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# **65** YEARS OF **JUNGHEINRICH**

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1953–2018



## FOREWORD

65 years of Jungheinrich

- a unique story of growth

It all began with a handful of employees at a small production facility; today there are more than 16,000 employees in 5 continents.

Jungheinrich started out as a manufacturer of forklift trucks and developed into a leading provider of intralogistic solutions.

Today, we are an engineering company, logistics systems provider and software developer in one, with our innovations automating customer warehouses world wide.

With our efforts to organise the company sustainably for future generations, we are following the tradition of our company founder, Dr. Friedrich Jungheinrich, who was already capitalising on the electric drive back in 1953.

In line with his motto "go for it", we are also doing everything in our power to successfully prepare Jungheinrich for the future.

This success story is the work of a great team and thanks go to all those who have worked on it over the last 65 years and those who are shaping the future today.

On behalf of the Management Board

Hans-Georg Frey

Hans-Georg Frey

Chairman of the Board of Management, Jungheinrich AG

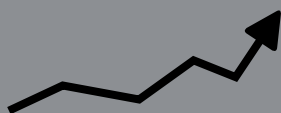
## OUR HIGHLIGHTS 2018

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EUR

# 40.63

JUNGHEINRICH SHARE  
2017 AT **ALL-TIME HIGH**


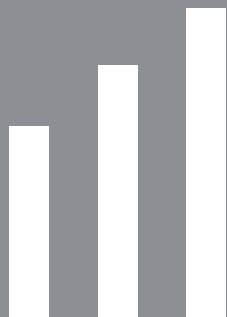


EUR

# 3.4

# BLN

REVENUE 2017



# +24%

MORE SPENDING ON  
RESEARCH AND DEVELOPMENT

(2016–2017)



More than

# 120,000

trucks produced for the first time in 2017

In Europe we are

# No. 2



A circular icon containing a map of Europe, positioned to the right of the 'No. 2' text.

in the industry

ENERGY EXPERTISE



2017: Largest truck order in the  
company's history with

# >1,000

LITHIUM-ION TRUCKS

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*Dr. Friedrich Jungheinrich*  
**DR. FRIEDRICH JUNGHEINRICH**  
STIFTUNG

11 co-operating universities and  
approx. 20 scholarship recipients  
in 5 countries

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IN 4 YEARS:

**+50%**  
REVENUE

**+37%**  
EMPLOYEES

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**~4,900**  
after-sales service technicians



EMPLOYERS IN  
GERMANY\*

\*according to Focus and Kununu

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**>16,000**  
EMPLOYEES WORLDWIDE

**39** OWN DIRECT  
SALES COMPANIES

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AWARDS:



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## IT ALL STARTED WITH AN IDEA

After World War II, Dr Friedrich Jungheinrich established the foundations for today's company. Initially still at his father's company, H. Jungheinrich & Co., he manufactures the first mechanical transport trucks: sack trucks, roller jacks and hand pallet trucks with matching skids that helped businesses and companies to move debris and other heavy loads during reconstruction. In 1948, when his father's company becomes too small, he moves to a property at Bachstraße 48 in Hamburg's Barmbek district. The workshop is so cramped that the workers often assemble the trucks in the open air. "Somehow we started there," Friedrich Jungheinrich later summarises this period of improvisation. A circumstance that explains the close relationship between Friedrich Jungheinrich and his employees. Every morning, the first thing he does is to walk around the small business and greet everyone with a handshake.

### The right niche and direct sales as a recipe for success

At an early stage, Friedrich Jungheinrich decides to sell the transport trucks directly to companies himself. So unlike others in the industry, he largely does away with distributors. Rainer Bartram, one of the first employees and salesmen, can communicate important information about company requirements learned on his company visits and draw Jungheinrich's attention to niche markets. This enables it to adapt the production of its transport trucks to the needs of its customers at an early stage. Many companies are particularly interested in small transport trucks that require little manoeuvring space. A product segment that Jungheinrich systematically develops and expands within a very short time.

### A milestone – the first electric pedestrian pallet truck

For some time now, Dr Friedrich Jungheinrich has been working on the idea of equipping mechanical pallet trucks with an electric drive. His first electric pedestrian pallet truck has an enclosed electric motor powered by a DC battery. All controls, the direction of travel as well as the lifting and lowering of loads, are via the switch on the tiller handle. When making empty runs, the operator can stand on the platform and use the pallet truck as a vehicle. This increases the operational speed, while simultaneously reducing the physical strain.



First workshop:  
Jungheinrich's story begins  
on Bachstraße.



Ground-breaking drive: The electrically driven "Ameise" quickly replaces the hand pallet truck.



Versatile allrounder: The "Ameise 55" – a milestone in product development.

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**The first electric four-wheel counterbalanced forklift truck:  
The "Ameise 55"**

With the "Ameise 55", unlike its pedestrian-controlled predecessors, the operator sits on the truck. The transport speed is therefore independent of the physical fitness of the worker. Thanks to a small turning circle, the "Ameise 55" can also be used in confined spaces. Even use in closed warehouses and workshops is possible without problems, because the "Ameise 55" is powered by an emission-free electric double-rotor motor with an output of 3.6 hp.

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### Expansion of the product range and relocation to a new production facility

As industry gets into gear at the beginning of the 1950s, Jungheinrich's order books are also filling up. In 1950, the company produces 20 electric forklift trucks in addition to its hand pallet trucks and transport trolleys. The workshop on Bachstraße reaches its limits. Once again, new production facilities must be found. As early as 1951, the workers assemble a new type of forklift in the halls on Billbrookdeich: an electric forklift with driver's seat. Named "Ameise 55" (A 55), Jungheinrich presents the new truck to industry professionals at the 1953 HANNOVER MESSE – and makes industry history!

## FOUNDATION OF H. JUNGHEINRICH & CO. MASCHINENFABRIK

The production of forklift trucks with driver's seat enables Jungheinrich to make the leap into the group of industrial companies playing a key role for the growing economy. Demand is increasing, but there is only limited support available for individual customers outside northern Germany. On 1 June 1953, Friedrich Jungheinrich establishes the first regional sales centre in Mülheim an der Ruhr.

