

Project RetailCX

by KNAPP

Because
visiting a
physical store
should
always be
worth it.

From the fully integrated warehouse, to the digitally driven shopping experience.

As one of the leading companies in the field of intralogistics, warehouse logistics, warehouse automation and order picking, close collaboration with clients throughout the world has allowed the KNAPP Group to experience first-hand the vast changes and associated challenges and opportunities for physical stores.

To help companies respond to these many new developments, employees, expertise and technologies have been pooled and an in-store solution developed with a view to transforming physical stores digitally and generating added benefit, creating a real incentive for customers to actually visit a store – hopefully again and again.

We hope you like the in-store system and we would love to hear any feedback you might have!

CONTENT

CHALLENGE & OPPORTUNITY	4
MISSION	6
SOLUTION	
HARDWARE	8
SOFTWARE	12
NEW CUSTOMER EXPERIENCES	13
TECHNOLOGY	16
ABOUT KNAPP	20
CONTACT	22

Technology, mobile devices, e-commerce and social media have revolutionised shopping habits and made customers more demanding than ever.

With rising rents and falling store traffic, the functions, benefits and, ultimately, the role of physical stores are being called into question in almost all sectors.

Companies that started out with direct distribution via e-commerce (D2C) want to use physical stores to generate higher visibility for their brand or give customers the chance to experience products in showrooms. Other companies, usually specialist retailers, place all of their trust in advisory services and consulting depth provided by employees.

Regardless of which role the physical store plays in the business model of the future, technology, automation and digitalisation will play a crucial role.



MISSION

The availability of products and the ability to take these home there and then; touching, testing and experiencing products before a purchase decision is made; advice from expert members of staff; or immediate help in the event of a problem: there are customer needs that are still best satisfied by physical stores. These are unique qualities.

We believe that the success of physical stores depends on the extent to which their unique qualities translate into attractive customer experiences that make repeat visits to a physical store worth it for the customer.

That is why we have made it our mission to develop an in-store system that enables exactly that.

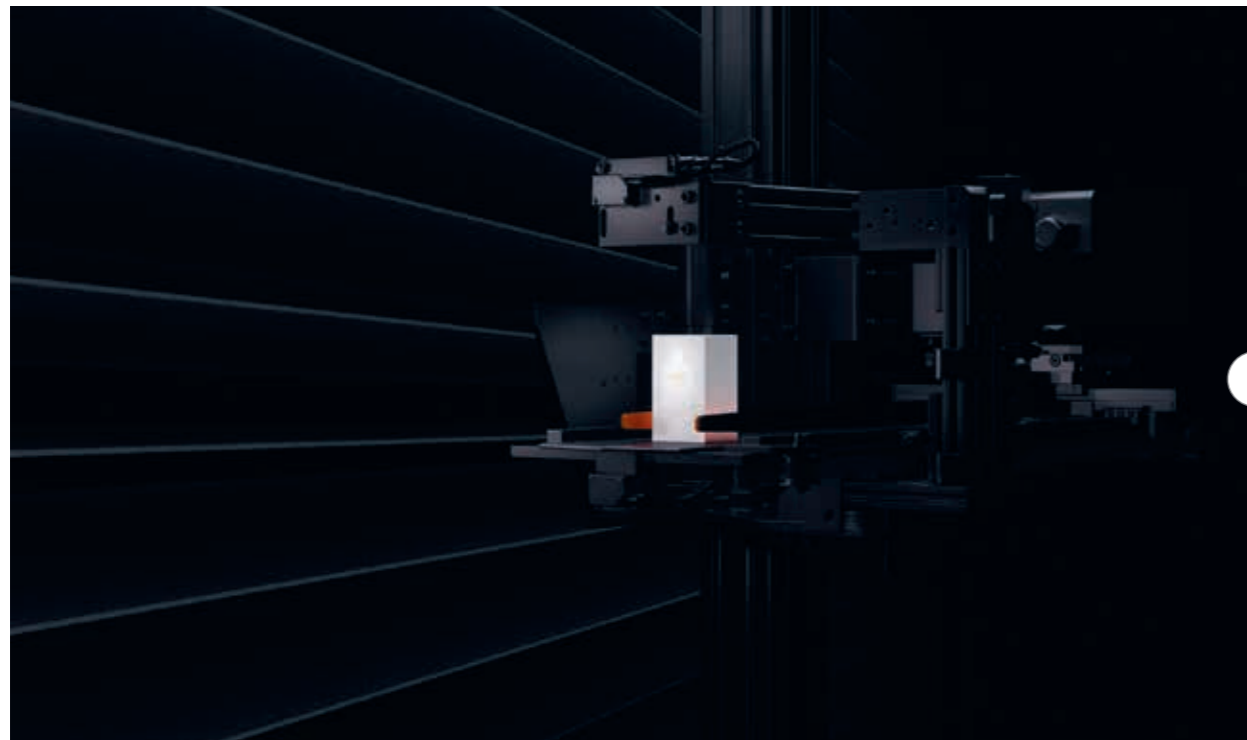
A configurable in-store system based on a fully automated picking robot and shelf system.

