



AUBURN HILLS, SEPTEMBER 6, 2017

# **Leadership in industrial automation**

ABB Innovation & Technology Day

Ulrich Spiesshofer, CEO



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# Important Notices

Presentations given during the ABB Innovation & Technology Day 2017 includes forward-looking information and statements including statements concerning the outlook for our businesses. These statements are based on current expectations, estimates and projections about the factors that may affect our future performance, including global economic conditions, and the economic conditions of the regions and industries that are major markets for ABB Ltd. These expectations, estimates and projections are generally identifiable by statements containing words such as “expects,” “believes,” “estimates,” “targets,” “plans,” “outlook” or similar expressions.

There are numerous risks and uncertainties, many of which are beyond our control, that could cause our actual results to differ materially from the forward-looking information and statements made in this presentation and which could affect our ability to achieve any or all of our stated targets. The important factors that could cause such differences include, among others:

- business risks associated with the with the volatile global economic environment and political conditions
- costs associated with compliance activities
- market acceptance of new products and services
- changes in governmental regulations and currency exchange rates, and,
- such other factors as may be discussed from time to time in ABB Ltd’s filings with the U.S. Securities and Exchange Commission, including its Annual Reports on Form 20-F.

Although ABB Ltd believes that its expectations reflected in any such forward-looking statement are based upon reasonable assumptions, it can give no assurance that those expectations will be achieved.

The presentations and the related discussion may also contain or refer to non-GAAP measures of performance. Definitions of these measures and reconciliations between these measures and their US GAAP counterparts can be found in the “Financial information” documents under “Quarterly results and annual reports” on our website at <http://new.abb.com/investorrelations/>

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**Pioneering technology leadership**

Software &amp; services

**Utilities      Industry      Transport & Infrastructure**

## Transport & Infrastructure

**Globally**

## Europe

~136,000 employees

# Why are we here today?



#1 economy in the world

#1 automation market globally for the industry sector

#1 market globally for ABB

- ~20,000 employees
- 60 manufacturing sites
- ~\$11 bn capital deployed since 2010



## Auburn Hills

Cradle of robotics in the US



# Purpose of today

## Inform

Next Level update  
Industrial Automation  
Robotics & Motion  
ABB Ability™  
Innovation – what's next?

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## Experience

Robotics solutions and factory tour  
ABB Ability™ System 800xA® – intelligent Chemical Projects  
B&R – Machine & Factory Automation  
ABB Ability™ – mining solution and platform  
ABB Ability™ Collaborative Operations™ – digital transformation in Marine

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## Discuss

Open forum  
Executive and business management dialogue

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# Agenda

Next Level transformation – update

ABB's leadership in industrial automation

# 2017: living Next Level

Clear priorities, implementation well under way

## **Profitable Growth**

Driving growth in four market-leading entrepreneurial divisions

Shifting the Center of Gravity: competitiveness, growth, risk

Quantum leap in digital

Value creating, strategic acquisitions and partnerships

## **Relentless Execution**

World-class operational excellence across the whole organization

– White Collar Productivity, Net Working Capital, Quality

Linked strategy, performance management and compensation

## **Business-led Collaboration**

Market focused and lean organization

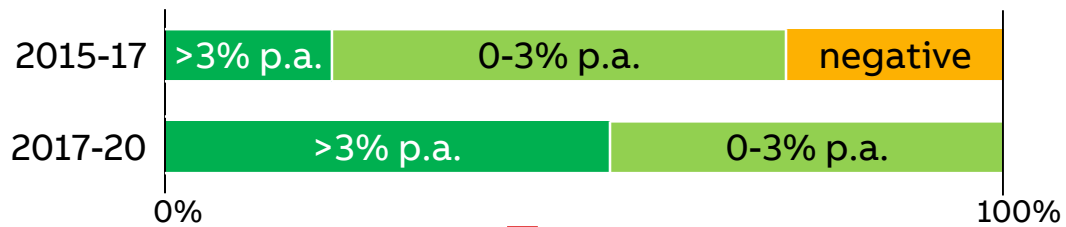
Continued leadership development

Strengthening the global ABB brand

# Growth momentum building

## Market growth across industry sectors

Share of ABB industry market



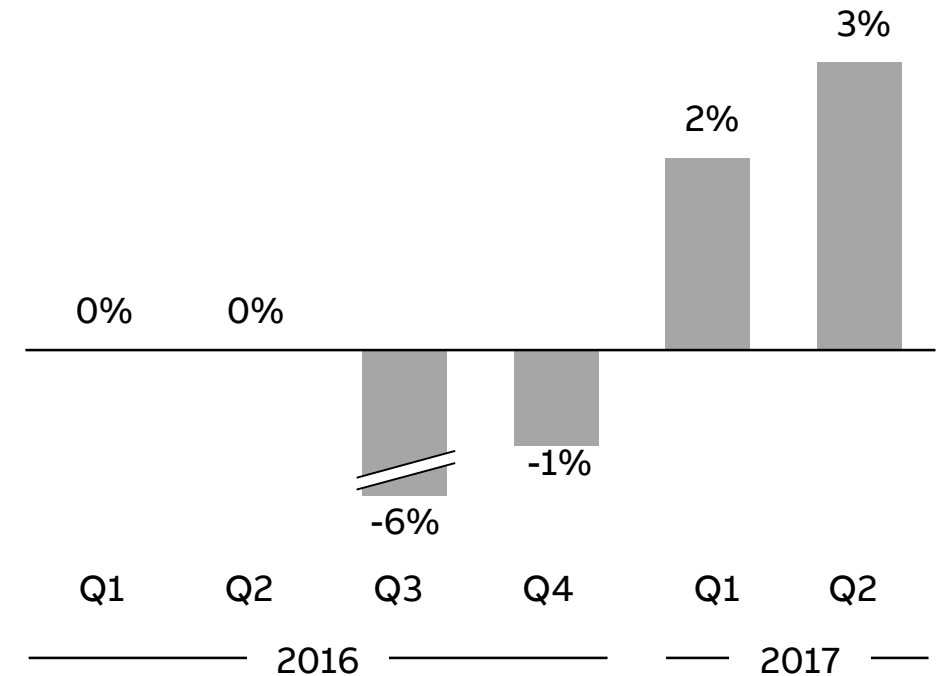
## PIE “growth machine” working

Penetration: all regions, food & beverage, automotive, service

Innovation: ABB Ability™, digital substation, select I/O

Expansion: B&R, Robotics acquisitions, Africa

## ABB base order growth, yoy, comparable





# New division structure working well

Partner of choice for ...

