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INVESTOR RELATIONS

ABB Division Fact Sheets

September 2018



ABB today

Two clear value propositions

Bringing electricity from any power plant to any plug



Power Grids

... a stronger, smarter and greener grid

#1



Electrification Products

... electrification of all consumption points

#2

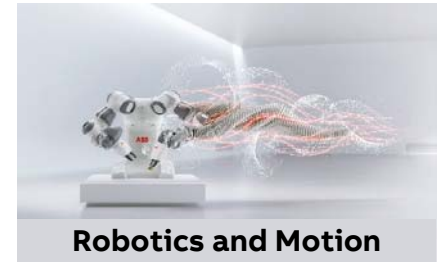
Automating industries from natural resources to finished products



Industrial Automation

... perfection in automation

#2



Robotics and Motion

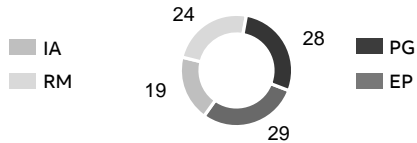
... robotics and intelligent motion solutions

#1 motion
#2 robotics

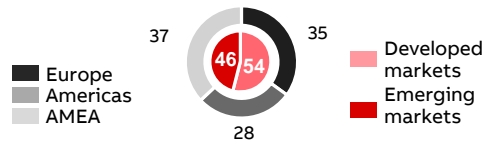
Partner of choice for...

ABB financial summary

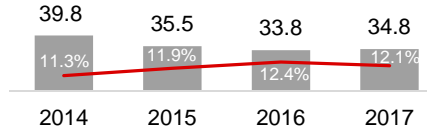
Revenues by division 2017
% of total revenues



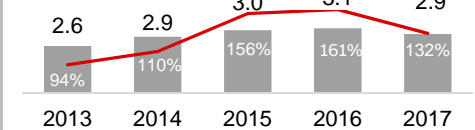
Revenues by region 2017
% of total revenues



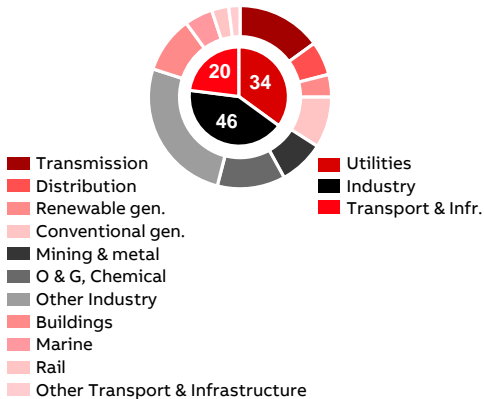
Revenues and Op. EBITA margin %
US\$ bn and %



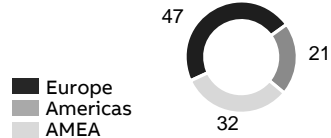
FCF and percentage of net income
US\$ bn and %



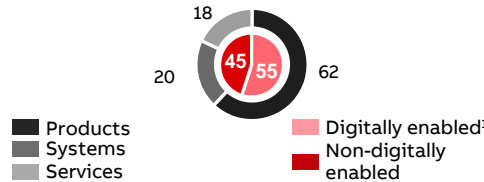
Revenues by end market 2017
% of total revenues, estimated



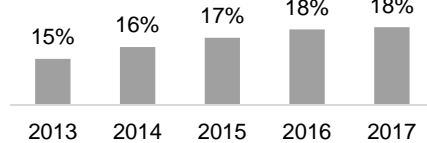
Employees by region 2017
% of total workforce



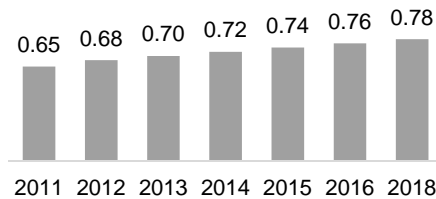
Revenues by product type 2017
% of total revenues, estimated



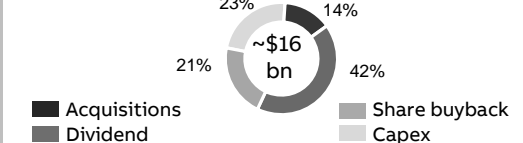
Service revenue percentage
% of total revenues