Jungheinrich products are soon also heading abroad: While Friedrich Jungheinrich focuses primarily on direct sales in Germany, he initially serves the European market via a dealer network.

As early as 1952, the revenue generated by the transport truck division climbs to more than DEM 830,000, prompting Friedrich Jungheinrich to completely separate the mechanical engineering business from the business enterprise run by his brother Otto in 1953. On 7 August 1953, Friedrich Jungheinrich and his brother-in-law Dr Werner Rosenkranz register H. Jungheinrich & Co. Maschinenfabrik (HJC) in the commercial register of the Hanseatic City of Hamburg – founding today's company.

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#### Strong brand: "Go fetch the 'Ameise'!"

In his search for a catchy brand name, Friedrich Jungheinrich looks towards other companies in the industry, such as "Muli", "Schildkröte" and "Steinbock". Together with his daughters, he decides on Ameise (the ant), which has characteristics similar to that of his transport trucks: It can lift and transport many more times than its own weight, symbolising diligence, passion and frugality. The "Ameise" quickly develops into a generic name for pallet trucks – irrespective of the corresponding manufacturer. Even today, in many warehouses, it is "Go fetch the 'Ameise'".

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Two arrows – a horizontal arrow crossed by a vertical arrow – symbolise the directions in which goods and materials are transported.

# INTERNATIONALISATION

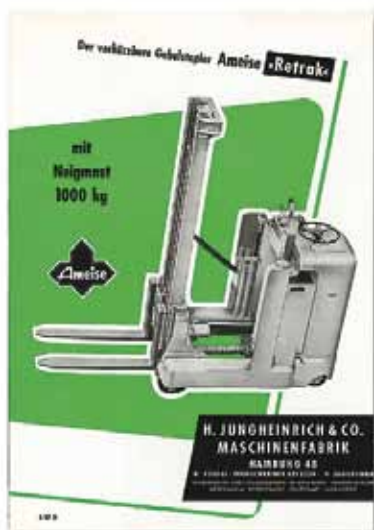
Jungheinrich's boom also continues during the years of the "economic miracle" in Germany. The topic of transport and storage rationalisation becomes increasingly important: As workers became scarce in the 1950s, companies invest in modern warehouse and conveyor technology.

While its competitors are more and more specialising, Jungheinrich keeps the small trucks in its range – and in this way is able to meet the needs of every customer through its broad product range.

In addition to a large number of new products, Jungheinrich develops its own first electric motor as early as 1956, which will be installed in more than 28,000 Jungheinrich trucks by 1965. Another innovation of 1956 is the "Ameise Retrak" – the first Jungheinrich reach truck. The "Retrak" establishes a completely new category of forklift truck. Even if opinions differ as to whether this is actually the first reach truck in the world or only in Germany, with the "Retrak" we coin a fixed concept in the industry.

## Direct to the customer

Technological innovations are just one pillar of success. The others are the systematic expansion of direct sales and the service network: After the first subsidiary in Mülheim an der Ruhr, others open in rapid succession. From the outset, the sales employees are not only salespeople, but also specialists. They work with customers to develop individual solutions for optimising internal transport and warehousing by using electric pallet trucks, tow tractors and forklift trucks – a novelty in the industrial truck industry. As early as the 1950s, Jungheinrich lays the foundation for today's tasks of materials flow analysis and logistics systems.



### The "Ameise Retrak" electric reach truck (ESM)

The "Retrak" is the result of years of hard work on building short and manoeuvrable forklift trucks. As storage space is expensive, the distances between the storage racking are getting smaller and smaller, the manoeuvring space for the transport trucks is getting tighter and tighter. When the first ideas of forklifts capable of raising and lowering a mast come out of the USA, Friedrich Jungheinrich takes them up and develops the first reach truck. With the movable mast, the "Retrak" is much more space-saving than the "Ameise 55" electric four-wheel forklift truck. Up to 30 percent space gain is now possible due to narrower aisle widths.

An advertising slogan from 1957 promises: "Retrak rationalisation means: Maximum utilisation of your warehouse with narrow aisles and high stacking heights."



Development of the service network: The service technicians of the subsidiaries use mobile “workshops” to ensure reliable operation of Jungheinrich trucks.

## Growing exports

Parallel to the expansion of business activities in Germany, exports are growing. In the mid-1950s, the company founder decides to expand the sales and service network throughout Europe. Within a short period of time, the proportion of exports, on which Jungheinrich’s strong market presence abroad is based to this day, increases significantly. Only three years after its foundation, the Hamburg-based company opens its first foreign subsidiary in Vienna – Hermann F. Jungheinrich Gesellschaft mbH – in 1956. This is followed by “Ameise Italiana” and “Ameise Svenska”. During the 1960s, the network of European companies is consistently expanded: Sales offices are established in quick succession in the Netherlands, the UK, Denmark, Switzerland and France. The Export Department is also active behind the Iron Curtain, for example in Czechoslovakia. In 1958, exports account for around 30 percent of the company’s revenue; by 1967, the proportion of international business making up the company’s revenue has already risen to 50 percent.

## RELOCATION TO LONG-ESTABLISHED SITE ON FRIEDRICH-EBERT-DAMM

With 750 trucks sold and a revenue in excess of DEM 11 million, 1958 is the most successful year in the company's history to date. The steadily growing demand for forklift trucks makes relocation to a larger production facility increasingly urgent. Jungheinrich gradually moves production from Billbrookdeich to Friedrich-Ebert-Damm. The new "Junior" series is manufactured here from 1960: compact, inexpensive and powerful trucks that run off car batteries instead of large and expensive special batteries. The first pedestrian forklift of the "Junior" series is the EJC, which quickly becomes the Volkswagen of forklift trucks. In 1962, Friedrich Jungheinrich designs the "Ameise Teletrak", a trackless forklift truck from the "Junior" series of pedestrian pallet trucks, which does not require an operator.



"Junior" success story: Easy to operate, universally applicable – the Volkswagen of forklifts.



The first step towards automation: The "Teletrak" automated guided vehicle.

