

CURIOUSITY

JUNGHEINRICH 4.0

CSR Report 2018

 **JUNGHEINRICH**

ABOUT THIS REPORT

102-1; 102-48; 102-49; 102-50; 102-51; 102-52 In this CSR Report, Jungheinrich describes the economic, environmental and social aspects of its company activity and their impact for the 2018 financial year (1 January to 31 December). The report covers all Jungheinrich Group employees (as of 31 December 2018). Deviations are indicated in the text.

This report is the consolidated, separate non-financial declaration for the 2018 financial year for both the Jungheinrich Group and Jungheinrich AG.

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Editorial note: In some cases the values reported have been rounded. This report is available in German and English. The editorial closing date was March 2019. The Jungheinrich AG 2019 CSR Report will be published in spring 2020.

You can find the CSR Report 2018 on our website:
<https://www.jungheinrich.com/en/sustainabilityreport-2018.pdf>

FOREWORD FROM THE CHAIRMAN

102-14



Hans-Georg Frey

Dear shareholders,

Jungheinrich's actions are guided by the firmly established principles of responsibility, trust and reliability – principles that have guided us from day one in our 65-year history. As a family-run company active in global markets, we set ourselves long-term goals and aim for profitable growth. We always have the coming generations in mind. We therefore make decisions that are sustainable and forward-looking – for the benefit of the Group, our employees and our environment. This is evident in our products, for example, with almost all the trucks sold in 2018 being battery-powered. Our approach is also reflected in the way we see ourselves as an employer. Since 2010, we have created 8,000 good, secure jobs worldwide, half of them in Germany. This means that 18,000 people in a total of 40 countries now work for Jungheinrich.

The study entitled "Jewels of the German Economy" (Juwelen der deutschen Wirtschaft) bears testimony to our successful work in the field of sustainability. According to the study, Jungheinrich is one of the companies that delivers the greatest ecological, social and economic added value for our society. The basis for this success lies in the review of our materiality analysis, which we use to manage our sustainability activities in a targeted manner. As part of this process, we have set the following new focal points that we want to provide you with information on in this CSR Report: environmentally friendly and safe products, economic responsibility, safe and good jobs, environment and energy, and transparency and responsibility in the supply chain.

We are delighted to be able to use this CSR Report to show you how we put our values into practice at Jungheinrich today – they always form the basis for our decisions and guide us in our day-to-day activities.

Yours faithfully,

Hans-Georg Frey
Chairman of the Board of Management

97%

of trucks sold
are **electric**.

8,000

new jobs
created worldwide
since 2010.

10,000



16%

reduction

in CO₂e emissions in product life cycle assessments
between 2010 and 2018

Proximity to customers worldwide
with over

5,300

after-sales
service technicians

Uniform level of knowledge:

introduction of Group-wide
compliance e-learning modules



Around

10

years
**average period
of employment**

Jungheinrich the company

COMPANY PROFILE

Founded in 1953, Jungheinrich ranks among the world's leading solutions providers for the intralogistics sector. With a comprehensive portfolio of material handling equipment, logistics systems and services, Jungheinrich is able to offer customers tailored solutions for the challenges posed by Industry 4.0. The Group's strategy is based on sustainable and profitable growth and therefore on increasing company value. Our goal is to become the number 1 intralogistics brand in all European markets and to be ranked among the top 3 global suppliers of material handling equipment in the long term.

BUSINESS MODEL

102-2

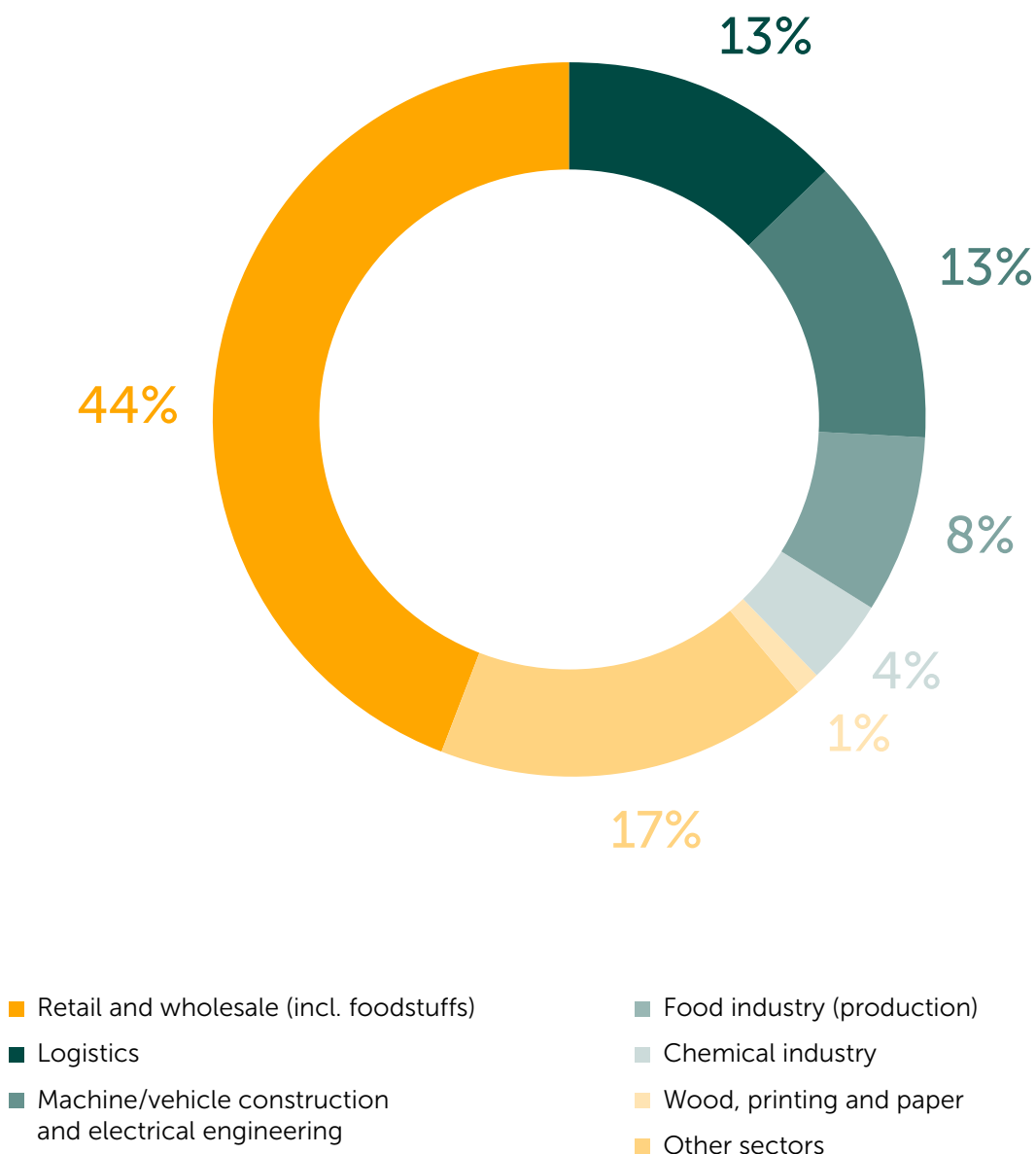
Our integrated business model encompasses the development, production and sale of new trucks, the logistics systems and mail-order businesses, the short-term rental of new and used equipment, the reconditioning and sale of used forklifts and the maintenance, repair and spare parts operations. Combined with comprehensive financial services offers, it is our aim to serve our customers from a single source for the duration of a product's life cycle.



CUSTOMERS BY SECTOR

102-6

Due to the diverse array of products and services we offer, ranging from technology and software to services, we cater to a number of sectors. We can also accommodate individual customer requests with solutions from our Lüneburg production plant, which is able to manufacture small series and customised products.

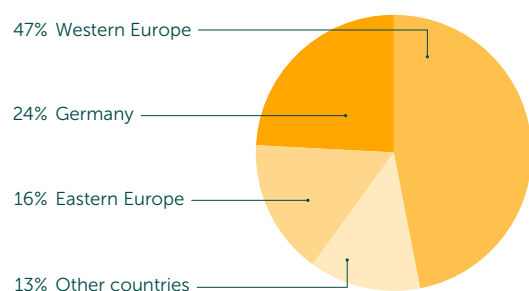


Note: These figures are based on approximately 70 per cent of incoming orders by units in 2018.

