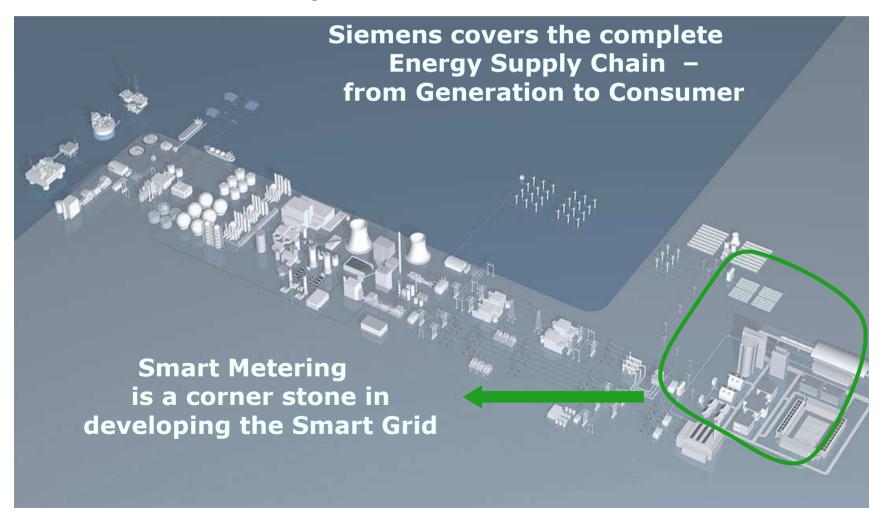
Meter Data Management as Central Data Hub

Dr. Monika Sturm Siemens AG Austria Roundtable 6C

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Future Electricity Grids Will Become "Smart"



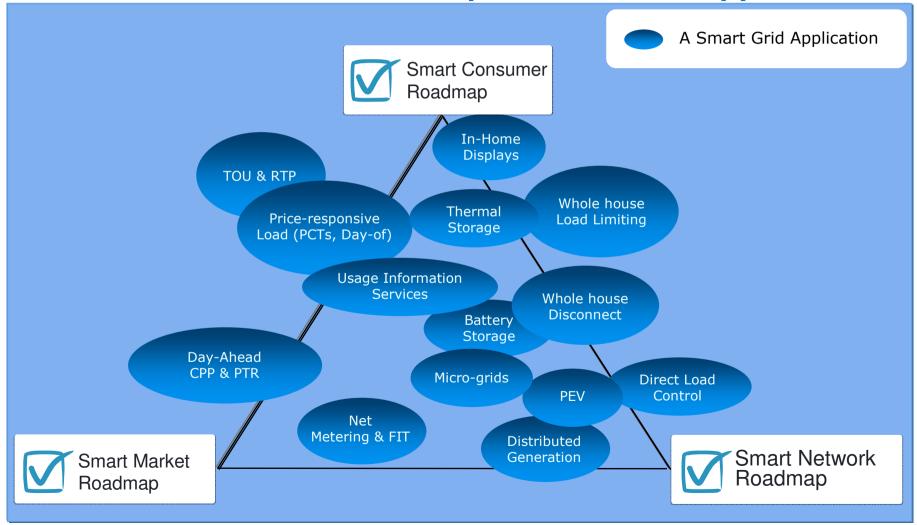


Smart Energy Evolution

Policy & Regulations **Global Activity** EU 20/20 Smart Infrastruiture Build US Smart Grid Ontario **Basic first** Australia Meter install <u>Innovation</u> UK Smart Meters Meter to cash Operations Critical mass of installations Open data access New service offerings Regulatory evolution Automation We are here © Siemens AG 2011

