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Industrial Automation

Writing the future of safe and smart operations in process and hybrid industries

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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”, “2019 framework” 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 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.

Some of the planned changes might be subject to any relevant I&C processes with the Employee Council Europe and / or local employee representatives / employees.

This presentation contains non-GAAP measures of performance. Definitions of these measures and reconciliations between these measures and their US GAAP counterparts can be found in the ‘Supplemental reconciliations and definitions’ section of “Financial Information” under “Quarterly results and annual reports” on our website at

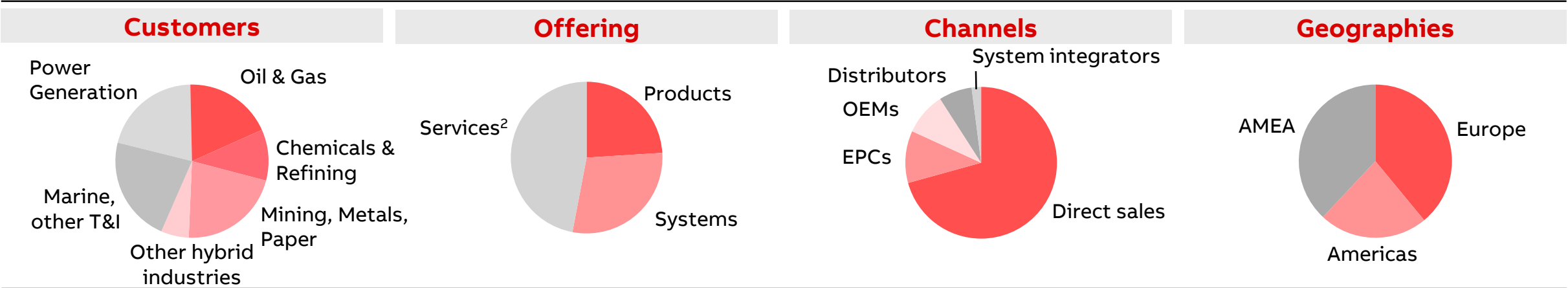
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Industrial Automation at a glance

Key figures¹

Global #2 #1 in DCS and process automation solutions #3 in measurement & analytics #1 in marine & turbocharging	~\$90 bn global market size	~\$6.5 bn 2018 revenues	14.1% 2018 op. EBITA	~21 k employees worldwide
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Business mix (by revenue)



2018 delivered, positioned for profitable growth

Leadership in process automation – # 1 in DCS, 19th consecutive year

Profitable Growth

Orders \$6.8 bn, 8% up; large orders returned to growth
Revenues \$6.5 bn, stable; ABB Ability™ digital service revenues doubled in two years
Order backlog grew for first time since Q4 2015

Relentless Execution

Delivered \$914 mn operating EBITA at a 14.1% margin
Profitability driven by strong execution and positive business mix, including EPC exit
Decreased working capital, improved return

Business-led Collaboration

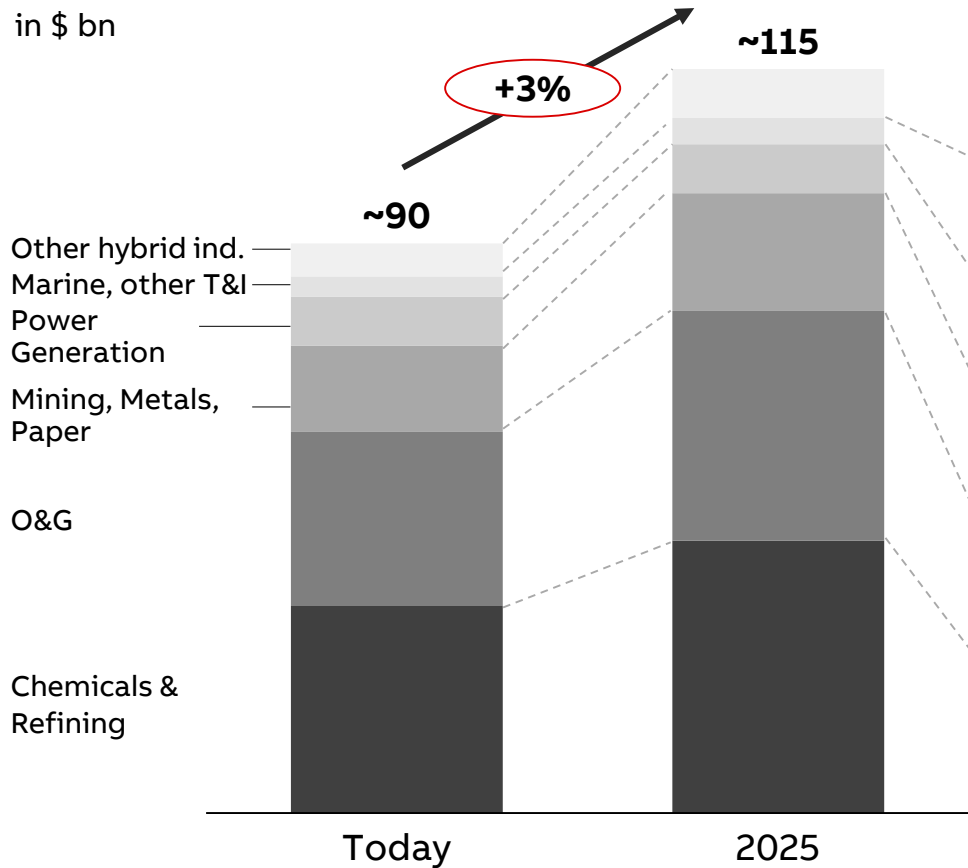
Growth across regions and businesses in 2018
Cross-divisional collaboration, integral to IA business model



