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E.ON Digital Technology

Our energy networks need an update.

How E.ON is transforming a systemically relevant industry
with Data, Technology & Algorithms

To secure a stable energy network,
Demand and Generation need to be in balance.

Demand

Generation

Current trends are presenting significant challenges to our current energy network.

Electrification of heating market

Demand

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Shift to eMobility

Electrification of heating market

Demand

Generation

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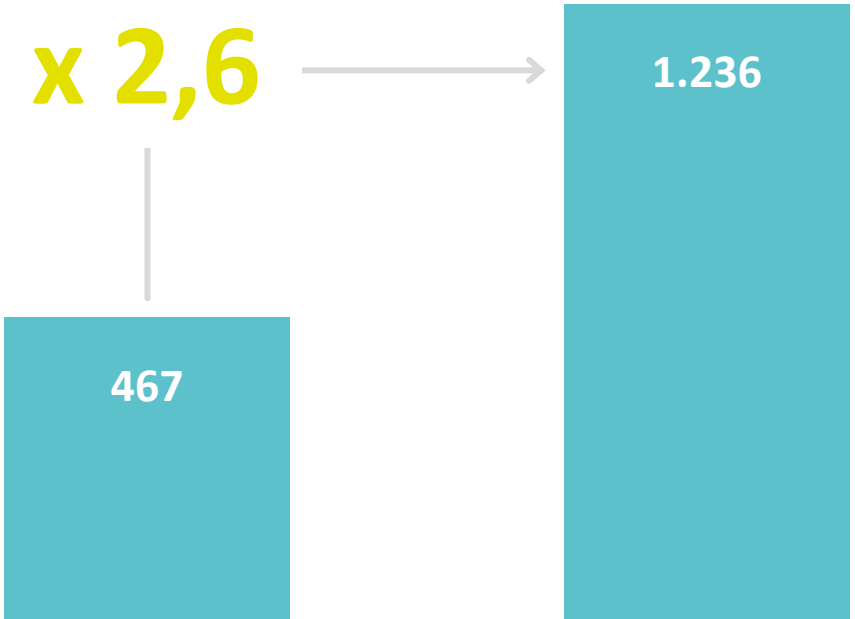
Installed renewable capacity in GigaWatt across Europe



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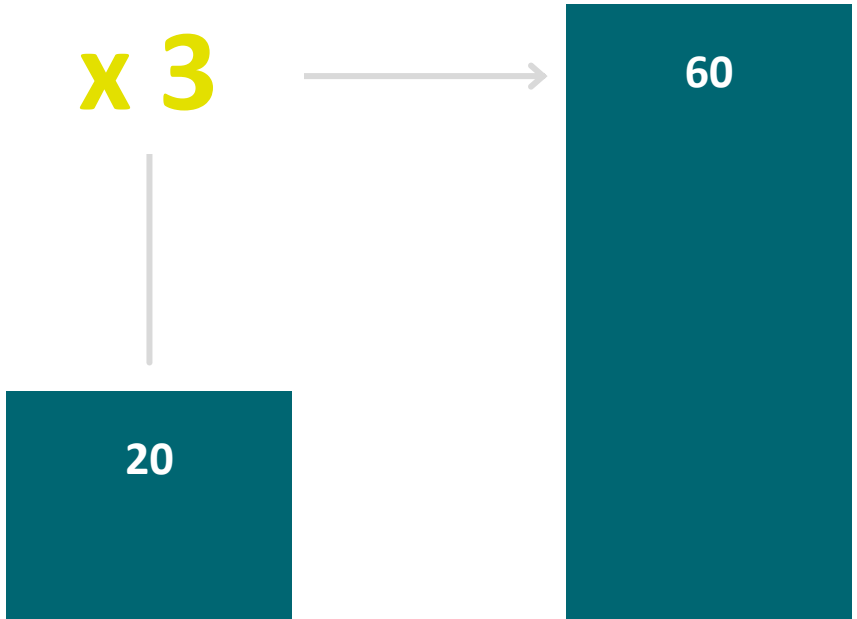
Installed heat pumps in Mio. across Europe



