JANUARY , 2019

IoT by ABB

Romania 2019

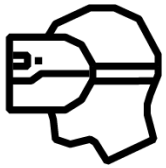
ABB Romania Country Managing Director

Tomasz Wolanowski

Digital technologies are driving new innovation in industrial markets

Media is focused on B2C but the “killer app” is in B2B

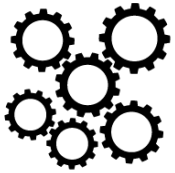
Virtual/augmented reality



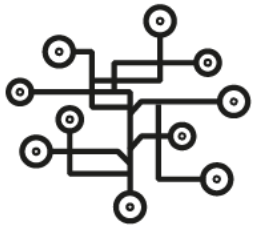
Software-defined machines

Machine learning

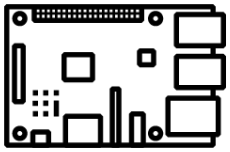
Time-sensitive networking



Big data



Inexpensive computing

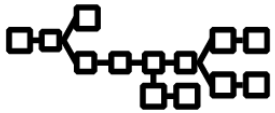


Cloud computing

Cybersecurity

Connectivity

Blockchain



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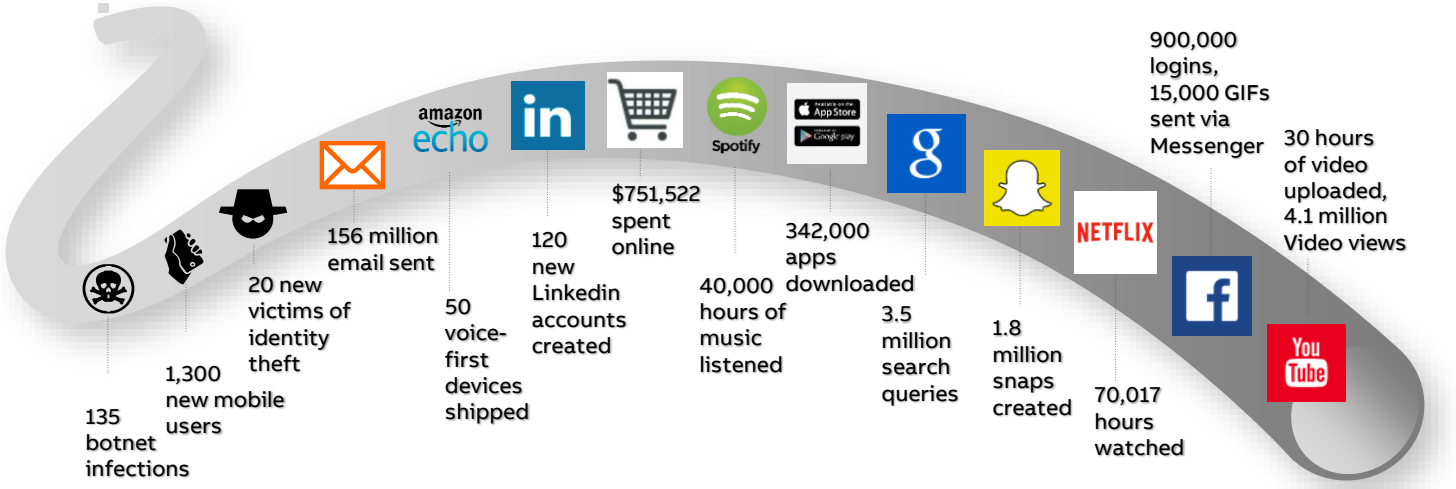
Real-time is getting more important

What happens in an internet minute?

Every day, 2.5 quintillion bytes of data are created



90% of global data has been generated in last 2 years alone

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Emerging technology trends fueling Digital Adoption

Cost of building and operating “smart things” quickly dropping.

Cost of sensors

$1.30 → .60
avg. cost
over the past ten years

Cost of bandwidth

↓ 40x
over the past ten years

Ubiquitous cloud infrastructure

↓ 20x
cost per MB
over the past ten years

Cost of processing power

↓ 50x
over the past ten years

Enough IP addresses

IPv6 = 3.4×10^{38} IP addresses

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Looking ahead

Increase in connectivity provides more opportunity

Things and Connectivity

- 6.4 billion connected “things” in 2016
- More than 20 billion by 2020
- **5.5 million new things every day**
- In 2016, global Internet traffic will exceed the 1 zettabyte mark (1 trillion GB)
- Traffic growing at 23% per year
- By 2019, traffic will be 64x that of 2005
- **Majority of traffic from non-PC devices**

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Source: Gartner public forecast (Nov. 2015); Cisco Virtual Networking Index (2014)

The technical revolution has started

(just look into your pockets…)

2005

Two days after pope Johannes Paul II died.

