



DECEMBER 7, 2021

Electrification Capital Markets Day 2021

Tarak Mehta – President, Electrification Business Area
Frank Muehlton – Division President, ABB E-mobility

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 or anticipated transactions.

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
- general market conditions, and
- such other factors as may be discussed from time to time in ABB Ltd’s filings with the US 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.** We caution that the foregoing list of factors is not exclusive and you should not place undue reliance upon any forward-looking statements, including projections., which speak only as of the date made. We do not undertake or accept any obligation to release publicly any updates or revisions

to any forward-looking statements to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based.

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 and annual reports” on our website at www.abb.com/investorrelations. Reconciliations can be found on our website under “Capital Markets Day 2021”.

This presentation shall not constitute or form part of, or be construed as, an offer, invitation or recommendation to purchase, sell or subscribe for any securities in any jurisdiction or a solicitation of any offer to purchase, sell or subscribe for any securities in any jurisdiction and neither the issue of the information nor anything contained herein shall form the basis of or be relied upon in connection with, or act as any inducement to enter into, any investment activity. This presentation should not be construed as a prospectus or offering document and investors should not subscribe for or purchase any shares in ABB Ltd or any affiliate thereof on the basis of or in reliance on the information contained in this presentation. The spin-off and IPO referred to in the presentation will be undertaken, if at all, in transactions not subject to the registration requirements of the Securities Act of 1933 or the Securities Exchange Act of 1934.

Sustainable transport = more electrification

1

ABB Electrification | Tarak Mehta

- Emissions reductions → 2x faster growth in electricity demand¹
- Market leading technology and innovation
- Growth in key segments: data centers, buildings, e-mobility

2

ABB E-mobility | Frank Muehlon

- Leader in EV charging infrastructure
- Investing in digital services
- Preparing for a public listing in 2022





