France	50.0
TREX.PARTS SRL	Mouscron, Belgium	50.0
JT Energy Systems GmbH	Freiberg, Germany	40.0
Schwerter Profile GmbH	Schwerte, Germany	50.0

As of 31 December 2022, the following associated companies were included in the consolidated financial statements of Jungheinrich AG, Hamburg, using the equity method:

Company name	Domicile, country	Share of voting rights and capital in %
Cebalog GmbH	Pyrbaum, Germany	40.0
Magazino GmbH	Munich, Germany	21.7

As of 31 December 2022, the following companies were included in the consolidated financial statements of Jungheinrich AG, Hamburg at fair value:

Company name	Domicile, country	Share of voting rights and capital in %
Jungheinrich Polska Produkcja Sp. z o.o.[1]	Bronisze, Poland	100.0
Irapol Sp. z o.o.[1]	Łódź, Poland	100.0
Jungheinrich Digital Solutions s.l.[1]	Madrid, Spain	100.0
Jungheinrich Business Services Croatia d.o.o.[1]	Zagreb, Croatia	100.0
Jungheinrich Katalog Verwaltungs-GmbH[1]	Hamburg, Germany	100.0
Gebrauchtgeräte-Zentrum Dresden Verwaltungs-GmbH[1]	Klipphausen/Dresden, Germany	100.0
The Jungheinrich Australia Trust[1]	Adelaide, Australia	100.0
Jungheinrich Latinoamérica y Caribe Ltda.[1]	Pudahuel/Santiago de Chile, Chile	100.0
Jungheinrich Lift Truck Middle East (FZE)[1]	Sharjah, UAE	100.0
Multiton MIC Corporation[1]	Richmond/Virginia, USA	100.0
Jungheinrich Unterstützungskasse GmbH[1]	Hamburg, Germany	100.0
FORTAL Administracào e Participacoes S.A.[1]	Rio de Janeiro, Brazil	100.0
Boss Manufacturing Ltd.[1]	Leighton Buzzard, UK	100.0
ISI Verwaltungs GmbH[1]	Extertal, Germany	100.0
Supralift Beteiligungs- und Kommunikations-Gesellschaft mbH[1]	Hofheim am Taunus, Germany	50.0
TREX.PARTS Management GmbH[1]	Sittensen, Germany	50.0

1 Not consolidated due to its subordinate importance.

(45) Application of Section 264, Paragraph 3 and Section 264b of the German Commercial Code (HGB)

The following German subsidiaries included in the consolidated financial statements of Jungheinrich AG made use of the waiver pursuant to Section 264, Paragraph 3, and Section 264b of the German Commercial Code (HGB) to some extent:

- Jungheinrich Vertrieb Deutschland AG & Co. KG, Hamburg
- Jungheinrich Norderstedt AG & Co. KG, Hamburg
- Jungheinrich Export AG & Co. KG, Hamburg
- Jungheinrich Service & Parts AG & Co. KG, Hamburg
- Jungheinrich Moosburg AG & Co. KG, Moosburg
- Jungheinrich Degernpoint AG & Co. KG, Moosburg
- Jungheinrich Projektlösungen AG & Co. KG, Offenbach am Main
- Jungheinrich Digital Solutions AG & Co. KG, Hamburg
- Jungheinrich Landsberg AG & Co. KG, Landsberg/Saalekreis
- Jungheinrich Rental International AG & Co. KG, Hamburg
- Jungheinrich Financial Services AG & Co. KG, Hamburg
- Jungheinrich PROFISHOP AG & Co. KG, Hamburg
- Gebrauchtgeräte-Zentrum Dresden AG & Co. KG, Klipphausen/Dresden
- Jungheinrich Beteiligungs-GmbH, Hamburg
- Jungheinrich Financial Services International GmbH, Hamburg
- Jungheinrich Logistiksysteme GmbH, Moosburg
- ISI Automation GmbH & Co. KG, Extertal
- MIAS GmbH (formerly: MIAS Maschinenbau, Industrieanlagen & Service GmbH), Munich

(46) Issuance of the declaration regarding the German Corporate Governance Code in accordance with Section 161 of the German Stock Corporation Act (AktG)

In December 2022, the Board of Management and the Supervisory Board issued a declaration of compliance in accordance with Section 161 of the German Stock Corporation Act (AktG) and made it permanently and publicly accessible on the website of Jungheinrich Aktiengesellschaft.

