

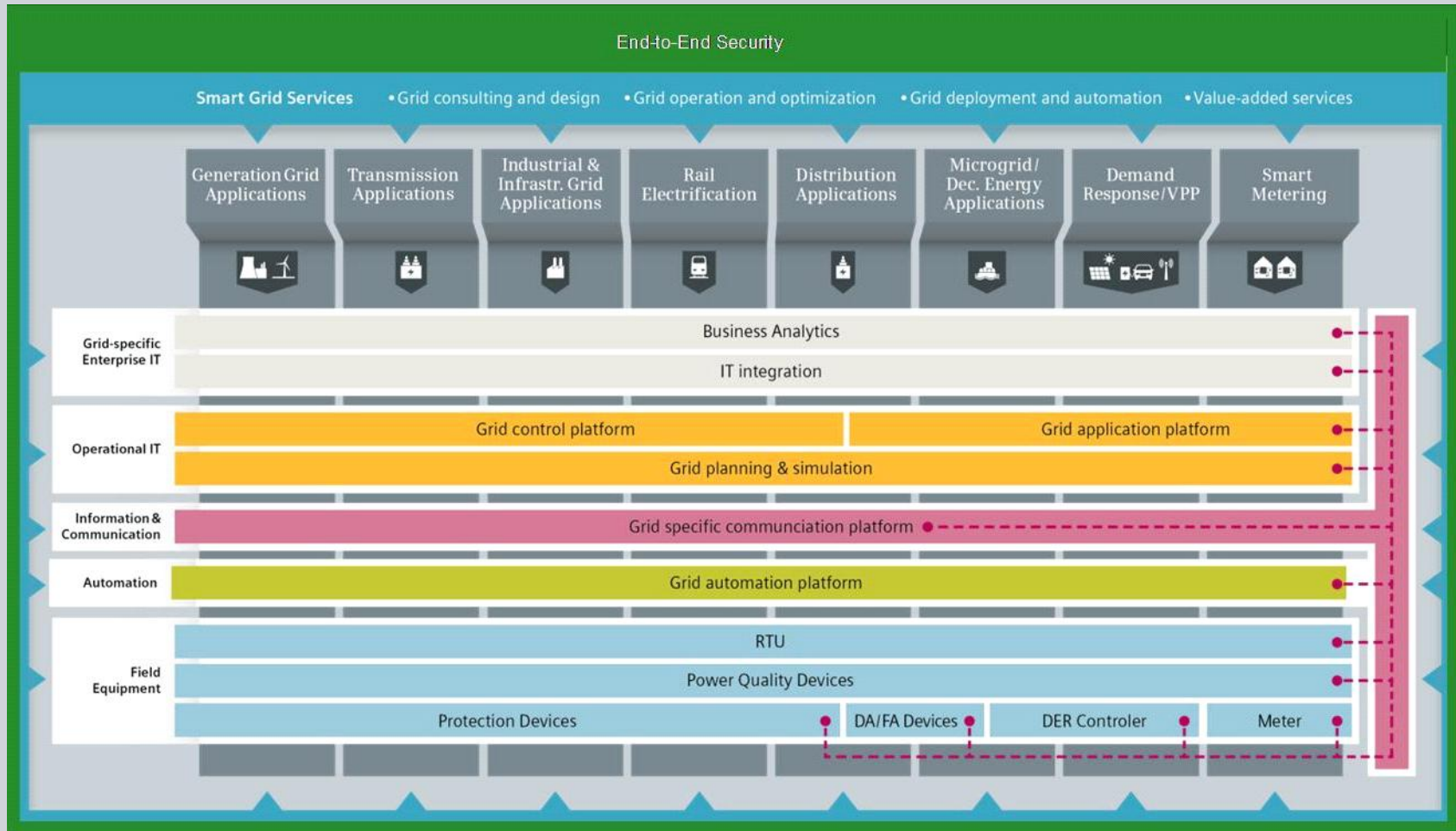
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Smart Communication – the Enabler for Smart Grids