ABB Electrification

Powering sustainable
transport

ABB Way

Electrification

**Safe, smart, and sustainable electrification
for our customers and partners**

Powered by our people



Where we are first



**For our
Customers**



In Innovation



In Digital

ABB is #1 in sustainable transport electrification

Business opportunities and market sizes in 2021

Market position



Passenger eCar charging solutions

~\$3 bn

#1



eBus and eTruck charging solutions

~\$1 bn

#1



Rail infrastructure electrification

~\$3.5 bn

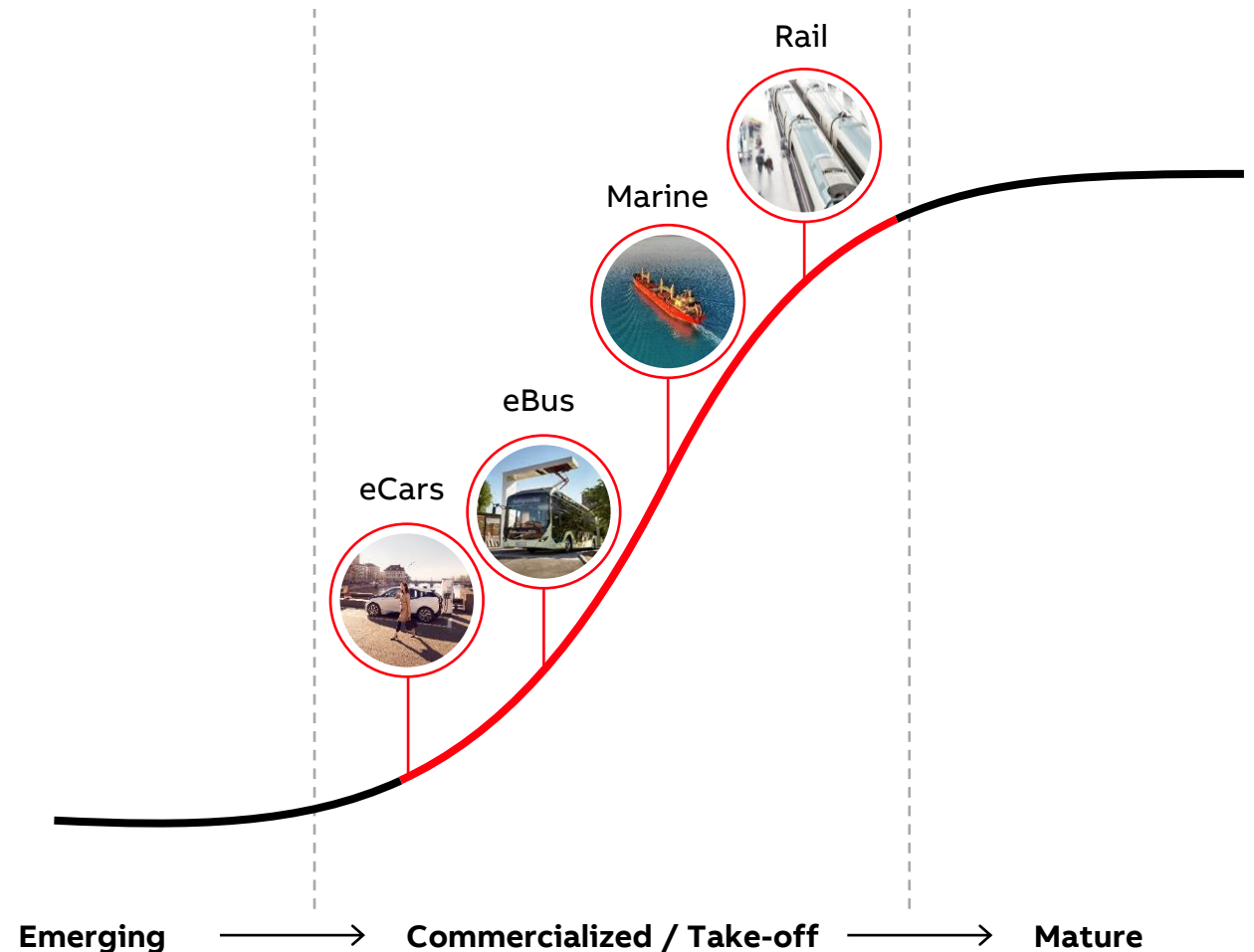
#1



On-shore marine electrification

~\$0.5 bn

#2



Business opportunities have various levels of market maturity

Sustainable transport as part of our business

Orders¹ of ~\$900 mn, ~6% of Electrification order intake

Sustainable transport market growth drivers

01

Regulation

- Decarbonization
- Incentivized EV adoption

02

Technology

- Battery prices & performance
- EV charging
- Hydrogen & fuel cells
- V2G, storage & renewables converge in buildings

03

Consumer switch to electric cars

- New mobility patterns: shared and autonomous
- Growth of fleets & public transportation

04

Needed infrastructure upgrades

- Grid upgrades to support e-mobility
- Rail and airports require retrofits and upgrades

ABB EL orders in sustainable transport CAGR

22%

Sustainable transport market CAGR

11%

2017 – 2021E

For sustainable transport, we expect double digit growth rate to continue in the mid-term

We will continue to outgrow the market

Enabling smart transport through better electrification

Our references from all over the world



Rail & metro electrification

Case study:

LAX Airport light-rail, USA



Sustainable city transport

Case study:

Electric buses network, Qatar



Smarter distribution grids

Case study:

Virtual Power Plant for State Grid
Jibei Electric Power, China



CO₂-free passenger vehicles

Case study:

DREEV by EDF & Nuvve vehicle-to-grid, Europe



Rail and metro electrification

Automated People Mover at Los Angeles International Airport (LAX)



2.25 miles for 87 million passengers a year, resulting in **117,000 fewer vehicle miles travelled**



Using Envelope Energy Storage System with **energy redundancy and robustness** (7 MW and 2.1 MWh of traction & energy storage)



ABB backup power solution will allow trains to run for **40 minutes in the event of an outage**



Sustainable transport for cities...