MARKETS BY REGION 102-6

In addition to our domestic market of Germany, the sales markets in Europe and other regions are growing ever faster. International sales are increasing steadily. As a result, the share of international sales is now at 76 per cent.

Revenue in 2018 by region



in € million	2018	2017	Change %
Germany	900	851	5.8
Western Europe	1,780	1,627	9.4
Eastern Europe	616	542	13.7
Other countries	500	415	20.5
Total	3,796	3,435	10.5

KEY FIGURES AT A GLANCE 102-7

The following table shows the Jungheinrich Group's key figures for the 2018 financial year.

Jungheinrich Group		2018	2017	Change %
Incoming orders	units	131,000	123,500	6.1
	€ million	3,971	3,560	11.5
Orders on hand 31/12	€ million	907	692	31.1
Production of material handling equipment	units	121,000	120,100	0.8
Revenue	€ million	3,796	3,435	10.5
thereof Germany	€ million	900	851	5.8
thereof abroad	€ million	2,896	2,584	12.1
Foreign ratio	%	76	75	–
Earnings before interest and income taxes (EBIT)	€ million	275	259	6.2
EBIT return on sales (EBIT ROS)	%	7.2	7.5	–
EBIT return on capital employed (ROCE) ¹	%	16.0	17.3	–
Earnings before taxes (EBT)	€ million	249	243	2.5
EBT return on sales (EBT ROS)	%	6.6	7.1	–
Profit or loss	€ million	176	182	–3.3
Capital expenditure ²	€ million	106	88	20.5
Research and development expenditure	€ million	84	77	9.1
Balance sheet total 31/12	€ million	4,746	4,130	14.9
Shareholders' equity 31/12	€ million	1,362	1,244	9.5
thereof subscribed capital	€ million	102	102	–
Employees 31/12	FTE ³	17,877	16,248	10.0
thereof Germany	FTE ³	7,378	6,962	6.0
thereof abroad	FTE ³	10,499	9,286	13.1
Earnings per preferred share	€	1.73	1.80	–3.9
Dividend per share – ordinary share	€	0.48 ⁴	0.48	0.0
– preferred share	€	0.50 ⁴	0.50	0.0

¹ EBIT as a percentage of interest-bearing capital employed (cut-off date)

² Property, plant and equipment and intangible assets without capitalised development expenditure

³ FTE = full-time equivalents ⁴ Proposal

CSR AT JUNGHEINRICH

As a globally leading company in intralogistics, we are responsible for our activities in Germany, Europe and the rest of the world from an economic, environmental and social viewpoint. We are aware of this responsibility and act accordingly every day. Our conduct is based on our understanding of CSR: the successful combination of profitable growth and awareness of social and environmental issues.

Common understanding of CSR

Responsible conduct in our business activities has always been an immutable part of our business identity at Jungheinrich. Furthermore, by going beyond this and integrating environmental and social issues in our company values we are able to generate long-term corporate value and meet the expectations of our stakeholders. We want to improve everyday – to achieve this we rely on our employees to act responsibly.

CSR at Jungheinrich

- ▶ is based on our integrity and business ethics as a family-run company.
- ▶ is based on long-term cooperation with our partners in the value chain.
- ▶ is evident through the creation of stable and valuable jobs in order to make a positive contribution to society.
- ▶ means showing responsibility towards our employees through mutual respect and team spirit.
- ▶ focusses on environmental sustainability and energy efficiency.
- ▶ requires constant evaluation of our CSR performance.

Added value for the German economy

We give something back to society. This was confirmed by a study published in October 2018 by news aktuell, Faktenkontor and the Hamburg Institute of International Economics (HWWI). The study analysed 5,000 German companies with regard to ecological, social and economic criteria. The result: Jungheinrich ranks among the top 3 companies offering the greatest added value for society. We are delighted to have been awarded this ranking.

Meeting demands

102-11 A central part of increasing CSR in our company involves avoiding negative effects for people and the environment. We have therefore firmly established a precautionary approach in our Group guidelines and processes for quality, environment and energy, work safety and compliance issues. We aim to go beyond the legal requirements and are committed to keeping our impact as neutral as possible – we consider both mandatory.

We also take into consideration the demands of our internal and external stakeholders. This involves evaluating risks and opportunities, the effectiveness of processes (Purchasing, Development, Production, Sales, Personnel, etc.), making necessary resources available and constantly improving performance.

Quality, environment, energy and work safety

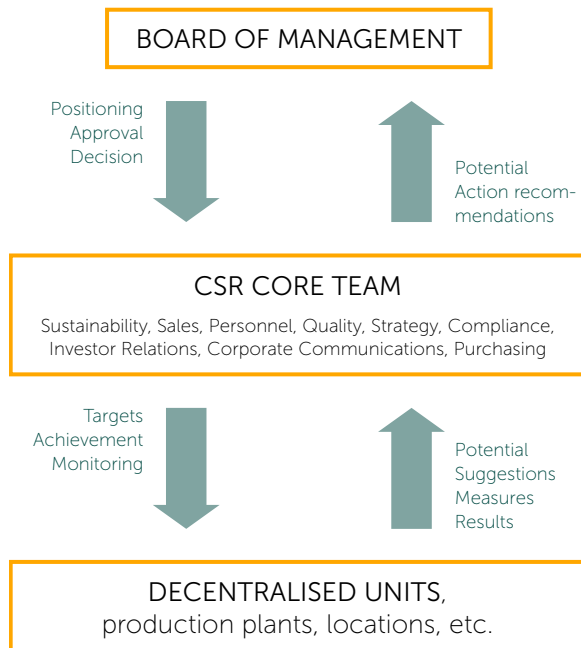
Cooperation: we depend on the cooperation of our employees in quality, environment, energy and work safety issues. They are therefore kept well informed and involved. This applies equally to all company divisions, activities and processes.

Improvements need targets. We set Group-wide targets as well as site and area targets. In order to achieve our targets, we implement appropriate measures and regularly monitor their effectiveness.

Further information and details on sustainability can be found in the Responsibility section of our website.

How CSR is managed at Jungheinrich

102-18; 102-20



We created the “CSR Core Team” in 2016 to manage issues relating to CSR within the Jungheinrich organisation. The interdisciplinary team, comprised of members from Sustainability, Sales, Personnel, Quality, Strategy, Compliance, Investor Relations, Corporate Communications, Purchasing, recommends courses of action and suggests targets. This organisational structure enables us to successfully integrate CSR in our company.

The Core Team occupies a key role as an intermediary between the business units and the Board of Management. Decisions for the Board of Management are prepared and discussed under the leadership of the CSR department. Various departments are included to ensure an overarching view of CSR and provide input. Beyond this, more input comes from the production plants, sales units and other locations. After all, they are the ones who will carry out suggestions approved by the Board of Management.

Materiality analysis

102-46 We updated our materiality analysis in the 2018 financial year. Various sources of information¹ were used to determine which topics are material for Jungheinrich in terms of sustainability. The topics identified as part of this process were evaluated by our key stakeholders and internal experts with regard to their business relevance or the extent to which they can be influenced. 17 out of the 33 topics were rated as being particularly relevant and each achieved more than 70 points (out of 100) in our materiality analysis. They were then grouped into five areas of focus. The outcome is shown in the materiality matrix.

¹ We used the following external sources: customer enquiries, EcoVadis, German Commercial Code (Handelsgesetzbuch), ILO core labour standards, ISO 14001, ISO 50001, ISO 45001, competitors, MSCI, UN Principles for Responsible Investments.

We used the following internal sources: experts in matters relating to the environment and occupational safety, development & innovation, IT security.

Materiality matrix

102-47



Material topics for Jungheinrich

- 1 Environment & energy**
Energy (consumption & renewable energies)
Waste & recycling
- 2 Environmentally friendly & safe products**
Materials (resource-saving products)
Environmentally friendly products
Customer health & safety
Customer satisfaction, competitive standing, R&D
Product quality & enhancement
- 3 Transparency & responsibility in the supply chain**
Material compliance
Transparency in the supply chain
- 4 Economic responsibility**
Acting within the law
Compliance & corruption
Responsible management
Norms & standards
- 5 Secure & good jobs**
Occupational health & safety
Training and development
Good employer

Focal topics

1. Environment and energy

Environmental awareness and a responsible attitude towards resources are among the central issues of our time and are at the very core of sustainability. 20 years ago, we obtained ISO 14001 certification for our first production plant. Today, our expectations regarding environmental awareness are greater than ever. Be it the introduction of LED technology in offices and workshops or a holistic waste disposal concept, we devote equal attention to energy and the environment in our various locations.