## Power Grids



Transformation progressing

Closing out legacy risks

Business model transformation

Market-leading profitability

## Electrification Products

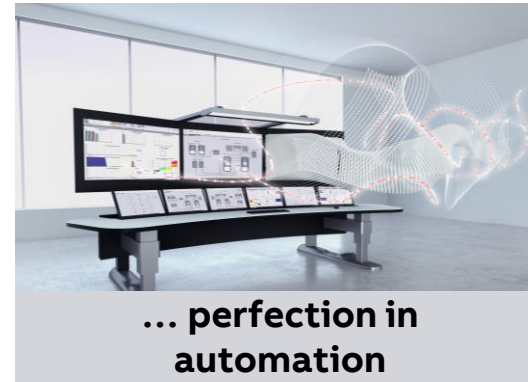


Integration of all ABB LV-/ MV-activities

Innovation, e.g. home automation, smart products

Expansion in growth sectors, e.g. e-mobility, renewables, data centers

## Industrial Automation

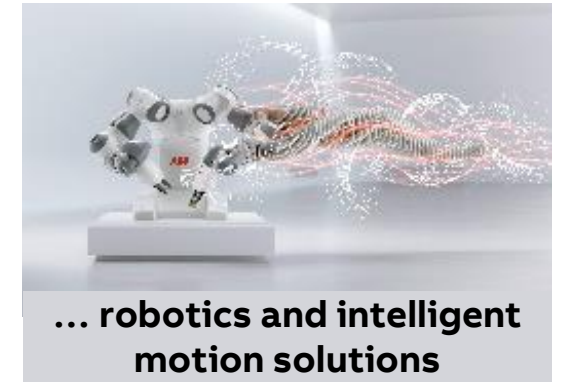


Integration of all control-based solutions: DCS, PLC/IPC<sup>1</sup>

Expansion, e.g. B&R, Pharma

Leading in digitalization, software and service

## Robotics and Motion



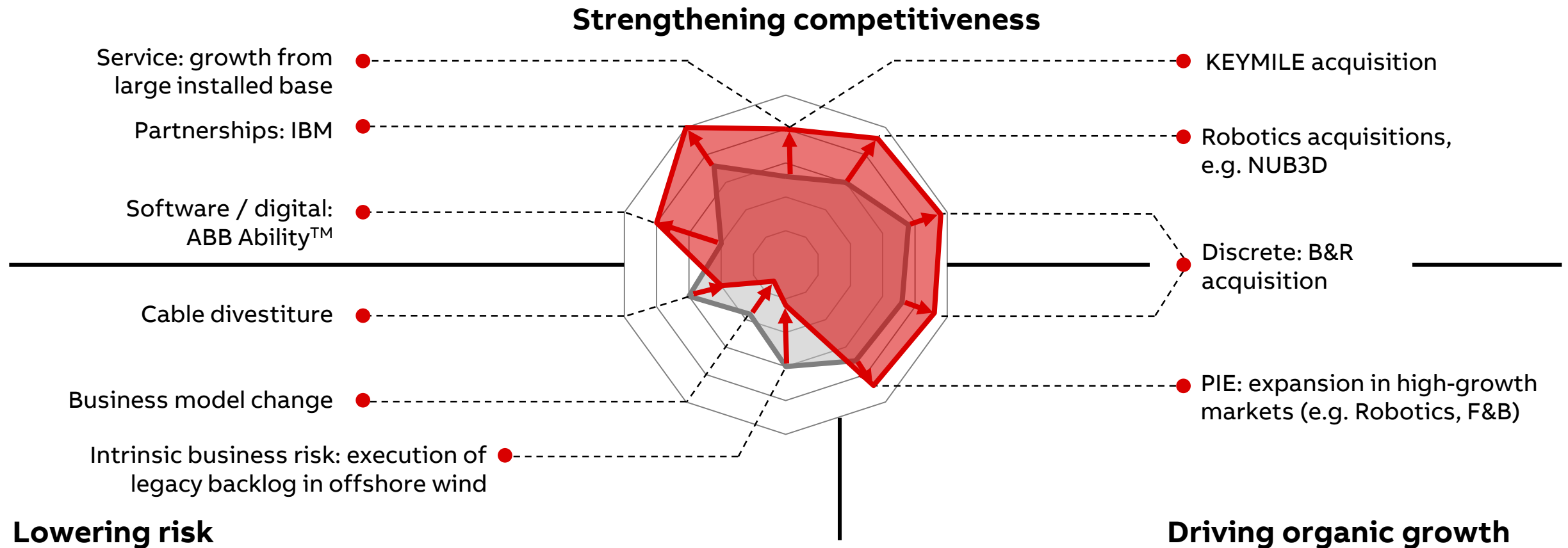
Focused, simplified portfolio

Robotics: innovation & customer value leader

Motion (motors & drives) bottoming out, early cycle momentum building

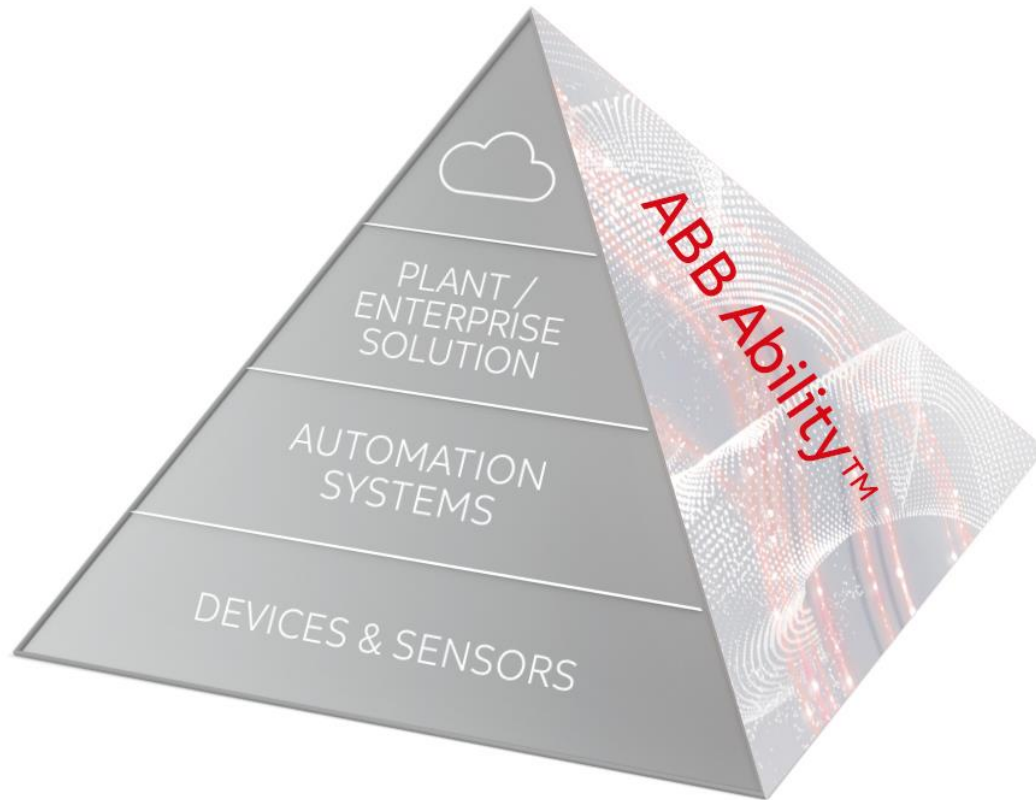
# Shifting ABB's Center of Gravity

Steady action stream driving the transformation<sup>1</sup>

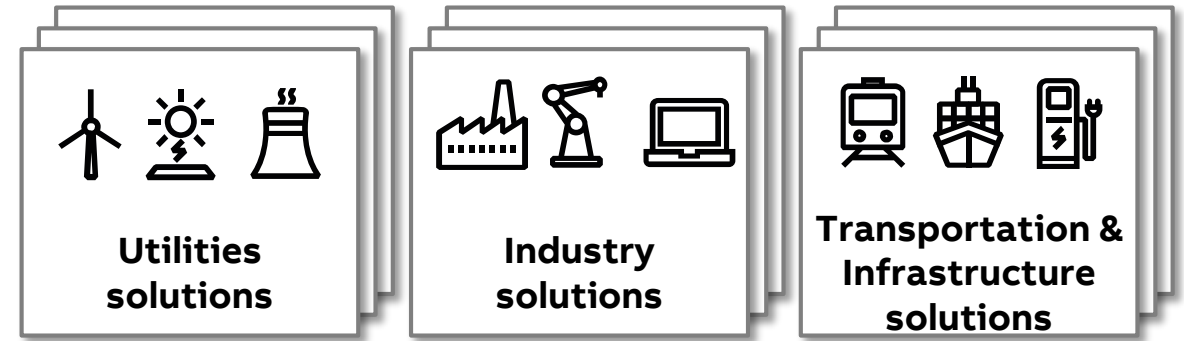


# ABB Ability™: industry-leading digital solutions

Successful launch in Europe, Americas and AMEA<sup>1</sup> in H1 2017



**180+ ABB Ability™ solutions**



Microsoft

Platform



(common technologies for device, edge, and cloud)

# ABB's group targets 2015-20

Ambition confirmed

## Group targets

Revenue growth <sup>1</sup>	3 – 6%
Operational EBITA % <sup>2</sup>	11 – 16%
Operational EPS growth CAGR <sup>3</sup>	10 – 15%
FCF conversion to net income	>90%
CROI % <sup>4</sup>	Mid-teens

