

A large circular inset on the left side of the slide shows a man and a woman standing next to a dark-colored electric car. The man is holding a red charging cable, and the woman is pointing at a digital display on the car's side. The background of the inset shows a lush green landscape with trees.

NOVEMBER 19, 2020

# Electrification

## Capital Markets Day 2020

Tarak Mehta,  
President of Electrification



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# Agenda

- 01. ABB Electrification
- 02. Market outlook
- 03. Direction and execution
- 04. Creating value



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# Electrification focus areas

## 01. Driving growth by differentiation

- Market leading core technology and innovation
- Creating value for customers with digital solutions

## 02. ABB Way: performance management

- Clear mandate for each division
- GEIS integration, Installation Products division turnaround

## 03. Portfolio management

- Systematic review down to product line level
- Exploring adjacencies via bolt-ons & start-ups



# Electrification divisions overview

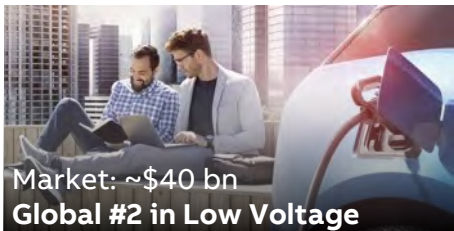
Revenues \$12.7 bn, employees ~53 k in 2019

## Distribution Solutions



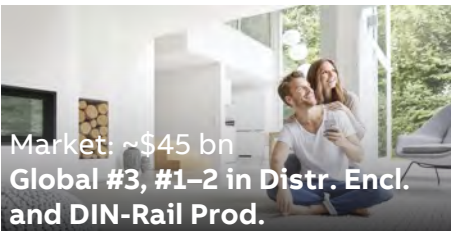
Medium and low voltage control & protection products, systems & switchgear, automation & services

## Smart Power



Low voltage breakers & switches, enclosed products, motor starters, power protection, electric vehicle charging infra. & service

## Smart Buildings



Miniature breakers, distribution enclosures, wiring accessories, building automation

## Installation Products



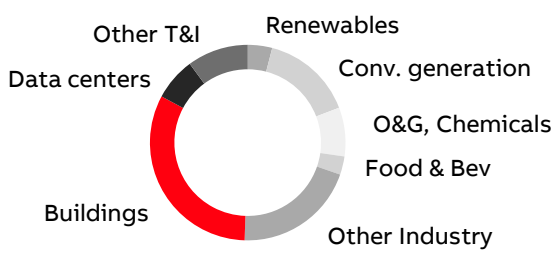
Wire & cable management, termination, fittings & other accessories

## Power Conversion

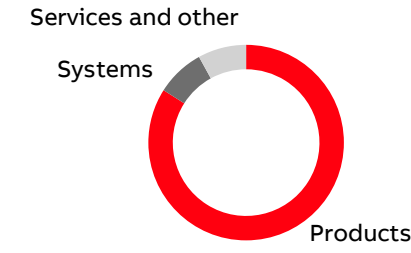


Power conversion products including embedded power products, DC power solutions and services

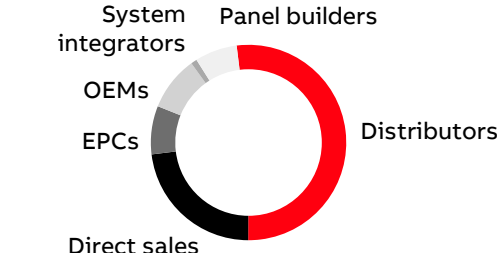
## CUSTOMERS



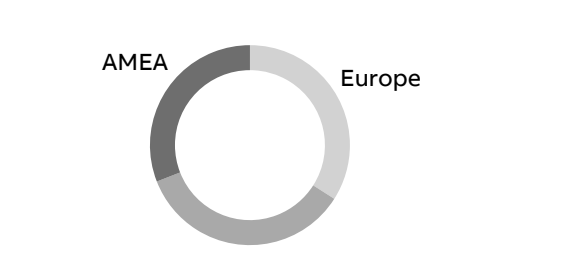
## OFFERING



## CHANNELS



## GEOGRAPHIES





# The essence of the Electrification business

~70%+ of our portfolio goes inside the electrical panel...

**>\$10bn rev / >100 product lines – inside an electrical panel**

- Circuit breakers
- Fused switches
- Non-fused switches
- Operating mechanisms
- Contactors
- O/L relays
- Pilot devices
- Power supplies
- CAM switches
- Relays & Timers
- Surge protection
- Enclosures
- Cable ties & wire duct
- Flexible conduit & fittings
- Cable lugs
- Cord & Cable



