



AUBURN HILLS, SEPTEMBER 6, 2017

From automated to autonomous

ABB Innovation & Technology Day

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Important Notices

Presentations given during the ABB Innovation & Technology Day 2017 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” 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:

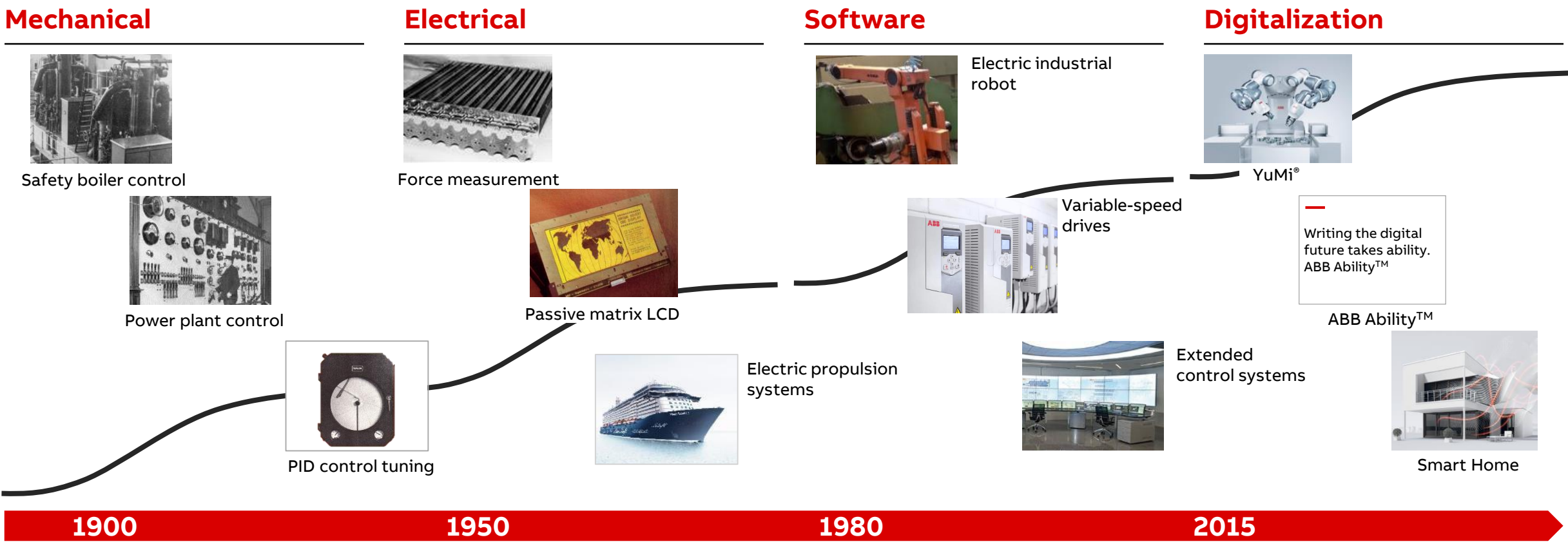
- business risks associated with the with the volatile global economic environment and political conditions
- costs associated with compliance activities
- market acceptance of new products and services
- changes in governmental regulations and currency exchange rates, and,
- such other factors as may 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.

The presentations and the related discussion may also contain or refer to non-GAAP measures of performance. Definitions of these measures and reconciliations between these measures and their US GAAP counterparts can be found in the “Financial information” documents under “Quarterly results and annual reports” on our website at <http://new.abb.com/investorrelations/>

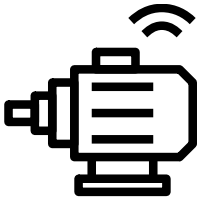
ABB's consistent contributions to industrial progress

