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

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November 2019 | Slide 2
Meet the Electrification team

Business lines

Alessandro Palín
Managing Director, Distribution Solutions

Giampiero Frisio
Managing Director, Smart Power

Oliver Iltsberger
Managing Director, Smart Buildings

Matthias Heilmann
Managing Director, Installation Products

Global markets

Mike Mustapha
Head of Global Markets

U.S.

Maryrose Sylvester
U.S. Head of Electrification

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></th>
<th>Electrification</th>
<th>Industrial Automation</th>
<th>Motion</th>
<th>Robotics &amp; Discrete Automation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global #2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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

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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
ABB Electrification

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

Utilities
- Renewables
- Distribution

Industry
- Oil, gas & chemicals
- Food & Beverage
- Machine builders

Transport & infra
- Buildings
- E-mobility
- Data centers

- Reliable data centers
- Power safety & protection
- Home automation
- Secure & efficient buildings
- E-mobility infrastructure
- Enabling renewables
- Distributed gen. & storage
- Smart power distribution
Electrification business lines
Aligned to customer needs

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

Smart Power
- Low voltage breakers & switches, motor & power protection, electric vehicle charging infrastructure & service

Smart Buildings
- Miniature breakers, distribution enclosures, wiring accessories, building automation

Installation Products
- Wire & cable management, termination, fittings & other accessories

~$5 bn\textsuperscript{1}

#1 Medium voltage

~$3 bn\textsuperscript{1}

#2 Low voltage

~$3 bn\textsuperscript{1}

#2 Installation products

~$2 bn\textsuperscript{1}

\textsuperscript{1}Management 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></td>
<td>Margin</td>
<td>Profitable growth</td>
<td>Profitable growth</td>
<td>Turnaround</td>
</tr>
<tr>
<td>Priorities</td>
<td>Integrate GEIS</td>
<td>Integrate GEIS</td>
<td>Integrate GEIS</td>
<td>Turnaround</td>
</tr>
<tr>
<td></td>
<td>New solutions design</td>
<td>ABB Ability™ Energy mgmt.</td>
<td>ABB Ability™ Building mgmt.</td>
<td>Simplify portfolio</td>
</tr>
<tr>
<td></td>
<td>ABB Ability™ Asset mgmt.</td>
<td>Solar inverter business carve-out</td>
<td>and IoT ecosystem</td>
<td></td>
</tr>
<tr>
<td>Skills &amp; capabilities</td>
<td>Distribution grids</td>
<td>Digital talent</td>
<td>Building automation</td>
<td>Operational excellence</td>
</tr>
<tr>
<td></td>
<td>Solution architects</td>
<td>E-mobility</td>
<td>System integration</td>
<td>Supply chain turnaround</td>
</tr>
<tr>
<td>Salesforce spend</td>
<td>=</td>
<td>+ +</td>
<td>+ +</td>
<td>=</td>
</tr>
<tr>
<td>R&amp;D investment</td>
<td>+</td>
<td>+ +</td>
<td>+ +</td>
<td>=</td>
</tr>
<tr>
<td>Capital intensity</td>
<td>=</td>
<td>=</td>
<td>=</td>
<td>=</td>
</tr>
<tr>
<td>Cash flow</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**

**ABB realignment from 5 to 4 divisions**

**Bringing together all electrification components**

**+GEIS**
Strengthens #2 global position, expands U.S.

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenues ($bn)</th>
<th>Total margin (bps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015¹</td>
<td>6.5</td>
<td>~17</td>
</tr>
<tr>
<td>2016¹</td>
<td>9.3</td>
<td>(~150) bps</td>
</tr>
<tr>
<td>2017</td>
<td>10.1</td>
<td>(&gt;250) bps</td>
</tr>
<tr>
<td>2018²</td>
<td>13.0</td>
<td></td>
</tr>
<tr>
<td>Today³</td>
<td>12.8</td>
<td></td>
</tr>
</tbody>
</table>

(All values in $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

~18%

Businesses in change mode (~40% revenues)

- Solar inverters
- Installation Products
- GE Industrial Solutions

<5%

12.9% operational EBITA\(^1\)

\(^1\) Last twelve months to end Q3 2019
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

<table>
<thead>
<tr>
<th>Data and digitalization&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Urbanization&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Shift to electricity&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Increase in data processed outside of originating core" /> 7.5x</td>
<td><img src="image" alt="+2 billion people living in cities" /></td>
<td><img src="image" alt="Share of electricity in the energy consumption mix" /> 35%</td>
</tr>
</tbody>
</table>

