

# Investor Handbook

April 2020

**kardex**

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# 1. Executive Summary

## 1.1 Kardex in brief

Kardex is a leading intralogistics provider of automated storage, retrieval and material handling systems in an attractive and growing market. With two entrepreneurially managed divisions, Kardex Remstar and Kardex Mlog, Kardex developed from a product and service supplier into a global industry partner providing solutions and services under the Kardex brand name. Kardex is well positioned to grow in a market with strong fundamentals and to achieve attractive financial returns.

Kardex has three manufacturing facilities and over 1 900 employees in over 30 countries worldwide.

Kardex Holding AG is listed on the SIX Swiss Exchange since 1987.

## 1.2 Intralogistics market and key trends

Storage and material handling is a key cost and efficiency factor, not only in traditional production and distribution facilities but increasingly also for service providers and for new (e.g. internet-based) business models. Many of these companies have to invest in modernizing their storage and warehouse facilities in the coming years. Companies with a manufacturing or distribution basis in high cost countries in Central Europe have been the main drivers of the automation trend. The rest of Europe, North America and increasingly also Asia/Pacific and South America are following this trend.

There are a lot of global trends that are causing change to the industry. These trends relate to core technologies and materials as well as the way how B2B and B2C transactions will be handled in the future. Most of these trends will therefore either directly or indirectly also have an impact on the intralogistics solution providers and their customers. The biggest impact will be in the transactions and ways of interaction with customers and the total information handling, which are directly related to the ever more globalized and digitalized business world. For instance the increase in e-commerce and the resulting delivery/return logistics demand more decentralized, smaller warehouses and "last mile" solutions. There will be a fundamental change in requirements to intralogistics core technology and product range with the implementation of smart machines with embedded solutions. Artificial intelligence has become a commercial reality and these new technologies will serve as enablers for more efficient solutions.

## 1.3 Strategic growth drivers

Kardex has defined three strategic drivers to exploit further growth and profit opportunities:

- Geographic expansion
- Leveraging existing customers with new solutions and services
- Entering new industry segments

The main geographic growth will be based on an increased market penetration in regions such as North America and Asia. In addition, Kardex will leverage its strong position and large installed base in the current markets to generate additional sales with existing customers through an extended solution and service offering. To further broaden the revenue streams, Kardex will continue to develop additional industry segments with existing standard solutions or new industry specific solutions.

## 1.4 Differentiating factors

### Strong market position

Kardex Remstar is a global market leader for dynamic storage, retrieval and material handling solutions. Kardex Mlog has a leading position in Central Europe for stacker cranes, conveyor systems and automated material handling systems. The two divisions are unified under a strong group brand.

### Large installed basis and strong service network

With over 140 000 installed Kardex Remstar machines and close to 1 000 Kardex Mlog warehouse systems, the Group has a broad existing customer base that counts on first-class after-sales services. Furthermore, many of these customers must and will upgrade their systems to further increase efficiency. Kardex is well positioned to benefit from these modernization needs.

### Industry specific stand alone solutions

Each division, separately as well as combined, offers stand alone subsystems for the various industry segments which are enjoying a rising demand.

### Global footprint

Kardex's global footprint offers a strong basis to provide sales and service worldwide and to partially mitigate the risk of local or regional downturns.

## 1.5 Key financials

### Key figures

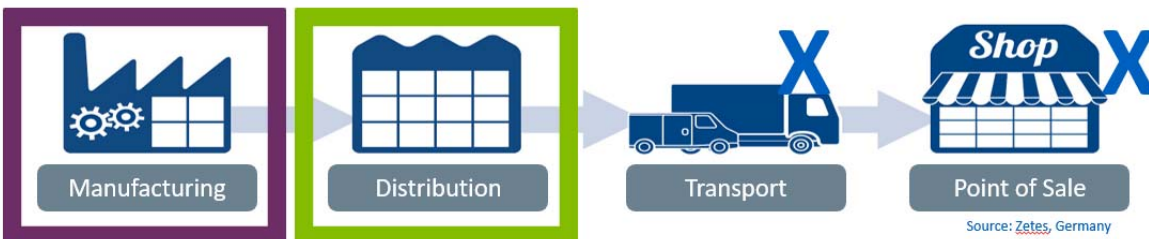
EUR millions

1.1.-31.12.	2019		2018		+/-%
Bookings	452.4	96.0%	481.2	113.7%	-6.0%
Order backlog (31.12.)	217.8	46.2%	230.1	54.3%	-5.3%
Net revenues	471.2	100.0%	423.4	100.0%	11.3%
Gross profit	171.3	36.4%	152.2	35.9%	12.5%
OPEX	107.8	22.9%	99.0	23.4%	8.9%
EBITDA	70.2	14.9%	59.0	13.9%	19.0%
Operating result (EBIT)	63.5	13.5%	53.2	12.6%	19.4%
Result for the period (net profit)	44.9	9.5%	38.3	9.0%	17.2%
Net cash flow from operating activities	44.8		48.1		-6.9%
Free cash flow	30.8		37.8		-18.5%
ROCE	51.2%		52.1%		
	31.12.2019		31.12.2018		+/- %
Net working capital	77.3		63.9		21.0%
Net cash	133.6		129.2		3.4%
Equity/Equity ratio	172.0	59.4%	153.3	57.9%	12.2%
Employees (FTE)	1 913		1 807		5.9%
	2019		2018		+/-%
Distribution per share (CHF)	4.50		4.00		12.5%

## 2. Kardex Company Profile

### 2.1 Introduction

Kardex is a leading provider of automated storage, retrieval and material handling systems in the intralogistics market. The intralogistics market covers the material logistics and handling but also the information management within manufacturing or distribution centers and aims to improve efficiency through increased performance and cost reduction. Intralogistics does not include the transportation outside the manufacturing and distribution centers.



The Group consists of the two divisions Kardex Remstar and Kardex Mlog. Both divisions are partners for their customers over the entire life cycle of a product or solution. The customer journey with Kardex includes all phases starting from design and conception to meet customer requirements, realization and start-up support and a continuous life cycle management.

Kardex has three manufacturing facilities in Europe a logistic and assembly facility and a manufacturing facility under construction in the US, and has over 1 900 employees in over 30 countries worldwide.

#### Manufacturing sites



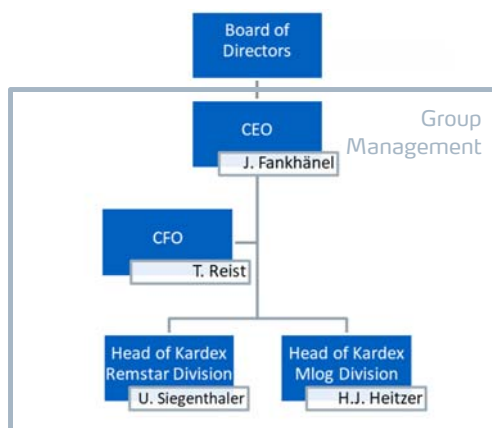
- A – Bellheim, Germany (Kardex Remstar)
- B – Neuenstadt am Kocher, Germany (Kardex Mlog)
- C – Neuburg, Germany (Kardex Remstar)
- D – Lexington, USA (Kardex Remstar)