Hamburg, 6 March 2023

Jungheinrich Aktiengesellschaft
The Board of Management

Dr Lars Brzoska Christian Erlach Dr Volker Hues Sabine Neuß

ADDITIONAL INFORMATION

Responsibility statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the combined management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Hamburg, den 6 March 2023

Jungheinrich Aktiengesellschaft
The Board of Management

Dr Lars Brzoska | Christian Erlach | Dr Volker Hues | Sabine Neuß

Independent Auditor's Report

To Jungheinrich Aktiengesellschaft, Hamburg

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Audit Opinions

We have audited the consolidated financial statements of Jungheinrich Aktiengesellschaft, Hamburg, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2022, and the consolidated statement of comprehensive income, consolidated statement of profit or loss, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from 1 January to 31 December 2022, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of Jungheinrich Aktiengesellschaft, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2022. In accordance with the German legal requirements, we have not audited the content of the disclosures marked as unaudited in section "Internal control and risk management system" of the group management report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2022, and of its financial performance for the financial year from 1 January to 31 December 2022, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of the disclosures in section "Internal control and risk management system" of the group management report referred to above.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

1. **Recoverability of goodwill**
2. **Recoverability of intangible assets, property, plant and equipment and trucks for short-term rental**
3. **Accounting of lessor contracts in the sales area**

Our presentation of these key audit matters has been structured in each case as follows:

1. Matter and issue
2. Audit approach and findings
3. Reference to further information

Hereinafter we present the key audit matters:

1 Recoverability of goodwill

1 In the Company's consolidated financial statements goodwill amounting in total to EUR 82,825k (1.3% of total assets or 4.0% of equity) is reported under the "Intangible assets" balance sheet item. Goodwill is tested for impairment by the Company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out at the level of the cash-generating units to which the relevant goodwill is allocated. The carrying amount of the relevant cash-generating units, including goodwill, is compared with the corresponding recoverable amount in the context of the impairment test. The recoverable amount is generally determined using the value in use. The present value of the future cash flows from the respective cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors on the business activities of the Group are also taken into account. The discount rate used is the weighted average cost of capital for the respective cash-generating units. The impairment test determined that no write-downs were necessary.

The outcome of this valuation is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from the respective cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complex nature of the valuation, this matter was of particular significance in the context of our audit.

2 As part of our audit, we assessed the methodology used for the purposes of performing the impairment test, among other things. After matching the future cash inflows used for the calculation against the adopted medium-term business plan of the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In addition, we assessed the appropriate consideration of the costs of Group functions. In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the value of the entity calculated in this way, we focused our testing in particular on the parameters used to determine the discount rate applied, and assessed the calculation model. In order to reflect the uncertainty inherent in the projections, we evaluated the sensitivity analyses performed by the Company. Taking into account the information available, we determined that the carrying amounts of the cash-generating units, including the allocated goodwill, for which no write-downs had to be regognised were adequately covered by the discounted future cash flows. With regard to the cash-generating units, including allocated goodwill, for which the need for write-downs was identified, we assessed whether the write-downs were appropriately determined and recognized. We also verified that the necessary disclosures were made in the notes.

Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

3 The Company's disclosures on goodwill are contained in section "Accounting principles" and in number 6 and 12 of the notes to the consolidated financial statements.

