

July, 3rd 2019, Timisoara

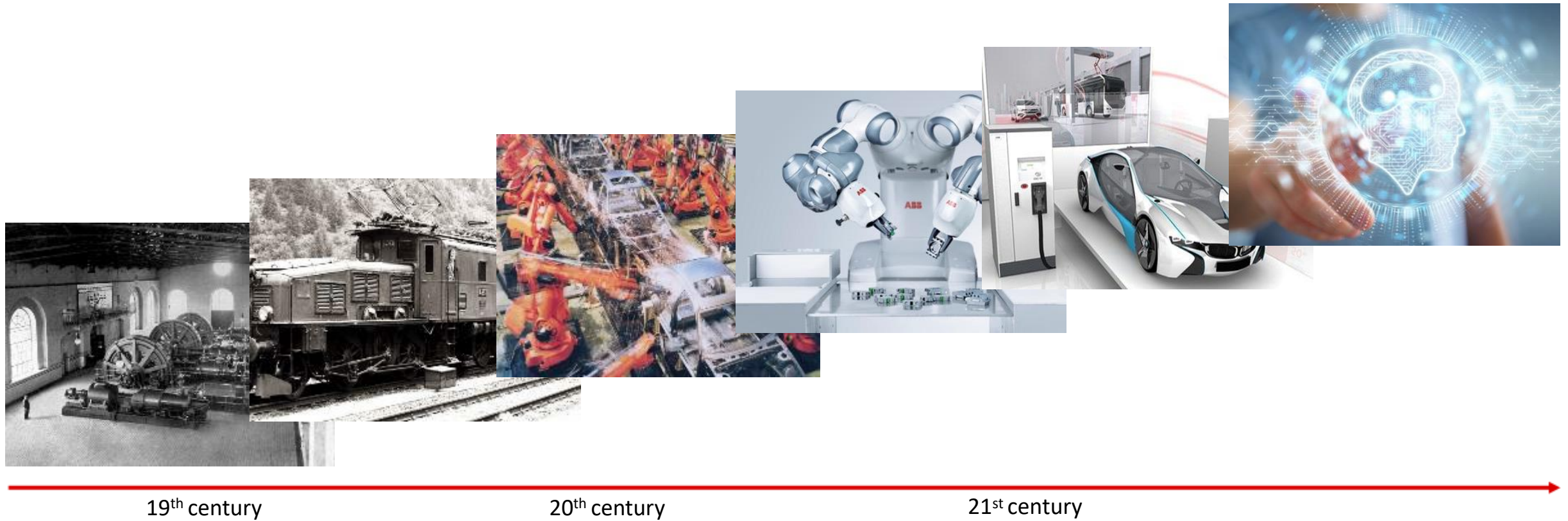
The future of food & beverage

Building tomorrow's food & beverage plant today

Constantin Ichimoaei – Executive Manager



ABB a pioneering technology leader in digital industries



Innovation is key to ABB's competitive advantage

Leadership built on consistent global R&D investment



More than \$1.5 billion invested annually in R&D



Collaboration with 70 universities

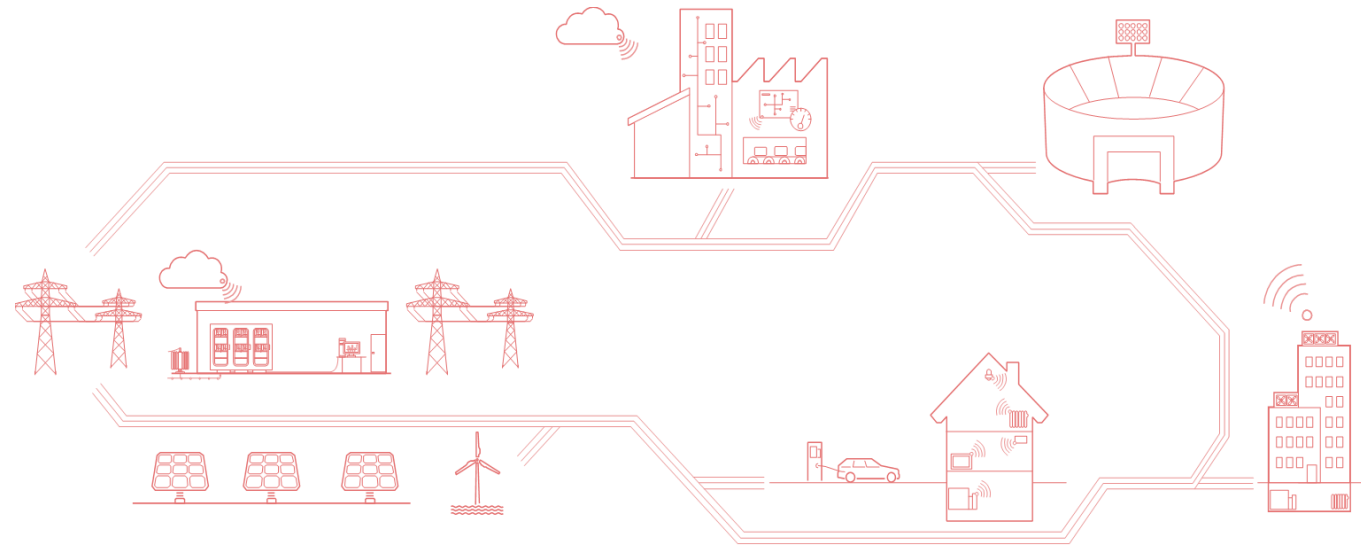


7,900 scientists and engineers



7 corporate research centers innovating globally

Electrification



Partner of choice for safe, smart and sustainable electrification



Solar applications

ABB Solar Inverters

Our vision

We want to generate safe, clean, sustainable power. How?

With our efficient, leading-edge, high-quality and easy-to-use power conversion technology.

By enabling the integration of Solar into smart grids and buildings.

With a passionate team of dedicated solar experts around the world.

And by enabling you to drive progress and successfully provide greener, smarter energy.

In short, solar solutions you can count on.



The market segments we operate in

From a single kilowatt to multi-megawatts

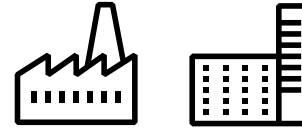
Residential



