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ABB FACTS

Automation Region Frukostmöte

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FACTS

Technologies that changed the world



ABB pioneered FACTS technology in the 1950s and remains the market and technology leader to this day. In the past 50 years ABB has executed over 800 FACTS projects worldwide and has stood for the vast majority of technology breakthroughs.



In the 1950's, ABB introduced series compensation which made the world's first 400 kV transmission possible by resolving the issue of how to transmit large amounts of power over long distances.

In the 1970's, ABB developed high-power thyristors and a new AC technology, namely the Static Var Compensator (SVC).

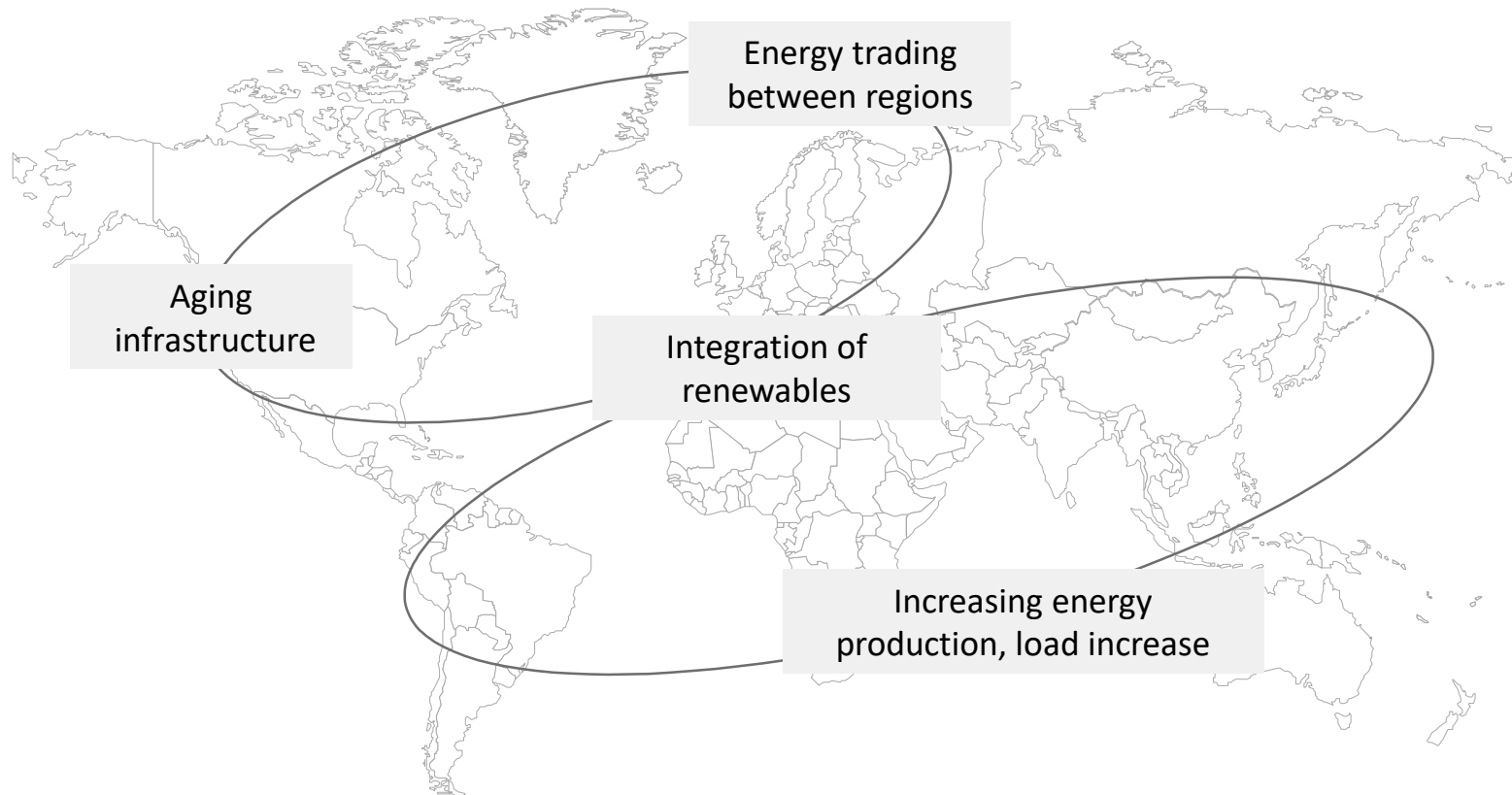
Blackout North-East USA – 14th of Aug 2003