## 2.2 Historical evolution

1977	Kardex incorporated under Swiss law
1981	Kardex AG opens the North American operations Remstar in Westbrook, ME
1987	Kardex listed on the SIX Swiss Exchange
1996	Acquisition of Megamat GmbH, Germany (former competitor in Germany)
2000	Acquisition of AFT Automation and Conveying Systems GmbH, Germany; Creation of the AFT Division
2001	Acquisition of 60% of the Stow Group, Belgium
2003	Kardex takes over the remaining 40% of the Belgian Stow Group; Creation of the Stow Division
2004	Split Kardex shares 1:5
2007	Sale of the AFT Division; Integration of Kardex International and Megamat to strengthen the Kardex Remstar Division
2008	Acquisition of Kardex Systems Inc. (Marietta, OH), a former competitor in the US
2009	Remstar (Westbrook, ME) and Kardex Systems Inc. (Marietta, OH) merge to form Kardex Remstar Inc.
2010	Acquisition of Mlog Logistics GmbH, Germany; Creation of the Mlog Division
2011	Change accounting standards to Swiss GAAP FER
2011/12	Strategic repositioning and recapitalization
2013	Sale of Stow Division

## 2.3 Group structure

Kardex consists of two entrepreneurial managed divisions, organized under the roof of a holding company. The divisions run as stand-alone units with full P&L and balance sheet responsibility. The central functions managed at holding level are kept at a minimum. Kardex is led by the Board of Directors and the Group Management, which consists of CEO Jens Fankhänel, CFO Thomas Reist, Head of the Kardex Remstar division Urs Siegenthaler and Head of the Kardex Mlog division Hans-Jürgen Heitzer.

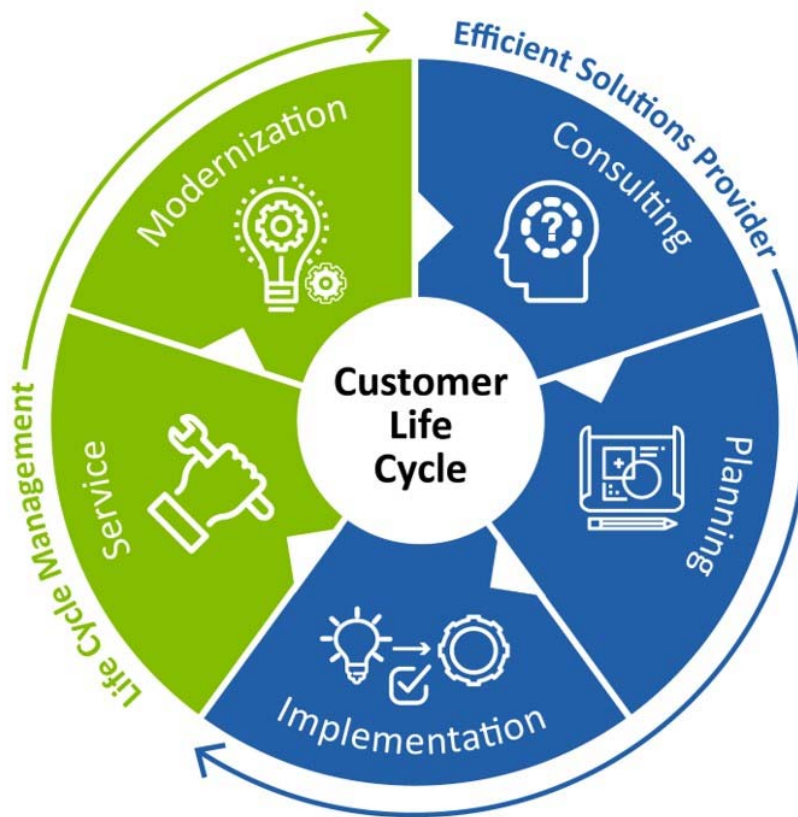


## 2.4 Business model and group strategy

The mission of Kardex is to provide solutions and services in order to increase the efficiency in storing and handling of goods and materials on a global scale. Kardex Remstar and Kardex Mlog are leading providers of solutions and services for automated storage, retrieval and materials handling. The Kardex portfolio includes products for heavy to light goods, software solutions, systems and life cycle services.

Based on a comprehensive product and service offering, the divisions aim to serve their customers as a life-time partner for warehousing solutions; starting from consulting to implementation through to service and life cycle management. In order to maintain and strengthen its competitive position through technological innovation and outstanding customer loyalty, Kardex is substantially investing in R&D activities as well as in the expansion of its service organization.

### Business Model

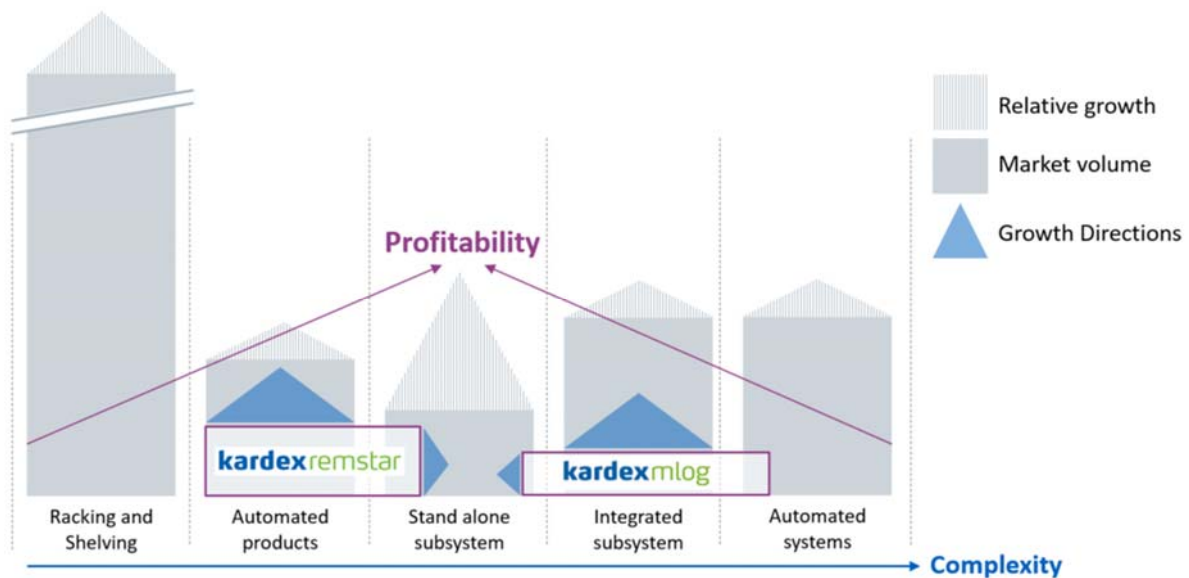


### Strategic growth directions

Kardex will move to a next level based on three main strategic growth directions – geographical expansion, leverage of existing customer segments with new solutions and services and entry into new industry segments. Both Kardex divisions are running business development activities to further penetrate their respective markets, to identify new countries and to define industry segments they will either increase the penetration or newly develop.

In terms of product and solutions offering, both divisions are increasing their efforts to further penetrate the solution category of stand alone subsystems, which shows one of the highest growth rates combined with attractive margins and lower risk levels. This market is driven by the need for standardization in many industries as well as new business model requirements from smaller (light industrial and service) companies, like internet shops.

Although other solution categories are growing at a healthy pace, profitability is lower in the static racking market (commodities) as well as in the most complex category (due to the higher project risks levels). Thus Kardex is not active in these solution categories, respectively only to a limited extent (Kardex Mlog).