Platform

At its core, the in-store system is composed of a picking robot and a shelf system adapted to the requirements of the customer, the different types of product and the shop layout.

With the assistance of the picking robot products are stored and retrieved, logged digitally and stored with minimal space requirement, safe from theft, all fully automatically.

Picking robot and shelf system



- The system starts to prove its worth economically from as little as 3000 products / packages items
- Scalable shelf storage; adaptable to the existing space; expands flexible when needed – capacity is depending on the packaging and robot size – for smaller products like jewellery it can store up to 100,000 packages
- Different product types and a broad article spectrum – e.g. for slow moving goods, returns, special products or online orders – can be stored in the same shelf system.
- Can be installed in all standard shop layouts
- Even different product types can be stored in the same shelf system

Add-ons

The picking robot and the storage system can be expanded with a number of different components depending on the shop layout, business objectives, customer structure and purchasing behaviour, creating even more possibilities for innovative shopping experiences.



Interactive screens

- Four versions of the screen are available: shop window, self-service, over-the-counter and mobile
- Displays are ultra-luminous, heat- and UV-resistant and designed for constant operation
- Displays are equipped with touchscreen functions and can therefore respond to employee or customer interactions

Additional output compartments (incl. conveyor system)

- As well as a permanent output compartment in the shelf system, additional output compartments can be installed in the store
- Custom conveyor technology transports the products retrieved from stock to the respective output compartment
- The output compartments are variable in size depending on the products being stored

24/7 terminal

- Consists of a shatter-proof interactive screen, a tamper-proof output compartment and a card payment system
- Conveyor technology may also be required depending on the location of the shelf system
- Customers can use the terminal to access and pay for products themselves
- If the terminal is installed on the face of a store, customers can purchase products independently of the opening hours