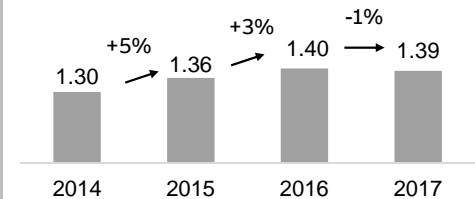
Dividend per share (CHF)



Capital allocation 2014 – 17
US\$ billions and % of total deployed



Operational EPS growth²



Power Grids

Partner of choice for a stronger, smarter and greener grid

Market size

~\$80 bn market¹ in 2018

Offering

Broadest offering of products systems, services and software for power transmission and distribution

Main competitors

SIEMENS



TBEA 特变电工

Position of strength

Market and technology leader
Unrivalled application know-how
Truly global player with largest installed base
Leading software and automation solutions
Industry leading margins

Key figures

Orders and revenues

\$ bn

■ Orders
■ Revenues



Op. EBITA

\$ bn, margin %



Employees

Thousand

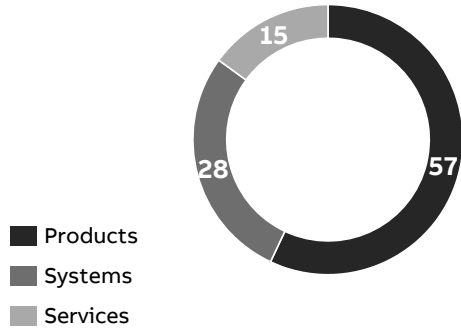


Power Grids

Business breakdown and trends

Offering

Approximation, %



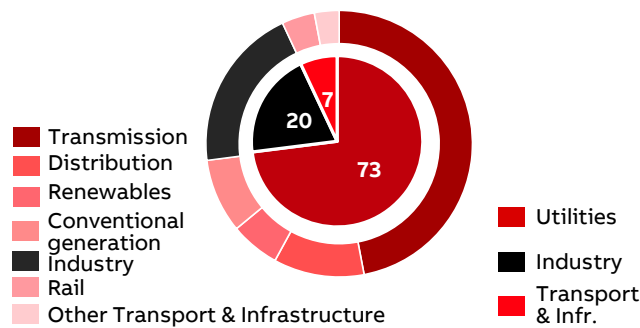
Digital equipment: real time supervision, higher reliability, maintenance optimization

Digitally enhanced systems: faster installation, more configurable power quality, higher penetration of renewables, managing less predictable supply & demand

Software & operations: more real-time control, smart asset mgmt., planning optimization

Customers

Approximation, % of revenues



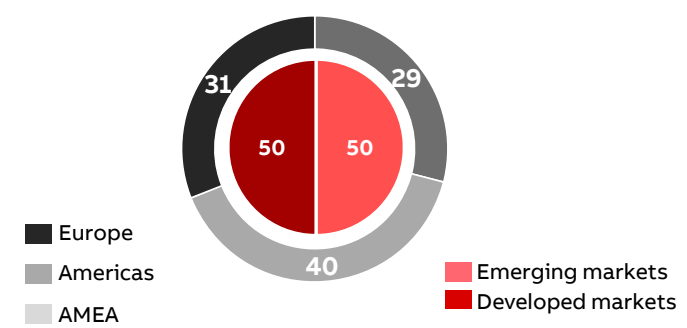
Transmission & distribution: 1-3% growth trend from increasing complexity, interconnections, aging infrastructure, physical cyber security

Integrating renewables: >3% growth for long distance transmission, storage, bi-directional flow, power stability, microgrids

Connecting consumers: rail electrification, datacenters, EVs, industry

Geography

% of revenues






Emerging markets: grid build out, renewable integration, interconnections, electrification of society

Developed markets: renewable integration, interconnections, aging infrastructure, power quality, security of supply, electrification of transport