2 Recoverability of intangible assets, property, plant and equipment and trucks for short-term rental

1 In the Company's consolidated financial statements, an amount in total to EUR 1,377,732k is reported under the balance sheet items "Intangible assets", "Property, plant and equipment", and "trucks for short-term rental". The recoverability of intangible assets, property, plant and equipment, and trucks for short-term rental was assessed as of the balance sheet date by means of impairment tests in accordance with IAS 36. The present value of the future cash flows from the respective cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about, for example, long-term growth rates to reflect a sustainable situation (so-called "perpetual annuity"). Expectations relating to future market developments and assumptions about the development of macroeconomic factors on the business activities of the Group are also taken into account. The discount rate used is the weighted average cost of capital for the respective cash-generating units. As a result of the impairment test, even after taking into account the fair value less costs of disposal, write-downs amounting to a total of EUR 4,1m were recognized with respect to the cash-generating units China and Ukraine. In addition, reversals of impairment losses to a total of EUR 2,7m were identified for the cash-generating units Chile and Romania.

The outcome of this valuation is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from the respective cash-generating units, the discount rate used, the rate of growth and other assumptions, and is therefore subject to considerable uncertainty. Against this background and due to the complexity of the methodological requirements, this matter was of particular significance in the context of our audit.

2 As part of our audit, we assessed the methodology used for the purposes of performing the impairment test and the determination of the weighted average costs of capital, among other things. After matching the future cash inflows used for the calculation against the adopted medium-term business plan of the Group, we assessed the appropriateness of the calculation, in particular by reconciling it with general and sector-specific market expectations. In addition, we assessed the appropriate consideration of the costs of Group functions in the impairment tests of the respective cash-generating units. In the knowledge that even relatively small changes in the discount rate applied can have a material impact on the value of the entity calculated in this way, we focused our testing in particular on the parameters used to determine the discount rate and growth rates applied, and assessed the calculation model. With regard to the cash-generating units for which the need for write-downs was identified, we assessed whether the write-downs or write-ups were appropriately determined and recognized. We also verified that the necessary disclosures were made in the notes. Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

3 The Company's disclosures on intangible assets, property, plant and equipment and trucks for short-term rental are contained in section "Accounting principles" and numbers 6, 12, 13 and 14 of the notes to the consolidated financial statements.

3 Accounting of lessor contracts in the sales area

1 In the Company's consolidated financial statements, carrying amounts in total to EUR 1,462,707k (23.7% of total assets) are reported under the balance sheet item "'Receivables from financial services" and carrying amounts in total to EUR 1.026.550k (16.7% of total assets) are reported under the balance sheet items "Trucks for short-term rental" and "Trucks for lease from financial services". Jungheinrich makes extensive use of leases as a sales instrument in the "Financial Services" operating segment. The corresponding agreements include both contracts in which Jungheinrich Group companies are contracting parties and those in which the leased asset was sold to external financial partners. Monetization mainly takes place through the long-term leasing of new trucks as leased assets to the end customer, the sale of the leased asset to a financial partner and subsequent leaseback as well as the leasing of the leased asset to the end customer at the same time (sale-and-leaseback) and the sale of the (leased) asset to a financial partner, who leases it to the end customer (vendor leasing).

Leases directly to the end customer are classified as finance leases or operating leases as defined by IFRS 16. In the case of sale and leaseback agreements concluded, the transaction is classified as a financing agreement and therefore a liability from financial services is recognized in addition to an asset. Vendor leases are classified uniformly as leases within the meaning of IFRS 16 in accordance with IFRS 15.