Usually projects **below 10kW**

- All about rooftop, typically single phase, one or very few inverters
- High value to connectivity, user friendly

Commercial & Industrial



Between **10 to 5000kW**

- C&I roofs, all three phases, some or many inverters
- Flexibility, compactness and performances the keys

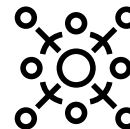
Utility



Above **5000kW**

- Massively ground mounted
- From LV to MV, always big and many units
- \$/W, performances and O&M on top

Microgrid



On/Off-grid projects

- From kw up to MW
- Rural installations primarily in Emerging countries

For on- and off-grid applications, across all power ranges and business models.

Commercial and industrial



Configurable, modular product design for flexible and easy installation



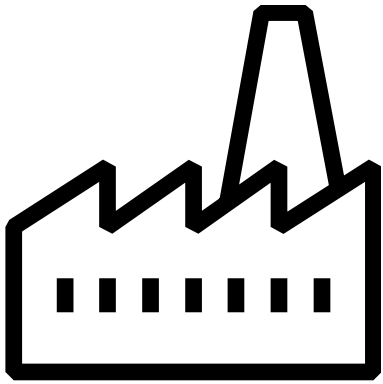
Connectivity and smart inverter capabilities for integration in smart environments



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The landscape is changing...

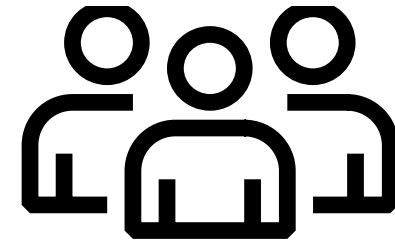
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Yesterday...



Manufacturers

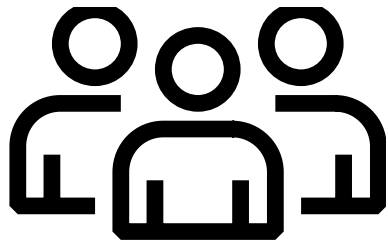


“We make this – Try it!”



Consumers

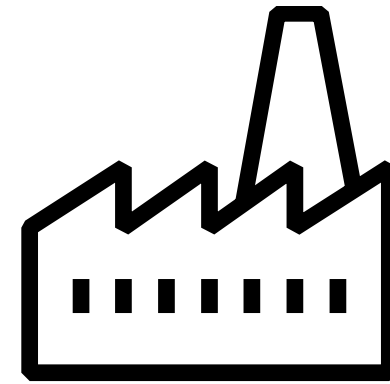
Versus today...



Consumers



“We want this – Make it!”