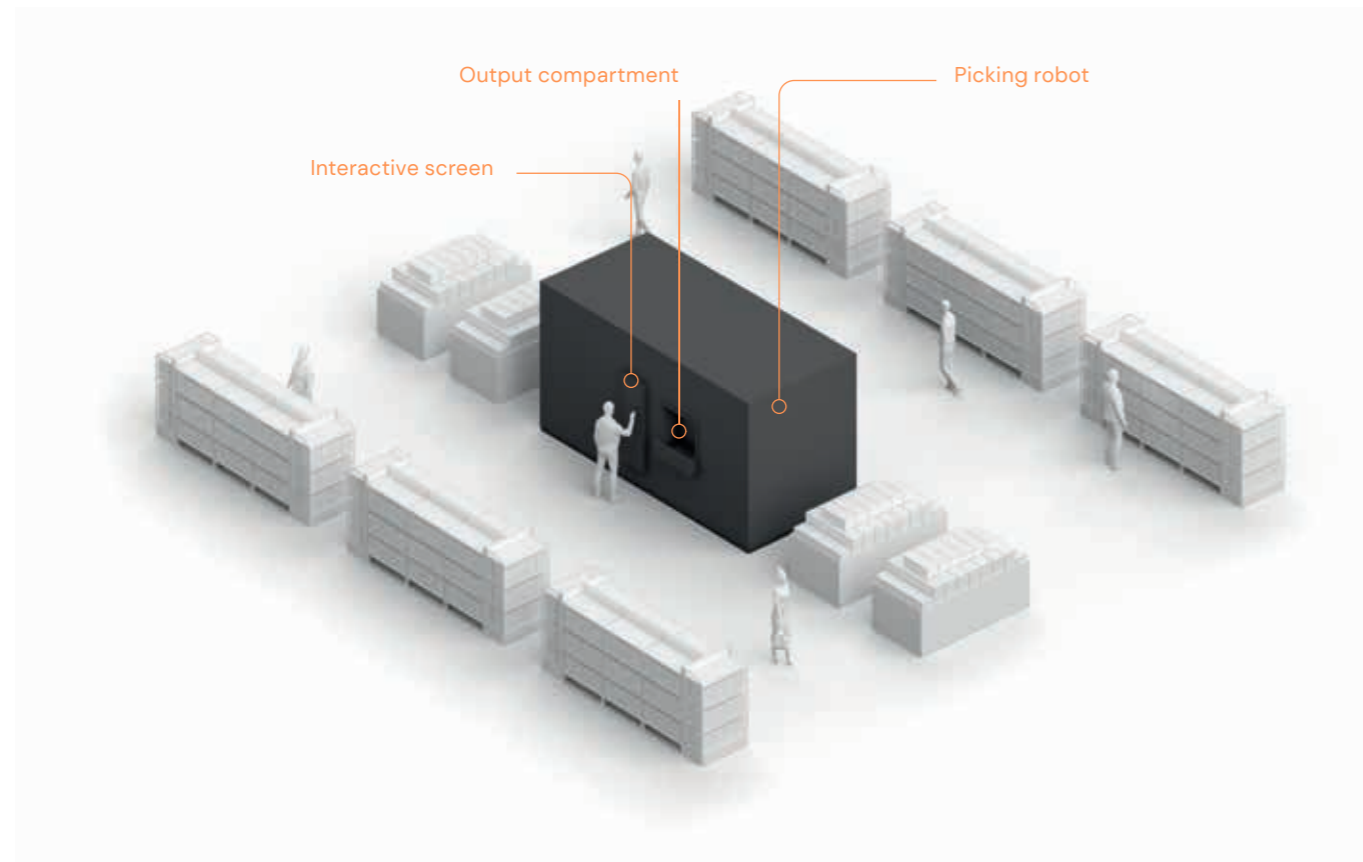
ActiveShelf

- Shelf equipped with sensors; only testing products are in public domain and the rest of your products is safely stored in our system
- As soon as a customer takes a test-product from the shelf, information about the product or its use is shown on the screen. It also shows different product variants.
- Customers can independently find information about the product, and directly get the wanted product on screen.
- Assists customers with finding products and advice; and offers the owner an easy product-based promotion area

The right solution for every requirement: stand-alone and integrated.