2. Environmentally friendly and safe products

Our development, production, sale and servicing of efficient, safe and economic products and solutions is what distinguishes Jungheinrich from the rest. In order to ensure customer satisfaction and safety, we are constantly enhancing our processes and launching new solutions on the market. We have been producing electric trucks for more than 65 years now and we are convinced that energy efficiency is one of the key issues facing our society today. Our unique vertical integration in the area of energy allows us to approach this topic in its entirety. We are the only intralogistics supplier that develops, produces and offers trucks, (lithium-ion) batteries, charging systems and power units. Our success has proven us right, with 97 per cent of the trucks we sold in 2018 being battery-powered.

3. Transparency and responsibility in the supply chain

Responsibility for our products begins with the supply of individual components or parts. As a result, we are aiming to enhance the transparency of our supply chain. We launched a project in 2018 in order to achieve this objective. Using a risk-based approach, we have already assessed our product groups in terms of product type, country of origin, degree of vertical integration, production processes, etc. We will be surveying, evaluating and auditing our suppliers as part of a step-by-step process in the foreseeable future.

4. Economic responsibility

Jungheinrich has always adhered to the principles and values of honourable business conduct; we believe humanity, integrity and high ethical standards in business are compatible with profitability. These principles take our sense of responsibility beyond the boundaries of our company to include customers, suppliers, society and more. This entrepreneurial attitude applies to everyone at Jungheinrich. All-encompassing compliance regulations

form the foundation of our consistent corporate values. Acting within the law and showing commitment to social initiatives create non-financial benefits both nationally and internationally.

5. Secure and good jobs

Our company strategy is based on sustainable and profitable growth. This means that our company is a good employer and creates secure jobs, thereby making a significant contribution to the development of society. With the "Jungheinrich Way of Leadership" concept, we encourage our managers to conduct themselves responsibly, think entrepreneurially and include our 18,000 employees on the path to growth. We are rising to the challenge posed by the ever tougher competition for the most talented candidates by promoting our employees' health and well-being, offering attractive training opportunities and creating a working environment where everyone feels part of the Jungheinrich family.

In dialogue with our stakeholders

102-42; 102-43; 102-44 In-depth communication with various stakeholders represents a vital element of our understanding of CSR and our business model. Our customers show us directly what the markets expect from us and what their demands are. Topics such as corruption, occupational safety, the environment and energy, and transparency in the supply chain are becoming increasingly relevant. We actively encourage this communication. We also maintain contact with other stakeholders via direct discussions, online platforms, surveys and events. To this end, we aim to increase satisfaction in stakeholder groups and create long-term relationships. To achieve this aim, we exchange information with a range of public and private institutions and other companies.

102-40 Stakeholders are weighted according to the relevance of their business operations to Jungheinrich. This includes 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 most important stakeholder groups for Jungheinrich are therefore customers, suppliers, employees, investors, competitors and associations.

Every year, the **Dr. Friedrich Jungheinrich Foundation** invests around

€ 250,000 in the education of young people.



In collaboration with **action medeor**,

donations from
Jungheinrich

helped support
humanitarian projects across the globe.

Uniform level of knowledge:
introduction of Group-wide
compliance e-learning modules

The Dr. Friedrich Jungheinrich Foundation
champions science and research
at **11** universities worldwide.





RESPONSIBILITY AND VALUES

We don't just feel obliged to take responsibility for social issues – it is a part of our corporate philosophy. We therefore support charity initiatives and promote the education of young people. With our commitment we make an important contribution to society. We also believe that good corporate governance involves constantly exceeding legal requirements and internal regulations. Our compliance management system and well-trained employees are crucial to achieving this.

Jungheinrich assumes its social responsibility

As a traditional company with roots in Hamburg, we take responsibility for social issues both inside and outside of the Group. We support initiatives and projects that match our corporate philosophy and our core skills. We have a long-term commitment to education, young talent in science and charity projects. All activities – both national and international – are coordinated at the Group headquarters in Hamburg. Individual Jungheinrich locations also select local initiatives to support. In addition, the Dr. Friedrich Jungheinrich Foundation allows us to make a positive contribution to the education of young people. We have a long-term partnership with the German medical aid organisation action medeor e.V. In addition to donating money and supplies, we also provide our expertise in intralogistics and encourage our employees to volunteer for charitable causes.

Employees show charitable spirit

Jungheinrich employees also collect donations through the internal "Donate your Pennies" campaign. With this voluntary programme, employees can donate the change behind the decimal point from their monthly pay. The money is then donated to charity projects chosen every year. The total amount raised by the end of the year is doubled by the Board of Management and donated, including tax benefit, to action medeor. Outside of Germany, the Jungheinrich companies in Austria, Italy, Portugal, Spain and the UK are now also participating in the "Donate your Pennies" campaign.

In addition to the "Donate your Pennies" campaign, our employees also volunteer for other charity causes by contributing their expertise or participating in fundraisers. This includes cash donations for special occasions, Christmas fundraisers for social institutions like "Die Arche" – a Christian charity for children and youths (Christliches Kinder- und Jugendwerk), and a variety of donations in kind, such as donations of trucks for the voluntary fire brigade at various locations.

Promoting young talent through the Dr. Friedrich Jungheinrich Foundation



The Dr. Friedrich Jungheinrich Foundation promotes the education of young talent.

Investing in the training and development of our employees has long been a cornerstone of our success. Young employees with outstanding training are one of Jungheinrich's most valuable resources. That is why Jungheinrich AG and the two shareholder families took the idea a step further and established the Dr. Friedrich Jungheinrich Foundation on 17 May 2004. The aim is to promote education in the MINT¹ subjects, and to support science and research. The Foundation grants scholarships to support uniquely qualified young people and cooperates with certain professorships at universities. Thanks to considerable support from the Dr. Friedrich Jungheinrich Foundation and Jungheinrich AG, in September 2017 the Institute for Technical Logistics was opened at the Hamburg University of Technology. The Institute provides education that covers all aspects of intralogistics.

The Dr. Friedrich Jungheinrich Foundation is currently collaborating with eleven universities in Europe, China and Turkey. National and international activities will be expanded in the future, and the focus on supporting young talent will be increased.

In addition to foundation assets of around €12 million, the Foundation has access to funds of around €250,000 per year. The returns on the Foundation's assets and donations are used to generate the funds required by the Foundation as it strives to promote excellence. In line with its charter, the Foundation provides support exclusively to charitable projects and operates as an organisation that is completely independent of Jungheinrich AG.

Social commitment – outlook

We select our charitable activities carefully. In addition to the aim of the activity, we look at the charities' long-term perspective in particular. Together with our partners we prioritise projects to support each year and also provide support in crisis situations. We intend to deepen these collaborative efforts both internally and externally in order to encourage more support by raising awareness of these joint projects.

JUNGHEINRICH AND ACTION MEDEOR – A POWERFUL PARTNERSHIP

Health is a basic need for all people, but not everyone has access to medical aid. This is a cause that is close to all of our hearts here at Jungheinrich: the Board of Management, the shareholder families and all of our employees have decided to support action medeor in its work to the best of our ability, with donations of supplies, regular monetary donations and advice on all intralogistics issues. As the "world's emergency pharmacy", action medeor has been committed to sustainably improving the health of people living in the world's poorest regions since 1964. Together with local partners, action medeor has provided drugs and medical supplies to around 10,000 health stations in 140 countries since then. With Jungheinrich's support, the organisation has established drug storage facilities in Tanzania and Malawi and expanded its storage facilities at the headquarters in Tönisvorst. We are continually stepping up our efforts, improving the existing infrastructure in action medeor's locations and supporting projects where help is urgently needed. Our help enables action medeor to organise medical aid more efficiently and ensures that supplies arrive where they are most needed. We are flexible in our support; we try to provide the right help at the right time.



Our long-standing partnership:
German medical aid organisation action medeor e.V.

¹ MINT: maths, information technology, natural sciences and technology

"We – that is Jungheinrich AG and our employees – support action medeor with our intralogistics expertise, storage technology and donations in order to make a positive contribution to social and economic development. After all, our commitment to sustainability does not end at the factory gates."