Source: TopTenz & Wikipedia

City	Number of people affected
New York City and surrounding areas	14,300,000
Toronto metropolitan area and surrounding areas	8,300,000
Newark, New Jersey , and surrounding areas	6,980,000
Detroit and surrounding areas	6,400,000
Cleveland and surrounding areas	2,900,000
Ottawa	780,000 of 1,120,000*
Buffalo, New York , and surrounding areas	1,100,000
Rochester, New York	1,050,000
Baltimore and surrounding areas	710,000
London, Ontario , and surrounding areas	475,000
Cambridge-Kitchener-Waterloo , and surrounding areas	415,000
Toledo, Ohio	310,000
Windsor, Ontario	208,000
Estimated total ^[16]	55,000,000



FACTS market drivers



Benefits

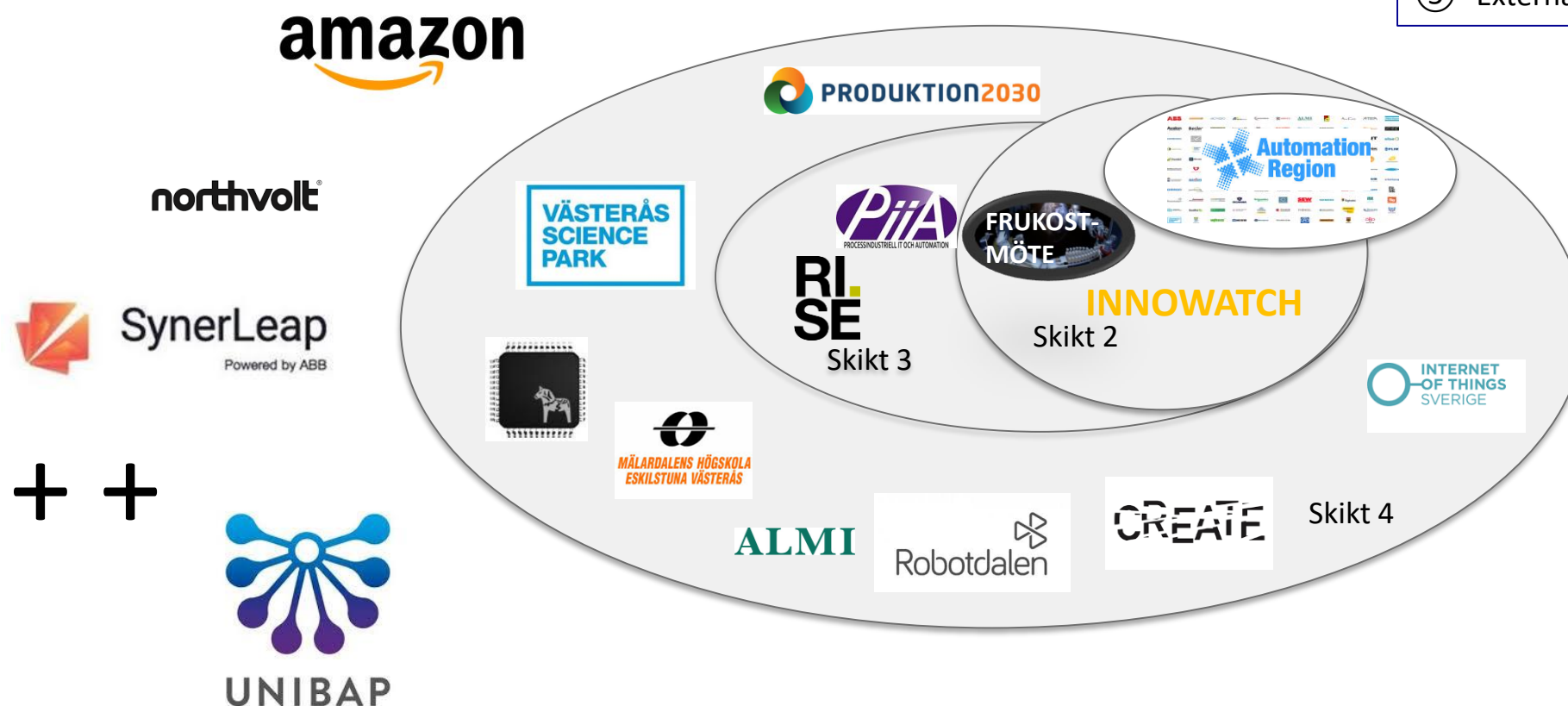
- Boost of transmission capacity
- Improved long distance power transfer
- Fast relief of transmission bottlenecks
- Power quality improvements
- Load flow control
- Improved dynamic stability of grids
- Minimizing black-out risks
- Facilitated integration of renewables
- Improved grid code compliance
- Improved supply to railway systems