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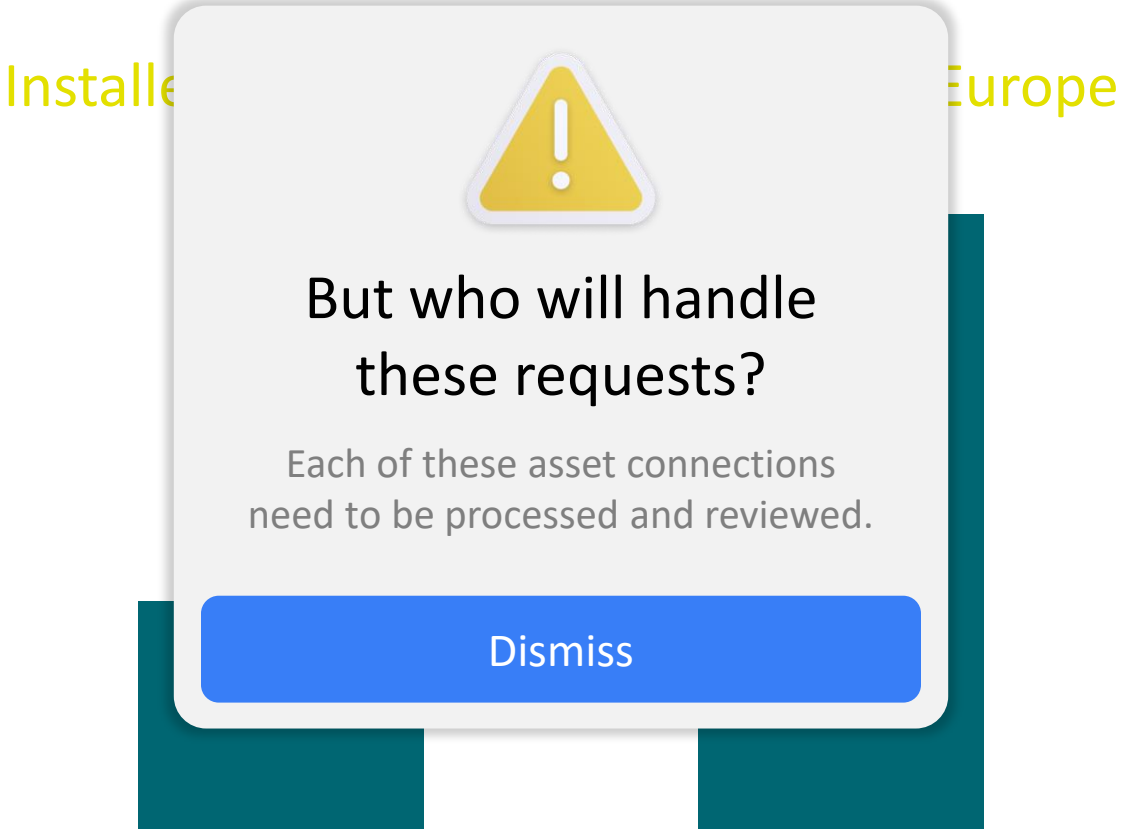
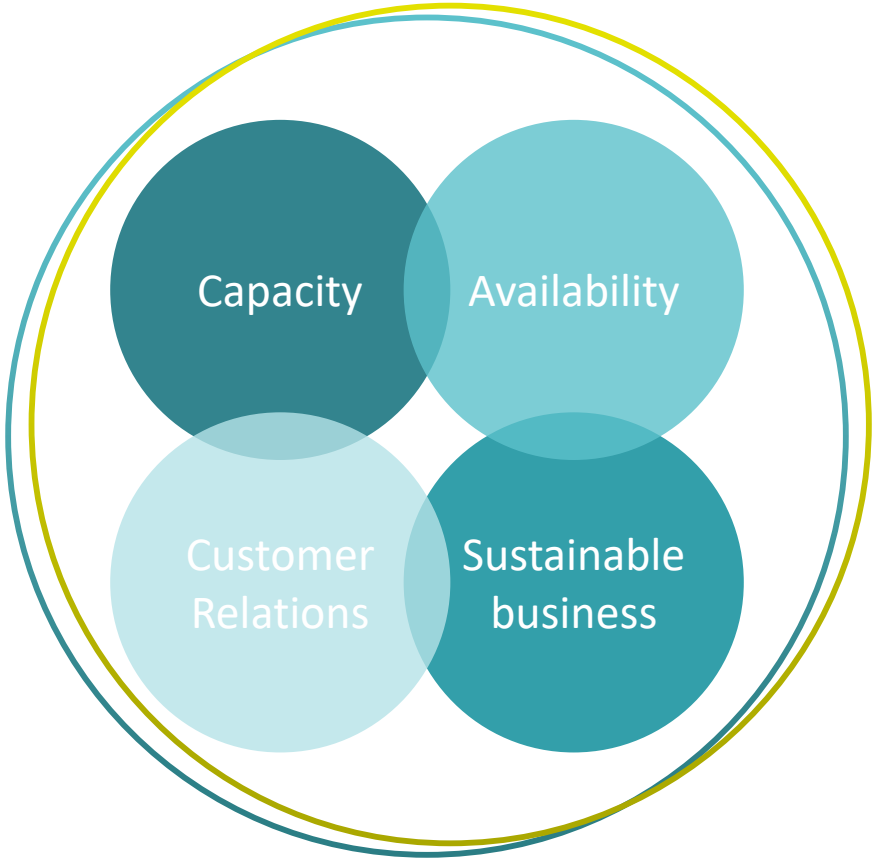


E.ON is committed to face these challenges and to upgrade our energy network until 2030.

Digitalization



Culture

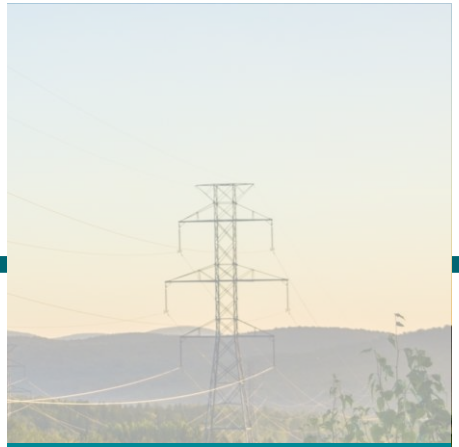
As a result of this strategy, digitalization has become one of the key focus areas for the next years.

Expert Services

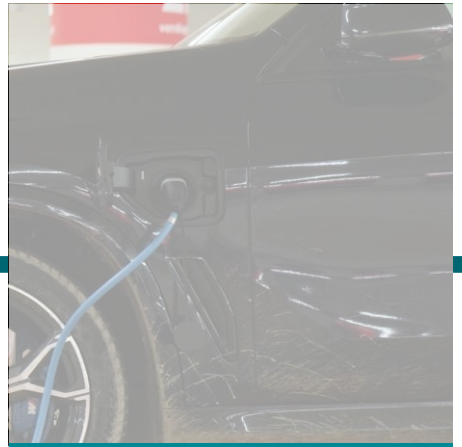
With Expert Services we are building a highly capable Inhouse-Consultancy with various competencies.

Expert Services

In order to achieve our ambitious targets we need to digitalize along our entire value chain.