**~\$3bn rev / ~30+ product lines - outside**



EV Chargers



Light switches



Emergency lighting



Door entry system



ABB i-bus® KNX



Industrial plugs



**1.7m**  
products shipped per day

**100+**  
local standards addressed

**>30,000**  
pricing decisions per day

**10m**  
connectable devices installed

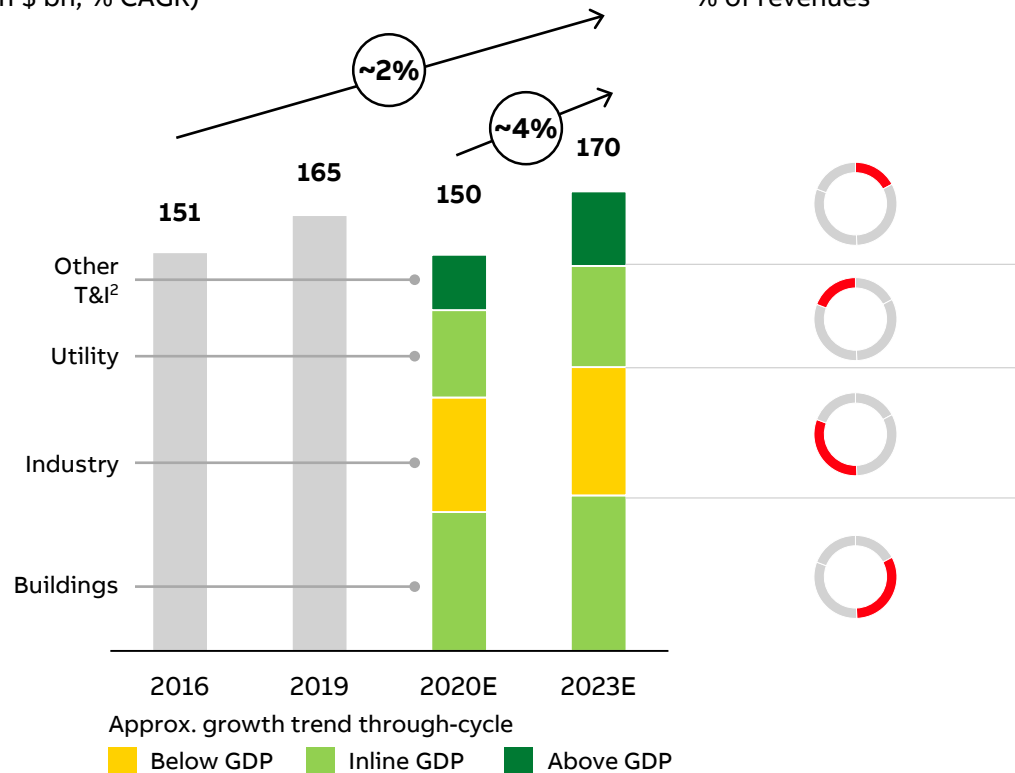
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## 02. Market outlook

# Electrification market: key segments

## Market size<sup>1</sup>

(In \$ bn, % CAGR)



## Business exposure

% of revenues



## Market growth drivers

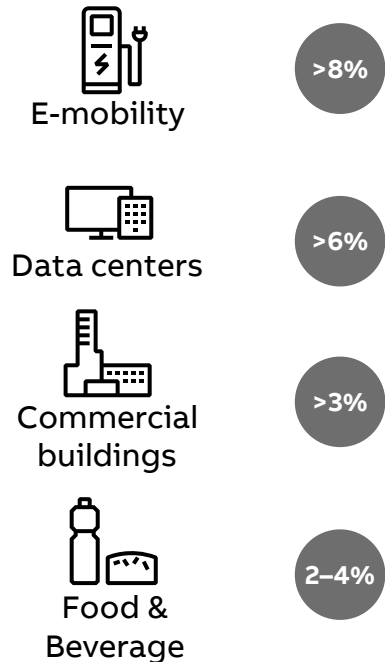
Electricity grows 2x faster than other energy sources

