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 Palín: 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
- 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
Differentiating in growth markets

Mike Mustapha, Head of Global Markets; Maryrose Sylvester, U.S. Country Managing Director, U.S. Head of Electrification; James-Yongzhan Zhao, Lead Business Manager, China
Fragmented regional markets
Well positioned geographically to maximize growth in globally mixed markets

ABB’s major strategic markets

Must win
- U.S.
- China

Strong position
- Germany
- Italy

Growth engines
- APAC (excl. China)
- South America

Key
- 0% to 2% GDP growth
- 2% to 4% GDP growth
- >4% GDP growth

Local strategy for all markets
Unmatched market coverage
Global sales organization: local focus, global coordination

From...
Business line specific approach

To...
Simplified ‘market-in’ model

Continuing to invest in our 14,000 strong sales team
Unique capability to address complex market requirements

Global scale, local solutions: product compliance

Global reach enables us to ensure compliance with complex global and local standards

Key

- ANSI (Americas) markets
- IEC markets

>100 local standards
Unique capability to address complex market requirements

Global scale, local solutions: extensive partner network

>50% revenues through distribution partners

Local partners provide us market access and insights not otherwise possible
Case study – U.S.: broader channel access to market
Acquisition of GEIS key to ABB’s distributor success

U.S. market, sales by channel

- Distributors 75%
- OEM, DEM, Contractor 15%
- End-users 10%

U.S. market, sales by distribution category

- Distribution & circuit protection: 20%
- Electrical consumables: 12%
- Industrial controls¹: 8%
- Lighting: 24%
- Other: 23%
- Wire & cable: 13%

ABB + GEIS = doubled position in distributors market to 40%

¹Industrial controls includes contactors, starters, pushbuttons, limits switches, sensors, etc.
Recent U.S. success stories

Complete electrical one-line portfolio allows ABB increased access to customers and distributors

City of Houston – Water Works

Success criteria
- Full electrical one-line offering
- GEIS distribution channel

Products: MV assemblies, motor control
Value: $26 mn

Rexel

Success criteria
- Full electrical one-line offering
- GEIS longstanding relationship

Products: Busway, LV assemblies, components
Value: $14 mn

Tyson Foods

Success criteria
- Installation Products relationship
- Added LV offering to master specification

Products: Switchboards, panelboards, motor control centers
Value: $10 mn
Case study – China: heritage of leadership in the Chinese market

First office 1974
First factory 1992

#1 medium voltage
#2 low voltage
2019

Attractive profitability
Complete local value chain supports evolving Chinese market

Wide-spread coverage
- All 285 cities
- Experts in focus segments

Best-in-class fulfillment
- New Xiamen Hub, largest worldwide
- 34 services centers

Advanced R&D capability
- 4 technical centers
- 850 engineers

Market-driven leadership
- 90% local leadership
- Strong market awareness
Recent China success stories
A trusted technology partner for flagship projects

New Beijing Airport
Size
1.4 mn m²

Beijing-Shanghai highspeed railway
Speed
350 km/h

Shanghai Tower
Altitude
632 meters

Fujian Refinery plant
Capacity
10 mn tons
Well positioned in China’s evolving digital market place

+1 bn devices connected in utilities by 2025\(^1\)
+500 new digital hospitals each year\(^2\)
>20 mn EVs on the road by 2025\(^3\)
More hyperscale and edge data centers
5G is coming

Digital China for China
- E-commerce
- Tailored digital solutions
- Digital eco-system
- People transformation

+50% digital business growth
- References in major segments
- Dedicated solutions centers
- Large scale digital partners

\(^1\)Based on the UPloT plan released by the SGCC, 2019; \(^2\)National Health Commission, 2019; \(^3\)Bloomberg New Energy Finance
Differentiating through core technologies and digital

Amina Hamidi, Chief Technology Officer; Alessandro Palin, Managing Director Distribution Solutions
Differentiating through domain knowledge, technology and innovation

Net Promoter Score feedback

72% industry and application knowledge
70% technology and innovation

Examples of external recognition

2019 Certificate of Appreciation
2018 special contributions to IEEE Std. C37.100.2
2015

2019 open innovability award – innovation by vendors –

Net Promoter Score is a management tool to measure customer satisfaction
Our technology leadership, grounded on people and competences

Extensive innovation ecosystem

- 48 locations
- 2,700 technologists
- Expanded ecosystem of 25 universities, 27 start-ups & 9 strategic partners (Microsoft, IBM, HPE, Ericsson etc.)