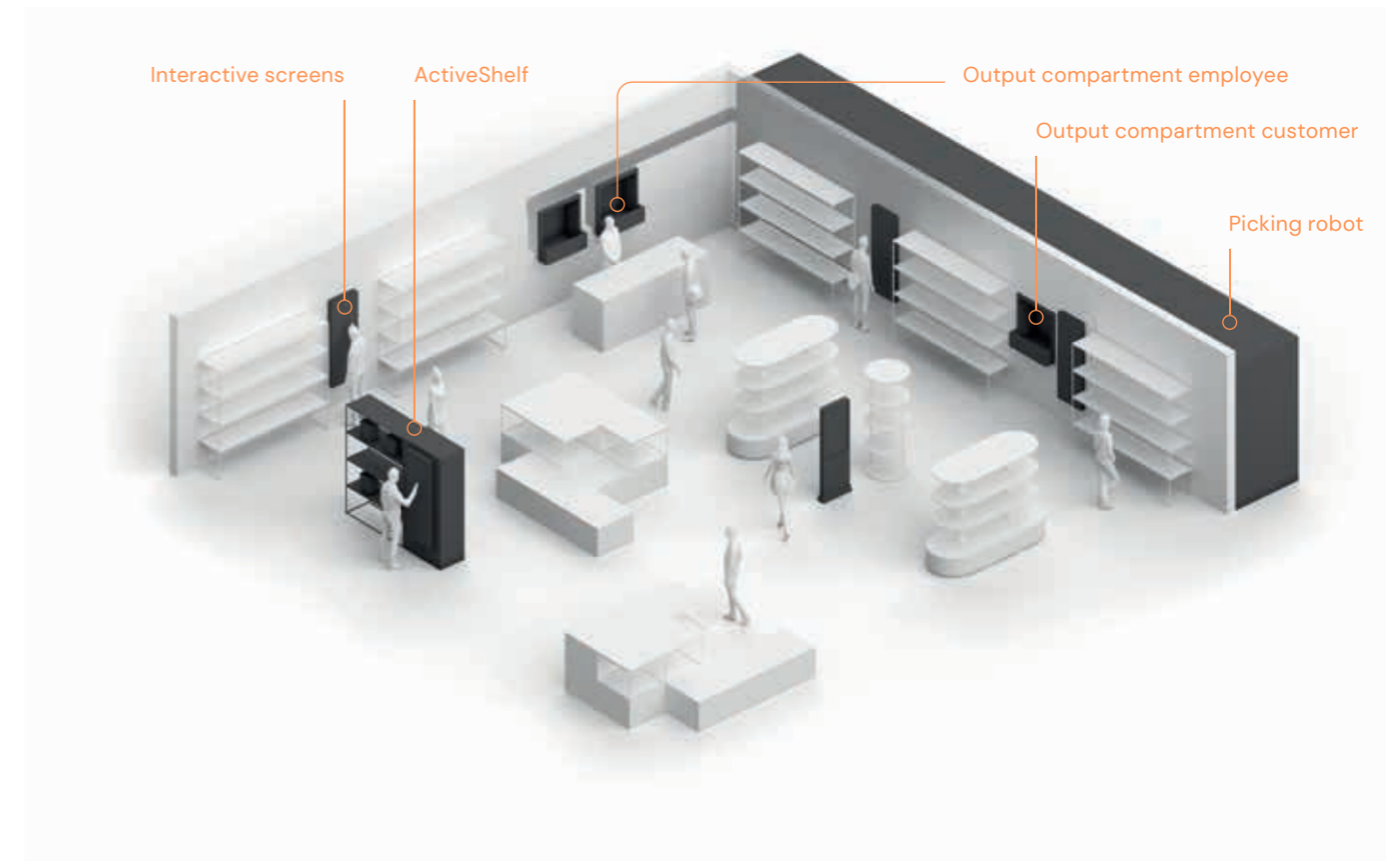
Stand-alone

In the stand-alone version all of the components are hard-wired in a compact box, enabling this system to be more quickly and easily integrated in existing store concepts. From shop-in-shop solutions right through to use outside of buildings, anything is possible.



Integrated

In the integrated version, the components are installed flexibly and independently of one another in the desired locations in the store and connected by means of conveyor systems. This version allows for even more usage scenarios with the in-store system.



Industries

The system is capable of managing a diverse range of product types and, as such, can be used in a number of different industries.

Drugstores

Facilitates the storage of a wide product range for everyday needs in an area of minimal size and the monitoring of expiry dates and the efficiency of handling of OTC drugs.

DIY enthusiasts and tradesmen

Customers, specifically those that know exactly what products they need, can find and buy small products such as screws quickly on the screen – or reserve and collect it through click&collect online.

Perfumery & beauty stores

Reduced storage space and activity requirements offer more space for product presentations and consultations. Also guarantees the proper storage of temperature-sensitive cosmetics.

Food supplements

Wide product ranges with a variety of different product and package sizes can be stored securely and efficiently under conditions that guarantee the durability of vital substances.

Watches & jewellery

The more valuable the product, the more important theft-proof storage and re-viewable stock control becomes. Major potential for saving on storage space, creating more space for consultation corners.

Shoes

Finding the right size is an important part of the shopping experience. Customers can use screens to check for themselves which sizes and colours are still available. Saves time and reduces the burden on staff.