New sources of consumption

Rising importance of distributed generation

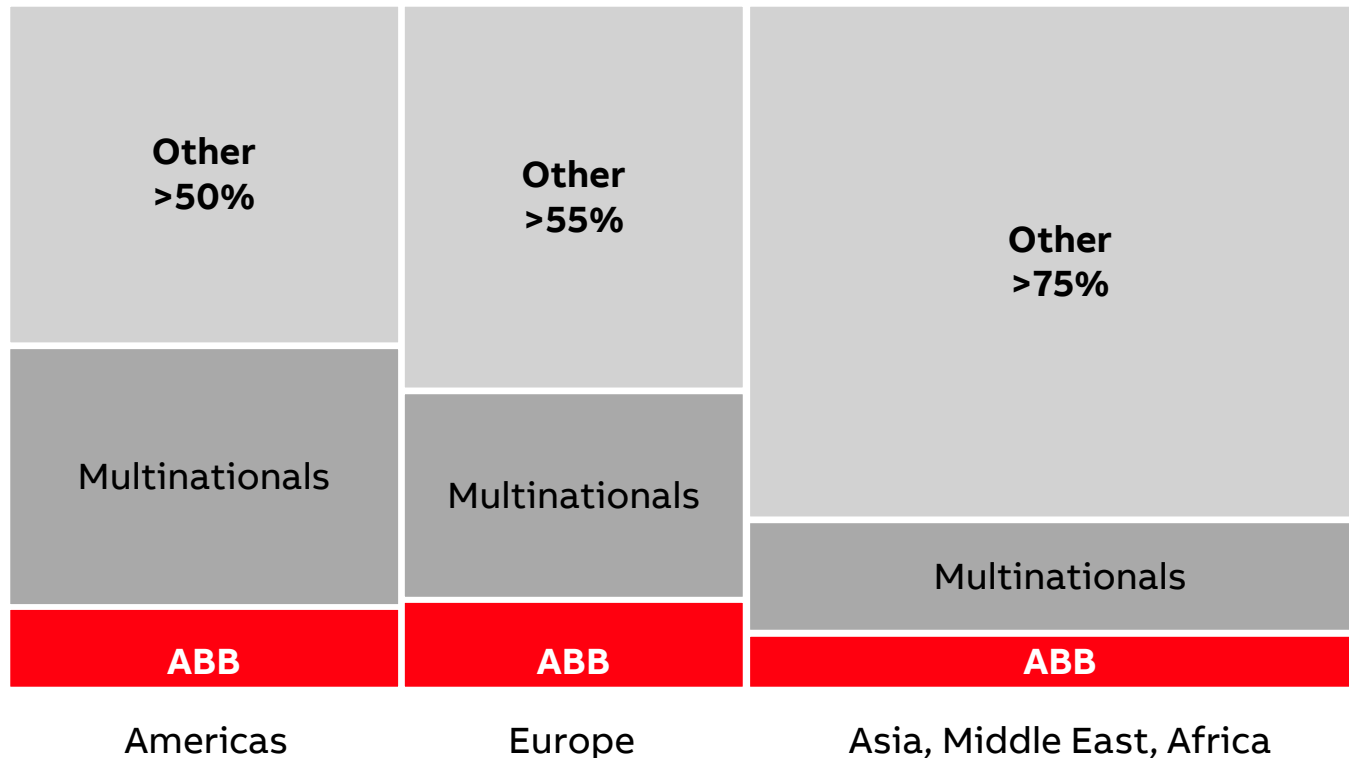
Expansion of e-commerce & digitalization

## High-growth segments<sup>1</sup>



# Electrification: fragmented market with local champions

Global electrification market structure<sup>1</sup>



Local offers /  
global scale  
+  
R&D leverage  
+  
Digital platform

Scope + scale + digital = increasing local market penetration



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## 03. Direction and execution

**ABB Way**

Electrification

**Safe, smart, and sustainable electrification  
for our customers and partners.**  
Powered by our people.



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## Where we are first...



**For our  
Customers**



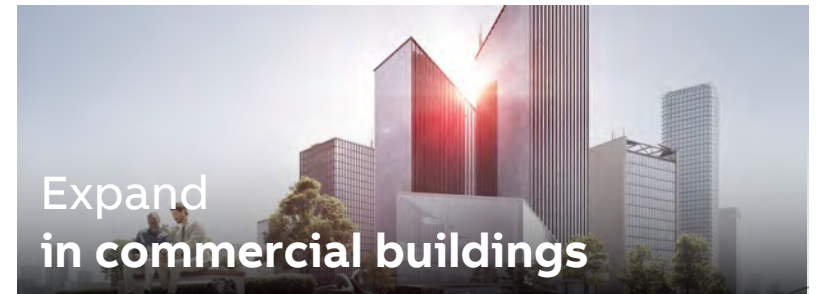
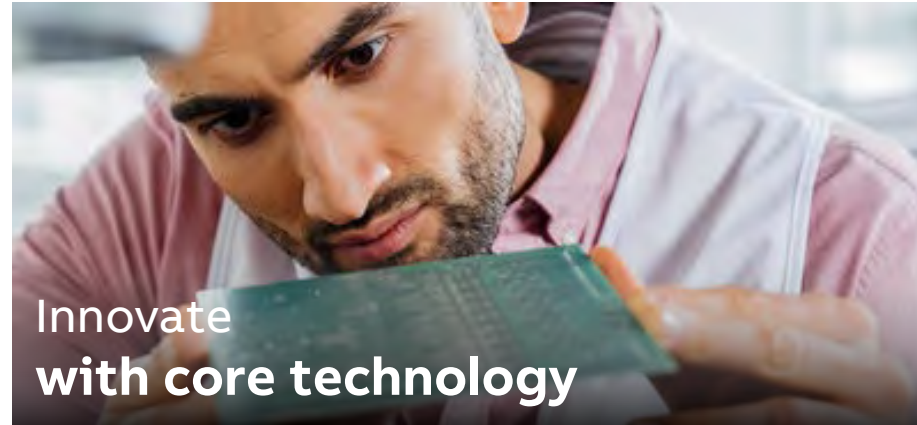
**In Innovation**



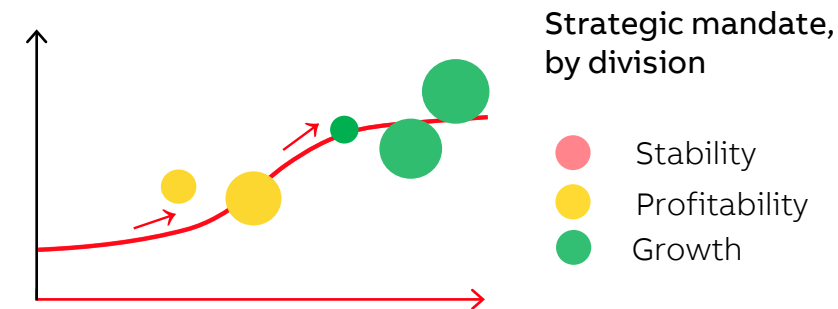
**In Digital**



## Six growth drivers



# How each division in Electrification will deliver



## Performance and markets

Integrate and optimize GEIS

Optimize sales and channel structure

Build industrial applications

## Capabilities

Build solutions for data centers, distribution utilities, F&B etc.

