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" 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.

On December 17, 2018, ABB announced an agreed sale of its Power Grids ("PG") business. Consequently, the results of the Power Grids business are presented as discontinued operations. The company’s results for all periods have been adjusted accordingly. Net income, EPS and Cash flow from operating activities include results from continuing and discontinued operations.

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, annual reports and regulatory filings” on our website at www.abb.com/investorrelations.
Meet the Electrification team

**Business lines**

- **Alessandro Palin**
  Managing Director, Distribution Solutions

- **Giampiero Frisio**
  Managing Director, Smart Power

- **Oliver Ilitisberger**
  Managing Director, Smart Buildings

- **Matthias Heilmann**
  Managing Director, Installation Products

**Global markets**

- **Mike Mustapha**
  Head of Global Markets

**U.S.**

- **Maryrose Sylvester**
  U.S. Country Managing Director

**Functions**

- **Christian Nilsson**
  Chief Financial Officer

- **Amina Hamidi**
  Chief Technology Officer

- **Tarek ElHadidi**
  Chief Information Officer

- **Andrea Menti**
  Head of Operations

- **Anton Kotov**
  Head of Strategy & Digital

- **Monique Elliott**
  Head of Customer Experience
## Electrification in ABB’s portfolio

<table>
<thead>
<tr>
<th>Segment</th>
<th>Global #2</th>
<th>Global #2</th>
<th>Global #1</th>
<th>Global #2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market size</td>
<td>$160 bn</td>
<td>$90 bn</td>
<td>$80 bn</td>
<td>$80 bn</td>
</tr>
<tr>
<td>Mid-term growth</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>6%</td>
</tr>
<tr>
<td>2018 revenues</td>
<td>$13.0 bn(^1)</td>
<td>$6.5 bn</td>
<td>$6.5 bn</td>
<td>$3.6 bn</td>
</tr>
<tr>
<td>2018 op. EBITA %</td>
<td>12.8%(^1)</td>
<td>14.1%</td>
<td>15.9%</td>
<td>14.6%</td>
</tr>
<tr>
<td>Employees</td>
<td>~55 k</td>
<td>~21 k</td>
<td>~20 k</td>
<td>~11 k</td>
</tr>
</tbody>
</table>

\(^1\)Electrification result adjusted to include GEIS on an annualized basis, based on H2 2018 contribution
Safe, smart, and sustainable electrification for our customers and partners
What we will show you today

1. **Driving growth**
   - Aligned to key mega-trends
   - Well positioned in high-growth segments

2. **Differentiating in our markets**
   - Scope and scale advantage
   - Market leading core technology and innovation
   - Digital creating value for customers

3. **Creating value through operational excellence**
   - Continuous improvement
   - GEIS integration, Installation Products turnaround
Understanding ABB Electrification

Driving growth

Differentiating in our markets

Creating value

Q&A
Serving markets from source to socket
Products, solutions and services across utilities, industry, transport & infrastructure
Electrification business lines
Aligned to customer needs

Distribution Solutions
~$5 bn
#1 Medium voltage
Medium and low voltage control & protection products, systems & switchgear, automation & services

Smart Power
~$3 bn
#2 Low voltage
Low voltage breakers & switches, motor & power protection, electric vehicle charging infrastructure & service

Smart Buildings
~$3 bn
#2 Installation products
Miniature breakers, distribution enclosures, wiring accessories, building automation

Installation Products
~$2 bn
GEIS integration

1Management estimates for business line revenues over last twelve months to end Q3 2019 including GEIS, on an unconsolidated basis and excluding Solar inverters
## How we run our business lines

### Mid-term priorities

<table>
<thead>
<tr>
<th>Focus</th>
<th>Distribution Solutions</th>
<th>Smart Power</th>
<th>Smart Buildings</th>
<th>Installation Products</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Margin</strong></td>
<td>Integrate GEIS</td>
<td>Integrate GEIS</td>
<td>Integrate GEIS</td>
<td>Turnaround</td>
</tr>
<tr>
<td><strong>Profitable growth</strong></td>
<td>ABB Ability™ Energy mgmt.</td>
<td>ABB Ability™ Building mgmt. and IoT ecosystem</td>
<td>Turnaround</td>
<td><strong>Operational excellence</strong></td>
</tr>
<tr>
<td><strong>Margin</strong></td>
<td>New solutions design</td>
<td>New solutions design</td>
<td>New solutions design</td>
<td>Turnaround</td>
</tr>
<tr>
<td><strong>Profitable growth</strong></td>
<td>ABB Ability™ Asset mgmt.</td>
<td>ABB Ability™ Asset mgmt.</td>
<td>ABB Ability™ Asset mgmt.</td>
<td><strong>Operational excellence</strong></td>
</tr>
<tr>
<td><strong>Skills &amp; capabilities</strong></td>
<td>Distribution grids</td>
<td>Digital talent</td>
<td>Building automation</td>
<td><strong>Supply chain turnaround</strong></td>
</tr>
<tr>
<td><strong>Salesforce spend</strong></td>
<td>+ + +</td>
<td>+ + +</td>
<td>+ + +</td>
<td>=</td>
</tr>
<tr>
<td><strong>R&amp;D investment</strong></td>
<td>+</td>
<td>+ + +</td>
<td>+ + +</td>
<td>=</td>
</tr>
<tr>
<td><strong>Capital intensity</strong></td>
<td>=</td>
<td>=</td>
<td>=</td>
<td>=</td>
</tr>
<tr>
<td><strong>Cash flow</strong></td>
<td>+ + +</td>
<td>+</td>
<td>+</td>
<td>+ + +</td>
</tr>
</tbody>
</table>
ABB Electrification build phase