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### Driving without an operator – the "Ameise Teletrak"

The controls of the "Ameise Teletrak" are optical: Photo resistors attached to the head of the truck scan a guide strip attached to the floor. A safety guard stops the truck at the slightest contact with an object or person. The trade press reports that the "Teletrak" makes a remarkable contribution to warehouse automation and thus to cost reduction.

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Long-established site on Friedrich-Ebert-Damm: Old and new (since 2015) location of headquarters.

The company grows with the Jungheinrich Group developing unstopably into an internationally oriented company. Soon the plant at Friedrich-Ebert-Damm is also too small. The first production facility outside Hamburg is built on an 80,000 square metre site in Friedrichsgabe near Norderstedt. A repair workshop and a production facility for spare parts for older series have been located here since December 1965. Hubertus-Regal Herstellungs- und Vertriebs-GmbH, founded by Jungheinrich in 1959, also relocates to Norderstedt. In 1966, a branch plant is opened in Brunn near Vienna for the production of hand pallet trucks for export. One year later, the company Akkutechnik Ladegeräte GmbH & Co. KG begins the production of chargers and impulse control systems.

#### **Mission statement: "Go for it!"**

When it comes to employee motivation, Friedrich Jungheinrich relies on a co-operative management style. His creed: "Everyone can feel like an entrepreneur and has a responsibility." What counts is commitment and performance.

#### **End of an era – the death of the company founder**

On 28 January 1968, Dr Friedrich Jungheinrich passes away due to cancer at the age of 68. His passing is mourned by family and workers.



An entrepreneur with vision:  
Company founder  
Dr Friedrich Jungheinrich.



From a single source: Tailor-made solutions ensure a smooth internal transport process.

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## BEGINNING OF A NEW ERA

Following the death of the company founder on 28 January 1968, Jungheinrich remains an independent family business owned by the shareholder families Lange and Wolf. Rainer Bartram takes over management of the Group holding company, Klaus Rosenkranz, nephew of the company founder, becomes CEO of Hamburg-based H. Jungheinrich & Co. Maschinenfabrik. The new management team continues the company's sound financial policy and also adheres to its strategy of organic growth.

Production at the new assembly halls in Norderstedt is increasingly expanded. In addition to Hubertus-Regal Herstellungs- und Vertriebs-GmbH, Akkutechnik Ladegeräte Gesellschaft, the repair workshop and spare-parts manufacture, Kunststofftechnik KG is founded in 1969, producing plastic covers and cladding there.

The demand for Jungheinrich trucks is greater than ever. For the first time in the company's history, revenue in 1968 exceeds DEM 100 million. A significant contribution to this is made by the new ETX high-rack stacker, the product innovation of 1968. After the "Retrak", this is the next milestone for better utilisation of storage height.

### From the “Ameise” to the complete warehouse system

Growing consumption changes the demand for constantly available items. Moving from purely stocking goods, industrial and wholesale warehouses are increasingly developing into distribution centres in which storage, combination and distribution are intertwined. Organising material handling becomes a central task that can only be solved with complete warehouse systems. Jungheinrich recognises this trend at an early stage and designs “tailor-made solutions” for its customers: From the planning of high-bay warehouses to the implementation of complete and partial solutions in the area of internal transport and warehousing.

Strategically, the planning and sales of system solutions are transferred from Lagertechnik KG to Maschinenfabrik – a trendsetting decision for the bundling of expertise in the fields of forklift trucks and rack systems. The first Jungheinrich order picker, the “Ameise Ordertrak”, equipped with two masts, is launched in 1972 and is specially designed to meet the needs of food wholesalers.



Modern warehouse technology: In the racking aisle, the ETX moves over floor guide rails; outside, it moves freely.

#### Optimum use of storage space – the ETX high-rack stacker

The ETX, for which drive components from the “Retrak” series are used, can lift a load of 1 tonne to a height of up to 10 metres and is therefore an alternative to permanently installed rack operating equipment. It is half the price of rack operating equipment and can move flexibly from one aisle to another just like any other truck. In racking aisles, the ETX is guided on a guide rail to relieve the workers of control tasks. A swivelling device ensures that the ETX stacks and retrieves its loads laterally in the racks – this saves on manoeuvring space and therefore aisle width.

With the aim of optimising warehouse processes, since 1970 Jungheinrich Lagertechnik KG, formerly Hubertus-Regal Herstellungs- und Vertriebs-GmbH, has been producing special racks for order picking on one or more levels in Norderstedt.

# GROWTH DESPITE RECESSION

Despite the economic crisis that began in 1973, the shareholder families and board of management remain on course for growth. As a result, the company is one of the first in the industry to start a short-term rental and used equipment business. In addition to trading in used equipment and short-term truck rental, this also includes financial services such as long-term rental and leasing. The new business segment rapidly develops into an important pillar that is intended to compensate for the decline in new truck business in later times of crisis.

Jungheinrich also intensifies its sales activities abroad. In 1974, the Hamburg-based company acquires one of France's leading manufacturers of hand pallet trucks, Mécanique Industrielle Chimique S.A., known as MIC for short. This is interesting because, in addition to a strong presence on the French market, the company also has a strong export position, especially in the USA – a market in which Jungheinrich has not yet been able to gain a foothold.

## **Concentration on core strengths – Intensification of international business**

At the end of 1974, Rainer Bartram, Friedrich Jungheinrich's long-time companion, retires from the board of management and operations. On 1 January 1975, Klaus Rosenkranz takes over as chairman of the board of management of the Group holding company. However, he takes up the reins at Jungheinrich at a difficult time. The economic slump resulting from the economic crisis means that the warehousing technology sector is facing cut-throat competition. Jungheinrich has to introduce short-time work due to stagnating sales. From now on, the business will focus on what Jungheinrich has always been expert at: the construction of forklift trucks. As a result, Rosenkranz succeeds in ending 1976 with another strong increase in revenue.

Jungheinrich also sets the stage for future growth in exports. Its commitment in the USA is therefore intensified. Jungheinrich gains access to the US market via the extensive MIC dealer network. New companies in Belgium and Spain further expand market shares in Europe, increasing the already high proportion of total sales made up by foreign business to around 60 percent.

