



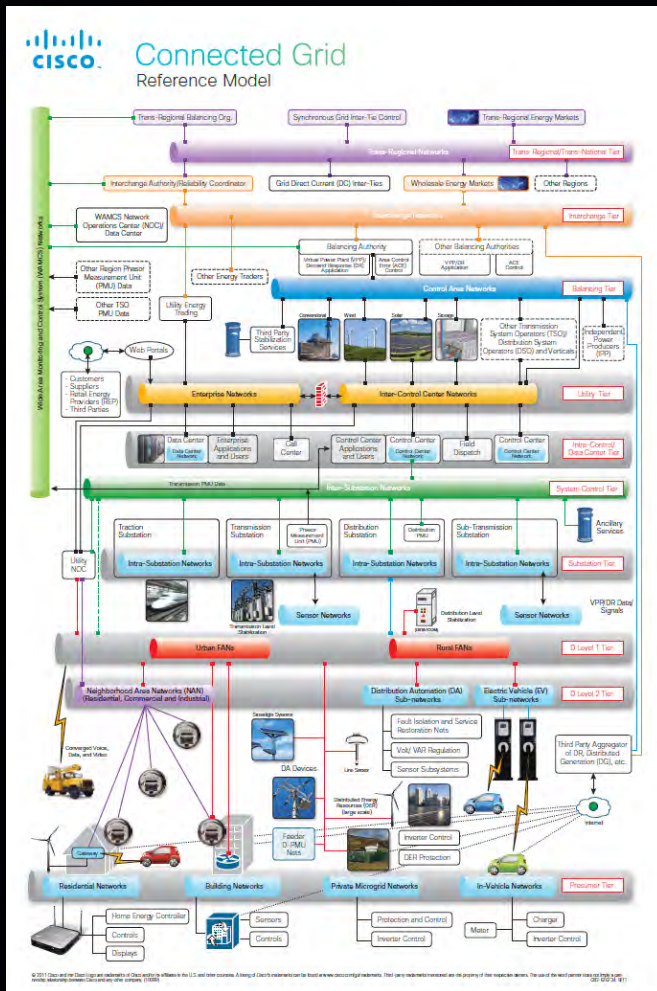
Digitizing the Energy System

Powering Innovation and Innovating Power

Rolf Adam, Director Energy & Smart Grid EMEAR

The Intelligent Energy System Cisco Vision

“ Transform energy production, distribution and consumption using an end-to-end IP platform to sustainably meet the world’s future energy needs. ”



Generation: Sustaining Operational Excellence

Generation



Picture: RWE

Offshore

From Monitoring to Robotics
How to ensure O&M in adverse conditions?

Conventional Global Remote

From Europe to Emerging
How to run power plants in South America / India from European headquarters?

Nuclear Operation/ Decommissioning

From Operations to Integrated Supply Chain
How to access a diminishing pool of experts?

Transmission: Operating Under Uncertainty

Transmission



Picture: Keymile

Legacy Technology

From Analogue to Digital
How to migrate systems, skills and employees to Smart Grid ready technology?

TSO – DSO Integration

From Central to Shared Responsibility for Stability
How to upskill DSO to cope with increased responsibility?

Prognosis and System Stability

From Experience to Algorithm
How to manage the future in an increasingly fragmented and complex system?

Distribution: Overboarding complexity

Distribution



Picture: Western Power

Grid Stability and Automation

From Dumb to Smart
How to technology enable Germany's 800+ DSOs?

Grid Based Storage

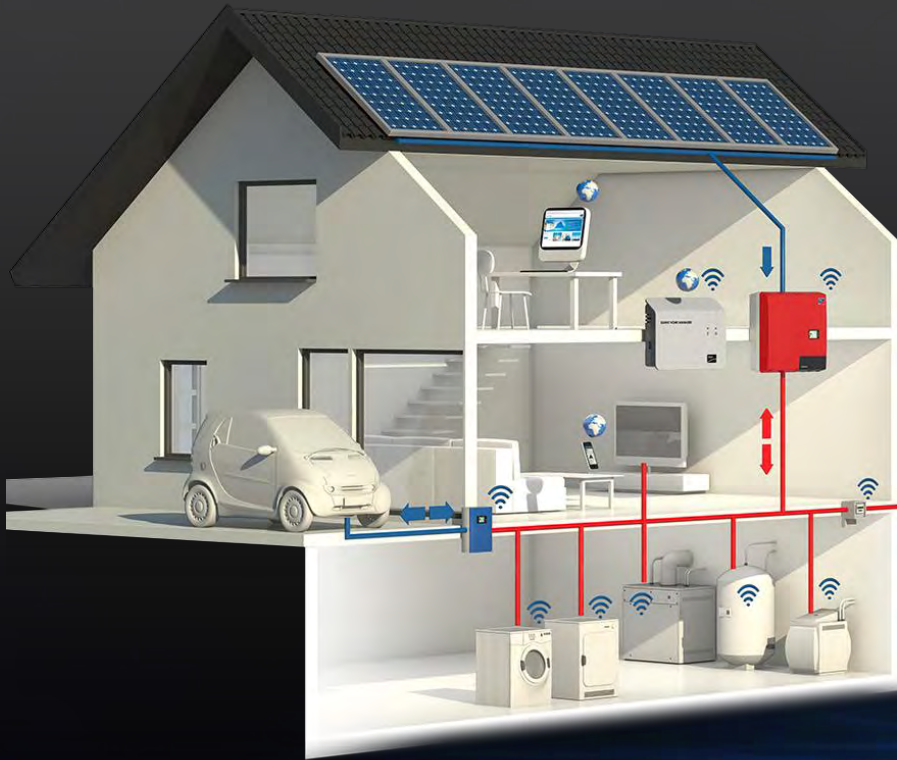
From Cables to Systems
Will storage replace cables and transformers?

Hybrid Infrastructures

From Single to Multi Purpose
How to align with mobility, lighting and communications?

Supply: Going Online

Supply



Energy aaS

From Electrons to Ambience
How will we consume energy in the future?

“Gridtailer”

From Retailer to System Operator
(When) will customers move off grid?

Live on Air

From Administration to Interconnected
How to run an interconnected household infrastructure?

How to Move Forward

- *Regulator: Develop the 2050 market design in line with new realities rather than building on incremental change*
- *ICT Technology Vendor: Make a conscious decision on solution ownership versus embedded systems*
- *(Infrastructure) Investor: Understand the evolving market for outsourced infrastructure intelligence and operation*
- *Utility: Prepare to align your business model with 2050 instead of betting the company on today's set-up*

Your Cisco Contact



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Thank you.