Addressing attractive markets

Global addressable market

in \$ bn



Business exposure

% of revenues



Market growth drivers

Increase in F&B and pharma investments driven by middle class growth; datacenter projects' multiplication

Energy efficiency; electric/zero emission vessels; digital and autonomous vessels

Sustainability and environmental regulations; conversion of coal to gas

Recovery of capex investments; digital solutions to raise productivity and improve safety

Recovery of capex investments; focus on EOR, safety, sustainability and digitalization

Middle class growth in Asia (e.g. plastics demand); growth in countries with cheap feed-stock

High-growth segments (examples)

Midstream LNG
7 – 10%

Mining digital solutions
>10%

Marine electric propulsion
7 – 10%

Customer needs in process and hybrid industries

Addressing customer needs...

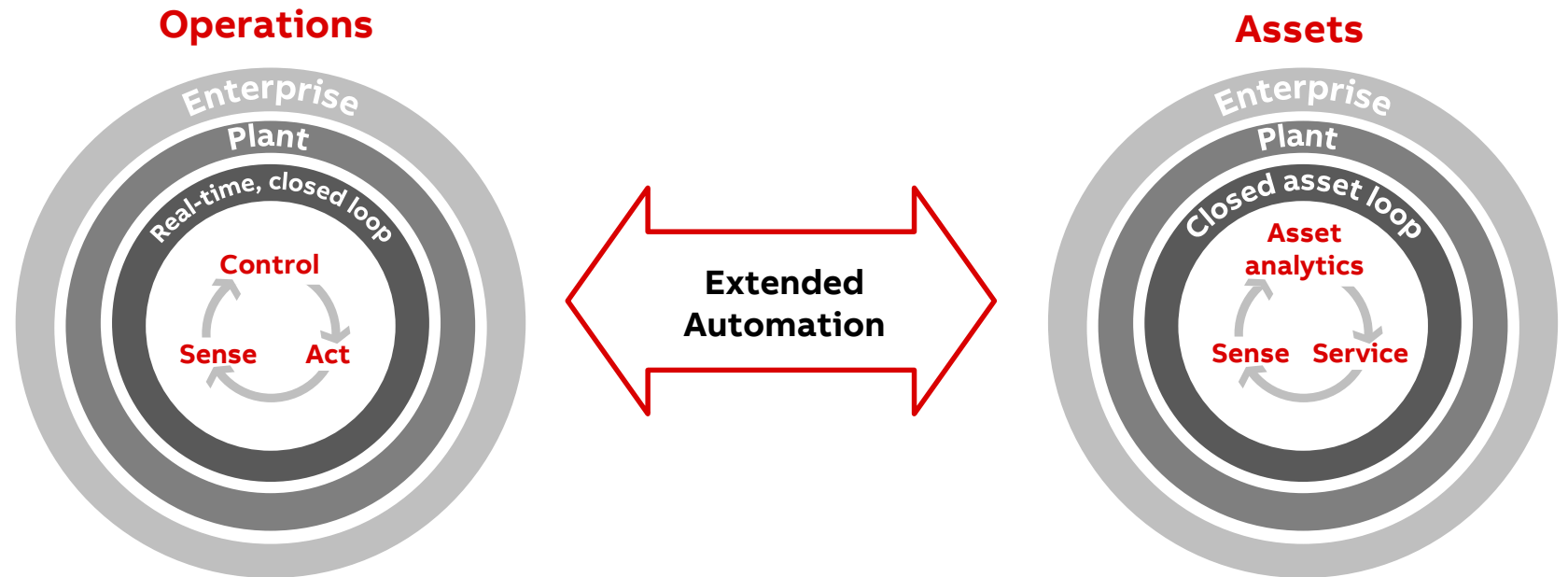
For capital projects:
reduce...

