„Welche Möglichkeiten für neue Energiedienstleistungen bietet die Analyse von Smart Meter Daten für Erdgas und Wärme?„

Andre Wankelmuth, Dr. Ashok Chandra-Sekaran, Dr. Johannes Hengstenberg

14.06.2016

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:

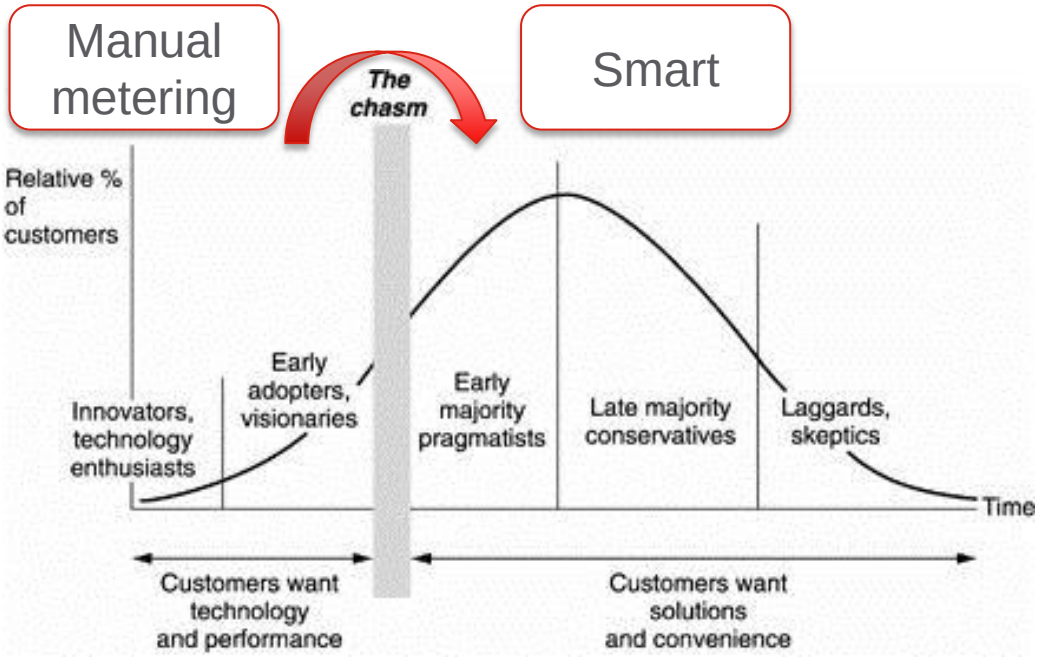


Image source: http://platformsandnetworks.blogspot.de/. Business Model Analysis

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

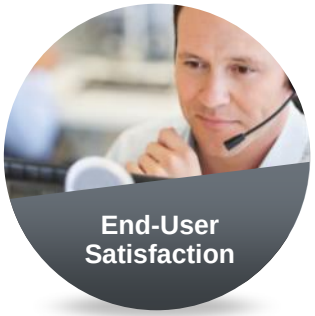
- Large delay in standards, interoperable set of technologies
  - BSI gateway pitfall: Costly and complex design, drifting specification
  - Data security and privacy focus a hurdle

- 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 („Wohnungsbaugeschellschaft“)

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

End-User

Retrofttable
Cyble upgrade
On mandate

DISCOVERGY
ENTDECKE DEINE ENERGIE

UTILITY/ ”MSB” SYSTEM

MEASURE & CONTROL

Meters, Telemetry module, Modems

COLLECT

Advanced Data Collection Software

ANALYZE

co2online Heat energy monitoring (Hemon)

WHY?
What is the need?

WHAT?
What is the value proposition?

HOW?
How could it look like?

Kwh? I don't know what this all is about!

Yes, I get my energy bill. Is it high or low? I cannot tell…

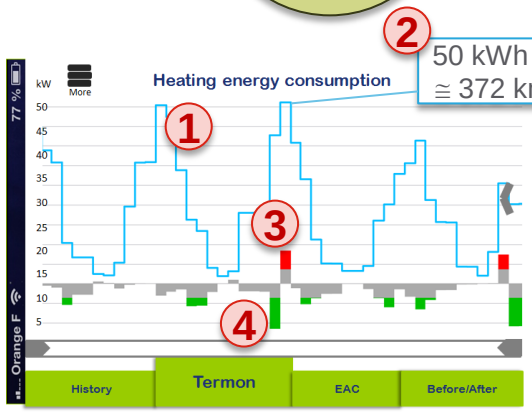
I try to save energy. But it is very difficult for me to judge what works and what doesn't…

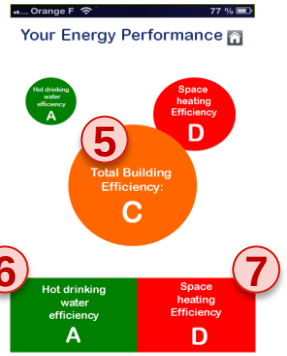
Julia

Julia needs a dashboard showing her consumption[1].