**Static products**

The first category of static storage systems is typically used in low-bay warehouses for storage of palletized goods or for storage of smaller boxes, creation of modular warehouse shelving and racking solutions. Racking and shelving systems are the most basic requirements in any distribution, storage or material handling operation and include various types of storage racks such as cantilever storage racks, portable stacking racks, conventional pallet racks, etc.

**Automated products**

This category includes automated products such as carousels (vertical and horizontal), vertical lift modules, vertical buffer modules etc. Typical solutions offered in this segment include these products combined with complementary product like bins & accessories, pick-to-light products and various software solutions. Ergonomically designed to be user-friendly, the return of these solutions is mostly driven by reduction in labor cost and optimized space requirements.

**Stand alone subsystems**

This category evolves from the category of automated products by combining standard technology available from the above categories with the aim of improving efficiency and quality of the solution. These solutions are mostly tailored to industry specific requirements and can be applied for many customers within the same industry segment due to their standardization. Demand for stand alone subsystems is growing fast as it offers the best returns based on the combination of low risk and high level of standardization.

**Integrated subsystems/systems**

This category forms the last step of any intralogistics automation and includes mostly greenfield projects, when the customers move from one or more manually operated sites to one central logistics center. The fully automated equipment with a stand alone warehouse control software is categorized as integrated subsystems, whereas a fully automated equipment with a fully integrated software solution is categorized as system. The level of complexity is determined by the customer's logistics processes and the various levels of the integration of the information systems required to run the operation.

## 2.5 Financial targets

	Net sales growth*	EBIT margin*	ROCE
<b>Kardex Remstar</b>		8%-16%	
<b>Kardex Mlog</b>		4%-8%	
<b>Kardex</b>	4%-5% p.a.	> 6%	>20%

\* Over the cycle of 5 years

Dividend policy (pay-out ratio)	Net debt/EBITDA
Up to 75% of operational Net Profit	<2.5x

## 2.6 Kardex divisions

### 2.6.1 Division Remstar

#### 2.6.1.1 Introduction

##### Overview

##### Key figures

- Marketshare >35%\*
- > 1 600 FTE
- > 140 000 installed solutions worldwide
- 2 manufacturing sites in Germany
- 1 manufacturing site in the USA

##### Solutions

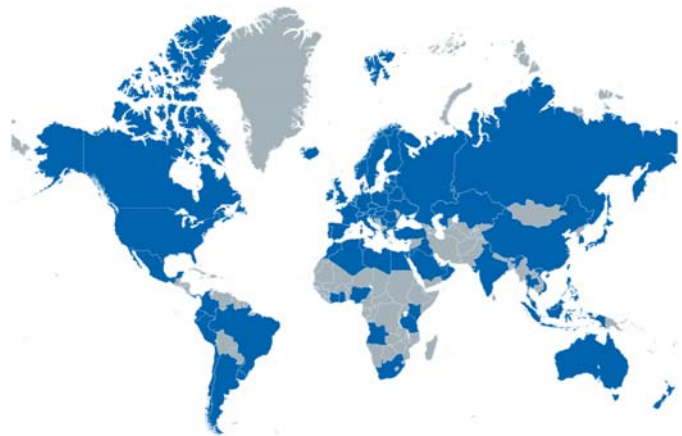
- Dynamic storage
- Retrieval and order picking
- Handling and automation

##### Product portfolio

- Vertical Lift Modules
- Vertical Carousel Modules
- Vertical Buffer Modules
- Horizontal Carousel Modules
- Software

\* company estimate

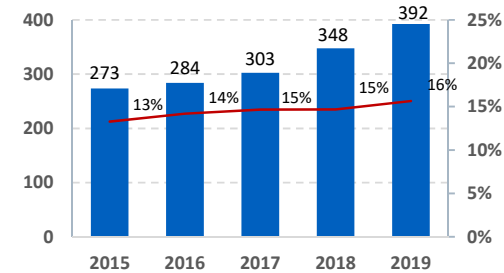
##### Entities, business partners & references (excerpt)



## Consolidated key figures for Kardex Remstar

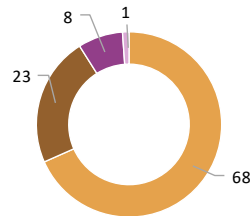
EUR millions	2019		2018		+/-%
Bookings	388.6	99.0%	381.3	109.7%	1.9%
Order backlog (31.12.)	159.8	40.7%	157.1	45.2%	1.7%
Segment net revenues	392.4	100.0%	347.5	100.0%	12.9%
EBITDA	66.8	17.0%	55.7	16.0%	19.9%
Operating result (EBIT)	61.4	15.6%	51.0	14.7%	20.4%
ROCE	45.9%		43.0%		
Employees (FTE on 31.12.)	1 610		1 511		6.6%

Net revenue and EBIT margin  
(in EUR millions)



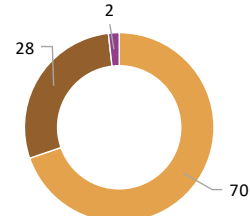
● Net revenue  
● EBIT margin

Net revenue by region  
2019 financial year in %



● Europe  
● Americas (North, Middle, South)  
● Asia/Pacific  
● Middle East and Africa

Net revenue by business unit  
2019 financial year in %



● New Business  
● Life Cycle Services  
● OEM

Kardex Remstar customers can be found in a broad range of industries, from highly industrialized through to office environment. Over 50% of the business is currently generated in four major segments – Machinery, Warehousing & Distribution, Electrics & Electronics and Automotive.

Segment Name	Today's Share
Mechanical Engineering	18%
Electronics	12%
Wholesale / Retail / E-Commerce	14%
Automotive / Transportation Equipment	13%
Metal	9%
Public Administration / Government	5%
Third-Party Logistics / Transportation	1%
Others	28%

The division has subsidiaries throughout Europe, Middle East/Africa, Asia and the US. For Kardex Remstar, the combination of local presence with a global service organization has become a crucial differentiator in terms of securing and gaining market share. Key success factors are high product quality, customer proximity and short response times, high and fast availability of spare parts and reduced general maintenance intervals. In addition, a professional global support network helps to ensure timely solutions to all customer needs.

Kardex Remstar’s business model consists of three business units – New Business, Life Cycle Service and OEM, of which the latter one is the newest, implemented to open up additional sales channels via dedicated business partners.

### New Business

This business unit is in charge of the customer journey from first touchpoint through to implementation and acceptance of delivered solutions. One of the main goals is to assure a continuous generation of new customers in existing and new industry segments via targeted marketing and business development activities.

### OEM

The implementation of the OEM strategy is a key cornerstone for the further development of Kardex Remstar. This new business unit aims to achieve a greater penetration of the intralogistics market with Kardex Remstar technology and to increase the capacity utilization rate of existing manufacturing sites generating economies of scale. In addition it provides a chance to enter geographical areas or industry segments that are currently not covered by Kardex Remstar.

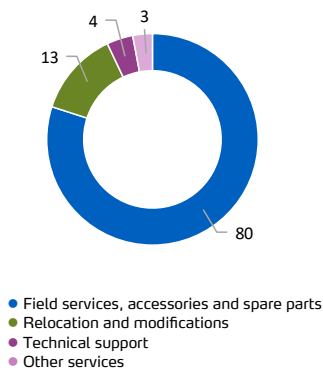
Targeted OEM partners range from companies that offer complementary product ranges to solution providers and integrators.

