„Welche Möglichkeiten für neue Energiedienstleistungen bietet die Analyse von Smart Meter Daten für Erdgas und Wärme?“
SMART METERING IN GERMANY
Residential Smart Meters for Electricity, Gas

» EU expects 80% of meters to be made „smart“ by 2020
» Current smart meter roll-out size <1 %
» Missing mandate and regulatory framework
» Challenge:

ARCHITECTURE DRIVEN APPROACH TOWARDS SMART METERING

Is the current norm

» Not directly starting with customer or end-user benefit

» Challenge for distribution grid operators
  • Obliged to pay for smart meters
  • No (or miniscule) subsidy
  • Limited by regulators for charging to end-users

» Large delay in standards, interoperable set of technologies
  • BSI gateway pitfall: Costly and complex design, drifting specification
  • Data security and privacy focus a hurdle

» Paradigm change complex: From billing towards energy efficiency
BENEFIT DRIVEN APPROACH
Cost vs Benefit Analysis based solutions is our way

» Customer benefit driven rather than architecture driven

» Benefit oriented solutions
  • Itron‘s smart metering solutions
  • co2online‘s Hemon platform
  • Innovative co2online-Itron Initiative: Value for consumer, utilities and building associations („Wohnungsgaugeschellschaft“)
CROSSING THE CHASM FOR SMART METERING

Value for utilities and end user by starting proprietary and upgrading to standard on mandate

- Building owners
- Consumers

- New revenue streams by value added energy services & consulting
- New customer acquisitions via USP
- Creating the motive to shift to smart meters

MEASURE & CONTROL
Meters, Telemetry module, Modems

COLLECT
Advanced Data Collection Software

ANALYZE
Heat energy monitoring (Hemon)

End-User

Retrofittable
Cyble upgrade
On mandate

UTILITY/ ”MSB” SYSTEM
Kwh? I don’t know what this all is about!
Yes, I get my energy bill. Is it high or low? I cannot tell…
I try to save energy. But it is very difficult for me to judge what works and what doesn’t…

Julia needs a dashboard showing her consumption. It should be translated into a format she understands.
Unusual high consumption and saving successes over a certain period should be easily spotted.

What is the overall energy efficiency of our home?
I never got an energy pass from our landlord…
How do I compare to others?

Marc would need an “online“ energy efficiency check. Hot water conditioning and heating make up more than 75% of an average energy bill!
He should know where he stands for his main energy parameters: thermal loss, energy consumption function, maximum heating load, base load, the temperature his heating system starts operation.
CARITAS FREIBURG PILOT

Improved Heat Energy Monitoring for Building Owner

» Setup
• Smart meters
• Modem
• Energy savings account
• Data analytics platform Hemon

» Functions
• Building efficiency class detection
• Heating energy estimate for drinking water
• Optimal boiler operation

» Building owner Benefits
• Improved building diagnosis and cost saving
• Early detection of accidents and technical problems
CARITAS PILOT RESULTS
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## CARITAS PILOT RESULTS

<table>
<thead>
<tr>
<th>Kennwert</th>
<th>errechneter Wert</th>
<th>Darstellung</th>
<th>Zähler</th>
<th>Basiszeitraum</th>
<th>Diagramm freigeben</th>
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SUMMARY

» Smart metering in Germany is at snails pace because crossing the chasm is a big challenge

» Benefit driven approach can accelerate to cross this chasm

» We have proposed an innovative initiative for smart energy services creating a win-win for consumers (real value) and utilities (new services)

» Approach is future proof for BSI via cyble upgrade and Discovergy is available as partner to reduce utilities investment risk
THANK YOU