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## Next Level – summary

- ▶ Next Level transformation well under way
- ▶ Topline growth and steady profitability despite market head winds & ongoing transformation
- ▶ 2017 crucial transition year
- ▶ Market dynamics improving
- ▶ ABB returning to profitable growth
- ▶ 2018 first year of “new normal”

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# Agenda

Next Level transformation – update

**ABB's leadership in industrial automation**

# Industrial automation

ABB positioned as pioneering innovation and technology leader<sup>1</sup>

## ABB's leadership in industrial automation

Global #1 in process control software

Global #1 in motion

Global #2 in robotics, #1 in China

Innovation & growth leader in machine and factory automation

Large installed base incl. motion, robotics, process control systems

ABB Ability™ – leading industrial solutions

## Innovation and technology trends



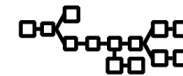
Internet of things / digitalization



Robotics



3D printing



Blockchain



Artificial intelligence

Well positioned in a world of accelerating innovation

# Industrial automation market

A >\$200 bn market for ABB expected to grow ~3% p.a.<sup>1</sup>

Utilities

Industry

Transport & Infrastructure

Process

Discrete

Oil & gas

Mining & metals

Food & beverage

Packaging & logistics

Automotive

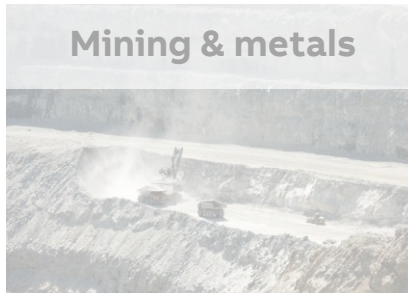
Refining & chemicals

Water & waste water

Pharma

Machinery

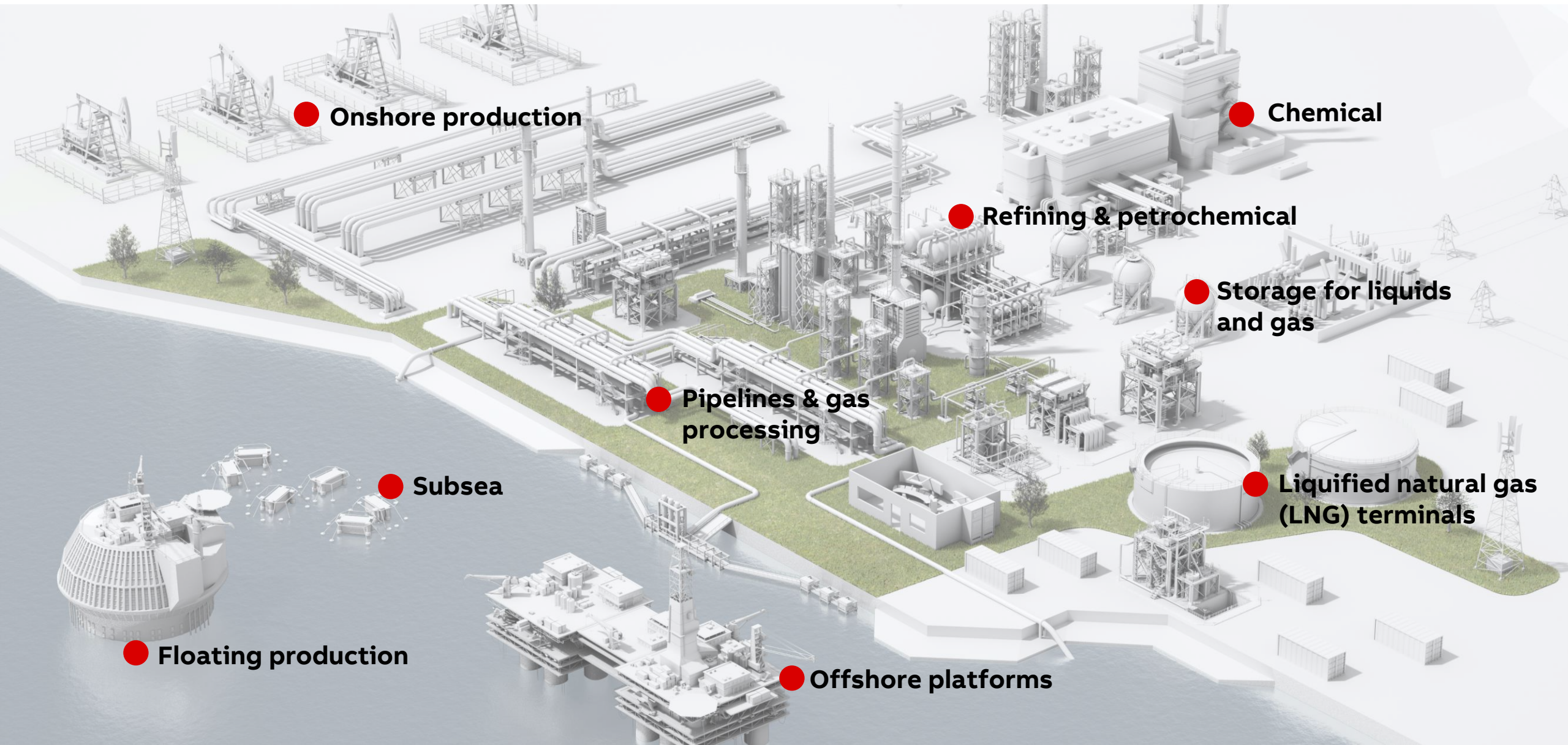
Electronics





# Our customers' operations

Example: oil, gas & chemicals



● Onshore production

● Chemical

● Refining & petrochemical

● Storage for liquids and gas

● Pipelines & gas processing

● Subsea

● Liquefied natural gas (LNG) terminals

● Floating production

● Offshore platforms



# Our customers' operations – example: chemical plant

ABB has a complete offering for process industries



Central control room & process control system (DCS)

Telecom systems

Safety systems

Power management system

Programmable Logic Controller (PLC)

