

# Process Automation Capital Markets Day



MAY 18, 2022

**ABB Capital Markets Day**

Process Automation

Helsinki, Finland

# Important notices

This presentation 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,” “on track,” “framework”, “ambition” or similar expressions.

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- Business risks associated 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
- General market conditions, and
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# Welcome back to the ABB Marine House

## Presenters



**Peter Terwiesch**  
President,  
Process Automation



**Alanna Abrahamson**  
CFO,  
Process Automation



**Brandon Spencer**  
Division President,  
Energy Industries



**Joachim Braun**  
Division President,  
Process Industries



**Juha Koskela**  
Division President,  
Marine & Ports



**Jacques Mulbert**  
Division President,  
Measurement & Analytics



**Bernhard Eschermann**  
CTO, Head of Process  
Control Platform

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# Objectives for today

- 1 Explain Process Automation **fundamentals**
- 2 Show how we **create value** for our **customers and shareholders**
- 3 Share our **strategy** to drive the business towards **sustainable performance**



# Agenda

- 8:00 **Process Automation overview**
- 8:45 Q&A
- 9:00 **Sensing**
- 9:25 Break
- 9:40 **Anchor products & integrated systems**
- 10:15 Q&A
- 10:30 **Immersion sessions**
- 12:30 Lunch
- 13:10 **Automation**
- 13:40 **Digital**
- 14:10 Wrap-up and Q&A
- 14:30 Departure to airport



Illustrate how we  
drive towards  
sustainable  
performance

# Process Automation overview



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# Process Automation overview

What this session will be about

- 1 Our **future business**, post Accelleron exit
- 2 Our **strategy** in the context of secular shifts
- 3 Our path towards **sustainable performance**
- 4 Our **customers, offering** and **differentiation**



**Peter Terwiesch**

President, Process Automation



**Alanna Abrahamson**

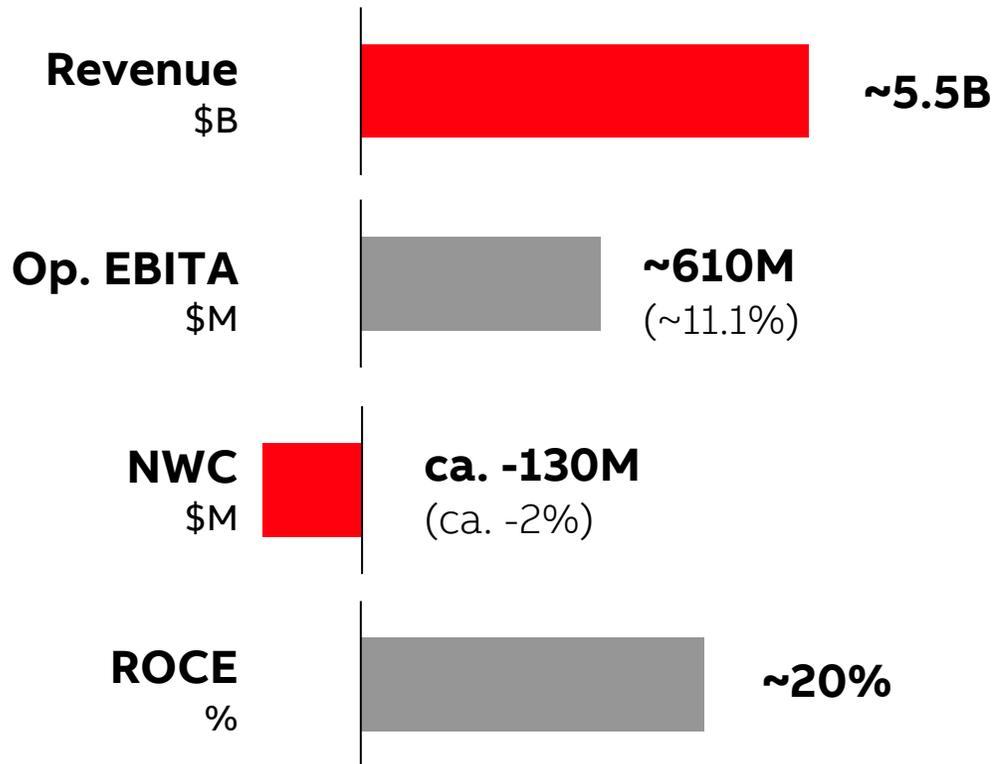
CFO, Process Automation



# Future Process Automation

At a glance

2021 pro-forma



Process automation, DCS<sup>1</sup>

Process analytics, various aspects of instrumentation

Marine electrical propulsion

Multiple industry-specific “anchor” products



~20K Employees

~45% Service

~70% Direct sales

<sup>1</sup> Distributed Control System  
Figures are in US dollars nominal, excluding Turbocharging  
Service, direct sales from management reporting

# Future Process Automation

Fully accountable divisions

Energy  
Industries



Process  
Industries



Marine  
& Ports



Measurement  
& Analytics



Turbocharging



**Brandon  
Spencer**



**Joachim  
Braun**



**Juha  
Koskela**



**Jacques  
Mulbert**



**Daniel  
Bischofberger**

Future Process Automation

Exit this year

# Our organization balances industry-specific expertise and scale

## Energy Industries



- Oil & gas upstream
- Oil & gas midstream and refining
- Chemicals
- Conventional power generation
- Low-carbon energy & water

## Process Industries



- Mining, minerals & cement
- Metals
- Pulp & paper
- Battery factories
- Other hybrid industries

## Marine & Ports



- Passenger vessels
- Special vessels
- Icebreaking vessels
- Navy
- Ports

## Measurement & Analytics



- Instrumentation
- Analytical
- Specialized sensing

## Process Control Platform, Digital Center of Excellence

# What we offer to our customers

## INTEGRATED SYSTEMS

**4** DIGITAL



**3** AUTOMATION



**1** SENSING



**2** ANCHOR PRODUCTS



ELECTRICAL & MOTION



Service on our installed base is central to the business model





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**Strategy**

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# Our external environment

Three major secular shifts

**Sustainability & energy transition**



**Automation & digital transformation**



**Globalization changes**



# Strategic priorities

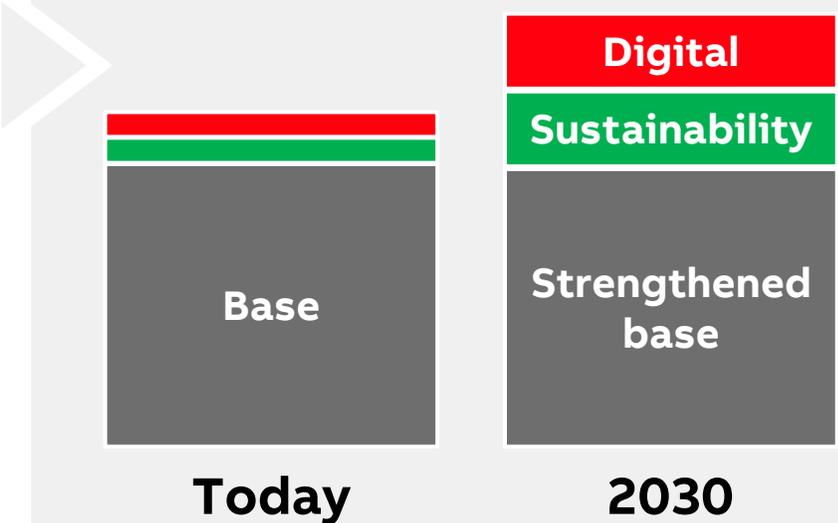


- 3 Digital growth & productization
- 2 Energy transition & sustainability
- 1 Performance improvement