**Data and digitalization**
- Increase in data processed outside of originating core: 7.5x

**Urbanization**
- +2 billion people living in cities by 2040
- ~6 bn people in 2040
- ~4 bn people in 2018

**Shift to electricity**
- Share of electricity in the energy consumption mix
- >30% in 2040
- ~23% in 2018

---

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

- Today: 160
- 2025: 200

Business exposure % of revenues

- Utilities: 30% (2025)
- Industry: 40% (2025)
- Buildings & Infrastructure: 30% (2025)
- Others: 10% (2025)

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%

CAGR 2017-2025. Source: ABB analysis
Distinct channels and solutions

Electrification

Direct
OEM / PB
ABB internal
EPC

Distributors

OEM / PB / EPC
E-commerce

>50%

Solutions

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

+30 segments

Channel management
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

<table>
<thead>
<tr>
<th></th>
<th>Americas</th>
<th>Europe</th>
<th>Asia, Middle East, Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other</strong></td>
<td>&gt;50%</td>
<td>&gt;55%</td>
<td>&gt;75%</td>
</tr>
<tr>
<td><strong>Multinationals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ABB</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Slide 18
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 Score² for innovation

---

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

<table>
<thead>
<tr>
<th>E-commerce</th>
<th>ABB Ability™ Marketplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data centers</td>
<td>Oil &amp; Gas</td>
</tr>
<tr>
<td>PARTNER SOLUTIONS</td>
<td></td>
</tr>
</tbody>
</table>

ABB ABILITY™ PLATFORM

SMART CONNECTED PRODUCTS
- Hardware
- Embedded software

3 mn connected\(^1\)
10 mn connectable\(^1\)

Digital services
- ENERGY Management
- ASSET Management
- BUILDING Management

Ease of doing business (including E-commerce)

Scalable, segment-focused solutions

Subscription-based SaaS

Global cloud platform

Products with embedded intelligence

\(^1\)Installed 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

Automation & Control
- Lighting & shading control
- HVAC control

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

Building segment example

Optimize energy bill
Avoid energy waste
Reduce total cost of ownership
Maximize uptime

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Driving continuous improvement
Operational excellence framework to benchmark and drive success

Operational KPI examples

<table>
<thead>
<tr>
<th>Claims resolution¹</th>
<th>Time to quote</th>
<th>On-time deliveries²</th>
<th>Simplification</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 hours</td>
<td>1 day</td>
<td>10 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>products</td>
<td>systems</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lead time²</th>
<th>Price increase²</th>
<th>GEIS synergies³</th>
<th>Incidents (TRIFR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 days → 3 days</td>
<td>$5 mn → $80 mn</td>
<td>$200 mn</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Outstanding customer experience

- Speed
- Simplicity
- Quality

- Pricing
- M&A integration
- Safety
- People

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

### Strategic rationale

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market access</td>
<td>- North America</td>
</tr>
<tr>
<td></td>
<td>- Global installed base</td>
</tr>
<tr>
<td>Performance improvement</td>
<td>- ABB technology leadership</td>
</tr>
<tr>
<td></td>
<td>- ~$200 mn cost synergies by 2022</td>
</tr>
<tr>
<td>Closing portfolio gaps</td>
<td>- Complementary NEMA, LV products</td>
</tr>
<tr>
<td>Strategic supply partnership</td>
<td></td>
</tr>
</tbody>
</table>

### Integration status

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>- 13k employees transitioned into ABB</td>
</tr>
<tr>
<td>Footprint and product rationalization</td>
<td>- 13 facilities announced for closure</td>
</tr>
<tr>
<td></td>
<td>- Product substitutions ahead of plan</td>
</tr>
<tr>
<td>Investing for growth</td>
<td>- Expanding 4 facilities in North America</td>
</tr>
<tr>
<td></td>
<td>- On track with ~$480 mn(^1) investment</td>
</tr>
</tbody>
</table>

### ‘Best of Both’ = success

<table>
<thead>
<tr>
<th>Cross-selling</th>
<th>&gt;$70 mn cross-sales YTD 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share growth(^2)</td>
<td>+0.4% +1.0% +0.6% -0.2%</td>
</tr>
<tr>
<td>Q3 2018 - Q4 2018 - Q1 2019 - Q2 2019</td>
<td>~2x market growth → total share gain ~0.5%</td>
</tr>
</tbody>
</table>

\(^1\)pre-tax H2 2018 to 2022 estimate, excluding approximately $130 mn lower cash taxes;
\(^2\)NEMA results

