



2020

Scalable & flexible robotic automation solutions for F&B

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ABB



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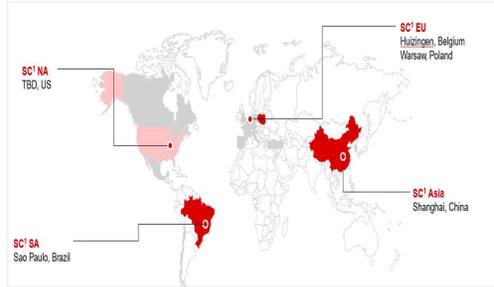
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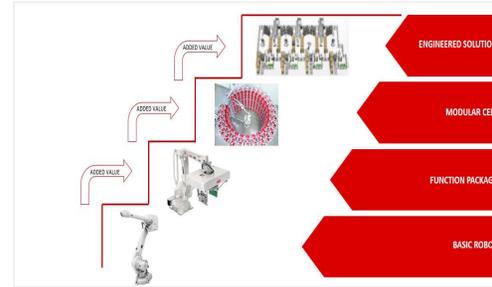
Intro to ABB Consumer Segments & Service Robotics



Addressing current consumer trends and demands



Leveraging on a strong Global footprint



Portfolio: flexible, modular and scalable solutions



Ground-breaking technology

Key drivers are the same but enabled by digital technologies

What keeps manufacturers up at night?



Shorter product cycles, more frequent launches

Reduce labour
Improve quality
Reduce waste
Improve yield



Increased cost of downtime and focus on reliability

Improve traceability
Increase efficiency and flexibility
Eliminate hygiene risks



Greater need for human and robot interaction

Reduce change over times
Collaborative operation (typically fenceless operation)
Digitalisation
Utilisation of available space

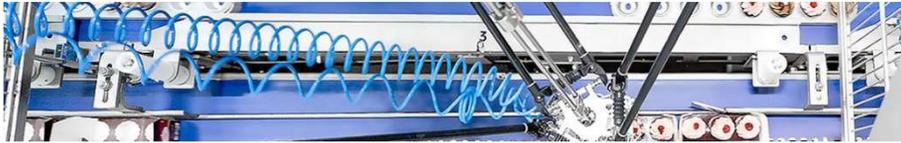


Robots play a significant role in helping manufactures meet these challenges.

Consumer Segments & Service Robotics

Our response to today's consumer trends and demands

Industrial robotics



Food & Beverage

Consumer Packaged Goods

Pharmaceuticals

Logistics

Service robotics



Restaurants

Retail

Healthcare

eCommerce

3PL¹

Post & Parcel

Consumer Segments and Service Robotics

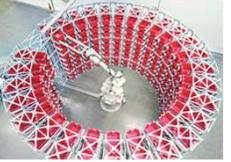
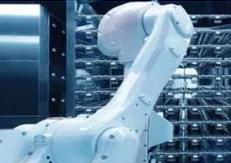
Focus segments in our world