- ▶ Cost
- ▶ Schedule
- ▶ Risk

For operations:
improve...

- ▶ Safety
- ▶ Productivity
- ▶ Energy efficiency

...by mastering operations and asset loops during the project and operations phases



Positioned to win...

Safe and smart operations

1

Pioneering technology



#1 in DCS
for 19th consecutive year

125+ years
in automation

2

Industry expertise

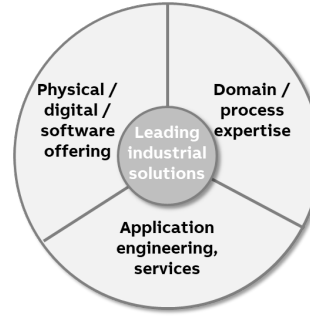


Enabling customers
to realize most complex projects¹ and run mission critical, real-time operations

Strong market share in
industry-specific products

3

Solutions-oriented business model

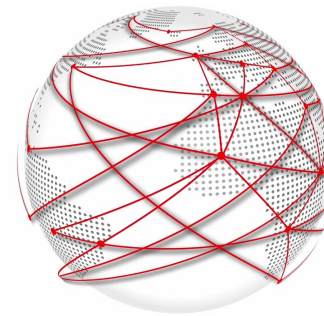


Channel to market for
ABB products

ABB Ability™ digital