SAMS



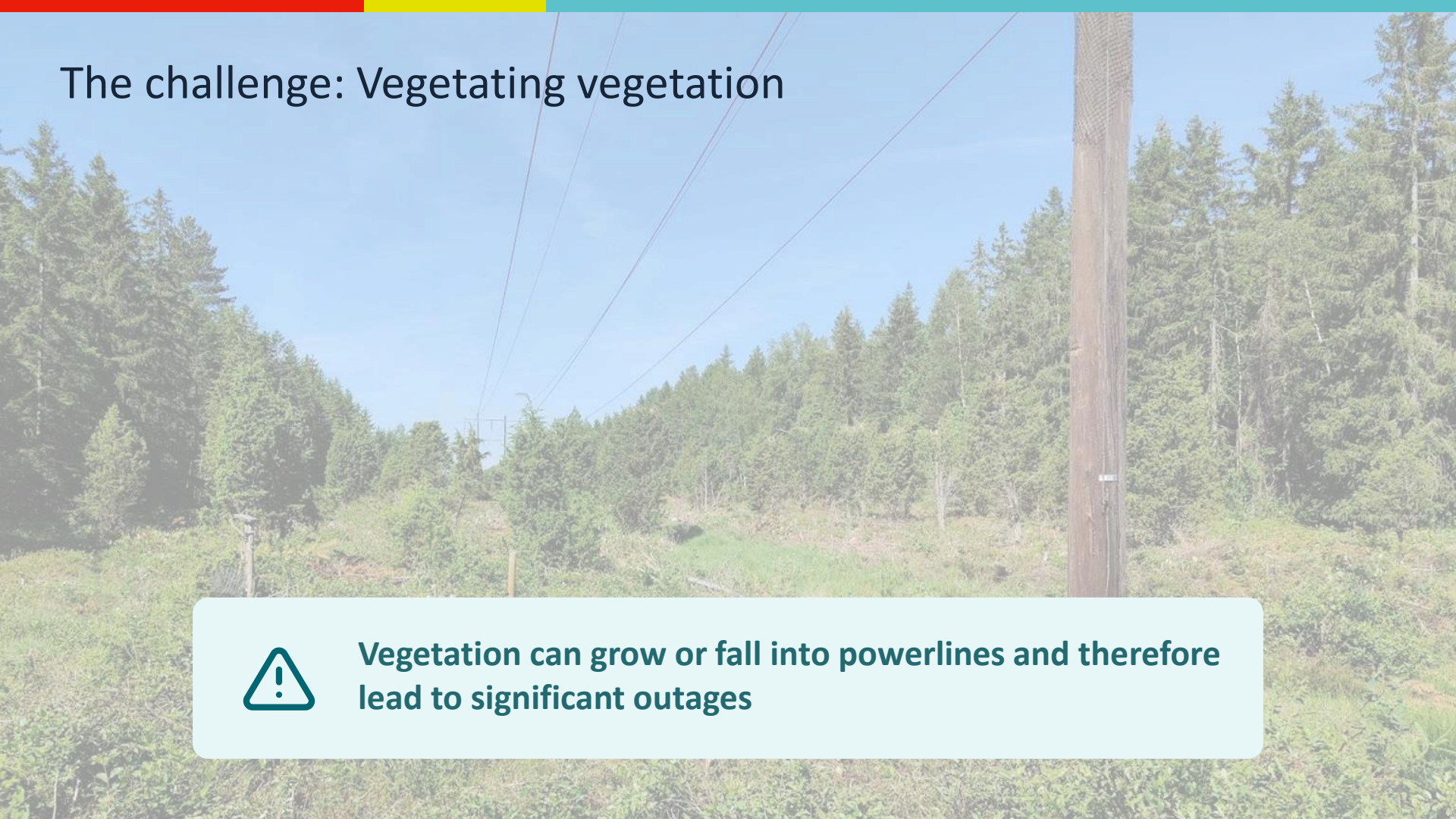
Vehicle2Grid

Infrastructure

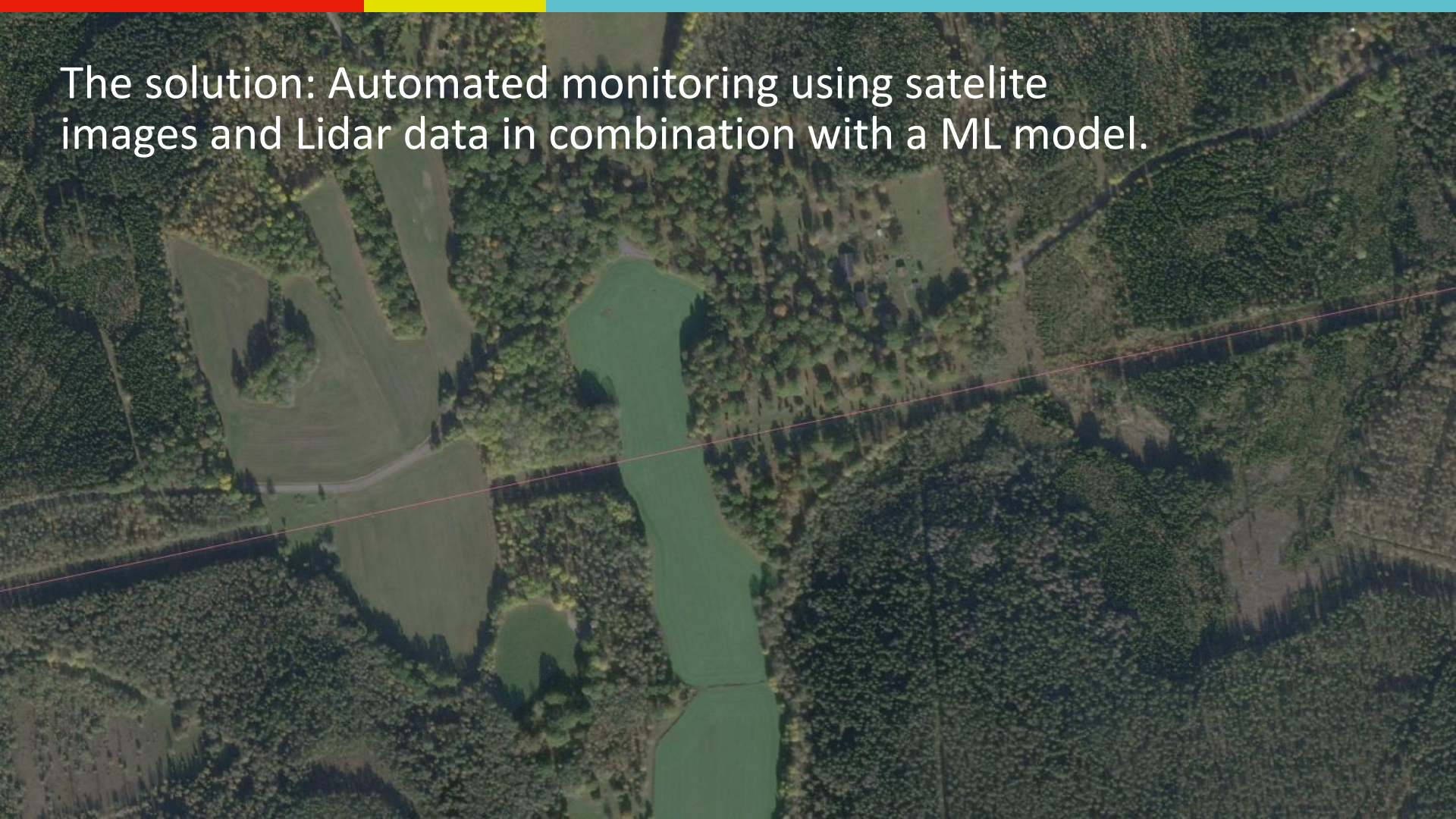

SAMS


Vegetation Management
SAMS

The challenge: Vegetating vegetation