Higher margin

Superior ROCE

Structural growth



# Performance improvement

Driving actions at granular level



**Stability**

~15%



**Profitability**

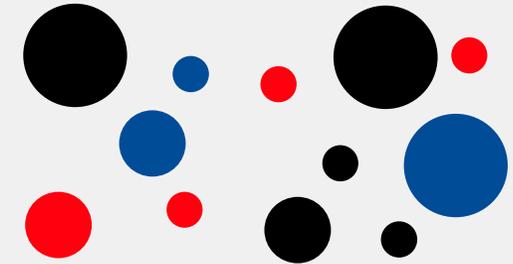
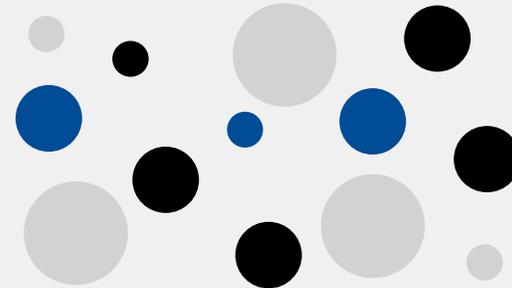
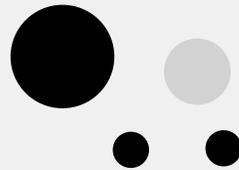
~45%



**Growth**

~40%

**Portfolio mgmt. at granular level**



**Division strategic mandates**



**Energy Industries**

**Process Industries**

**Measurement & Analytics**



**Marine & Ports**

**Each dot represents a business below the divisional level**

● Product and anchor offering

● New automation/integrated systems

● Service

● Digital

**Business size (directional)**

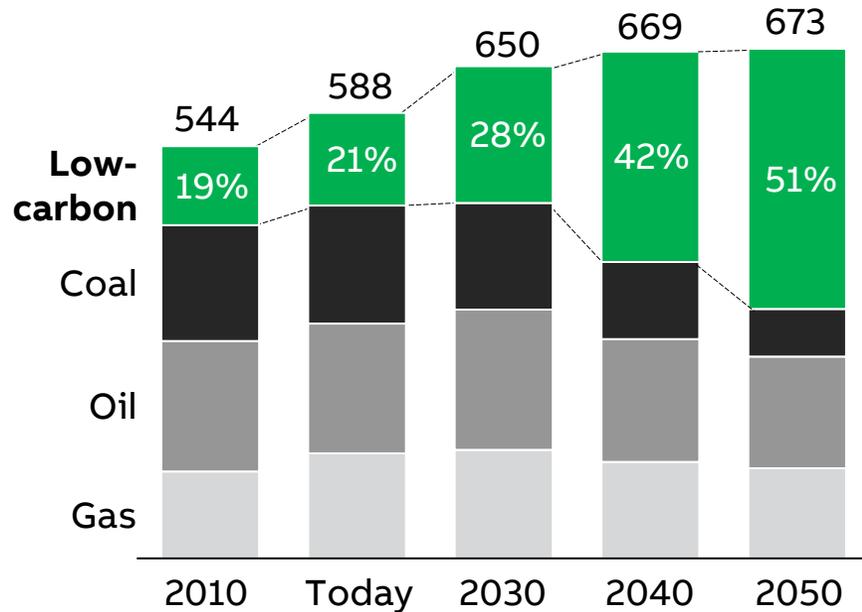
● Large

● Medium

● Small

# Energy transition & sustainability

The challenge: shift ~30% of energy to low-carbon sources until 2050, meeting increasing demand



Global energy supply, Exajoules

IEA Announced Pledges Scenario (middle-of-road scenario, 2.1° warming<sup>1</sup>)



## Investment cycle

Sustainable industrial asset base



## Electrification

Renewables for hard-to-abate industries



## Premium on efficiency

Automation, digital

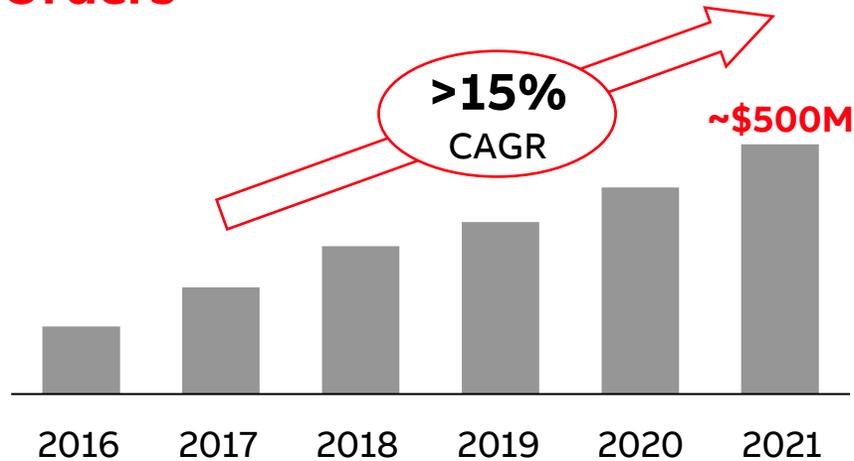
Net positive impact  
on Process Automation

# Digital: double-digit growth

Organic strategy

**~\$500M**  
Industrial software  
& digital services

## Orders



## Priorities



Continued double-digit growth



Increase productization



More SaaS/ recurring



Capabilities and culture

## Six customer value pillars



Operational Excellence



Process Performance Management



Extended Automation SW updates



Sustainability



Asset Performance Management



Cyber Security

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# Process Automation at the heart of ABB's purpose

**Creating  
success**



**Addressing world's  
energy challenges**



**Transforming  
industries**



**Embedding  
sustainability**



**Leading with  
technology**





**— Driving towards sustainable performance**

# Well positioned for positive structural growth

## Positive underlying industry growth

	To 2024	To 2030
Low-carbon energy & water	↑	↑
Hydro-carbon	↓	↓
	↗	→
	↑	↗
Marine & ports	↑	↑
Mining & metals		
Pulp & paper	↗	↗
Chemical		