Manufacturers

The consumer is the new food & beverage king



How do you evolve with the industry and drive success
with the pressure on you to provide –



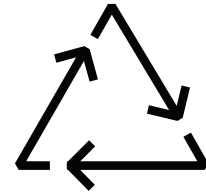
Product variety



Traceability



Consistent Quality



True Sustainability

**You need an experienced partner
who understands the big picture expectations**



You need an experienced partner who understands the big picture expectations

Efficiency



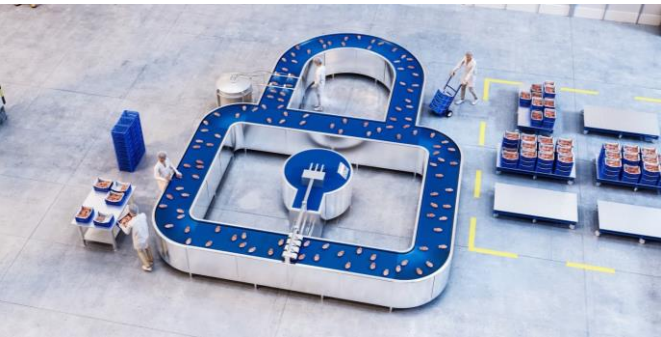
Digitalization



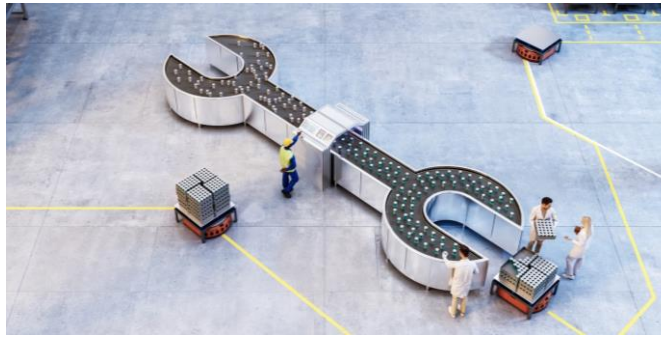
Sustainability



Safety



Reliability



Quality



A partner with a comprehensive offering



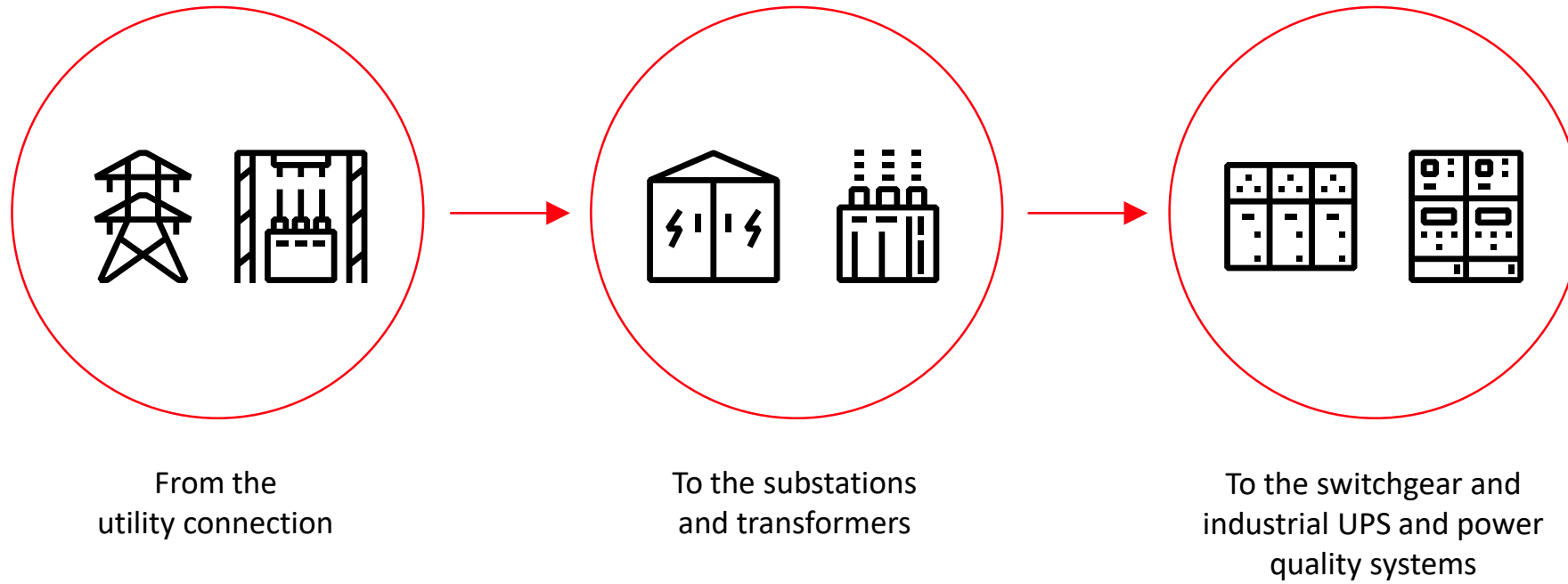
A partner with a comprehensive offering

Power your plant

- Utility power connection & plant distribution
- Power generation solutions
- Power quality solutions
- Renewable power solutions



