



Kardex Investor Day

The University Children's Hospital Zurich, 04 November 2025

Agenda

1 Welcome Alexandre Müller

2 Kardex Healthcare Business Thomas Larsen

3 University Children's Hospital Sandro Faerber

4 Tour of Children's Hospital Philipp Nobel / Thomas Larsen / Roger Remy

5 Kardex Business Update Jens Hardenacke / Thomas Reist

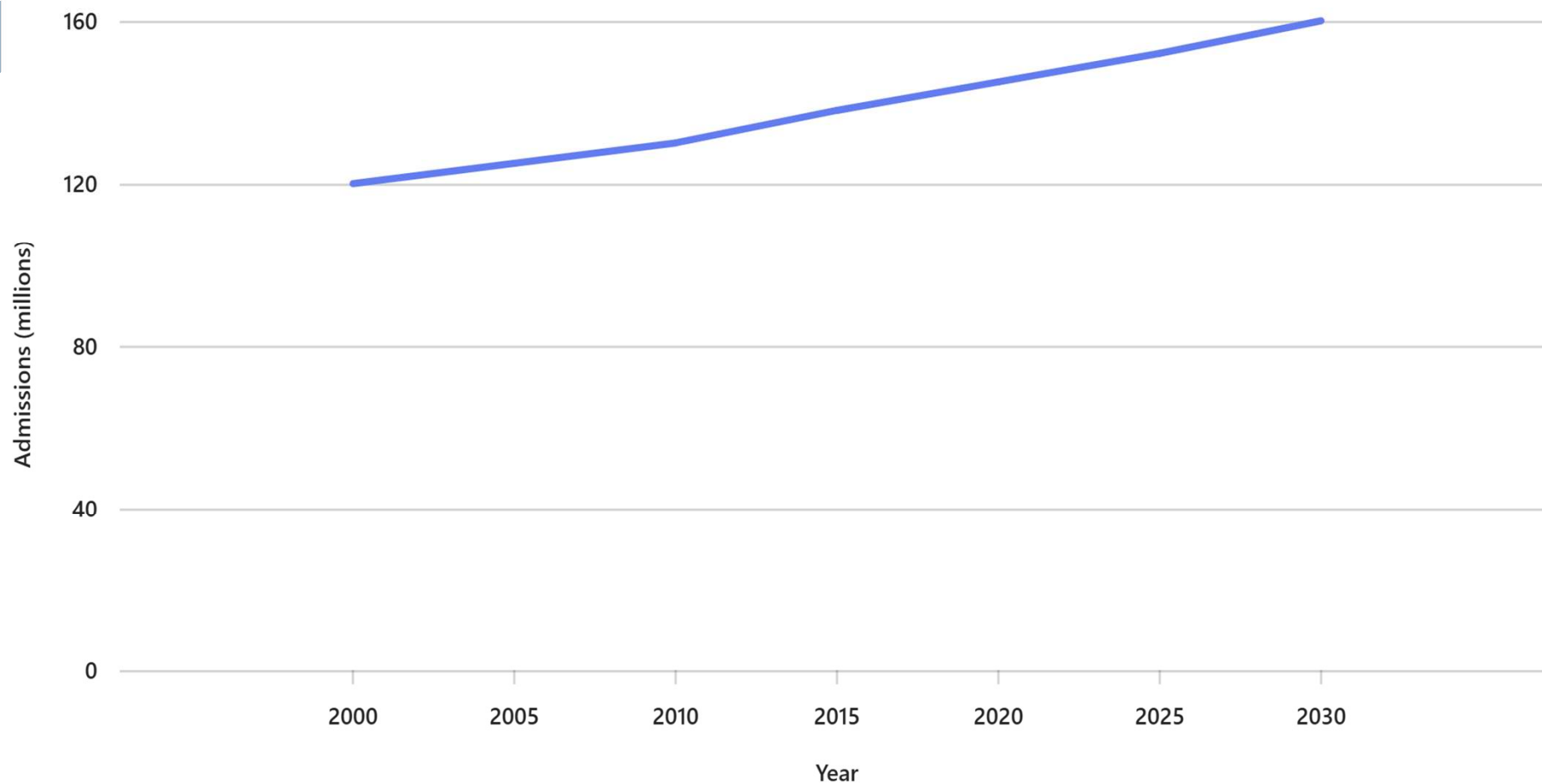
6 Q&A

Introduction

- Focusing on new industry specific areas – Hospitals is one of them
- Thomas Larsen brings over 25 years of healthcare experience, leading hospital logistics development
- Key challenges in hospitals ↔ Kardex solutions
- Focus on Kinderspital Zurich and Nordic hospital cases demonstrates diverse logistics solutions
- Improving efficiency and patient care
- Modern logistics enhance hospital operational efficiency and significantly improve patient experience