Leasing applications used throughout the Group have been set up to ensure the complete and correct recognition, categorization and classification of the various contract types in accordance with IFRS. The updating, programming, and administration of the classification and booking routines of the leasing applications are performed centrally in Germany, while contract recording is decentralized to the sales units or the Group's own financial services companies. The definition of criteria and parameters in the leasing applications requires discretionary decisions by the executive directors. Due to the high volume of transactions in connection with the different types of contracts, errors in this area can have a significant impact on the consolidated financial statements. Against this background, the assessment of the accounting treatment of leases in the sales area was of particular significance in the context of our audit

2 As part of the audit, we first obtained an understanding of the process for accounting for leases in the sales area, including an understanding of the existing types of contracts as well as the company's internal controls in the leasing area. With the knowledge of the organizational structure and the overall process, the audit focused on the leasing application used and on the completeness and accuracy of the data input in the individual sub-areas. In a further step, we assessed whether the criteria and parameters defined in the leasing applications used were appropriate for accounting for the lease and whether the automatic booking and classification routines stored complied with the relevant IFRS. To this we examined the Jungheinrich Group Accounting Manual, as the basis for programming the routines, for compliance with IFRS. Furthermore, we assessed the appropriateness of the accounting and classification routines. Our assessment was based on a selected sample of contracts. Based on the data inputs, we verified for each selected contract whether the results of the leasing applications are in compliance with the relevant IFRS. We assessed the data inputs in the financial year in the individual sub-areas on a sample basis. In this context, we verified the accuracy, proper accrual and completeness of the data input using the original contracts.

We were able to satisfy ourselves that the criteria and parameters defined by the executive directors in the leasing application are appropriate overall for the accounting of leases in the sales area.

3 The Company's disclosures on accounting of lessor contracts in the sales area are contained in sections "Revenue recognition" and "Leasing and financial services" of the notes to the consolidated financial statements.

Other Information

The executive directors are responsible for the other information. The other information comprises the disclosures marked as unaudited in section "Internal control and risk management system" of the group management report as an unaudited part of the group management report.

The other information comprises further

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB
- the separate non-financial report to comply with §§ 289b to 289e HGB and with §§ 315b to 315c HGB
- all remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report disclosures audited in terms of content or with our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. 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 financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, 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 audit opinions. 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 controls.
- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- Conclude on the appropriateness of the executive directors' 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 the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance 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 those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements 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

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB

Assurance Opinion

We have performed assurance work in accordance with § 317 Abs. 3a HGB to obtain reasonable assurance as to whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the electronic file Jungheinrich_KA_LB_2021-12-31.zip and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the electronic file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from 1 January to 31 December 2022 contained in the "Report on the Audit of the Consolidated Financial Statements and on the Group Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the electronic file identified above.

Basis for the Assurance Opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above in accordance with § 317 Abs. 3a HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering, of Financial Statements and Management Reports, Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB (IDW AsS 410 (06.2022)) and the International Standard on Assurance Engagements 3000 (Revised). Our responsibility in accordance therewith is further described in the "Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic renderings of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Satz 4 Nr. [number] 1 HGB and for the tagging of the consolidated financial statements in accordance with § 328 Abs. 1 Satz 4 Nr. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have considered necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The supervisory board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance work on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version in force at the date of the consolidated financial statements on the technical specification for this electronic file.
- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Delegated Regulation (EU) 2019/815, in the version in force at the date of the consolidated financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 10 May 2022. We were engaged by the supervisory board on 8 November 2022. We have been the group auditor of the Jungheinrich Aktiengesellschaft, Hamburg, without interruption since the financial year 2020.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

Reference to an other matter– use of the auditor's report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report as well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be filed in the company register – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the "Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB" and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German Public Auditor responsible for the engagement