### Life Cycle Service

Life Cycle Service serves as lifetime partner supporting all customer needs from acceptance to the end of life of a single product or an entire system. It offers support and improves the customer’s installations in a proactive manner with a shift to more predictive activities. One of the main goals is to assure maximum equipment and system uptime to support highest productivity for the customers. Life Cycle Service solutions offered to customers can be divided in 3 main service products. The following exhibit shows the contribution of each service product to Kardex Remstar’s net sales.

#### Sales split LCS (2019)

in %



#### Field services, accessories and spare parts

- Service contract portfolio with three different levels "Base Care", "Flex Care" and "Full Care" covering preventive maintenance, repair and parts services
- Preventive maintenance and ad-hoc repair service for non-contract customers
- Spare parts services delivery to customers for preventive or corrective replacement
- Spare parts packages/kits to assure high performance and high availability of installed equipment
- After Sales accessories and software licenses

#### Technical support

- Remote support services for equipment and the installed software suite providing support via remote to minimize machine downtime in case no physical repair on-site is required

#### Relocation and modifications

- Move equipment due to customer needs to optimize workflow layout
- Safety upgrade kits to conform to new safety requirements
- Technology update packages for hardware and software
- Functional upgrade packages

#### Other services

- Training for various levels of customer user groups (operators, super users, maintenance, etc.)
- Technician certification programs for business partners

#### 2.6.1.2 Solution and product portfolio

Best-in-class equipment and software (product portfolio) is one of the most important success factors for profitable growth. All Kardex Remstar solutions will mainly be based on the Kardex Remstar's equipment and software portfolio. In addition, a combination with innovative 3rd party technology or cross-divisional solutions are complementing the solution portfolio offered to the customers to drive additional growth and to improve the competitive position of Kardex Remstar.

The new business product portfolio can be divided into 5 product families - Vertical Lift Modules (VLM), Vertical Carousel Modules (VCM), Horizontal Carousel Modules (HCM), Vertical Buffer Modules (VBM) and the Software Suite.

The following exhibit shows the product portfolio of Kardex Remstar.

#### Vertical Lifts

- Shuttle



#### Horizontal Carousels



#### Vertical Carousels

- Megamat
- Lektriever



#### Vertical Buffers

- LR 35
- LT 35



#### Software Suite

- Power Pick Global



Main customer benefits from installing Kardex Remstar solutions are:

- High reliability based on many years of engineering experience and high level of standardization
- Fast returns on invest due to low level of investment combined with increased picking efficiencies and space savings
- Customizable to special requirements and meeting industry specific needs (e.g. air conditioning, built-in fire protection, meeting industry specific requirements)

## 2.6.2 Division Mlog

### 2.6.2.1 Introduction

#### Overview

##### Key figures

- Strong market position in Germany
- > 290 FTE
- Close to 1 000 installed solutions worldwide
- 1 production site in Germany

##### Solutions

- Integrated material flow systems
- High bay warehouses
- Turnkey warehouse system solutions

##### Solution and product portfolio

- Integrated subsystems
- Stand alone subsystems
- Stacker crane systems
- Conveyor and warehouse technology

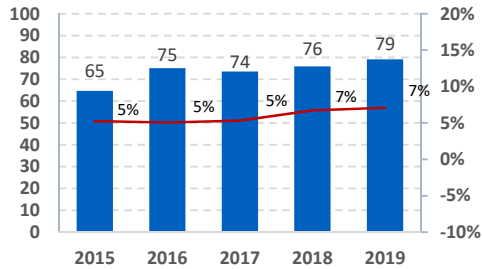
##### Entities, business partners & references (excerpt)



## Consolidated key figures for Kardex Mlog

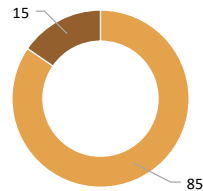
EUR millions	2019		2018		+/-%
Bookings	64.0	80.9%	100.0	131.8%	-36.0%
Order backlog (31.12.)	58.0	73.3%	73.2	96.4%	-20.8%
Segment net revenues	79.1	100.0%	75.9	100.0%	4.2%
EBITDA	6.6	8.3%	5.9	7.8%	11.9%
Operating result (EBIT)	5.6	7.1%	5.1	6.7%	9.8%
ROCE	33.5%		54.8%		
Employees (FTE on 31.12.)	291		287		1.4%

Revenues and EBIT margin  
(in EUR millions)



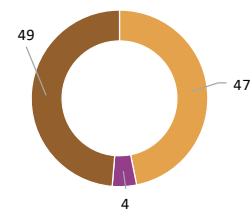
● Revenues  
● EBIT margin

Net revenue by region  
2019 financial year in %



● Germany  
● Rest of Europe

Net revenue by business unit  
2019 financial year in %



● Integrated Subsystems  
● Products  
● Life Cycle Services

Kardex Mlog has three business units: Integrated subsystems, Products and Life Cycle Services (incl. refurbishment).

Kardex Mlog's operates in the DACH region plus some selected countries in Europe. The development and introduction of standardized stand alone subsystems and the sales push for stacker cranes and conveyor modules will help to increase business volumes in a profitable way.

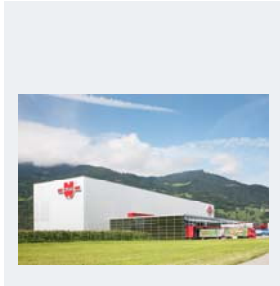


### 2.6.2.2 Solution and product portfolio

Kardex Mlog offers a full range of solutions and products for fully automated high bay warehouses for pallet and box (miniload) handling including pallet and box conveyors, monorail systems and stacker cranes. The portfolio consists of the stacker crane family, conveyor & transportation family and the warehouse management software.

The following exhibit shows the solution and product portfolio of Kardex Mlog.

#### Integrated subsystems



#### Stand alone subsystems

MTower



MSequence



MDynamic



MCompact



#### Stacker cranes used in integrated subsystems and stacker crane systems

Pallet cranes



Miniload crane



## Conveyor and warehouse technology used in integrated subsystems and stacker crane systems

Chain conveyors



Roller conveyors



Transfer units



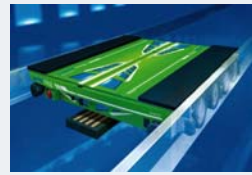
Monorail systems



Pallet lift



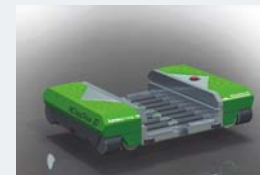
MMove



MSpacer



MCrossDrive



Main customer benefits from installing Kardex Mlog solutions are:

- High reliability of solutions and products based on many years engineering experience and high level of standardization
- Designed to meet the customer's requirements
- Efficient and fast warehouse logistic and material flow with low operating cost and reduced energy consumption

## 2.7 Corporate Governance

### 2.7.1 Board of Directors and Group Management

#### Board of Directors



**Philipp Buhofer**  
1959, Swiss citizen,  
HWV Horw/Lucerne

Chairman since 2011  
Member since 2004

**Since 1997**

Independent entrepreneur

**2002–2003**

Delegate and Chairman of the Board of Directors, EPA AG, Zurich, Switzerland

**1997–2002**

Member of the Board of Directors, EPA AG, Zurich, Switzerland

**1987–1997**

Purchasing and Sales and member of Executive Management, EPA AG, Zurich, Switzerland