Develop and grow digital energy management offering

Innovate with digital building management solutions

Improve operations. Review portfolio to focus on the value creating assets

Expand data centers competence

## Portfolio

Turnaround performance for several product lines

Drive growth in E-mobility  
Innovate in LV products

Bolt-on acquisitions

Invest in “power brands” to maintain differentiation

R&D, digital



Footprint, capex





# Empowered people in an agile organization

## Agile organization

- Fast, decentralized and flexible

## Values

- **Care** about our customers & **Courage** to take action
- **Curiosity** & **Collaboration** to find growth opportunities

## Engaged people

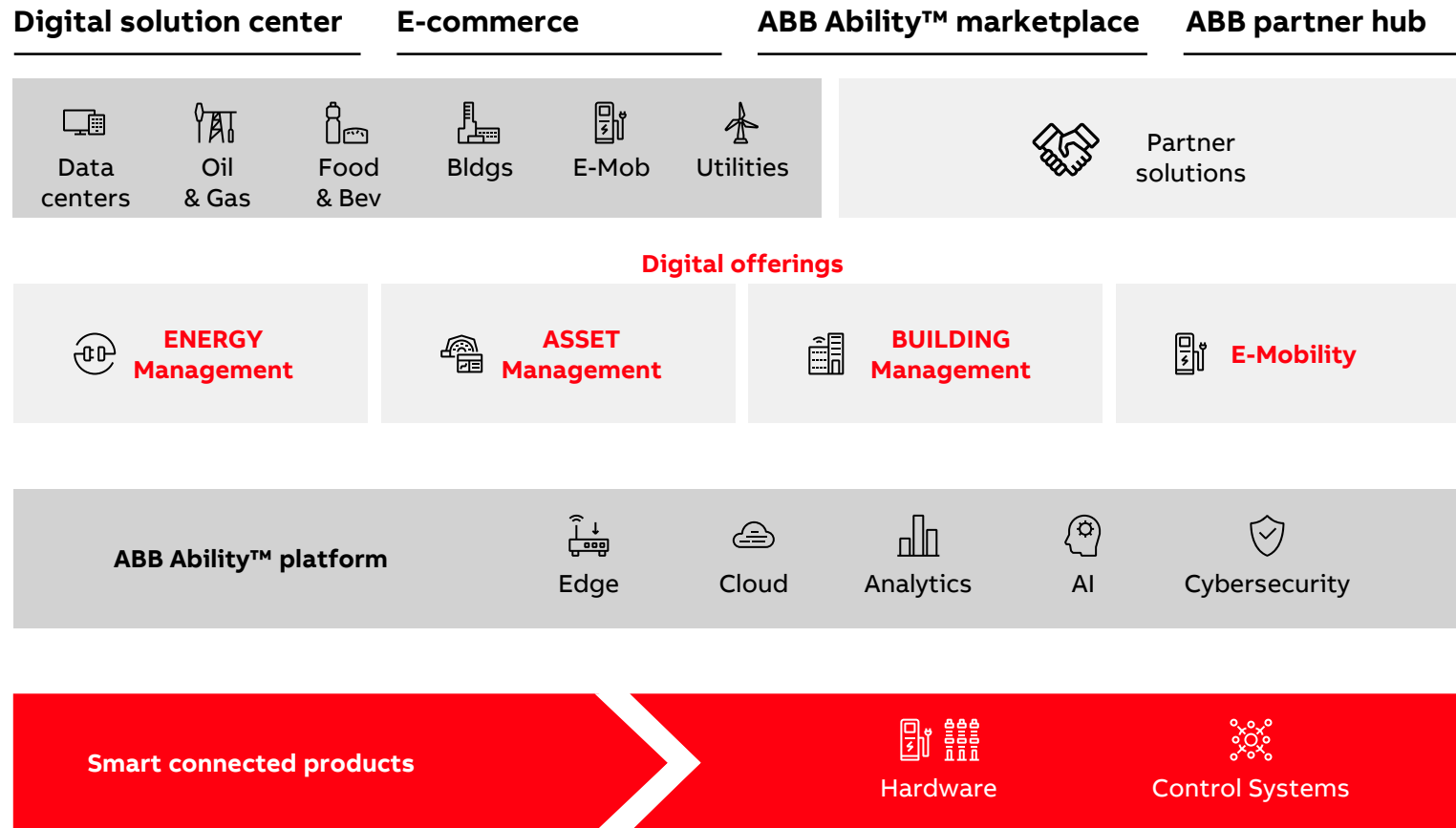
- Strong **sense of purpose**
- Aligned **performance metrics**