solutions

4

Vast global footprint



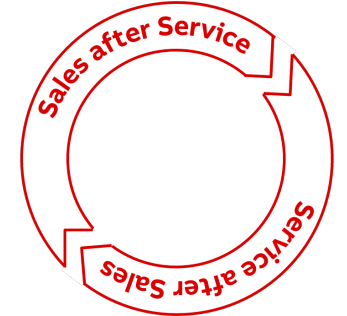
Largest service footprint

Presence in **100+** countries

24/7 ABB Ability™
Collaborative Operations™

5

Sales after Service, Service after Sales



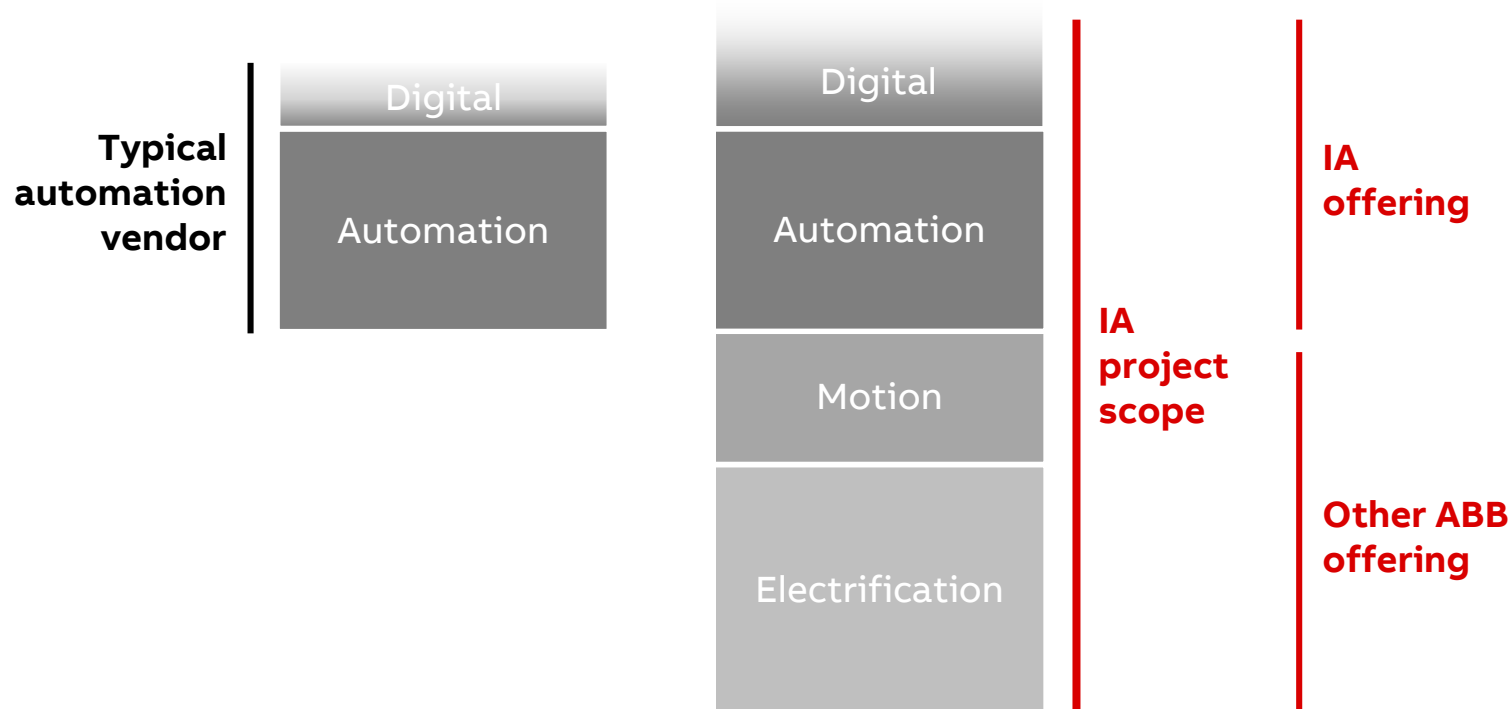
Largest installed base

35,000
connected systems

35,000,000
connected devices

...and capture larger scope in Capex projects for ABB

Illustrative: typical scope of a greenfield opportunity in OGC



Customer benefits

Integrated automation of process, electrical and motion

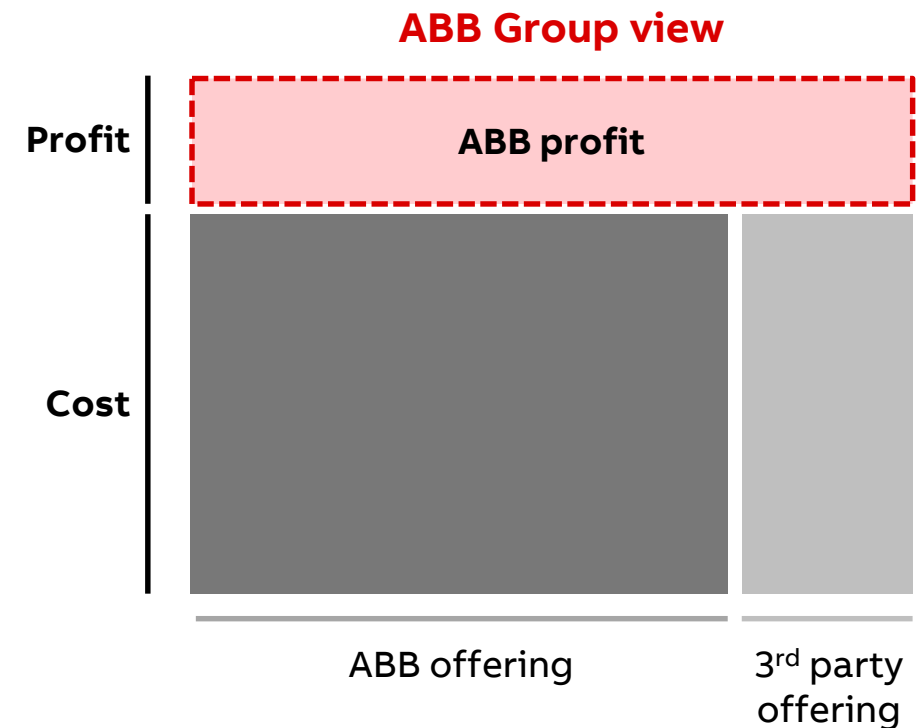
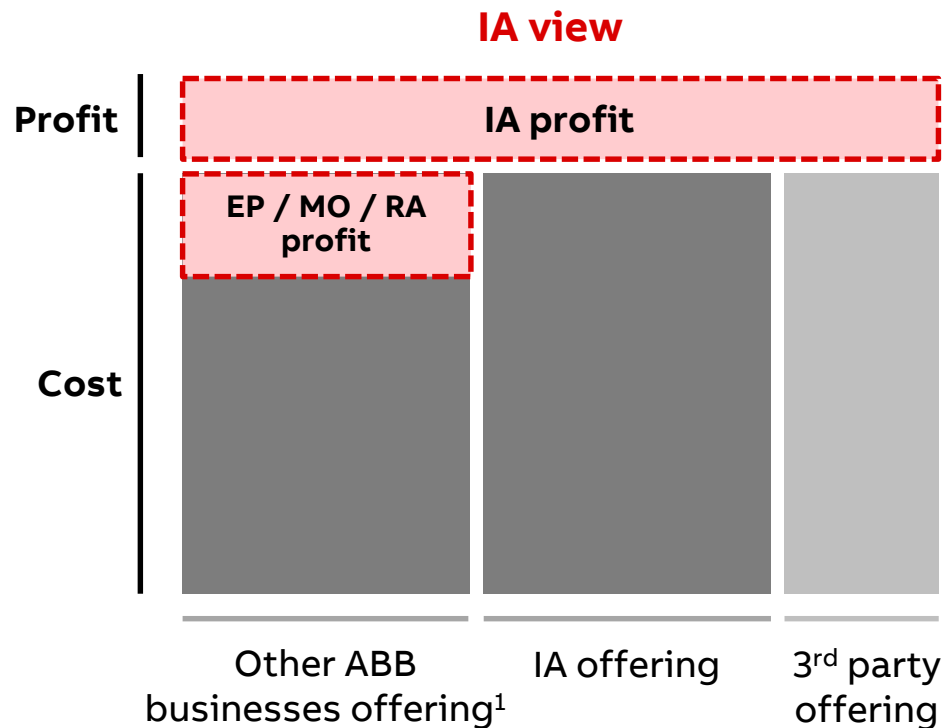
Augmented by software and digital services