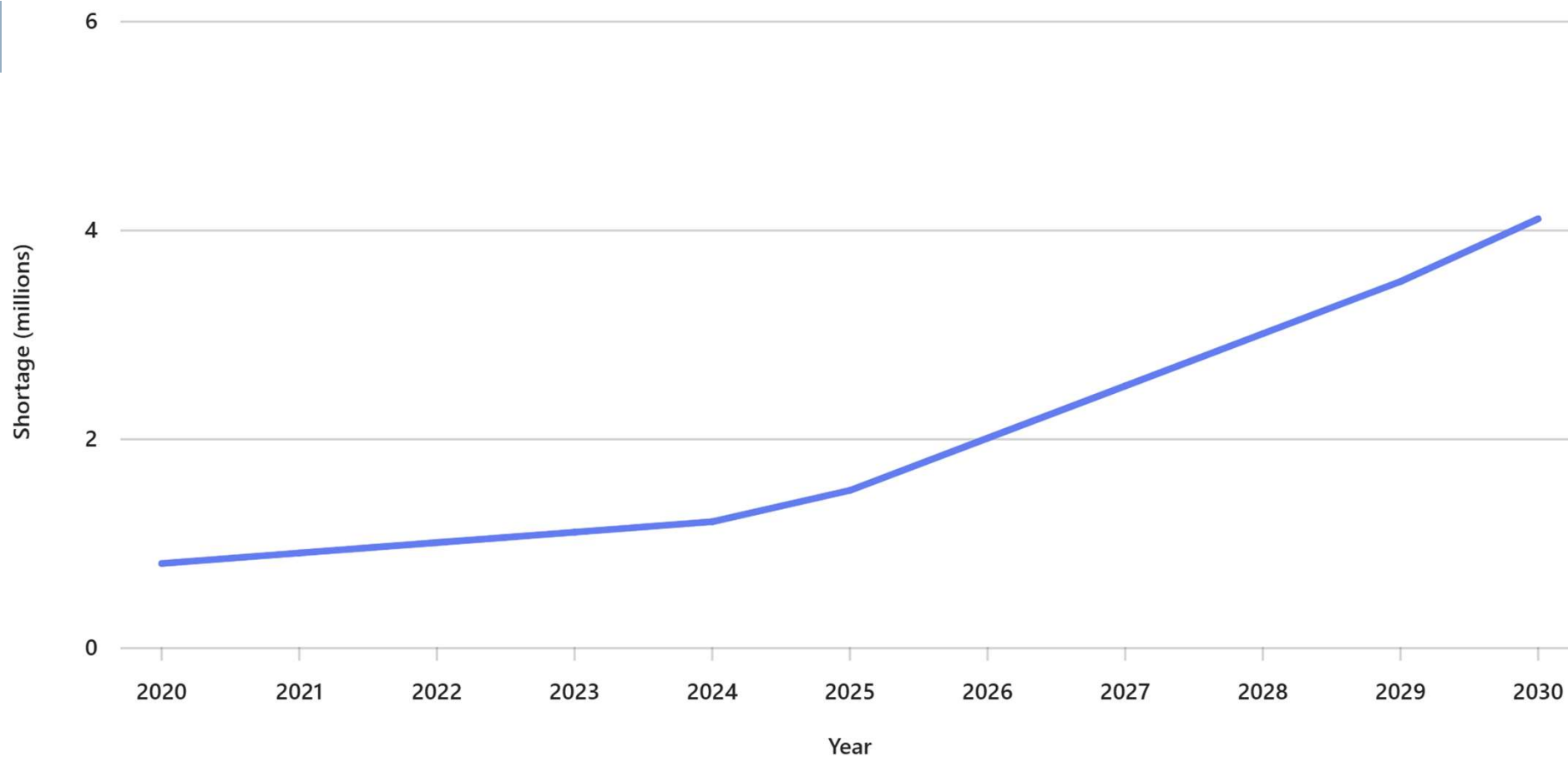
Introduction – Admissions*



*total Europe

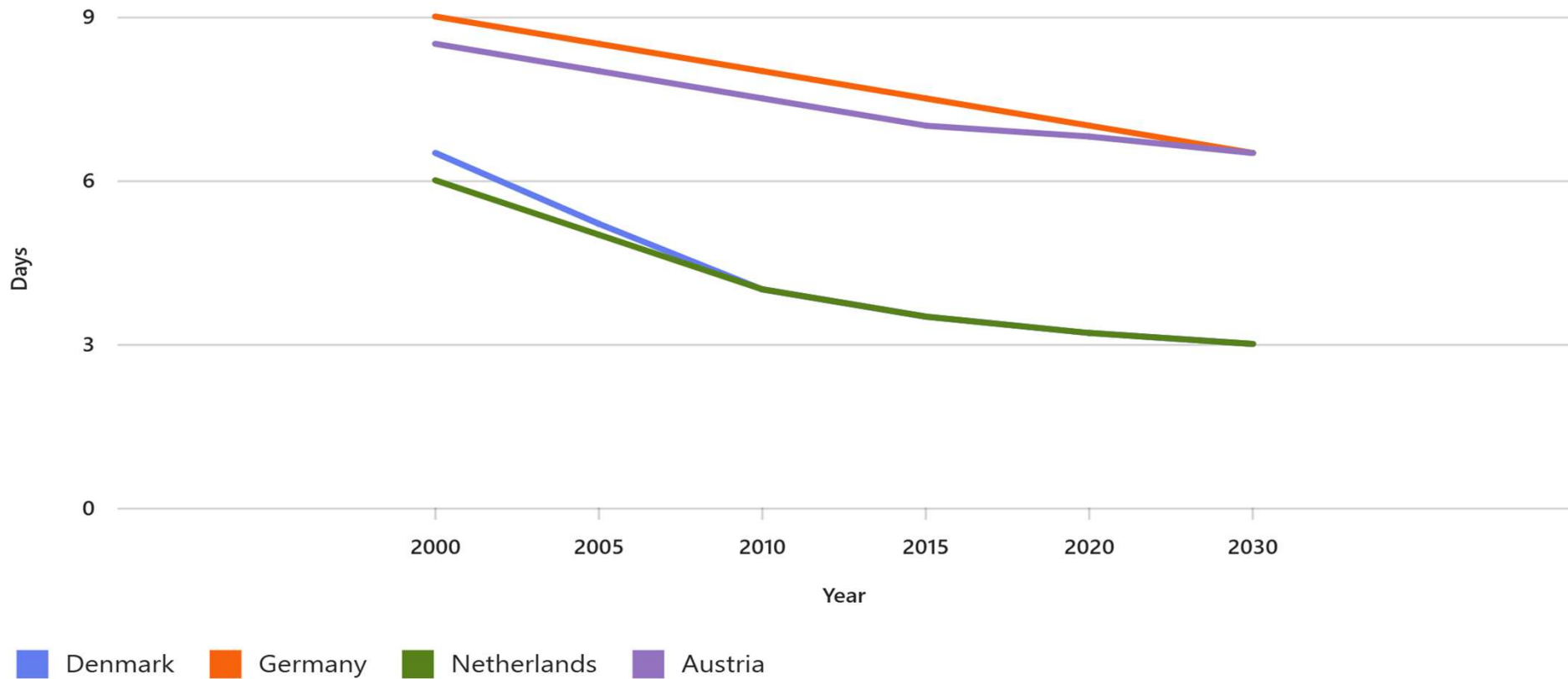
[Source: Healthcare resource statistics - beds - Statistics Explained - Eurostat](#)

Introduction – Key Personal shortage



Source: Healthcare shortages are 'threat' to EU's social resilience | EPP Group in theCoR

Introduction – Average days in Hospital



[Source: Average length of stay, all hospitals - European Health Information Gateway](#)

Daily Medical Equipment and Consumables

Medical Equipment and Consumables per Inpatient

Category	Examples	Kardex Storage Suitable
Wound Care & Dressings	Gauze, plasters, hydrogel, tape	Yes
Injection & Infusion	Syringes, needles, IV sets, saline bags	Yes
Personal Protective Equipment	Gloves, masks, gowns, face shields	Yes
Surgical Supplies	Sterile instruments, sutures, scalpels	Yes
Diagnostic Supplies	Blood tubes, urine containers, test strips	Yes
Medical Electronics	Batteries, electrodes, monitor cables	Yes
Catheters & Tubes	Urinary catheters, feeding tubes	Yes
Cleaning & Disinfection	Surface disinfectants, wipes, hand sanitizer	Yes
Textiles & Linens	Sheets, gowns, disposable linens	Yes
Pharmaceuticals	Medications, ointments, inhalers	Yes
Hospital Bed	Patient resting and treatment	Yes
IV Pole	Holding infusion bags and equipment	Yes
Wheelchair	Patient mobility	Yes
Mobile Monitor Stand	Transporting vital sign monitors	Yes



Smart Hospital Logistics

Processes in a hospital

The traditional way of designing a hospital

- Supplies to different floors and wards
- A hospital contains of **many small stocks** spread over the entire hospital – to always have the material nearby
- **Each ward orders to their own stock** which creates multiple stocks of same products within a hospital
- This creates **unnecessarily high stock levels**. When it's empty in my stock, where do I find the material?
- The inbound goods must be **delivered to all ward stocks**. After unpacking, the waste is brought back again
- **Goods transport operated in elevators** that should have been used for patients



What does this mean...?

- At a large Danish hospital, management confirms that in average a porter spends **1 hour per day** waiting in front of elevators
- With 420 porters working 200 days per year would mean a 10% spend handling beds which equals with 8'400 hours used only for waiting or **4 FTE's!**
- Visitors must wait up to 20 min for an elevator
- At Karlstad Hospital (SE), nurses spend up to 4 hours per shift to pick and distribute items
- Introducing automated storage solutions saves up to 90% space. With a building cost of +5'000 EUR/m², this obviously results in a very short ROI

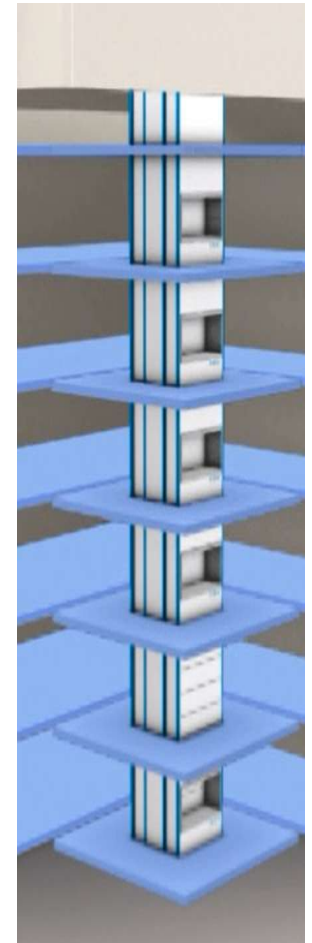
At the same time, Kardex solutions free-up capacity in elevators and give more time for porters, nurses etc. to patient related work

Why not bring well-known benefits from the industry into Healthcare



Supplies storage

- All supplies are handled in a **central storage** which is accessible from all relevant floors
- Within the central storage, wards can have access to all material
- No need for wards to have their individual safety stock which results in a **lower total stock**
- FIFO and full traceability
- All goods are **unpacked** in the logistics department and stored directly in the central storage
- **No transportation of goods or waste through elevators**



Bed storage

- Handling beds and larger equipment
- Often placed in corridors or in the basement, far away from where they are needed



Bed storage solution: VLM Shuttle with floor even loading

- **Specially developed bed trays**, adapted to handle different sizes of beds
- Able to load and unload through **front and rear side access openings**
- After beds have been prepared and cleaned in the washing area, the beds are **stored** in the units and are immediately available on all floors
- A bed is delivered to the ward in **one minute** instead of waiting 15 min for a porter being available to bring it via the public elevators



Bed storage

Challenges in hospital logistics – managing beds

- Block space in corridors
- Time-consuming transportation
- Not available when needed



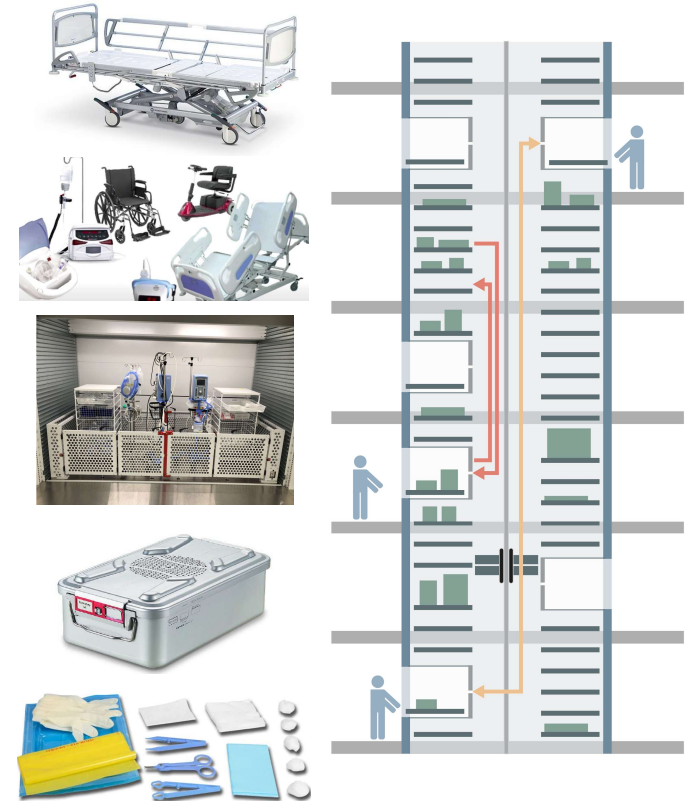
Efficient bed storage

- Clean corridors due to centralized storage
- Automated transportation between floors
- Beds available when & where needed