Automation Region

Regionens Innovationssystem betraktad från AR

Skikten och innovationssystemet

- ① Kopplat till vår basfinansiering
- ② Aktiviteter vi själva har kontroll över
- ③ Resurser som vi bidragit till, men själva ej har kontroll över
- ④ Resurser av betydelse för oss, med eller utan vår påverkan
- ⑤ Externa Effekter



Två ABB FACTS-händelser

Jul 2017, Boliden: "Vi sparade 50 kUSD med vår AR-pilot"

ABB Mining

 **Automation
Region**
Frukostmöte

 **xmreality**

ABB FACTS

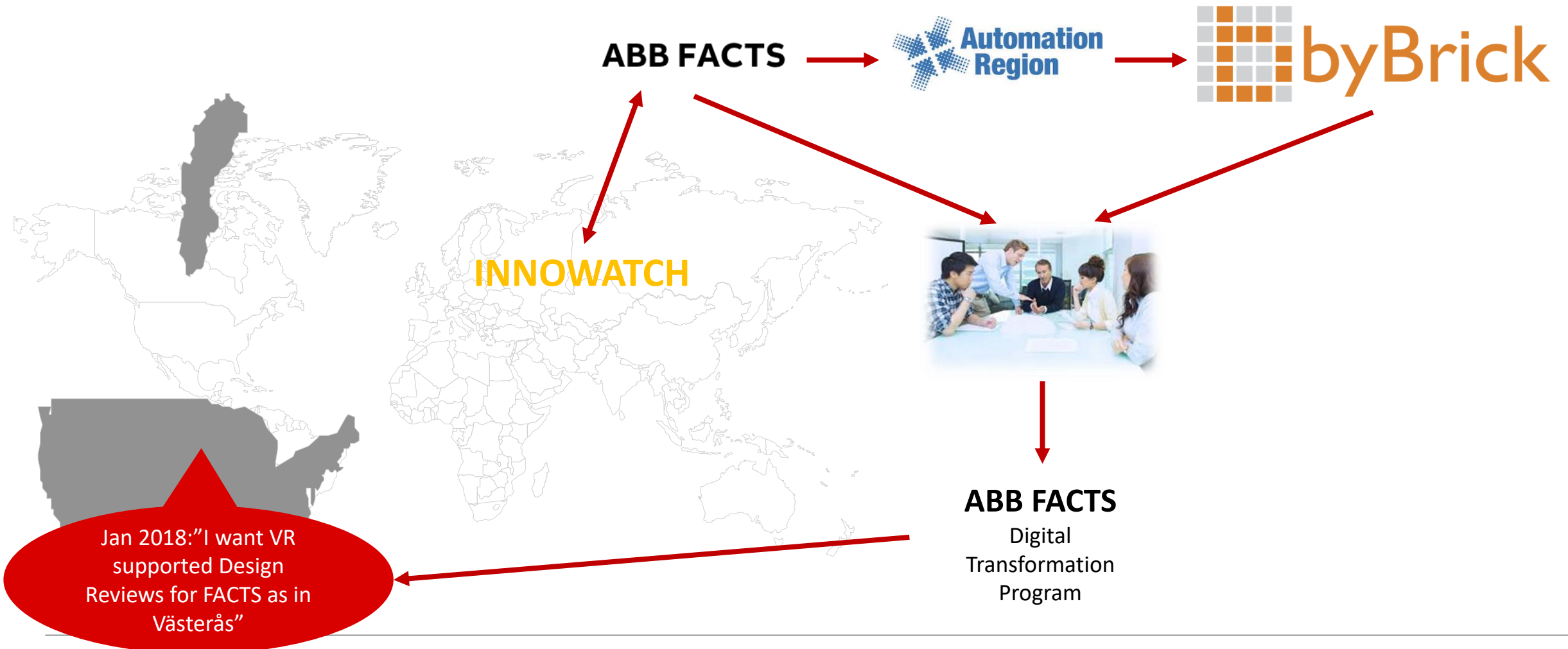
**RI
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INCODE