Motor control center

Analizers

Sensors

Intelligent field instruments

Operator mobility

Analyze & control

Chemical plant

Act

Sense

EXAMPLES

Motors

Variable-speed drives

Intelligent switchgear

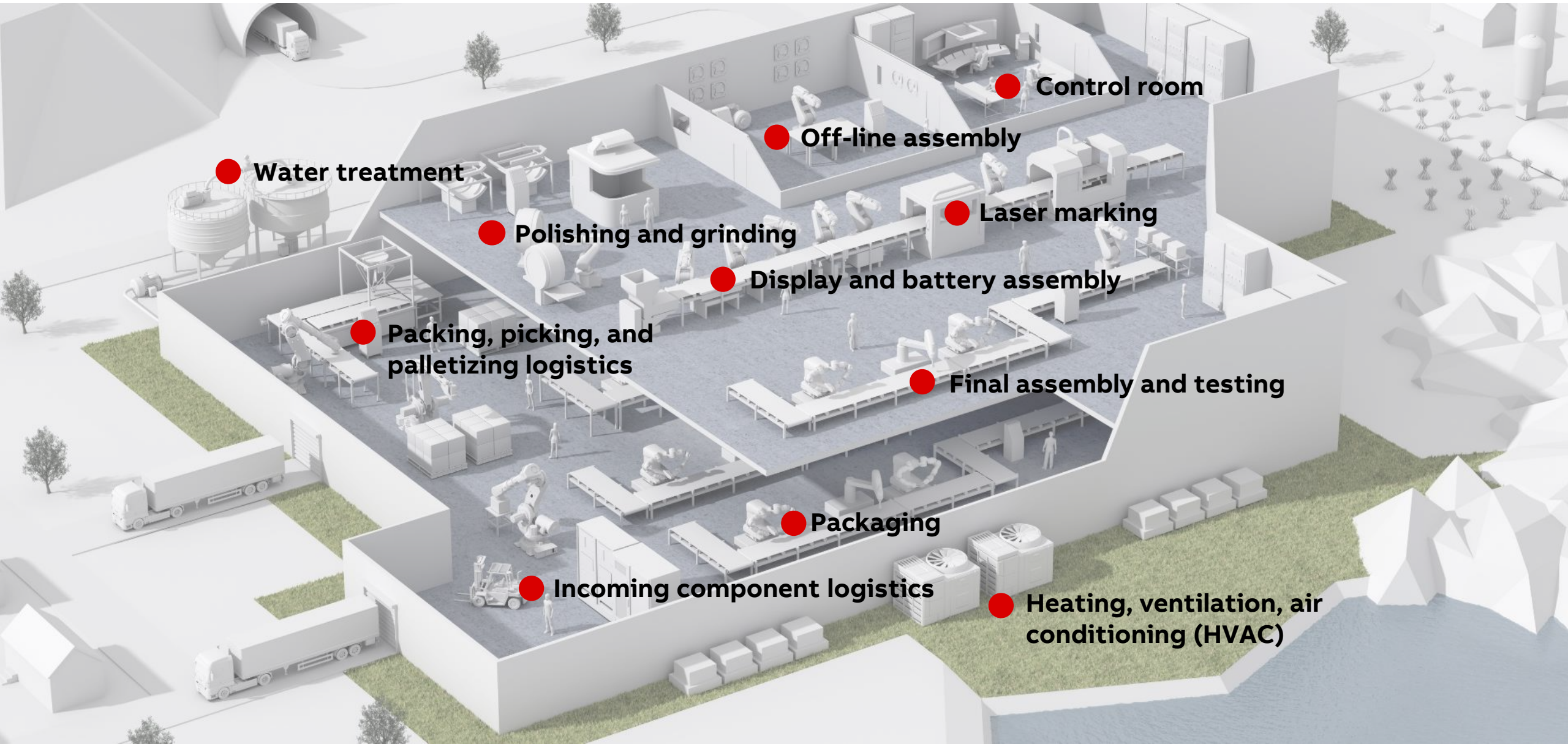
HV / MV / LV power distribution

**ABB Ability™, Software & Services**



# Our customers' operations

Example: electronics manufacturing plant in discrete industries

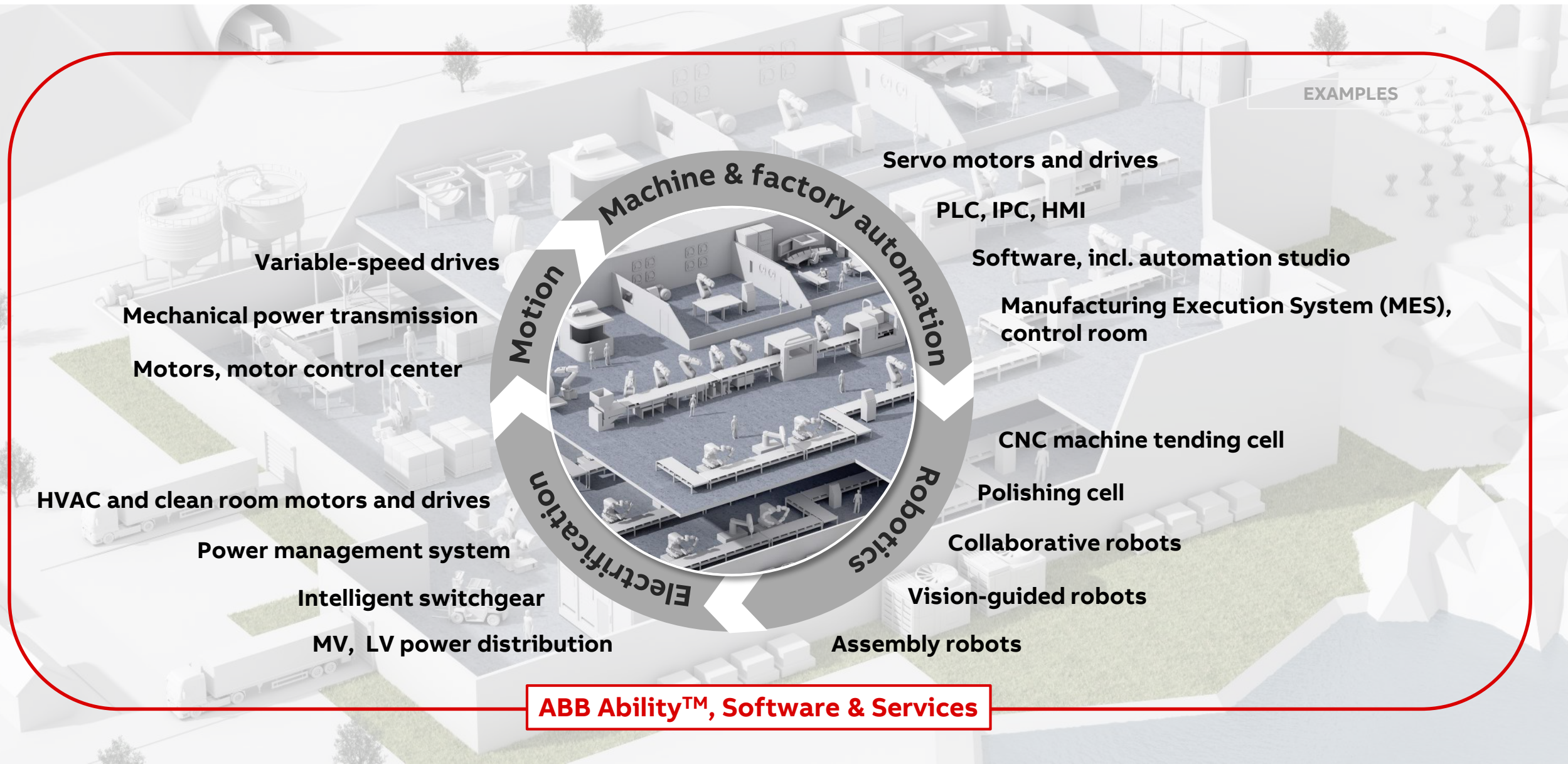