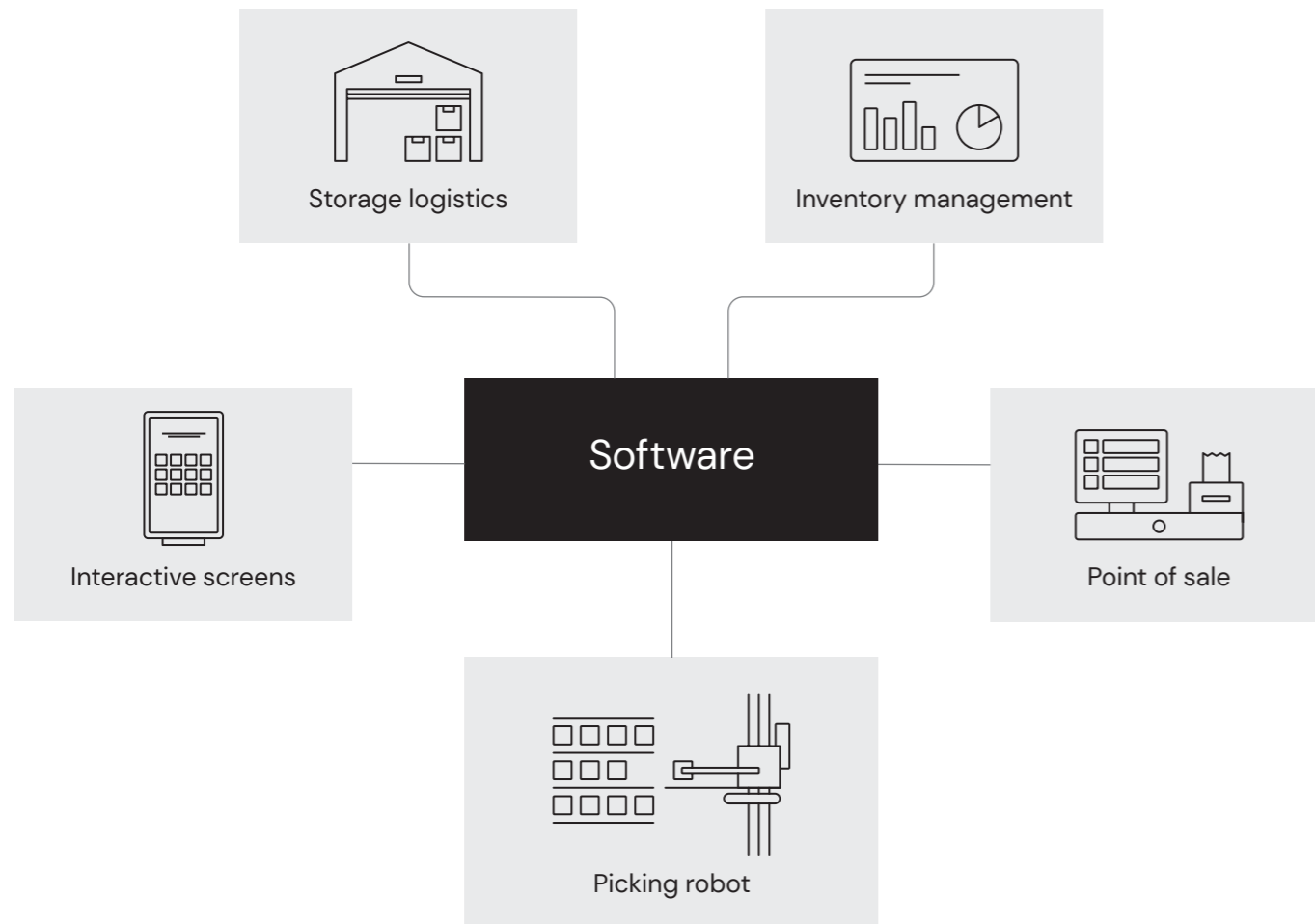
Electronics

Less storage space requirement, more space for product displays. Small accessories like cables etc. can be found quickly using screens, giving staff more time for consultation.

Food retail

Saves expensive storage space and helps with high stock turnover rates, correct storage and expiry data monitoring, all of which are crucial factors when dealing with food.

Our software brings the hardware to life and makes innovative shopping experiences a reality.



Configuration, management and monitoring

Our software allows you or your staff to operate the picking robot, storage system and all add-ons intuitively.

Data management

Compatible with merchandise management, POS and logistics software so that data may be connected across several levels.

Central output of content

Dynamic content can be centrally recorded on interactive screens – across different stores too.

Analysis

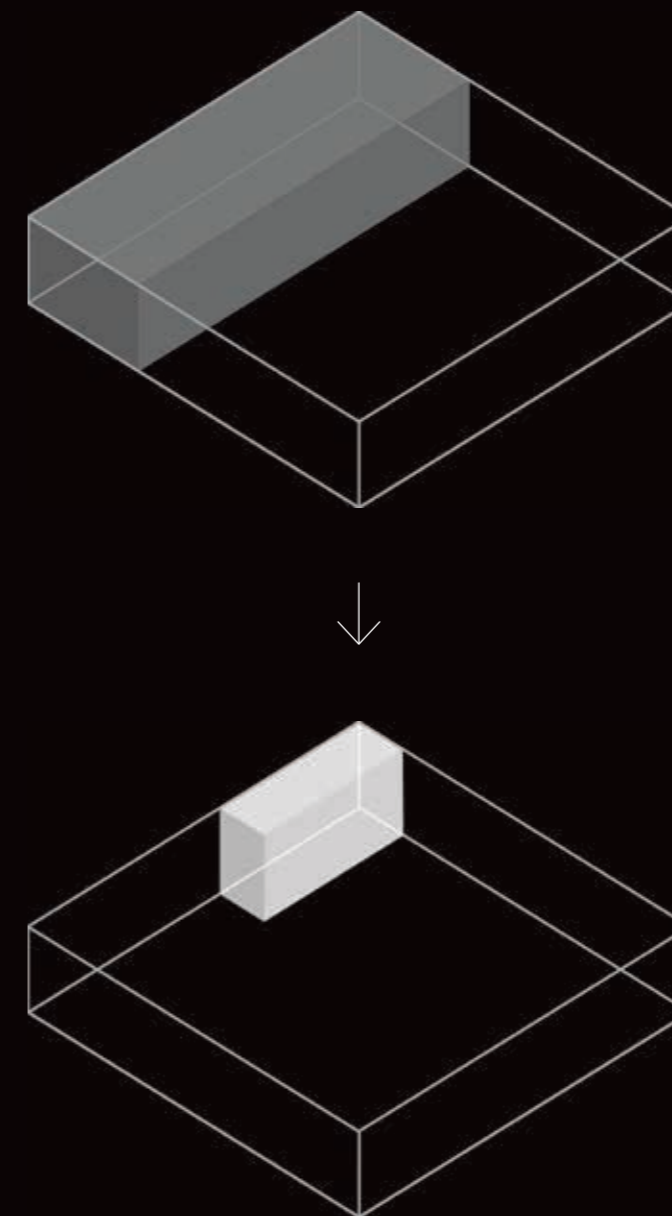
Data makes it possible to conclude key findings about customers, the product range, sales and processes

Creation of interfaces

Screen interfaces can be generated with just a few clicks and adapted to your CI or store design

Retail space is expensive, that's why it's important to use as little as possible for storage.