**Process Automation exposure**

## Accelerators

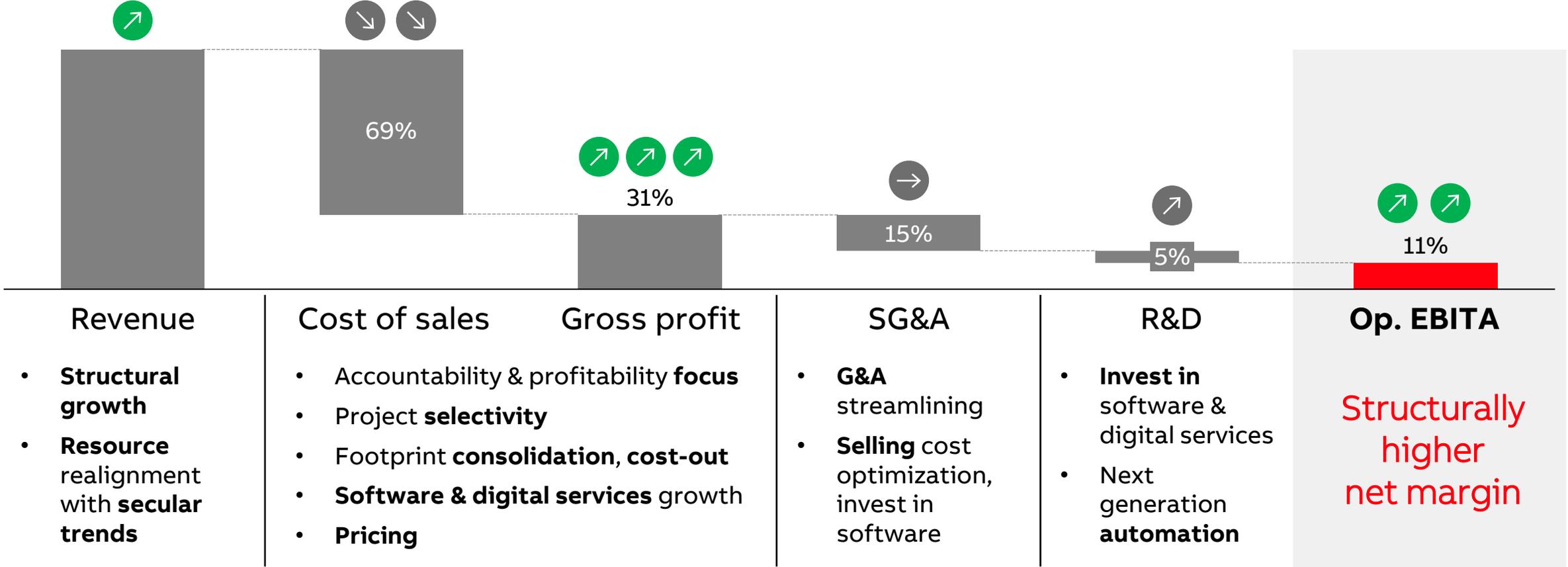
- ↑ More automation and sensing
- ↑ Industrial software and digital services
- ↑ Sustainability-driven investment cycle

## Installed base effect

- Recurring service revenue stream
- Decades-long asset lifetime
- Lower volatility

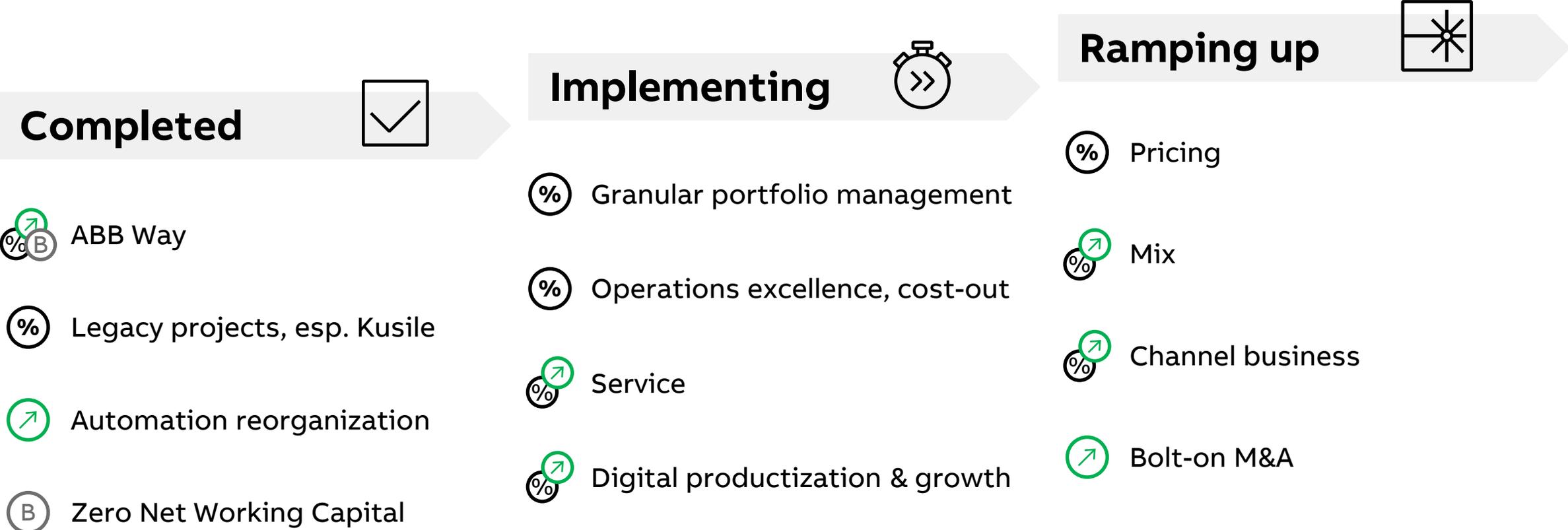
# Driving towards sustainable performance

## Process Automation, 2021 as % of revenue



Note: Turbocharging excluded, % of revenues are on operational basis excluding the impact of non-operational items