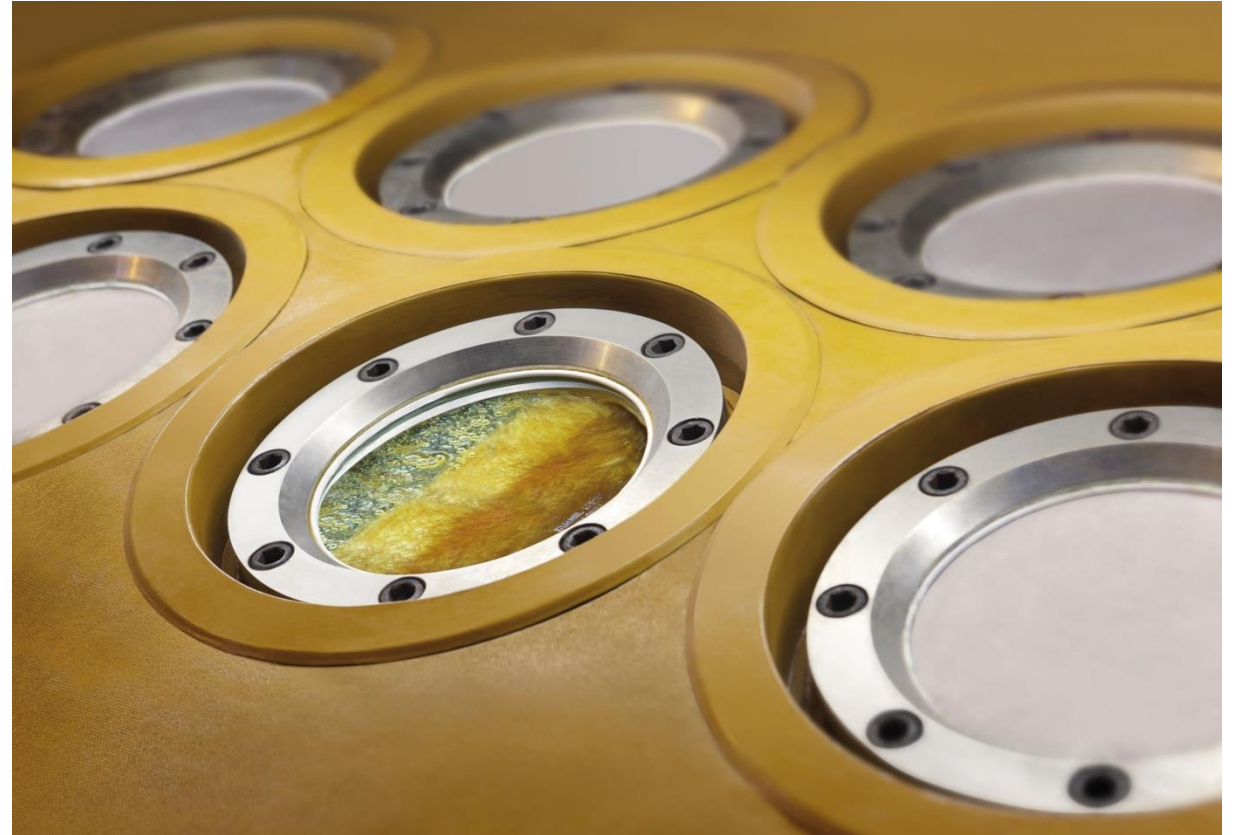
How we help power your plant



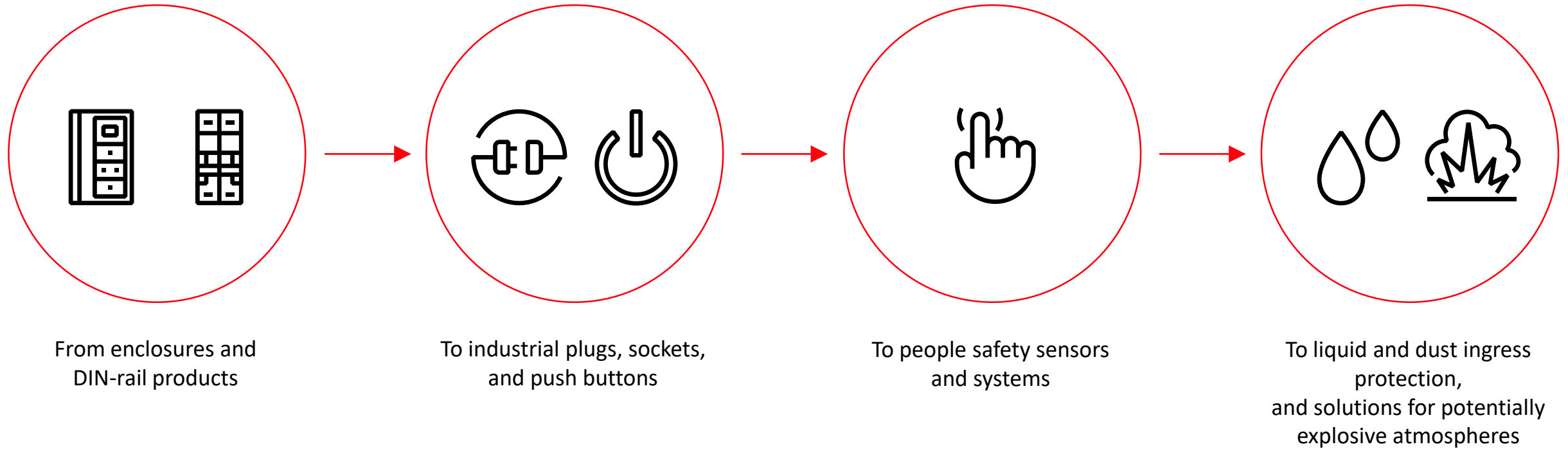
A partner with a comprehensive offering

Electrify your processes

- Electrical distribution solutions
- Electrical protection solutions
- Liquid and dust ingress solutions
- Corrosion resistant solutions
- Condensation protection solutions
- Food safety solutions
- Hazardous area and potentially explosive atmosphere solutions