Power Grids

Partner of choice for a stronger, smarter and greener grid

	Products & components	System & automation	Consultancy, services & software
Main offerings	<ul style="list-style-type: none"> Distribution transformers Power transformers HV gas / air insulated switchgear Power quality components 	<ul style="list-style-type: none"> Substations Grid automation FACTS HVDC and UHVDC Microgrids, BESS 	<ul style="list-style-type: none"> Consulting, planning services Network control, operation services Asset & workforce management Asset performance management Maintenance services
Competitive position	#1	Automation HVDC #1	#1
Major competitors			

Electrification Products

Partner of choice for electrification of all consumption points

Market

~\$166 bn market¹ in 2018

Offering

Broadest global portfolio of low- and medium-voltage products and solutions for intelligent protection and connection
Pre-engineered, packaged solutions and services tailored to customers' needs

Main competitors



Position of strength

Complete portfolio for electrification of “the site”
Strong distributor relationships
Geographically balanced production and R&D footprint
Strong growth segments EV charging, renewables, data centers
Innovative products and solutions
Intelligent solutions for smarter buildings

Key figures

Orders and revenues

\$ bn

■ Orders
■ Revenues



Op. EBITA

\$ bn, margin %



Employees

Thousand

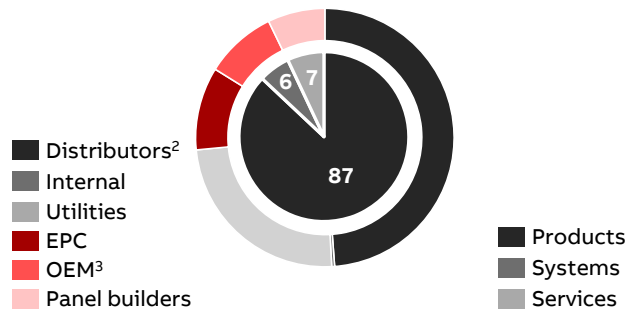


Electrification Products

Business breakdown and key end-market growth trends

Channels¹

Approximation, % of revenues

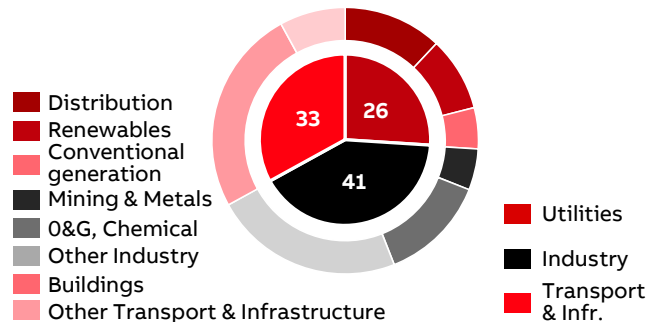


Digitalization: connectivity and communication, digital models and configurators

Services: condition monitoring and diagnostics, cloud connection and cyber security, collect, provide and process data

Customers

Approximation, % of revenues



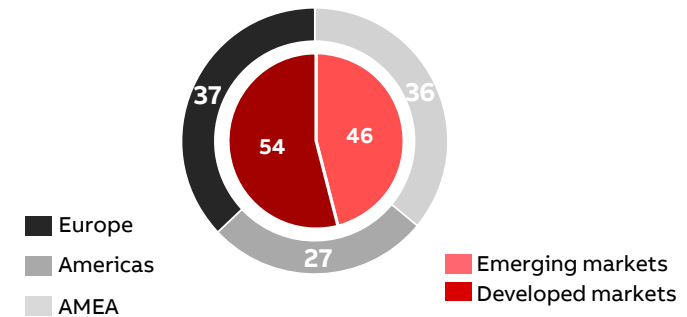
Buildings: 1-3% growth trend from shift to smart buildings

Industry: solid growth from digitalization as well as safety

Renewables: double-digit growth

Geography

% of revenues











Emerging markets: construction and infrastructure trends in key markets such as China and India. Urbanization and renewable integration

Developed markets: smart and energy efficient buildings. Intelligent power distribution. Growing datacenter and EV fast-charging infrastructure