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### **Sustainable corporate management**

Diversification and internationalisation prove their worth during the economic ups and downs of the 1970s. Despite rising manufacturing costs and tough competition in the industry, Jungheinrich invests in plant expansions and more efficient production methods at the same time. Instead of relocating production abroad, the Wolf and Lange families and the board of management set the course for sustainable growth as an independent family business in Germany.

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New standards in truck ergonomics: The "Ameise 300" three-wheel forklift truck.

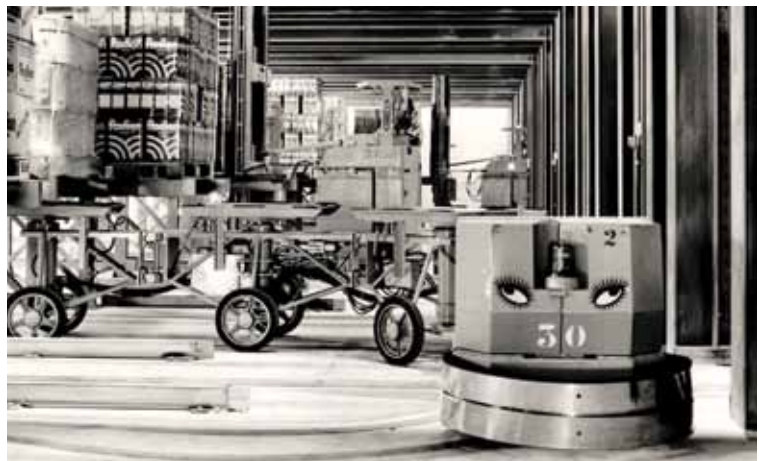
### Product innovations and expansion of the service sector

Jungheinrich launches the "Ameise 300" at the HANNOVER MESSE in 1975. An industry innovation, as it is the first forklift truck developed on the basis of an ergonomic study by the Institute of Ergonomics at Darmstadt University of Technology.

In addition, the after-sales service organisation is further improved. For the service life of Jungheinrich products can be increased with higher quality. With the increasing truck stock on the market, the need for flexible and efficient after-sales service is also growing. More than 500 Jungheinrich service vans are in operation to service well over 100,000 "Ameise" forklifts, pallet trucks and tow tractors. In 1978, support and services already accounts for almost one third of Group revenue.

# INCREASING COMPETITIVENESS

The economy has only just recovered from the effects of the 1973 oil price increase, when the general conditions deteriorate again in 1979 due to the second oil price shock. The recession is also reaching the materials handling and warehousing technology industry; competition is becoming tougher. Jungheinrich sticks to its proven strategy of high investment even during this crisis and launches an innovation offensive. Microelectronics open up new opportunities in the field of automated materials handling and warehouse technology.



Pioneer of automated guided vehicles: The "Ameise Teletrak" with inductive guidance.

## Pioneer of automated transport and warehousing systems

With the "Ameise Teletrak" with inductive guidance, the company introduces the automation of trackless forklift trucks as early as 1978. Microprocessors allow data processing during the course of work and connection to a central computer. An important step towards automated transport systems for a synchronised material and information flow and a prerequisite for an efficient warehouse and material flow organisation. Distribution logistics is becoming the most important factor for the market success of wholesalers, super-market chains and industrial companies. For example, Jungheinrich is developing a computer-controlled Teletrak system with inductive guidance for the automotive industry. Production and assembly are becoming so flexible with the Automated Guided Vehicles (AGV) that the sequence of work steps can be changed flexibly at any time. An automated Jungheinrich forklift and tow tractor system is also used in the automotive industry.

In co-operation with the Fraunhofer Institute for Transport Technology and Goods Distribution, Jungheinrich develops the ARS automated rack stacking system in the early 1980s. Due to the high rationalisation potential of the system, the innovation is promoted by the German Ministry of Research and Technology. The core components of the automated high-rack stackers are on-board computers linked to a warehouse management computer. With high throughput rates and lift heights of up to 15 metres, the ARS system opens up completely new performance areas.



Automating production: Processor-controlled industrial robots from Jungheinrich.

### On the way to becoming a full-range provider

Microelectronics enable industrial robots to be also included in the product range. In 1981, Jungheinrich sells the first 25 automatic handling machines equipped with grippers or tools with a multiprocessor controller, which can be programmed for a variety of tasks in the production process. In 1983, the Jungheinrich Anlagen- und Roboter-Technik (JART) business unit is established specifically for automated systems and robots, from which the independent subsidiary Jungheinrich Anlagen-Technik GmbH & Co. KG (JAT) emerges in 1985.



New pace to assembly: Switch to flow production.

### **New management, new plants, new production concepts**

On 1 April 1985, individually liable shareholders Klaus Rosenkranz and Walter Gnauert resign from the board of management of Jungheinrich-Unternehmensverwaltung KG. At the same time, the owner families move even closer to the company: Winfried Lange and Franz Günter Wolf, whose wives jointly hold the majority of the limited liability capital, join the holding company as individually liable partners. In the course of this restructuring, a new general authorised signatory is also appointed for Jungheinrich-Unternehmensverwaltung KG: Frank Bär. Together with Dr Eckart Kottkamp for Technology and Wolfgang Kiel for Sales, he forms Jungheinrich's management team.

They too continue to focus on technological progress and push ahead with completion of the Norderstedt plant. The new assembly plant enables Jungheinrich to react much more flexibly to changing market requirements: Order-related design and production for a large number of individual solutions. This is made possible by the innovative concept of "Modular System Development" (MSE) and the consistent conversion of series production to modular design. This means that more truck variants can be manufactured from fewer parts and assemblies. In addition, assembly is switched to the principle of synchronised flow production. Transport routes are shortened and work processes are simplified. The first product series designed using the MSE concept is the new generation of reach trucks. Jungheinrich revises all products according to the MSE principle by 1990.

Following expansion of the Norderstedt plant and the orientation of manufacture towards series production, Jungheinrich opens a new plant for special builds and small series in Lüneburg in 1989. The assembly of forklifts with IC engines is also relocated from Wandsbek to Lüneburg. At the end of the 1980s, the Wandsbek plant increasingly develops into a location for material flow technology systems. In addition to the existing production of the forklift trucks with inductive guidance, system trucks for tailor-made customer solutions are co-ordinated here.