Reduced installation and maintenance costs

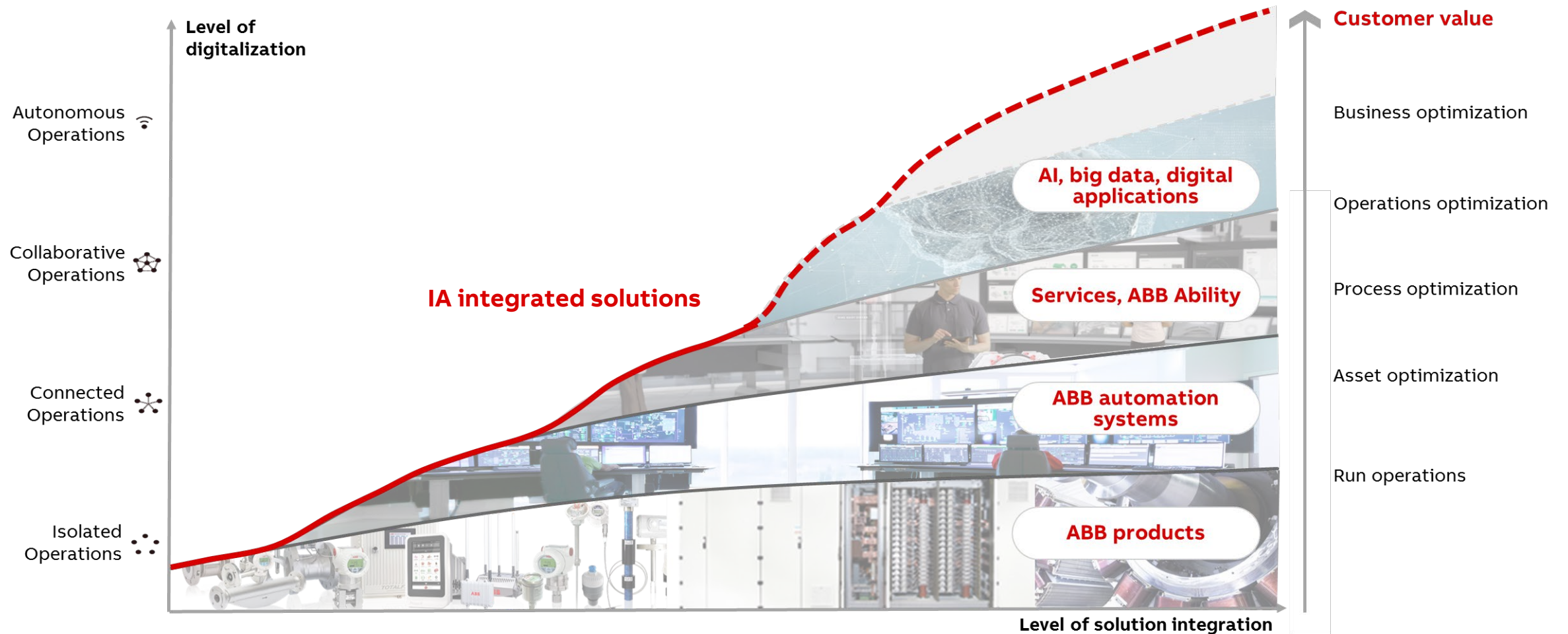
Integrated lifecycle services across the full scope