1/3 complete
## Installation Products turnaround

In progress

<table>
<thead>
<tr>
<th>Restoring the basics 2019</th>
<th>2020-21 actions</th>
<th>Future direction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Addressing issues</strong></td>
<td></td>
<td>Shift product mix</td>
</tr>
<tr>
<td>– Price / commodities mismatch</td>
<td>Optimize sales and channel structures to most profitable products</td>
<td>– Invest, expand specialty ‘Power Brands’ globally</td>
</tr>
<tr>
<td>– Unfavorable mix</td>
<td>Strengthen pricing</td>
<td>– Scale up differentiated products</td>
</tr>
<tr>
<td>– Cost to serve</td>
<td>Reduce cost to serve</td>
<td></td>
</tr>
<tr>
<td><strong>Actions taken</strong></td>
<td>Optimize manufacturing footprint</td>
<td>Selective market approach</td>
</tr>
<tr>
<td>– New leadership, simpler structure: +$21 mn cost saving</td>
<td>Talent upgrade</td>
<td>– Broad portfolio in North America</td>
</tr>
<tr>
<td>– Net pricing +$13 mn 2019 benefit</td>
<td></td>
<td>– Tailored offer globally</td>
</tr>
<tr>
<td>– Portfolio review</td>
<td></td>
<td>– Transition out of non-core countries</td>
</tr>
</tbody>
</table>

---

Re-establishing profitable growth in attractive segments

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ABB Electrification

Understanding ABB Electrification

Driving growth

Differentiating in our markets

Creating value

Q&A
ABB Operating System (ABB-OS)

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

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

**Accountability**
- Country structure integrated into business
- Tailored employee incentives
- Direct owned costs vs. allocated costs
Driving above-market growth

Mid-term revenue development

<table>
<thead>
<tr>
<th>FY 2018</th>
<th>Market growth</th>
<th>Above-market growth</th>
<th>Mid-term</th>
</tr>
</thead>
<tbody>
<tr>
<td>$13 bn</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

~3% p.a.

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

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

Momentum since GEIS acquisition

- Q3 2018: 13.5%
- Q4 2018: 11.7%
- Q1 2019: 12.4%
- Q2 2019: 13.5%
- Q3 2019: 14.2%

Mid-term outlook

- Rolling 4Q: 12.9%
- Cost infl.
- Op. efficiency (ABB-OS)
- Volume/Mix/Price
- GEIS
- Solar & other portfolio improvements

Mid-term outlook targets:
- 14.2%
- 19%
- 15%
Optimizing gross margin
Cost management and pricing strategy

Balanced material distribution\(^1\)

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

Supply country/region

Procurement & op. productivity savings

<table>
<thead>
<tr>
<th>Year</th>
<th>Procurement ($ mn)</th>
<th>Operations ($ mn)</th>
<th>Net price variance on products</th>
<th>Commodity impact on products</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>111</td>
<td>115</td>
<td>-38</td>
<td>-17</td>
</tr>
<tr>
<td>2018</td>
<td>114</td>
<td>114</td>
<td>38</td>
<td>-67</td>
</tr>
<tr>
<td>2019 RR(^3)</td>
<td>103</td>
<td>98</td>
<td>106</td>
<td>-15</td>
</tr>
</tbody>
</table>

Product pricing actions\(^2\)

<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>-17</td>
<td>-38</td>
</tr>
<tr>
<td>2018</td>
<td>38</td>
<td>-67</td>
</tr>
<tr>
<td>2019 RR(^3)</td>
<td>106</td>
<td></td>
</tr>
</tbody>
</table>

Note: calculations excluding GEIS unless otherwise stated
\(^1\)Geographic 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;
\(^2\)Excludes Distribution Solutions and Solar inverter business lines;
\(^3\)2019 run-rate as at end Q3 2019
Managing growth investment

R&D investment ($ mn)$

- 2017: 319
- 2018: 316
- 2019 RR: 307

~3% of revenues

Core technology

- ABB Ability™
- Digital investment 5 year CAGR +20%
- ~$400 mn p.a. including GEIS and corporate share

SG&A investment ($ mn)$

- 2017: 1,622
- 2018: 1,645
- 2019 RR: 1,640

Investments in sales training and pricing tools

- Salesforce.com across business
- GEIS integration to drive reinvestment from G&A to Sales in 2020

Note: calculations excluding GEIS unless otherwise stated
1Non-order related R&D investment, including investments in GEIS-related product conversion; 22019 run-rate as at end Q3 2019; 3Sales 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

- **Transform**
- **Growth leader**
- **Value generator**

Illustrative

- **Completed divestment**
- **Announced**
- **Under review**

**Chargedot**

**Solar inverters**
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