Hans-Georg Frey, Chairman of the Board of Management



In Nepal, our "Donate your Pennies" campaign helped to improve sanitation at four schools and went towards awareness training for children and local leaders.

Adherence to rules and regulations

102-16 Jungheinrich's business model is based on the responsible and ethically proper conduct of all people who work for the company. Only then we can be perceived and respected by our customers, suppliers, employees, shareholders and all other stakeholders as a reliable partner. As a result, we have taken precautions and introduced processes to ensure compliance with laws and regulations as follows:

- ▶ A compliance management system with clear responsibilities both at the Group headquarters and in the operating units (production plants, sales units).
- ▶ A Code of Conduct and a Group policy based on the Code of Conduct, which are binding for all Jungheinrich employees, including the Board of Management and the Supervisory Board.
- ▶ A hotline allowing employees to report compliance breaches anonymously and as part of a straightforward process by telephone or email.

Jungheinrich conducts ongoing compliance training sessions for all employees throughout the Group. These are organised either in the form of face-to-face events or via our internal LMS (Learning Management System) "CAMPUS".

419-1 In recent years, Jungheinrich has not been sanctioned, nor have any significant official investigations been launched against the company or its managers/ executive bodies.

Consistent Code of Conduct

205-2 Jungheinrich's guidelines, binding regulations and standards are made centrally available to employees – including guidelines on dealing with issues relevant to compliance. These guidelines outline the procedure for dealing with suspected or actual violations of legal requirements or internal regulations. This includes the Code of Conduct, which is applicable throughout the company and requires all employees to observe legal regulations and standards. It also outlines the flawless conduct we expect from all employees when it comes to competition law. The main topics covered in the Code of Conduct are anti-corruption, competition law and data protection.

Informational events on compliance

205-2 In order to promote correct conduct, the central compliance department organises training events for our employees on site. In 2014 and 2015 such events were held at all German Jungheinrich locations. In 2018, 30 compliance training events were organised, including in China, Colombia and Serbia (2017: 35). In addition to on-site events, Jungheinrich has also made various compliance e-learning modules available since 2016. These modules are available to the entire Group. In the coming years, we aim to gradually train all of our employees, continually offer courses and expand our training offer. The course content includes competition law, data protection and our Code of Conduct. We also regularly brief our Supervisory Board on issues relevant to compliance.

We provide information and seek to raise awareness among our employees about compliance principles in various risk areas in a manner that suits the target group concerned. This covers, for instance, anti-corruption and competition law. The production plants and sales locations also organise more in-depth informational events with topics relevant to the location. We also obligate our business partners to adhere to the compliance requirements of Jungheinrich.

Assessment via corporate audit

205-3 All suspected cases of corruption are generally first investigated by the Chief Compliance Officer and Head of Central Compliance, who will then initiate further measures, such as document audits, on-site interviews or disciplinary measures, as necessary. There were no incidences of corruption in the year under review (2017: 0).

205-1 In order to prevent corruption, all Jungheinrich locations are monitored for risk indications through revolving corporate audits. A standard part of the process is checking documents and financial transactions. A total of 23 audits were performed in 2018 (2017: 20).

Clearly defined reporting channels – in person or anonymously

We are committed to providing firmly defined, clearly communicated Group-wide reporting channels for all issues concerning compliance topics and suspected violations. A hotline has been set up to supplement the established reporting channels, i.e. reporting to direct supervisor, local personnel manager or compliance officer and/or the central compliance team. This has been communicated throughout the Group and the function can also be accessed on our website. As this reporting channel is provided by an external supplier, employees can report potential compliance topics and receive information anonymously.

High data protection standards

Complying with privacy rights and protecting company secrets are crucial to Jungheinrich. We have guidelines in place to ensure that protection standards are maintained and legal regulations (EU law) observed when handling private data. In addition, responsibilities are regulated to ensure our standards are met.

We also place the same high expectations on our suppliers and sales partners when it comes to compliance and data protection. Along with ethically proper conduct we expect them to observe the principles of free and fair competition. That is why we have integrated these points in our general supplier agreements and require explicit confirmation that the relevant antitrust and competition laws and provisions will be observed.

Transparency and responsibility in the supply chain

308-1; 408-1; 409-1; 414-1 We aim to shape the success of our products together with our suppliers – the best foundation for this is a long-term, cooperative partnership. The careful selection of suppliers is the basis for guaranteeing our outstanding product quality. Before a manufacturer becomes a Jungheinrich supplier, it has to meet approval criteria that are consistent throughout the entire Group. One essential aspect of this is the supplier manual that we have developed, which must be signed by the

supplier. The supplier manual sets out all of the requirements that Jungheinrich imposes on its contractors in terms of sustainability.

In 2018, we took a closer look at the issue of responsibility in the supply chain and developed a concept that will be implemented from 2019 onwards. This will initially serve to boost transparency and will then result in greater responsibility being assumed on this basis.

New and existing suppliers are to be evaluated and assigned to risk categories with regard to ecological, economic and social criteria, as well as material compliance¹. Among other things, this process will take into account the type of goods supplied or services rendered, as well as the revenue generated with the supplier concerned.

In addition, a "Supplier Code" that reflects what Jungheinrich expects from its suppliers has already been drawn up. Depending on the supplier risk category, measures have been defined ranging from acceptance of the "Supplier Code" referred to above to the performance of self-assessments and internal or external audits.

In order to implement the concept, supplier qualification and procurement processes are being adapted. There are also plans to introduce a software solution in the course of this year to support processes and analyse suppliers.

Our goal is to increase transparency with regard to our suppliers in the foreseeable future and to assume more responsibility in sustainable procurement.

Jungheinrich value chain

102-9



¹ Material compliance: compliance with substance prohibitions

€84 million

was spent on
research and development (2018).

With more than

5,300

after-sales service technicians,
we are always at our customers' side.



All Jungheinrich trucks

are subject to safety and function checks.

With the introduction of assistance and
safety systems, such as

zoneCONTROL,

we are making **our trucks even safer.**

ISO 9001 certified

2

PRODUCT DEVELOPMENT, QUALITY AND SAFETY

At Jungheinrich, product responsibility means supplying high-quality, safe products and services. We therefore maintain the highest safety standards. The ongoing optimisation of processes and the introduction of new technology are commonplace in our working day. We aim to protect our customers to the best of our ability from any possible harm they may come to when using our products. We also aim to provide the latest technology to the benefit of our customers. Thanks to our service technicians, we can guarantee that this is also the case beyond the factory gates.

Holistic quality management

Jungheinrich has adopted a systematic approach to quality management. Our development projects, for example, have to reach set milestones at which certain quality criteria are checked.

A crucial element of developing safe products is to consider and fulfil external and internal stakeholder demands. This can be achieved by taking a comprehensive view of all relevant areas from the product's development to use phases.



The production plants in Norderstedt, Lüneburg, Moosburg, Degernpoint, Landsberg and Qingpu (China) all work with ISO 9001 certified quality management systems. This approach is especially reflected in processes set for the entire Group.

Proactive approach to standardisation processes a strategic task

102-13 Jungheinrich considers being proactive in standardisation processes an important strategic task. Standards provide legal clarity, for example by defining central safety requirements for material handling equipment. This allows us to minimise risks of error and prevent accidents. Applying standards also facilitates export and ensures level playing fields between suppliers. Common standardisation processes also enable standards to be checked for practical application, and product optimisation to be achieved in research associations. Some of the trade associations in which Jungheinrich is a member include the Mechanical Engineering Industry Association (VDMA – Verband Deutscher Maschinen- und Anlagenbau), the Association of German Engineers (VDI – Verein Deutscher Ingenieure), the International Organization of Standardization (ISO) and the German Institute for Standardisation (DIN – Deutsches Institut für Normung).

Standardisation processes are an important basis for increasing the safety and reliability of our products even further. They are therefore a vital element of CSR at Jungheinrich. Adhering to standards ensures the user-friendliness of our products and also covers aspects of work safety. As an example, we are currently involved in the ongoing development of ISO 3691¹.

In addition to safety, other CSR issues are becoming increasingly relevant in standardisation processes – such as the energy efficiency of products. We are also proactive in this area and are currently developing a new consumption standard for material handling equipment in partnership with other manufacturers. This will allow our customers to take energy efficiency into account as a product feature when making sustainable purchase decisions and to obtain information on how efficient batteries and battery chargers are.