IA generates value for ABB both directly and indirectly

Illustrative: example of a typical solutions order



Serving customer needs with most comprehensive solutions portfolio

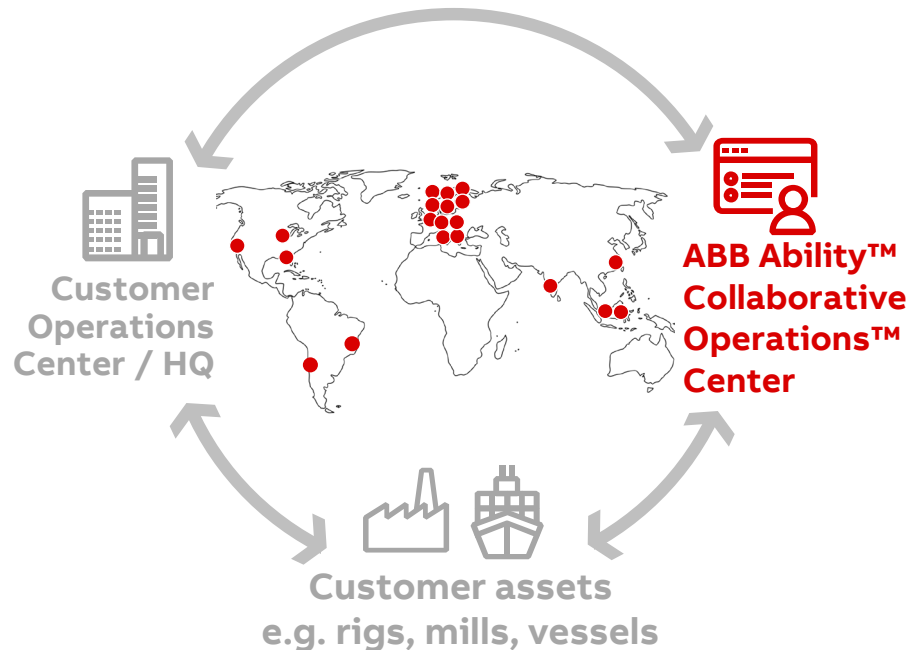


Leading solutions portfolio for ABB Ability™ Collaborative Operations™

Transforming the way we work with customers with 24/7 access to ABB experts

For operations:
improve...

- ▶ Safety
- ▶ Productivity
- ▶ Energy efficiency



of customers
connected¹

900+ industrial plants
800+ marine vessels
40+ mines

Key benefits
(selection)

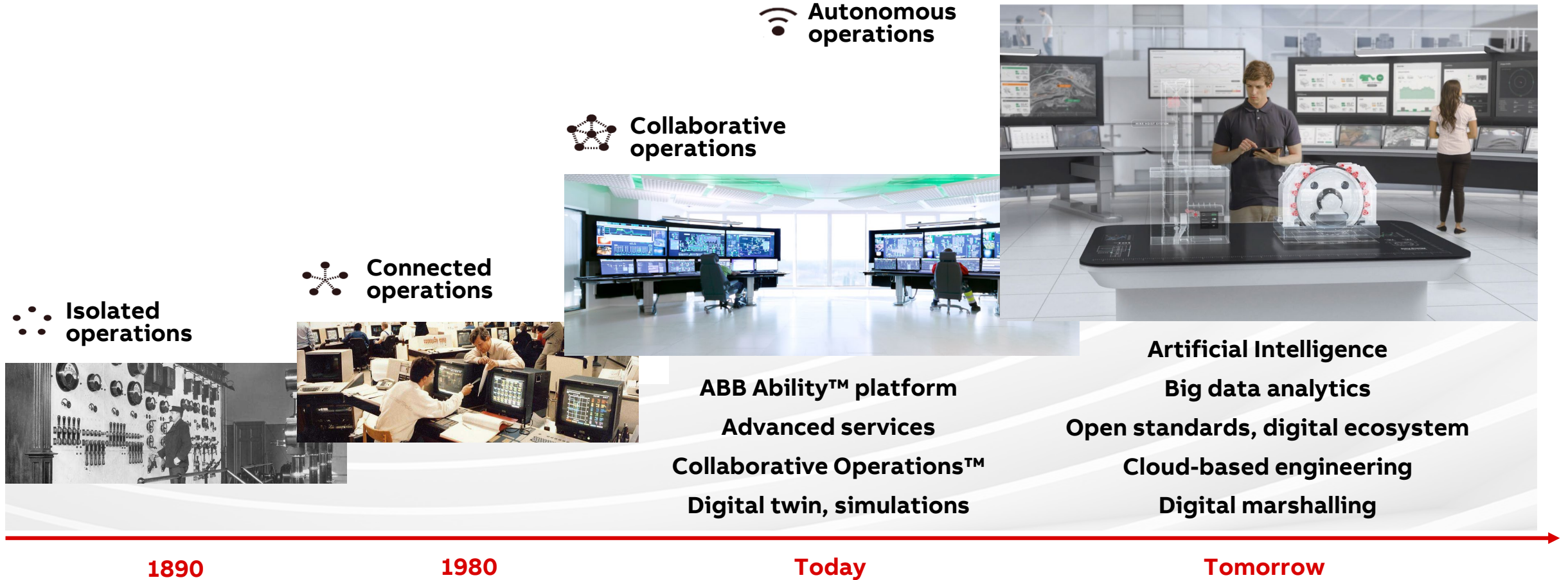
Increased **productivity**
Higher **uptime**
Lower **maintenance costs**
Improved **operational performance**