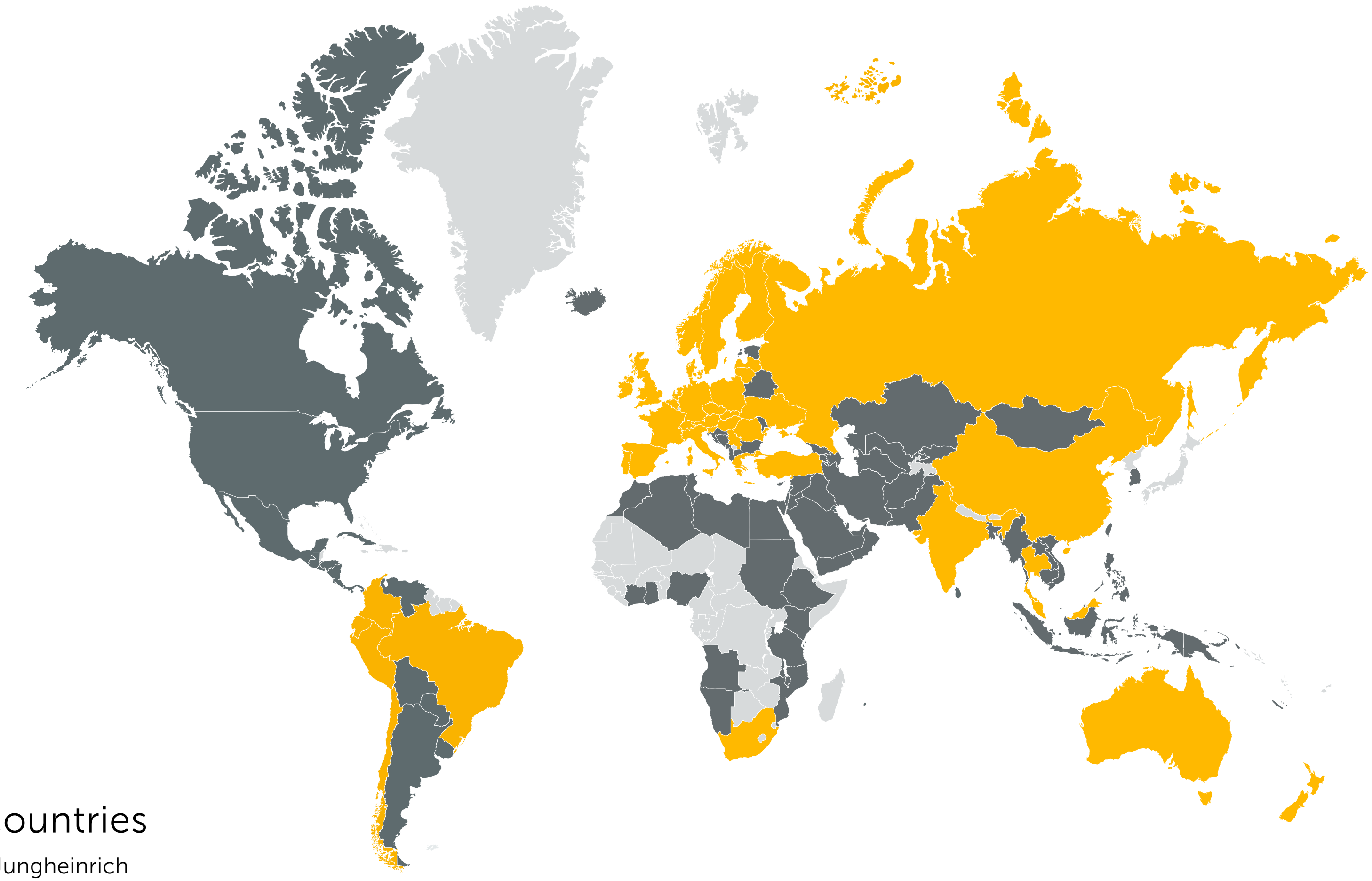
The German Public Auditor responsible for the engagement is Alexander Fernis.

Hamburg, 6 March 2023

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Alexander Fernis	pp. Stefanie Bubbers
Wirtschaftsprüfer	Wirtschaftsprüferin
[German Public Auditor]	[German Public Auditor]