Electrification Products

Partner of choice for electrification of all consumption points

	Electrical distribution	Automation / Control	Installation	Building solutions
Main offerings	<p>LV/MV switchgear Distribution boards Circuit breakers Solar inverters</p> 	<p>MV grid automation Motor control centers Intelligent breakers UPS</p> 	<p>Enclosures DIN-rail products Wire and cable management Wiring accessories</p> 	<p>Smarter buildings Smarter homes Smarter mobility</p> 
Competitive position	MV #1 / LV #2	Electrification #2		EV fast charging #1 ¹
Major competitors				

Industrial Automation

Partner of choice for industrial automation

Market

~\$130 bn market in 2018¹

Offering

Control systems, software, measurement & analytics
Industry-specific power & automation solutions, products (e.g. electric ship propulsion) and services

Main competitors

SIEMENS

EMERSON

YOKOGAWA

Honeywell

Schneider
Electric

Position of strength

Integrated control product, system and service offering
Advanced process control & optimization software and know-how
Integrated power and automation solutions
Largest installed base, advanced services
Deep domain and process expertise

Key figures

Orders and revenues

\$ bn

Orders
Revenues



Op. EBITA

\$ bn, margin %



Employees

Thousand

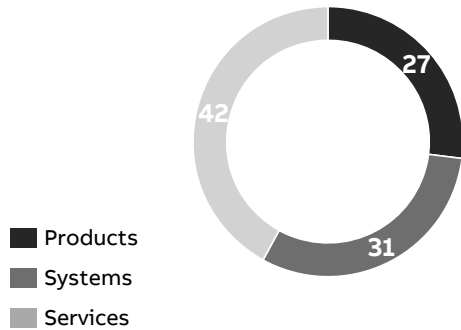


Industrial Automation

Business breakdown and key end-market growth trends

Offering

% of revenues

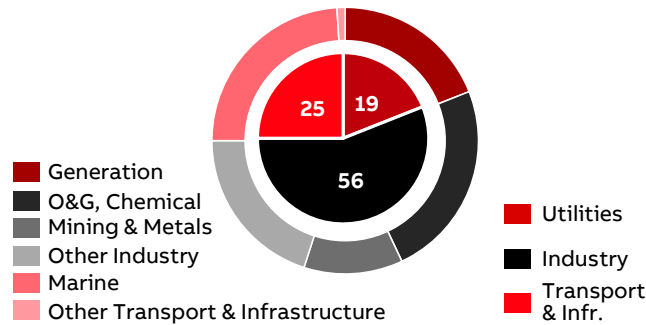


Digitalization: growth opportunity building on largest installed base in power generation and process industry

Services: supporting customers remotely with advanced services and optimization

Customers

Approximation, % of revenues



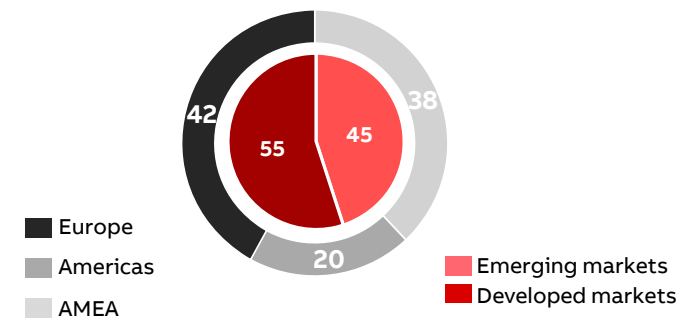
Chemicals: positive fundamentals

F&B, pharma & discrete industries: >3% growth supported by population growth, increasing disposable income

Cruise ships: strong demand from Asian and North American operators

Geography

% of revenues



Emerging markets: penetration of basic automation still rising, aging installed base provides upgrade opportunities

Developed markets: leveraging digital to achieve next level of productivity, energy efficiency and safety

Industrial Automation

Partner of choice for industrial automation

Main offerings

Competitive position

Major competitors

Industry-specific solutions & services

Integrated electrification & automation solutions
Systems and advanced services



Process industries #1 – 5
Marine #1



Control systems & software

Process and discrete control (DCS, PLC)
Adv. process control & manufacturing execution systems