**1984–1987**

Procurement and Marketing, Metro International (Baar, Düsseldorf and Hong Kong)



**Felix Thöni**  
1959, Swiss citizen,  
Dr. oec. HSG

Vice Chairman since 2016  
Executive Director from 2012 to 2016  
Member since 2011

**Since 2010**

Board Member, management consultant

**2003–2009**

CFO, Charles Vögele Holding AG, Pfäffikon, Switzerland

**1992–2002**

CFO, Carlo Gavazzi Holding AG, Steinhausen, Switzerland

**1988–1991**

Area Controller, Schindler Management AG, Ebikon, Switzerland



**Jakob Bleiker**  
1957, Swiss citizen,  
grad. phys. ETH, lic. oec. HSG

Member since 2012

**Since 2018**

Member of various Board of Directors

**2017**

Manager Business Unit Food, Bosch Packaging Technology, Robert Bosch GmbH, Beringen, Switzerland

**2011–2016**

Manager Confectionery and Food Division, Bosch Packaging Technology, Robert Bosch GmbH, Beringen, Switzerland

**2004–2011**

Manager Bosch Packaging Systems Division, Bosch Packaging Technology, Robert Bosch GmbH, Beringen, Switzerland

**2002–2003**

Manager Business Unit Sigpack Service and Specialty Market, SIG Holding AG, Neuhausen, Switzerland

**1998–2002**

Manager Customer Support Service and member of the Executive Board, Sulzer Textil AG, Rütli, Switzerland

**1988–1998**

Various management functions, Sulzer Group, Winterthur, Switzerland

**1986–1987**

Project Manager, Kannegiesser Maschinen AG, Ziefen, Switzerland



**Eugen Elmiger**

1963, Swiss citizen,  
BS in Electrical Engineering, HSLU Horw

Member since 2020

**Since 2011**

CEO, maxon international ag, Sachseln,  
Switzerland

**1991–2011**

Various management functions,  
maxon motor ag, Sachseln, Switzerland

**1990–1991**

Project Manager process control systems,  
Rittmeyer AG, Baar, Switzerland

**1987–1990**

Project Manager Engineering, RUAG,  
Emmen, Switzerland



**Andreas Häberli**

1968, Swiss citizen,  
Degree in electrical engineering ETH, PhD  
in micro engineering ETH

Member since 2020

**Since 2011**

Chief Technology Officer and member of  
the Executive Committee, dormakaba  
Group, Ruemlang, Switzerland

**2003–2010**

Head of Development and member of  
Management Board, Kaba AG, Wetzikon,  
Switzerland; from 2009 additionally Head  
of Development and member of Manage-  
ment Board, Kaba GmbH, Herzogenburg,  
Austria

**1999–2003**

Member of Management Board, Sensirion  
AG, Staefa, Switzerland

**1997–1999**

Chip Design Engineer, Invox, Silicon Valley,  
USA



**Ulrich Jakob Looser**

1957, Swiss citizen,  
grad. phys. ETH, lic. oec. HSG

Member since 2012

**Since 2009**

Partner, Berg Looser Rauber & Partners  
(BLR & Partners), Thalwil, Switzerland

**2001–2009**

Chairman (since 2005), Accenture AG  
(Switzerland), Zurich, Switzerland

**1987–2001**

Partner (since 1993), McKinsey & Company  
Inc., Zurich, Switzerland

**1983–1984**

Software development, Spectrospin AG,  
Fällanden, Switzerland

## Members of the Group Management



**Jens Fankhänel**  
Chief Executive Officer

1965, German citizen  
University degree in Electrical Engineering/ Specialization in Automation Engineering and Technical Cybernetics, University Chemnitz, Germany

**Since 2016**

CEO of Kardex Group

**2011-2018**

Head of Kardex Remstar Division

**2008-2010**

Managing Director WDS Region Europe 1, Swisslog AG, Buchs, Switzerland

**2005-2008**

Vice President and CEO Hub Central Europe, Dematic GmbH & Co. KG, Offenbach, Germany

**2002-2005**

Managing Director, Swisslog Australia, Epping, Australia

**1994-2002**

Senior Consultant/Director, i+o GmbH, Heidelberg, Germany



**Thomas Reist**  
Chief Financial Officer

1971, Swiss citizen  
MAS in Corporate Finance / Bachelor of Science FH in Business Administration, FHNW Zurich / Olten, Switzerland

**Since 2016**

CFO of Kardex Group

**2011-2016**

Head of Finance & Controlling on holding level, Kardex AG, Zurich, Switzerland

**2001-2011**

Group Controller / Head of Finance & Controlling / Department Head Finance, Angst+Pfister AG, Zurich, Switzerland / Paris, France

**1998-2001**

Head of Finance & Controlling / Controller, Zimex Aviation AG, Zurich, Switzerland



**Urs Siegenthaler**  
Head of Kardex Remstar Division

1959, Swiss citizen  
University Degree in Mechanical Engineering, Bern University of Applied Sciences, Biel; Postgraduate Studies in Business Management, Lucerne University of Applied Sciences, Horw, Switzerland

**Since 2019**

Head of Kardex Remstar Division

**2016-2019**

Head of New Business Kardex Remstar

**2011-2016**

Head of Life Cycle Service Kardex Remstar

**2008-2011**

Divisional Head of TGW Group, Austria

**2007-2008**

Senior VP Strategic Projects, Swisslog Group, Switzerland

**1999-2007**

Head of Region/Managing Director, Swisslog Group, Switzerland

**1996-1999**

Project Director, Swisslog Group, Switzerland

**1993-1996**

Head of Sales & Projects, Swisslog Group, Switzerland



**Hans-Jürgen Heltzer**  
Head of Kardex Mlog Division

1962, German citizen  
grad. mechanical engineer, Aachen Technical University, Germany

**Since 2011**

Head of Kardex Mlog Division

**2010-2011**

Managing Director, Mlog Logistics GmbH, Neuenstadt, Germany

**2002-2009**

Managing Director, Locanis AG, Unterföhring, Germany

**2000-2001**

Division Manager Distribution and Project Management automatic high rack storage systems, MAN Logistics, Heilbronn, Germany

**1996-2000**

Division Manager Systems, Mannesmann Dematic, South Africa

**1989-1996**

Project Manager "overall projects", Mannesmann Dematic, Offenbach, Germany

## 2.7.2 Extract of the Corporate Governance Report

The Kardex Group is divided into the two divisions or segments Kardex Remstar and Kardex Mlog.

The Kardex Group is led by the Board of Directors and the Group Management, which consists of CEO Jens Fankhänel, CFO Thomas Reist, Urs Siegenthaler, Head of the Kardex Remstar division and Hans-Jürgen Heitzer, Head of the Kardex Mlog division.