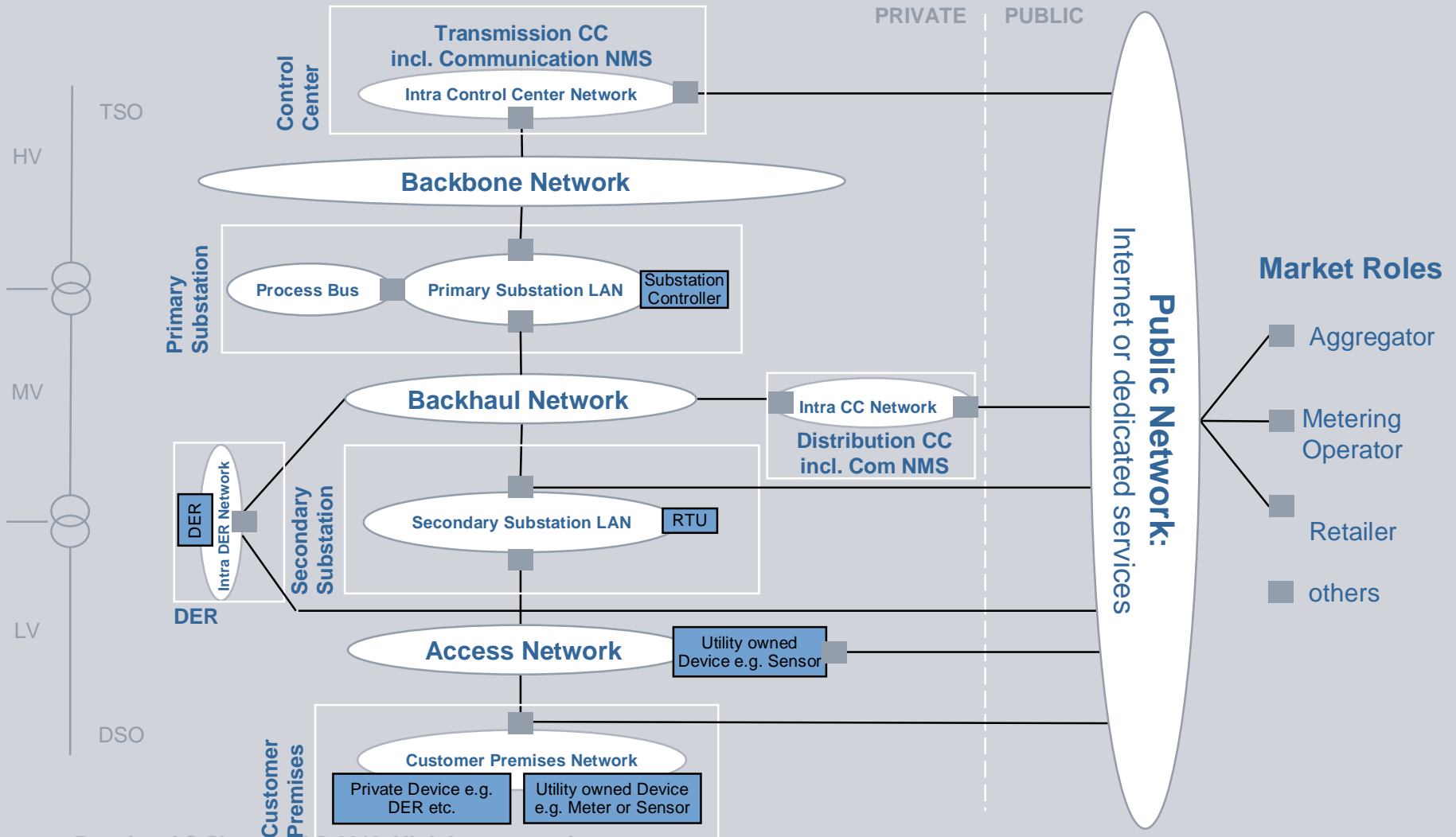
True customer value in Smart Grids

The Smart Grid Suite



The Smart Grid Communication Network

Comprehensive, Simple and Easy to understand



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The Smart Grid Plan

Common Network View

- Communication View of Smart Grid

Applications & mapping to Network Domains

- Smart Grid Applications
 - Advanced Metering, Distribution Automation, monitoring and control of distributed energy resources & etc.

Network Domain Requirements

- Requirements of the applications (e.g. Bandwidth, Latency, TCO, Ease of Deployment) result in
- Requirements for each Network Domain