### Expansion of the sales and service organisation

In the second half of the 1980s, Group management focuses on optimising the sales and service organisation. On the one hand, the Jungheinrich rental fleet is growing steadily from new models; on the other hand, long-term truck leasing is another service. Jungheinrich also offers a special rental package: Long-term rental with full service and a guarantee of constant availability at a fixed price. Jungheinrich also sells used trucks that have previously been reconditioned in the workshops of the subsidiaries. The used forklifts represent an inexpensive and equally reliable alternative to new trucks, as they are also covered by a warranty. This makes Jungheinrich a strong and flexible partner for its customers beyond new truck business.

## CONTINUITY AND CHANGE – JUNGHEINRICH BECOMES A PUBLIC LIMITED COMPANY

Jungheinrich is well positioned at the end of the 1980s and exceeds revenue of DEM 1 billion for the first time in 1987. The entire conversion is paying off: In 1989, all plants in Germany and abroad are working at full capacity. Revenue increases to just below DEM 1.3 billion – meaning that Jungheinrich's consolidated external sales have more than doubled since 1983.

Ultimately, Jungheinrich's growth strategy leads to it opening itself up to the capital market. In order to make the company public, the Lange and Wolf shareholder families change the legal form of H. Jungheinrich Maschinenfabrik GmbH & Co. KG into a public limited company by shareholders' decision on 20 June 1990.

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### IPO

On 30 August 1990, Jungheinrich floats on the stock exchange – it is the third-largest new launch in the year of German reunification. The first supervisory board of the public limited company is prominently composed of entrepreneur Dr Arend Oetker, BDI President Dr Tyll Necker, Rainer Bartram and Franz Günter Wolf. Dr Eckart Kottkamp, Dr Hans-Peter Schmohl, Dr Norbert Klusen, Wolfgang Kiel and Karin Martin make up the AG's first Board of Management. In order to ensure that the decision-making authority for strategic decisions remains with the Lange and Wolf families in the future, only the ordinary shares have voting rights – the independence of the Group is still guaranteed.

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# TRENDSETTING DECISIONS

In 1990, Germany celebrates reunification; the Iron Curtain has fallen. In Germany's new federal states and the former Eastern bloc countries, there is a considerable backlog of demand for modern forklift trucks and warehousing technology. Jungheinrich opens its first subsidiary in the new German states in Klipphausen near Dresden on 3 October. Subsidiaries in the Czech Republic and Hungary are established in 1992, and two years later in Poland, with the aim of generating sales on the eastern European markets.

But the "second economic miracle" expected after reunification has failed to materialise and Germany slips into a severe recession. Jungheinrich establishes a joint venture with competitor Linde aimed at reducing costs for the necessary development of expertise. In 1993, the JULI motor plant in Moravany near Brno in the Czech Republic goes into operation.

In addition to this cooperation, Group management responds to the crisis and the further intensification of competition with targeted structural measures. For example, the company converts its sales organisation in Germany into a two-stage system: Since 1992, the ever-closer network of subsidiaries has been supplemented by regional distribution centres, which in turn now manage the associated subsidiaries. This enables sales and marketing to react even more efficiently to special characteristics of the market and the demands of customers. The after-sales area is proving particularly stable in these times of crisis. It significantly counteracts the slump in new business: After the sale of a forklift truck, after-sales service promotes long-term customer loyalty and therefore also new business with a comprehensive service package.

The ComFour concept is developed in 1994 to combine the financial services of leasing, short-term rental, hire purchase and partial payment. When concluding the contract, the customer chooses one of the four variants, but may change it at any time during the term of the contract. As early as 1995, the ComFour quota of around 22 percent almost matches the truck leasing level – a great success for this unrivalled concept.

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## Focus on the customer

Since 1993, Jungheinrich has been putting together sales and after-sales teams comprising sales representatives and service technicians under the motto "One face to the customer" in order to meet customer requirements even better. Each customer has a permanent contact person who is familiar with their needs and who looks after them from purchase through to maintenance and repair service.

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## Environmental protection and quality management

Since 1992, environmental protection has also been an integral part of our corporate strategy. The environmental protection guidelines are binding for all employees and regulate the structure, procedure and legal principles of corporate environmental protection. From this point on, recyclable materials are used in production and emission control measures such as hall ventilation and noise protection are implemented. Furthermore, an integrated quality concept forms part of the corporate strategy. Quality as the basis for customer satisfaction and as an overriding notion for all products, services and processes is defined as an investment-determining criterion and as a dynamic process.

## The major coup

Numerous new products make 1994 a year of innovations. In addition to a product offensive in the forklift truck business unit, the internal logistics division also develops successfully. The new Jungheinrich data communication system significantly increases information processing in the warehouse and the throughput performance of the truck fleets at the customer's premises.

There is a reason why 1994 is one of Jungheinrich's most important years in its development into an international mechanical engineering group: The takeover of the British Boss Group, including the long-established Bavarian company Steinbock. The Jungheinrich and Steinbock/Boss production programmes scarcely overlap, but, above all, Jungheinrich is expanding its expertise in IC-powered counterbalanced trucks. This makes Jungheinrich a full-range supplier and full-service provider – the best prerequisites for maintaining an even stronger international position in the forklift truck industry in the future.



"Swift" mid-lift truck: Modern operating concept, easy handling.



MULTI-PILOT: Innovative control lever for one-handed operation.

## RESTRUCTURING – THE “JUPITER” PRODUCT INITIATIVE

The rapid integration of the new subsidiaries and the strategic realignment of the entire Group are now being pushed ahead. The programme: the “Jupiter” product initiative. The goal: To increase productivity throughout the Group in order to ultimately take over the costs and technology management for electric forklift trucks. Production at the individual sites is therefore combined for this purpose. Manufacturing costs are to be reduced through greater quantities. Jungheinrich relocates production at Wandsbek site to Moosburg as early as 1995. Only the head office remains at Friedrich-Ebert-Damm in Hamburg-Wandsbek.