Hospital application

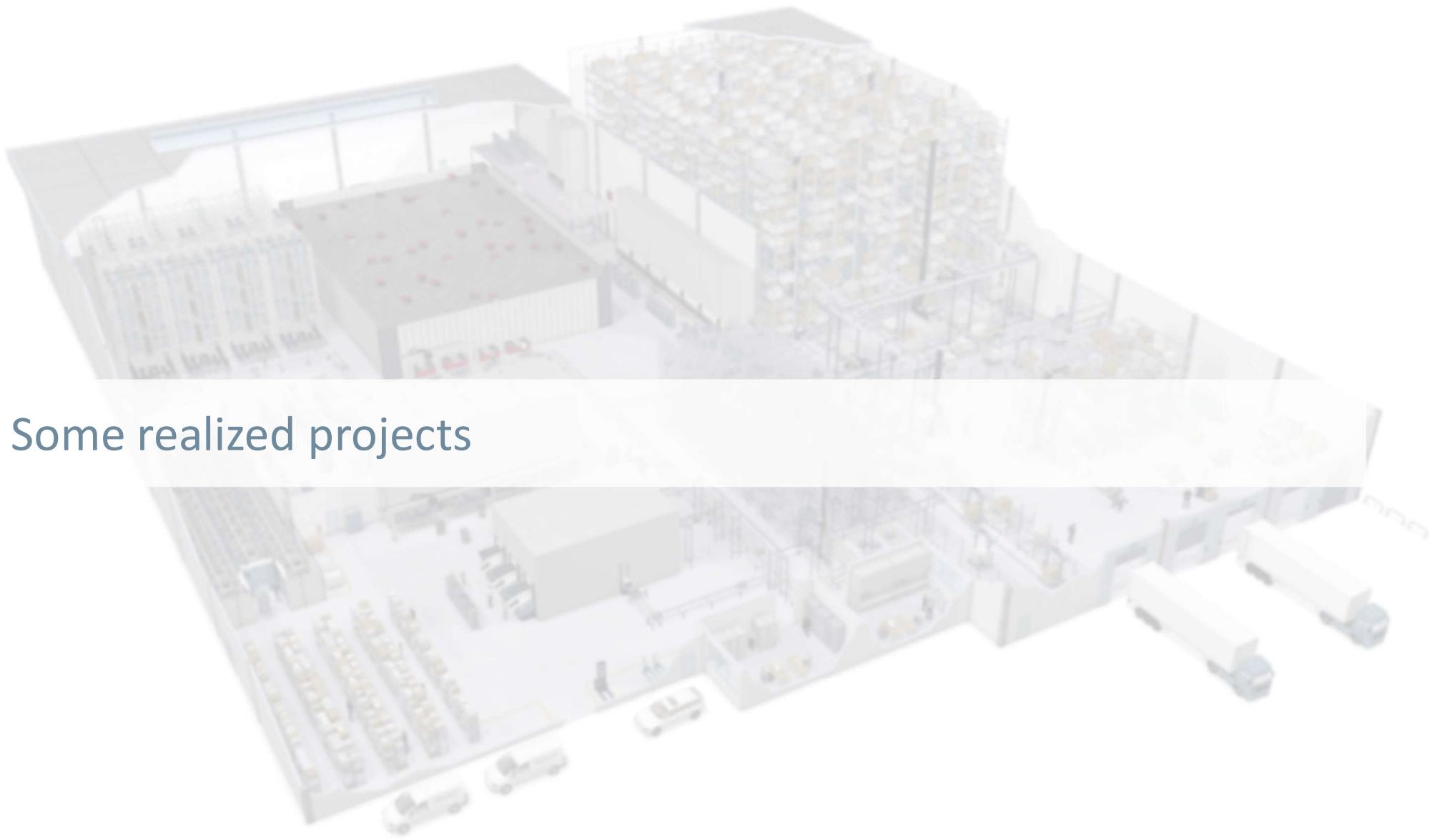
- Preferred unit type: VLM Shuttle
- Main features:
 - Shuttle up to 60 meters (more to come)
 - Access opening on floor level
 - Multiple access openings (up to 12 are possible)
 - Modular special equipped trays
 - Partly charging functionality on trays
 - Speed roller door
 - Hospital design
 - Easy load/un-loading
 - Optional:
Clean room or hygienic environment



Reducing healthcare-associated infections (HAIs) with Kardex solutions

- HAIs affect 5-7% of hospitalized patients in high-income countries
- In Denmark alone, this equals to **around 60'000 patients per year**
- **Dedicated storage:** Isolation of used beds from patient care areas
- **Space optimization:** Compact vertical storage eliminates clutter in corridors
- **Reduced manual handling:** Minimizes staff exposure to contaminated beds
- **Automated washing integration:** Ensures contaminated beds follow a closed-loop process before being reused
- **Traceability:** Links to hospital IT for many numbers, expiry dates, and usage history

→ **Outcome:** Kardex solutions help reduce HAIs by combining **automation, hygienic workflows, and traceability**, resulting in safer patients' environment, optimized space, and improved infection control.



Some realized projects

kardex

Kinderspital Zurich, Switzerland



Customer pain | Challenges | Starting position

- In the central warehouse, an automated storage system based on the "goods to person" principle was tendered. The system is designed as a horizontal carousel due to the low ceiling heights and the different sized containers.
- In order to retrieve material without personnel during the night shift, they would like to have a fully automated system.
- For the storage of surgical instruments, VLMs should be designed to combine sterilization and the pre-operative zone. Two independent devices should be available to ensure redundancy.

Kinderspital Zurich, Switzerland



Solution | Products

- Sterile goods storage:
 - 1x Shuttle 250-1250x610x8750 & Led-Navigator
 - 1x Shuttle 250-1650x610x8750 & Led-Navigator
 - Power Pick Systems (standalone / no interface)
- Both VLMs have two access openings



UZ Leuven | Belgium

Industry Segment: Healthcare / Pharmaceuticals / Hospitals

Website: <https://www.uzleuven.be/en>



Introduction

UZ Leuven is the largest University Hospital in Belgium. The hospital is constantly expanding. In this phase they are expanding their facilities and in 1 of the buildings they want to centralize their logistic processes.

WHY: Customer Pain / Growth

The current daily process of supplying hospital departments with materials like medicine, bandages, etc. is inefficient and operated from multiple locations. In the new facility UZ Leuven is aiming for an efficient, ergonomically friendly and centralized process.

WHAT: Solution / Products

4 Extended Kardex Compact Buffer : (26 segments, 8 m height) with a turntable and conveyor access opening on 1st floor combined with Conveyor system.
4 Shuttle XP500 -2450 : (2x 18.650mm with 2 access openings and 2 x 18.650 mm with 3 access openings) + Fire doors & Gas extinguishing system
PPG to manage as well the VBM as the VLM processes (including 90 days special programming) . Conveying managed by partner company Maas.

HOW: Application / Customer Process

Compact buffer extended: Order fulfillment with batch picking. Inbound preparation and inbound process over the conveyor system.
Storage on the Shuttles for the clinical studies and other products stored for several levels.

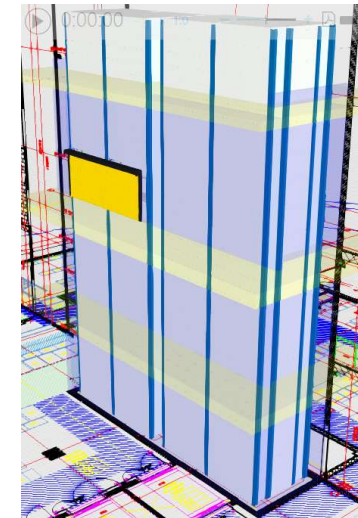
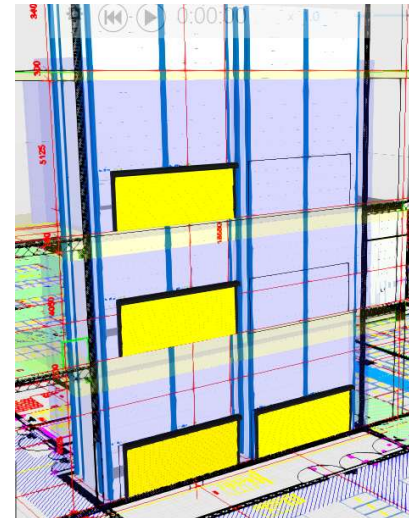
UZ Leuven | Belgium

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- 26 segments on 8 m height
- Bins 600 x 400 x 120 h with insert bins 1/8, 1/4, 1/2, 1/1 of 170 mm H
- 5594 locations.



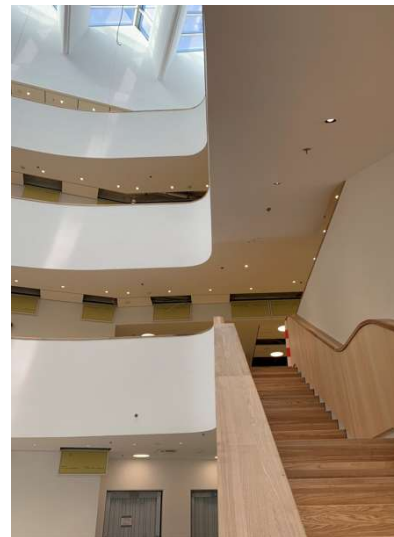
- 4 Shuttle 500 xp 2450 x 864 / 18 m
- Average of 100 trays per unit.

