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### Agenda



- 1. Innovation Drivers
- 2. Innovation Examples
- 3. Innovation Roadmap



### Driver for innovations in the energy system





Renewable generation in distribution grids



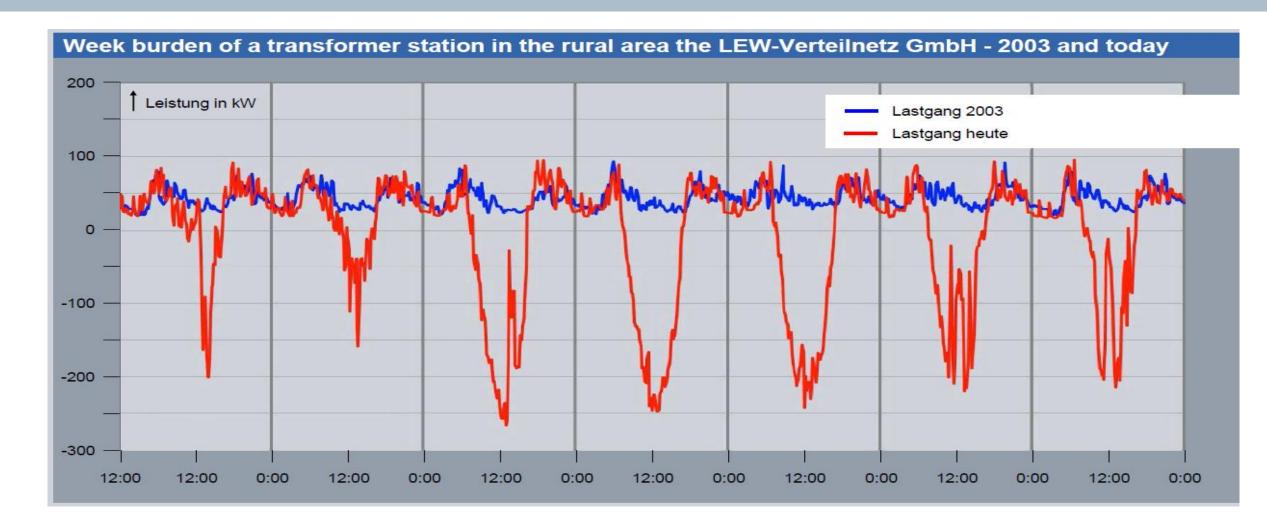
Increasing electrical loads in LV distribution grids

Aging and/or weak infrastructure

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### Renewable integration in distribution grids





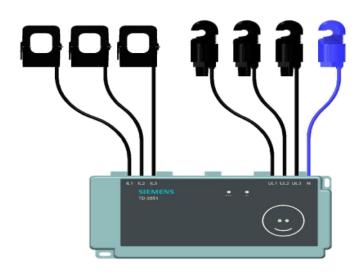
### **Smart Buildings - Customer Energy Management (CEM)**