+Thomas & Betts (2012)
Broadened LV offer, U.S. became ABB’s largest market

LV Products division

2015¹
Incl. T&B

2016¹
+ MV Products

2017
+ Solar inverters, critical power, EV charging

2018²
+ expanded LV, MV for U.S.

Today³

Revenues
6.5
9.3
10.1
13.0
12.8

Total margin⁴
~17
(~150) bps
(>250) bps
12.9

($ bn or % terms, unless otherwise stated)

¹Not recast for later portfolio changes; ²Annualized performance for GEIS based on H2 18 contribution; ³Last twelve months to end Q3 2019; ⁴Operational EBITA margin
Electrification operational EBITA margin

High performing businesses (~60% revenues)

- Distribution Solutions
- Smart Power
- Smart Buildings

Businesses in change mode (~40% revenues)

- Solar inverters
- Installation Products
- GEIS

12.9% operational EBITA

~18% <5%

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1Last twelve months to end Q3 2019
ABB Electrification

Understanding ABB Electrification

Driving growth

Differentiating in our markets

Creating value

Q&A
Aligned to key mega-trends

The world is going digital, urban, and electric

### Data and digitalization

- **2018**: 10%
- **2022**: 75%

- **7.5x** Increase in data processed outside of originating core

### Urbanization

- **2018**: ~4 bn people living in cities
- **2040**: ~6 bn people living in cities

- **+2 billion** people living in cities

### Shift to electricity

- **2018**: ~23%
- **2040**: >30%

- **+35%** Share of electricity in the energy consumption mix

---

Source: ¹Gartner; ²UN World Urbanization Prospects (2018 Revision); ³IEA, BP Energy Outlook 2018 (electricity as % of total building and industrial energy consumption)
Well positioned in high-growth segments

Global addressable market in $ bn

<table>
<thead>
<tr>
<th>Category</th>
<th>Today</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings &amp; Infrastructure</td>
<td>160</td>
<td>200</td>
</tr>
<tr>
<td>Industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Business exposure % of revenues

CAGR +3%

Market growth drivers

- Electricity grows 2x faster than other energy sources
- New sources of consumption
- Rising importance of distributed generation
- Expansion of E-commerce and digitalization

High-growth segments

- E-mobility >8%
- Data centers >6%
- Commercial buildings >4%
- Food & Beverage 3-4%
- Oil & Gas 3-4%

Source: ABB analysis
Distinct channels and solutions

Channel management

Electrification

- Direct
- OEM / PB
- ABB internal
- EPC

Distributors

>50%

OEM / PB / EPC

E-commerce

+30 segments

- Buildings
- Utilities
- Food & Beverage
- Oil & Gas
- E-mobility
- Data centers
- Rail & infra
- Mining
- Marine
- Wind & solar
- Machine builders
- Others

Solutions

OEM = Original Equipment Manufacturer; PB = Panel Builder; EPC = Engineering, Procurement and Construction
ABB Electrification

Understanding ABB Electrification

Driving growth

Differentiating in our markets

Scope and scale  Innovation  Execution

Creating value

Q&A
Scope and scale advantage
Local access combined with large scale advantage

Global electrification market structure

- Local offers / global core
  - +
  - Manufacturing scale (cost advantage)
  - +
  - R&D leverage
  - +
  - Global digital platform

1Source: ABB analysis
Market leading core technology
Electrification’s cutting-edge innovation DNA

NeoGear switchgear

Safest product in the market
25% space saving
30% operational costs saving

Major innovation in +$35 bn market

Solid state breaker concept

Architectural control point for electrification

Market-defining products

Innovation ecosystem: >2,700 technologists in 48 centers

R&D investment: >$300 mn p.a.\(^1\)

70% Net Promoter Score\(^2\) for innovation

\(^1\)Non-order related R&D investment excluding GEIS; \(^2\)Net Promoter Score is a management tool to measure customer satisfaction
Digital innovation
Creating customer impact and new revenue streams