Technology innovations pioneered by ABB

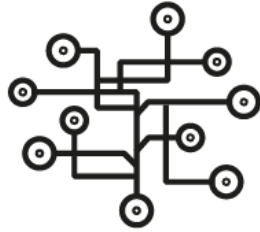


Digital technologies are driving innovation in industrial markets

Smart sensors



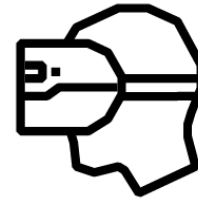
Big data



Cyber security



Virtual / augmented reality



Artificial Intelligence



Software-defined machines



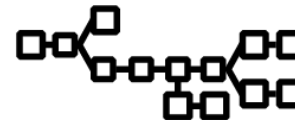
Connectivity



Cloud computing



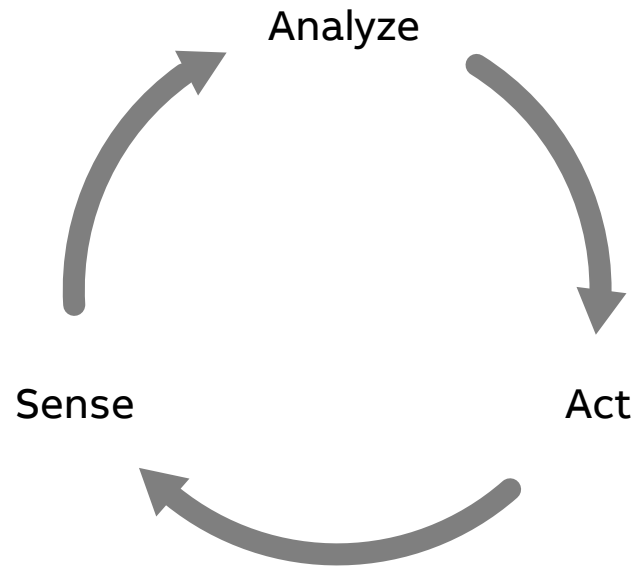
Blockchain



Artificial Intelligence is a long term game changer

Automated systems move towards autonomous

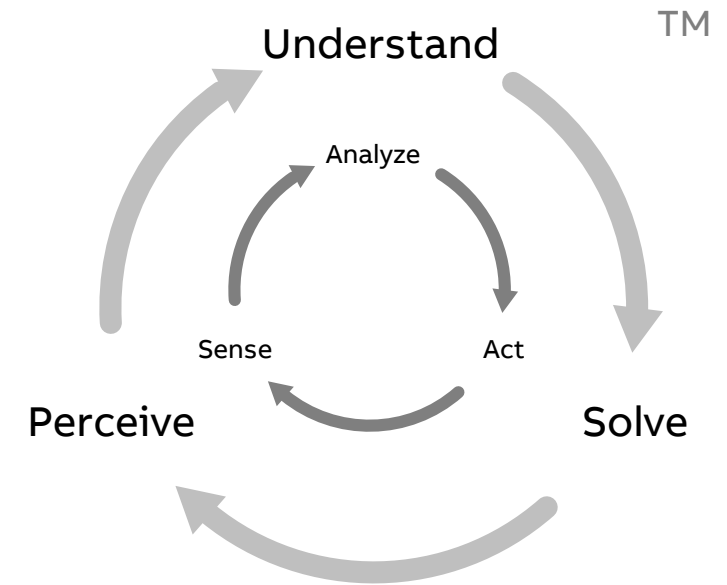
Automated



Steady state control

Normal operation
Start, transients, stop

Autonomous



Complete plant lifecycle

Artificial Intelligence is key technology for the next level of industrial progress

AI: “The ability to learn or understand or to deal with new or trying situations”¹