Key results
(selection)

Oil & Gas: **-30%** op. expenditures
Mining: **\$5 mn** of op. savings p.a.
Pulp & Paper: **-55%** maintenance
Power Generation: **+20%** machine life
Marine: **\$350k** savings per vessel

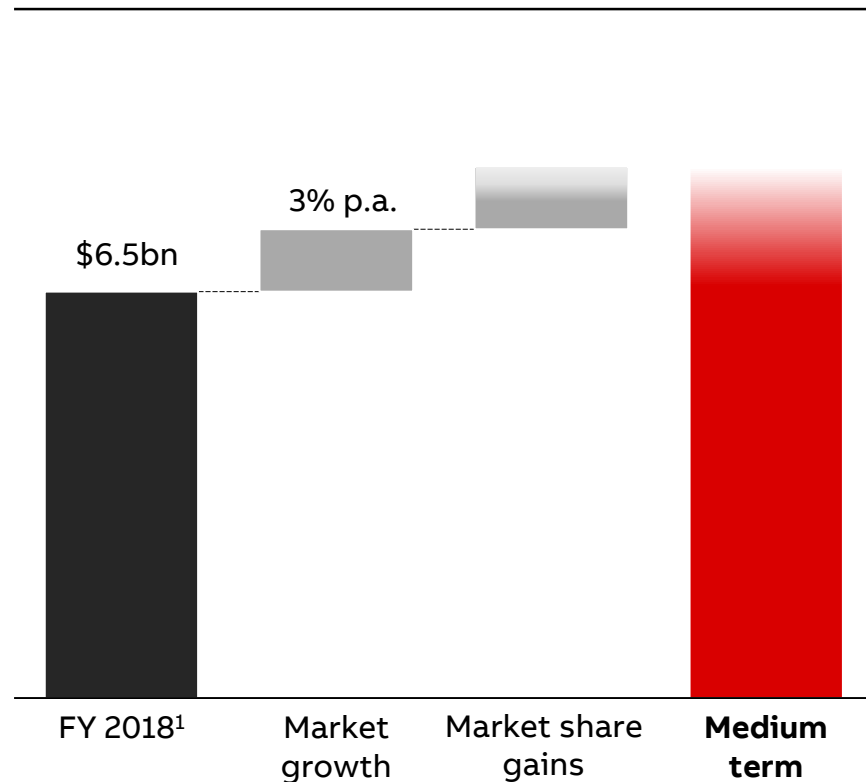
What's next?

Towards autonomous: driving pioneering technology leadership in digital industries



Driving above-market growth going forward

Medium-term revenue development



Drivers for above-market revenue growth

Penetration

- Prioritize verticals and drive tailored growth initiatives
- Leverage unique installed base and vast service footprint to support customer lifecycle
- Drive industry consolidation and increase market share