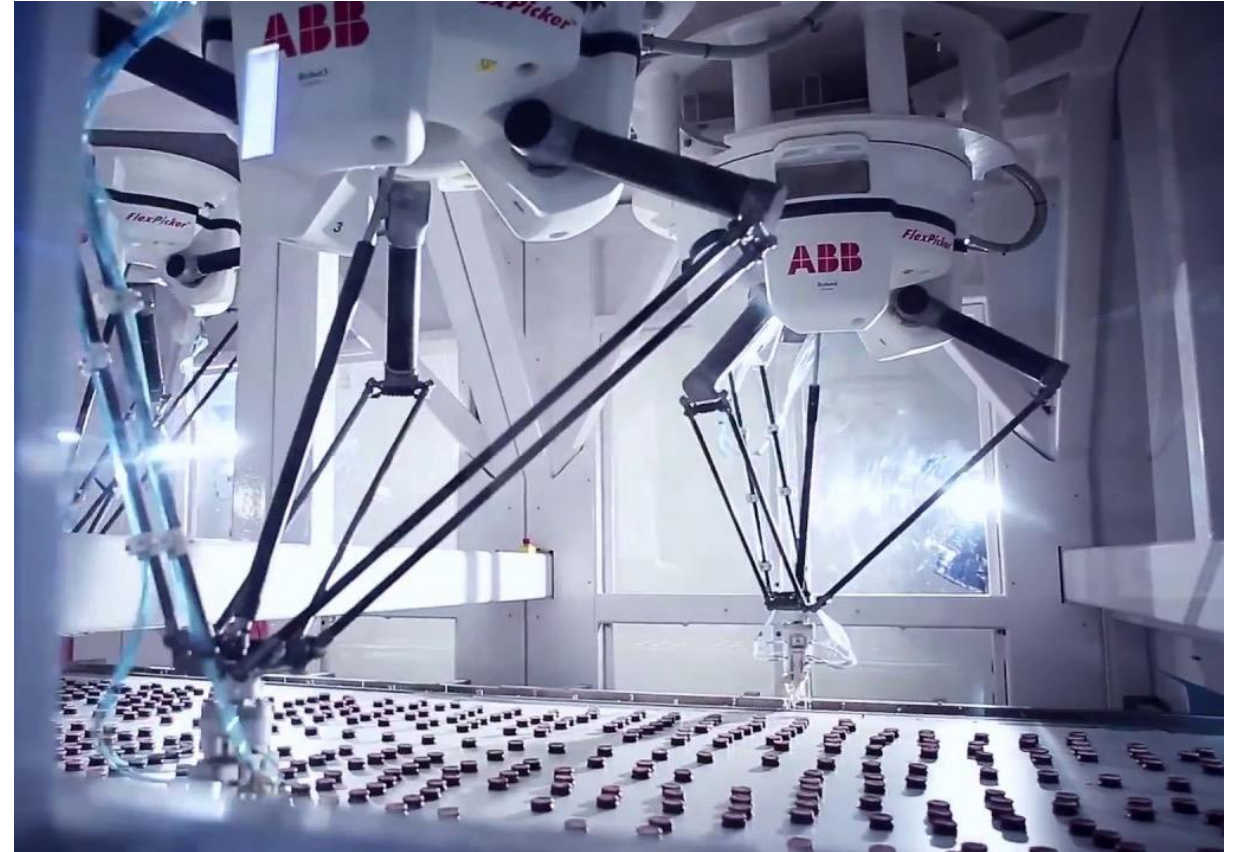
How we help electrify your processes



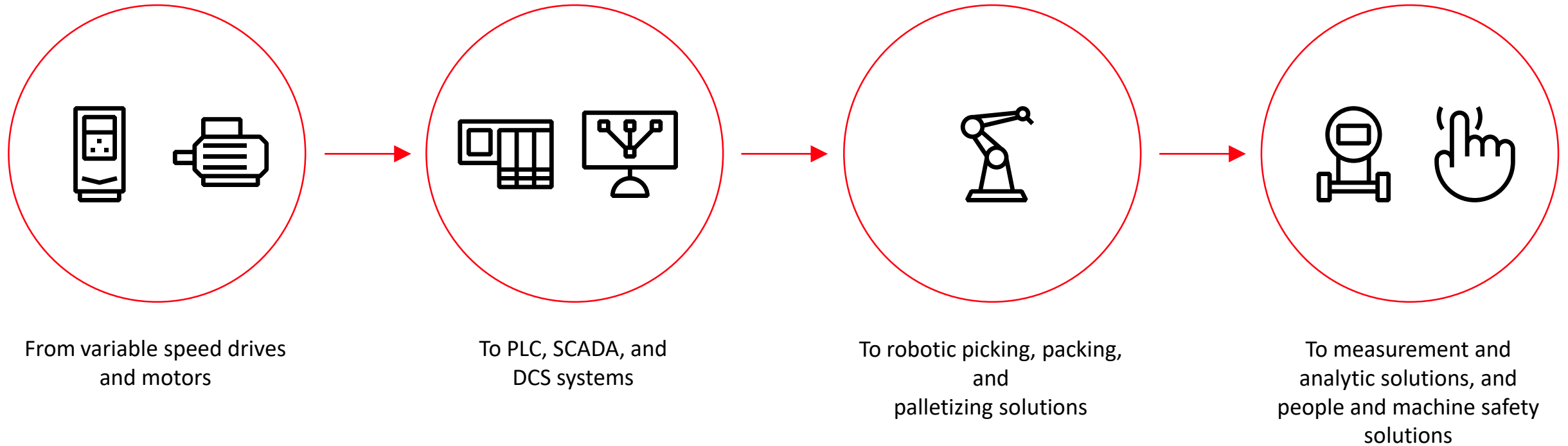
A partner with a comprehensive offering

Automate your processes & safeguard operations

- Plant, process, and machine automation and control
- Picking, packing, and palletizing robotics
- Food and people safety solutions