Board of Directors	Functions / Committees
<b>Philipp Buhofer</b> (1959, Swiss citizen) Since 2004	Chairman of the Board
<b>Felix Thöni</b> (1959, Swiss citizen) Since 2011	Vice Chairman of the Board Audit Committee, Compensation and Nomination Committee
<b>Jakob Bleiker</b> (1957, Swiss citizen) Since 2012	Member Chairman Audit Committee
<b>Eugen Elmiger</b> (1963, Swiss citizen) Since 2020	Member Compensation and Nomination Committee
<b>Andreas Häberli</b> (1968, Swiss citizen) Since 2020	Member Member Audit Committee
<b>Ulrich Jakob Looser</b> (1957, Swiss citizen) Since 2012	Member Chairman Compensation and Nomination Committee
Group Management	Functions
<b>Jens Fankhänel</b> (1965, German citizen)	CEO
<b>Thomas Reist</b> (1971, Swiss citizen)	CFO
<b>Urs Siegenthaler</b> (1959, Swiss citizen)	Head of Kardex Remstar Division
<b>Hans-Jürgen Heitzer</b> (1962, German citizen)	Head of Kardex Mlog Division

### «one share – one vote»

The company's 7 730 000 fully paid-up registered shares have a nominal value of CHF 0.45 (CHF 0.45) each. Each registered share corresponds to one vote at the General Meeting ("one share – one vote" principle) and is eligible for dividends. The right to apply the special rules concerning treasury shares held by the company is reserved, particularly in relation to the exception from the entitlement to dividends.

### **Registration rules**

The registered shares of Kardex AG may be purchased by any legal or natural person. Nominee registrations are permitted. The purchasing of shares is subject to the following limitations on nominee registrations:

The company may refuse registration as a shareholder with voting rights in the share register if upon request the purchaser does not expressly declare that they hold the shares in their own name and for their own account. The Board of Directors is entitled to delete an entry in the share register with retroactive effect from the date of that entry if such entry was based on false information. It may hear the shareholder or beneficiary in question in advance.

In each case, the shareholder or beneficiary in question must be immediately informed of the deletion.

### **Shareholders' participation rights**

On 31 December 2019, there were 2 095 (1 910) shareholders entered in the share register. A majority of them had their registered office or domicile in Switzerland. Each Kardex AG registered share entitles the holder to one vote at the General Meeting. There are no voting right restrictions. Furthermore, any shareholder has the right to have his shares represented at the General Meeting by written proxy by an independent voting proxy, another shareholder with voting rights or a third party.

Shareholders representing at least 1% of the shares issued may request in writing that items be added to the agenda, specifying the proposed resolutions. Such items must be submitted to the Board of Directors in writing at least 40 days before the General Meeting.

### **Duty to make an offer upon change of control**

In accordance with § 4 of the company's Articles of Incorporation, a purchaser of Kardex AG shares is only obliged to make a public offer under the terms of article 135 (the opting-up clause) of the Financial Market Infrastructure Act (FMIA) if his holding exceeds 49% of the company's voting stock.

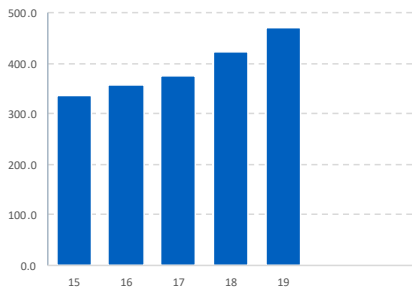
### **Statutory auditors**

PricewaterhouseCoopers AG, Zurich, Switzerland, have been the statutory auditors of Kardex AG since 2014.

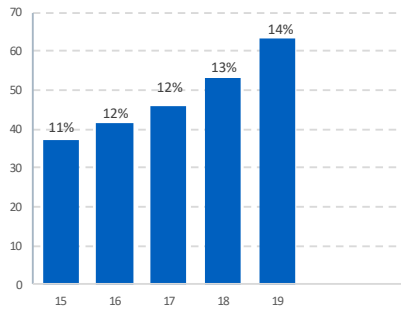
# 3. Key figures and share information

## 3.1 Key figures at a glance

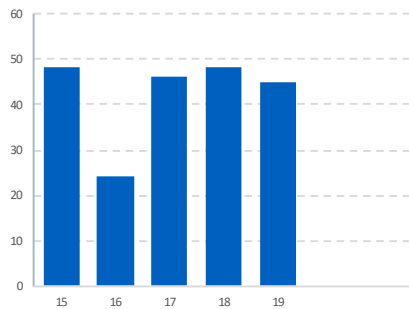
Net revenues  
in EUR millions



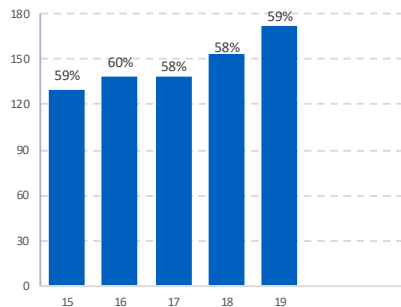
Operating result (EBIT) and EBIT margin  
in EUR millions and in %



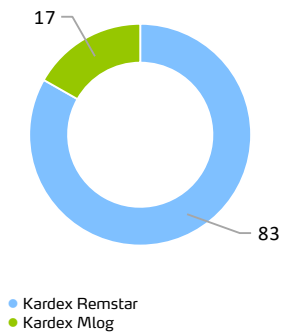
Net cash flow from  
operating activities  
in EUR millions



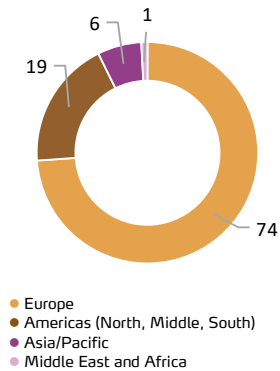
Equity and equity ratio  
in EUR millions and in %



Net revenue by segment  
Business year 2019 in %



Net revenue by region  
Business year 2019 in %





## 3.2 Financial highlights 2019

### Key figures

EUR millions

1.1.-31.12.	2019		2018		+/-%
Bookings	452.4	96.0%	481.2	113.7%	-6.0%
Order backlog (31.12.)	217.8	46.2%	230.1	54.3%	-5.3%
Net revenues	471.2	100.0%	423.4	100.0%	11.3%
Gross profit	171.3	36.4%	152.2	35.9%	12.5%
OPEX	107.8	22.9%	99.0	23.4%	8.9%
EBITDA	70.2	14.9%	59.0	13.9%	19.0%
Operating result (EBIT)	63.5	13.5%	53.2	12.6%	19.4%
Result for the period (net profit)	44.9	9.5%	38.3	9.0%	17.2%
Net cash flow from operating activities	44.8		48.1		-6.9%
Free cash flow	30.8		37.8		-18.5%
ROCE	51.2%		52.1%		
	31.12.2019		31.12.2018		+/- %
Net working capital	77.3		63.9		21.0%
Net cash	133.6		129.2		3.4%
Equity/Equity ratio	172.0	59.4%	153.3	57.9%	12.2%
Employees (FTE)	1 913		1 807		5.9%
	2019		2018		+/-%
Distribution per share (CHF)	4.50		4.00		12.5%