Innovation

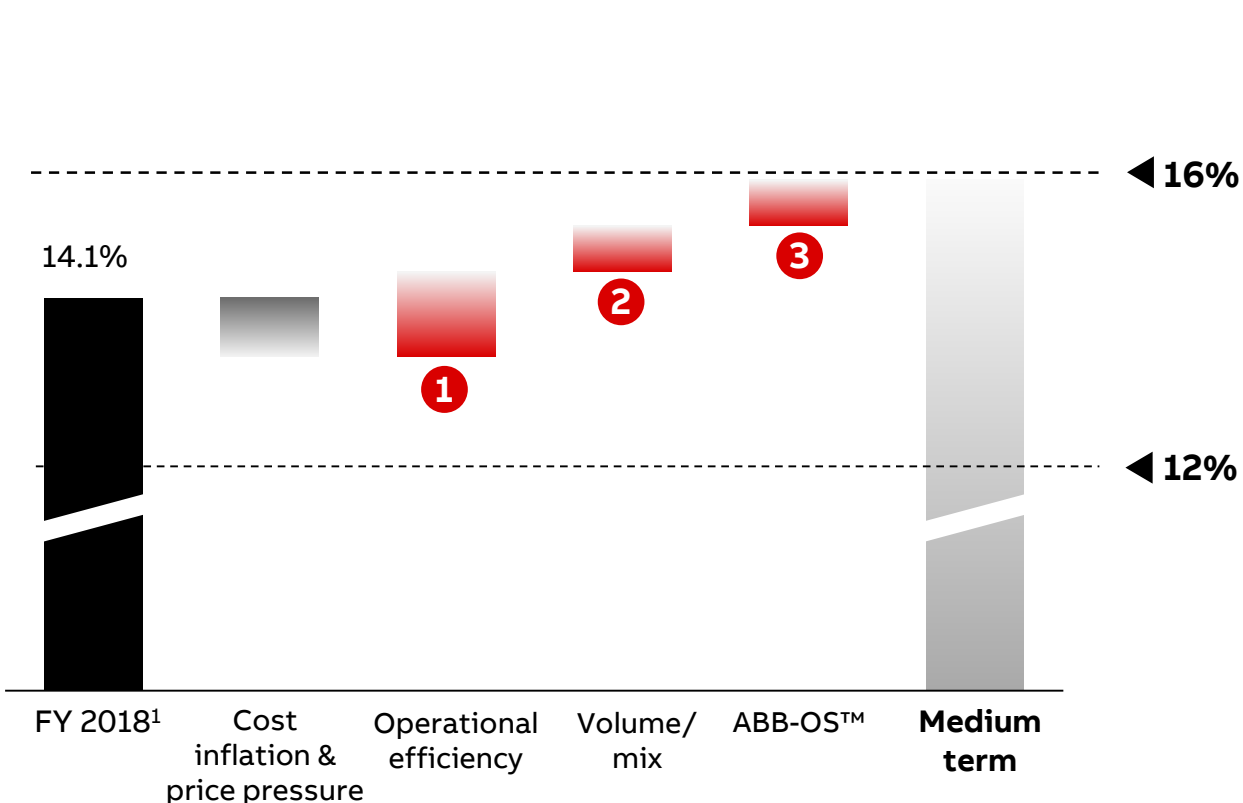
- Build on DCS leadership to provide integrated solutions across process, electrical, motion and digital
- Accelerate revenues from ABB Ability™ solutions, new software applications and service business models
- Innovate new sensor and analyzer technologies

Expansion

- Add industry-specific, differentiated solutions based on anchor products and comprehensive ABB offering
- Increase focus on fast-growing hybrid segments

Driving op. EBITA margin within the target margin corridor of 12 – 16% with little additional capital

Operating EBITA margin



Details on key drivers

- 1 Operational efficiency**
 - Strive towards flawless project execution excellence
 - Use AI to further improve efficiency
 - Relentless performance culture
- 2 Volume/mix**
 - Serve growing customer needs in process and hybrid industries
 - Balance growth, margin and ROCE
- 3 ABB-OS™**
 - Drive towards a lean and simple organization
 - Align resources toward profitable growth priorities
 - Implement ABB-OS™ – zero-based budgeting

Creating value for customers in process & hybrid industries and ABB

Writing the future of safe and smart operations

Attractive growth

Address customer needs with differentiated, industry-specific offering, incl. ABB product pull-through, ABB Ability™ and integrated solutions
Capture greater share of customer wallet in fastest growing verticals; leverage markets returning to growth

Stronger margins

Implement clear initiatives to drive cost down and increase productivity
Enhance efficiency through simplification

Optimizing capital

Drive superior returns targeting highly attractive ROCE
Invest into the future: ABB Ability™, innovation, differentiated solutions and thought leadership

**Medium-term
operational EBITA margin**

12 – 16%

**Let's write the future of safe and smart operations.
Together.**

ABB