Creating smarter future of homes, buildings and mobility
Megatrends shape the future of buildings

**Urbanization**
70% of the world’s population will live in cities by 2050
UN study

**Digitalization**
By 2020, 33bn+ internet-connected devices will be used worldwide
Strategy Analytics study

**Integration of flexible supply**
The solar market will grow to 150 GW in 2025
Frost&Sullivan

**Integration of flexible demand**
EVs will represent over 55% of the market by 2040
Bloomberg
Smarter Building
- Office
- Hotel
- Commercial

Smarter Home
- Single Family
- Multi Family

Smarter Mobility
- Bus charging
- Car charging

SECURITY & COMFORT

EFFICIENCY & SECURITY

AVAILABILITY & CHARGING TIME
Current possibilities
To increase security and comfort

ABB Ability™
Remote control, maintenance, commissioning

Smarter Home
Current possibilities
To increase security and comfort

- **EFFICIENCY**
  - Solar, EV Charging

- **FLEXIBILITY**
  - Control via smartphone or tablet inside or remote
  - Sonos, Alexa, Google, Apple & Philips Hue Integration
  - Smarter Home Developer Program

- **SECURITY**
  - CCTV, Sirens, Home security, Door communication, Access control

- **COMFORT**
  - Light, Blinds, Heating

ABB Ability™
Current possibilities
To increase security and comfort

ABB Ability™
Remote control, maintenance, commissioning

Home Automation
ABB-free@home®
ABB-secure@home
ABB-Welcome
Current possibilities
To increase efficiency and security

ABB Ability™
Remote control, maintenance, commissioning
Current possibilities
To increase efficiency and security

CONTROL
Control via smartphone or tablet inside or remote

EFFICIENCY
HVAC management, Load management

SECURITY
CCTV, Sirens, Building security, emergency lighting, Door communication, Access control

FLEXIBILITY
Sonos, Alexa, Google, Apple & Philips Hue Integration

ABB Ability™

COMFORT
Light, Blinds, Heating, Cooling

ABB
Current possibilities
To increase efficiency and security

ABB Ability™
Remote control, maintenance, commissioning

Building Automation
ABB i-bus® KNX
ABB-Welcome IP
Future possibilities – energy efficiency
By the right energy management and integration of renewables

ABB Ability™
For purchasing and control by owner or 3rd Party

DEPENDING ON
Weather (cooling and heating of rooms), number of people, regular use of cars / calender, recognition of activities

Independent energy production

Self consumption

Car, Light, Heating, HVAC, PC/Data center

Energy management

Energy production

Energy Storage Home

Energy Storage Car
Future possibilities – AI and face recognition
For supporting individualization and well being

ABB Ability™
For purchasing and control by owner or 3rd party

Personalization through face recognition
Building knows who you are and changes the setup

Based on experience AI changes the setup of the house
Future possibilities – load management
By the right energy management and integration of renewables

ABB Ability™
For purchasing and control by owner or 3rd Party

Energy management

Independent energy production

Self consumption
Car, Light, Heating, HVAC, PC/Data center

DEPENDING ON
Weather (cooling and heating of rooms), number of people, regular use of cars

ENERGY ON DEMAND

Energy production

Energy Storage Building

Energy Storage Car
Future possibilities – easy integration
To reduce construction and maintenance time

ABB Ability™
Configuration, ordering, commissioning and control

Professional configures and orders via ABB Ability

Installation of the devices

Commissioning via ABB Ability

LEARNING BUILDING
Buildings recognize the devices automatically

CCTV

Light

HVAC
Future possibilities – personalization
To increase the security level and have convenient usage

- Personalization through face recognition
- Building knows who you are
- Camera recognition

INDIVIDUAL NEEDS
Temperature, light
Time Management, routing,
Work space management
Meet right people
Future possibilities – personalization

To increase the security level and have convenient usage

- Camera recognition
- Individual needs
- Temperature, light time management, routing, workspace management, meet right people

- Personalization through face recognition
- Building knows who you are

ABB
Future possibilities – well-being
To create healthy working places

Heart rate
Measured with smartphone, wearables

People counting
through dome camera

Temperature, light,
ventilation/oxygen

Optimization of scenes
based on experiences

CONTROL

LEARNING BUILDING
Future possibilities – routing

To increase the safety level and have convenient usage

Guiding through the building, access control, calendar functions, sirens, escape routing, overview of people inside the building
Future possibilities – BIM data
To improve building applications during lifetime

LEARNING BUILDING
Artificial Intelligence

BIM Data
Building Information Modeling

AI-developing new buildings based in BIM
AI-developing new cities based in BIM
Conclusion

Megatrends

- Urbanization
- Digitalization
- Flexible demand
- Flexible supply

Expectations

- Control
- Comfort
- Efficiency
- Flexibility
- Security

ABB Ability™ solutions

- Smarter Home
- Smarter Building
- Smarter Mobility