# Our customers' operations – example: electronics manufacturing plant

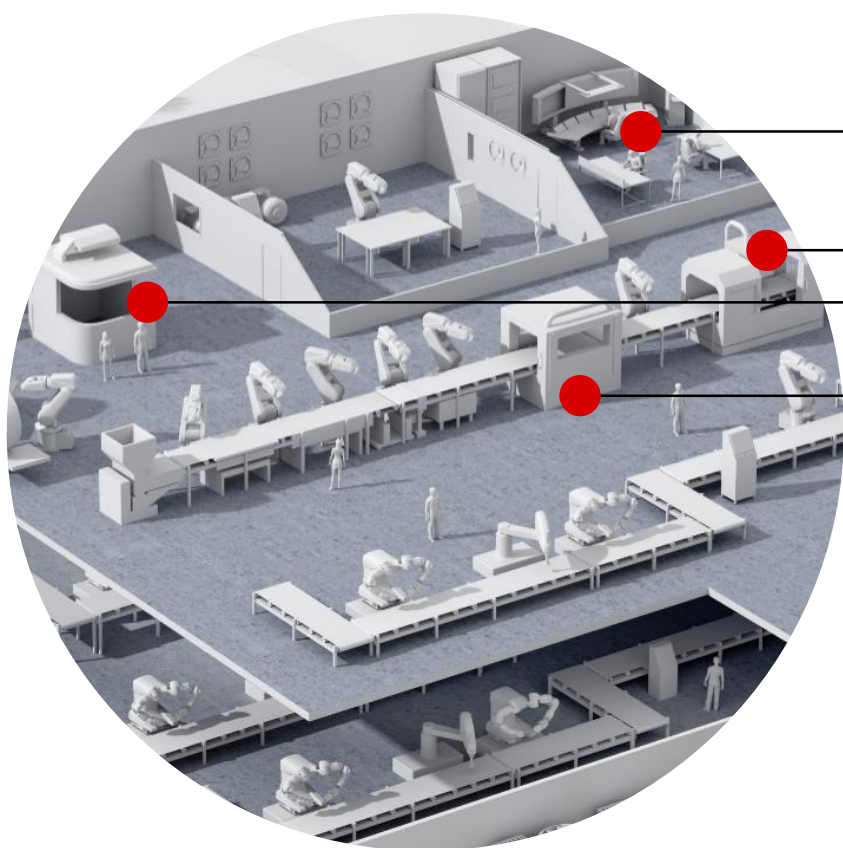


ABB has a complete offering for discrete industries

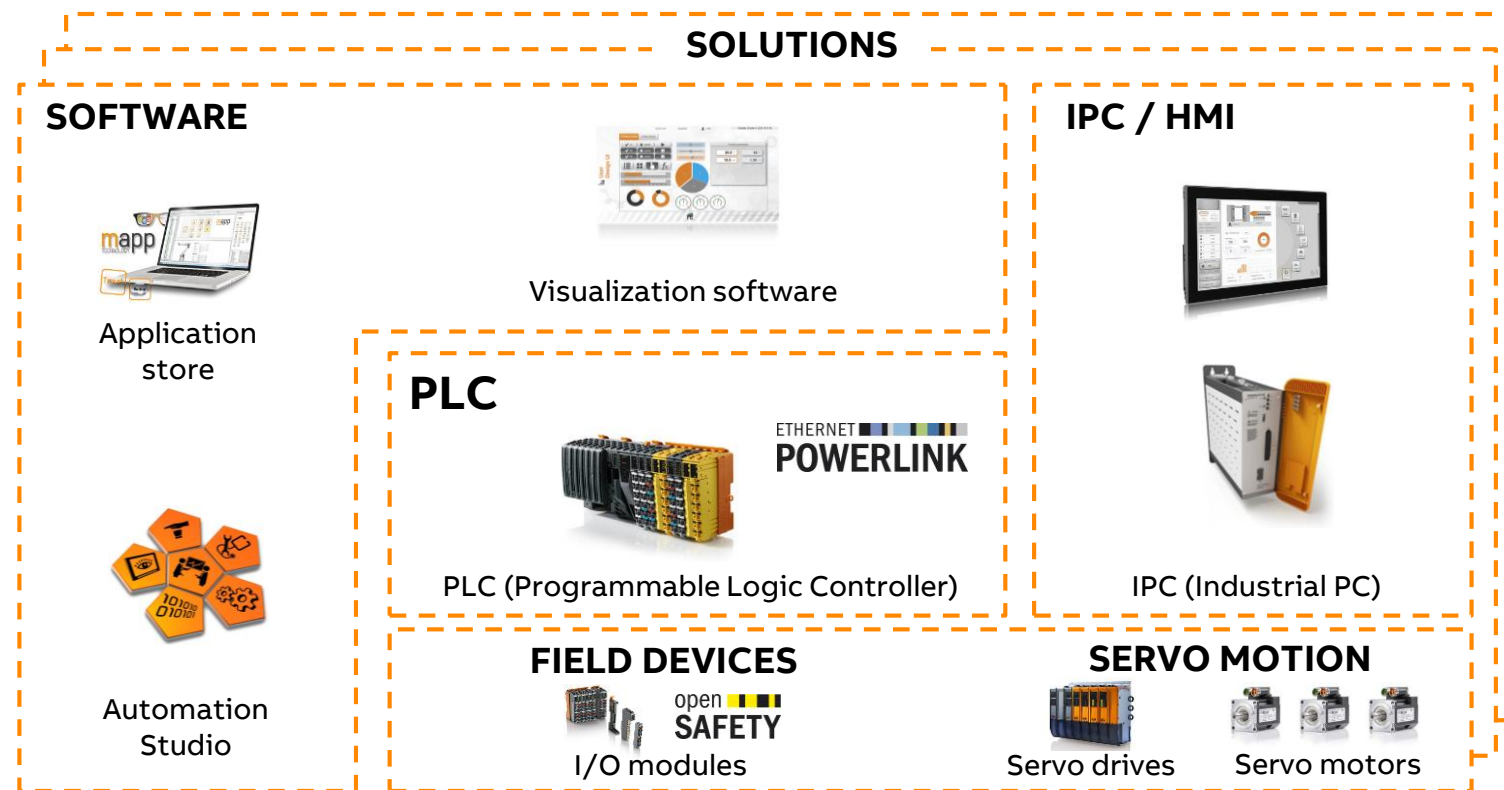




# Our customers' operations – example: electronics manufacturing plant



## B&R – solutions for machine and factory automation

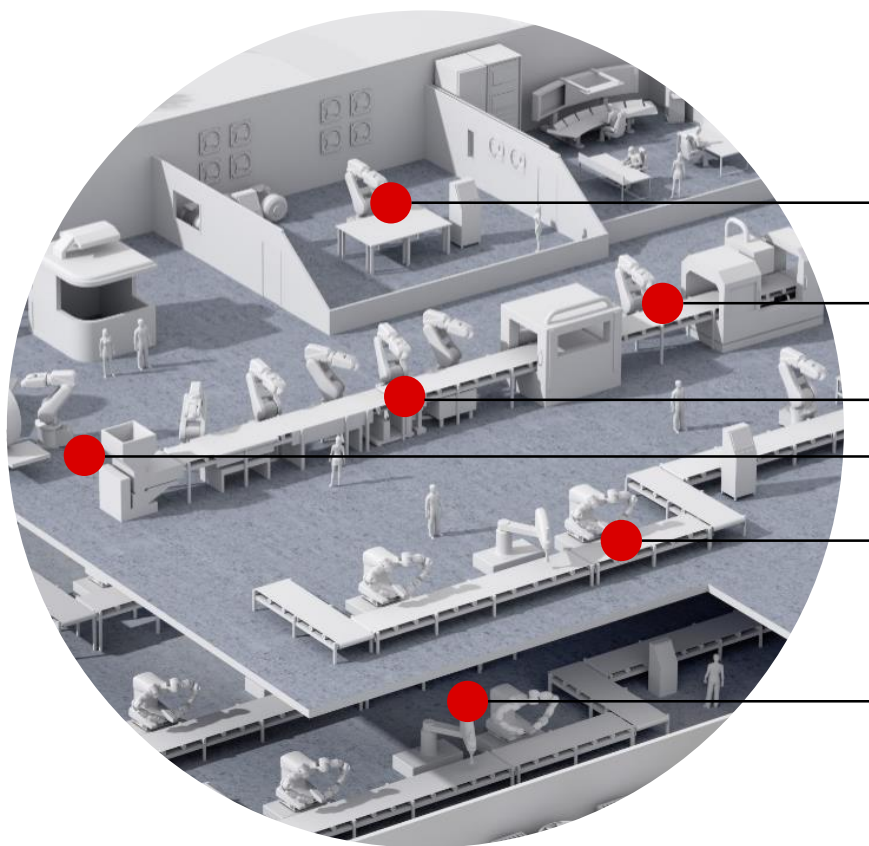




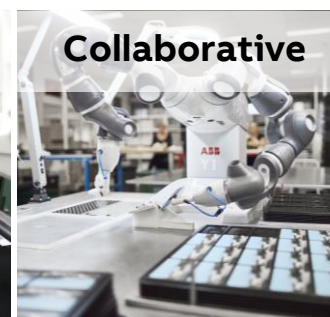
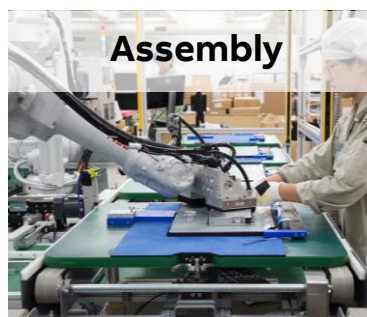