Vegetation can grow or fall into powerlines and therefore lead to significant outages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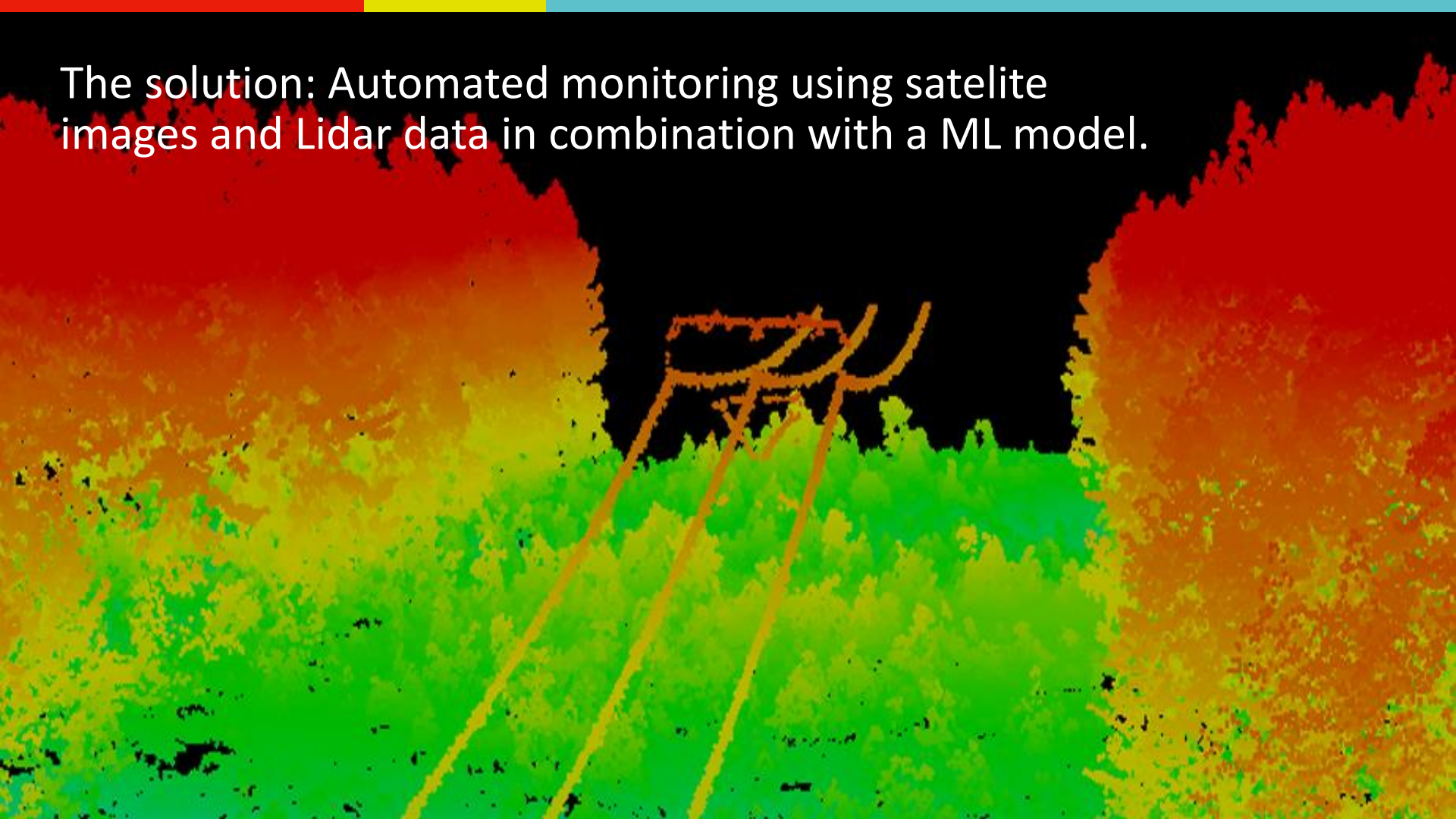