Storerooms ensure that products are available on-site, but they are a major cost factor. That makes it all the more important to use every square metre as efficiently as possible. The in-store system reduces the required storage space by between 40 to 70%.



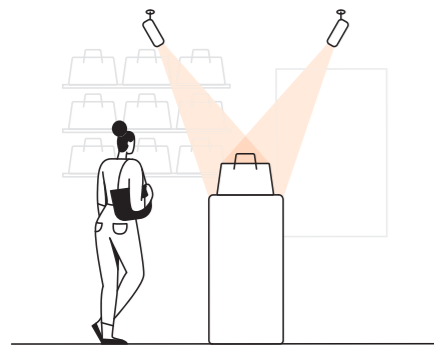
BEFORE

- Classic shelf storage and room for employees to sort and select use up a lot of retail-space
- Warehouse-management and industry specific documentation requirements have to be done manually
- Maximal storage-height of up to 2,20 m to ensure reachability for the customer

AFTER

- Saving up to 70% storage space
- Additionally it is possible for the system to save batchnumbers as well as date of expiry, getting rid of many tedious tasks
- Scalable and multi-layer storage solutions enable an optimised storing of goods up to a storage-height of 3,65 m

The in-store system transforms processes and, in doing so, opens up endless possibilities for creating new customer experiences.



Product presentation

Improved product displays

PROCESS TRANSFORMATION

- Products can be displayed more elaborately
- Products can be explained one-on-one in consultation corners

CUSTOMER EXPERIENCE

- More products to interact, test and inform
- A clearer store layout invites to stay



Consultancy

The quality of consultancy increases

PROCESS TRANSFORMATION

- Employees are relieved of piecemeal and time-intensive storage activities

CUSTOMER EXPERIENCE

- Employees are available more frequently
- More time for extensive consultation



Promotions

Attention-grabbing promotions

PROCESS TRANSFORMATION

- Content in diverse formats can be output centrally and digitally on screens
- No need for significantly more expensive, complex and time-intensive print productions.

CUSTOMER EXPERIENCE

- Content is delivered in a visually more attractive and less disruptive form
- Promotions blend seamlessly into the shopping experience, instead of interrupting it



Self-service

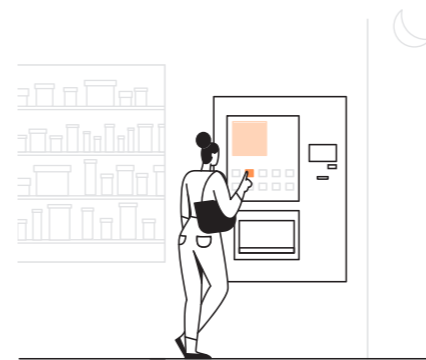
New self-service possibilities

PROCESS TRANSFORMATION

- Employees are relieved of search activities that do nothing to add to the customer experience

CUSTOMER EXPERIENCE

- Customers can decide for themselves which level of service they would like
- Those who don't require consultation can obtain information and products quickly and efficiently without having to rely on staff
- Staff will be there to assist those who do require consultation



24/7 availability

Availability of products when customers need them

PROCESS TRANSFORMATION

- Products available on-site without need for personnel and in full compliance with legal requirements
- Additional sales without additional costs

CUSTOMER EXPERIENCE

- Through the terminal, that can be reached right at the street, products are available around the clock
- These can be bought, paid for and collected whenever it is most suitable for the customer



Omnichannel (Click&Collect)

The boundaries between online and offline disappear

PROCESS TRANSFORMATION

- No employees needed to dispense ordered or purchased goods

CUSTOMER EXPERIENCE

- Can buy product online and collect quickly and exactly when it suits them over an interactive screen



Storage

Additional experience factor

PROCESS TRANSFORMATION

- Not only is the actual storage activity removed, it becomes a part of the shop design