### 3.3 Consolidated balance sheet

EUR millions	31.12.2019	31.12.2018
Property, plant and equipment	41.2	33.0
Intangible assets	4.1	2.6
Financial assets	6.6	6.6
<b>Non-current assets</b>	<b>51.9</b>	<b>42.2</b>
Inventories and work in progress	19.2	15.0
Trade accounts receivable	65.4	62.5
Other receivables	15.4	11.4
Prepaid expenses	4.3	4.6
Cash and cash equivalents	133.6	129.2
<b>Current assets</b>	<b>237.9</b>	<b>222.7</b>
<b>Assets</b>	<b>289.8</b>	<b>264.9</b>
Share capital	2.5	2.5
Capital reserves	31.3	31.2
Retained earnings and translation differences	138.7	120.7
Treasury shares	-1.0	-1.1
<b>Equity before minorities</b>	<b>171.5</b>	<b>153.3</b>
Minority interests	0.5	-
<b>Equity</b>	<b>172.0</b>	<b>153.3</b>
Non-current provisions	20.6	19.4
<b>Non-current liabilities</b>	<b>20.6</b>	<b>19.4</b>
Trade accounts payable	17.3	14.2
Current provisions	6.0	4.9
Accruals	54.7	48.4
Other current liabilities	19.2	24.7
<b>Current liabilities</b>	<b>97.2</b>	<b>92.2</b>
<b>Liabilities</b>	<b>117.8</b>	<b>111.6</b>
<b>Equity and liabilities</b>	<b>289.8</b>	<b>264.9</b>

### 3.4 Information on Kardex share

#### Share capital and capital structure

	2019	2018	2017	2016	2015
Par value per share (CHF)	0.45	0.45	4.05	7.35	10.35
Total registered shares	7 730 000	7 730 000	7 730 000	7 730 000	7 730 000
Number of treasury shares	11 640	13 195	15 149	16 700	-
Number of dividend-bearing shares	7 718 360	7 716 805	7 714 851	7 713 300	7 730 000
Registered capital (CHF 1 000)	3 479	3 479	31 307	56 816	80 006
Total voting rights	7 718 360	7 716 805	7 714 851	7 713 300	7 730 000

#### Key stock exchange figures per share

CHF	2019	2018	2017	2016	2015
Share price high	178.40	180.00	120.00	99.90	82.00
Share price low	112.20	106.40	94.20	57.80	40.20
Closing rate	163.00	113.40	119.60	95.25	78.00
Average volume per trading day (no. of shares)	17 167	17 110	14 415	12 596	16 528
Market capitalization - CHF million (31.12.)	1 259.99	876.58	924.51	736.28	602.94

#### Key figures per share

CHF	2019	2018	2017	2016	2015
Earnings per share (EPS) <sup>1</sup> - basic	6.39	5.74	4.59	4.34	3.94
Earnings per share (EPS) <sup>1</sup> - diluted	6.39	5.74	4.59	4.34	3.94
Price earning ratio (closing rate)	25.54	19.80	26.12	21.95	19.79
Dividend <sup>2</sup>	4.50	4.00	-	-	-
Reduction of nominal value	-	-	3.60	3.30	3.00
Equity	24.23	22.36	21.17	19.18	18.10

<sup>1</sup> Calculated by the generally accepted method (net result/average number of outstanding shares).

<sup>2</sup> 2019: Distribution of a dividend as proposed to the Annual General Meeting to be held on 14 April 2020.

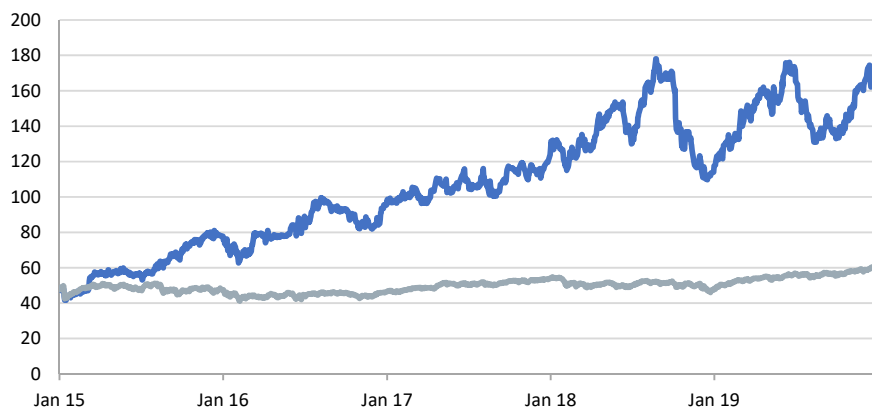
The registered shares of Kardex AG are traded by the Swiss Reporting Standard of SIX Swiss Exchange in Zurich, Switzerland. They are contained in the SPI (Swiss Performance Index).

Stock exchange symbol: KARN; Swiss securities number: 10083728; ISIN number: CH0100837282; Bloomberg: KARN SW Equity; Reuters: KARN.S. Current prices can be seen at [www.kardex.com](http://www.kardex.com).

## Share price performance

### Kardex Holding AG share

On SIX Swiss Exchange 1 January 2015 to 31 December 2019 based on the daily closing price in CHF



- Registered shares of Kardex Holding AG (KARN)
- Swiss Performance Index (SPI)

## Shareholder structure

As at 31 December 2019, there were 2 095 shareholders (1 910) entered in the share register. The following shareholders held 3% or more of the outstanding share capital of Kardex Holding AG at year end:

	31.12.2019	31.12.2018
BURU Holding AG and Philipp Buhofer	23.3%	23.6%
Alantra Partners S.A.	8.1%	8.4%
Invesco Ltd.	5.1%	

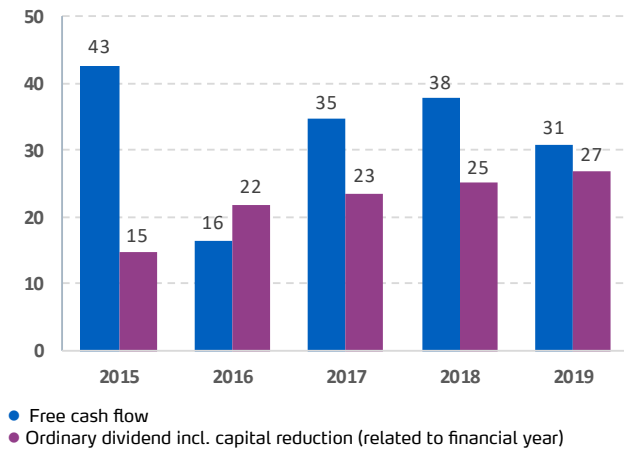
### 3.5 Attractive dividend policy

Based on a resolution at the Annual General Meeting, up to 75% of the net profit (based on the consolidated group result) will be paid out to the shareholders.

Over the last four years the free cash flow has been able to more than cover the dividends.

#### Cash flows cover payouts to the shareholders

EUR millions



# 4. Industry outlook

## 4.1 Intralogistics overview

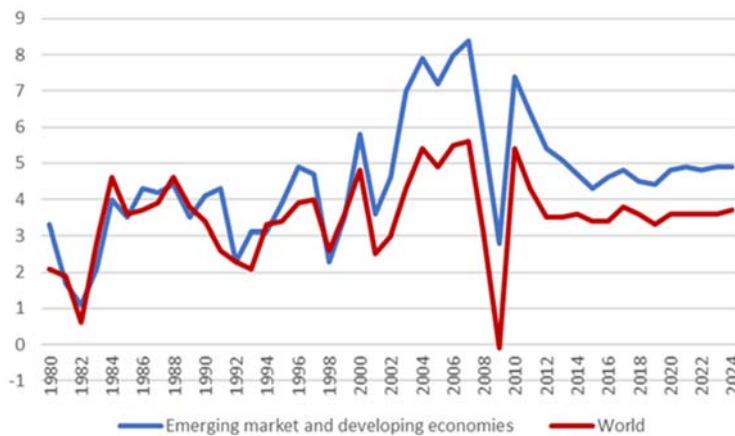
Modern, smooth intralogistics has a major impact on the productivity of companies in any industry sector and of any size. Whatever goods are stored, a reliable and efficient storage and retrieval system significantly reduces personnel resource requirements and warehousing costs. Excellent logistics processes are expressed in the form of low stock levels, short supply times, on-time delivery, low error rate and low logistics costs. For manufacturing and warehousing and distribution companies, the task is to plan, control and monitor logistics processes with a very high degree of precision.