# Digital Electrification in a nutshell

Creating customer impact and new revenue streams



2023 ambition

**>\$1bn  
e-commerce**

**&**

**>\$3bn  
of EL scope  
searchable &  
selectable  
online**

# Delivering digital solution for Burj Khalifa

Up to  
**30%**  
operational costs  
reduction

## Challenges

400 **electrical loads** including 24MW A/C

57 elevators serving 163 floors

Reduce routine time-based maintenance costs  
and move towards **predictive maintenance**

## ABB Solution



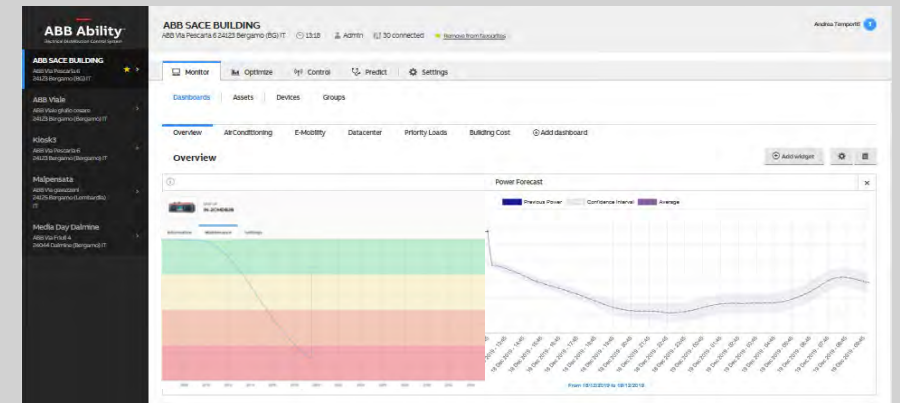
**Reduce maintenance cost up to 30%**



**Maximize uptime:** prevent fault of electrical equipment through AI predictive maintenance algorithms



**Improve safety:** Central Control point accessible anywhere; no need for physical presence



# Enabling hyperscale efficiency for colocation

More than  
**25%**  
operational costs  
reduction

## Challenges

Provide scalable, flexible IT infrastructure to multiple colocation clients while staying cost and **power efficient**

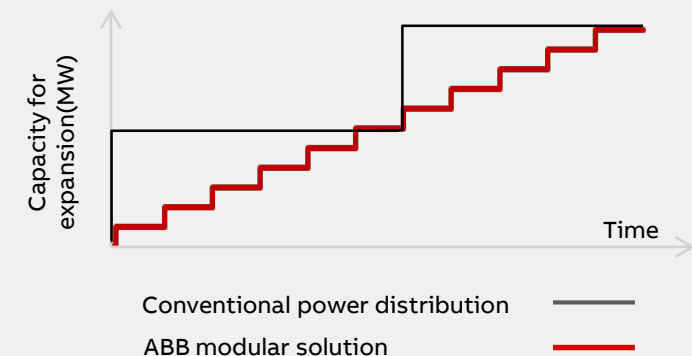
## ABB Solution

LV switchboards and modular UPS<sup>1</sup> for **easy expandability**

Li-Ion battery strings for **longer life, higher power density & improved total cost of ownership**

Efficient modular systems for **better power usage effectiveness**

### More efficient & flexible scaling





An aerial photograph of a modern city skyline. In the foreground, there's a river with a small bridge and lush green trees. The middle ground is filled with various modern buildings, including a prominent tall, slender skyscraper with a glass facade. The background shows a hazy cityscape under a blue sky with light clouds.

# **Sustainability: helping the Netherlands drive CO<sub>2</sub> emission reduction**

**WE ENABLE A  
LOW-CARBON  
SOCIETY**

**WE PROMOTE  
SOCIAL PROGRESS**

**WE PRESERVE  
RESOURCES**

**INTEGRITY AND  
TRANSPARENCY**



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# 04. Creating value

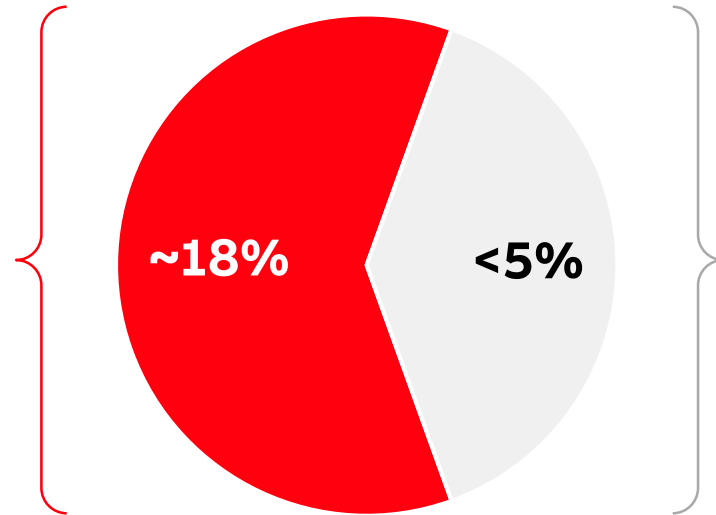
# Updating from 2019 Electrification Investor Day