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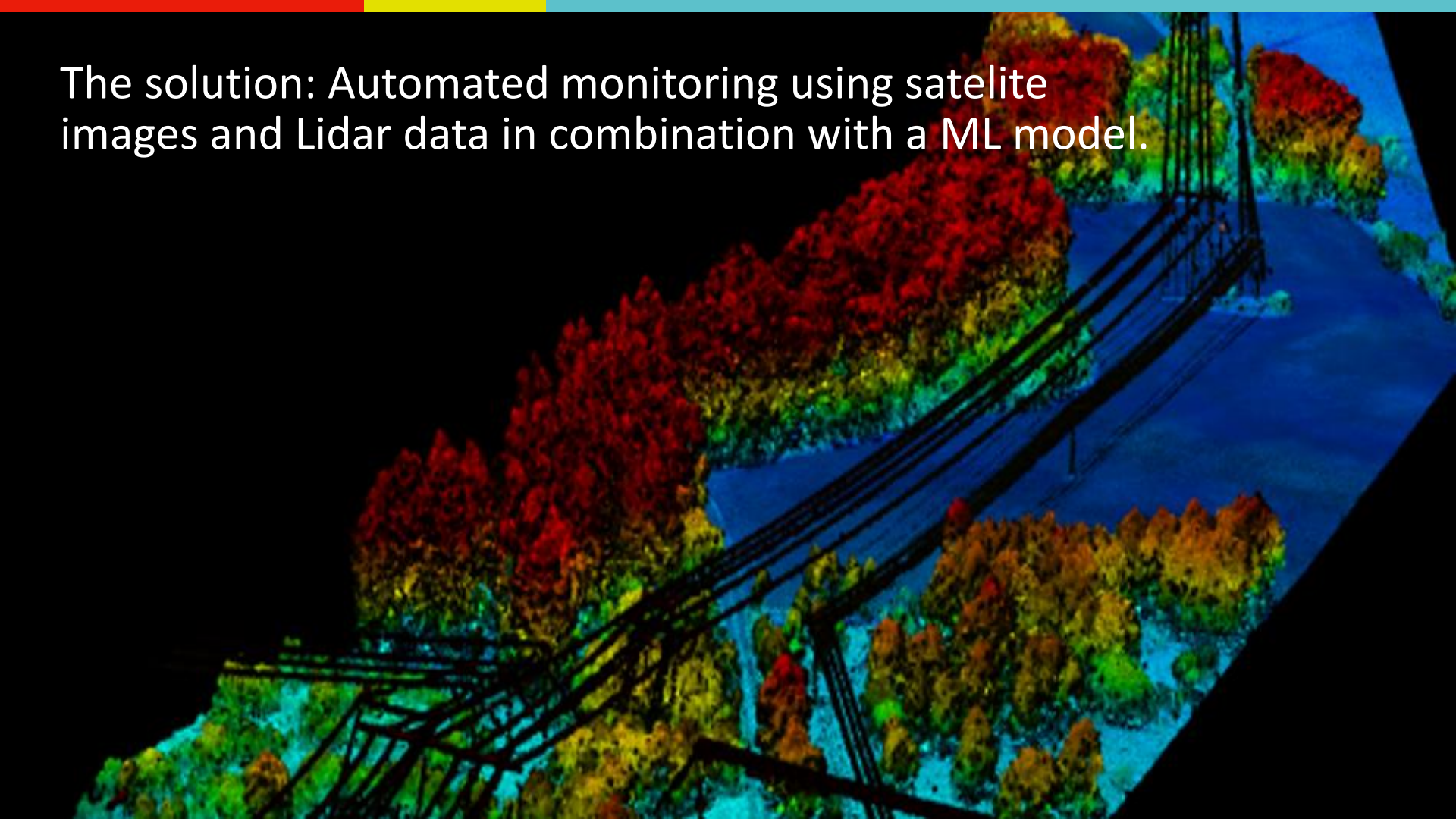
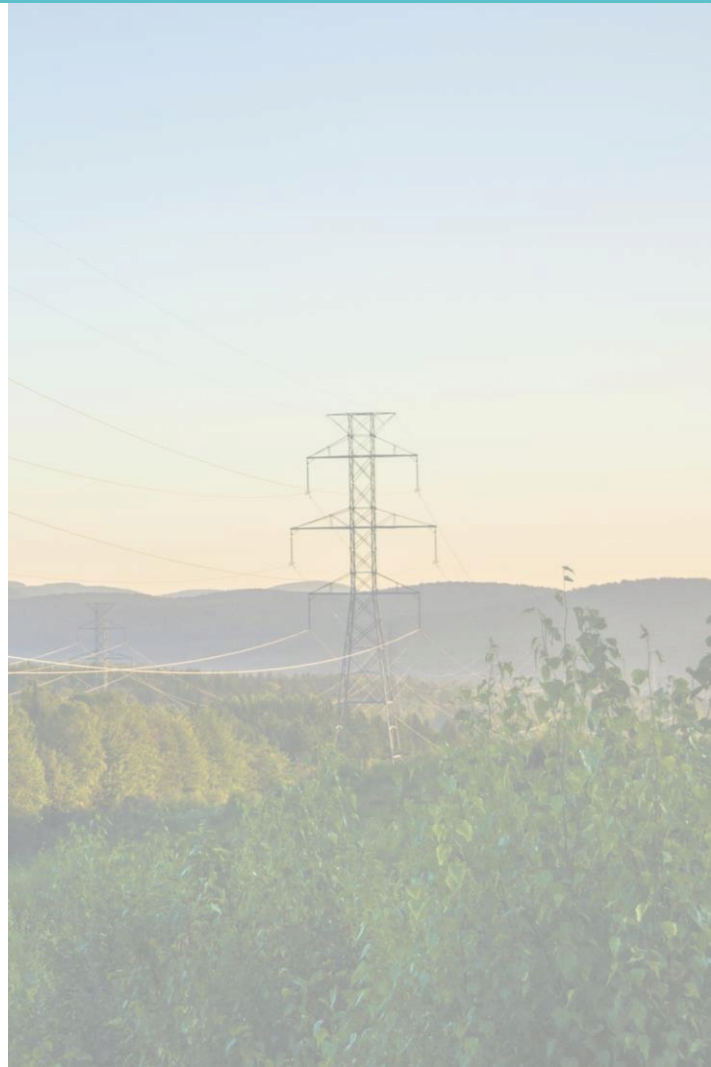