Charging Qatar's largest electric bus infrastructure project



25% of public bus network electric by 2022
100% by 2030



ABB to design, supply, test, and commission a charging infrastructure for **1,000 buses = 50,000 passengers per day**

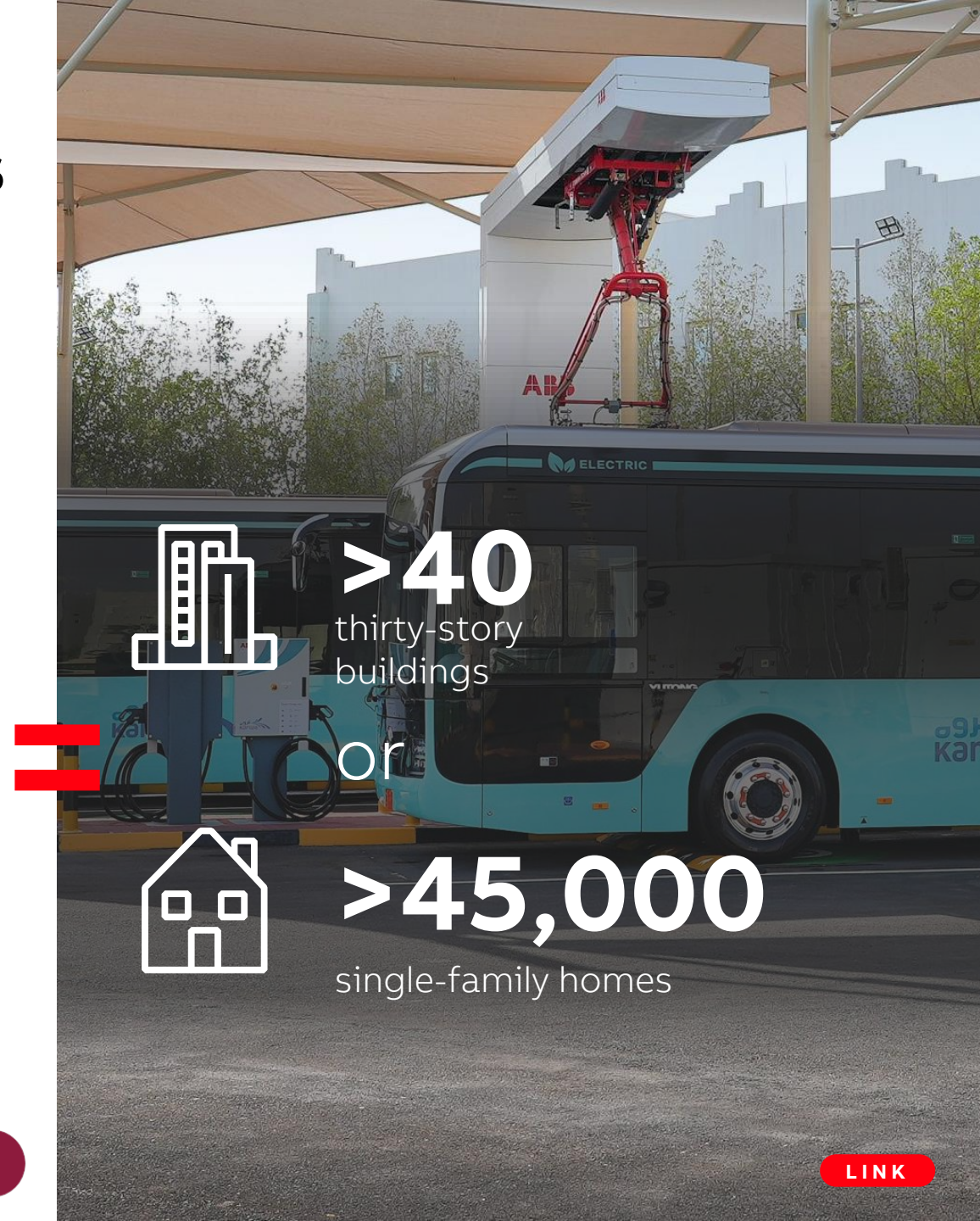


125 MW of charging capacity is a major **country transport decarbonization effort**



... creating need for grid upgrades

125 MW
of charging capacity
to be delivered for the
e-bus project in Qatar



Smarter distribution grids

ABB intelligent distribution, metering and coordination control helps State Grid Jibei Electric Power build a Virtual Power Plant (VPP)



226 MW to be added on top of existing **26.5 MW capacity of the VPP** will meet the needs of **12.4 million people** living in cities of Zhangjiakou, Qinhuangdao and Langfang



ABB devices for **monitoring, protection and control** ensure efficient power management. **Peak shaving and load transfer** to enable **real-time interaction** between **adjustable resources and power systems**