# Our customers' operations – example: electronics manufacturing plant

ABB robotic solutions tailored to customers' process and needs

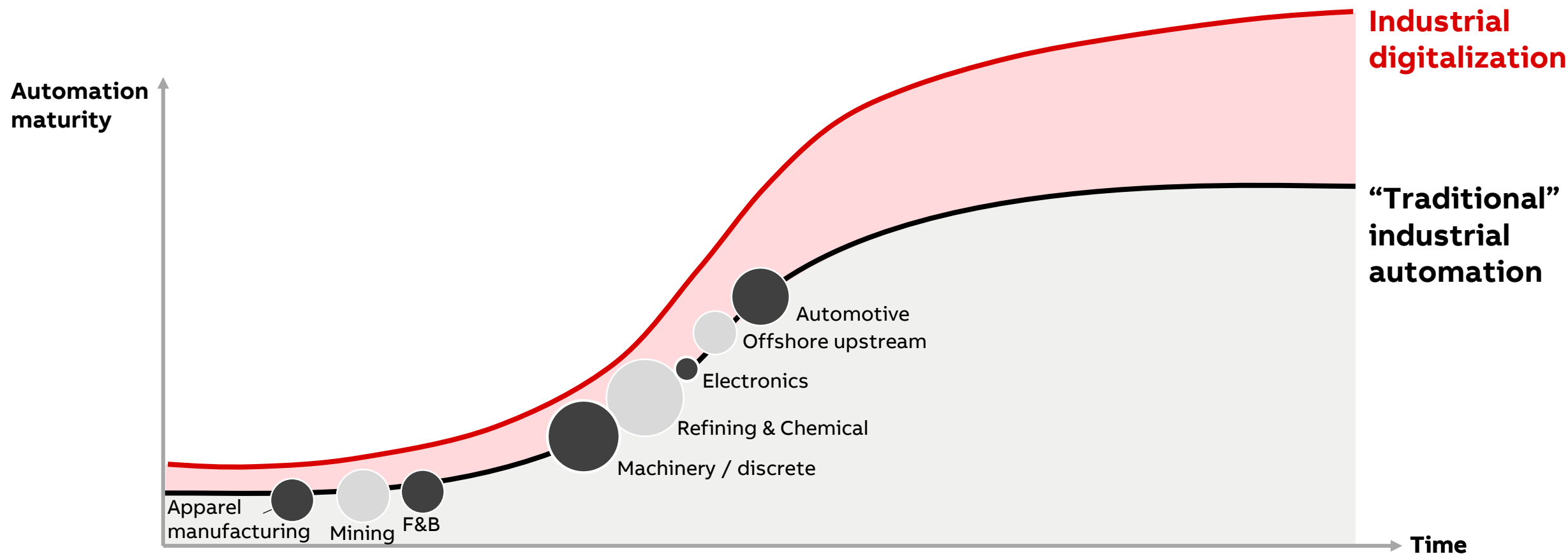


## Examples of processes with ABB robotics solutions



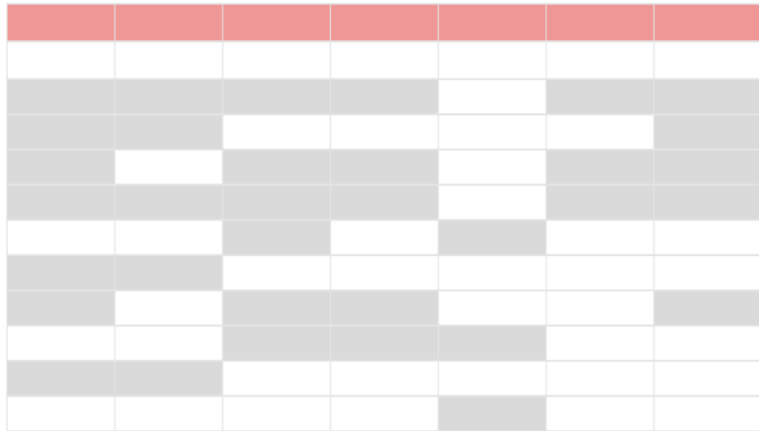
# Our customer value proposition for industrial automation

ABB is the partner of choice for value creation through automation and digitalization

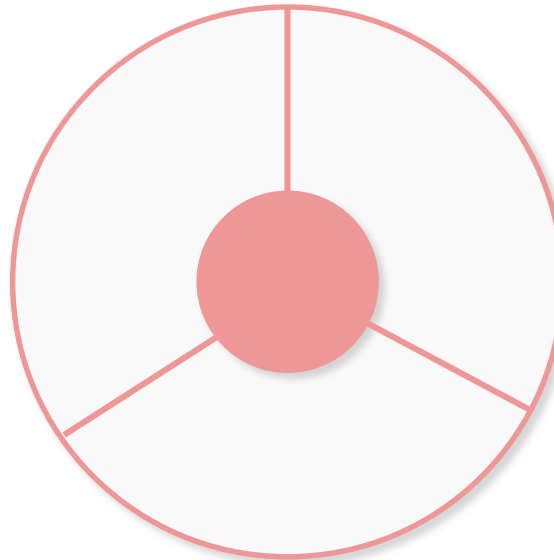


# ABB's unique competitive differentiation

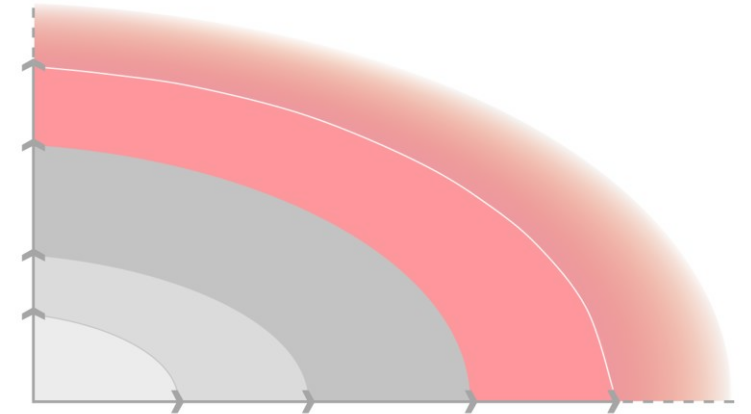
Three building blocks



**Leading portfolio**



**Solution-oriented business model**



**Innovation dynamics**



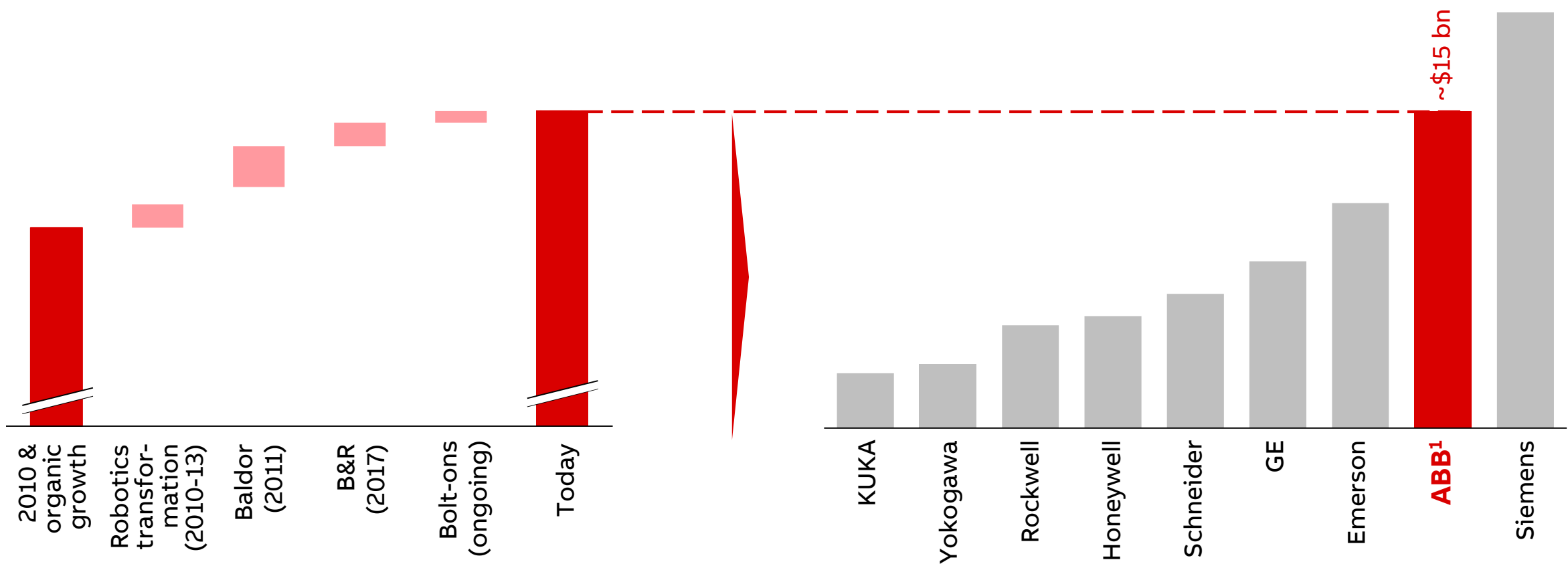
# ABB's leading industrial automation portfolio