Evaluation of Network Technologies

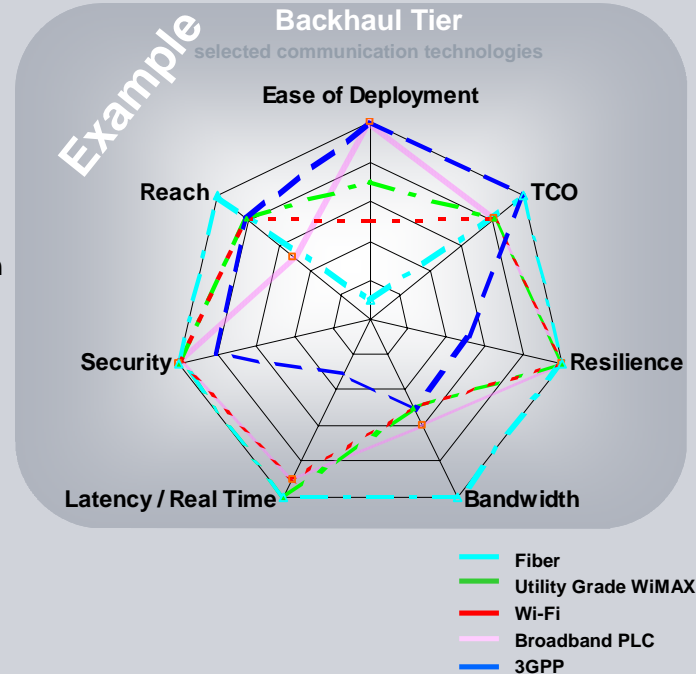
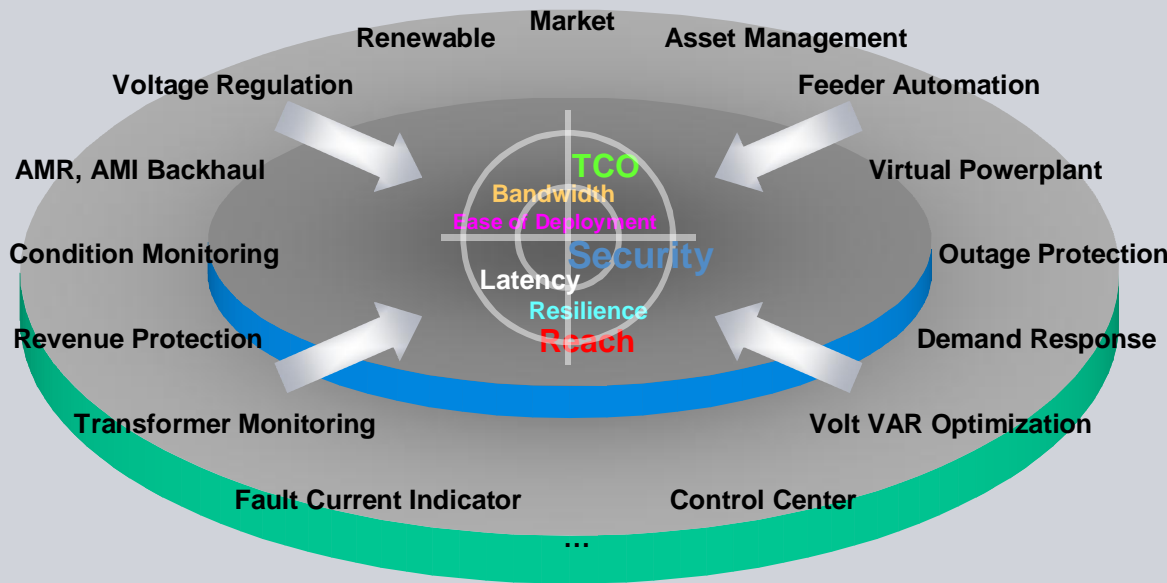
- Private Communication Network (e.g. Powerline, Fiber Optics, Utility WiMax) versus
- Public Communication Networks (e.g. xDSL, 3GPP)

External Influences

- Regulation
- Regional differences
- New service offerings

Results in a comprehensive view on a simple and easy to understand communication network architecture for all applications