How we help automate your production



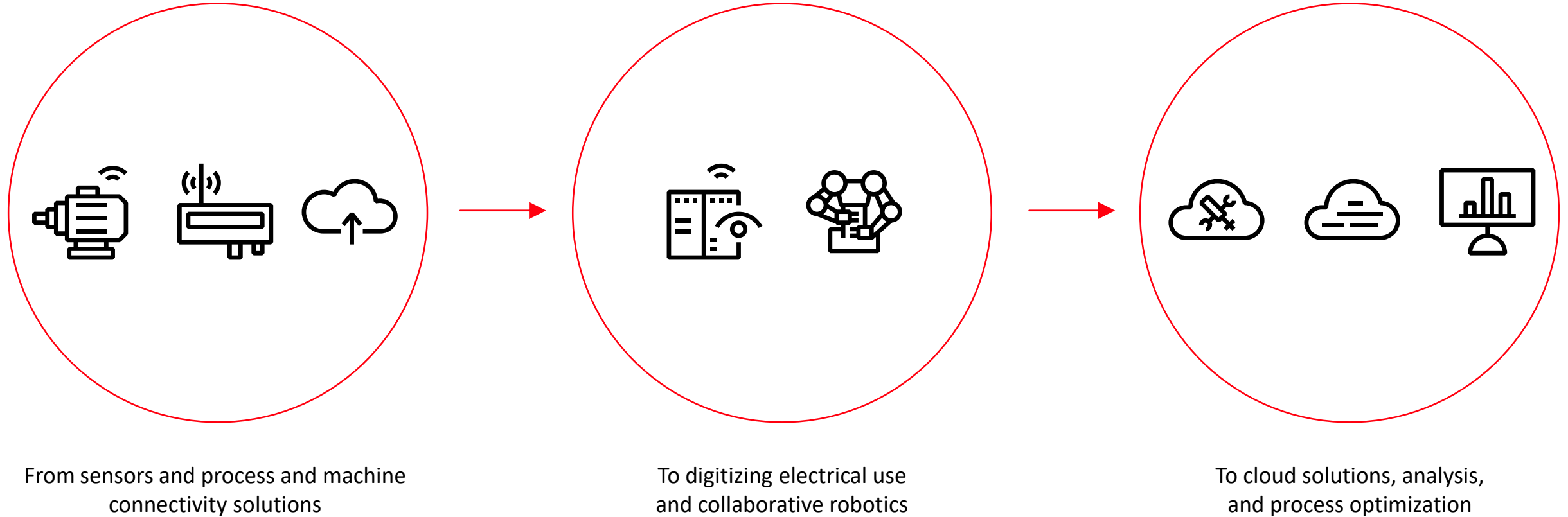
A partner with a comprehensive offering

And digitalize your future

- Measuring & sensing
- ABB Ability™ portfolio
- Continuous operations

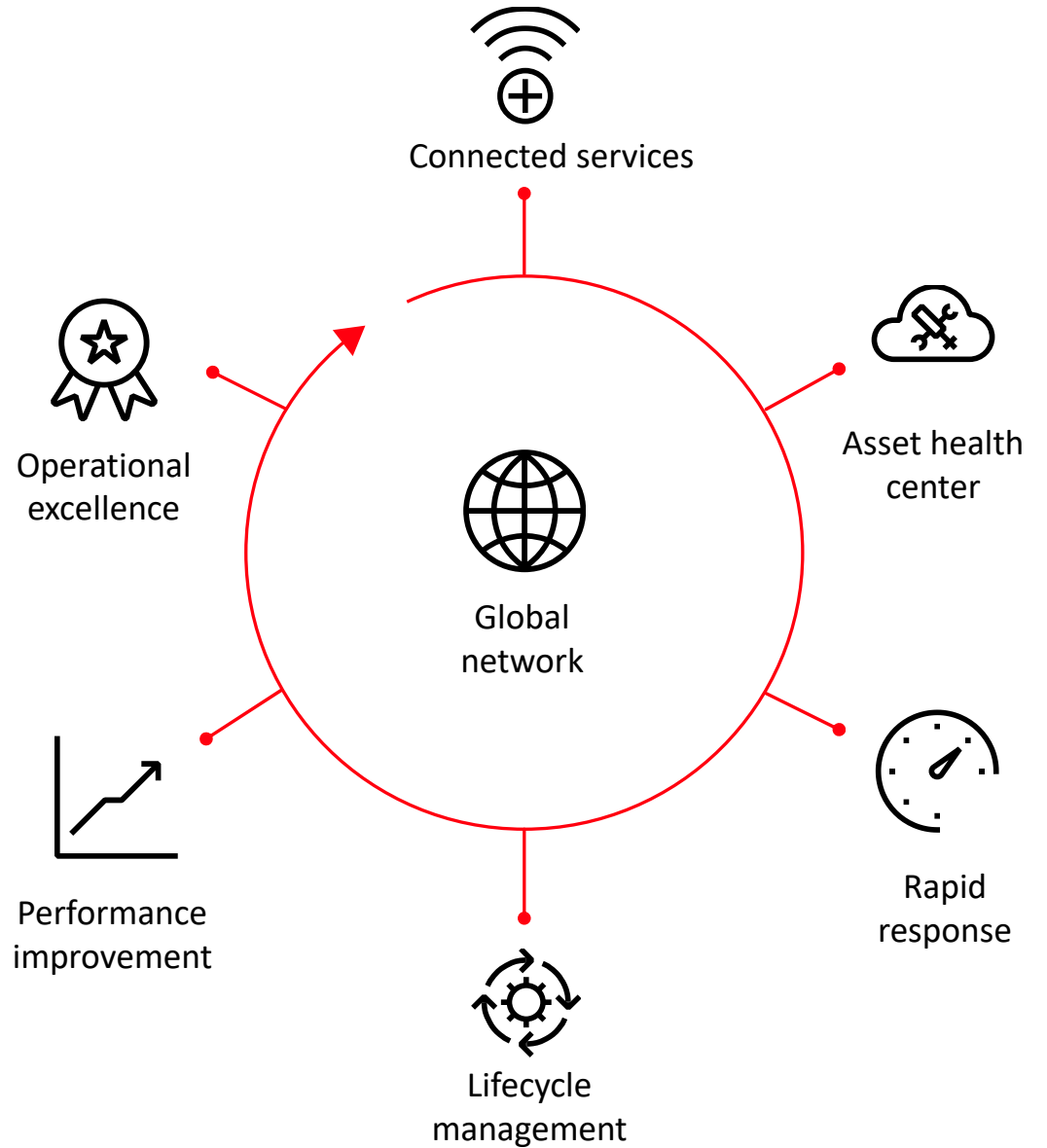


How we digitalize your plant

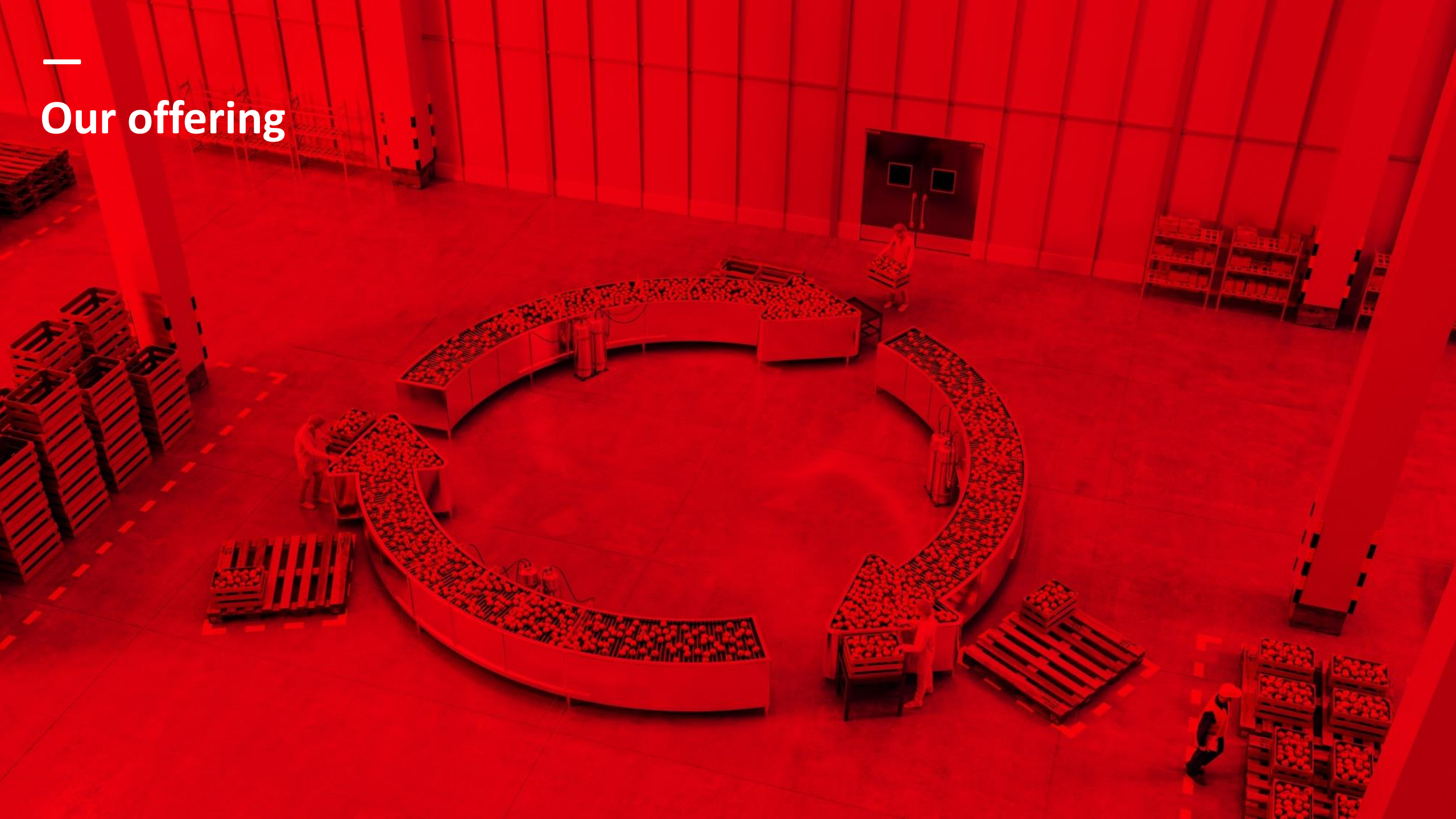


A partner with a comprehensive offering For continuous operations

A broad portfolio of services and support at each stage of the production process, backed by a global network.



— Our offering



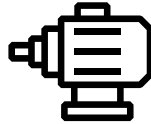
A partner with a comprehensive offering

Picking, packing & palletizing



- Flex Picker
- PalletPack
- RacerPack

Electrical & mechanical



- LV drives
- Softstarters
- SynRM
- Baldor
- Dodge
- Ultra-Kleen

Power distribution, protection & quality



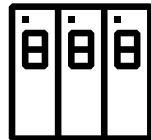
- MV & LV SWG
- Transformers
- UPS, AVC, RPC

Control



- 800xA
- MES
- AC500
- Batch Management

Safety & protection



- MNS iS
- Thomas & Betts
- Jokab Safety

Instrumentation



- Hygienic Master

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So let's talk



ABB