2019-03-25

It takes dedication to adopt 5G

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ABB Corporate Research, Linus Thrybom

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Ongoing revolutions in ABB domains

The Energy Revolution

The Fourth Industrial Revolution

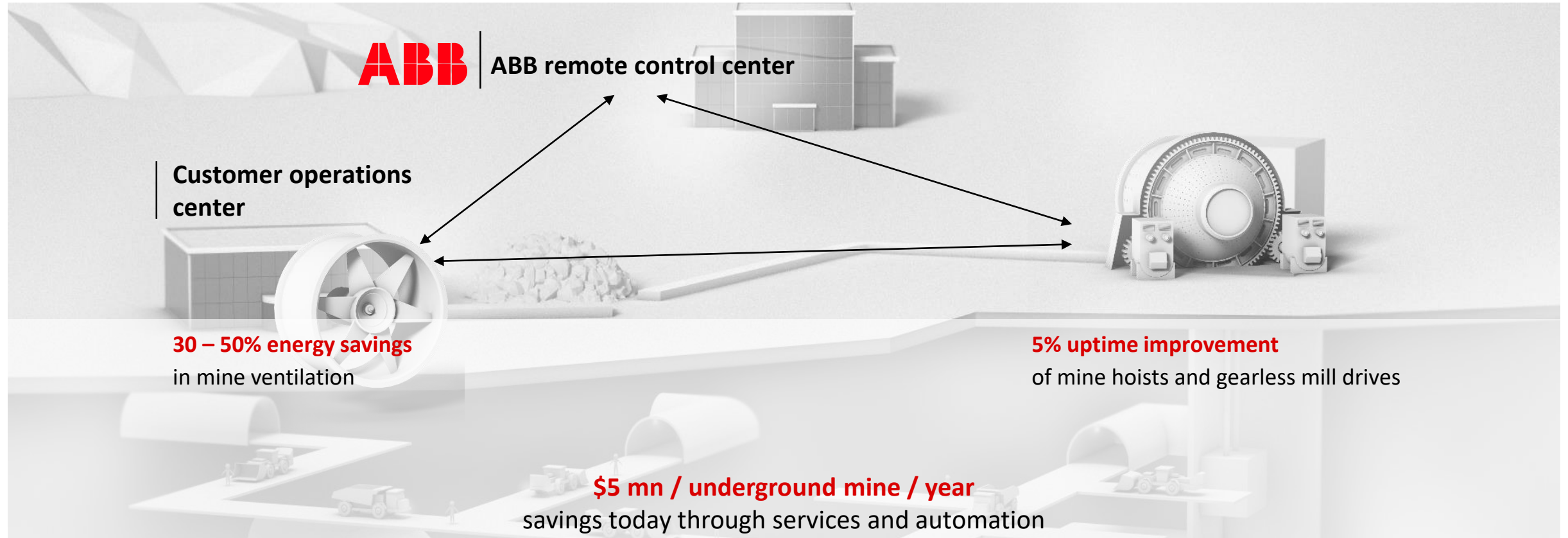**The eMobility Revolution**

Utilities

Industry

Transport & Infrastructure

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Customer value through digital for mining - Optimizing mining processes in real-time

ABB remote control center

Customer operations center

30 – 50% energy savings in mine ventilation

5% uptime improvement of mine hoists and gearless mill drives

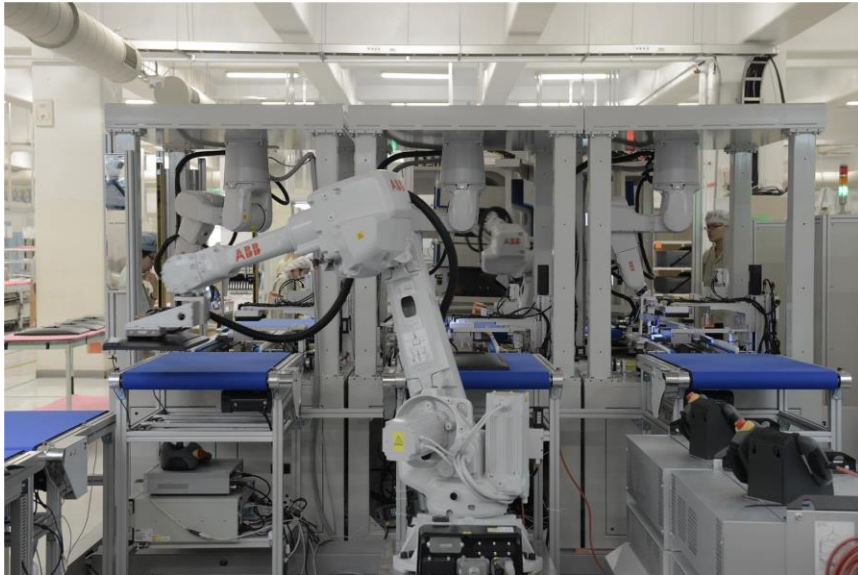**$5 mn / underground mine / year** savings today through services and automation

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Setting the scene

The scene

Process automation and manufacturing

Reliability – robust and resilient systems

QoS and latency – deterministic systems

Cyber security & safety, privacy – critical infrastructure

System integration

Manageability

Plant networks – KISS

OT ⬌ IT

Segmented

WSN

On premise

Local ➜ Simple ➜ Robust

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Dedicated spectrum values

Private network and local spectrum values

Responsibility & Liability

- Makes responsibilities clearer – 5G will be an integrated part of the plant

- Liability cost

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Dedicated spectrum values

Private network and local spectrum values

Responsibility & Liability

Freedom to digitalize

- Tool for verticals to digitalize in non-urban areas

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Dedicated spectrum values

Private network and local spectrum values

Responsibility & Liability

Freedom to digitalize

Privacy

- Control of data and processes
- Control of Infrastructure
- On premise

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Dedicated spectrum values

Private network and local spectrum values

Responsibility & Liability

Freedom to digitalize

Privacy

New business offerings

- Enables innovation on new offerings & business models

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Freedom to digitalize

Privacy

New business models

Flexibility

- Custom made solutions – instead of "one size fits all"

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On the other side…

Private network and local spectrum risks

$\sum$ Values >> $\sum$ Risks

Simple

- to engineer and integrate
- to maintain, monitor and operate

Collaborate

- It is not a "one domain issue" – need cross domain collaborations

Then we will create success!

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