New technologies – new revenue streams

SC B5

Question 3.1 - What are the benefits of digital solutions like IoT-sensors, machine learning, artificial intelligence, drones, robots etc. for substation life cycle from planning to maintenance? Which measures are necessary to increase the acceptance of intelligent IoT-based power equipment in substations?

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VATTENFALL

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Promises of new technology

- IoT/IIoT/IT/OT
  - How do they relate?
- Cloud/Edge
  - New technologies enable new applications and revisiting old
- Machine Learning/DSP
  - Explainability and applying new methods to old problems
- Substation construction, refurbishment and dismantling
  - 3D based design
- Data Driven O&M
  - New types of data
- New types of substations (Grid batteries/Data Centers)
  - More data
- Dynamic Line Rating and grid observability
  - Benefits from IoT and Machine Learning technologies

Group Discussion Meeting

Hurdles for implementation

- IT vs OT
  - Best of both worlds

- IT security in transfer of data and data at rest
  - Could IT be ahead?

- Data silos
  - Sharing data enables new applications and methods

- Cloud acceptance
  - Local cloud