## Recap: High performing businesses (~60% revenues)

Distribution Solutions

Smart Power

Smart Buildings



12.9% Op. EBITA margin<sup>1</sup>

## Businesses in change mode (~40% revenues)

Solar inverters ✓

Exited in Q1 2020

Installation Products ✓

Turnaround in execution

GE Industrial Solutions ✓

>60% through integration



13.4% Op. EBITA margin<sup>2</sup>  
in Op. EBITA margin target corridor in Q3 2020



# Update since 2019 Electrification Investor Day

## GEIS integration: >60% complete

	by Year 5 <sup>1</sup>	by 2020	by 2022	
Product conversion (\$m)	260	130	260+	On track
Cost synergies (\$m)	200	140+	200+	Ahead of plan
Footprint optimization (sites closed)		18	28	On track
Investment (\$m) <sup>2</sup>	480	330	410	Within forecast

Purchase price adjustment: \$97 mn cash adjustment to \$2.5 bn

52 new products introduced to the market in 2020

## Installation Products turnaround

### Performance

Op. EBITA: >250 bps (vs 2019)

- Strengthened **pricing** and optimized channel structure
- Expanded distribution network and core manufacturing sites
- Better **mix** and **lean** structure

### Future direction

- “Win-win” partnerships in distribution & retail to drive product mix shift
- Expand product and service offering, especially in “power brands”

**Harnessflex**

**Adaptaflex**

**Ty-Rap**

furse

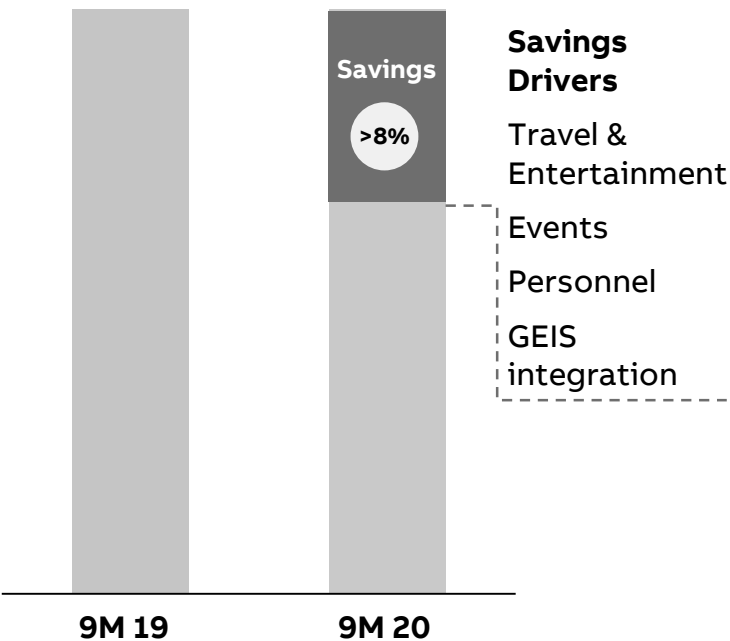
**PMA**

- Stabilize operations to align supply and demand for profitable growth

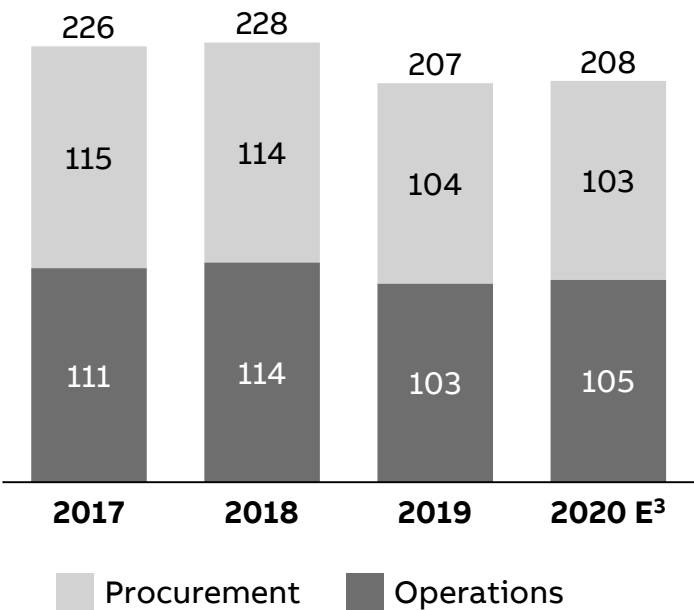
# Continuous improvement for optimizing gross margin