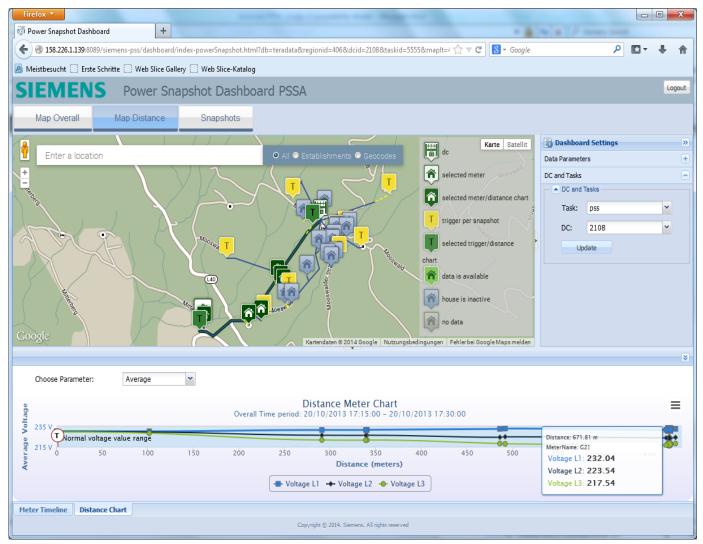


#### **Innovation Example 1:**

#### **SIEMENS**

### **Grid Monitoring Device & Datenauswertung - AMIS TD-3551/3552**





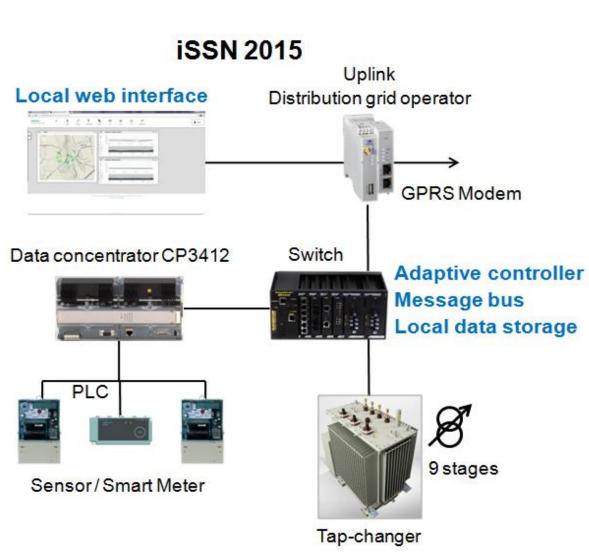


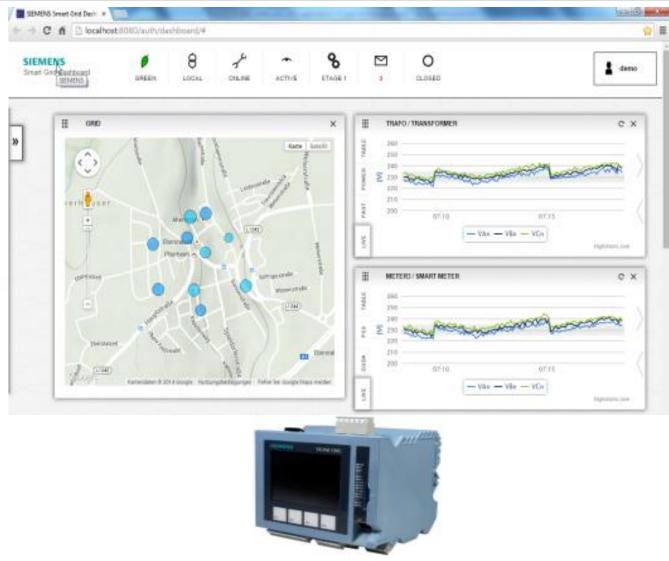
### Innovation Example 2: FITformer® REG –v2





# Innovation Example 3: Smart Low Voltage Grid - Development of intelligent Monitoring & Control

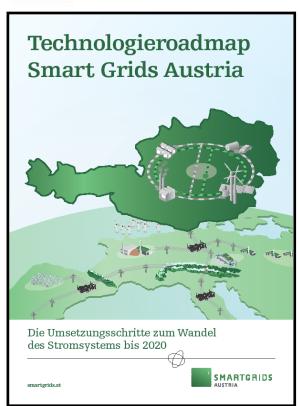


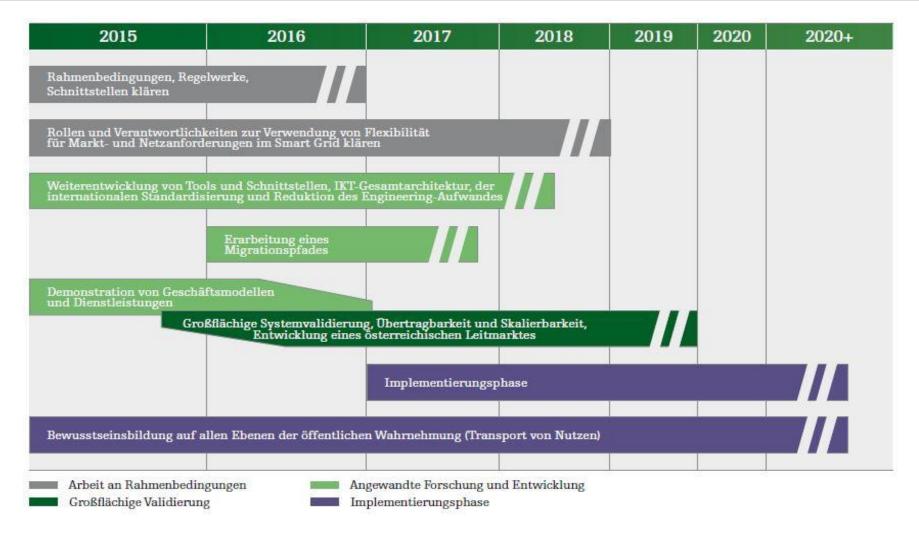




# On the Road (map)... Technology roadmap Smart Grids Austria – Implementation path until 2020







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### **Innovation - Smart Grid Migration Path**

### **Smart Grid Migration Path**

### Goal: Optimising of <u>CAPEX + OPEX !</u>

**Grid** 

Efficieny gain

**Efficieny gain** 

Monitoring

without active control

with active control

- Continous grid monitoring
- Data validation
- ➤Topology mapping/

- **➢** Big Data
- > Business Analytics
- Operative and strategic grid planning

- > Voltage Control
- Overload Control
- > Automatic Switching
- ➤ Smart Market / Smart Grid / Smart Building interaction

Smart ICT concepts and web technology based solutions to support

"Life Cycle Management for distributed automation systems" & "Plug and Automate"



### Thank you for your attention!





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