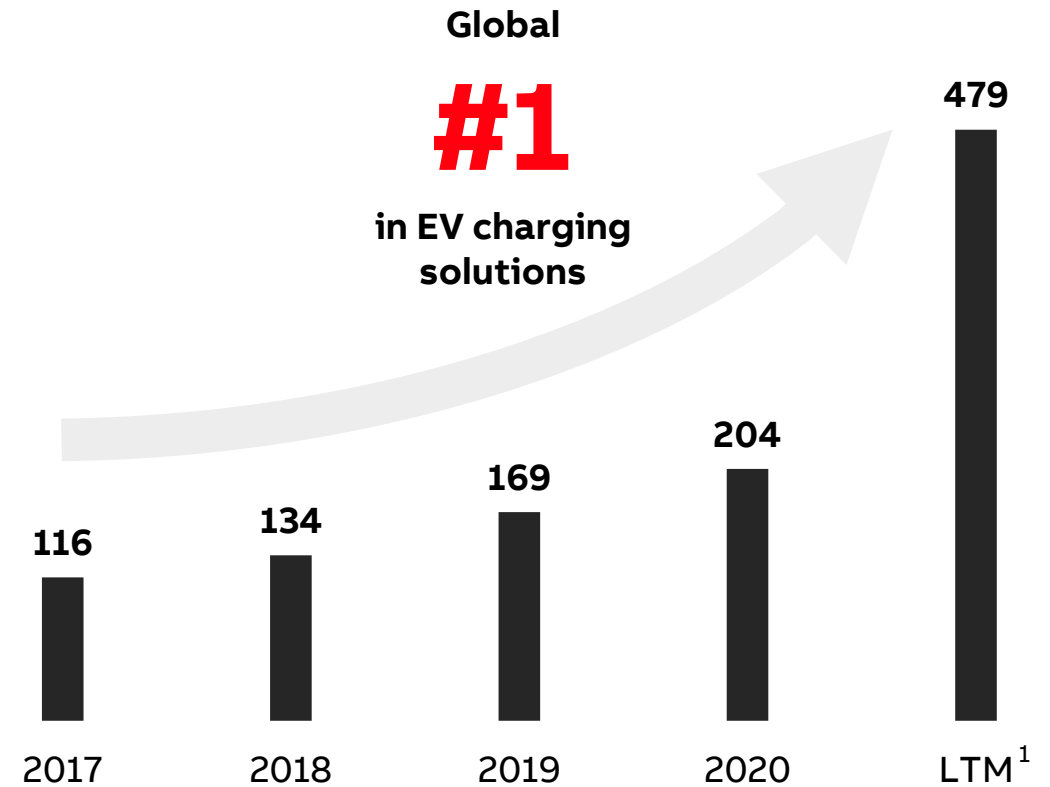


Continuous investments over years in e-mobility business start to pay off with strong growth momentum