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Realized Projects

Torshavn Hospital, Faroe Islands

- Modern architecture requires modern logistics solutions
- 2 bed units and 1 supply unit
- Height: 20.5m



Realized Projects

Karlstad Hospital, Sweden

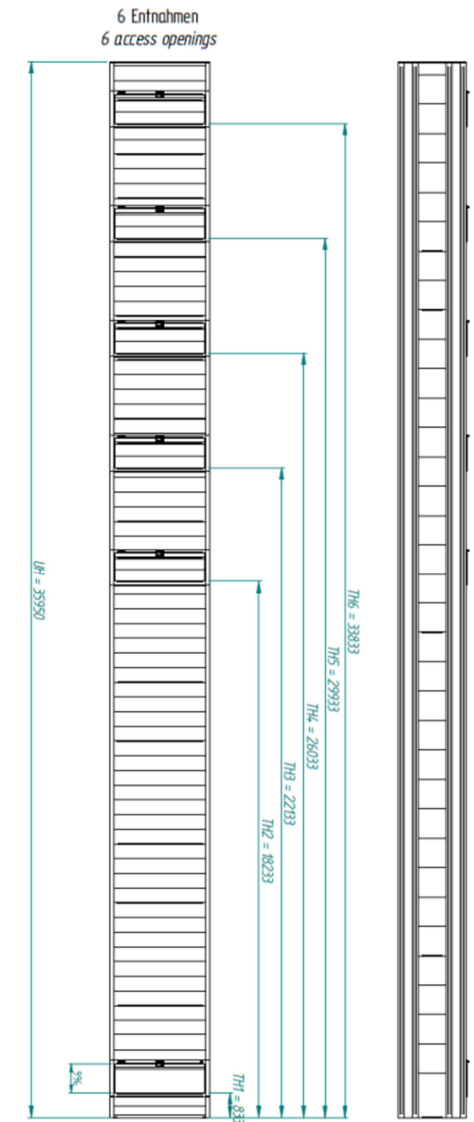
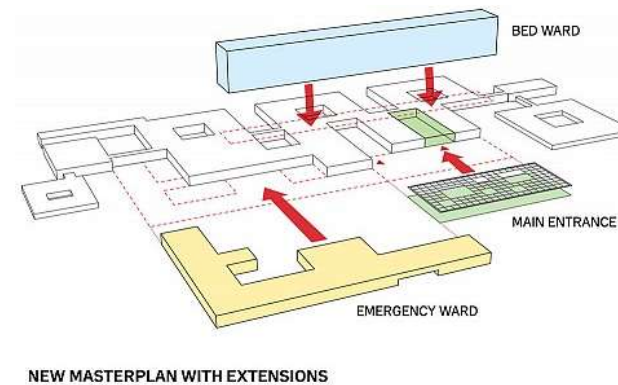
- One Shuttle for supplies to different floors
- Height: 25m
- 5 access openings
- Goods receive, unpacking/storing from the basement
- Picking from different floors
- Power Pick Global Software



Realized Projects

Kolding Hospital, Denmark

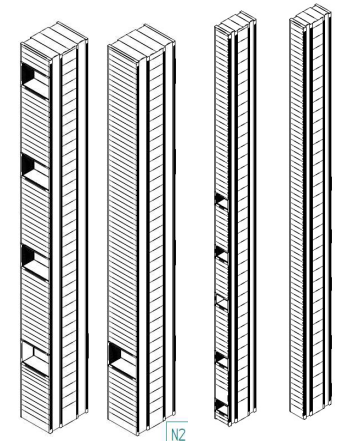
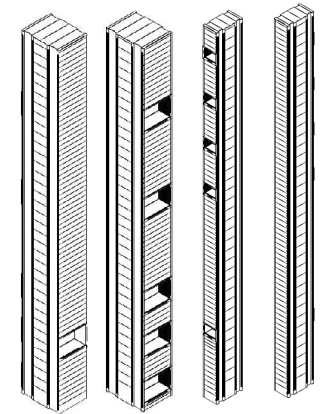
- Two Shuttles for supplies to different floors
- Height: 36m
- 6 access openings each
- Goods receive, unpacking/storing from the basement
- Picking from different floors



Realized Projects

Children's Hospital, Finland

- 2 Shuttles for supplies to different floors
- 2 Shuttles for beds and other large equipment
- 5 - 6 access openings each
- Unit heights up to 38.5 m
- Power Pick Global Software



References

Links

- [Case Study: Karlstad](#)
- [Hospital Logistics Made Easy: Save Time, Space & Costs with Kardex](#)
- [Case study: Optimized warehouse and logistics in the New Children's Hospital with Kardex Shuttle](#)
- [Hospital Logistics | Climate and Cleanroom Storage | Kardex](#)
- Warehouse Insights – Hospital Logistics



Adobe Acrobat
Document



About myself



Thomas Larsen, MBA

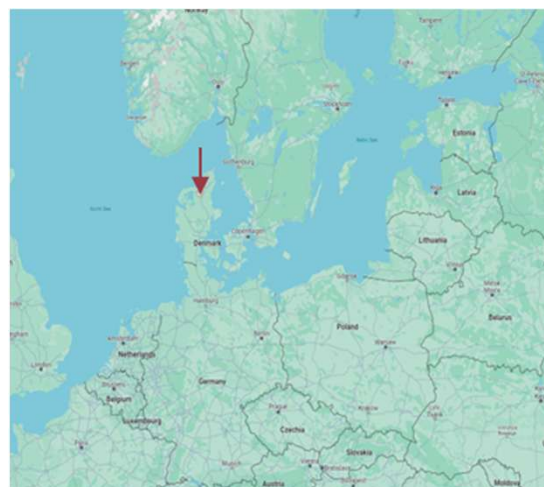
Director Business Development
Hospital Logistics

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- 52 years old, living in Denmark
- 25+ years experience in the Healthcare sector and Public Tender environment
 - Swisslog Healthcare (10y)
 - Siemens Healthcare (10y)
 - Engineering/planning hospitals (6y)
- Since January 2024 working for Kardex as global responsible for hospital solutions



Thank you for your attention!

Thomas Larsen

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Children's Hospital - Zurich

Solution Summary

Kardex Remstar as the general contractor



AS Intra-Move

kardexremstar



UNIVERSITÄTS-
KINDERSPITAL
ZÜRICH

GILGEN
LOGISTICS SYSTEMS

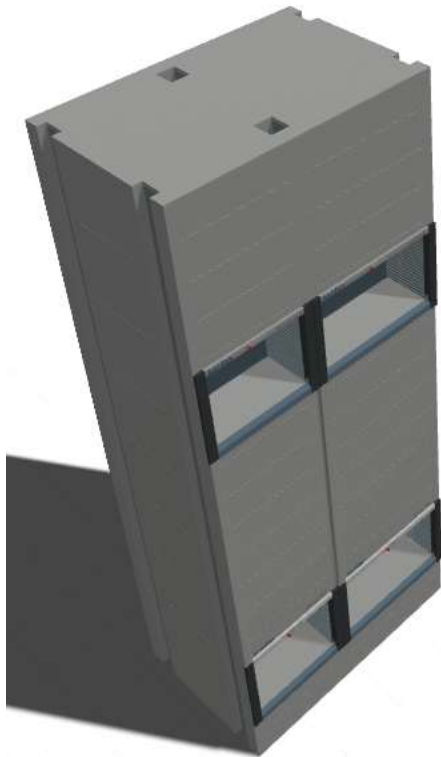


marti
systeme ag

nexus / **schweiz**

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Surgical equipment



Instacount

- QR-Code «GTIN*»
 - Sieve designation
 - Sieve number
 - Expiration date

*GTIN = Global Trade Item Number

** FEFO = First Expire, First Out

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- Goods identification over GTIN
- Goods issue via scan according to reference schematic
- Considering FEFO**
- Goods issue in case of emergency withdrawal

Central warehouse (end-to-end integration)



NEXUS

- Master data
- Purchase orders to suppliers
- Customer deliveries within the hospital

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- Inbound and outbound goods
- Stock keeping and inventory ownership
- Emergency withdrawals



Investor Day Kinderspital Zürich

04 November 2025

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About the Kardex AutoStore Team