Jungheinrich worldwide



41 countries

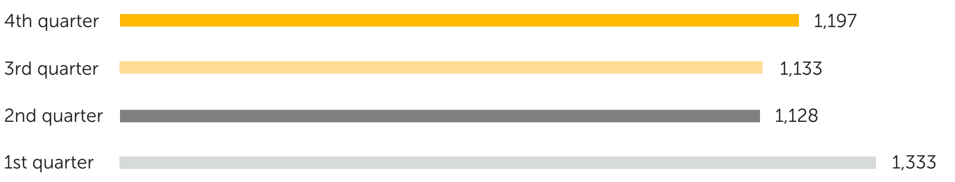
Own direct sales companies

Approximately 80 countries

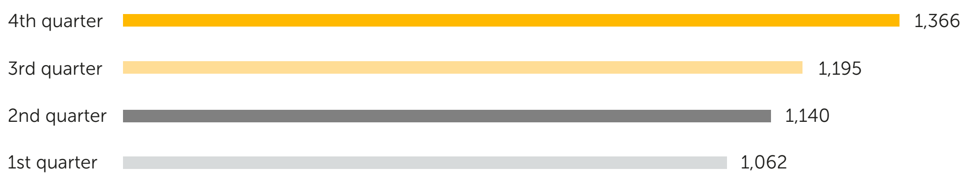
Partner of Jungheinrich

2022 quarterly overview

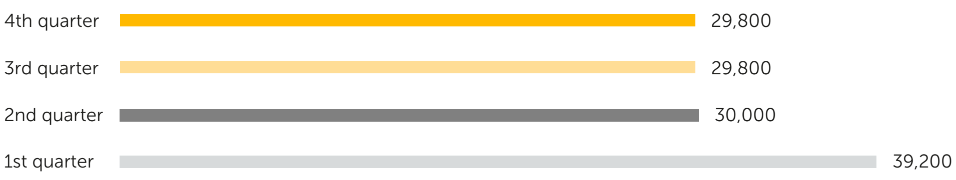
Incoming orders in € million



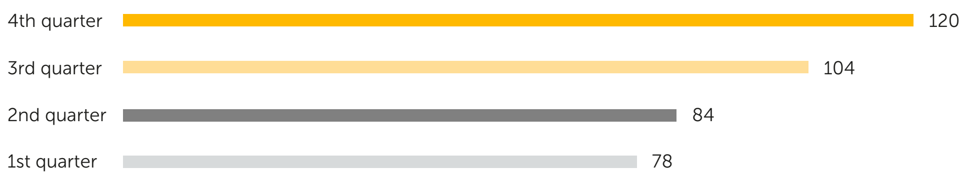
Revenue in € million



Incoming orders in units



Earnings before interest and income taxes in € million



Five-year overview

Jungheinrich Group		2022	2021	2020	2019	2018
Incoming orders	Units	128,800	162,400	111,400	121,900	131,000
	€ million	4,791	4,868	3,777	3,922	3,971
Orders on hand 31/12	€ million	1,595	1,519	821	787	907
Revenue	€ million	4,763	4,240	3,809	4,073	3,796
thereof Germany	€ million	1,106	1,014	917	966	900
thereof abroad	€ million	3,657	3,226	2,892	3,107	2,896
Foreign ratio	%	77	76	76	76	76
Earnings before interest, taxes, depreciation and amortisation (EBITDA)	€ million	787	737	643	670	595
Earnings before interest and income taxes (EBIT)	€ million	386	360	218	263	275
EBIT return on sales (EBIT ROS)	%	8.1	8.5	5.7	6.4	7.2
ROCE[1]	%	16	20	11	–	–
Earnings before taxes (EBT)	€ million	347	349	200	242	249
EBT return on sales (EBT ROS)	%	7.3	8.2	5.3	5.9	6.6
Profit or loss	€ million	270	267	151	177	176
Free cash flow	€ million	–239	89	–	–	–
Capital expenditure[2]	€ million	73	71	75	157	106
Research and development expenditure	€ million	128	102	89	86	84
Balance sheet total 31/12	€ million	6,164	5,769	5,411	5,231	4,746
Trucks for short-term rental	€ million	459	363	289	353	381
Trucks for lease from financial services	€ million	567	500	516	558	528
Receivables from financial services	€ million	1,463	1,407	1,327	1,260	1,044
Liabilities from financial services	€ million	1,992	1,896	1,803	1,760	1,526
Shareholders' equity 31/12	€ million	2,051	1,803	1,546	1,488	1,362
thereof subscribed capital	€ million	102	102	102	102	102
Equity ratio (Group)	%	33	31	29	28	29
Equity ratio (Intralogistics)	%	50	48	45	46	46
Return on equity after income taxes (ROE)	%	14	16	10	12	13
Net debt (+) / Net credit (–)[1]	€ million	75	–222	–194	172	108
Indebtedness ratio[1]	Years	0.11	<0	<0	0.32	0.23
Employees 31/12	FTE[3]	19,807	19,103	18,103	18,381	17,877
thereof Germany	FTE[3]	8,251	7,995	7,577	7,635	7,378
thereof abroad	FTE[3]	11,556	11,108	10,526	10,746	10,499
Earnings per preferred share[4]	€	2.65	2.62	1.49	1.75	1.73
Dividend per share – ordinary share	€	0.66[5]	0.66	0.41	0.46	0.48
– preferred share	€	0.68[5]	0.68	0.43	0.48	0.50