The rejuvenation of the product range and the overhaul of numerous series are another part of the “Jupiter” programme. In 1997, the first diesel and LPG forklift trucks designed by Jungheinrich leave the Leighton Buzzard plant. This marks the company’s return to what is still the largest forklift truck segment after almost 40 years without internally developed and manufactured combustion engines and the end of its 14-year cooperation with US manufacturer Yale.



Moosburg production site: Since the takeover of Steinbock, Jungheinrich invests sustainably in the plant.

The Group's stronger focus on customer requirements and services is moving the after-sales area as an independent business unit to the same level as production. In order to drive customer-oriented innovations forward, Service works closely with Development.

With the "Central Purchasing Group" staff division introduced in 1997, Purchasing is developing into a strategic supplier management unit. Purchasing costs are to be reduced overall, preferred suppliers selected and more closely linked to the Group, and Group-wide standards developed for suppliers.

Parallel to the various internal reorganisation measures, Group management continues to focus on expansion. The expansion of the eastern European direct sales network is a particular focus of attention. A subsidiary is founded in Slovakia in 1996 and in Slovenia in 1997. New foreign companies are also established in western Europe with a Portuguese subsidiary in 1998. The markets in the USA, South America and Asia are also becoming increasingly important. In 1998, Jungheinrich opens its first representative office in Singapore.

At the end of the 1990s, Jungheinrich is represented at over 40 locations worldwide. In 1998, the Group generates a revenue of almost DEM 1.7 billion outside Germany – bringing the share of foreign business in Group sales to 64 percent.




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**"Faster, stronger, more cost-effective" –  
Jungheinrich as a three-phase AC pioneer**

In 1996, the EFG-VD electric four-wheel forklift is the first electric forklift truck with three-phase AC drive system. With this drive, electrically powered forklift trucks achieve throughput capacities that reach the level of diesel forklifts – environmentally friendly without emissions. A true pioneering achievement!

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## ENTERING THE NEW MILLENNIUM

Outstanding products, strong sales and a dense customer service network – Jungheinrich's strengths since then – are continuously expanded and supplemented. Since 1999, the newly created "International Key Account Management" has been serving all major international customers across borders.

The Internet as a brand ambassador and future-oriented sales channel is becoming increasingly important. In 2000, Jungheinrich becomes the first European company in the sector to establish an online presence with a shop for forklift trucks and warehousing technology.

At the beginning of 2000, the consolidation course chosen is systematically continued. The market presence of Jungheinrich Direct Sales is expanded via new foreign subsidiaries: Greece, Turkey and the USA in the year 2000, Ireland, Brazil and Singapore in 2001 and Russia, Latvia and Lithuania in 2003. The direct sales network thus comprises a total of 24 countries, 10 of which are in eastern and south-eastern Europe – a unique selling point in the industry. The process of brand concentration is completed by the company's 50th anniversary in 2003. The Jungheinrich brand repositions itself worldwide under the slogan "Jungheinrich – well worthwhile".

### Sophisticated service offerings, new production structure and expansion of the system and project business

As part of the expansion of the profitable maintenance and service business for forklifts, two modern logistics centres in Norderstedt and Lahr take over the supply of spare parts for Europe from 2002. This means that spare parts are available overnight throughout Europe for the first time.

The return of production to the German plants is also largely implemented in 2004 and the new production structure rapidly bears fruit. Revenue in 2004 rises by a good 4 percent year-on-year to EUR 1.52 billion – putting Jungheinrich in fourth place among the world's largest manufacturers of forklift trucks, behind Toyota, Linde and Nacco.

Another strategically important step is the expansion of the system and project business. As a general contractor, Jungheinrich supports its customers with individual, integrated concepts and links rack systems and stacker cranes, automatic small parts warehouses and various conveyor systems with precisely coordinated EDP management software to create a precisely tailored, cost-effective warehouse system.



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### One brand, one technology, one colour – Jungheinrich!

In order to reduce costs and streamline the organisation, Jungheinrich moves away from its multi-brand strategy and realigns its sales organisation. From now on, all products will be offered via direct sales exclusively under the Jungheinrich brand. The markets are now only served by one sales organisation in each country.

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### New markets and new standards

Different requirements of individual markets and increasing complexity of the divisions require a structural adjustment of the sales organisation. From 2004, division heads are responsible for series products, project business, short-term rental and used equipment, international key account management and after-sales service. The globally active sales units are divided into four regional divisions, each with one responsible head. In 2006, the divisions for PROFISHOP BUSINESS ENTERPRISE SALES with catalogue business and online sales are added, with the dealer sales organisation following in 2010.

At the same time, the company increases productivity of its plants in Norderstedt, Lüneburg and Moosburg. Changes in production and assembly methods lead to product adaptations, so that newly developed trucks are launched on the market in all lines in 2005.

In addition, increased commitment to the trading of used equipment leads to the foundation of the Dresden used equipment centre in 2006 for the reconditioning of used forklifts and pallet trucks in Klipphausen near Dresden. All European Jungheinrich sales centres now deliver their trucks to the Saxony plant for refurbishment – so Jungheinrich is well equipped to meet the growing demand for used trucks, which the company receives back primarily from financing agreements.

In the same year, an assembly plant for electric pallet trucks opens in Qingpu near Shanghai, China, to supply the growing Asian market.



Concentrating on the essentials: The new production structure is reflected in the number of units, among other things.



From a single source: Complete logistics systems from Jungheinrich.



“Centre of Excellence”: Effective production creates efficient products – the production plant in Landsberg near Halle (Saale).

### Between financial crisis and recession

In 2006, Jungheinrich looks back on the most successful fiscal year in its corporate history to date. Under new Chairman Hans-Georg Frey, the Board of Management continues to focus on profitable growth throughout the Group in 2007 – the year ends with further records for revenue and profits. Group revenue exceeds the record level of EUR 2 billion for the first time. Jungheinrich’s 2008 fiscal year also achieves a new record in revenue. At the same time, however, a global economic downturn sets in with the intensification of the banking and financial crisis – the intralogistics industry and Jungheinrich along with it are not spared. The massive market slump and the marked decline in orders continue unabated in 2009.

Group management reacts to these general conditions not only with consistent cost management, but also with measures to strengthen the market position, intensified sales activities and targeted investments. Similarly, in view of this business situation, the Lange and Wolf families prove their loyalty to the company by refraining, among other things, from paying themselves dividends as ordinary shareholders.