Total investment from 2017 to September 2021, \$ mn

230

including \$114 mn in R&D and \$116 mn in CapEx, M&A, and Ventures

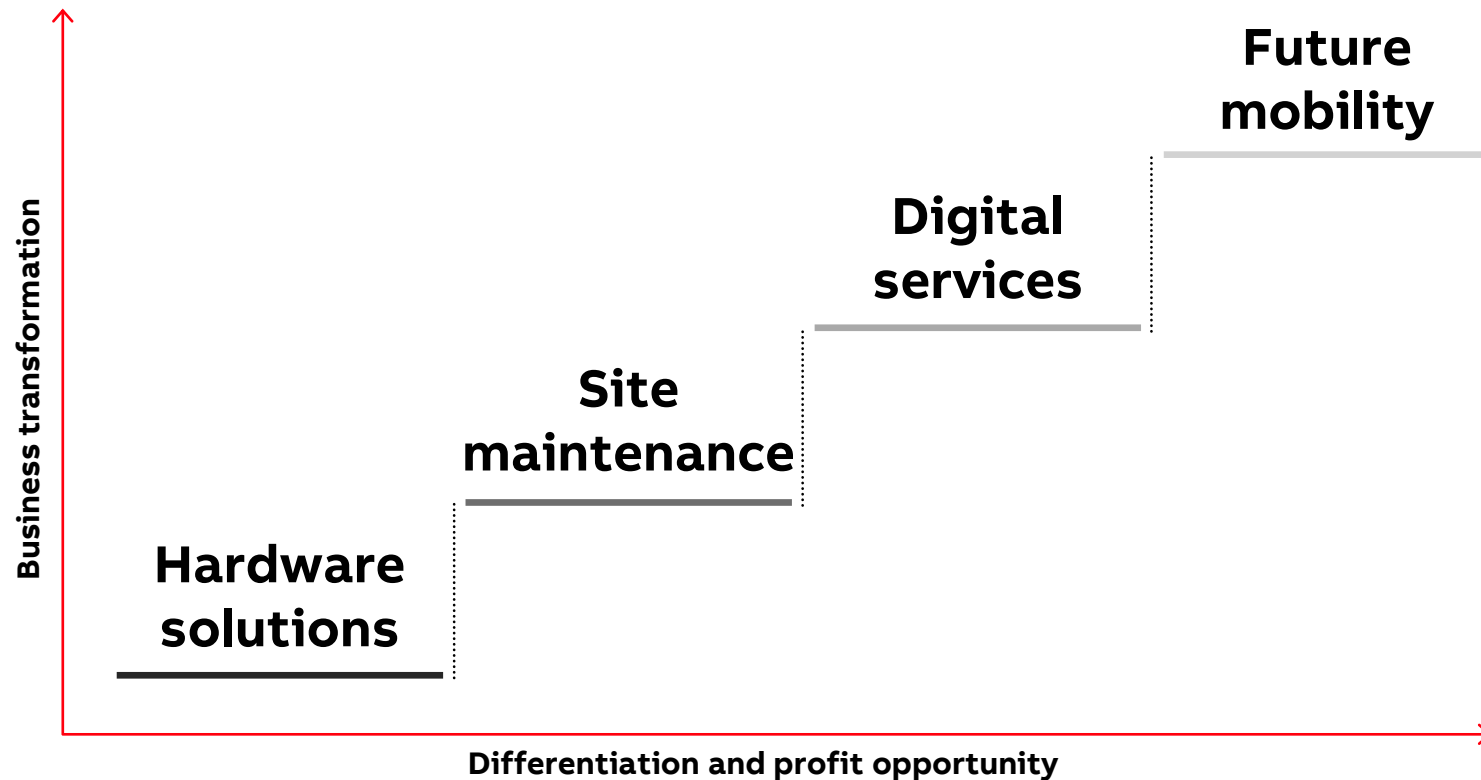


■ Orders (\$ mn)

1. Last twelve months ending 30 September 2021

ABB E-mobility transformation is ongoing

From hardware solutions to digital services and future mobility



Potential listing in 2022

1.

DIFFERENT BUSINESS METRICS

- High-growth business
- R&D intensive
- Direct and distribution-led



2.

BUSINESS MODEL TRANSFORMATION

- From CapEx to CapEx + OpEx
- Charging-as-a-Service business model
- V2G

3.

TALENT AND M&A

- Keep attracting best talent
- Acquire HW & SW companies
- Crystallize valuation

A red-tinted photograph of a city street scene. In the foreground, a woman in a light-colored dress walks past a white electric car parked at a charging station. To the left, a person is riding a bicycle. The background features historic European architecture, including a church with two prominent towers. A large, white, stylized graphic element is on the left side of the image.

ABB E-mobility

Powering the e-mobility
revolution

ABB E-mobility: The world leader in EV charging solutions

A pioneer of the green mobility revolution

c. \$230 mn

Total investment by ABB
from 2017 to Sep-21¹

\$263 mn

LTM revenue²

~57%

2017-LTM revenue
CAGR²

>500k

AC chargers sold

>25k

DC chargers sold

>300

Granted patents

>85

Present countries³

~1,000

Employees

~300

R&D engineers⁴

Note: Unless specified, figures are as of today;
financial information is in draft form and is subject
to completion and amendment