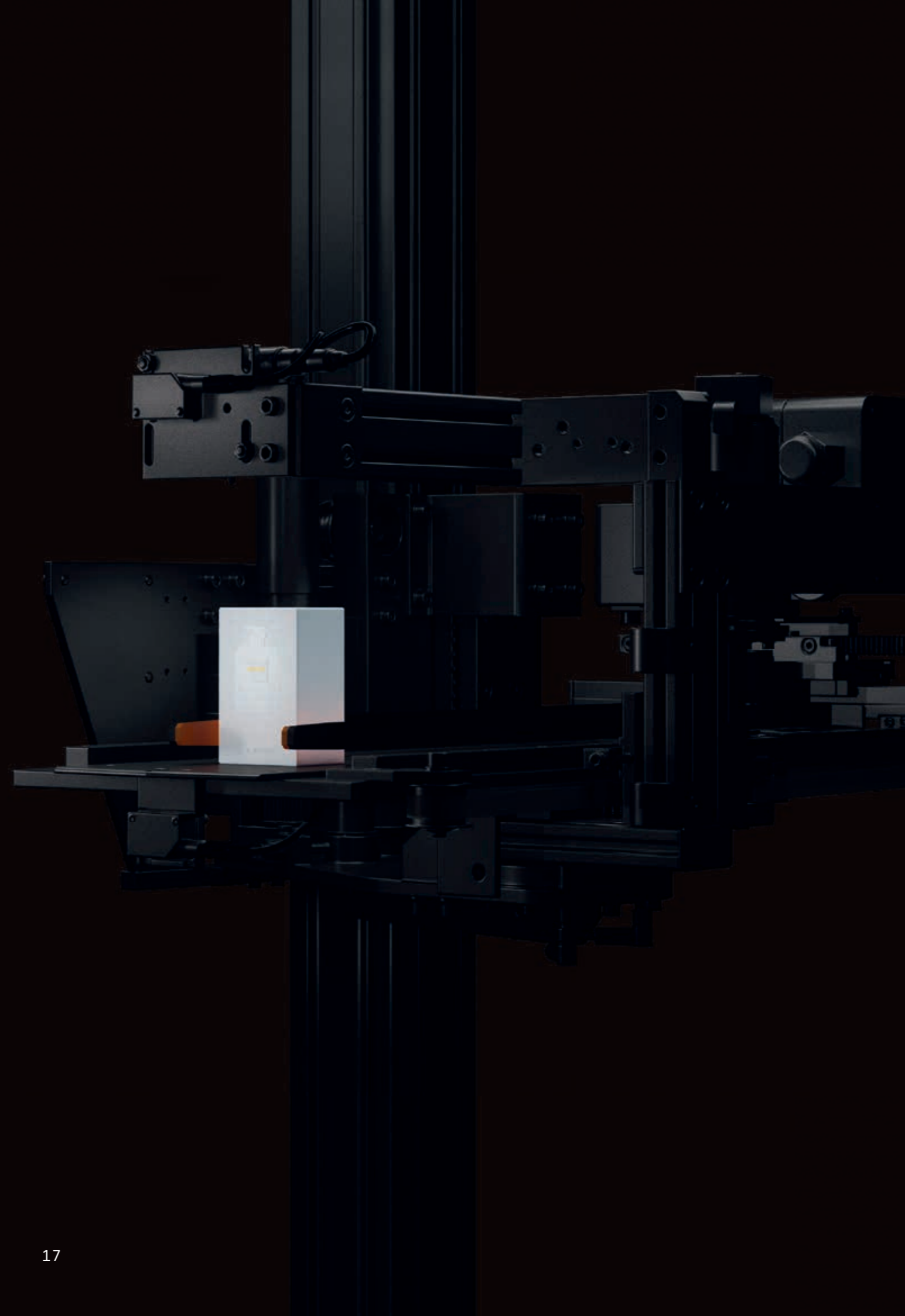
CUSTOMER EXPERIENCE

- Through the terminal that's accessible right at the street the products are available for the customer anytime
- Interesting experience that customers will talk about

Reliable. Fast. Tried and tested. Our picking robot.

Fully automatic order processing requires technology which is both tried-and-tested and sophisticated.

Our company has over 15 years of experience in developing robots.



306 million
handlings per year

14,26 s/product
Picking speed

Functional reliability

- UPS for a controlled shutdown of the unit
- Cold standby computer
- Double external data back-up
- Remote monitoring with 24/7 immediate remote robot maintenance available

Service and Support

- 24/7 hotline
- Service technician on site
- Solution center with advanced handling and process training

Energy consumption

- The gentle 400V plant engineering increases the life span of the electronic components and has powerfull reserves when needed
- Application of KERS, that uses the kinetic energy of breaking to regain energy that is being injected back into the system.