Market-defining products and solutions

- >70 new products / solutions released p.a.
- >4,200 patent families, 40% related to digital
- >10 million connectable\(^1\) devices
- 30 ABB Ability™ solutions

~$400 mn R&D investment\(^2\), +20% CAGR in digital spend\(^3\)
Smart LV breakers, well positioned for the future
Best-in-class technology for strong base business

$8 bn available market, ABB #2

Best-in-class size and digital offering

ABB smart LV breaker Emax 2

Up to 30% space saving
The best ratings in the smallest footprint

Built in microgrid, energy management and predictive maintenance solutions

4x connectivity
Largest offering of embedded communication protocols: interact with any digital system

2x software advanced functionalities

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SECTION THREE

Focus on high-growth segments

Oliver Iltisberger, Managing Director Smart Buildings
## Electrification business focuses on most relevant end-user segments

Focusing on three high-growth segments

<table>
<thead>
<tr>
<th>Segment</th>
<th>Market size</th>
<th>Mid-term growth</th>
<th>Growth drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data centers</td>
<td>~$19 bn¹</td>
<td>&gt;6%</td>
<td>Data &amp; digitalization, Sustainability, efficiency</td>
</tr>
<tr>
<td>E-mobility</td>
<td>~$5 bn²</td>
<td>&gt;8%</td>
<td>Shift to electricity, Decarbonization</td>
</tr>
<tr>
<td>Commercial buildings</td>
<td>~$21 bn³</td>
<td>&gt;4%</td>
<td>Urbanization, Decarbonization</td>
</tr>
</tbody>
</table>

¹Gartner, Cisco, Credit Suisse, Frost & Sullivan; ²BNEF, Merrill Lynch, McKinsey; ³IHS, McKinsey, BCG
4CAGR 2017-2025. Source: ABB analysis
Data center growth
Successful in bundled solutions for optimized operations, uptime, efficiency, total cost

Market insight

1. Hyperscale and co-location segment growth
2. Standardization and industrialization
3. Focus on sustainability and energy efficiency

Example customers

Market growth >6% CAGR

ABB captures potential with digitally connected solutions

CAGR² ~18%

Example customers:

1. Sources: Cisco, IEA, Gartner, Credit Suisse, 451 research, ABB analysis. Market growth 2017-25 CAGR; ²ABB Electrification, excluding GEIS, 2019 run-rate as at end Q3; ³ABB Group (excl Power Grids), 2019 run-rate as at end Q3
Data center solution success: largest open data center in Nordics
ABB with unique solution, delivering the wide / comprehensive powertrain from grid to chip

Delivered solution with superior service capabilities

<table>
<thead>
<tr>
<th>Digitalization</th>
<th>Grid connection &amp; power distribution</th>
<th>Solutions &amp; service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Value proposition and customer benefits

- High quality technology, competitive engineering expertise
- Breadth of portfolio
- Project execution and delivery time
- ABB’s 24/7 service capabilities to ensure mission critical uptime
- Footprint reduced by 10%
- Installation time reduced by 25%
- CO₂ emissions reduced\(^1\)

\(^1\)Compared to reference designs
### ABB is a global pioneer in connected E-mobility infrastructure

Best-in-class solutions with market leadership

<table>
<thead>
<tr>
<th>Market insight</th>
<th>ABB offers integrated and connected E-mobility solutions</th>
<th>Market traction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast charging key for EV adoption</td>
<td>API integration, web tools, monitoring</td>
<td>&gt;11,000 installed fast chargers in +76 countries</td>
</tr>
<tr>
<td>Grid-to-vehicle integration</td>
<td>Grid-side connection &amp; market</td>
<td></td>
</tr>
<tr>
<td>Connected solutions required</td>
<td>Medium- low voltage power distribution and control</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fleet management, Energy management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>End-user solutions &amp; services</td>
<td></td>
</tr>
</tbody>
</table>

**Market growth >8% CAGR**

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*Sources: Merrill Lynch, BNEF, Berenberg, Frost & Sullivan, McKinsey. Market growth 2017-25 CAGR*
E-mobility solution success: complete solution for large bus depot
ABB with vertically integrated and connected solution from grid to charging point

Delivered complete depot electrification and charging solution

<table>
<thead>
<tr>
<th>Digitalization</th>
<th>Medium and low voltage power</th>
<th>High-power chargers</th>
</tr>
</thead>
</table>

Value proposition and customer benefits

- Complete solution from grid-connection to charging point
- Increased uptime thanks to digital service support
- 213 million passengers transported each year
- 110 bus lines electrified, covering more than 920 km
- 100% fleet electrification
- Emissions-free operations
Connecting building products into one IoT ecosystem
Mid-segment commercial building solutions a growth opportunity