Cost management, productivity and pricing

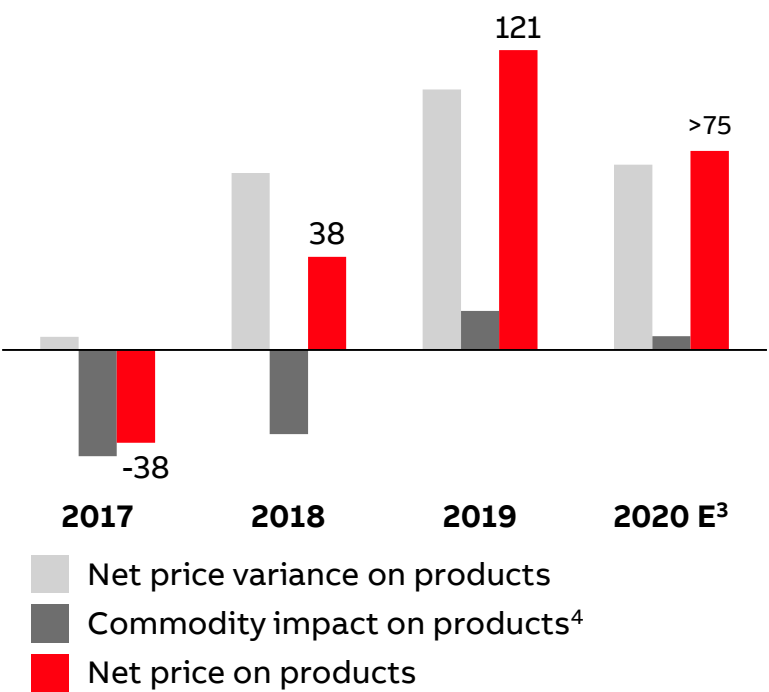
## Controlling SG&A in disruption



## Procurement & operations productivity savings<sup>1</sup>



## Product pricing actions<sup>2</sup>

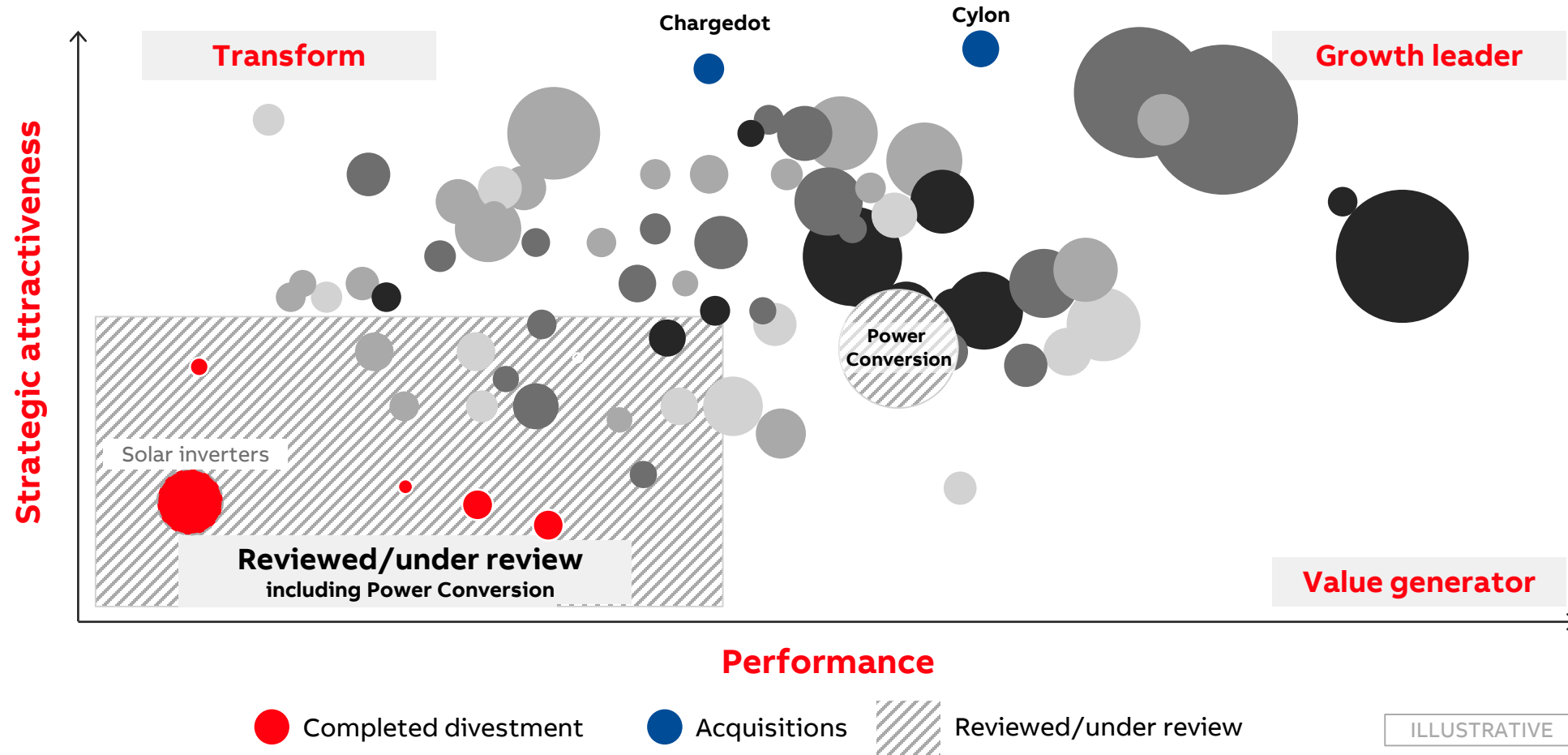


Slide 22

1. Procurement (Supply Chain Management) savings include SG&A cost reductions e.g. in transport and logistics  
2. Excludes Distribution Solutions, GEIS, EVCI (Electric Vehicle Charging Infrastructure), Power Protection, and Solar inverter lines  
3. 2020 forecast as at end Q3 2020  
4. Commodity impact includes raw material impact according to ABB definition and estimated impact from steel and plastic raw materials excluding hedging