2013

His successor Benedikt XVI retired and a new pope has been elected.

Within 8 year ~100% market penetration

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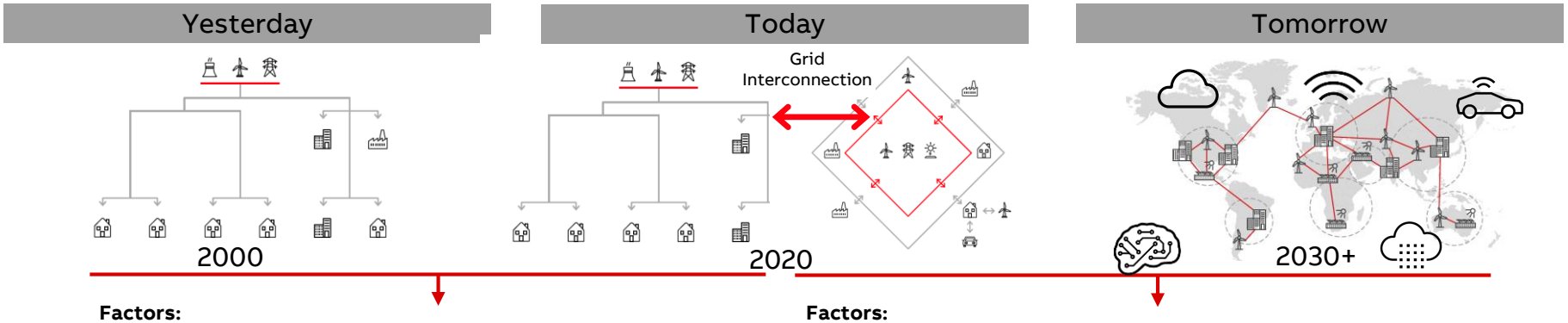
Source: www.spiegel.de, Christian Klettner /BASF

Grid evolution today and in the future

Power systems of the future



Factors:
- Global warming – ecological threats
- Stimulated, regional introduction of renewables
- Exponential reduction of photovoltaics & battery storage costs
- Consumer to Prosumer development
- Digitalization trend
- Interconnection technology development

Factors:
- Full scale deployment of renewables across all regions
- Increased share of energy by wire
- Massive introduction of grid connected Electrical Vehicles
- Utilities re-inventing themselves with new business models
- Power exchange with related data transfer («Internet of Energy»)
- Artificial Intelligence enabling complex autonomous processes

New opportunities & challenges require new ideas – evolutionary & revolutionary

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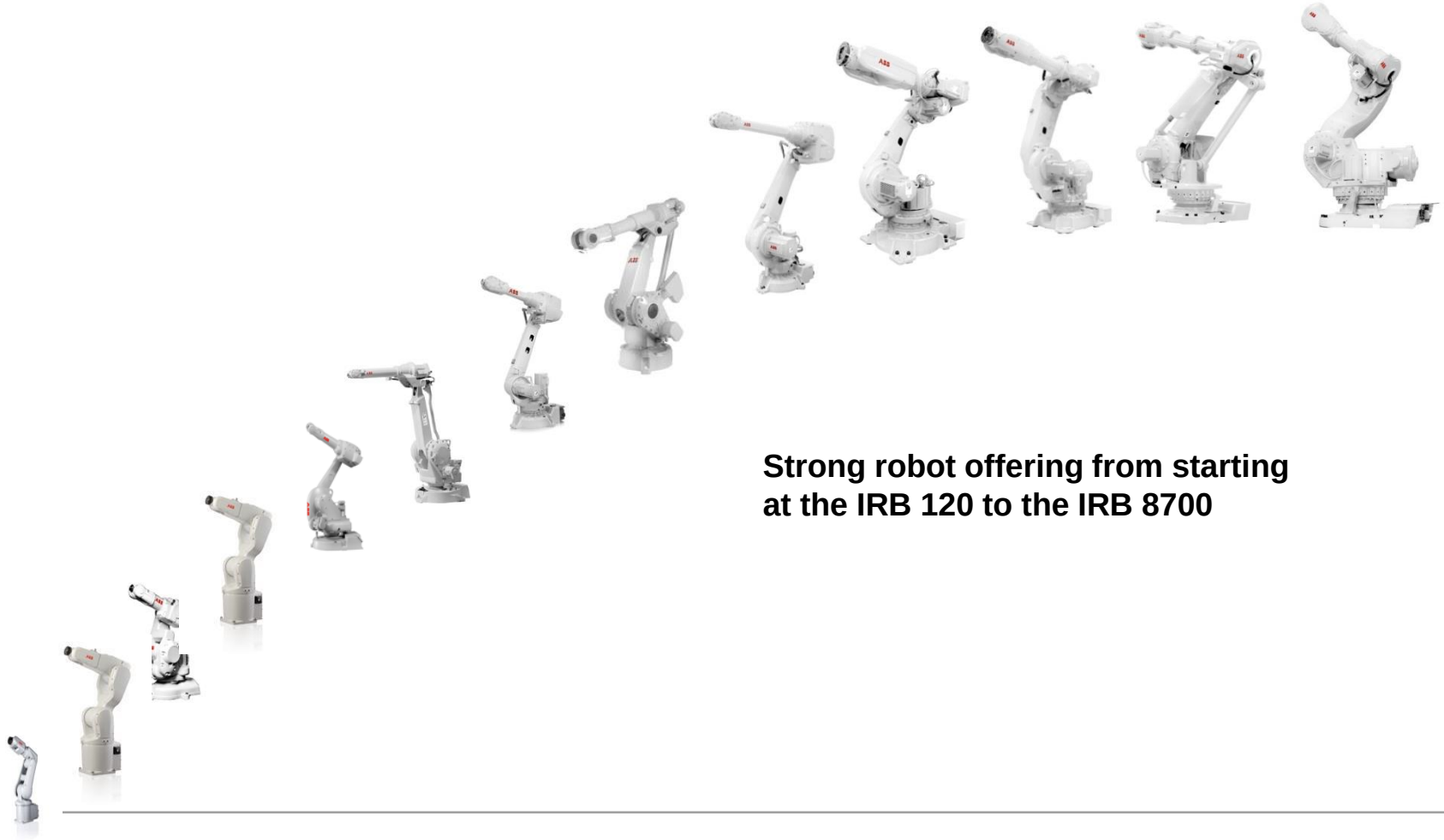
Sources: ABB