Consumer seg. & Logistics

Healthcare

Retail

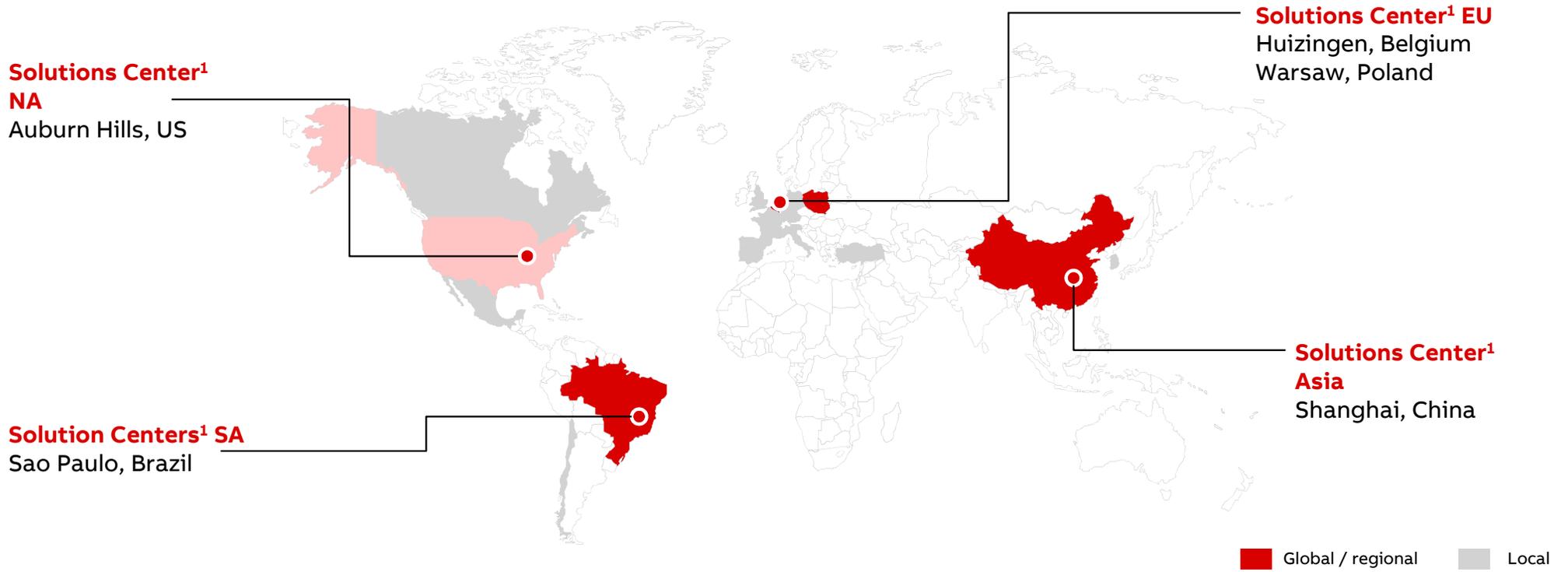
Restaurants and Kitchens

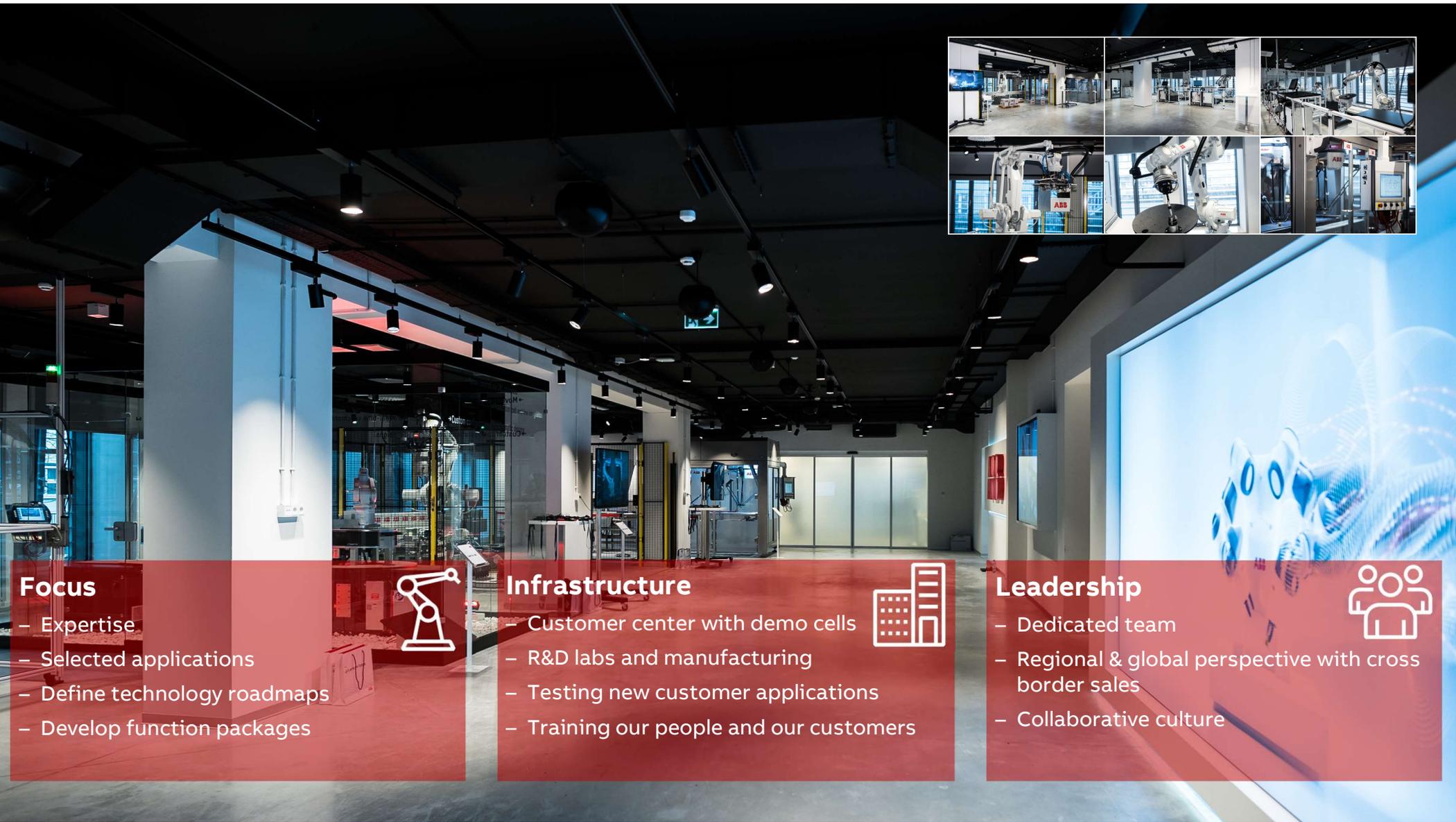
Consumer seg. & Logistics		Healthcare		Retail			Restaurants and Kitchens		
Distribution	eCom	Hospitals	Laboratories	Grocery	Apparel	Pharmacy	QSR	Kiosks	Professional kitchens
									
Retail distribution	Buffer & sequencer	Laboratory automation	Logistic solutions	Inventory checking	Replenishment support	Food preparation	Fresh-prepared food		
									
Picking, packing	End-of-line	Internal warehousing solutions	Medical device companies	Autonomous replenishment	Center store vending machine	Order preparation	Food serving		

Robotic Solutions and technologies to improve productivity, safety and service quality levels

Global reach: local support with global leverage

600+ colleagues in 4 Solutions Centers and 15 local operations





Focus

- Expertise
- Selected applications
- Define technology roadmaps
- Develop function packages



Infrastructure

- Customer center with demo cells
- R&D labs and manufacturing
- Testing new customer applications
- Training our people and our customers



Leadership

- Dedicated team
- Regional & global perspective with cross border sales
- Collaborative culture



The current focus of robotics R&D

Robotics is playing a key role in coping with disruption and pushing the boundaries of automation

1. **Flexibility** – multifunctional and multipurpose
2. **Simplification** – pre-trained for rapid deployment
3. **Modularity** – easy lifecycle management



ABB single & mixed case depalletizing cell

A modular, scalable portfolio

Building blocks to scale faster, safer and more profitably

Modular, scalable robotic solutions

Flexible design: footprint, performance etc.