In 2009, the production plant for electric low lift trucks, designed as the “Centre of Excellence”, opens in Landsberg near Halle (Saale). The plant in Qingpu, China, is further expanded and Jungheinrich enters into a development and sales partnership with Mitsubishi Caterpillar Forklift America Inc. (MCFA) in Houston, Texas. With the acquisition of a stake in one of the leading software houses for warehouse management systems – ISA GmbH (Innovative System solutions for Automation) in Graz, Austria – Jungheinrich expands its software expertise, thereby strengthening its market position in the field of increasingly complex logistics systems.

## A SIGN OF GROWTH AND FUTURE ORGANISATION

Thanks to these forward-looking measures, Jungheinrich returns to the profit zone as early as 2010 and, as a result, moves up to third place in the worldwide ranking of forklift truck suppliers. Since then, Jungheinrich has been among the top 3 in the intralogistics industry alongside Toyota and the Kion Group.

The consequences of the global crisis are finally overcome: In the 2011 fiscal year, Group revenue rises by around 17 percent year-on-year to EUR 2.1 billion and net income exceeds EUR 100 million for the first time. The Group therefore returns to its former revenue and profits strength. The consistent expansion of the logistics systems and financial services business divisions also contributes to this. Due to its own financial services companies in Germany, Italy, France, the UK, Spain, the Netherlands and, since 2012, Austria, more than one in three pieces of new business concluded by Jungheinrich in Europe is now under a rental or leasing contract.

In product engineering, the future focus is on energy-saving drive technology. In 2011, Jungheinrich already sets new standards in energy efficiency with the first electric pedestrian pallet truck with lithium-ion technology of the EJE 112i type ready for series production. Another innovation is the ETM/ETV 214-216 reach truck, which, with 10 percent lower energy consumption, achieves up to 10 percent higher throughput performance compared with its predecessor. The internal combustion engine counterbalanced truck with hydrostatic drive, launched in 2012, also stands for high energy efficiency.

New standards in energy efficiency: The EJE 112i is the first serial truck to feature lithium-ion technology.



### Dr Friedrich Jungheinrich-Foundation

In the tradition of the company founder Dr Friedrich Jungheinrich, the Dr Friedrich Jungheinrich Foundation, founded in 2004 by the Wolf and Lange families and Jungheinrich AG, contributes to the promotion of science, research and education in the fields of electrical engineering, mechanical engineering and logistics. In partnership with the Helmut Schmidt University Hamburg, the Hamburg-Harburg University of Technology, The Technical University of Munich and Tongji University Shanghai, the Foundation awards scholarships and research projects to particularly qualified young people.

## The strategic business model of the Jungheinrich brand

Jungheinrich's success is based on the broad utilisation of its entire service portfolio. It ensures that every single customer receives products and complete solutions tailored exactly to their needs.



## NEW STRATEGIES – GLOBAL GROUP ON COURSE FOR GROWTH

In 2013, Jungheinrich celebrates its 60th anniversary under the motto "60 Years of Passion for Logistics". From a small workshop in Hamburg-Barmbek, the company has developed into a global Group with around 11,000 employees and an annual revenue of more than EUR 2 billion. In order to continue on its successful path, the Group strategy sets the ambitious target of "4/7": By 2020, revenue is to rise to EUR 4 billion, requiring annual growth of 7 percent. To achieve this, five strategic priorities are defined. In addition to the European market, the focus is on the continuous development of growth markets, especially in the Asia-Pacific region with a focus on China. In addition, the logistics business and the counterbalanced truck product segment are to be developed and the mail-order business is to expand internationally.



Systematic logistics:  
Stacker cranes from Jungheinrich.

### Expansion of logistics systems business and sales and marketing

This Group strategy is subsequently to be consistently implemented. Jungheinrich bundles its expertise in the field of logistics systems into a newly created division: Jungheinrich Logistiksysteme GmbH, headquartered in Moosburg, is founded at the beginning of 2014 and a separate Board of Management department is finally established for the division. In 2015, Jungheinrich acquires the MIAS Group, the leading supplier of stacker cranes and load handling equipment, headquartered in Munich, in order to expand its product range and seize new market opportunities in this rapidly expanding business division.

The continuous development of new markets means that, by 2013, Jungheinrich is represented in 32 countries with its own direct sales and service network. The acquisition of the Australian dealer NTP Forklifts sets the course for growth in one of the largest forklift truck markets in the Asia-Pacific region. The company is also expanding its sales and service network in Africa, its core market of Europe and South America. It now has its own direct sales units in South Africa, Romania and Chile. The expansion of the network continues with Colombia, Peru and Ecuador and the takeover of Grupo Agencia Alemana, a long-standing distribution partner. In its anniversary year, Jungheinrich has its own sales and service companies in 39 countries.

### Listing on MDAX

This success is also reflected on the financial market: Jungheinrich AG is listed on the MDAX of Deutsche Börse on 4 December 2014. This means that the company is listed on the MidCap Index, which comprises the 50 largest listed companies below the DAX in Germany.

## Increased capacities

The strong growth course requires equivalent capacities, which Jungheinrich is subsequently increasing in all areas. Two new production sites open in 2013. A plant in Qingpu, China, comes into operation to meet the growing demand for forklifts in Asia. Another independent "Centre of Excellence" for warehouse and system trucks is built at the Degernpoint business and industrial park in Bavaria. The Moosburg plant in the immediate vicinity is restructured in the course of this, thus achieving a leap in productivity in the manufacture of the strategically important counterbalanced trucks. Production capacity at the Moosburg plant is almost doubled to 30,000 trucks per year. In 2017, Jungheinrich establishes the joint venture "ICOTEX" (Industrial Components of Texas, LLC) with its sales partner for the USA, Canada and Mexico, MCFA (Mitsubishi Caterpillar Forklift America Inc.). The "ICOTEX" plant opens in the Texan city of Conroe, where forklift and industrial components are now manufactured for the American market.