Picking robot

		R2000	R3000
Width		1.85 m (incl. inputting system 2.26 m)	1.85 m (incl. inputting system 2.26 m)
Height		2.00 m – 3.60 m	2.00 m – 3.60 m
Height grid		10 cm	10 cm
Length		4.39 m – 21.12 m	4.39 m – 21.12 m
Length grid		50 cm	50 cm
Shelf depth		42 cm	42 cm
Possible locations		Ground floor, basement, second floor	Ground floor, basement, second floor
Storage		frontal or lateral	frontal or lateral
Storage time		Ø between 8 and 12 sec. Ø 300 packages/h	Ø between 6 and 8 sec. Ø 500 packages/h
Dispensing time		Ø between 8 and 12 sec. Ø 300 packages/h	Ø between 6 and 8 sec. Ø 500 packages/h
Transferable packages	cubic:	yes	yes
	min. package dimensions	35 x 15 x 15 (L x W x H)	35 x 15 x 15 (L x W x H)
	max. package dimensions	400 x 300 x 200 (L x W x H)	400 x 300 x 200 (L x W x H)
	cylindrical:	yes	yes
	min. package dimensions	15 x 35 mm (H x Ø)	15 x 35 mm (H x Ø)
	max. package dimensions	200 x 300 (H x Ø)	200 x 300 (H x Ø)
	Weight	5 – 5,000 g	5 – 5,000 g
Barcodes	Detection and processing of PZN, PZN8, EAN, 2D barcodes	yes	yes
Current consumption	CE-Norm, UL-Norm, CSE-Norm	3-phase 400 Volt / 480V	3-phase 400 Volt / 480V
Energy consumption	Full load	approx. 2.300 VAh	approx. 2.300 VAh
	In operation	approx. 340 VAh	approx. 340 VAh
	Stand-by	less than 70 VAh	less than 70 VAh
Security	Backup computer	yes	yes
	add. data backup to ext. Hard drive	yes	yes
	Remote monitoring	yes	yes
Standard equipment	Greenline technology / Energy manager	yes	yes
	Combipick	yes	yes
	Multipick	yes	yes
	Verifier / VidCap	yes	yes
	Storage location printer	yes	yes
Options	automated shelf clean system	Option	Option
	Pick & Place	Option	Option
	iScan 3.0	Option	Option
	second gripper	Option	yes
	Video system/camera	Option	Option
	Drywall enclosure	Option	Option
	Cooling shelf	Option	Option
Colours	On request	yes	yes
Conveyor technology	On request we can provide a multitude of different conveyance (conveyer belt, lift, slides, pneumatic delivery, ...)	yes	yes

*KNAPP always endeavours to ensure the greatest possible accuracy when calculating technical data. These are merely – unless expressly agreed otherwise – target values and serve as no guarantee of specific characteristics. The accuracy of these details may vary depending on local or technical circumstances.

We believe that “Project RetailCX” has the potential to revolutionalise working processes and shopping experiences just as the introduction of the barcode system did.

Initially, the barcode replaced the manual entry of prices and cut long queues at the till.

But, as the system has become established – today 98 per cent of food and roughly 80 per cent of non-food products on the German market alone feature barcodes – not only has it enabled intelligent stock management, it has allowed transparent supply chains to be established globally.

What started in 1974 as a small change in the workflow of a supermarket in the USA with the first-ever checkout scan – a 10-pack of Wrigley’s Juicy Fruit – later marked none other than the start of a new era in the world of trade, logistics and industry.

Progressive thinkers. Shaping the future. Logistics partner. Since 1952

From production, distribution and last mile logistics right through to the point of sale: KNAPP is one of the world's leading technology companies and offers intelligent and cost-effective automation solutions including software for the entire value chain.

From consulting and design, project management, production, assembly and commissioning right through to 24/7 support and lifecycle management, KNAPP is a one-stop shop for all-in-one solutions. Among its key sectors are healthcare, fashion, retail, food retail and industry.

Every era has its own challenges: As a partner of industry, KNAPP has long pursued the aim of finding intelligent solutions for the latest market needs, securing the long-term success of its customers in the process. Take for instance the picking machine for wholesale pharmacy in the 1980s, or our pioneering role in shuttle technology in the early 2000s, or currently in the field of artificial intelligence and data-driven logistics.

Making complexity simple – this philosophy is at the core of all our work here at KNAPP. Approximately 5,000 employees worldwide work day in, day out, on implementing the logistical needs and objectives of each of our clients in tailored solutions on diverse scales ranging from XS to XXL.
More information: knapp.com

Employees **5,000** Locations **43** Export ratio **98%**



Whether online retailers, food retail, electronics, cosmetics or international fashion labels – leading companies place their trust in solutions from the KNAPP Group.



Who but our clients could tell more about success stories:
<https://www.youtube.com/user/KNAPPwebtv>



CONTACT

If you're interested in our products, we would be happy to assist you should you require any information, have any questions or to provide you with an individual quote.

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Mon–Fri, 8.00 a.m.–6.00 p.m. CET

retailcx@knapp.com

Response within 24 hours

<http://retailcx.knapp.com>

Further information

Project RetailCX is a new service from Graz-based KNAPP AG operated under its Gelsenkirchen-based subsidiary KHT Kommissionier- und Handhabungstechnik GmbH.



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