Shorter deployment

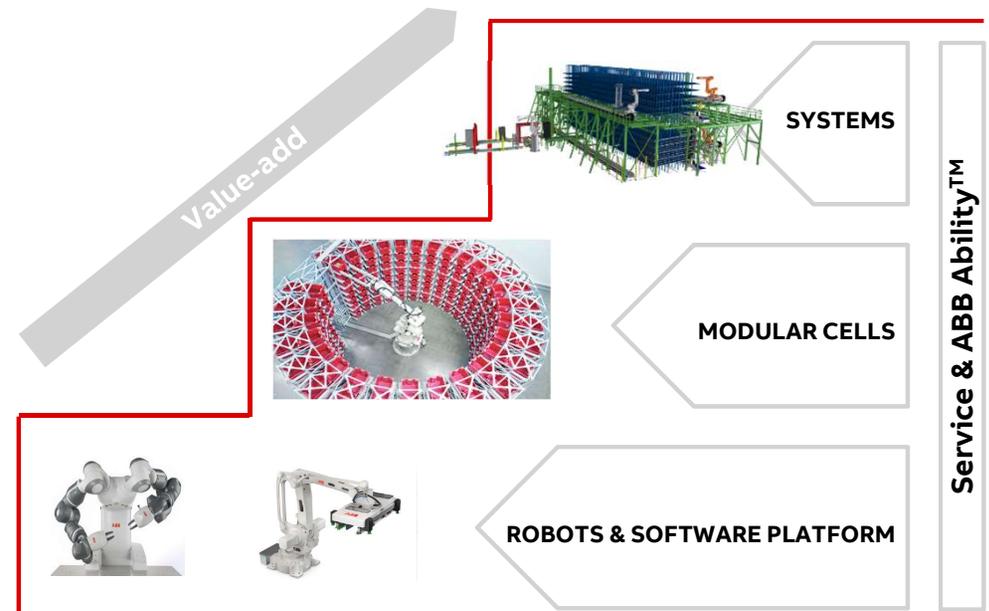
Scalable

Possible re-deployment

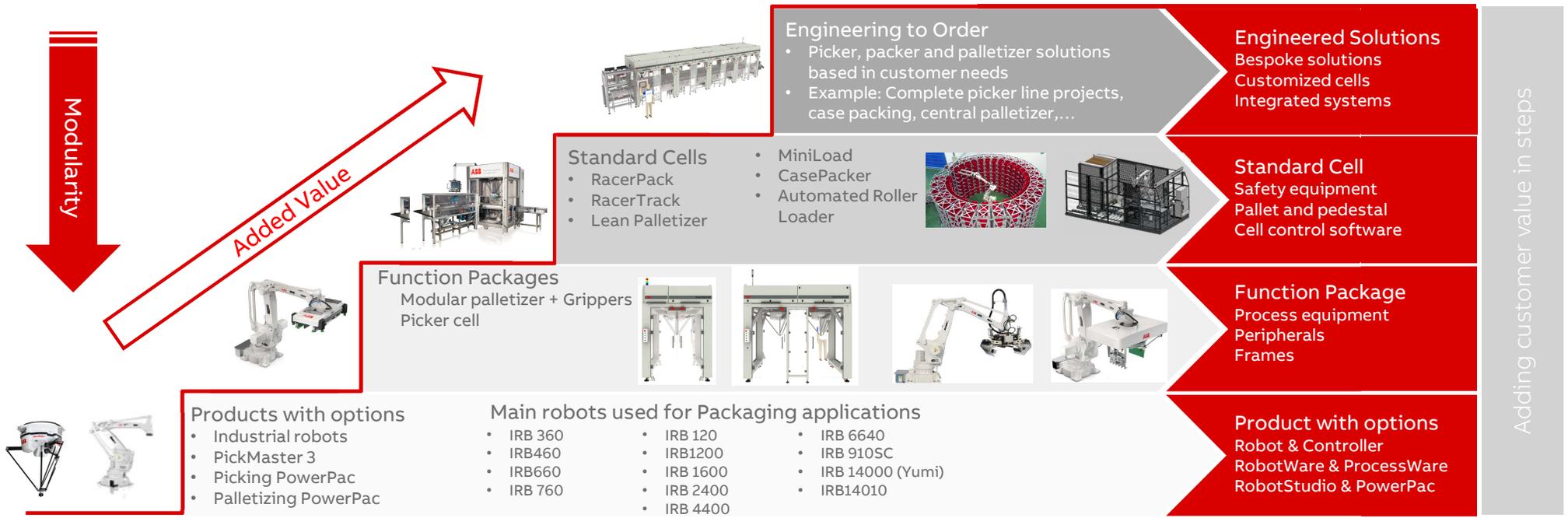
Born-digital

Created through deep application and domain expertise

Value steps to fit channels



Portfolio for the F&B segment



Flexibility

Applications areas



Picking

This is an area in which we service a multitude of installations, covering a host of different products, applications and packaging line set-ups. These include frozen food, bakery and confectionary as well as ice-cream, meat and fish, cheese, pet food, medical products, shampoo and perfume bottles.



Packing

This area is all about packing a variety of items into boxes. It includes robot-based case packing - smaller boxes packed into larger ones, and racetrack packing - many items picked simultaneously with the aid of grippers.



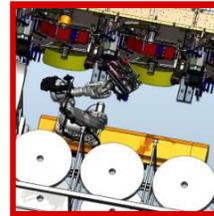
Palletizing

Placing boxes, trays, bags, bottles or other items on a pallet seems easy enough. However, when you need to meet the most rigorous demands in terms of speed, care of handling, pallet patterns, stability, precision and cycle time, nothing compares to a robot-based automation solution from ABB.



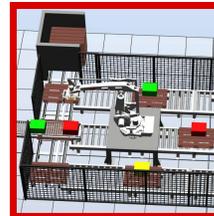
Order Picking

Shorter product life cycles & changeover times, output per m² and batch size 1 are some of the key opportunities for flexible, tailored and intelligent solutions .



Handling of packaging material

Handling of packaging material
Robot based loading and unloading of film rolls on packaging machinery with precise guiding minimizes changeover times and costly production stops.



Mix & Depalletizing

Boxes and crates are produced and stored in batches, but they need to be re-arranged with the right mix for distribution. Efficient and flexible palletizing and de-palletizing makes sure every product is ready for shipmen with the right mix to the retailers.

Simplification

Next Generation PickMaster®: Enabling Simplification, Collaboration and Digitalization



Collaborative Palletizing Cells

SafeMove 2

Key features and benefits

Advantages:

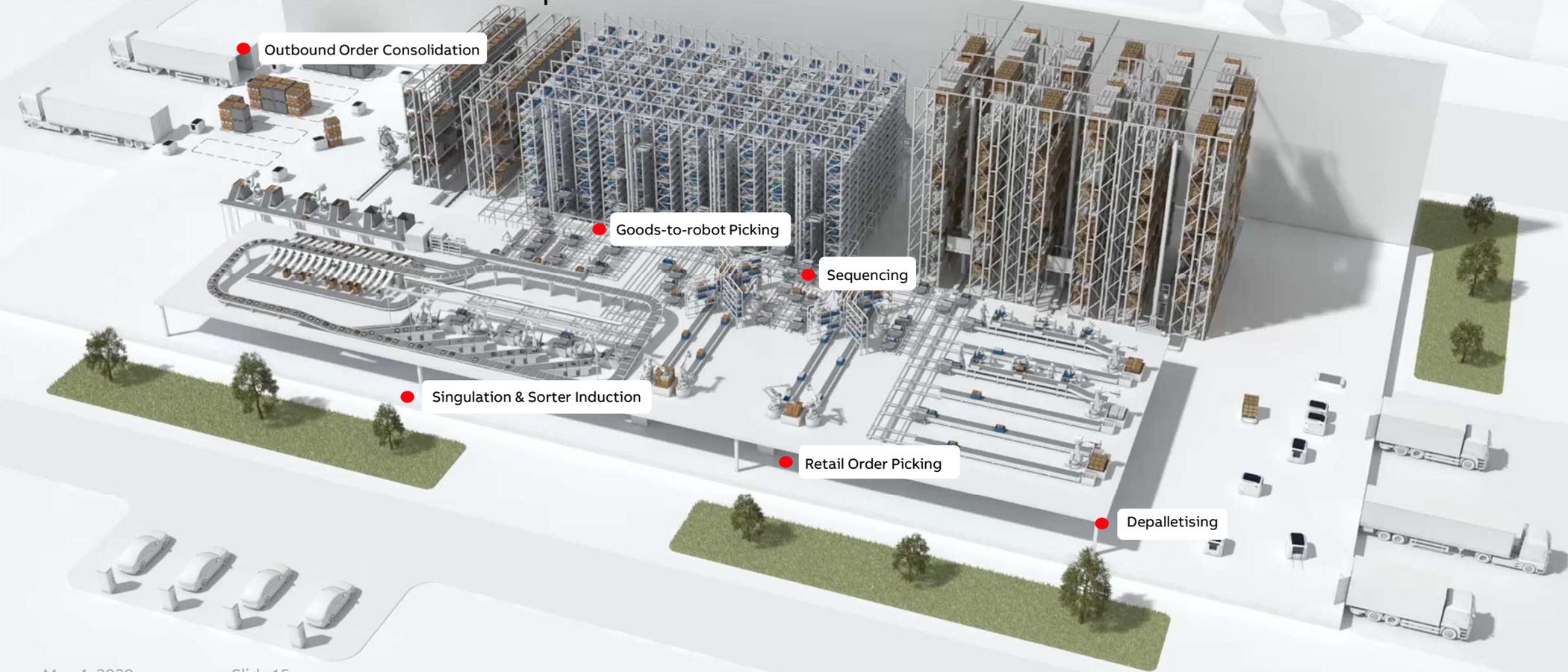
- Collaborative: no need for interlock keys
- Robot does not need to stop for pallet exchange
- Robot does not need to be restarted since we can maintain it stopped with “motor on”
- Increased productivity
- Low maintenance due to fewer conveyors
- Saves space in the production line (small footprint)
- Repeatable and easy to install
- Low cost solution compared to other palletizing solutions



Innovation and collaboration

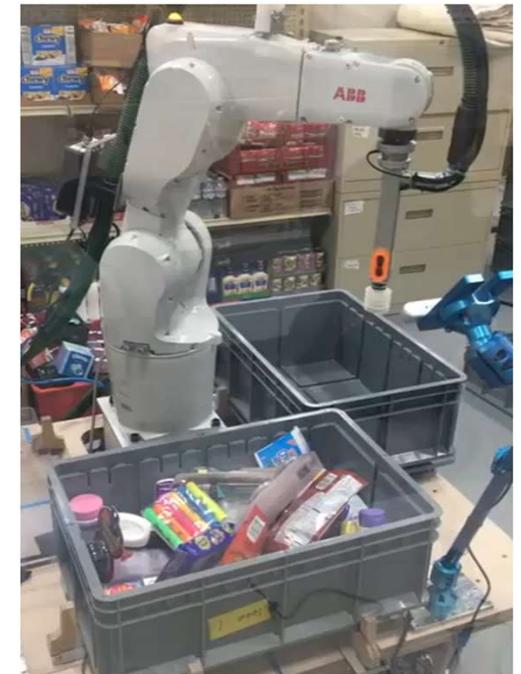
Robotic solutions for warehouse automation