	Sensing & analytics	DCS <sup>1</sup>	PLC / IPC <sup>2</sup> servo motion	Industrial motion <sup>3</sup>	Robotics	Digital platform	Electrification <sup>4</sup>
<b>ABB</b>							
Siemens							
Emerson							
GE							
Schneider							
Fanuc							
Honeywell							
Rockwell							
Yaskawa							
Yokogawa							
KUKA							

————— Industrial Automation —————    ————— Robotics & Motion —————    —ABB Ability™—    —EP<sup>5</sup>, PG<sup>6</sup>—

# ABB's leading industrial automation portfolio

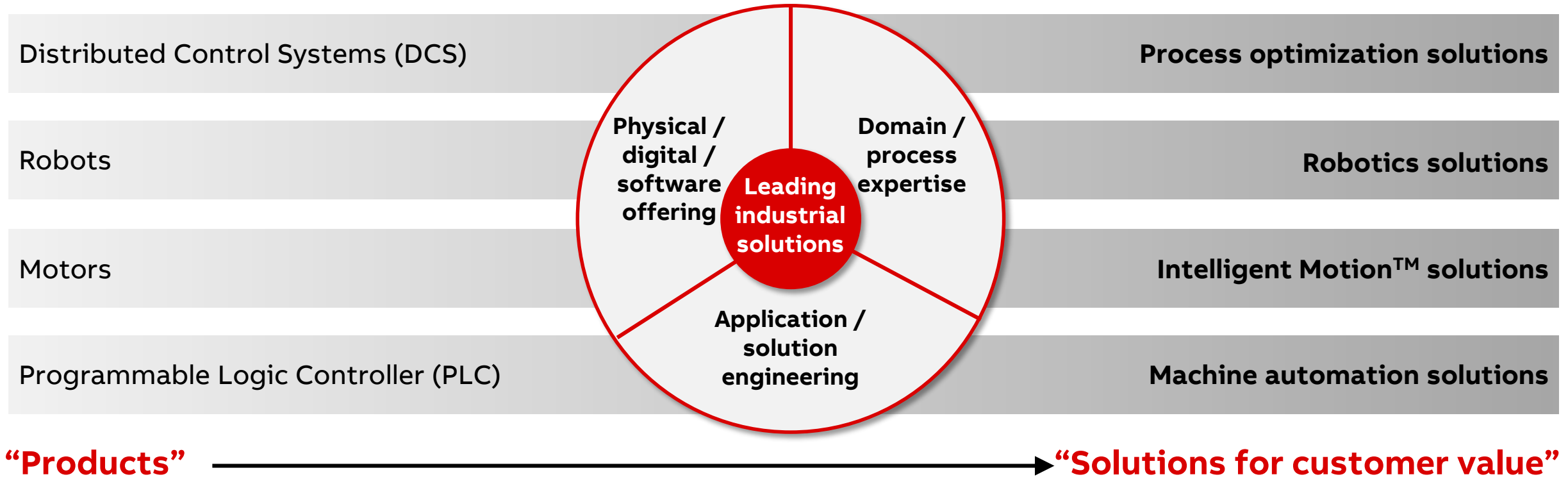
Targeted portfolio development results in solid #2 position



# Solution-oriented business model for industrial automation

From...

To...