ABB Robotics Romania

Current portfolio



Strong robot offering from starting at the IRB 120 to the IRB 8700

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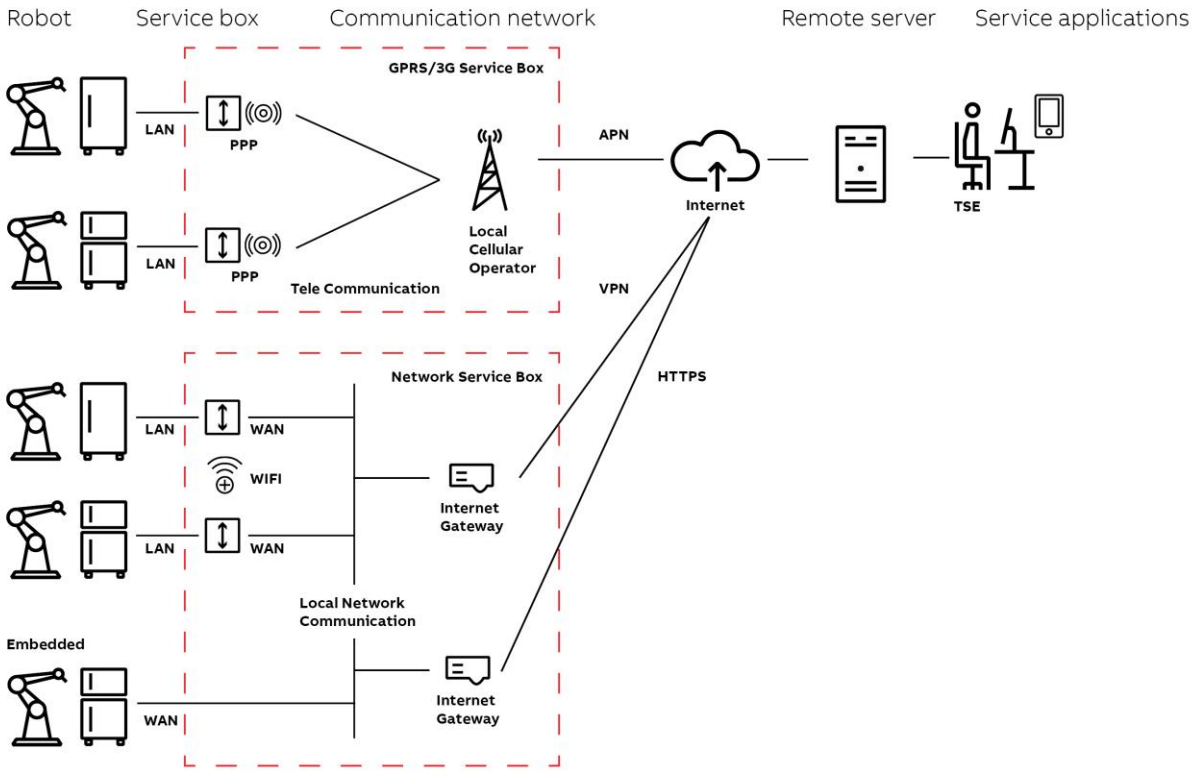
ABB Ability Connected Services