- Ease of doing business (including E-commerce)
- Scalable, segment-focused solutions
- Subscription-based SaaS
- Global cloud platform
- Products with embedded intelligence

ABB ABILITY™ PLATFORM

DATA CENTERS
OIL & GAS
FOOD & BEV
BUILDINGS
E-MOBILITY
UTILITIES

PARTNER SOLUTIONS

E-COMMERCE
ABB ABILITY™ MARKETPLACE

ENERGY MANAGEMENT
ASSET MANAGEMENT
BUILDING MANAGEMENT

DIGITAL SERVICES

SMART CONNECTED PRODUCTS

3 MN CONNECTED
10 MN CONNECTABLE

EASE OF DOING BUSINESS
SCALABLE, SEGMENT-FOCUSED SOLUTIONS
SUBSCRIPTION-BASED SaaS
GLOBAL CLOUD PLATFORM
PRODUCTS WITH EMBEDDED INTELLIGENCE

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1Installed base of ABB Electrification devices in the field
Digital innovation
Creating value for customers

Connected products with embedded intelligence
- Distribution, protection & connection
- Sensing & metering
- Emergency lighting & access control
- EV charging

Cloud-enabled, subscription-based digital services
- Energy management
- Asset management
- Building management

Automation & Control
- Lighting & shading control
- HVAC control

Optimize energy bill
Avoid energy waste
Reduce total cost of ownership
Maximize uptime
Driving continuous improvement
Operational excellence framework to benchmark and drive success

### Operational KPI examples

<table>
<thead>
<tr>
<th>Description</th>
<th>Action</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims resolution¹</td>
<td></td>
<td>24 hours</td>
</tr>
<tr>
<td>Time to quote</td>
<td>products</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>systems</td>
<td>10 days</td>
</tr>
<tr>
<td>On-time deliveries²</td>
<td></td>
<td>95%</td>
</tr>
<tr>
<td>Simplification</td>
<td>Legal entities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SKUs</td>
<td></td>
</tr>
<tr>
<td>Lead time²</td>
<td></td>
<td>5 days → 3 days</td>
</tr>
<tr>
<td>Price increase²</td>
<td>$5 mn</td>
<td>$80 mn</td>
</tr>
<tr>
<td>GEIS synergies³</td>
<td>$200 mn</td>
<td></td>
</tr>
<tr>
<td>Incidents (TRIFR)</td>
<td></td>
<td>0.5</td>
</tr>
</tbody>
</table>

1 For non-material complaints; ² Targeted improvement over 3 years; ³ Cost synergies by 2022
## GEIS integration

### On track

### Strategic rationale

#### Market access
- North America
- Global installed base

#### Performance improvement
- ABB technology leadership
- ~$200 mn cost synergies by 2022

#### Closing portfolio gaps
- Complementary NEMA, LV products

#### Strategic supply partnership

### Integration status

#### Organization
- 13k employees transitioned into ABB

#### Footprint and product rationalization
- 13 facilities announced for closure
- Product substitutions ahead of plan

#### Investing for growth
- Expanding 4 facilities in North America
- On track with ~$480 mn investment

### ‘Best of Both’ = success

#### Cross-selling
> $70 mn cross-sales YTD 2019

#### Market share growth

<table>
<thead>
<tr>
<th></th>
<th>Q3 2018</th>
<th>Q4 2018</th>
<th>Q1 2019</th>
<th>Q2 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>~2x market growth</td>
<td>+0.4%</td>
<td>+1.0%</td>
<td>+0.6%</td>
<td>-0.2%</td>
</tr>
</tbody>
</table>

→ total share gain ~0.5%

1/3 complete
## Installation Products turnaround

**In progress**

### Restoring the basics 2019

**Addressing issues**
- Price / commodities mismatch
- Unfavorable mix
- Cost to serve

**Actions taken**
- New leadership, simpler structure: +$21 mn cost saving
- Net pricing +$13 mn 2019 benefit
- Portfolio review

### 2020-21 actions

- Optimize sales and channel structures to most profitable products
- Strengthen pricing
- Reduce cost to serve
- Optimize manufacturing footprint
- Talent upgrade

### Future direction

**Shift product mix**
- Invest, expand specialty ‘Power Brands’ globally
- Scale up differentiated products

**Selective market approach**
- Broad portfolio in North America
- Tailored offer globally
- Transition out of non-core countries

---

**Re-establishing profitable growth in attractive segments**
ABB Electrification

Understanding ABB Electrification

Driving growth

Differentiating in our markets

Creating value

Q&A
# ABB Operating System (ABB-OS)

## Simplification
- From 6 to 4 operating business lines
- Integration of GEIS into business lines
- Reduction of legal entities