ABB's Automated Warehouse Concept



Modular and scalable robotic decant and order picking

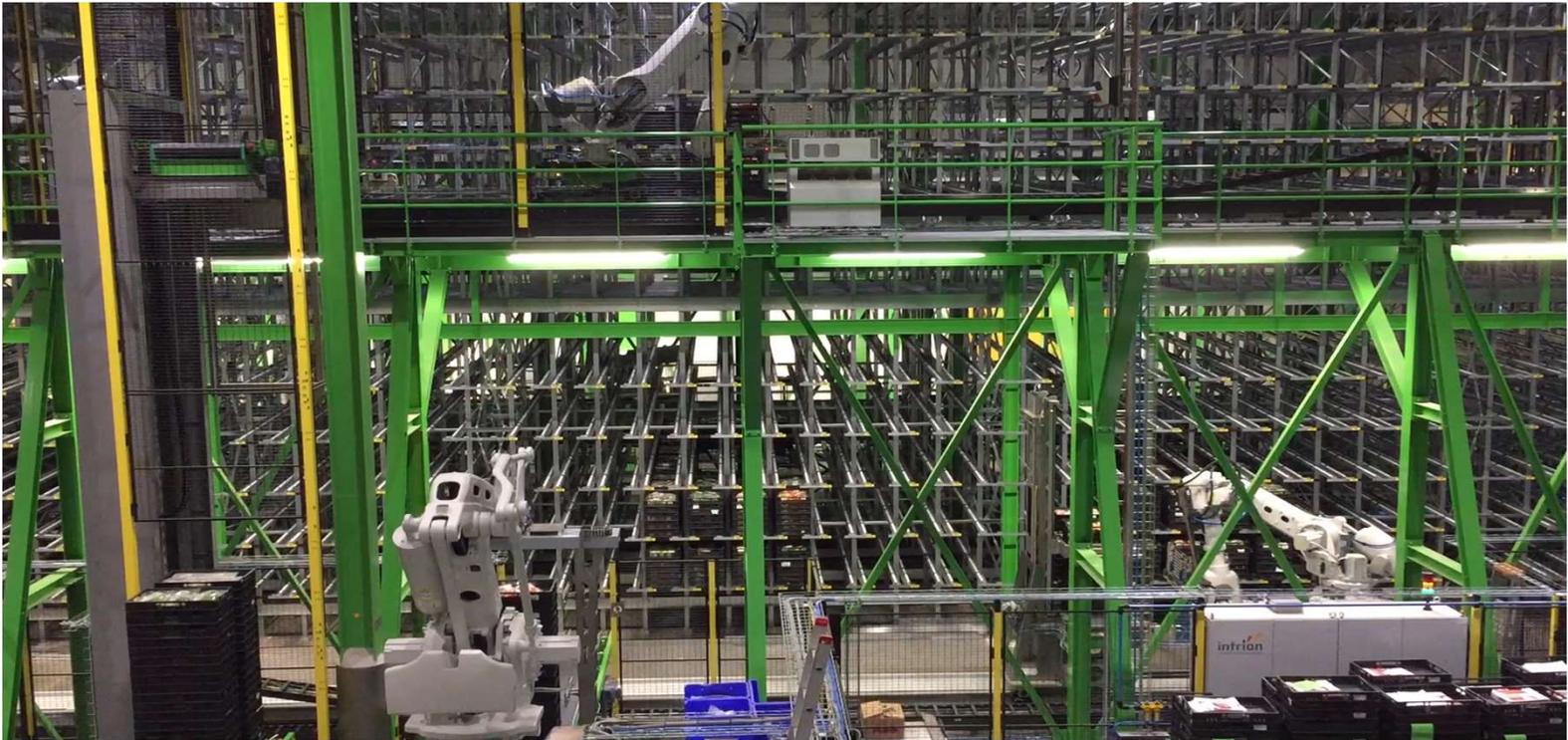
Standard building blocks to create any kind of application





Modularity case

Longer shelf-life thanks to shorter order lead times



Scalable and flexible robotics solutions for F&B

Enabled by Simplification, Collaboration and Digitalization

Technology leadership

- 1 A pioneer in industrial robots, collaborative robots and first mover in digitalization

Global/local footprint

- 2 Strong local sales and engineering coupled with deep, global domain expertise and supported by the industry's broadest service offering and network

Unique offering

- 3 Unique portfolio, innovation strength, true global presence and applied domain expertise for increased productivity, flexibility and simplicity

Strong solutions focus

- 4 ABB combines know-how in complete systems and robots for speed of reaction and performance: Modularity, Flexibility and Seamless Integration for Intralogistics

Q & A



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