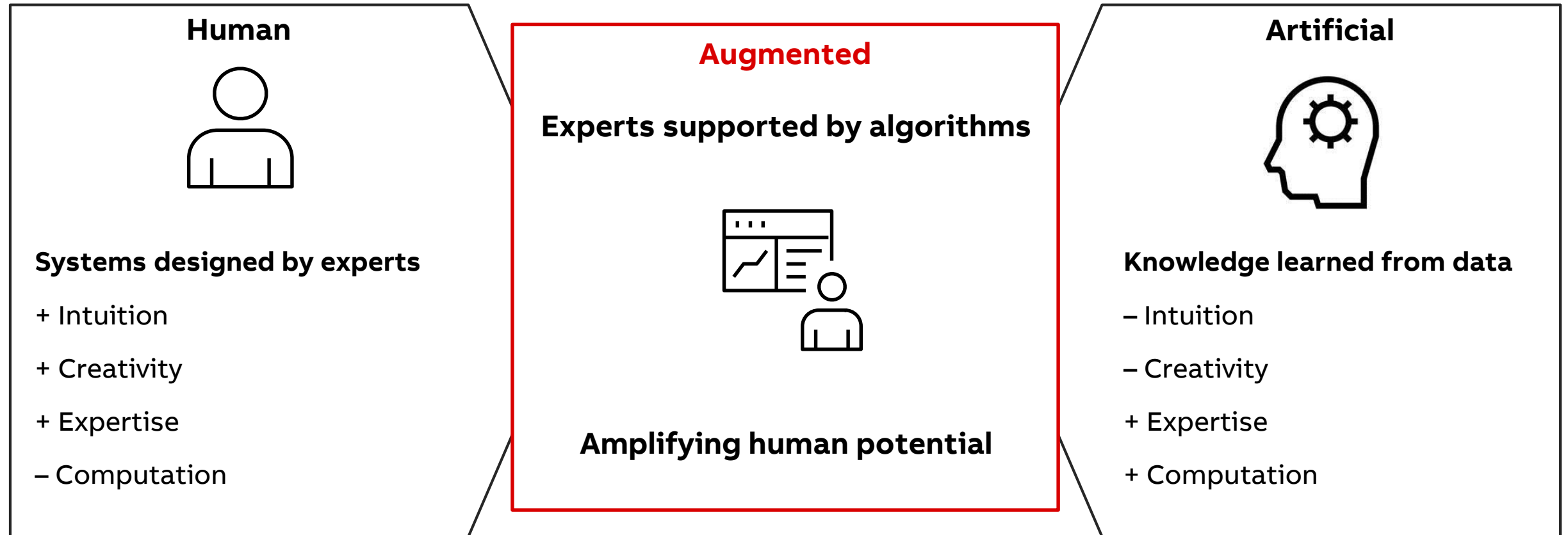


ABB partners with startups to write the future in industrial AI

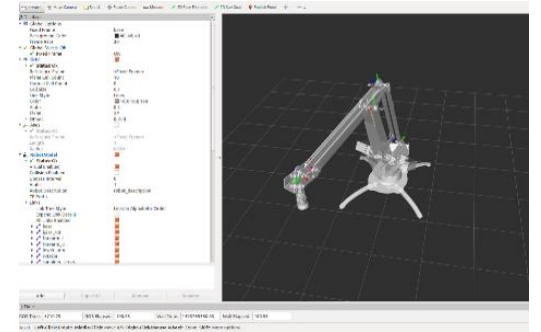
ABB Technology Ventures identifies complementary startups