# Process Automation performance improvement journey



# Strong project capabilities critical to our business model



**>7,000** engineering and project execution staff



**5,000** active projects, of which **1,600** over \$1M



**>100,000** person-hours invested into project opportunity & risk reviews per year

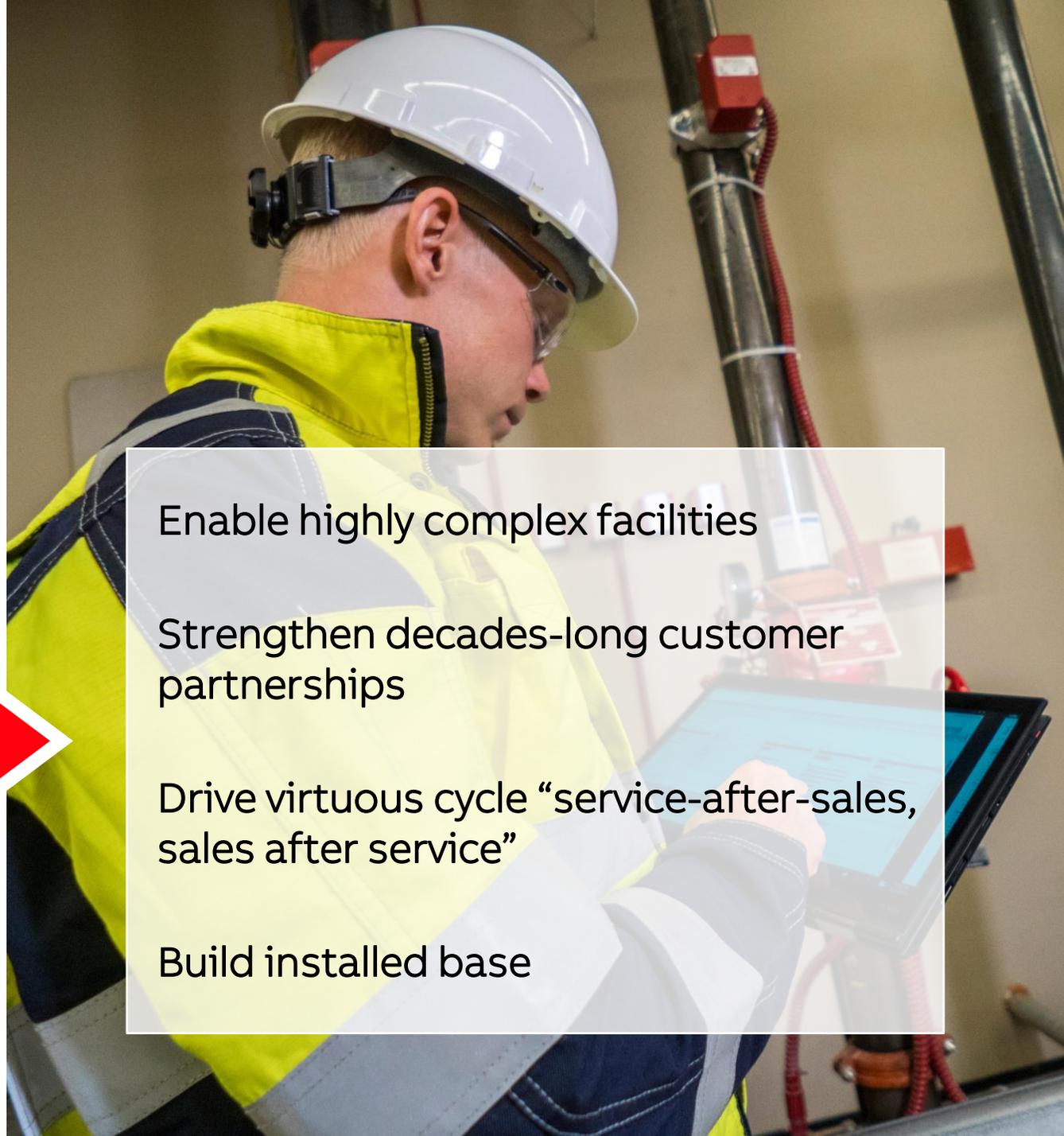


Enable highly complex facilities

Strengthen decades-long customer partnerships

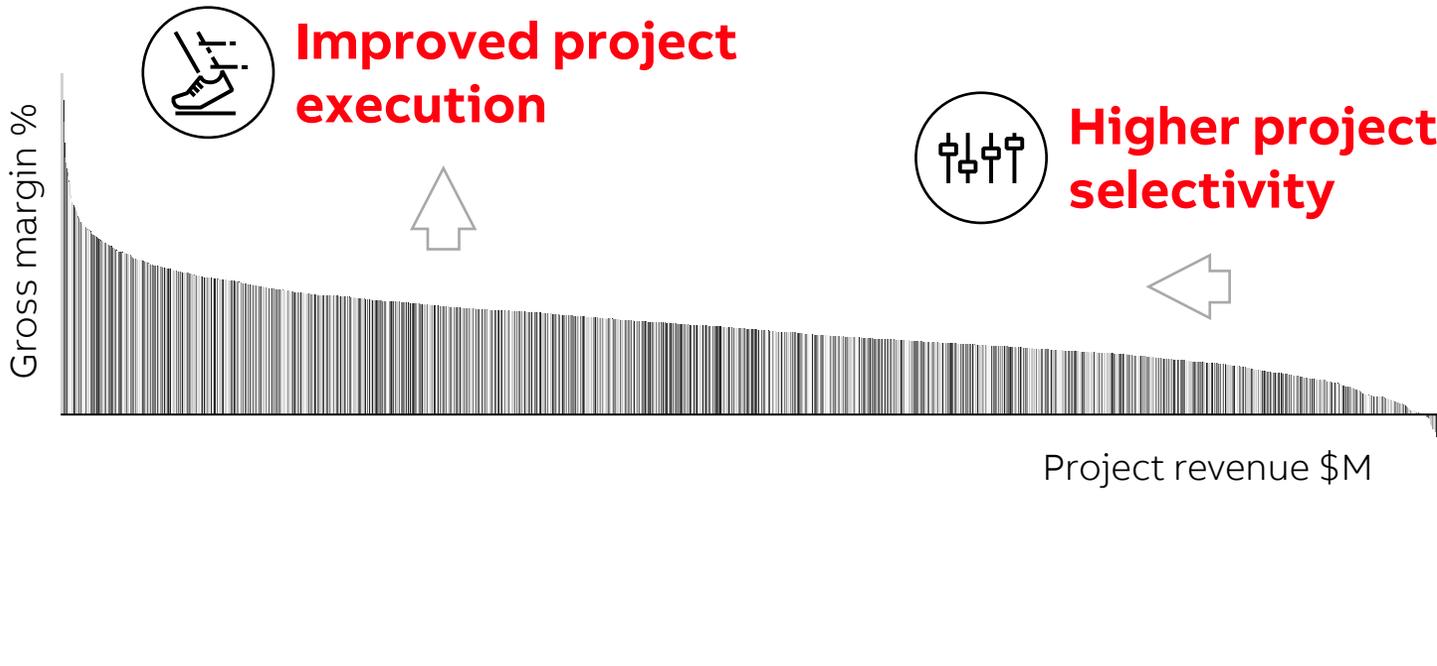
Drive virtuous cycle “service-after-sales, sales after service”

Build installed base



# Improved business performance through project execution

## PA active projects by gross margin

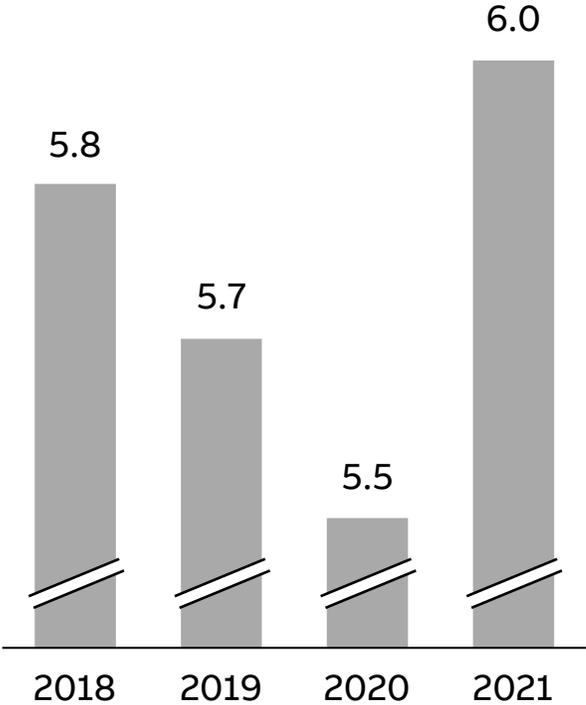


Average project margin accretion from “as-sold” to “as-delivered”