Adhering to all laws and standards relevant to safety issues (such as the machinery directive, EMC Directive²) and complying with internal ergonomic and safety requirements are obligatory at Jungheinrich at all stages – starting with product development.

Quality awareness in all processes

Our company is growing at speed – and so are the production numbers – while order throughput times are dropping significantly. These developments are leading to higher quality and flexibility demands of our suppliers. Production plants systematically check parts purchased during the incoming goods inspection. The cycle and scope of the check is determined by the quality department together with product development – the check always matches the level of importance for safety and function. The performance of the suppliers can be seen based on the performance indicators, which are regularly ascertained, such as timeliness and quantities rejected.

The appropriate escalation levels are initiated as soon as pre-defined limits are exceeded in quality or logistics performance. Suppliers that stand out during this process are flagged and monitored as part of a regular supplier qualification committee meeting with measures to return performance to better levels. The aim of this procedure is to bring supplier performance back within the set limits as quickly as possible. If the measures show no results, the supplier will be barred from the purchasing process.

Purchasing, quality and logistics work closely to achieve Jungheinrich's key strategic goals. A centralised quality organisation standardises processes and defines the consistent quality levels expected of suppliers. This allowed us to further improve the quality of the production materials we supplied in 2018 and to reduce the proportion of materials resulting in complaints. We want to forge ahead with this positive development in the years to come, too.

¹ Material handling equipment safety.

² Directive 2014/30/EU regarding electromagnetic compatibility.



360-DEGREE PROTECTION

A whole number of solutions are helping to make our products safer. Find out below how our 360-degree protection concept protects people, goods, warehouse equipment, machinery and data.

1. Protecting people

Our end-to-end safety concept protects people in the warehouse from collisions with trucks or other accidents. We offer a number of truck options that make our products safer to handle.

The smart system for recognising people uses several cameras on the truck to detect the distance between the truck and individuals or objects in the warehouse. Drivers are warned both acoustically and visually if there are people in the danger zone behind the truck. The new "zoneCONTROL" system enables location-dependent speed restriction for trucks. By way of example, the truck brakes in danger zones such as ramps or footpath crossings. "added View" is a panorama view provided by digital cameras, which gives the truck operator a better overview, including a bird's eye view, thus improving safety and ergonomics.

2. Protecting goods

Every day, our trucks are used to move high-value goods. Various assistance systems help to transport them safely and to save both time and costs. In addition to a load indicator in the truck display that provides information on the current load weight, we offer various lift, fork and speed assistance systems to equip trucks with customised features. The optional "curveCONTROL" automatically reduces the truck speed when cornering, depending on the load and the steering angle.

3. Protecting warehouses and warehouse equipment

Our preventative services help our customers to avoid risks resulting from damaged warehouse equipment, such as racks. We have our own in-house rack inspectors who have been approved by the corresponding industry association and have the specific expertise needed to perform professional inspections according to the European Norm EN 15635. These inspections can also be carried out during ongoing operations.

4. Protecting machinery

We aim to ensure that Jungheinrich trucks are always safe and ready for use. This is another area in which we support our customers with a large variety of specifications. An installed Jungheinrich shock sensor can determine how the truck reacts to shocks and accidents and prevents further damage by analysing the collected data.

The heavy loads handled by our forklifts on a daily basis call for particularly sensitive maintenance and services. In addition to general maintenance, we also provide services that are critical from a safety perspective. These include tests such as FEM 4.004¹, exhaust emission checks or gas checks.

5. Protecting data

In times of increasing digitalisation and connectivity, our digital solutions, such as ISM Online, are also gaining in popularity. The system collects, monitors and analyses fleet data. In order to protect our customers from hacking attacks, ensuring that our digital solutions meet the very highest security requirements is a top priority for us. We have our software and web applications certified by independent experts in order to achieve this.

6. More safety with lithium-ion batteries

Compared to lead acid batteries, lithium-ion batteries offer significant advantages for our customers. More than 90 per cent of our batteries are lithium iron phosphate batteries. This form of cell chemistry is considered to be the safest sort of lithium-ion battery. Once installed, the batteries are ecologically non-toxic, harmless and, unlike lead acid batteries, do not release gas. They are also extremely resistant to external influences such as heat and strong vibrations. In order to increase safety for our customers even further, we have developed our own battery management system, which monitors the function of each cell and will gently power down in the event of danger.

In addition to the various environmental and safety advantages, our lithium-ion batteries stand out first and foremost by virtue of their performance, fast charging times and the fact that they do not need to be maintained. Their charging time is reduced to the record time of 80 minutes² and they do not need to be changed. You can find further information on our lithium-ion batteries on our website and on page 32.

¹ Periodic inspection of industrial trucks

² 6–7.5 times faster than lead acid batteries

Set standards for in-house production

Jungheinrich is synonymous with quality – that is why we have the highest standards in all production areas. We have clearly defined quality standards, particularly when it comes to producing and assembling parts or components that are designed to ensure security and/or functionality. One of our core skills is welding: it is crucial to the load-bearing structure of our products, like the truck frame or lifting frame. We take full responsibility for this. The inspection of welding joints is a fixed step of the manufacturing process at every Jungheinrich production plant and at defined intervals in the laboratory (destructive testing).

We regularly check that our welding quality standards – such as welding joint inspections – meet the ISO 3834-2 standard.

Comprehensive control mechanisms

416-1 The passing of control points is a standard procedure in the production plants after every important manufacturing step. In prefabrication, there are a number of control points where random geometry checks are performed along with the normal inspections carried out by employees. Along with safety-relevant issues such as braking, steering, lifting and driving, product quality is also checked thoroughly during and at the end of assembly. Random checks are performed here, too – where issues such as structural stability are examined – as well as regular, comprehensive audits, which are performed by quality assurance in cooperation with the development, after-sales services and production departments. Components relevant to safety and functions, such as lifting frames, are thoroughly tested at workstations specifically designed for this purpose.



Quality is our trademark.



Automated guided vehicles are the highlight of any automated warehouse.

Systematically recording, evaluating and analysing errors in all production areas caused by the company or third parties allows for continual improvement, which is tracked by performance indicators.

In order to make our production even more efficient and ensure quality, we are gradually introducing a new technology: the Andon system assists with the real-time recording of errors in assembly and in future in prefabrication. The system basically allows employees to quickly flag a problem at their workstation and signal what kind of error it is.

Focussed application of big data

The possibilities resulting from data collection in terms of product quality and safety are constantly increasing. Our internal specialists are looking into how the data collected can be used most efficiently. In this way, findings from field observation are included in the product development and standardisation processes. We want to make increased use of the data analysis from our own production and from monitoring suppliers to reduce error costs.

8,000 **new jobs** created
worldwide since 2010.



We offered to take on

99% of our
apprentices
in 2018.

Average **period
of employment**
of around

10 years

Over
5,700
participants in
the training centre
(2018)

We employed
an average of more than

260 trainees and apprentices
last year.

GOOD EMPLOYER

Our employees are the backbone of the Jungheinrich Group. We believe that good employers encourage their employees to identify with the company and its targets. A family-friendly work environment, active promotion of health and positions with personal responsibility and good prospects form the foundation of our endeavours to raise employee satisfaction and motivation.

Jungheinrich as an employer

102-8 An international player with a sense of familiarity: Even as a Group with 18,000 employees around the world and exponential growth over the last few years, Jungheinrich has managed to retain the advantages and character of a family-run company. This is especially reflected in the way we treat our employees. Our corporate values of courage, innovation, trust, passion and entrepreneurship are based on mutuality.

401-1 Each employee contributes to our overall success with their dedication. Outstanding products and highly skilled employees make Jungheinrich a secure and attractive employer over the long run. Our average period of employment of around ten years and low employee fluctuation show that our employees are happy at the company. The global staff turnover figure comes to 6.2 per cent (2017: 5.5 per cent).

Fluctuation rate

401-1

	2018	2017	2016
Germany ¹	172	109	92
in %	2.5	1.7	1.5
International ¹	871	732	568
in %	8.8	8.4	7.0

¹ Only voluntary resignations

Gaining and retaining skilled employees

102-8 Society's changing attitudes in favour of sustainability along with the demographic changes mean that we face new challenges when it comes to gaining the most talented candidates for our company. We aim to fulfil employees' expectations regarding personal development and work-life balance to the best of our ability. Flexible working-time models, company pensions and training offers are the incentives we use to increase employee loyalty and win new employees. That we aim for long-term relationships is shown in the fact that 96.0 per cent of employees in Germany and 98.4 per cent of employees abroad have permanent contracts with Jungheinrich (2017: 96.2 per cent of employees in Germany and 98.5 per cent of employees abroad).