INNOWATCH

Två ABB FACTS Stories



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ABB Ability



<10 months

ABB FACTS

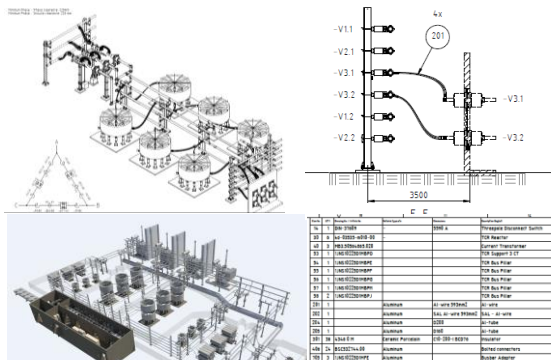


**Automation
Region**
Frukostmöte



Utilizing digital solutions by leveraging existing data

From 2D drawings to fully immersive VR solutions

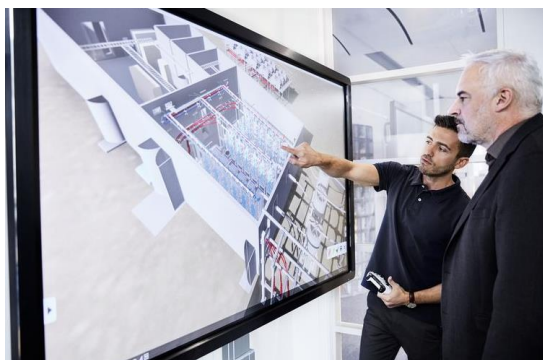


2D & CAD Drawings

All ABB PG&I sites has since many years been designed in 3D

Common ground and compatibility regardless of CAD-System

3D models hold valuable data both for ABB and our customers



Gaming solutions

Completely new software installations.
3D and VR engines

Cutting edge equipment such as HTC Vive,
Oculus Rift and large touch screens

Artificial intelligence through Machine Learning
and real-time data through ABB Ability