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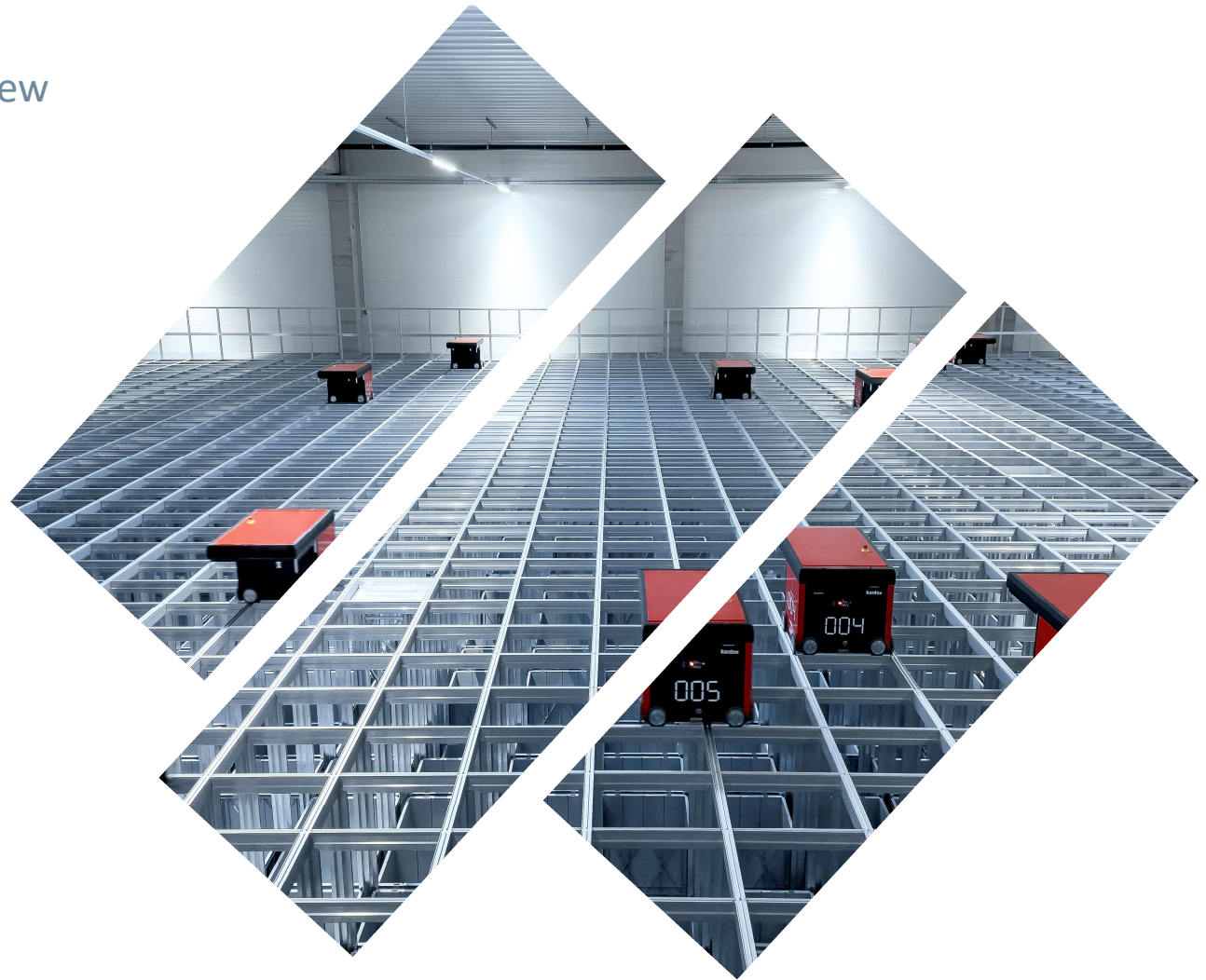


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Agenda

- Kardex AutoStore - an overview
- Innovations
- Healthcare References

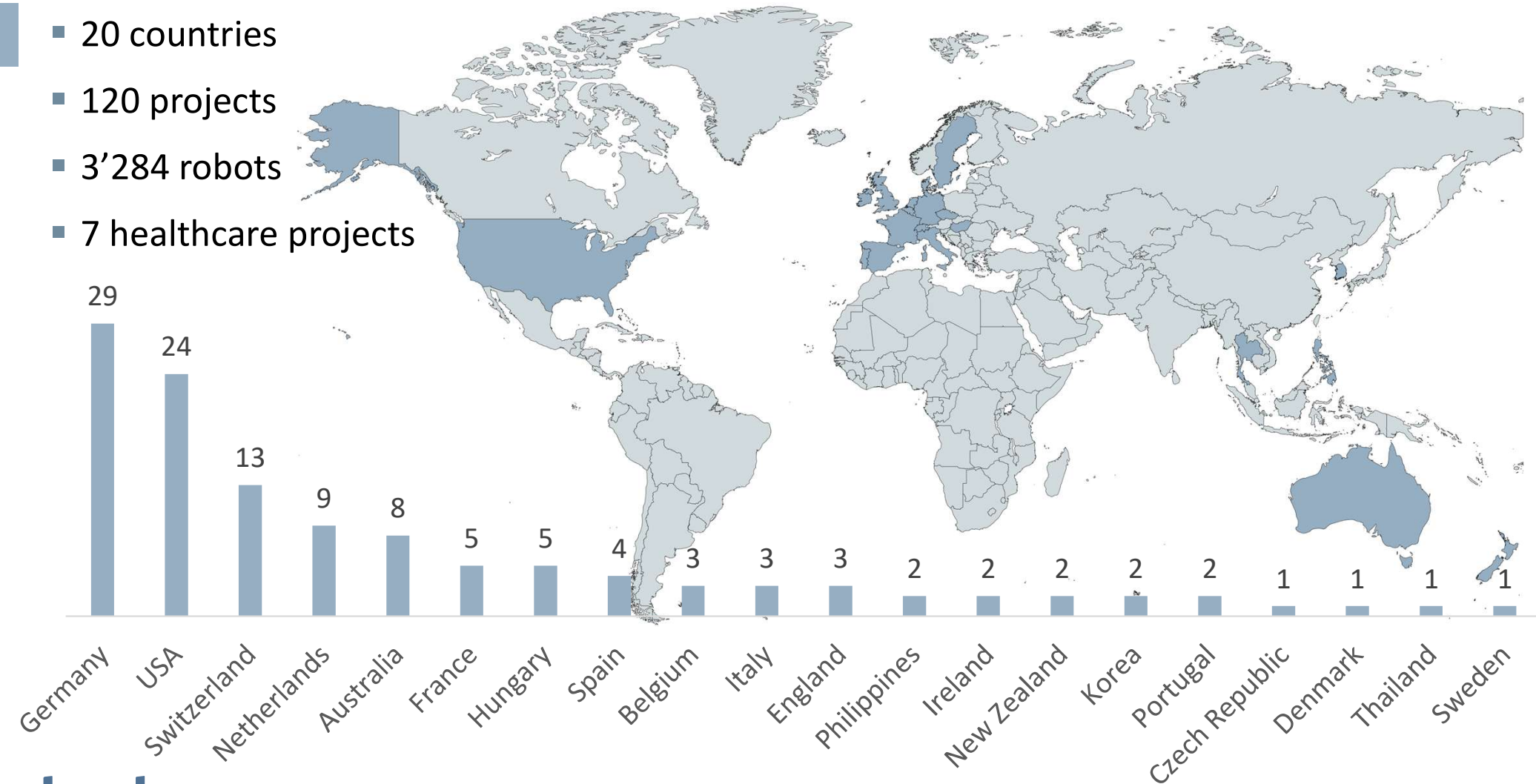




Kardex AutoStore - an overview

Won projects since February 2021 (start of KXAS business)