Employees by region and gender

102-8

	FTE 2018	of whom female ²
Germany	7,378	1,320
France	1,236	250
Italy	1,036	266
United Kingdom	817	132
Poland	597	136
Russia	521	99
Other Europe	3,936	788
China	852	183
Other countries	1,504	317
Total	17,877	3,491

² Number of employees excluding apprentices and fixed-term employees



THE "JUNGHEINRICH WAY OF LEADERSHIP"

Our unique attitude towards leadership, based on the deepest of trust in our employees, has always characterised Jungheinrich. The company founder Dr. Friedrich Jungheinrich used just three words to express this attitude: "Go for it!" With these words he encouraged his employees to go for their suggestions and ideas and so become a part of the company. We have translated and future-proofed this message in our current management guide, the "Jungheinrich Way of Leadership".

The motto of the 2018 Executive Management Conference, "More Communication. More Collaboration. More Trust." shows just how important good communication and collaboration is to us. The trust our managers place in our employees encourages more initiative and leaves room for ideas. This strengthens employee confidence in the company, with a positive knock-on effect on our customers. The company's success is directly dependent on the qualifications, skills and commitment of each of our employees. Employees in leadership positions play a prominent role in integrating and promoting the guiding principle with pivotal values such as entrepreneurship, focus and growth in the Group.

Custom-made training programme

In order to further establish the Group-wide understanding of leadership within the organisation, we are working continuously on our learning and development programmes to provide our managers with active support in their roles. This was the motivation behind the development of the new "Leading Sales" programme, which was designed specifically for managers working in Marketing & Sales. The programme combines the "Jungheinrich Way of Leadership" with strategic topics and conveys a profound understanding of the business model, as well as the necessary specialist skills.

In order to advance our strategy in a targeted manner and to prepare the Jungheinrich organisation for the future, it is particularly important for us to establish a management culture that is consistent with the "Jungheinrich Way of Leadership" and ensure that it becomes firmly rooted throughout the Group. To this end, a group of top international executives worked on the sustainable implementation of the leadership model and its further development at both management and employee level.

Shaping changes together

We still see "Change management and culture development" as a main focus in personnel development. The main aim is to integrate the leadership model further. Developing our employees' management skills is crucial, particularly in times where circumstances can change fast. We have developed and deployed a number of different training concepts that focus on this, with the aim of effectively initiating and steering lasting changes.

What we offer our employees

Broad spectrum of career development opportunities

404-1; 404-3 With our extensive training offers, that are often not just job specific, we aim to encourage all employees to develop themselves further. In 2018, employees in Germany completed an average of 44 hours of training and education, while those abroad completed 42 hours. Annual feedback reviews with managers are another step in ensuring the diligent development of employees. The personnel development department supports our employees in their development efforts. We are particularly appreciative of our employees' willingness to constantly learn and develop themselves further. Because of this, Jungheinrich has set up its own training centre at its Norderstedt site where it can ensure its employees receive the necessary training. A team of trainers, advisers and experts in digital learning and training management ensure employees receive lasting success in learning.

Committed to health

403-2 Our employees' health is important to us. Our primary goal is to keep improving employee health. The healthiness ratio of our employees in Germany stands at 94.2 per cent. In order to achieve this, we are working continuously on optimising our working conditions across the board. We are using campaigns and initiatives to encourage our employees to lead healthy lifestyles and to promote personal responsibility. With 23 work accidents² per 1,000 employees, the accident rate in Germany has decreased again compared to the previous year (2017: 25).

Accident statistics in Germany¹

403-2

	Number of accidents
Total	164
Number of accidents per 1,000 employees	23
Average number of days of work missed per accident	15.3

We aim to help our employees get through the working day, fit and healthy, with diverse measures and initiatives. They include:

- ▶ site-based ergonomically furnished workspaces
- ▶ subsidised occupational health check-ups
- ▶ a varied company sports programme
- ▶ holding "Yes I Care" workshops for managers to raise awareness of employee health issues

We also aim to organise regular health awareness days with a specific focus. These days provide employees with the opportunity to receive advice on health and nutrition, feedback on personal health status and tips and ideas on how to improve health. Numerous offers such as circulation and mobility checks or vaccination advice complete our health awareness days.



Healthy eating is also an important aspect of our health days.

¹ Excluding MIAS GmbH, Jungheinrich Profishop and apprentices

² Workplace accidents including accidents while commuting, with three or more days of work missed.

The calculation was carried out based on information from the relevant trade associations and was prepared on an FTE basis. The figure includes neither contract partners nor service providers of Jungheinrich.

Balancing work and family commitments

Jungheinrich takes the phrase family business seriously: the satisfaction of our employees and their families is of the utmost importance to us. We are well aware that it can be quite a balancing act to fulfil both work and family commitments. Our employees in Germany can turn to pme family service for help with managing this balancing act.



Our competent partner: pme Familienservice

pme family service offers advice and support for a variety of issues relating to child care. The services on offer include advice during pregnancy, help finding child care places and support for general parenting issues.

Impartial advice

Should our employees experience situations or phases in their lives where speaking with an impartial, professional person would be helpful, they can benefit from the services of the Fürstenberg Institute. Our employees in Germany and their close family members can take advantage of an individual consultation at any time, without fuss and suited to their daily plans. They will receive individual, discreet and professional advice.



Support when you need it: the Fürstenberg Institute

Going global

For more than 15 years now, we have been offering our employees the opportunity to work on projects worldwide and gain new experience. Jungheinrich AG is represented by direct sales companies in 40 countries, meaning that we can offer our employees a wide range of opportunities for professional, linguistic and intercultural development. The fact that our employees can exchange ideas and support each other, even if this involves transcending departmental and national boundaries, and can build up new specialist knowledge in the process, is extremely valuable to our organisation.

Equal opportunities for all

405-1 From Jungheinrich's perspective, the diversity of our workforce forms the basis for the company's success. It allows different perspectives, ideas and solutions to emerge within teams and as employees interact with one other. Employees from 56 nations¹ work together at our German sites, striving to achieve our corporate goals. We do everything in our power to maintain and further promote an atmosphere of openness and tolerance.

202-2 It is important to us that Jungheinrich's common values – the Jungheinrich Way of Leadership – are put into practice internationally. That's why we regularly send managers from our headquarters to our foreign subsidiaries. In the long term, our aim is for the management level of our foreign subsidiaries to be staffed with local managers who are familiar with local conditions and national cultures. In 2018, 84 per cent¹ of our managers outside of Germany came from the country in which they were working. The influence of these international managers is a welcome asset for us.

202-1; 405-1; 405-2 The ratio of women in the global workforce² remained stable at 20.0 per cent (2017: 19.9 per cent). In Germany, too, the ratio of women was on a par with the previous year's level at 18.8 per cent (2017: 18.7 per cent), outstripping the last comparison figure available for the mechanical engineering sector in Germany of 16.6 per cent.³ The ratio of women on the Supervisory Board is 33 per cent. Jungheinrich pays all employees a comparable salary in line with their positions. In addition, compliance with minimum wage requirements and fair remuneration in line with standard market conditions are an absolute must for us.

¹ Excluding MIAS GmbH and Jungheinrich Profishop

² Calculated by number of employees

³ According to the German Federal Office for Employment in 2016

Setting the course for the future

We have great plans – that is why we need energetic, innovative people who also think entrepreneurially. We offer committed and ambitious school-leavers attractive and secure apprenticeships and dual study places. Every year, we aim to take on all apprentices and students (hereafter apprentices) who have completed their training and studies with us. In 2018, we offered 99 per cent of our apprentices temporary or permanent contracts with the company.

Apprenticeships at Jungheinrich are based on a comprehensive concept: apprentices receive reliable mentoring as well as encouragement from their supervisors to show initiative. We give them both the necessary freedom and responsibilities by assigning them a variety of tasks – from the very start of the apprenticeship right through to the end of their training.