Combined into new solutions

3D/VR to be used by Sales at customer visits to show virtual sites

Collaboration internal as well as with customer and civil suppliers

Live data through ABB Ability

Stronger customer relations

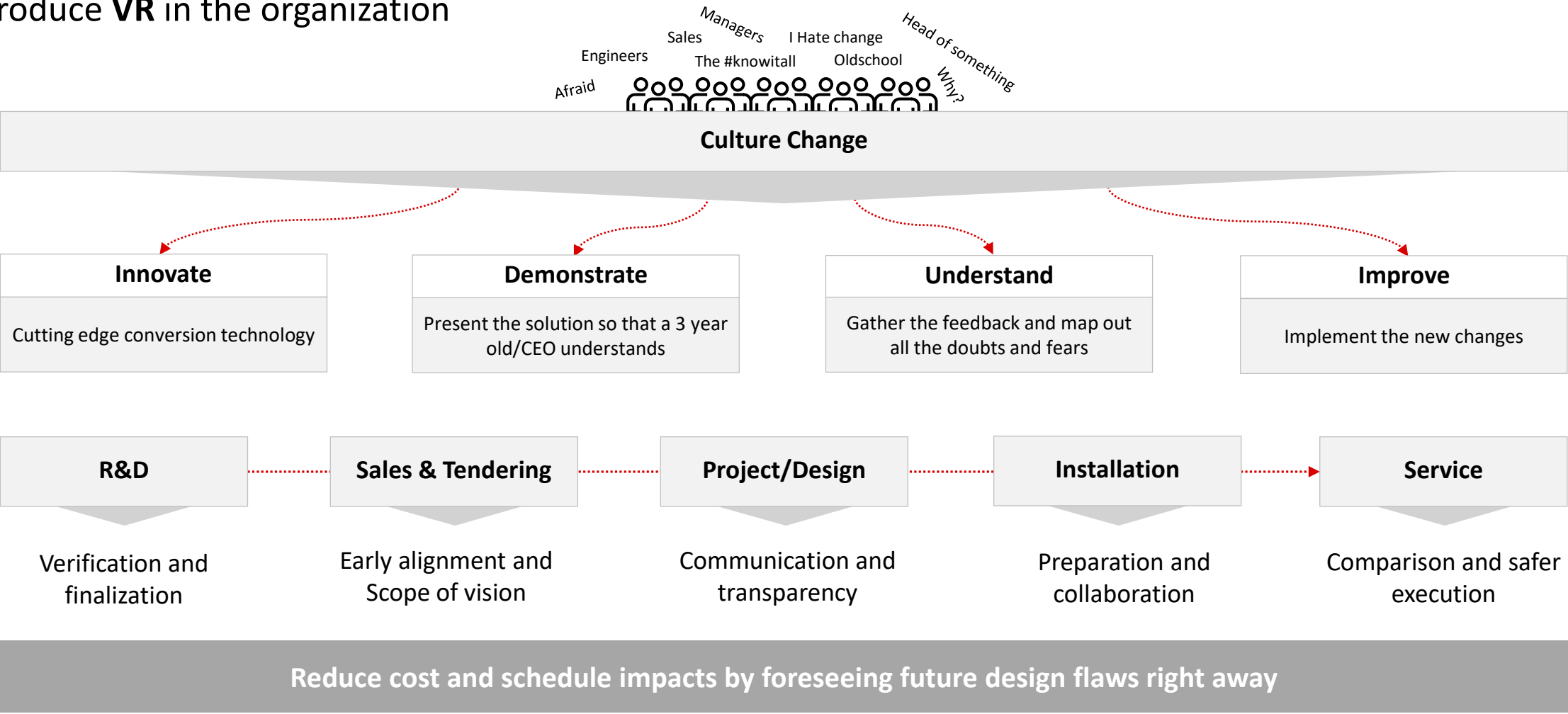
Culture change

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Deeper engagement with our customers through the power of visualization from day one