# Solution-oriented business model for industrial automation

Increasing customer value along the entire lifecycle with ABB Ability™

Customer  
asset lifecycle

Plan / design

Build

Operate

Our enhanced  
digital value  
proposition

Our “traditional”  
value proposition

Our customer  
relationship

130+ ABB Ability™ solutions  
for industry

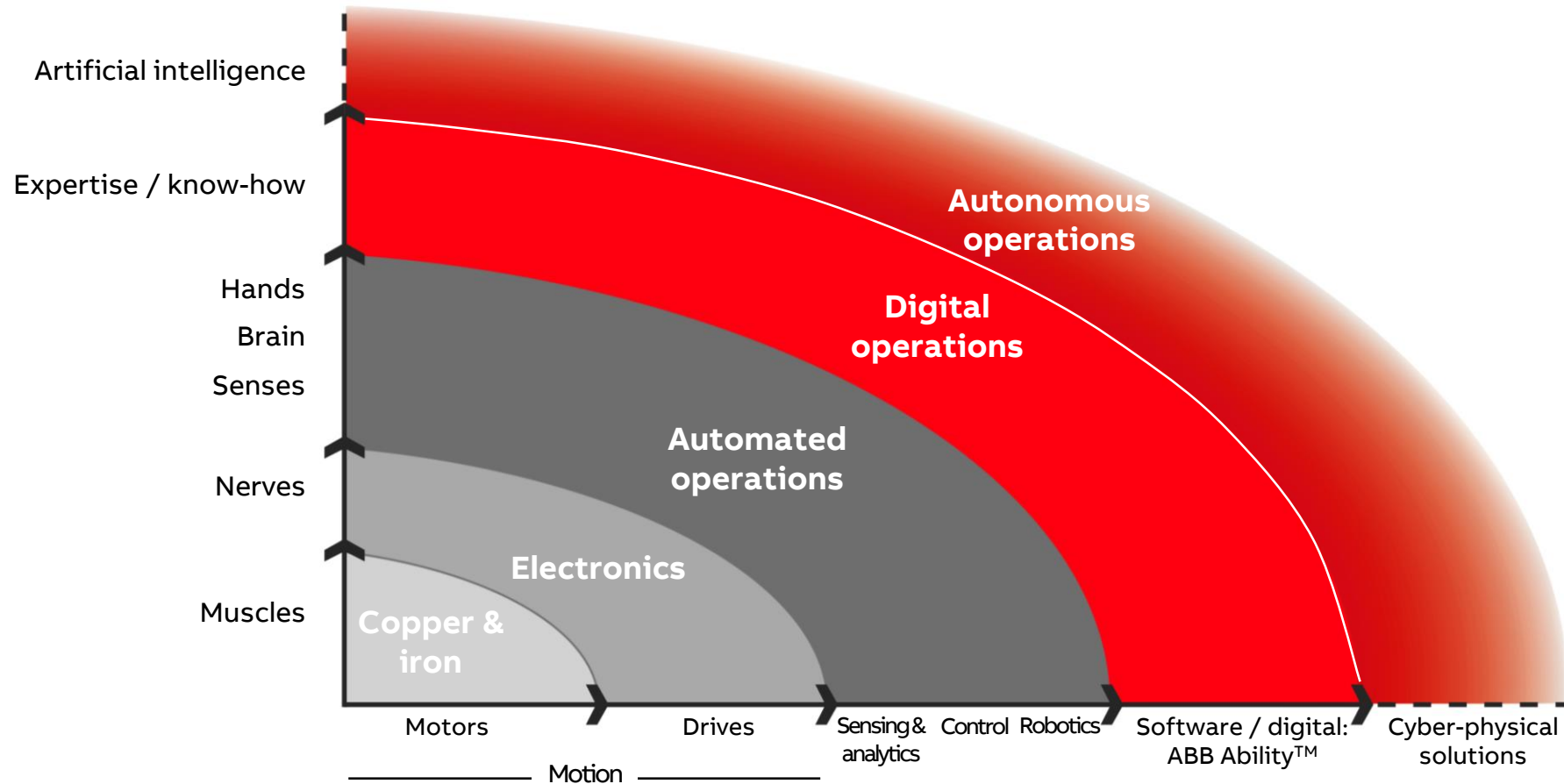
Planning partner

Product, solutions, systems partner

Operations partner

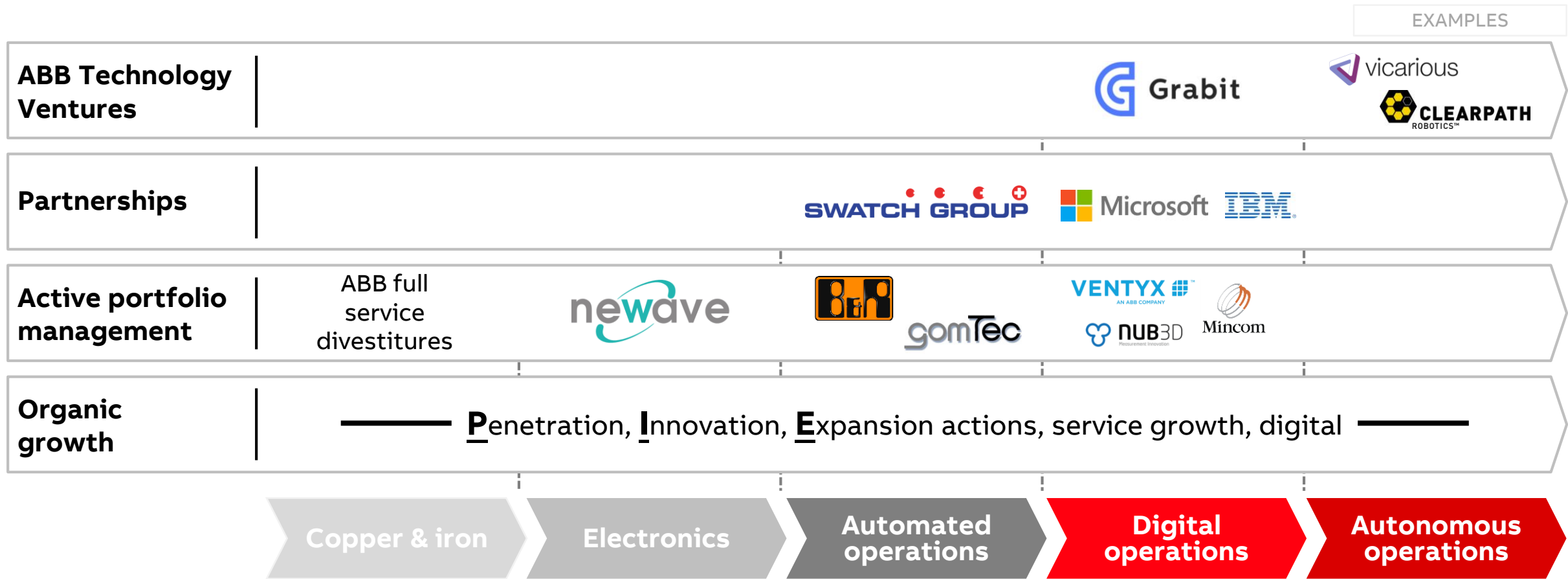
# ABB innovation dynamics

Continuous innovation dynamics for Next Level customer value



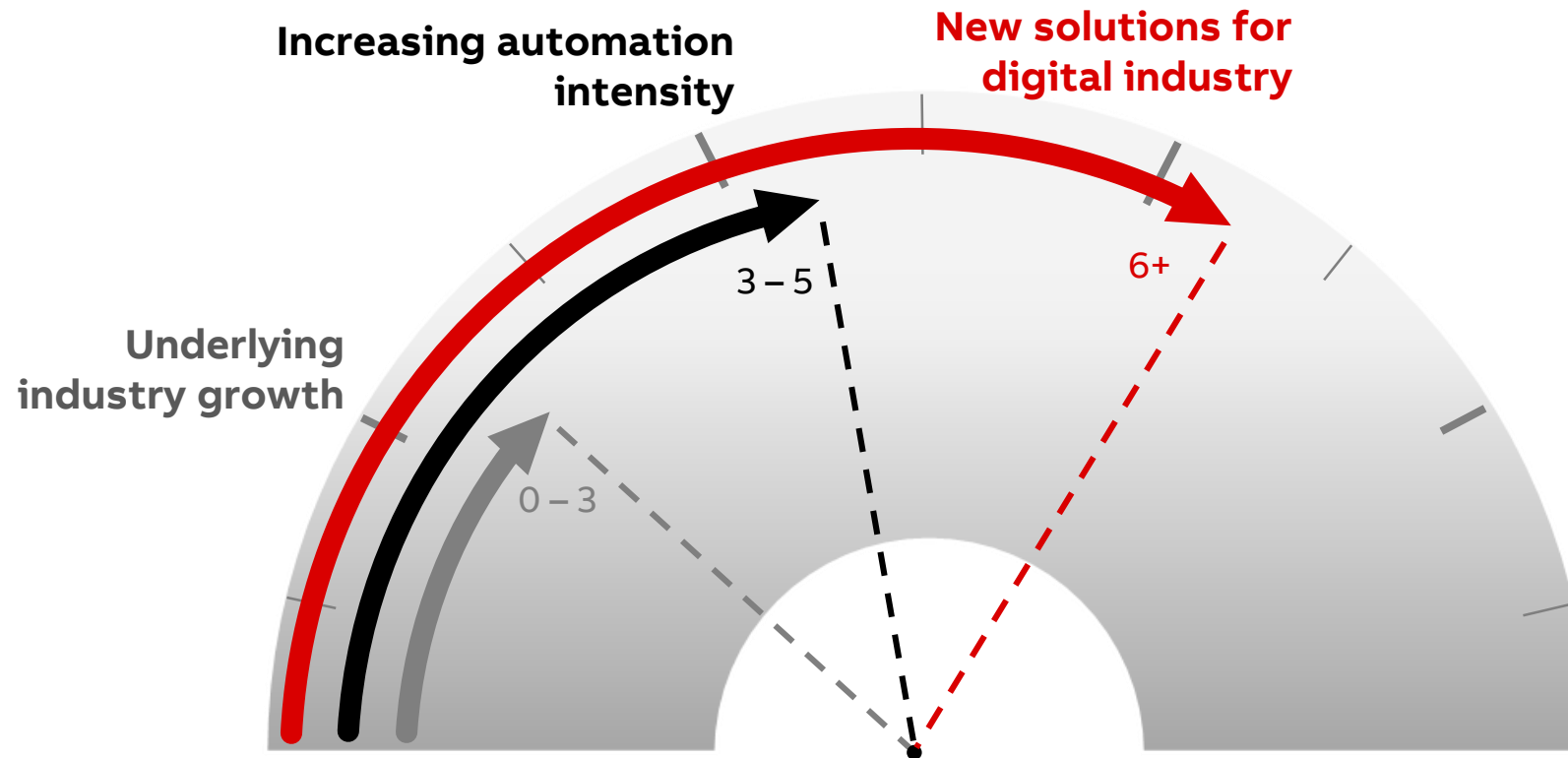
# What to expect from ABB in industrial automation?

Targeted, disciplined combination of all means of growth



# What to expect from ABB?

Unique growth dynamics



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## What to expect from ABB?

Improved quality of business

**More automation:** lower exposure to underlying industry cycles, secular tailwind

**More recurring revenue:** digital, services – leveraging large installed base

**More high value-add solutions:** attractive economics, less “copper and iron”

**More stability:** more base orders, less EPC<sup>1</sup>



# ABB's leadership in industrial automation

## Well positioned

Next Level transformation – #2 in industrial automation today

Strong history of pioneering technology – well positioned for the future

Large installed base, strong domain and process expertise

## Competitive differentiation

Unique industrial automation portfolio

Targeted solutions-oriented business model

Leading innovation

**Attractive economics,  
good growth prospects**

**ABB**