Number of apprenticeships rising

With an average of more than 260 trainees and apprentices, we have set a new record. The fact that we are still achieving excellent training results and the keen interest shown by applicants in training at Jungheinrich serve as confirmation for our trainers and all employees involved in training. The focus of our training portfolio, which covers 20 training occupations, is based on demand-oriented aspects and is adjusted on an ongoing basis. The number of our trainees and apprentices is expected to increase again in 2019. One focal point will be our new

apprenticeships in agricultural and construction machinery, through which we train our after-sales service technicians of tomorrow. The proportion of students on dual study courses also rose in Germany by 19 per cent. The increase shows that dual study has since become a key component of our strategy to attract up-and-coming young talent.

International trainee programme expanded

We have expanded and rolled out our international trainee programme "Jungheinrich International Graduate Program" (JIG), for the development of the next generation of managers, to other countries. By the end of the year, 47 trainees were enrolled in the programme in Chile, China, Denmark, France, Germany, Greece, Italy, Russia, Singapore, Spain and the UK. The trainees were deployed in various areas of the Group, according to their skills and interests. In 2018, JIG once again received the "Career-enhancing, fair trainee programme" quality certificate from ABSOLVENTA, a jobs forum for students, school-leavers and young professionals.



Seal of quality for the "Career-enhancing, fair trainee programme"



Qualified employees are our future.

16% **reduction in**
CO₂e emissions
in product life cycle assessments
between 2010 and 2018

More than
50,000 used forklifts
reconditioned

97% of trucks sold
are **electric:**

Jungheinrich offers an integrated system for electric trucks,
ranging from charging stations and energy storage to power units.

Ecological design criteria
included in the design
of our trucks

80%



are saved in the production
process with remanufactured
forklifts (JUNGSTARS)
compared to new production.

x2

In 2018, we were able to double sales of new trucks
featuring **lithium-ion batteries.**

ENERGY, ENVIRONMENT AND CLIMATE PROTECTION

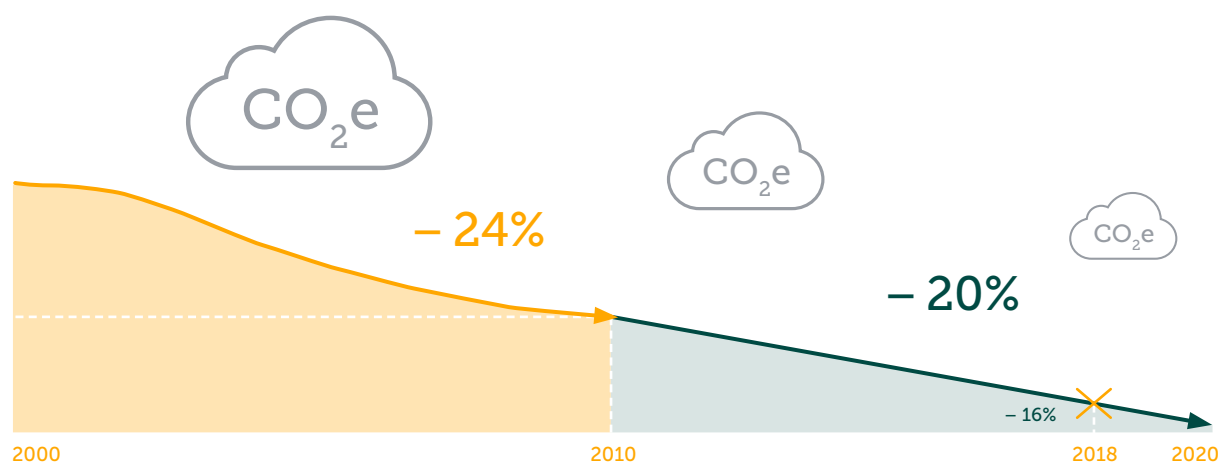
Ranked among the world's leading intralogistics companies, we have a great responsibility in terms of the environmental impact of our products and business activities. We completely accept this responsibility and encourage environmentally friendly conduct on a number of levels. Our products and solutions guarantee a high level of customer benefit and the minimisation of environmental impacts through energy and resource efficiency.

Environmental impact of our products

302-5 Our long-term aim is to reduce the total amount of direct and indirect greenhouse gas emissions by another 20 per cent by 2020 against 2010 levels. We have already reduced these emissions – by 16 per cent between 2010 and 2018 – and so we are fully on track to achieve our target.

In the last ten years, we have achieved improvements of up to 31 per cent in CO₂e emissions¹ in manufacturing and use in the various product groups. This in turn allows our customers to reduce their energy costs and the associated CO₂e emissions.

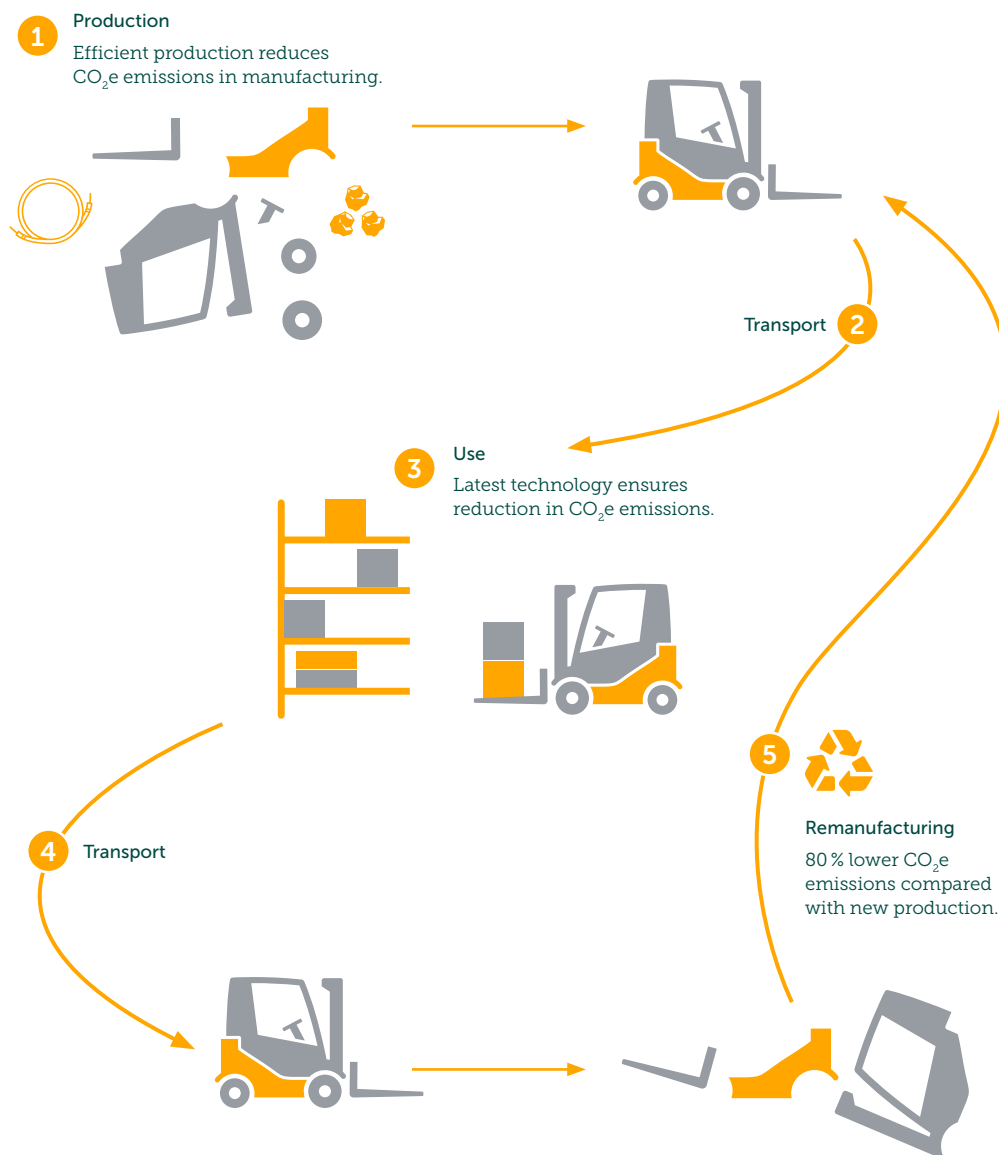
Reducing our CO₂e emissions



This development reflects the CO₂e emissions of an average Jungheinrich truck.