# Order backlog gross margin improved +200bps

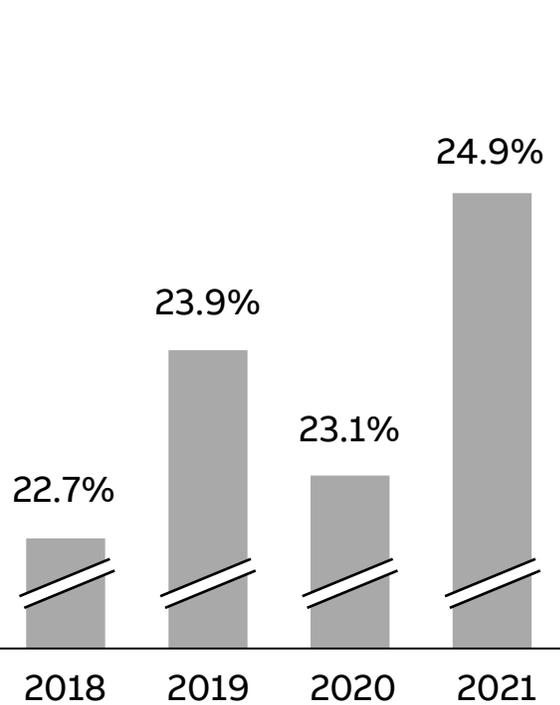
## Orders

\$B, excl. Turbocharging



## Order backlog margin

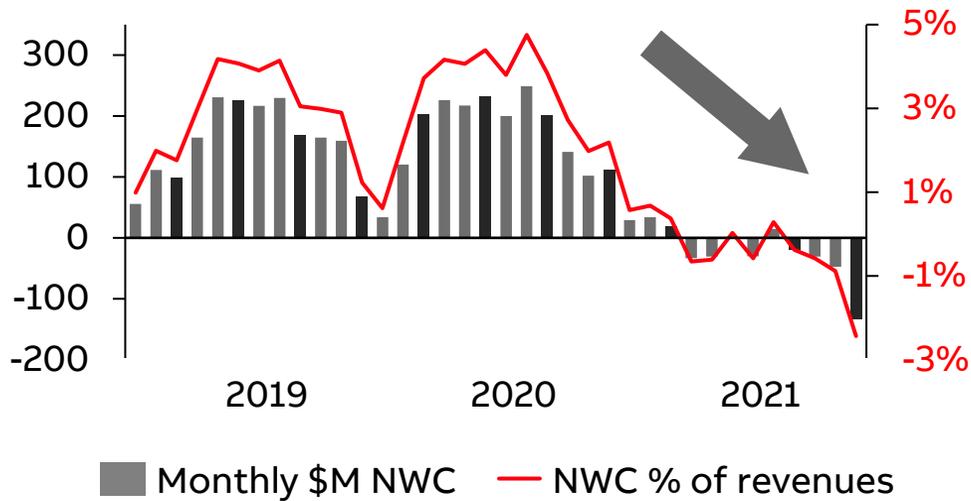
Gross margin %, excl. Turbocharging



# Asset-light business model – zero NWC

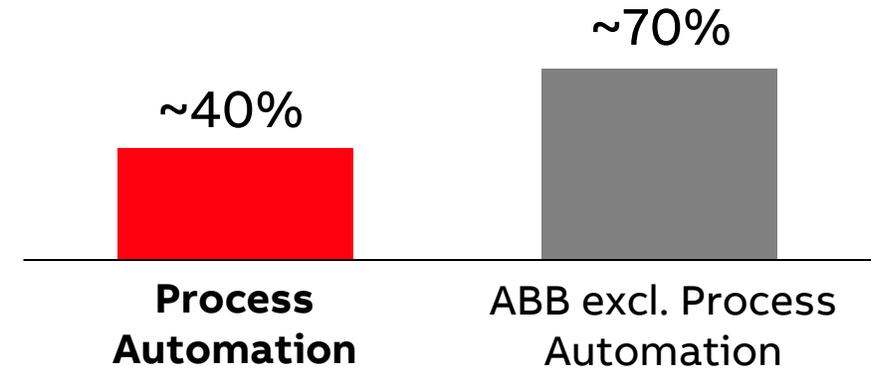
## Net working capital

excl. Turbocharging



## Fixed asset intensity

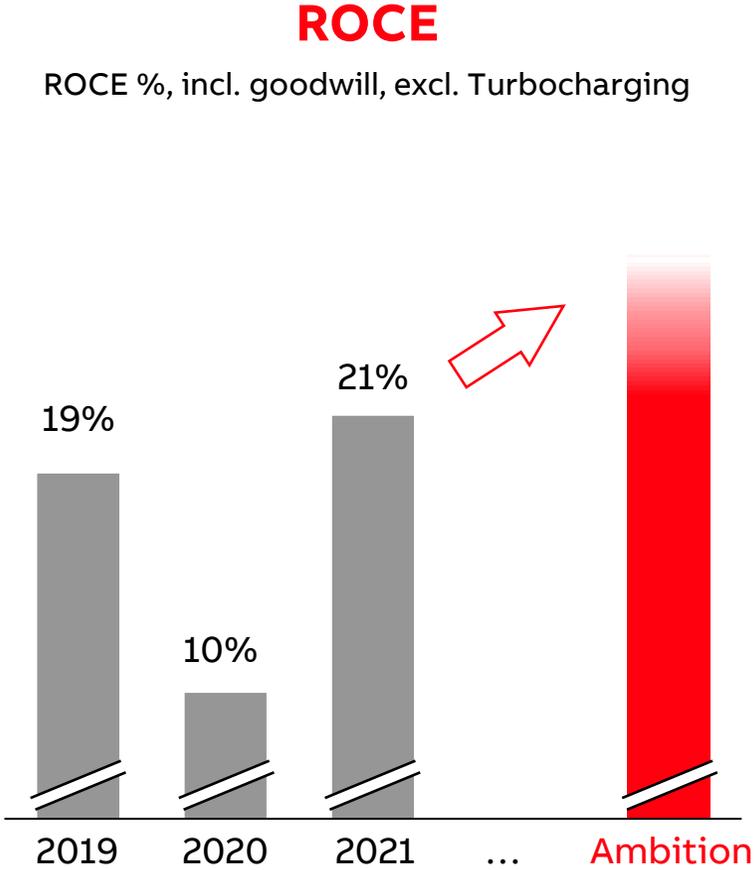
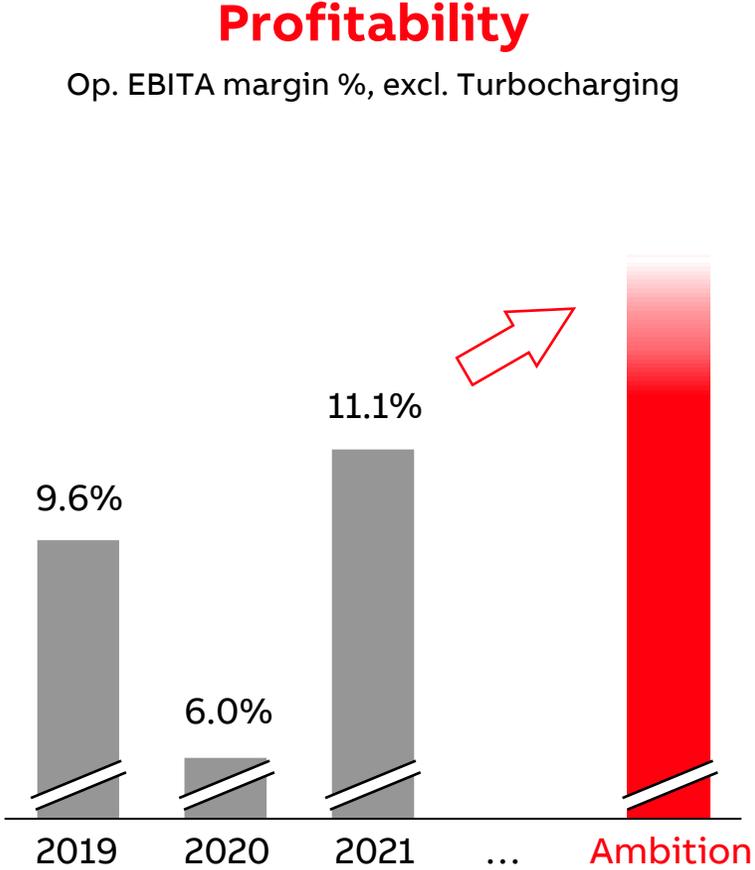
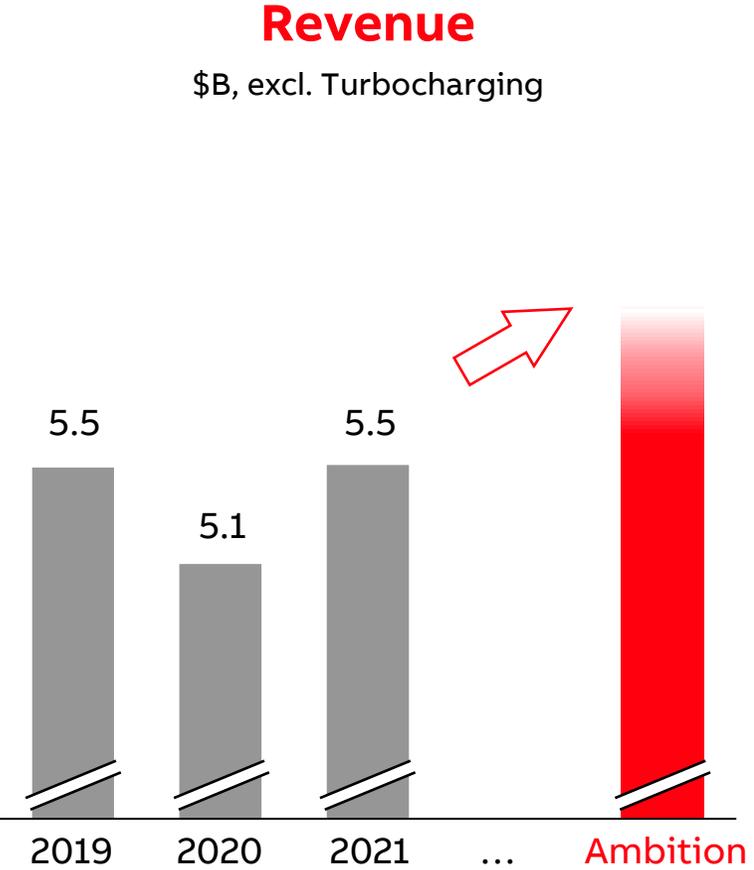
PA excl. Turbocharging; fixed assets (incl. goodwill)/ revenue