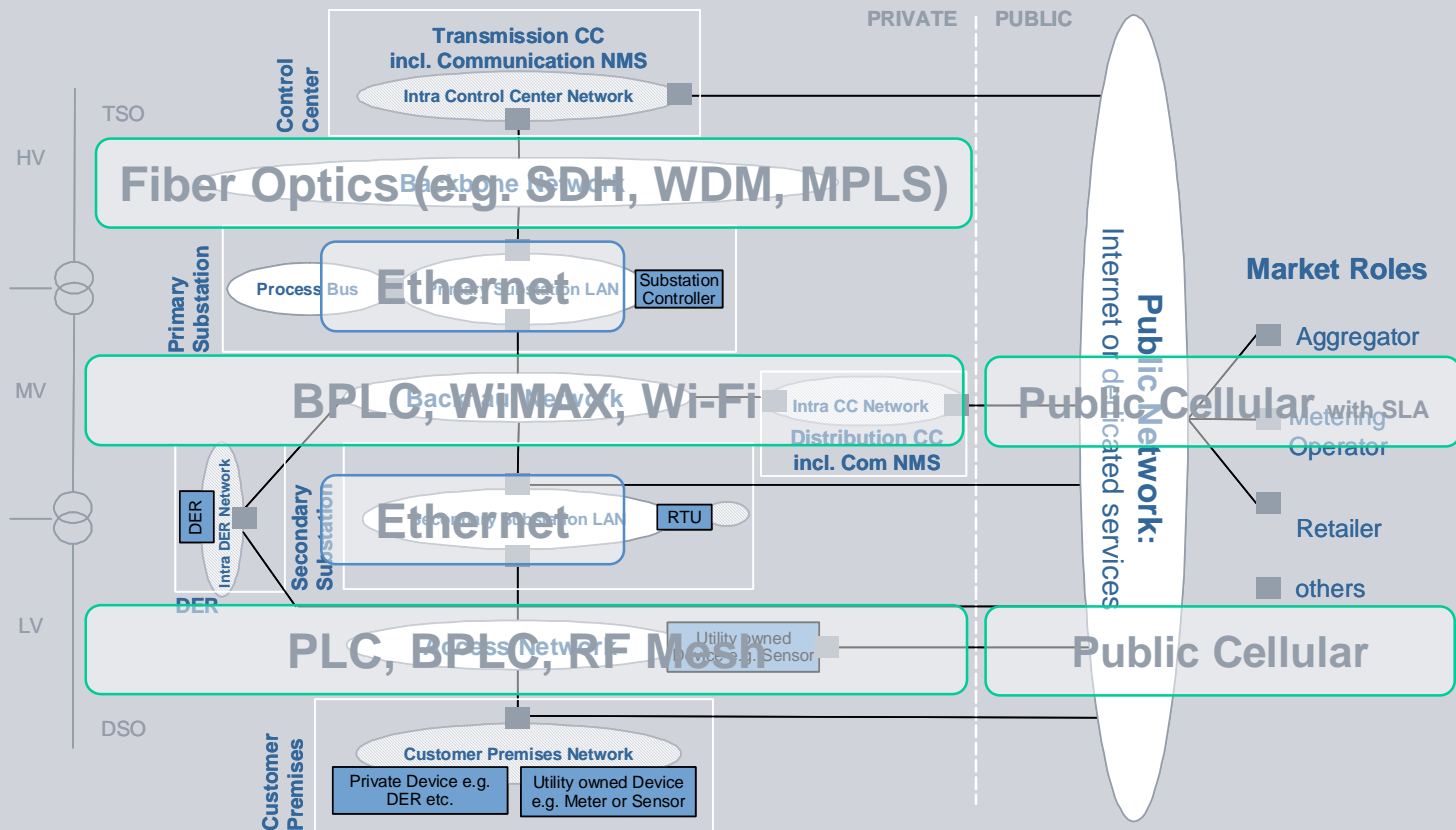
A plethora of Applications and Drivers Which Communication Technology to chose?



The applications and boundary conditions drive the decision on the best technologies and their mix

The Smart Grid Communication Network

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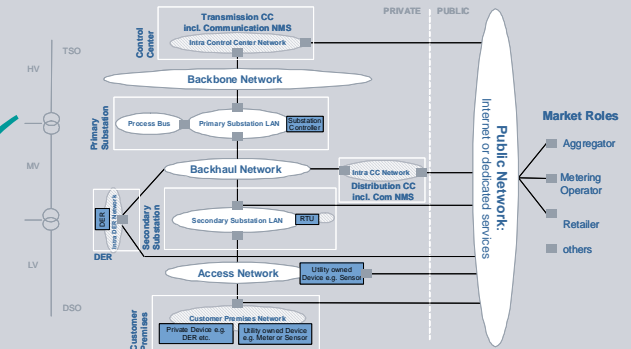


- Stakeholder view and regional differences impact the choice of technology
- Backhaul & Access Networks will be Hybrid Networks using mix of different technologies

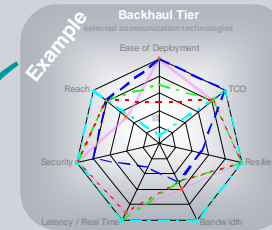
The Smart Grid Communication Networks

Comprehensive, simple and easy to understand

- A comprehensive yet simple and easy to understand view on Smart Grid Communication Networks
- One Network Architecture serving all applications
- The Stakeholders View is important



- Communication Technologies complying to the applications' requirements are available today
- Utility Networks will be deployed using a "Mix & Match" approach



- Utilities will need experienced Solution Providers to build these heterogeneous communication networks



Siemens White Paper

Further information is available in Siemens White Paper „Smart Communications for Smart Grids“

<http://w3.siemens.com/smartgrid/global/en/resource-center/Pages/whitepapers.aspx>