¹ CO₂ equivalent: A unit of measure that shows the greenhouse effect of various gases as equivalent to CO₂

Stages of the product life cycle assessment



20 PER CENT REDUCTION IN CO₂e EMISSIONS BY 2020

In 2011 we became the first manufacturer of material handling equipment to receive DIN EN ISO 14040 product life cycle assessment certification from TÜV Nord, an international provider of security, inspection and certification services. This systematic product life cycle assessment includes the manufacturing, use and refurbishment stages.

Impacts are presented in CO₂e. This "currency" allows us to calculate the raw material and energy consumption during the individual stages and compare them based on CO₂e. We are continually improving the energy

efficiency of our products and the production process. The total certified assessment has already shown a 24 per cent reduction between 2000 and 2010. We managed to achieve this impressive reduction by reaching a variety of technology milestones. One of these milestones was the introduction of high-frequency charging technology and fourth-generation alternating power technology. With 80 per cent the use stage makes up the largest part of the product life cycle assessment. Energy-efficient intralogistics products therefore make an important contribution to climate protection.

Used forklifts – a growing business field

301-2; 302-5 Along with manufacturing more efficient products, we are also working to gradually expand the range of used equipment we offer, our JUNGSTARS, thereby actively boosting all three aspects of sustainability: we are creating good jobs, and securing these jobs and our economic performance with constant growth in units. In addition, the refurbishment of used trucks requires far fewer materials and much less energy. We sold our 50,000th used forklift last year.

Frames, engines, motors, hydraulic components, lifting frames, protective driver roofs and drive and steering shafts are some of the parts that are refurbished. This results in reductions of around 80 per cent in CO₂e compared with new production. We also guarantee correct and environmentally friendly disposal of fuels and trucks that are no longer useful.

Refurbished used equipment

in units

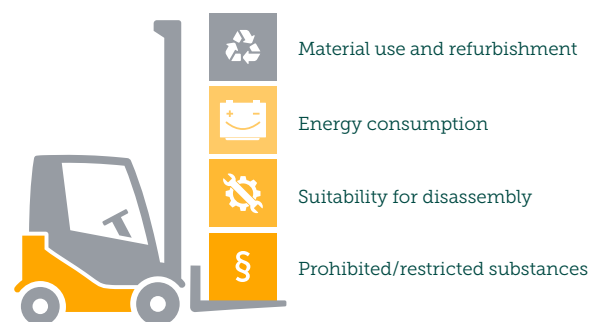


As good as new. Our Used Equipment Centre in Dresden refurbishes trucks, scrutinising their safety, technology, appearance, reliability and sustainability, to turn them into real JUNGSTARS.

Ecological design – considered from the very start

Sustainability plays an important role at Jungheinrich throughout the entire product life cycle and is taken into account with ecological design criteria right from the new product design phase. We include all relevant areas when developing our material handling equipment. The environmental compatibility assessment during the product development phase allows us to exhaust the energy and resource efficiency potential for each product. Defined milestones ensure that the following ecological design criteria and more are recorded, evaluated and implemented:

Ecological design criteria



Thought through: our ecological design criteria form the basis for our product life cycle assessments and refurbishment.



The new ETV 216i with fully integrated lithium-ion battery.

Our materials

301-1; 301-2 The main components of material handling equipment are steel and grey cast iron¹. Another important component, particularly for Jungheinrich, is the battery, because our product portfolio largely consists of electric material handling equipment. The majority of batteries that we fit are currently still lead-acid batteries. Lead is virtually completely recyclable and can be reused in new batteries. That is why we mostly use batteries with recycled lead.

Lithium-ion batteries

We see great potential in lithium-ion technology. This is why this technology is one of the focal points of our current research and development work for electric power. In 2011, Jungheinrich became the first series supplier of trucks powered by lithium-ion batteries. In 2018, we doubled our sales of trucks featuring this drive technology in a year-on-year comparison. Our success encourages us to keep working on this technology. We are also continually developing our business model – with the right short-term rental options and guaranteed battery returns, for example. Due to their long lifespan, we believe that the reuse of lithium-ion batteries in material handling equipment offers considerable potential. The use of end-of-life power units as stationary energy storage systems is another possibility.

More than 90 per cent of the lithium-ion batteries we install use lithium iron phosphate cells, which are cobalt-free.

Environmental impact of our locations

Both during production and in our sales activities, we handle water and energy in an environmentally friendly manner. We meet all legal environmental requirements, and more – such as customer requirements. These are systematically recorded in an online legal database, in specialist committees (e.g. VDMA) and other sources. Internal specialist committees regularly monitor, discuss and coordinate water, waste, emissions, energy and hazardous substance requirements for sites and other Jungheinrich units. The responsibilities are laid out in the Group guidelines and processes.

This is also how we deal with product-relevant laws and guidelines, such as the battery law and the RoHS² directive. By integrating them into Jungheinrich guidelines and processes and monitoring them during internal and external audits, we can ensure that all locations comply with these requirements. We also focus on stakeholder requirements and the constant reduction of our environmental impact. Examples include our ISO 14001 certified environmental management system at our production plants in Norderstedt, Lüneburg, Moosburg, Degernpoint, Landsberg and Qingpu (China) and several sales units, as well as the construction of our headquarters, which was awarded a gold certificate by the German Sustainable Building Council (DGNB – Deutsche Gesellschaft für Nachhaltiges Bauen e.V.).

¹ Grey cast iron is an iron-carbon alloy

² 2011/65/EU directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Certification as foundation for energy analysis

Energy is an increasingly important topic. Given the legal requirements and standards that exist, this is clear to see – for our customers and our Group alike. With ISO 50001 certification at our production plants in Norderstedt, Lüneburg, Moosburg, Degernpoint and Landsberg, Jungheinrich is laying the foundation for a systematic performance analysis in terms of energy. As part of these management systems, but also through projects, such as the gradual transition to LED lighting technology at several locations, we are identifying and acting on potential opportunities to reduce energy consumption.

Energy consumption^{1,2}

302-1

	2018	2017	2016
Natural gas in kWh	49,006,187	49,044,241	45,261,897
Heating oil in kWh	2,955,802	2,888,894	3,013,863
Diesel in l	10,578,586	9,933,928	9,452,186
Petrol in l	89,650	82,235	76,989
Electricity in kWh	60,843,445	58,827,545	55,994,885
District heating in kWh	13,068,477	12,180,711	12,391,932

Handling energy sources

As a manufacturing company, Jungheinrich is reliant on the use of a variety of energy sources. The main types of energy used by our production sites are natural gas, heating oil, diesel, electricity and district heating. Due to the comprehensive range of services offered, our sales activities also cause emissions. That is why we offer our service technicians training in petrol saving in order to help them reduce their CO₂ emissions. Some locations use electric vehicles, which lowers direct emissions further.

Greenhouse gas emission^{1,2}

305-1; 305-2

in t CO ₂ e	2018	2017	2016
Direct GHG emissions (scope 1) ³	38,425	36,631	34,741
Indirect GHG emissions (scope 2) ³	28,004	26,788	26,441

Converted according to EN-03

³ Emission factor sources: IEA and DEFRA

Turning waste into a resource

Whether hazardous or not – both types of waste can be a valuable resource for recycling or even repurposing. The majority of waste from production plants, sales units and other locations is recycled, and the material or heat reused. We aim to keep the amount of waste that is disposed of/sent to landfills compared to waste that is recycled at a permanently low level and aim to continually reduce it.

Total amount of waste^{1,2}

306-2

in t	2018	2017	2016
Total hazardous waste	4,428	4,685	4,349
Recycling of materials	3,320	3,619	3,199
Thermal utilisation	274	311	290
Disposal (landfill)	833	755	860
Total non-hazardous waste	12,173	10,820	10,810
Recycling of materials	8,741	7,350	6,602
Thermal utilisation	1,528	1,955	2,644
Disposal (landfill)	1,904	1,514	1,563

¹ The figures shown 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 units in Austria, France, Germany, Italy, the Netherlands, Poland, Russia, Spain, Switzerland and the UK.

² The scope has been expanded with retroactive effect to include the sales units in Austria, the Netherlands, Spain and Switzerland. The figures are partially estimated and have been corrected to reflect the better data available for the last few years.

GRI INDEX

102-54; 102-55

This report was prepared in accordance with the GRI standards.

General standard disclosures

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GRI indicator	Indicator name	Page	Topic from materiality analysis
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