Superior ROCE

# Margin improvement before growth, superior ROCE

Driving towards sustainable performance



A photograph of two construction workers in a red-tinted industrial setting. They are wearing hard hats and safety vests, and are looking at a tablet together. The background shows structural elements of a building under construction.

—  
**Customers, offering and  
differentiation**

# Our customers and their needs

Run some of the most complex operations on the planet

-  Mining & Metals
-  Pulp & Paper
-  Oil & Gas
-  Chemicals
-  Food & Beverage
-  Power Generation
-  Marine



**Solids**  
e.g., ore, paper, cement



**Liquids**  
e.g., water, milk, oil, chemicals



**Gases**  
e.g., methane, steam, air



## Customer needs



**Safety**



**Reliability**



**Most competitive facilities**



**Protection of past investment while accessing new technology**



**Sustainability**

# Our offering and go-to-market

## INTEGRATED SYSTEMS

### 4 DIGITAL



### 3 AUTOMATION



### 1 SENSING



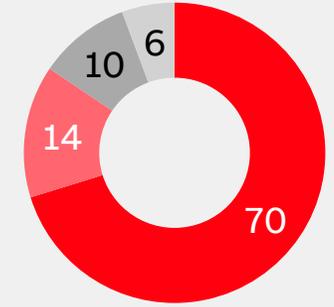