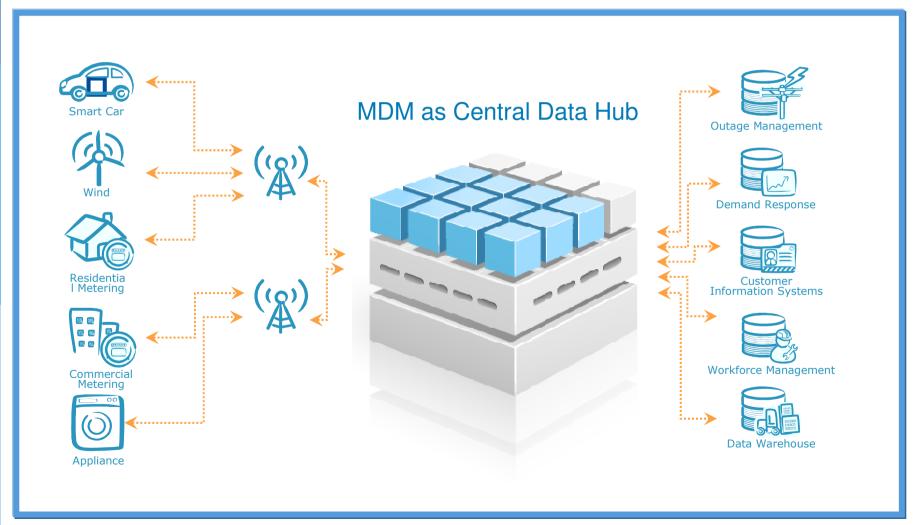


MDM as foundation for multiple Smart Grid Applications





Future oriented MDM Architecture





Smart Consumer Roadmap



Critical Peak

Prices &

Smart

Control

Smart Interval Metering



Consumer Engagement



Solar Net Metering & Feed-in-Tariffs TOU & Pricing
Programs









Smart Appliances







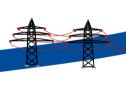
Smart Network Roadmap



Smart Interval Metering



Outage Event Automation



Forecasting & Asset Planning



Emergency Load

Controls

Interactive Grid Operations



Bi-directional Grid Operations & Voltage Mgmt

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Network Load & Loss Analysis





Smart Market Roadmap

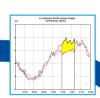


Smart Interval Metering



Enhanced Supplier

Switching



Profile to Interval Settlements



Aggregated Renewable Scheduling

Storage & Ancillary Services



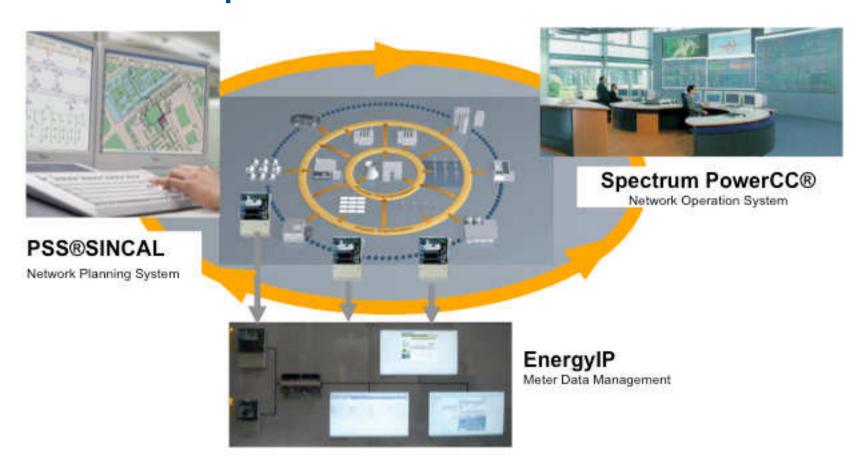
Enhanced Energy Shopping

Microbilateral Agreements



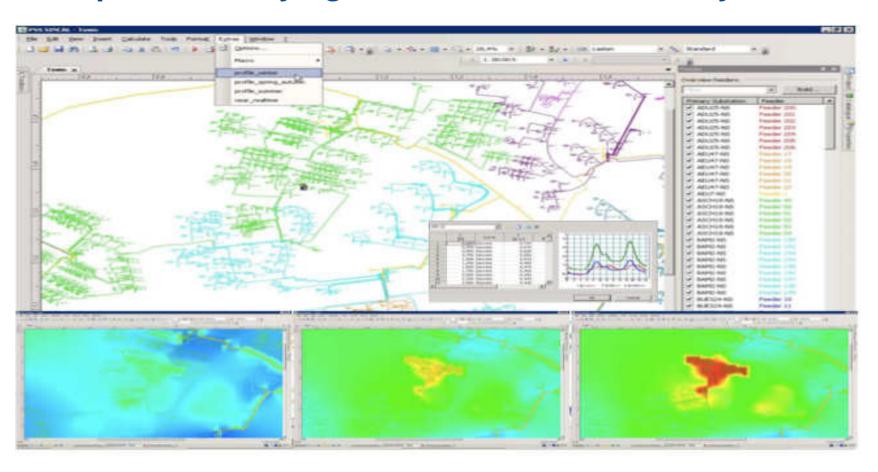


Smart Grid Operation with Real-Time Meter Data





Example for a varying Network Load over a Day



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Summary



Commercial Operations

Serving Customers & Markets

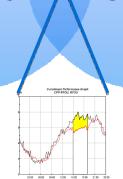
- •CRM/CIS
- Billing & Tariffs
- Credit & Collections
- Payment Services
- Settlements
- Customer Analytics
- •ERP



New Customer Services

- Data Acquisition
- Data Integrity
- Information Services
- Interactive Operations
- Device Configurations
- Multi-vendor
- Multi-network
- Device Security





Smart Networks

- Energy Management
- Outage Management
- Asset Utilization
- Network Planning
- Demand Dispatch
- Network Analytics