## Speed
- Empowerment: faster decision making
- Shared service centers report to business
- Alignment on capital allocation

## Accountability
- Country structure integrated into business
- Tailored employee incentives
- Direct owned costs vs. allocated costs

---

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Driving above-market growth

Mid-term revenue development

- $13 bn
- ~3% p.a.
- Above-market growth
- Mid-term

Approach

Scope and scale
- Common sales organization across business lines
- Local sales coverage in +100 countries

Innovation
- Core technology innovation
- Scalable solutions for key segments
- Digital services on ABB Ability™

Execution
- GEIS integration: ‘Best of Both’
- Customer focus via ABB-OS simplification

¹Annualized performance for GEIS based on H2 18 contribution
Reaching margin corridor during 2020

Momentum since GEIS acquisition

- Rolling 4Q
- Cost inflation
- Op. efficiency (ABB-OS)
- Volume/Mix/Price
- GEIS
- Solar & other portfolio improvements

Mid-term outlook

- 12.9%
- 13.5%
- 11.7%
- 12.4%
- 13.5%
- 14.2%

Mid-term outlook: 19%

Rolling 4Q
Cost inflation
Op. efficiency (ABB-OS)
Volume/Mix/Price
GEIS
Solar & other portfolio improvements
Mid-term outlook: 15%
Optimizing gross margin
Cost management and pricing strategy

Balanced material distribution

<table>
<thead>
<tr>
<th>Purchasing country/region</th>
<th>Supply country/region</th>
<th>Domestic</th>
<th>Import</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td></td>
<td>87%</td>
<td>13%</td>
</tr>
<tr>
<td>Europe</td>
<td></td>
<td>91%</td>
<td>9%</td>
</tr>
<tr>
<td>North America</td>
<td></td>
<td>77%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Procurement & op. productivity savings

<table>
<thead>
<tr>
<th>Year</th>
<th>Procurement ($ mn)</th>
<th>Operations ($ mn)</th>
<th>Total ($ mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>111</td>
<td>115</td>
<td>226</td>
</tr>
<tr>
<td>2018</td>
<td>114</td>
<td>114</td>
<td>228</td>
</tr>
<tr>
<td>2019 RR³</td>
<td>103</td>
<td>98</td>
<td>201</td>
</tr>
</tbody>
</table>

Product pricing actions

<table>
<thead>
<tr>
<th>Year</th>
<th>Net price variance on products ($ mn)</th>
<th>Net price on products ($ mn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>-38</td>
<td>106</td>
</tr>
<tr>
<td>2018</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2019 RR³</td>
<td>106</td>
<td></td>
</tr>
</tbody>
</table>

Note: calculations excluding GEIS unless otherwise stated
¹Geographic distribution of tier 1 suppliers to North America, China and Europe as at end H1 2019. Includes raw and direct material purchases for consolidated Electrification; ²Excludes Distribution Solutions and Solar inverter business lines; ³2019 run-rate as at end Q3 2019
Managing growth investment

R&D investment ($ mn)\(^1\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Core technology</th>
<th>ABB Ability™</th>
<th>Digital investment 5 year CAGR +20%</th>
<th>~$400 mn p.a. including GEIS and corporate share</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>316</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>307</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SG&A investment ($ mn)\(^3\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Investments in sales training and pricing tools</th>
<th>Salesforce.com across business</th>
<th>GEIS integration to drive reinvestment from G&amp;A to Sales in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1,622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>1,645</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019 RR(^2)</td>
<td>1,640</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: calculations excluding GEIS unless otherwise stated
\(^1\)Non-order related R&D investment, including investments in GEIS-related product conversion; \(^2\)2019 run-rate as at end Q3 2019; \(^3\)Sales and G&A expenses, excluding primarily GEIS, restructuring, bad debts and FX impacts
Enhancing our portfolio
Continuing systematic portfolio management down to a product line level

- Solar inverters
- Chargedot
- Under review
- Performance
- Review
- Transform
- Growth leader
- Value generator

Illustrative

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- Announced
- Completed divestment
Electrification CFO priorities

**Attractive growth**
- Above market growth
- Continuously reinvesting in R&D, digital and sales

**Disciplined execution**
- Delivering ~$200 mn GEIS cost synergies
- Pricing, operational efficiency, cash generation

**Continuous portfolio management**
- Solar inverter exit agreed
- Other portfolio actions ongoing

Reaching operational EBITA margin corridor of 15-19% during 2020
Safe, smart, and sustainable electrification

1. **Driving growth**
   - Aligned to key mega-trends
   - Well positioned in high-growth segments

2. **Differentiating in our markets**
   - Scope and scale advantage
   - Market leading core technology and innovation
   - Digital creating value for customers

3. **Creating value through operational excellence**
   - Continuous improvement
   - GEIS integration, Installation Products turnaround