## 4.2 Global trends and drivers impacting intralogistics

### 4.2.1 Sound global demand

The global economic activity is expected to grow on a stable pace, with a projected worldwide growth of 3.3% in 2019, 3.6% in 2020 and 3.6% in 2021, according to the World Economic Outlook from the IMF. The estimates are also positive for the years ahead. The growth in the emerging markets and developing economies are expected to outpace the world real GDP growth by about 1%, which bodes well for the Kardex divisions whose strategies are geared up to profiting from the geographical expansion.

Real GDP growth (in %)



Source: IMF World Economic Outlook

The overall intralogistics market moves in line, albeit with a time lag with the global economy. This cyclicity is induced in the industry by its end users who, in line with any down-swing, postpone or cancel their orders but on the other hand have to invest extensively in any given economic up-swing. This cyclicity and the associated time lags were also observable during the last economic crisis as well as the subsequent economic recovery. The time lag between economic recovery and increase in intralogistics orders or shipments is approximately 9–12 months and is driven by factors such as capital intensity of the installed solutions and dependency of new orders on capacity expansion. Although Kardex has been impacted by this cyclicity in the past, the increased revenues generated through after-sales services, which today accounts for around 30% of total revenues, substantially reduced the impact of economic cycles on the company and its corresponding vulnerability.

#### 4.2.2 Increase in e-commerce

More and more companies are adapting to e-commerce resulting in an exploding number of goods which need to be stored and picked and ultimately forces the companies to optimize their supply chain and logistics. E-commerce is setting new standards, with tight delivery deadlines and first-rate service. Many companies will have to change their overall supply chain strategy; instead of a centralized distribution center, many smaller, decentralized distribution hubs must be available to ensure a quick or same-day shipping. Clear order processes and returns procedures are absolutely essential for a company's success in the e-business. With returns substantially increasing, reverse logistics will become a major competitive factor in the e-commerce business. Through the implementation of new affordable, flexible automated storage and retrieval systems, the reverse logistics process can be simplified and managed at lower cost.

#### 4.2.3 Industry 4.0

The broad penetration and application of modern IT creates a network where smart machines can share information with one another and can work independently or together with humans, making modern production and distribution more flexible and efficient. Modern machines are able to collect data, analyze them and take decisions or provide advice upon them. Industry 4.0 gives rise to a need for change from a central to an embedded intelligence and thus there will be a fundamental change in requirements to intralogistics core technology and product range.

All these changes will affect total supply chains, taking intralogistics to the next level. Smart businesses will need smart products and solutions, where real-time data will be shared among machines, robots, employees, suppliers and customers to enhance the productivity, reliability and ultimately profitability.

#### 4.2.4 Cloud computing

The delivery of hosted services over the internet enables companies, organizations and private individuals to consume shared computing resources, such as virtual machine, servers, storage or applications, as a utility rather than having to build and maintain local servers or personal devices. Cloud platforms are enabling new business models and services, such as Software as a Service (SaaS), also known as on-demand software, hosted software or web-based software.

These decentralized network systems make it easier to gather, monitor, analyze, and distribute data across the entire value chain. It helps in improving inventory management, mobile field services, and mobile sales, along with compatibility with other mobile devices. Besides eliminating the cost for hardware acquisition, installation, maintenance and even IT staff, organizations can benefit from automatic software updates, accessibility from any location and cross device compatibility. These are new revenue opportunities for intralogistics providers, uplifting after-sales services into a new dimension. Not only by generating more predictable and stable revenues but also by increasing customer efficiency and loyalty.

#### 4.2.5 Ageing society and stronger health and safety regulations

One of the great achievements of the last century is the rise in life expectancy, not only in the western economies but also in the developing countries. This great accomplishment of increased longevity also comes with significant long-term economic consequences. An aging population means fewer working-age people in the economy, which leads to a supply shortage of qualified workers, higher labor costs, increased health care costs and pension commitments.

This leads to not only a need for an increased level of automation in the manufacturing industry, but also to adjustments on the machines, tools, devices and software to suit the requirements of an aging workforce. The industry will

have to adapt to support and accommodate the user needs of the older worker. More and more organizations are starting to deploy ergonomically designed automation systems which help workers complete their tasks while simultaneously eliminating the risk of injury. In addition to enhancing safety, the devices can boost productivity and reduce a variety of costs – positioning both workers and companies for operational success.

In addition to the higher standards required for an aging workforce, stronger health and safety regulations are being implemented for which companies will have to comply with. This can also be seen as an opportunity for companies to modernize and automate their intralogistics, offering a more efficient working space while at the same time substantially decreasing the risk of worker injury.

#### 4.2.6 After-sales service and support

Product or system related services (which include support, refurbishment, maintenance, repair and engineering services) are getting more and more important. Due to increasing competition from low cost manufacturing locations like China, India and other Asian countries, product related service business offers higher top line and bottom line growth to be derived from significant differentiation and increased brand loyalty. Due to increasing competition, intralogistics companies are focusing on providing consultative value added services to their customers after the normal sales cycle.

With the implementation of new technologies under the “Industry 4.0” framework, intralogistics providers will also be able to monitor their machines in real time and give insights and cost saving information to their clients. This helps the clients in proactively identifying and addressing potential problems. The machine downtime is drastically reduced as clients can repair or replace critical parts before they have to shut down the machine. And manufacturers can predict after-sales services throughout the lifetime of machines leading to higher availability of the correct spare parts and lower maintenance cost for the clients.



# 5. Peers

## 5.1 Competition occurs mostly on divisional level

Overall, Kardex competes with many large and mid-size companies which are operating businesses similar to one or both divisions of Kardex. It is important to note that Kardex is not competing as a whole because it operates with two independent entrepreneurially managed divisions.

Kardex Remstar enjoys market leadership in the dynamic storage solutions market in many countries with a global market share of approx. 35%-40%. A long-standing experience in the dynamic storage market, a broad range of automated storage and retrieval solutions, a global presence and first-class after-sales services are the factors that give Kardex Remstar an edge over its competitors. Today, about 80% of total revenue of Kardex Mlog is generated in the German market. Kardex estimates that Kardex Mlog ranks amongst the first three manufacturers of stacker cranes in Germany and is leading in certain niche markets.

The following table lists various peers (direct competitors) of Kardex by division.

Kardex Remstar	Kardex Mlog
Modula S.p.A.	SSI Schäfer Fritz Schäfer GmbH
Hänel GmbH & Co. KG	Dematic/HK Systems (Kion Group)
SSI Schäfer Fritz Schäfer GmbH	Swisslog (KUKA Group)
SencorpWhite	KNAPP AG
Dexion (Constructor Group AS)	viastore SYSTEMS GmbH
EffiMat Storage Technology A/S	LTW Intralogistics GmbH
Electroclass	Stöcklin Logistik AG
	Vanderlande Industries (Toyota Industries Corp.)
	Körber AG
	Gebhardt Intralogistics Group

The majority of these companies is held privately or is a division of a larger group.

# Disclaimer

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