Market insight¹

<table>
<thead>
<tr>
<th>Building size</th>
<th>BACS penetration today</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;10,000 m²</td>
<td>60 – 70%</td>
</tr>
<tr>
<td>10,000 m²</td>
<td>10 - 15%</td>
</tr>
<tr>
<td>2,000 m²</td>
<td>0 – 5%</td>
</tr>
<tr>
<td>&lt;2,000 m²</td>
<td></td>
</tr>
</tbody>
</table>

Solution expansion to deliver customer value

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

ABB Ability™

Cloud enabled digital services
- Energy management
- Building management

Automation & Control
- Lighting & shading control
- Access control
- HVAC control

¹Source: BCG; BACS = Building Automation and Control System
# Commercial buildings solution success: multi-tenant office in France

ABB with comprehensive building automation and electrification for mid-segment

## Delivered full smart building solution

<table>
<thead>
<tr>
<th>Building management</th>
<th>Power supply</th>
<th>Automation</th>
</tr>
</thead>
</table>

## Value proposition and customer benefits

- Complete offering with building electrification
- Connecting all building functions into one system, managed by ABB Ability™ platform
- Open API enables future expansions, external services easily integrated
- Flexibility for multi-tenant solution
- Up to 30% energy savings

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November 2019

1DALI lighting control including sun-tracking solution compared to reference base case

Photo source: Didier Boy de la Tour / AFAA Architecture
SECTION FOUR

Operational excellence – GEIS integration

Giampiero Frisio, Managing Director Smart Power; Sarah Acker, Americas Smart Power & Smart Buildings Hub manager
## Leadership in electrification

ABB acquired GE Industrial Solutions (GEIS) for $2.6 bn

### Deal rationale

<table>
<thead>
<tr>
<th>Market access</th>
<th>Expanded access to North America</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significant 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>GE to tap ABB’s leading portfolio through long-term supply partnership</td>
</tr>
</tbody>
</table>

### Reshape to prepare for growth
The ‘Best of Both’: ABB + GEIS

Delivering a best-in-class source to socket portfolio of industry leading technologies

Our customer proposition

People
From field application engineers to sales we are adding expertise
Front end commercial process for customers to search, configure, order and track their orders

Process
Investment in new production capacity and manufacturing resources

Products
Integration of ABB’s world-class technologies with GEIS’ proven low voltage portfolio for a ‘Best of Both’ offering
ABB + GEIS: significant value creation potential

**Expected annual cost synergies ($ mn)**

<table>
<thead>
<tr>
<th></th>
<th>H2 18</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>$200</td>
<td>~120</td>
<td></td>
<td></td>
<td></td>
<td>~200</td>
</tr>
</tbody>
</table>

**Sources of synergies**

- ~$200 mn run-rate by 2022
- Product and technology portfolio harmonization
- Footprint and process optimization
- Supply chain savings
- SG&A cost reduction

Approximately 80%

**Expected annual costs ($ mn)**

<table>
<thead>
<tr>
<th></th>
<th>H2 18</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>~$480</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Post-closing integration costs, H2 2018 to 2022**

On track with ~$480 mn² investment
- Of which ~80% non-operational
- ~$130 mn lower cash taxes versus pre-closing estimate
GEIS: why we have done the acquisition

New complete portfolio

Medium voltage
(1 – 69 kV)

From utility
Power transformer
Load interrupter switchgear
Medium voltage switchgear
Capacitor bank
Enclosed drive
Medium voltage motor control
Transformer
Busway
Low voltage switchgear
Switchboard
Power panelboard
Motors

Filling white spot areas for ABB portfolio in North America

Low voltage
(120 V – 1 kV)

Motors
Enclosed drive
Low voltage motor control
Transformer
Busway
Lighting panelboard
Load center
Installation products

Leverage ABB’s scale and technology investment
What have we done since the GEIS acquisition?

Organization

~13,000 employees successfully transitioned to the receiving business lines

Network rationalization

13 plant closures announced, 2 R&D centers closed, 3 assets divested
Operations processes reviewed

Preparing for growth

+$100 mn investment to expand 4 North American facilities
+100 new products ready for introduction in 2020 in the U.S.

Synergy actions on track and in line with expectations
Process optimization: ~40% of the total cost synergies

Improving North America commercial process with legacy GEIS ‘empower’ platform

**Legacy – slow and manual process**

- Up to 4 different ordering systems
- Manual drawings & quotes
- Manual updates

**Future – driving customer productivity**

- One ordering system for all offerings
- Automatic quote configuration
- Real time status

One interface for our partners to configure, order and track
Summary
Reshape to prepare for growth

Integration one-third complete
Execution in line with expectations

‘Best of Both’ to drive product synergies and conversion

Footprint and process excellence driving cost synergies and customer value