Available Solutions

3 Solutions Available(S4C+ and IRC5):

- Mobile Service Box (GPRS/3G + ABB Sims (or local sims)
- Wired/Wifi Service Box (Customer Internet Access)
- Wired Embedded (Customer Internet Access)

=> Embedded possible from RobotWare 6.04 (Nov 2016)



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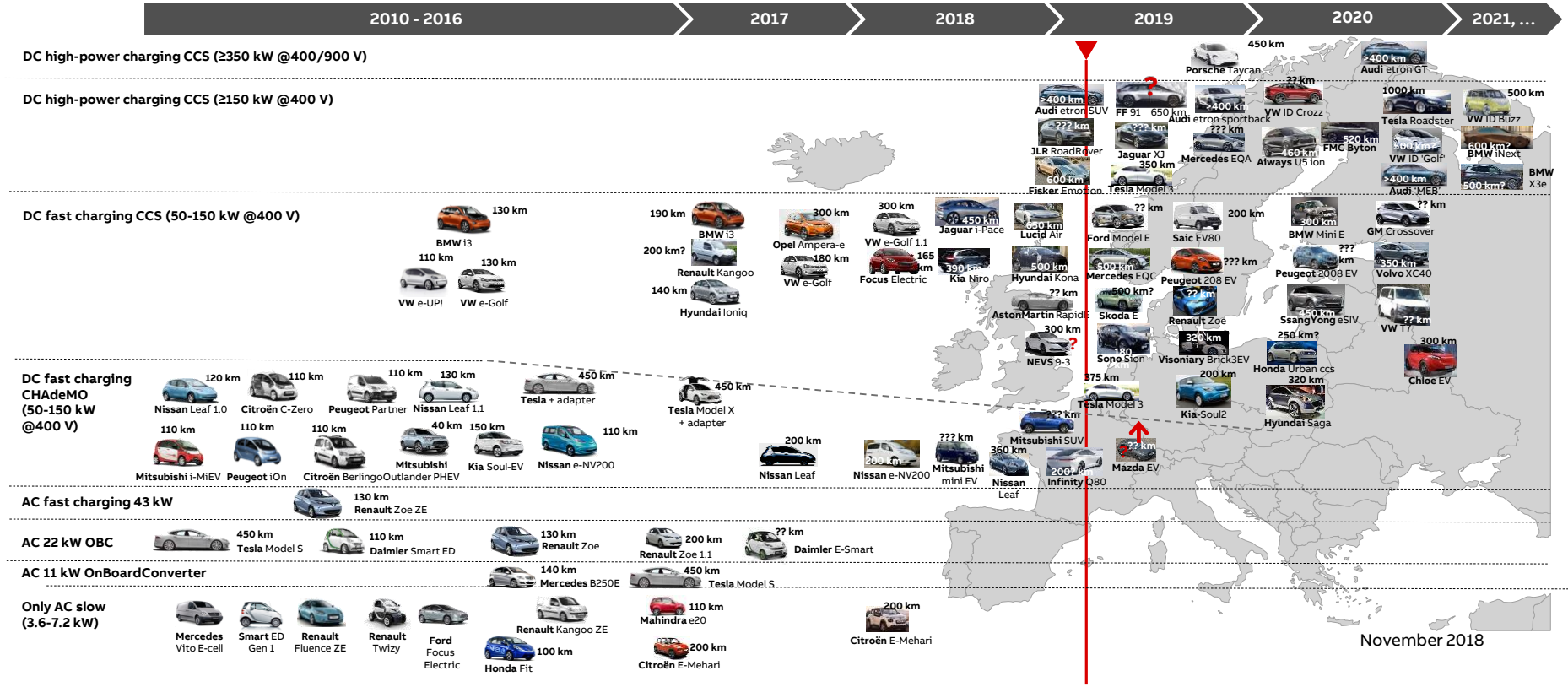
Follow the car through Europe, and open standard protocols



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Highway and metropolitan segment

Terra 54: CE-approved 50 kW Multi-standard chargers – Input: 3x 400V

Terra 54 CT
DC+AC Charger

50kW DC CCS-2

22kW AC

Available

Terra 54 CG
DC+AC Charger

50kW DC CCS-2

43kW AC (also 22kW version)

Available

Terra 54 CJ
DC Charger

50kW DC CCS-2

50kW DC CHAdeMO

Available

Terra 54 CJG
DC + AC Charger

50kW DC CCS-2

50kW DC CHAdeMO

43kW AC

Available

Terra 54 CJG
DC + AC Charger

50kW DC CCS-2

50kW DC CHAdeMO

22kW AC

Available

Terra 54 CJT
DC+AC Charger

50kW DC CCS-2

50kW DC CHAdeMO

22kW AC

Available

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