Towards human level AI



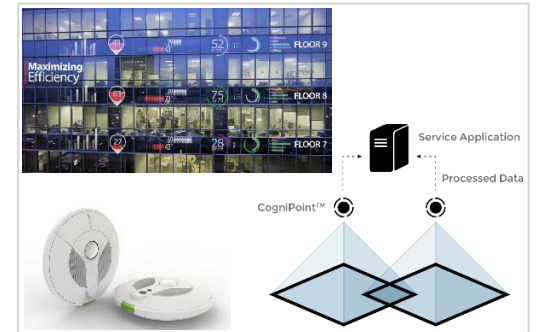
To simplify AI implementation



To move safely and autonomously



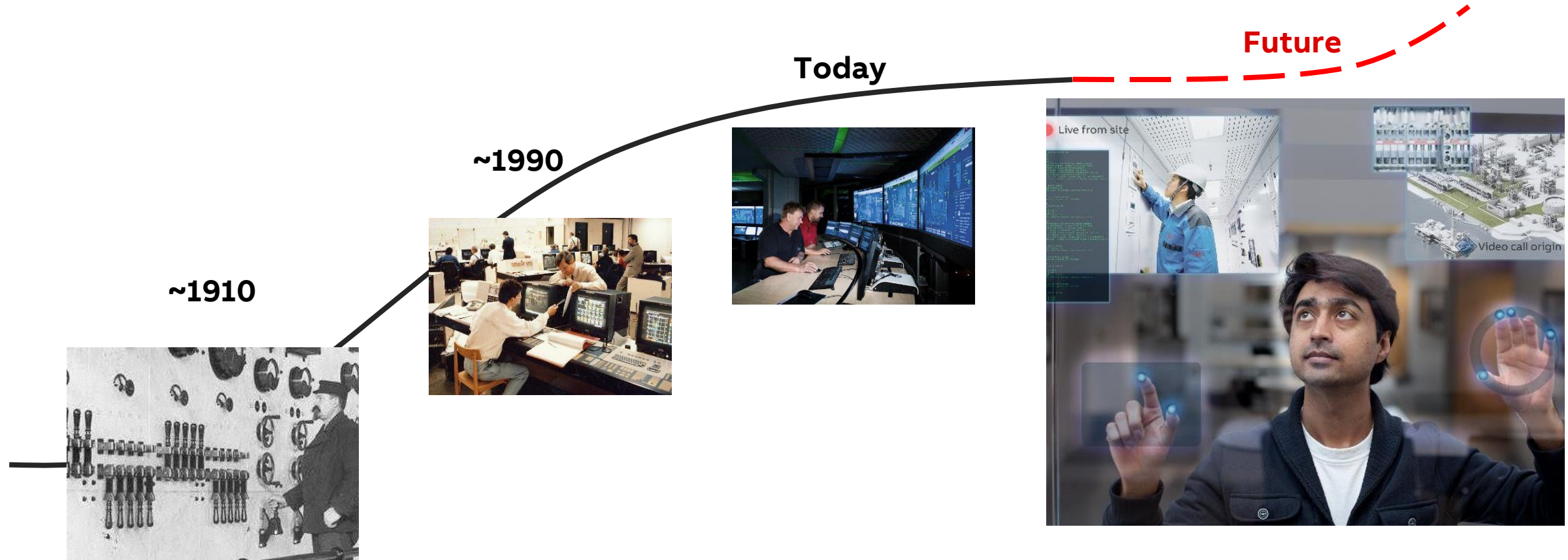
Towards smarter buildings



Augmenting decision-making and functionality in industries and commercial buildings

Operator environments will augment human perception capabilities

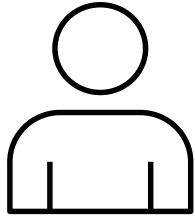
AI handles information complexity allowing humans to focus on where intervention is needed



AI – a paradigm shift in ease of installation and use of robots

From programming to teaching and learning

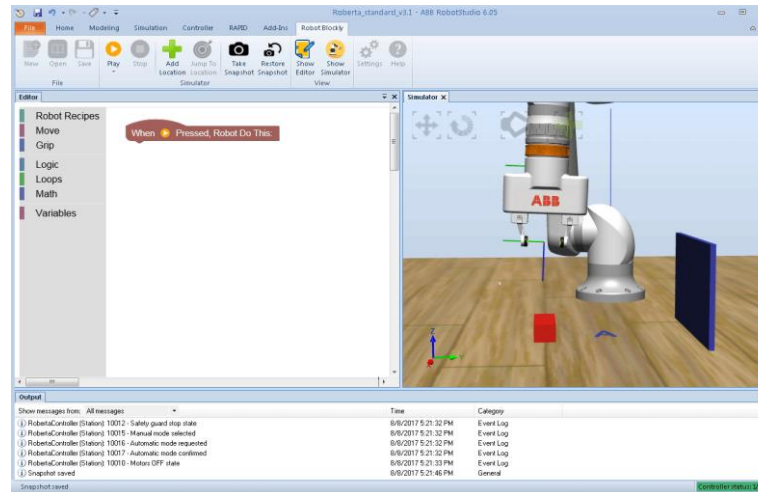
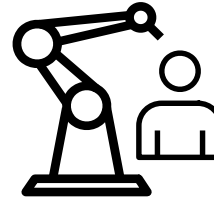
Yesterday: **programming**



```
//Defining single location in RAPID
```

```
CONST robtarget  
rb_Location1:=[[471.90028601, -  
160.550088443, 259.855061587],  
[0.0196845700059949, 0.999779442304461, -  
0.00713127900217168, 0.00165206200050307],  
[-1, -1, 1, 0], [9000000000, 9000000000,  
9000000000, 9000000000, 9000000000,  
9000000000]];
```

Today: **teaching**



Tomorrow: **learning**



Autonomous robots designed for target segments



“Data center sheriff”



“Motor crawler”



“Transformer diver”

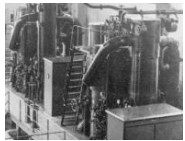


“Plant helicopter”

Pioneering technology leadership by ABB

Writing the future of industrial progress

Mechanical



1900

Electrical



1950

Software



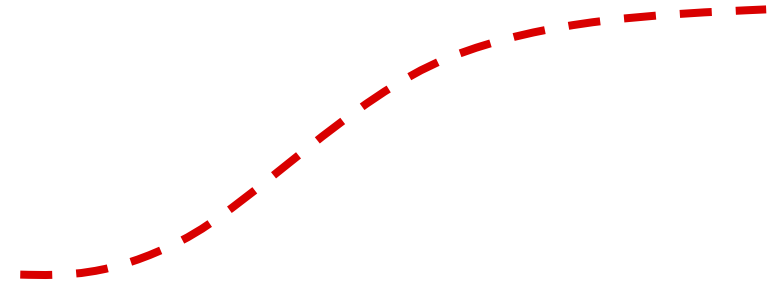
1980

Digitalization



2015

Autonomous



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ABB is building a bridge to the future



ABB