Explanatory notes to the key financial data:

Equity ratio = Shareholders' equity ÷ Total capital × 100

EBIT return on sales (EBIT ROS) = EBIT ÷ Revenue × 100

EBT return on sales (EBT ROS) = EBT ÷ Revenue × 100

EBIT return on capital employed Intralogistics (ROCE) = EBIT intralogistics ÷ average capital employed Intralogistics × 100

Return on equity after income taxes (ROE) = Profit or loss ÷ Average shareholders' equity × 100

Net indebtedness = Financial liabilities – Cash and cash equivalents and securities

Indebtedness ratio = Net indebtedness ÷ EBITDA (excluding the depreciation of trucks for lease from financial services)

1 Determined according to accounting changes as of 01/01/2019 (IFRS 16 "Leases"). (Values from the previous year have not been adjusted.)

2 Property, plant and equipment and intangible assets without capitalised development expenditure and right-of-use assets.

3 FTE = full-time equivalents.

4 Based on share of earnings attributable to the shareholders of Jungheinrich AG.

5 Proposal.

Financial calendar, Legal notice, Contact

FINANCIAL CALENDAR

31 March 2023
Balance sheet press conference (virtual)
Publication of the Annual Report 2022

31 March 2023
Analyst conference (virtual)

8 May 2023
Interim statement as of 31 March 2023

11 May 2023
Annual General Meeting 2023 (virtual)

16 May 2023
Dividend payment

10 August 2023
Interim report as of 30 June 2023

10 November 2023
Interim statement as of 30 September 2023

LEGAL NOTICE

Published by
Jungheinrich Aktiengesellschaft
Corporate Communications
Friedrich-Ebert-Damm 129
22047 Hamburg, Germany

Concept and design
Silvester Group, Hamburg, Germany

Translation
EnglishBusiness AG, Hamburg, Germany

Photographs and graphics
Cover photo: Jungheinrich AG

Photos Board of Management and
Supervisory Board: Matthias Haslauer,
Hamburg, Germany

Graphics: Jungheinrich AG

CONTACT

Corporate Communications
Phone: +49 40 6948-2063
info@jungheinrich.com

Corporate Investor Relations
Phone: +49 40 6948-1328
info@jungheinrich.com

Corporate Sustainability, Health & Safety
Phone: +49 40 5269-4569
sustainability@jungheinrich.de

The data in the chapter "Combined separate non-financial report
in accordance with the CSR Directive Implementation Act"
was compiled with the help of WeSustain..

cority

This annual report has been published in German and English.
The German version shall always take precedence.

Jungheinrich
Aktiengesellschaft

Friedrich-Ebert-Damm 129
22047 Hamburg, Germany

Phone: +49 40 6948-0
Fax: +49 40 6948-1777
info@jungheinrich.com

www.jungheinrich.com