Project benefits

- Less power outages because of vegetation due to comprehensive risk assessment and clearing validation
- Reduction in clearing costs due to
  - flexible, as-needed clearing planning optimization
  - Effort based tender process
  - Higher utilization of, e.g., mechanized clearing
- Less manual effort with clearing validation
- Fully integrated Ecological Corridor Management increasing landowner’s and customer’s satisfaction

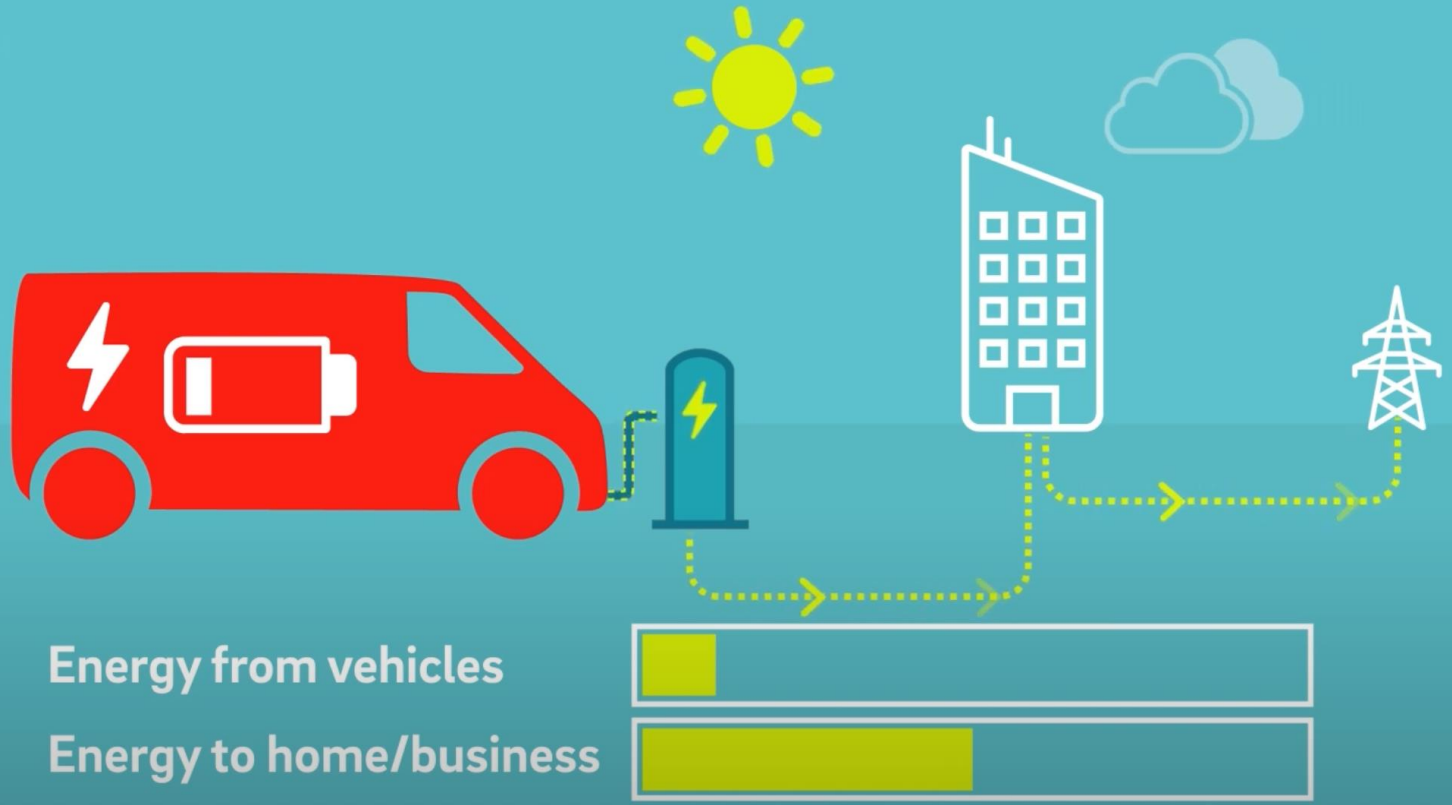



Vehicle2Grid

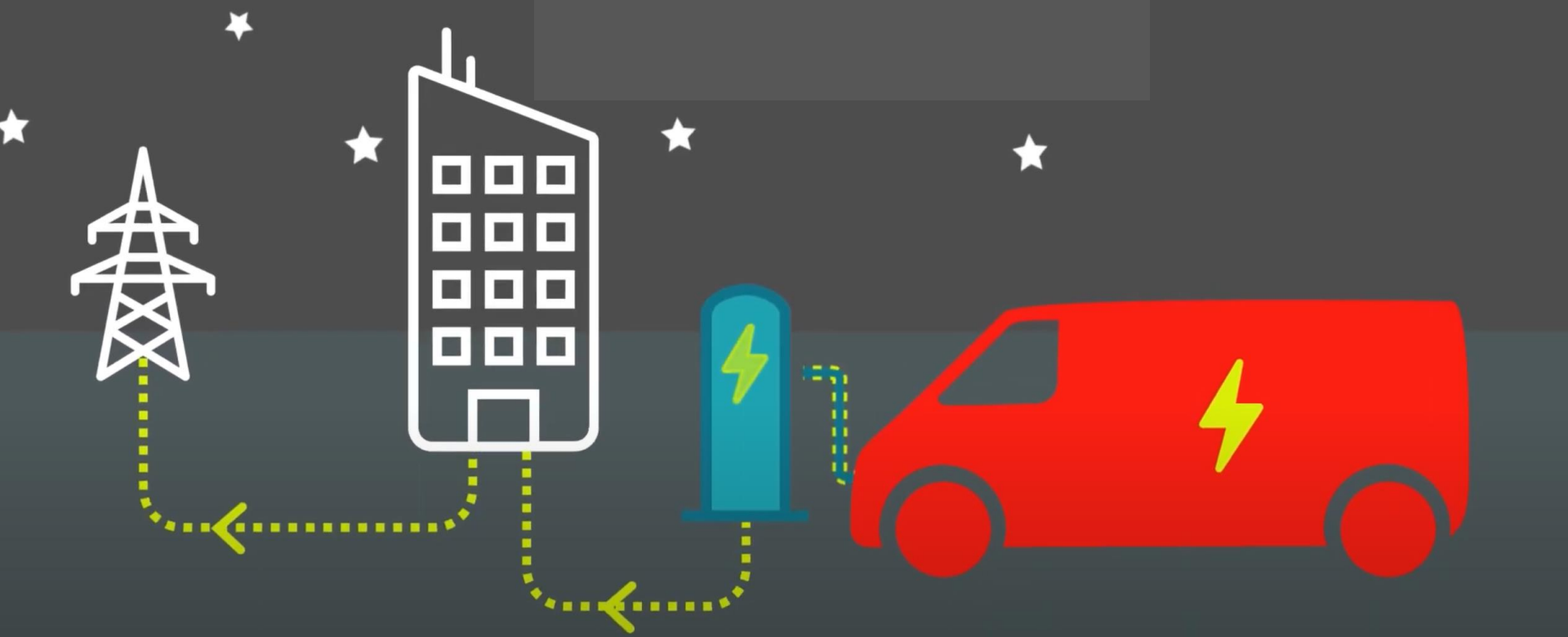
The challenge: Inefficient network usage

EV-fleet customers cannot steer when their cars are charged. Therefore they are often charged when energy is more expensive and the network is under higher stress.

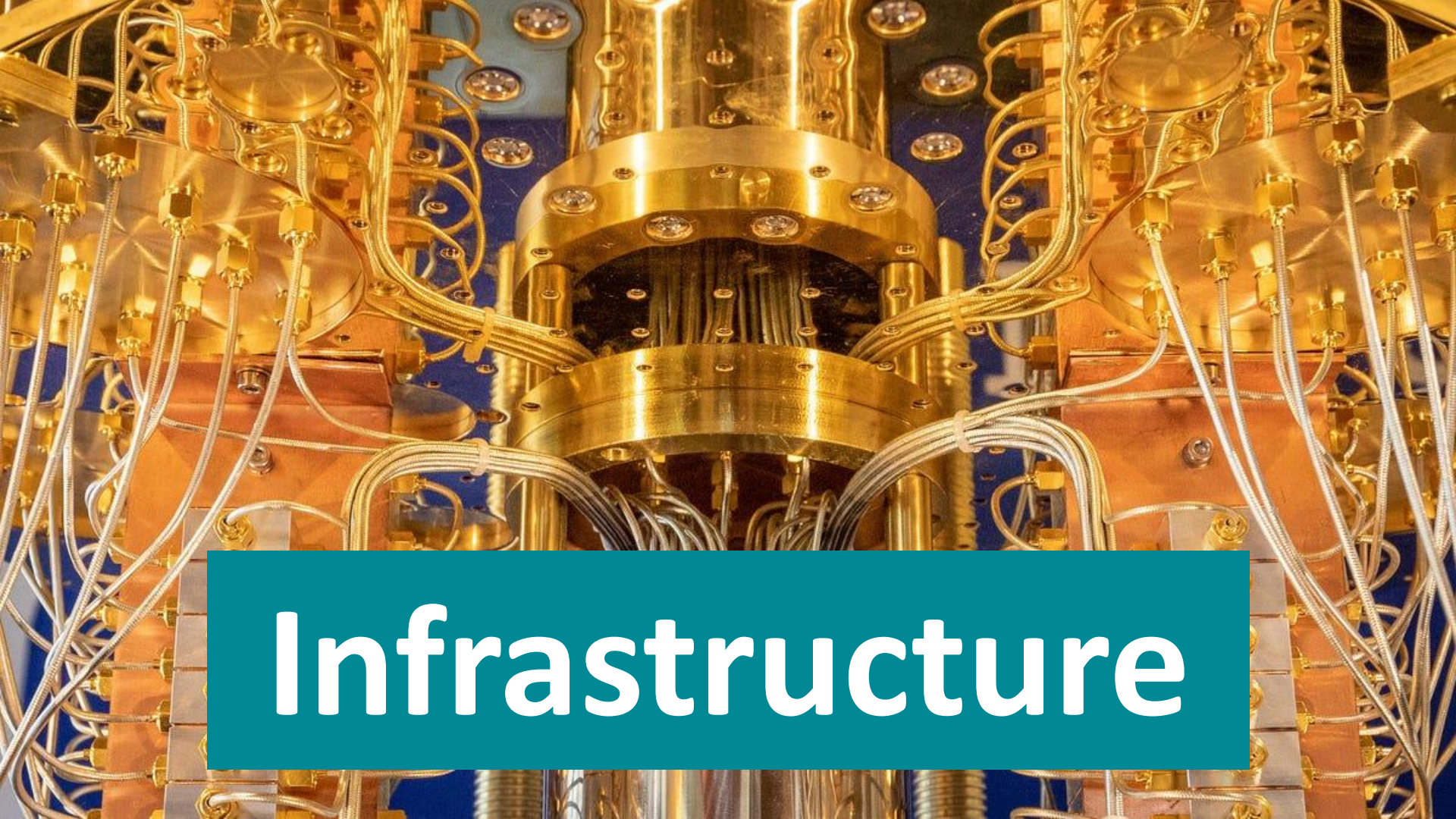
The solution: Leverage EV batteries during daytime…