The supply of spare parts is also adapted to the tasks ahead. In 2013, a state-of-the-art spare parts centre comes into operation in Kaltenkirchen, Schleswig-Holstein. Jungheinrich has developed and realised it itself, relying on its expertise as a general contractor for complete logistics systems. In the Asia-Pacific region, the supply of spare parts is further expanded – a Jungheinrich regional warehouse for spare parts opens in Shanghai in 2016.

In Hamburg-Wandsbek, from August 2014, a new corporate headquarters is built at a long-established Jungheinrich location. A 5-storey building with a floor space in excess of 18,000 square metres is built on the site at Friedrich-Ebert-Damm 129, which served as the production and administration facility between 1958 and 1995, and was the headquarters of the Group from 1996 until demolition in 2007. In December 2015, more than 500 Jungheinrich employees move into their new, modern working environment. Only a short time later, the next construction project starts: Next to the building, which was completed in 2015, an almost identical building is constructed to accommodate further employees at the site. The opening of the new building is planned for 2020.



Headquarters with tradition: Friedrich-Ebert-Damm 129.

## The Jungheinrich Way of Leadership

Along with strategy, leadership is the key factor in reliably achieving goals. The Jungheinrich Way of Leadership is at the heart of Jungheinrich's leadership culture. It describes the disciplines of the Learning Organisation, core values, the specific tasks of leadership and the importance of "Go for it and lead the way" for future actions.

**Communication** **Thinking out of the box** **Trust**  
**Entrepreneurship**  
**Innovation** **Focus** **Growth**  
**Result orientation** **Learning from mistakes**  
**Drive** **Responsibility**  
**Passion** **Courage** **Contribution to the big picture**  
**Feedback**

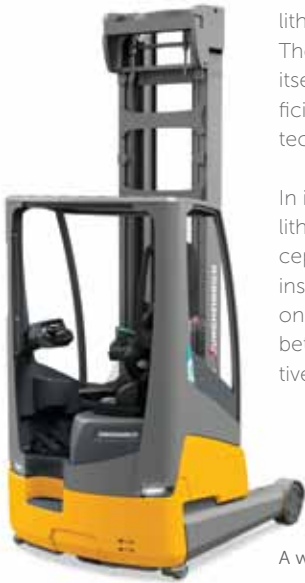
### The Jungheinrich Training Centre

The Jungheinrich Training Centre opens in September 2015. It accommodates the increasing number of employees, the increasingly complex technology and the growing global presence of the company. An area of almost 8,000 square metres at the Norderstedt plant is home to state-of-the-art training rooms and plenty of space for working on and learning about trucks and racking from all Jungheinrich lines. Up to 5,000 participants are able to qualify here every year.



## Jungheinrich 4.0

Jungheinrich's technical innovations are aligned with Industry 4.0: Automation, digitalisation and interconnectivity. Today, the solution provider for intralogistics develops manual to fully automated trucks, racking and software from a single source as a provider of logistics systems, a software developer and a mechanical engineer.



Jungheinrich presents another milestone in intralogistics in 2015: The next generation of lithium-ion batteries, developed in the "Energy and Drive Systems" division founded in 2014. The batteries can be recharged for a complete shift within 30 minutes. Jungheinrich sees itself as a complete solution provider: The energy storage concept also includes highly efficient forklift trucks with an interface to an intelligent battery management system, charging technology with quick chargers and professional energy consulting.

In its anniversary year 2018, Jungheinrich presents the latest innovation associated with lithium-ion technology: The ETV 216i reach truck. This represents a completely new concept for forklift trucks. The truck is no longer built around a battery as is usually the case; instead, the battery is a fixed component of the truck. Since the lithium-ion energy store only takes up about half the space otherwise required, the operator has more space and better allround visibility. The method of truck development on the ETV 216i is also innovative: Usability studies and prototype tests involve customers directly in the process.

A world first: The ETV 216i represents innovation, efficiency, safety and ergonomics.



The driving force behind electromobility: Jungheinrich lithium-ion technology.



Analogy for power and endurance: New visual language for marketing campaigns.

## READY FOR THE FUTURE

By consistently implementing the Group strategy, Jungheinrich is on the way to achieving its specified targets in the year of its 65th anniversary. In 2017, the company's revenue is EUR 3.4 billion, an increase of 50 percent over four years. More than 16,000 people are employed in Jungheinrich subsidiaries in 39 countries around the globe. Jungheinrich is represented by partner companies in more than 80 other countries. Jungheinrich is No. 2 in the intralogistics industry in Europe, producing more than 120,000 trucks for the first time in 2017 and recording the largest truck order in the company's history with over 1,000 lithium-ion trucks. After 65 years of development into today's successful global Group, the company is well positioned to set new goals for the future and to achieve them.



The future is electric:  
This is Intralogistics 4.0 – made by Jungheinrich.

# FROM FORKLIFT MANUFACTURER TO SOLUTIONS

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## Warehousing technology



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### Battery-powered counterbalanced trucks



### IC engine-powered counterbalanced trucks



### Hand pallet trucks



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### Tow tractors

### Trailers



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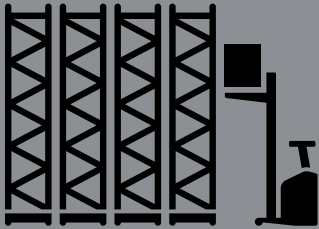
### Other solutions



## PROVIDER – OUR PRODUCT AND SERVICES PORTFOLIO

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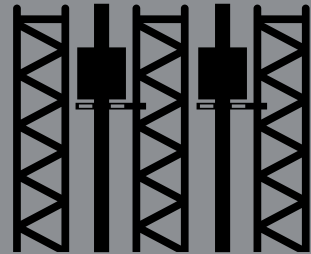
### Logistics systems



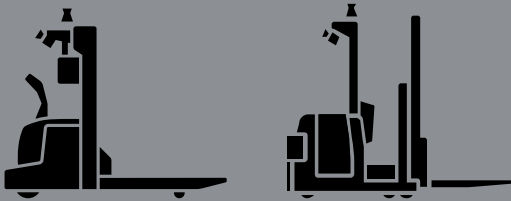
### Rack systems and warehouse equipment



### Stacker cranes



### Automated guided vehicles



### Conveyor technology



### Warehouse management



### Digital solutions



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