# Enhancing our portfolio

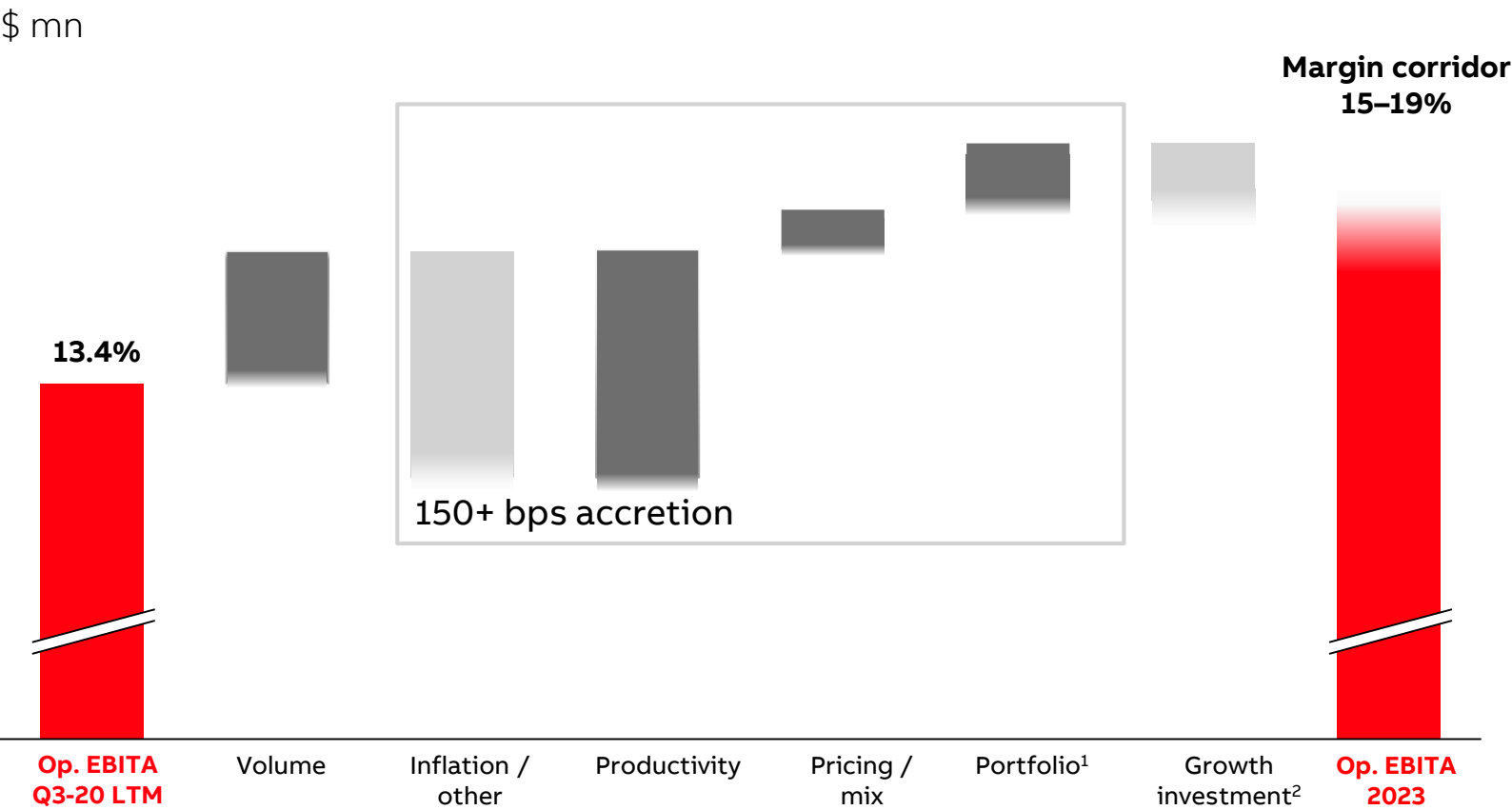
Continuing systematic portfolio management down to a product line level





# Electrification Operational EBITA bridge

Aim to be well within margin corridor as from 2023



## Profitability levers

- Growth in the targeted segments above GDP
- Portfolio transformation incl. GEIS
- Improved performance from Installation Products
- Operational productivity
- Ongoing pricing actions
- Improved mix due to digital portfolio

1. Includes GEIS integration, Solar divestment and other  
2. Includes R&D, digital & sales initiatives

# Electrification value creation



Well aligned to key global **high-growth segments**



**Customer focus**, innovation in **core technologies** and **digital solutions** will drive **growth**



Increasing **profitability** with **GEIS, Installation Products, & continuous improvement**



**Portfolio management** including product line turnarounds, divestments & bolt-on acquisitions



**Aim to be well within the Op. EBITA margin corridor as from 2023**

**ABB**