1. Total investment includes R&D, CapEx, M&A,
and other financial investments

2. Last twelve months ending 30 September 2021

3. Operational presence

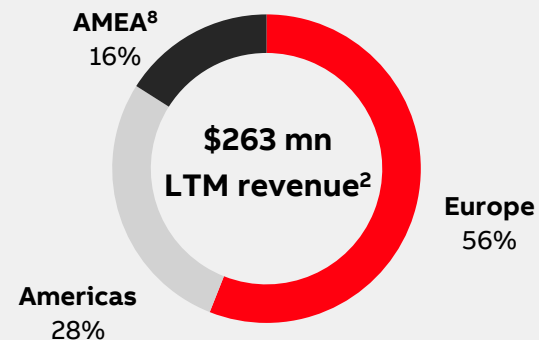
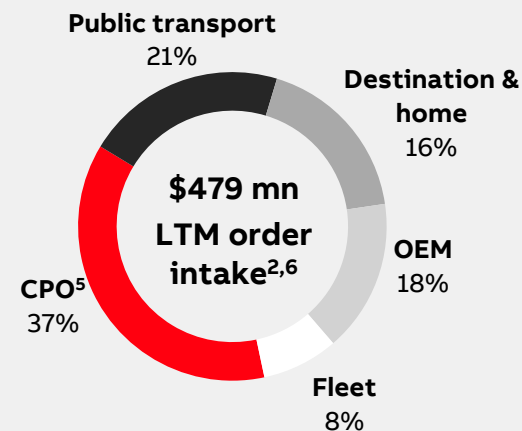
4. Includes contractors

5. Charge Point Operator

6. Split excludes unassigned segment and sales via
ABB given no visibility on end-customer

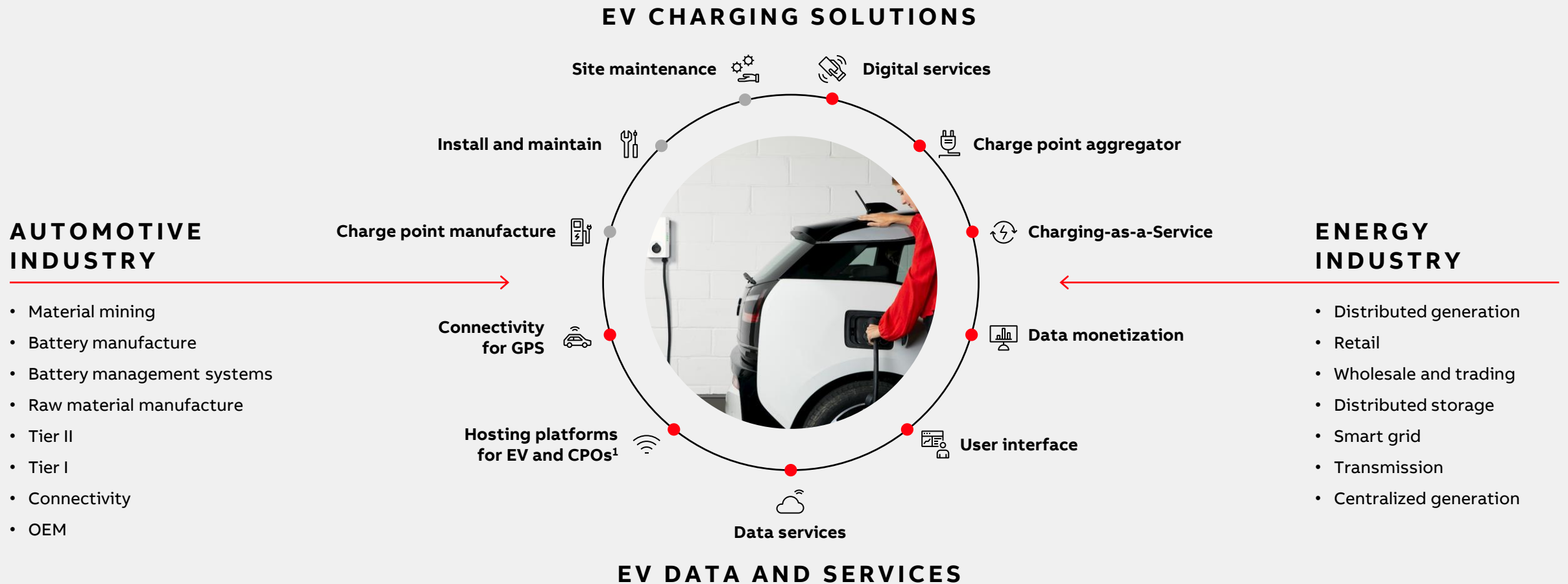
7. Based on revenue, footprint and product breadth