DCS #1; PLC Top 5
APC/MES software #1/2



Measurement & analytics

Pressure, temperature, flow, level, force measurement
Analyzers



Measurement & analytics top 3 – 5¹



Propulsion

Electric propulsion systems for ships
Large turbochargers >500kW



Electric marine propulsion #1
Turbocharging #1



Robotics and Motion

Partner of choice for robotics and intelligent motion solutions

Market

~\$106 bn market in 2018¹

Offering

Robotics and intelligent motion solutions

Main competitors

KUKA

SIEMENS

FANUC

**SEW
EURODRIVE**

WEG

Position of strength

Technology leader in fast-growing robotics market

Broadest robotics portfolio and large installed base

Largest motion player with unmatched global reach

At the cutting edge of power electronics and quality, renewables, and electric transportation

Key figures

Orders and revenues

\$ bn

■ Orders

■ Revenues



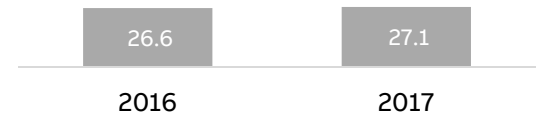
Op. EBITA

\$ bn, margin %



Employees

Thousand

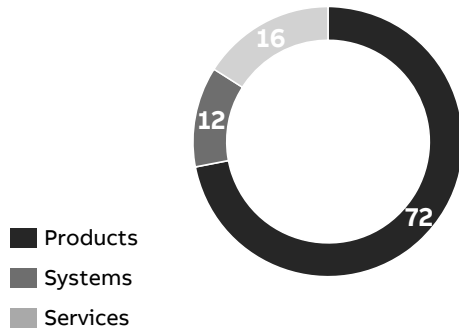


Robotics and Motion

Business breakdown and key end-market growth trends

Offering

% of revenues

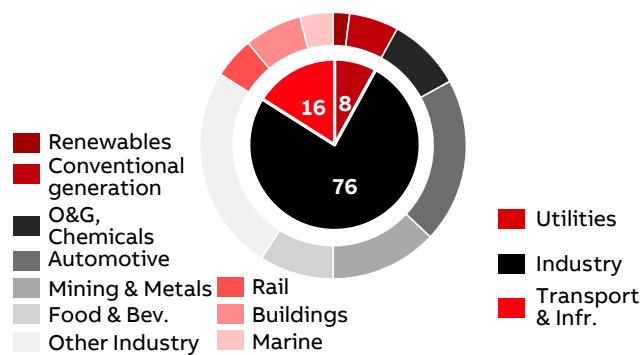


Digitalization: will continue gaining relevance and will drive customer expectations

Services: growing reliance on data management and statistical productivity

Customers

Approximation, % of revenues



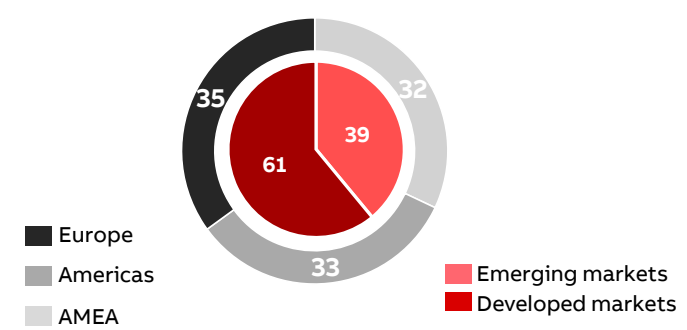
Automotive: growing specifically in emerging markets like Asia

3C & semicon: robotization of manufacturing processes

Food & Beverage: population and income growth, lifestyle changes

Geography

% of revenues



Emerging markets: automation and productivity driving robotization, key market China

Developed markets: US and European macro-economic trends and digitalization supporting growth, political risks

Robotics and Motion

Partner of choice for robotics and intelligent motion solutions

Main offerings

Competitive position

Major competitors

Robotics

Industrial robots, software and IoTSP connected services
Robotic applications and systems for diverse industries



#2



Drives

LV AC drives up to 5,600 kW
MV drives to 100 MW
Wind converters
Digital services and software tools
Propulsion converters



#1



Motors & Generators

LV motors to 1,200 kW
HV motors to 80 MW
Power generators to 80 MW
Mechanical power transmission



#1



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