Virtual Reality during the entire project lifecycle

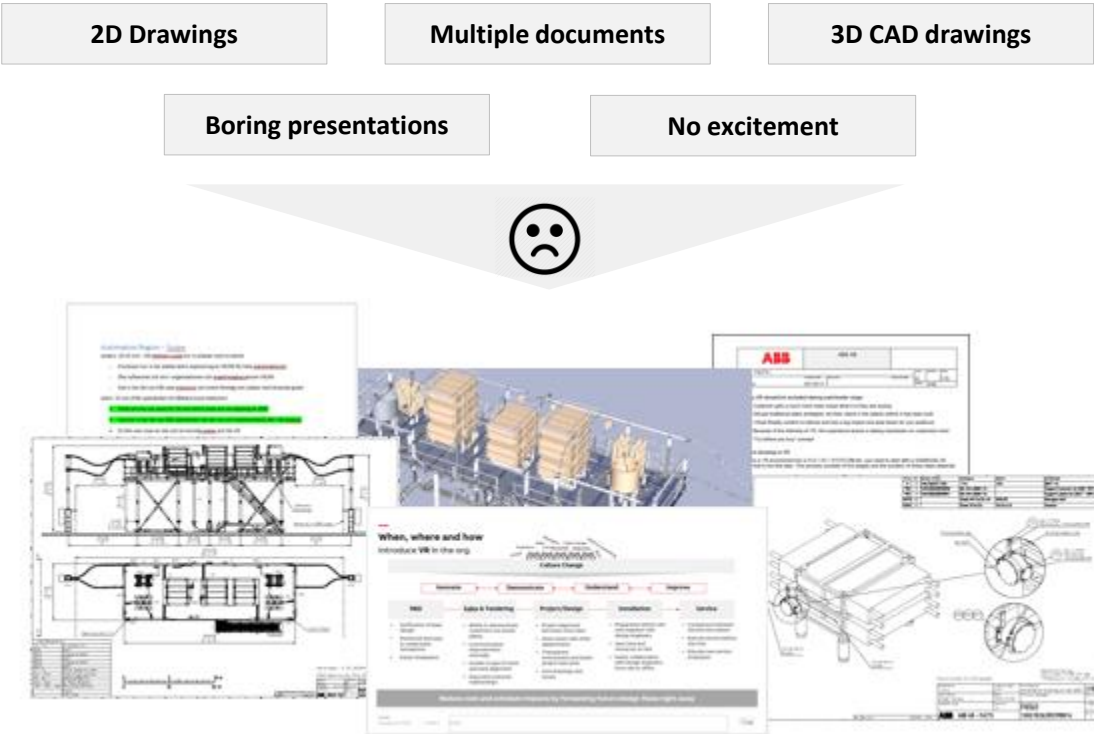
Introduce **VR** in the organization



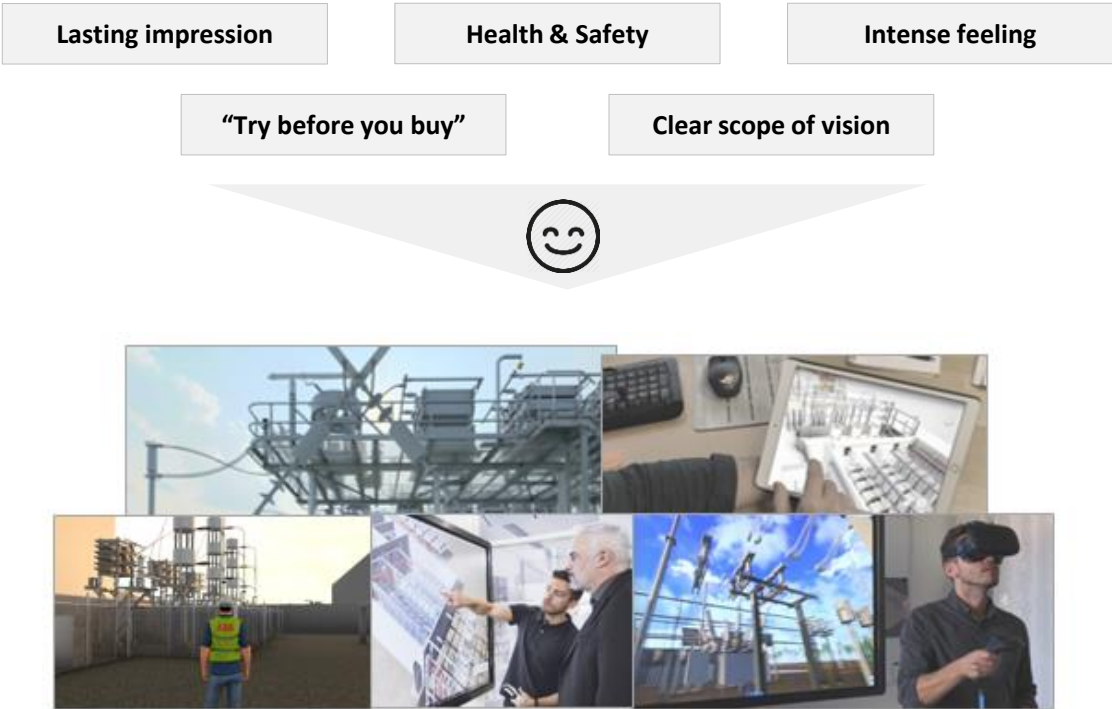
Customer engagement through 3D/VR

Deeper and better relationships through immersive visualization from day one

Classic sales



Improved sales



Last words and video

The key to a innovative digital culture transformation is participation and communication



Contact



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Questions?



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