8. Asia, Middle East, Africa



Mission-critical element of EV consumer experience

Central role in a complex ecosystem



Vertically integrated offering across smart and connected EV charging solutions



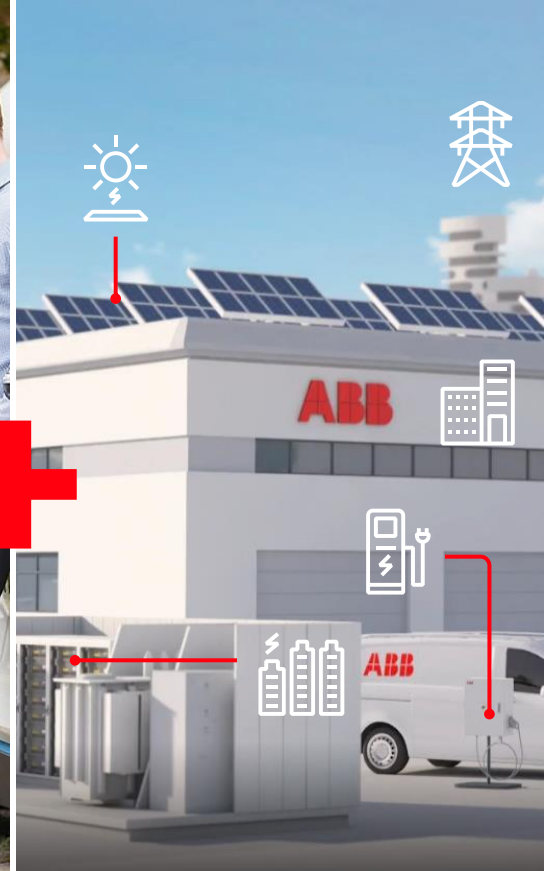
**AC & DC
charging
hardware**

1.



**B2C & B2B
digital
services**

2.



**Advanced
energy & fleet
management**

3.

Widest portfolio of public and commercial EV charging hardware

Addressing key customer needs globally across use-case, vehicle type and brand

Charging power and time designed for customer needs

Complete offering based on ABB-defined standards allowing for scalability and efficient serviceability

AC

3-22 kW
4-16 hours
Home & work



DC Destination

20-25 kW
1-3 hours
Parking



Bi-directional

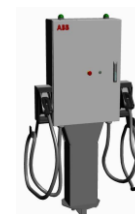
DC Fast

50-180 kW
15-60 min
Commercial

All-in-one systems



Centralized power solutions



DC High Power¹

150-600 kW
5-20 min
Highway

Fully integrated into a variety of B2B and B2C networked solutions

Comprehensive digital services and recurring software offering, connecting backend for >50 B2B customers



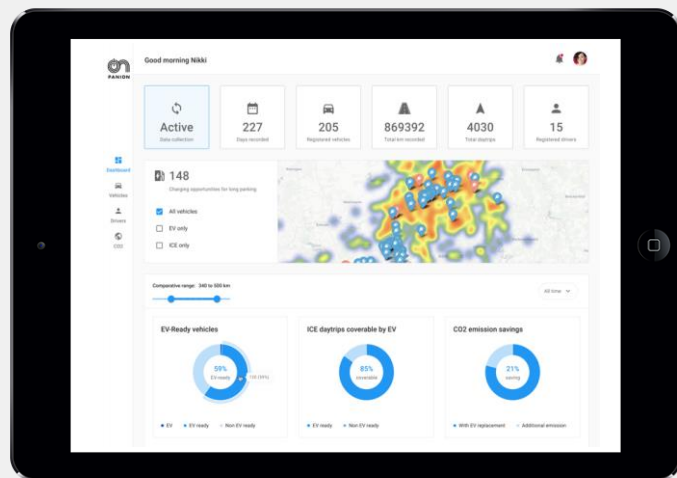
User interface



Case management



Access management



Emission-free passenger vehicles

ABB Vehicle-to-Grid (V2G) brings bi-directional charging with DREEV



ABB will supply its brand-new **11 kW bi-directional charging V2G technology**



V2G is expected to become the **dominant technology within 5 years** with 33% of global fleet expected to be electric