- 20 countries
- 120 projects
- 3'284 robots
- 7 healthcare projects



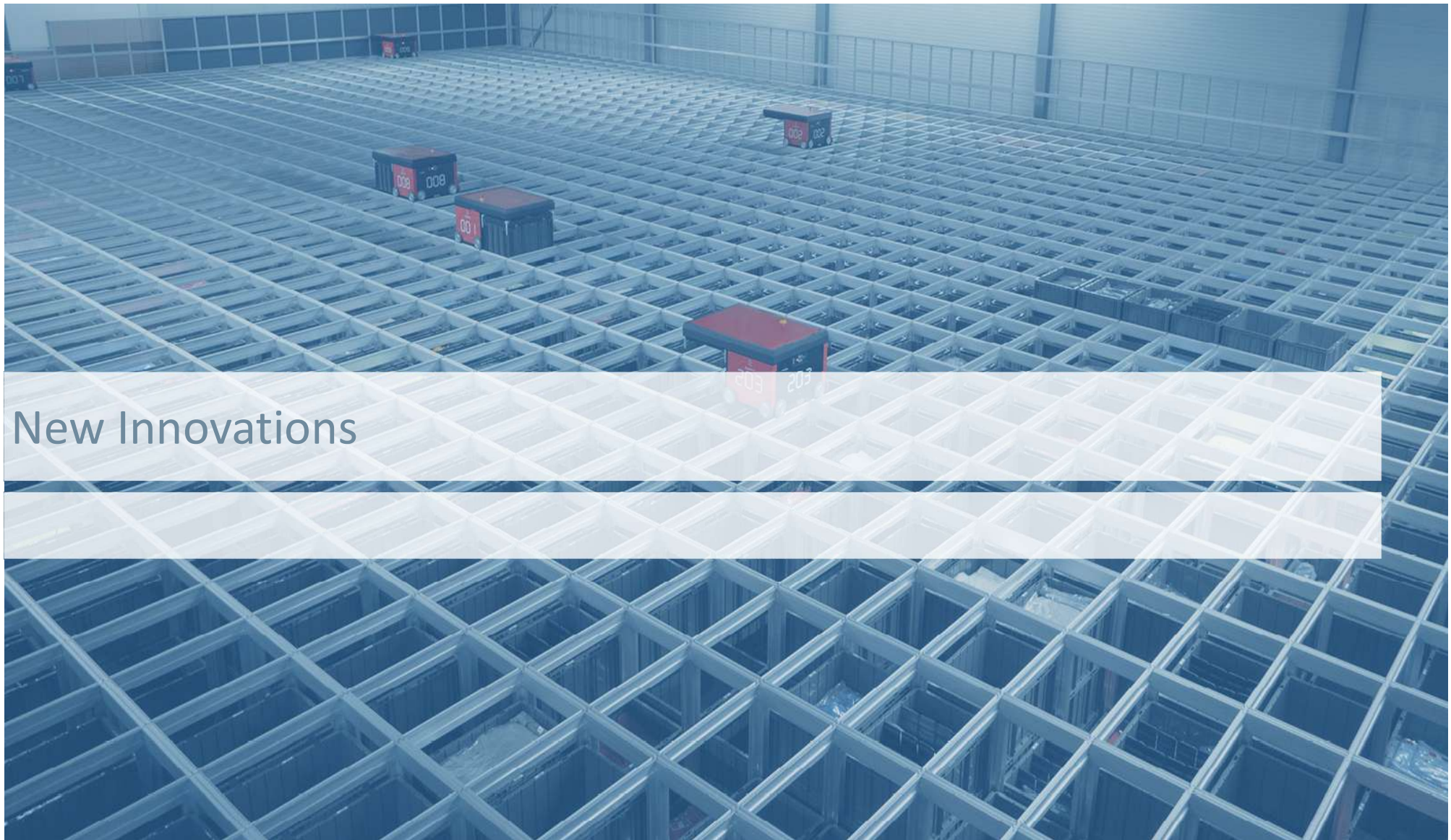
Kardex combined solutions

AutoStore & VLM



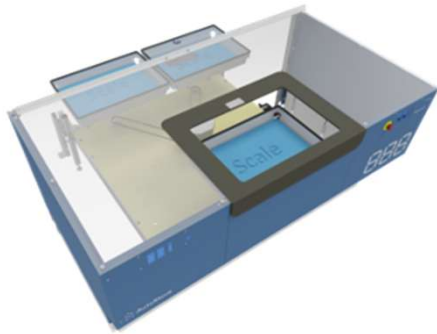
AutoStore & VBM





New Innovations

Kardex Port AI



Name: **Kardex Port scale and counting**

Abbreviation: **Kardex Pick AI**

Function:

- **Scale/Count:** The integrated scale of the Kardex Port enables items to be weighed and counted. The measurement accuracy is $\pm 5\text{gr}$.

Customer benefits in real time:

- Weight and quantity recording during order picking
- Precise item counting
- Inventory accuracy
- Detection of incorrect removals



Automated bin induction



Key benefits:

- Cost reduction
- Automation of simple tasks
- Safety for employees
- Modern and ergonomic workstation

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Kardex SnapVac



Name: **Kardex SnapVac**

Abbreviation: **KSV**

Naming:

- **Snap** – The unit snaps into place at the top of the AutoStore R5 robot
 - Easy installation/removal
 - Not permanently attached to a robot
 - AutoStore System and Kardex SnapVac can be run simultaneously
- **Vac** – The device is designed to vacuum dust, dirt, etc. from the top of the AutoStore grid

Sensor cleaning station

- Fully integrated cleaning system from Kardex
- Removes dust and contamination
- Each robot drives to the cleaning station once a day
- The blow-off nozzles are activated automatically
- After a few seconds, the cleaning process is finished
- The robots can work without interruption for longer, which increases the overall availability of the system





Healthcare References

VetLogOne GmbH in Wunstorf, Germany



Scope of supply:

- AutoStore Grid for 68.800 bins
- 32.000 bins (330mm)
- 30 Red Line (R5) robots
- 4 Carousel Ports (2 Frames)
- 2 Conveyor Ports
- 1 Picking Robot

VetLogOne GmbH has opened Germany's first logistics center specifically for veterinary medicine in Wunstorf in spring 2021.

The wholly owned subsidiary of Economic Association of German Veterinarians eG operates pharmaceutical logistics with state-of-the-art conveyor and picking technology on several levels on nearly 20'000sqm of warehouse space. The state-of-the-art location with an expansion possibility to almost 40'000sqm meets all GDP standards and offers a high degree of flexibility within the framework of contract logistics and fulfillment.

▪ Why VetLogOne chose Kardex

- Innovative product developments
- Professional and competent contact persons
- Convincing and customer-specific solution finding
- Fast response times

▪ Advantages of the Kardex AutoStore solution for VetLogOne

- Reduction of needed space
- High throughput to meet varying customer demand
- Minimal downtime of equipment
- Flexible expansion
- Scalability for future growth
- Adaptability to changing market requirements

Bredent Group GmbH in Senden, Germany



Since 1974 Bredent has a clear position in the dental market: Bredent products help dental technicians to efficiently create high-quality, aesthetic, and periodontally hygienic dental prostheses. Bredent has always been committed to optimizing products and work processes - always with the well-being of the patient in mind.

Today, almost 50 years later, the Bredent Group consists of three companies: Bredent, Dental Concept Systems (DCS), and Bredent Medical. The benefit for customers lies in the coordinated and well-thought-out, synergistic solutions from dental technology (Bredent) to high-tech mechanical engineering (DCS) to leading-edge medical technology - including modern prophylaxis and state-of-the-art implant and prosthetics (Bredent Medical).

Scope of supply:

- AutoStore System
- 40.000 bins
- 23 robots
- 6 Conveyor Ports
- 2 Fusion Ports staging
- 1 Fusion Port Frame
- WMS-Software



Advantages of the Kardex AutoStore solution for Bredent GmbH:

- Reduction in the amount of space required
- High throughput to meet varying customer requirements
- Adaptability to changing market requirements

Universitätsspital Basel



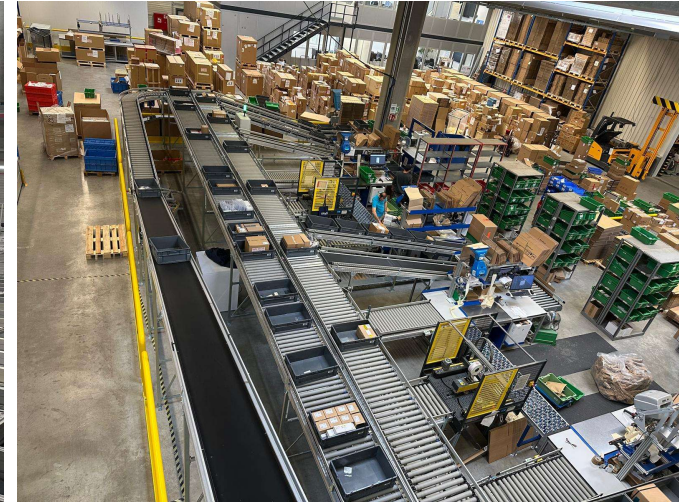
Scope of supply:

- AutoStore Grid mit 15'000 bins
- 9 Red Line (R5) robots; 9 chargers
- 1 Carousel Ports Frame
- Go-Live: September 2025

The USB's central warehouse supplies more than 10 different hospitals in Basel. Until now, logistics have been handled within the city of Basel. At the new location in Birrsfelden, AutoStore will manage small parts stored in plastic containers fully automatically. The new logistics center will simplify delivery routes and processes within the USB.



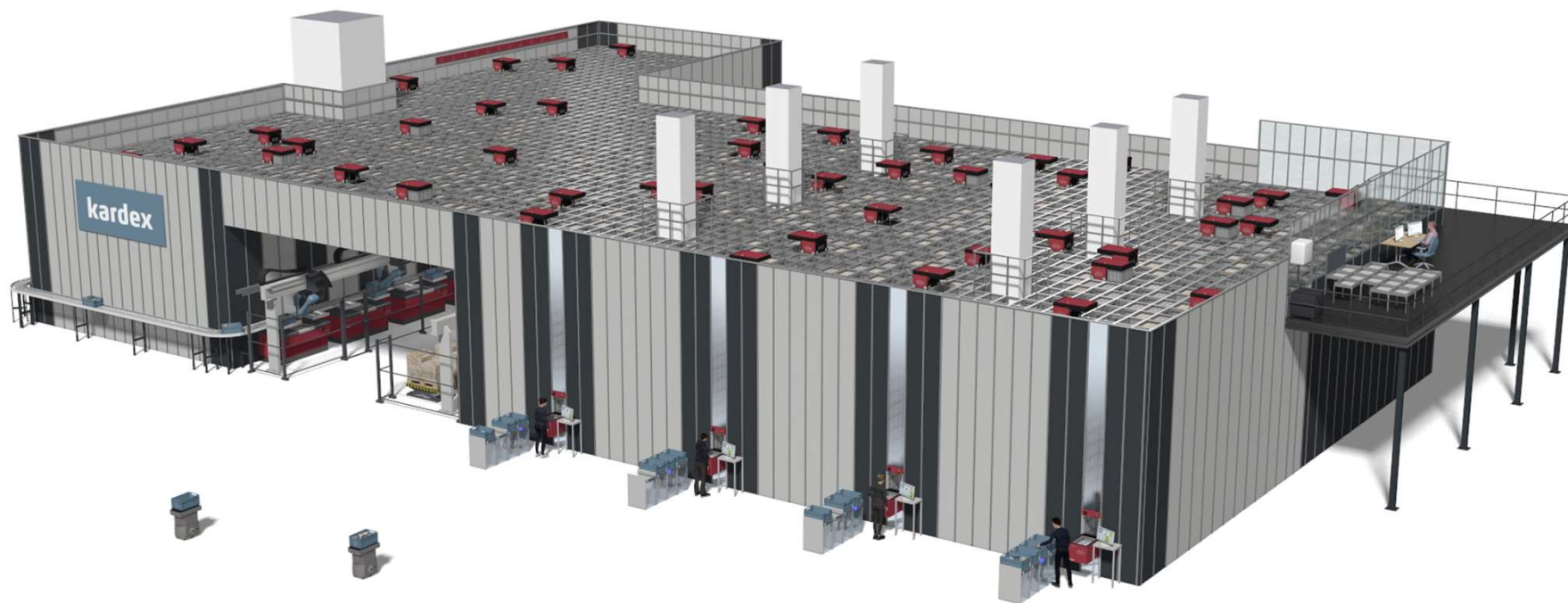
Roche Diagnostics Mannheim



Scope of supply:

- AutoStore Grid mit 29'000 bins
- 18 Red Line (R5) robots;
- 3 Carousel Ports
- 1 Conveyor Port
- Conveyor System
- SAP EWM Integration
- Go-Live: März 2025

Thank you



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Kardex Business Update

04 November 2025

Agenda

1 Updates since last Investor Day

2 Executing the Transformation

3 Our Growth Journey

Intralogistics Market in 2023

Trends in Intralogistics



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Effects of these Trends

- Industry 4.0
- Efficiency
- Effectivity
- Collaboration
- "New" technologies
- Trend & Innovation

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Effects of these Trends

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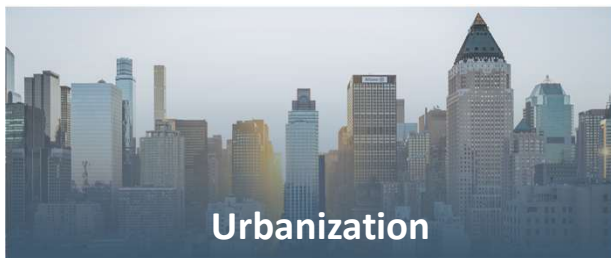


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Another megatrend is shaping the future of intralogistics

Megatrends¹



Effects

1. Shortage of skilled labor force
2. Aging workforce
3. Increased health concerns



Impact on Intralogistics

- Automation adoption
- Ergonomic and safety focused solutions

1. Rising labor costs
2. Space scarcity



- Smart warehouse design
- High density storage
- Energy efficient logistics

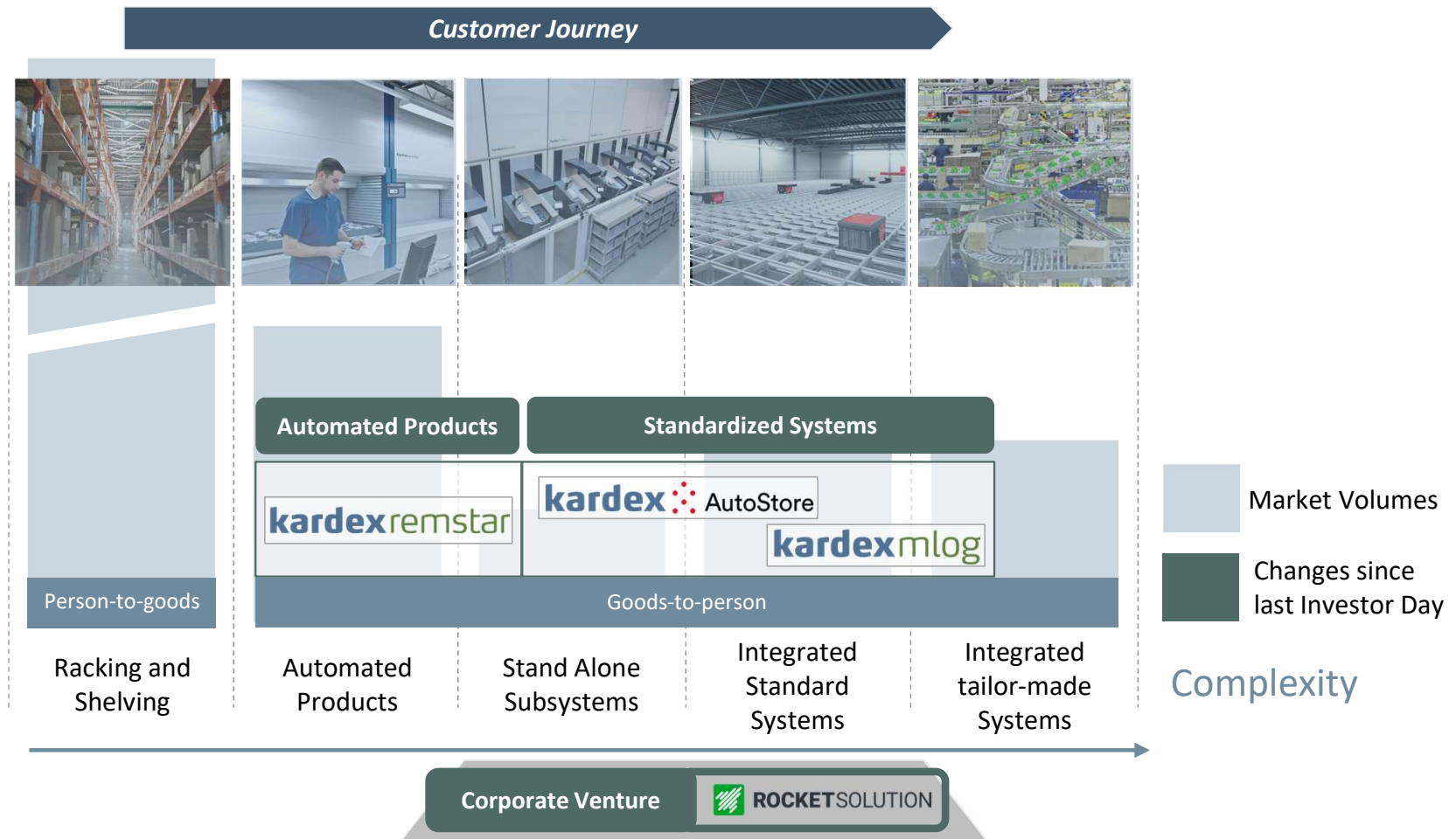
1. Supply chain regionalization
2. Capital reallocation and investment surge



- Smaller and localized warehouses
- Growth expectations >GDP

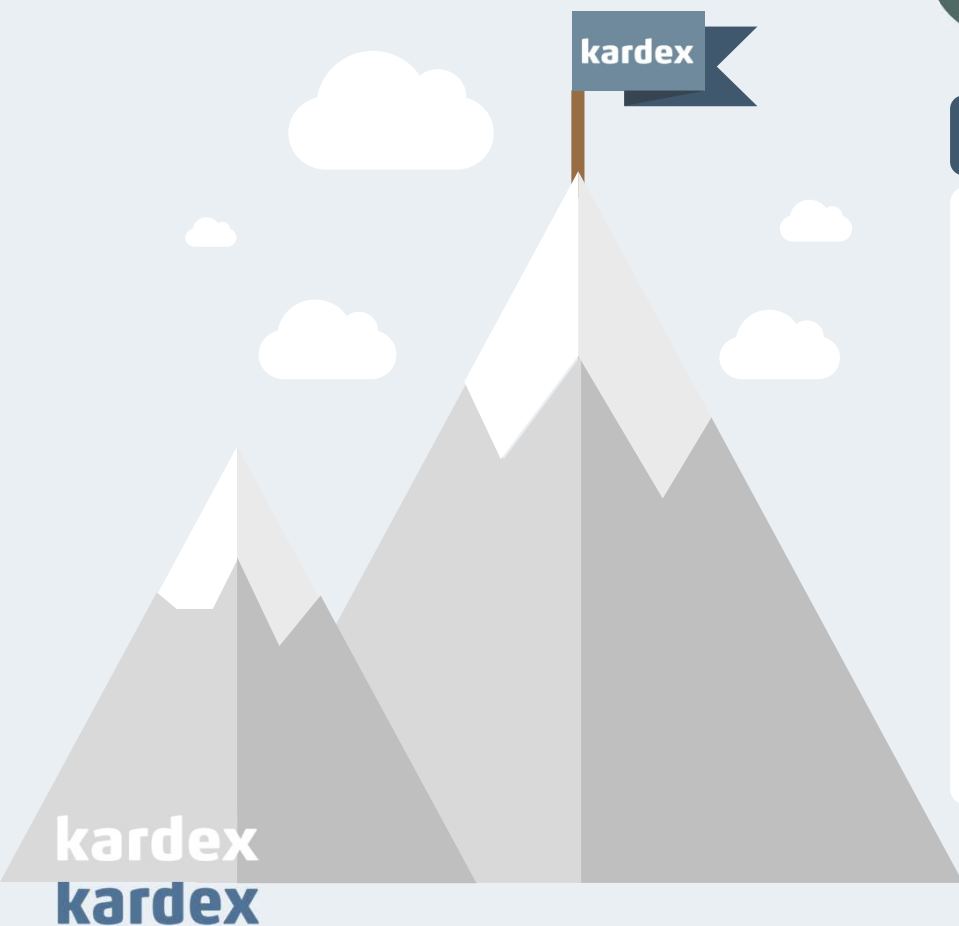
Source: 1) Zukunftsinstitut (2025). Megatrend Urbanization. Retrieved from [zukunftsinstitut.de](https://www.zukunftsinstitut.de); Zukunftsinstitut (2023). Megatrend Demographic Change. Retrieved from [zukunftsinstitut.de](https://www.zukunftsinstitut.de); PwC (2024). Megatrends: Five Global Shifts Reshaping the World We Live In. Retrieved from [pwc.com](https://www.pwc.com)