### 2 ANCHOR PRODUCTS



### ELECTRICAL & MOTION

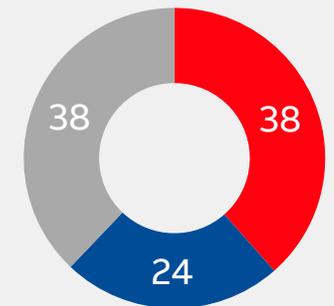


## Direct sales approach and customer contact

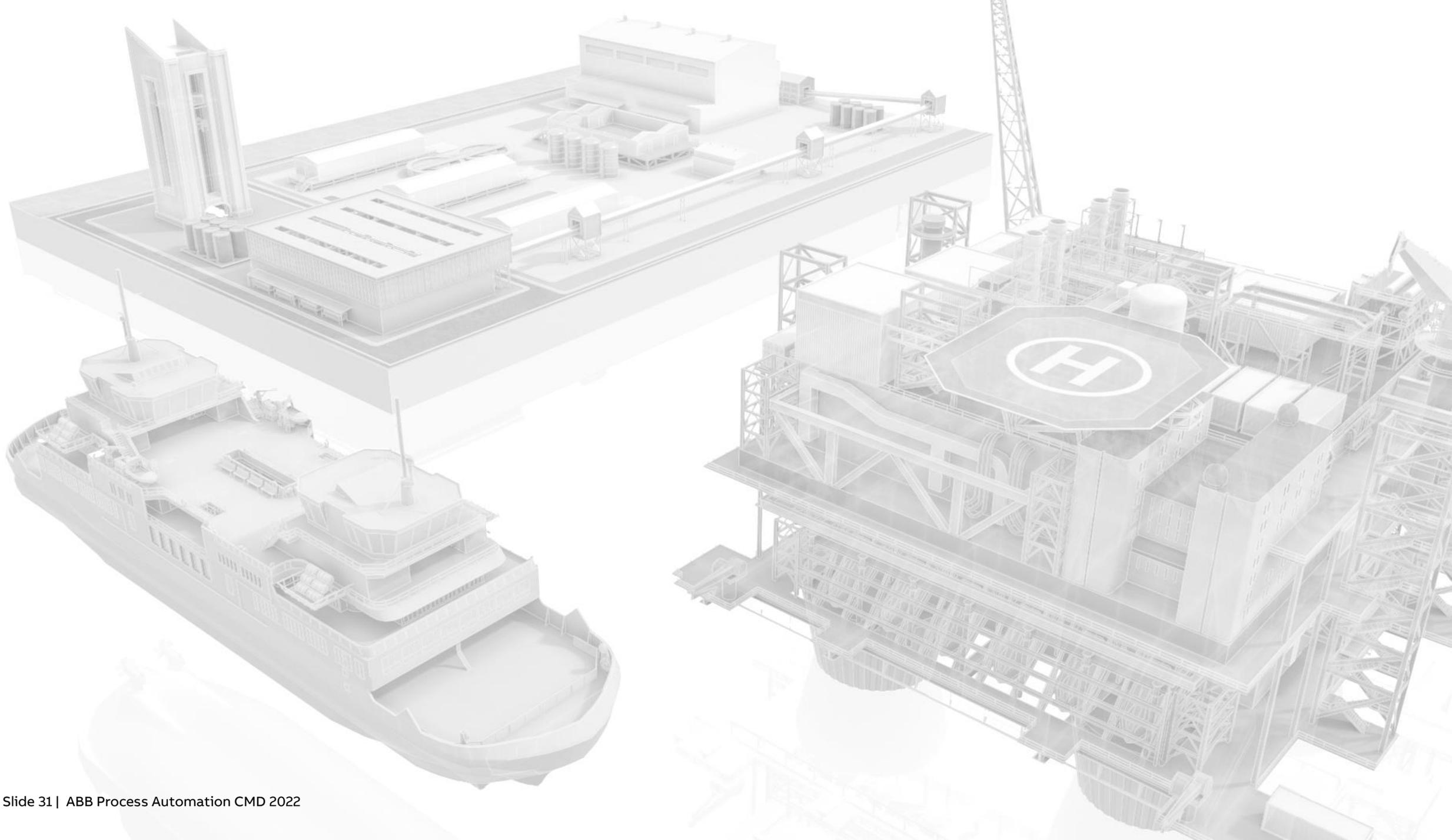


■ Direct sales    ■ Distributors  
■ EPC/Integrator    ■ OEMs

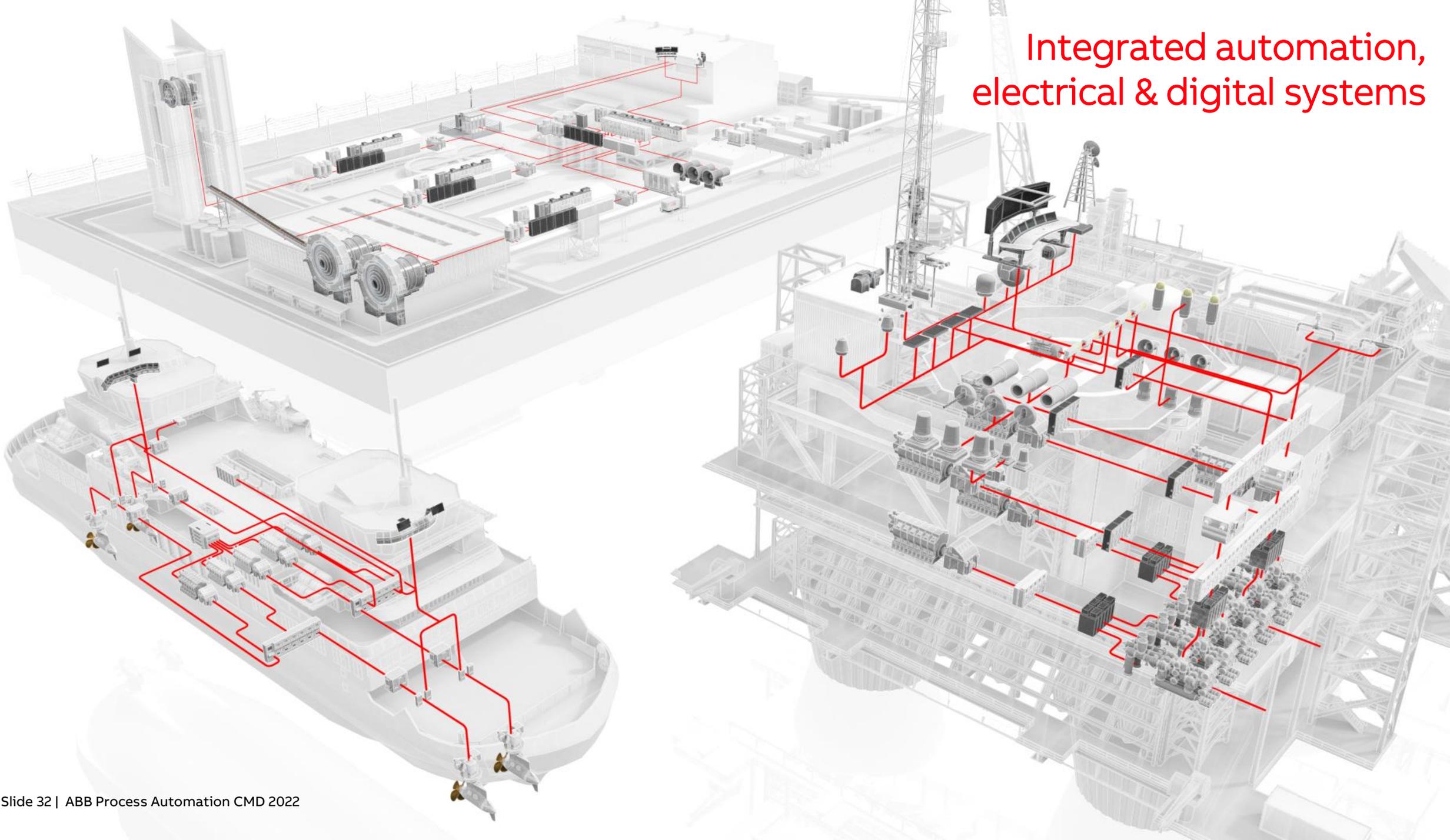
## Global footprint

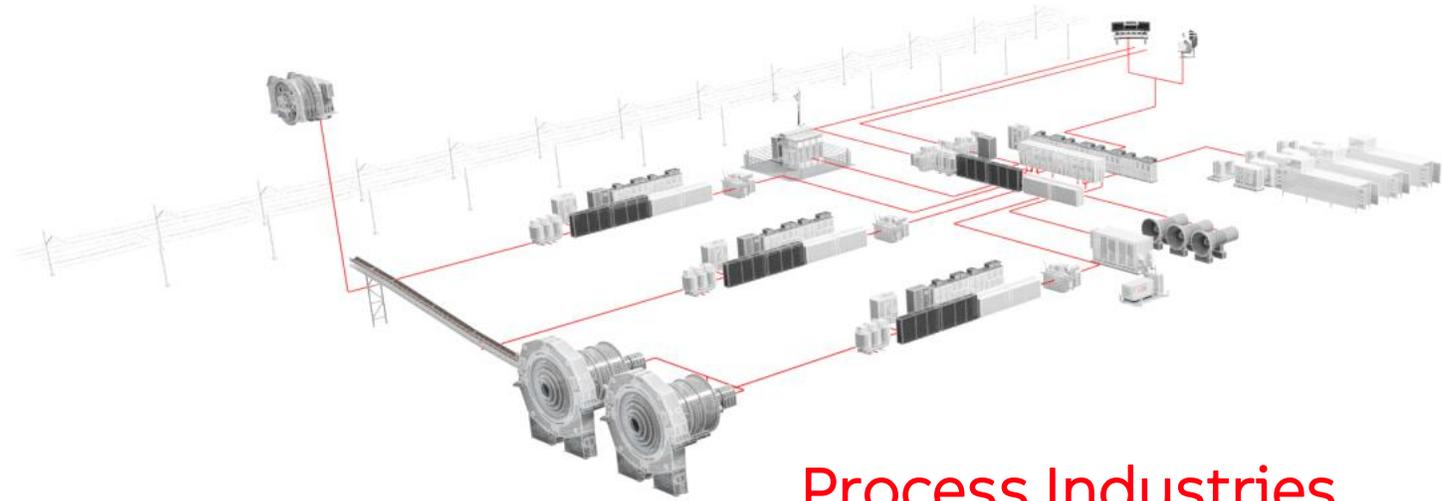


■ Europe    ■ AMEA  
■ Americas

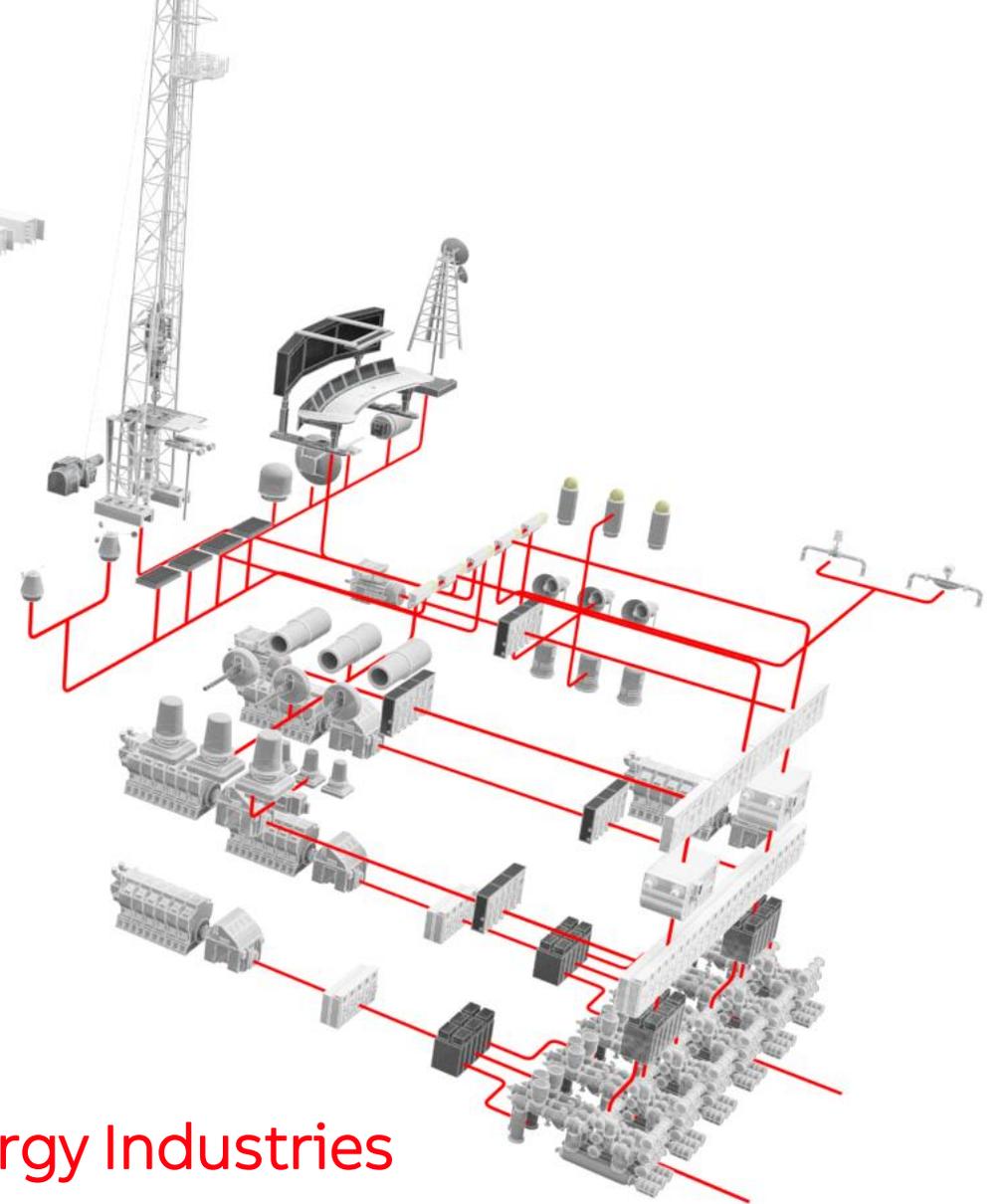


Integrated automation,  
electrical & digital systems

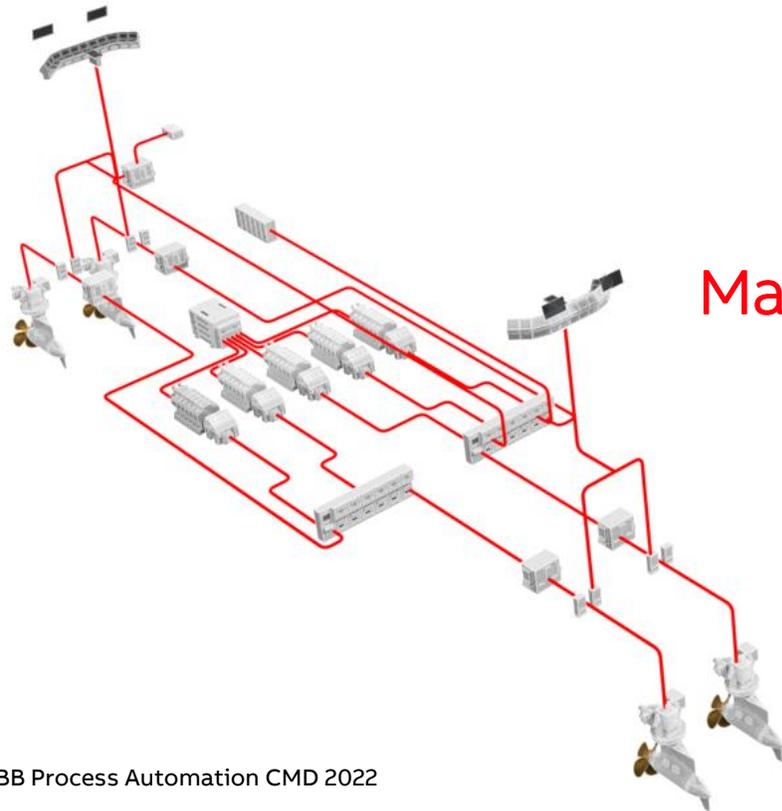




Process Industries



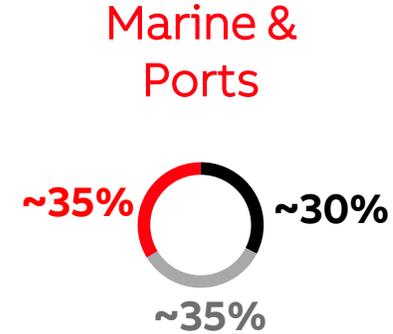
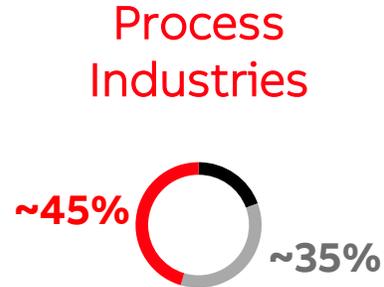
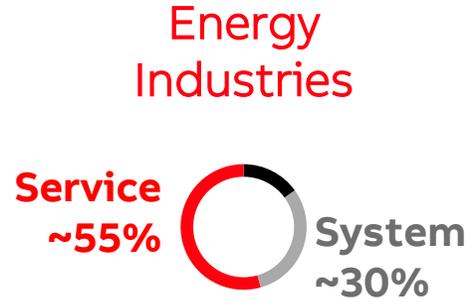
Energy Industries



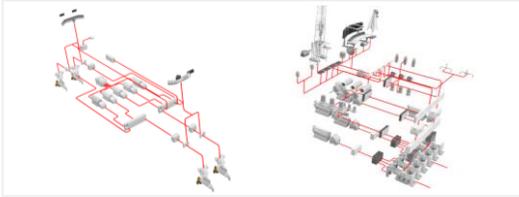
Marine & Ports

# Business archetypes and offering by division

-  Product
-  System
-  Service



# How we differentiate



Seamlessly **integrated** automation, electrical and digital **systems**



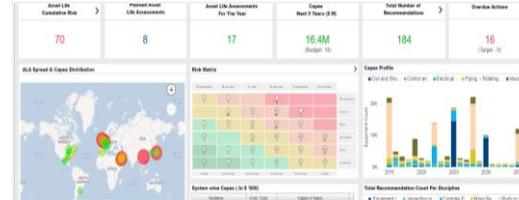
#1-2 for process-critical **anchor products**



#1 **DCS** position and broadest **installed base**



**Technology** leadership in **Sensing**



In-depth **industry sector expertise**, **decades-long customer partnerships**



**Open standards** approach, customer optionality



Latest **technology** while **protecting** past **investment**



Strong **system** and **project delivery** capabilities

# Driving towards sustainable performance

## Summary

- 1 Strong fundamentals**  
Leading market positions, leveraging scale and installed base
- 2 Strategy aligned to secular growth**  
Capture growth from automation, digitalization and sustainability
- 3 Systematically improving profitability**  
Following a granular approach
- 4 Superior ROCE**  
Asset-light model, negative NWC

**Granular perspective on  
Process Automation along  
offering across the day**



**ABB**