V2G charging **reduces total cost of ownership** and helps manage demand



Differentiated and open innovation platform and roadmap

Institutional focus on technology development and patented innovations

- 8** R&D sites
- ~300** R&D engineers¹
- 17%** R&D expense as % of LTM revenue²
- \$114 mn** R&D expense from 2017 to September 2021
- >300** Granted patents



EV fleet management platform with Amazon AWS



Acquisition of smart energy control platform Enervalis

- 1
- 2
- 3
- 4

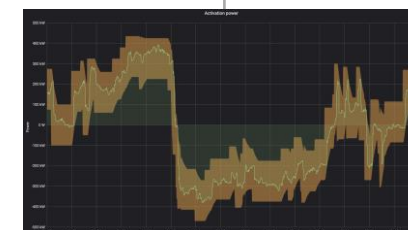


Smart home charging



One megawatt charging systems

Load aggregation & energy balancing



Selected planned innovations

Virtual utility
Smart grid
Bi-directional
Smart city

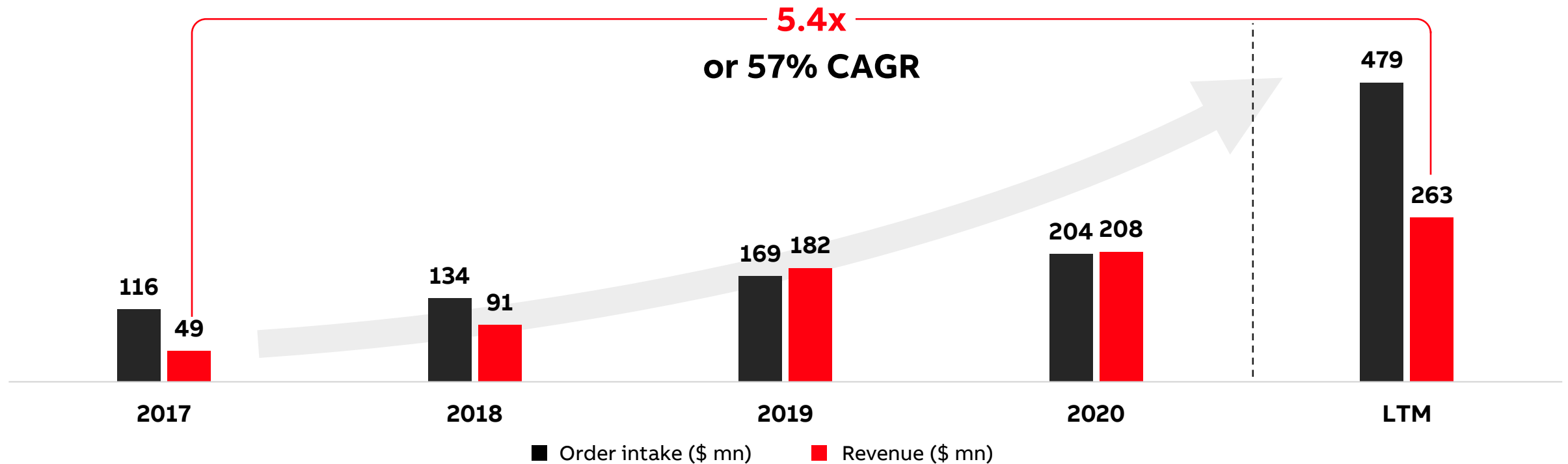
Note: Financial information is in draft form and is subject to completion and amendment

1. As of today; includes contractors; additional R&D center in Switzerland will be transferred from ABB research center by end of 2021

2. Last Twelve Months ending 30 September 2021

Proven track record of top-line growth with strong outlook

Revenue driven by consistent R&D investment, explosive market growth and proven ability to scale

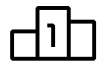


Note: Financial information is in draft form and is subject to completion and amendment

LTM = Last Twelve Months ending 30 September 2021

ABB E-mobility

Powering the e-mobility revolution



Global leader in a fast-growing market



Recognized technology innovator



Sustainability is in our DNA



Unique opportunity to realize our full potential



Market leader

ABB