…and charge them during night-time



All packed up into an attractive offering for fleet customers.

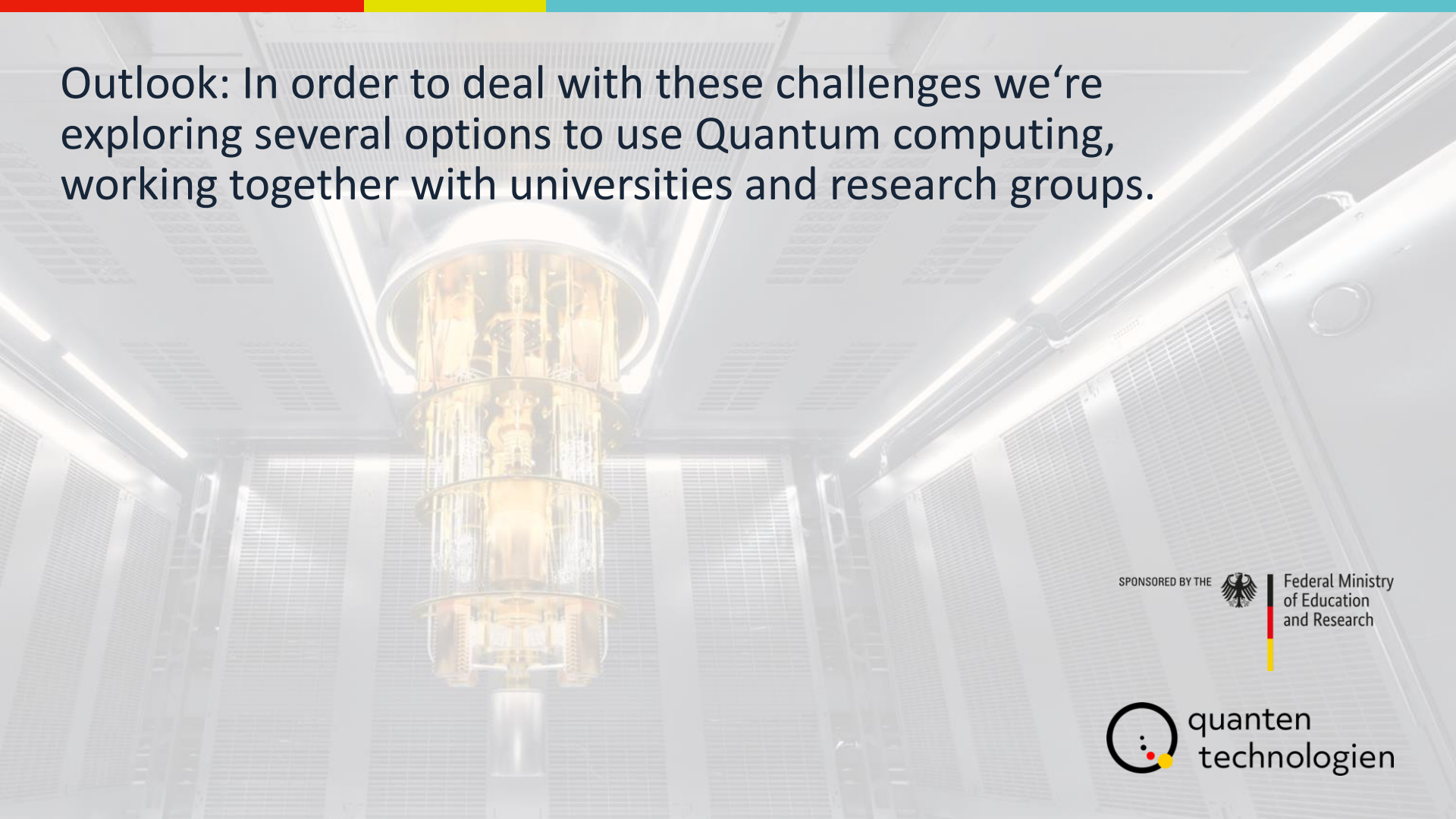


Infrastructure

The challenge: With an increasing number of smart devices in our network we need a way to analyse and process these vast amounts of data.

Over the next years we can expect millions of additional devices with energy-related information to be connected to the internet with tons of data to be processed.

Outlook: In order to deal with these challenges we‘re exploring several options to use Quantum computing, working together with universities and research groups.



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Thank you.

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