Kardex' STRATEGIC POSITIONING in the Intralogistics Market



Winning together as ONE Kardex

The power of collaboration



Achieving >100 m€

Kardex AS & Mlog

~ 75 m€

DACHSER
Intelligent Logistics

metzger 
Autoteile

 **sonepar**
Powered by Difference

 **BAUHAUS**

Rocket & Mlog

~ 10 m€

 **groninger LISCA**

Remstar & Mlog

~ 15 m€

 **Lufthansa**

Remstar & Kardex AS

~ 10 m€

 **DEUTZ**

 **infineon**

Executing Kardex' transformation for scalable, profitable growth



One global Kardex: Maintaining three distinct business units while aligning our go-to-market strategy to create a more customer-centric organization



Portfolio momentum: Launch of Rocket for light goods expands addressable market and strengthens competitive edge



Growth investments: Increased allocation to Sales, R&D, and IT to drive profitable growth



Digitalization in motion: ERP rollout, process digitalization, and innovation initiatives are actively progressing

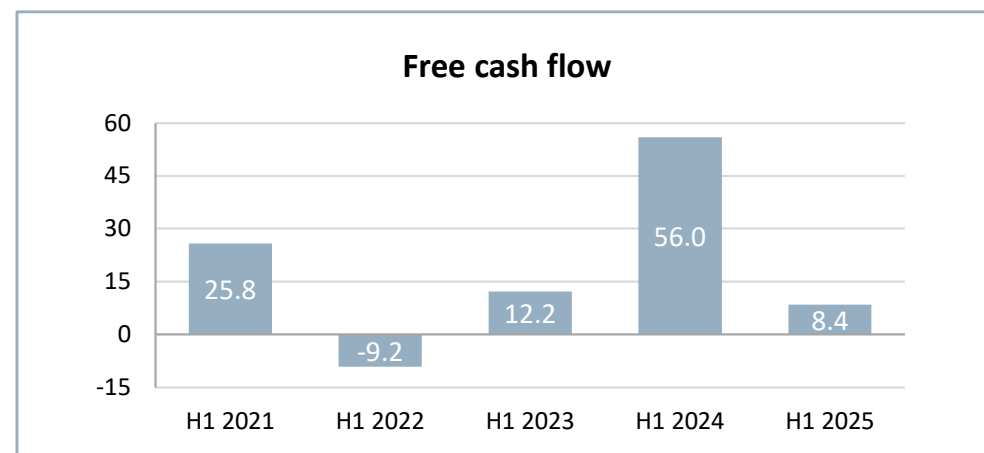
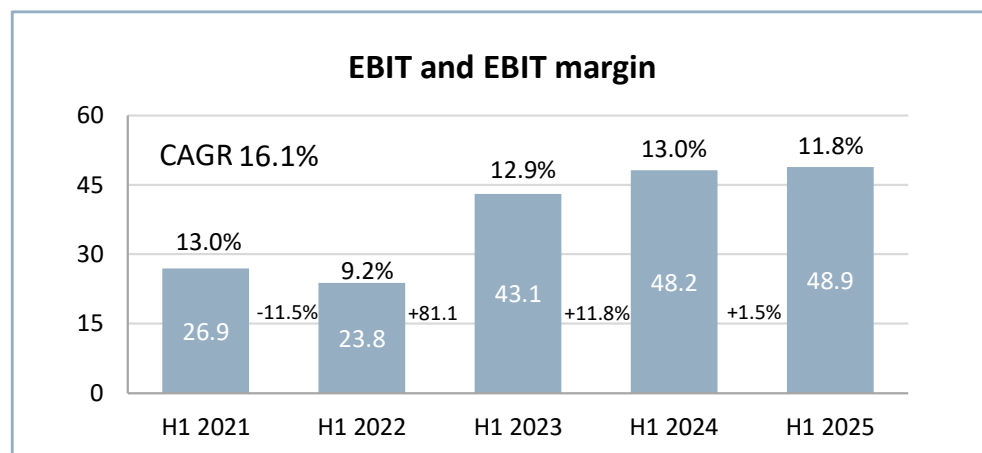
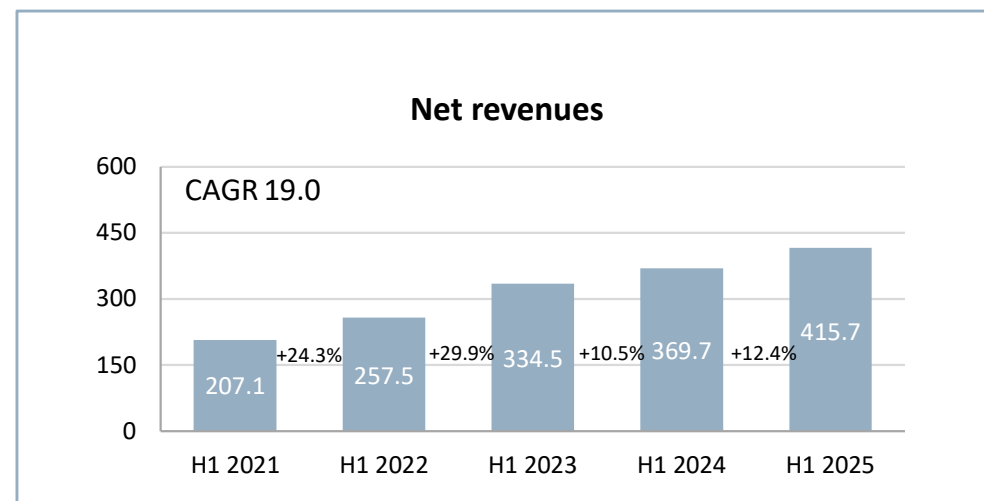
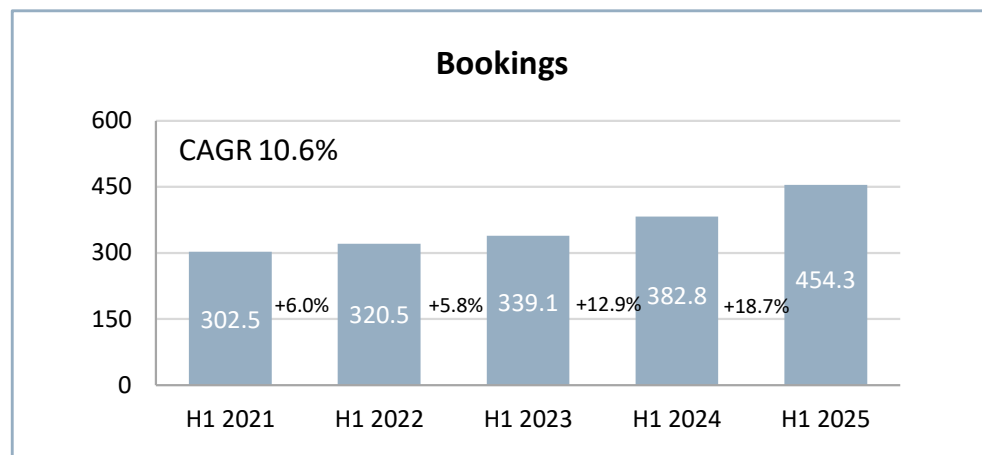
Financial Targets as of 01 January 2025

KPI	Scope	Target
Net revenues growth	Group	EUR 1.5 bn by 2029-2031
EBIT margin*	Automated Products	14 - 17%
	Standardized Systems	5 - 8%
	Group	10 - 14%
ROIC	Group	> 25%
Dividend policy (payout ratio)	Group operational Net profit	up to 75%
Net debt/EBITDA	Group	< 2.5x

= 10-14% CAGR

* over the cycle of 5 years

Kardex – Key Figures H1 2021 - 2025 (in EUR million)



Outlook

- Megatrends like “reshoring”, “shortage of skilled labor force” and “automation” are expected to drive the positive market sentiment
- Kardex will continue to substantially invest in sales & marketing, R&D and IT to further outperform the market and to create the basis for continuous profitable growth
- Despite geopolitical tensions and trade uncertainties, a stronger H2 2025 is anticipated in bookings, net revenues and EBIT
- Kardex is confident to achieve results in line with the communicated financial targets

Questions?



Disclaimer

This communication contains statements that constitute “forward-looking statements”. In this communication, such forward-looking statements may include statements on the financial situation, earnings situation and business results of Kardex as well as certain strategic plans and objectives. Because these forward-looking statements are subject to risks and uncertainties, actual future results may differ materially from those expressed in or implied by the statements. Many of these risks and uncertainties relate to factors which are beyond Kardex’ ability to control or estimate precisely, such as future market conditions, currency fluctuations, the behavior of other market participants, the actions of governmental regulators and other risk factors detailed in Kardex’ past and future filings and reports and in past and future filings, press releases, reports and other information posted on Kardex’ websites. Readers are cautioned not to put undue reliance on forward-looking statements, which speak only of the date of this communication. Kardex disclaims any intention or obligation to update and revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Thank you for your interest and your visit

Jens Hardenacke, CEO

Thomas Reist, CFO

Alexandre Müller, IR

Philipp Nobel, System Sales

Thomas Larsen, BD Hospital Logistics

Roger Remy, AS Sales