It should be translated into a format she understands[2].

Unusual high[3] consumption and saving successes[4] 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….

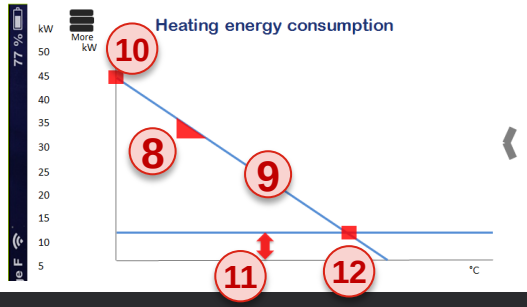
How do I compare to others?

Marc

Marc would need an „online" energy efficiency check[5].

Hot water conditioning[6] and heating[7] make up more than 75% of an average energy bill!

He should know where he stands for his main energy parameters: themal loss[8], energy consumption function[9], maximum heating load[10], base load[11], the temperature his heating system starts operation[12].



CARITAS FREIBURG PILOT

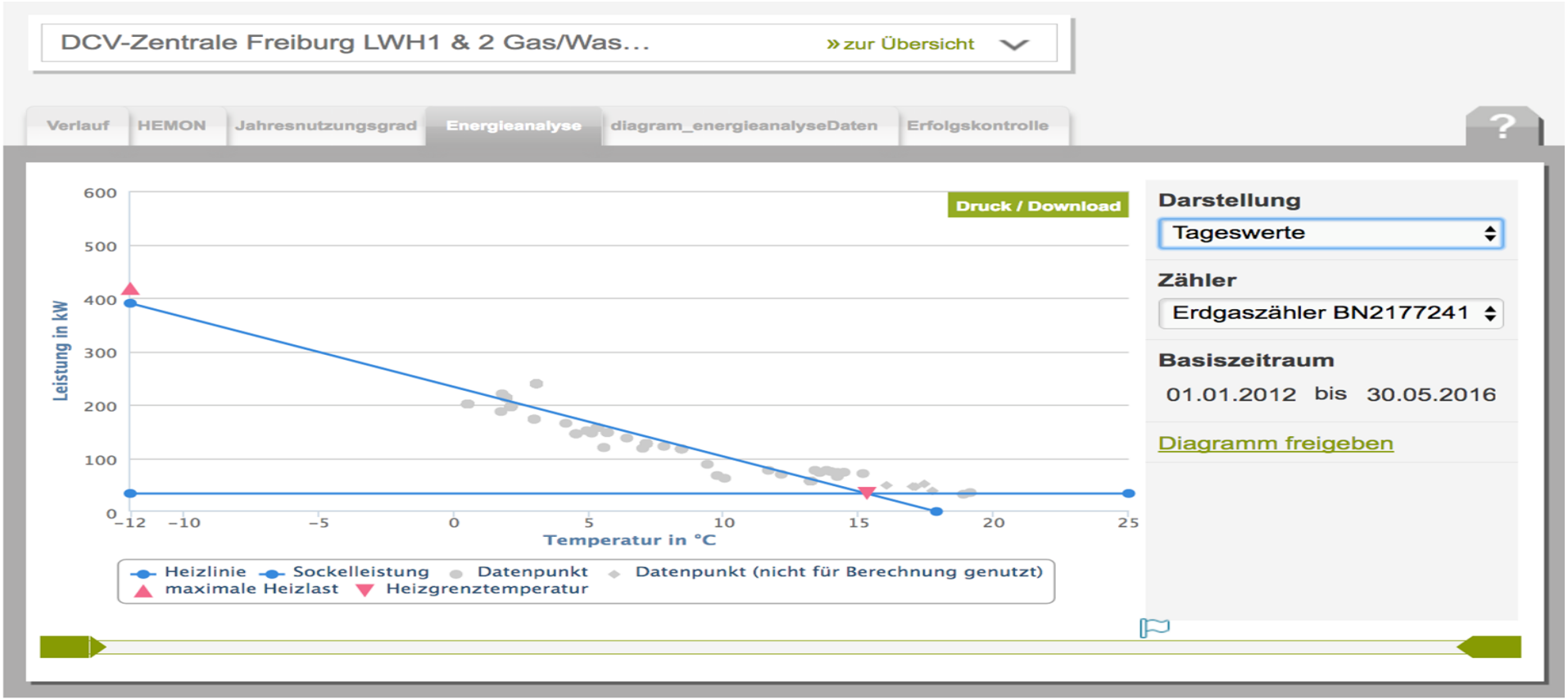
Improved Heat Energy Monitoring for Building Owner

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

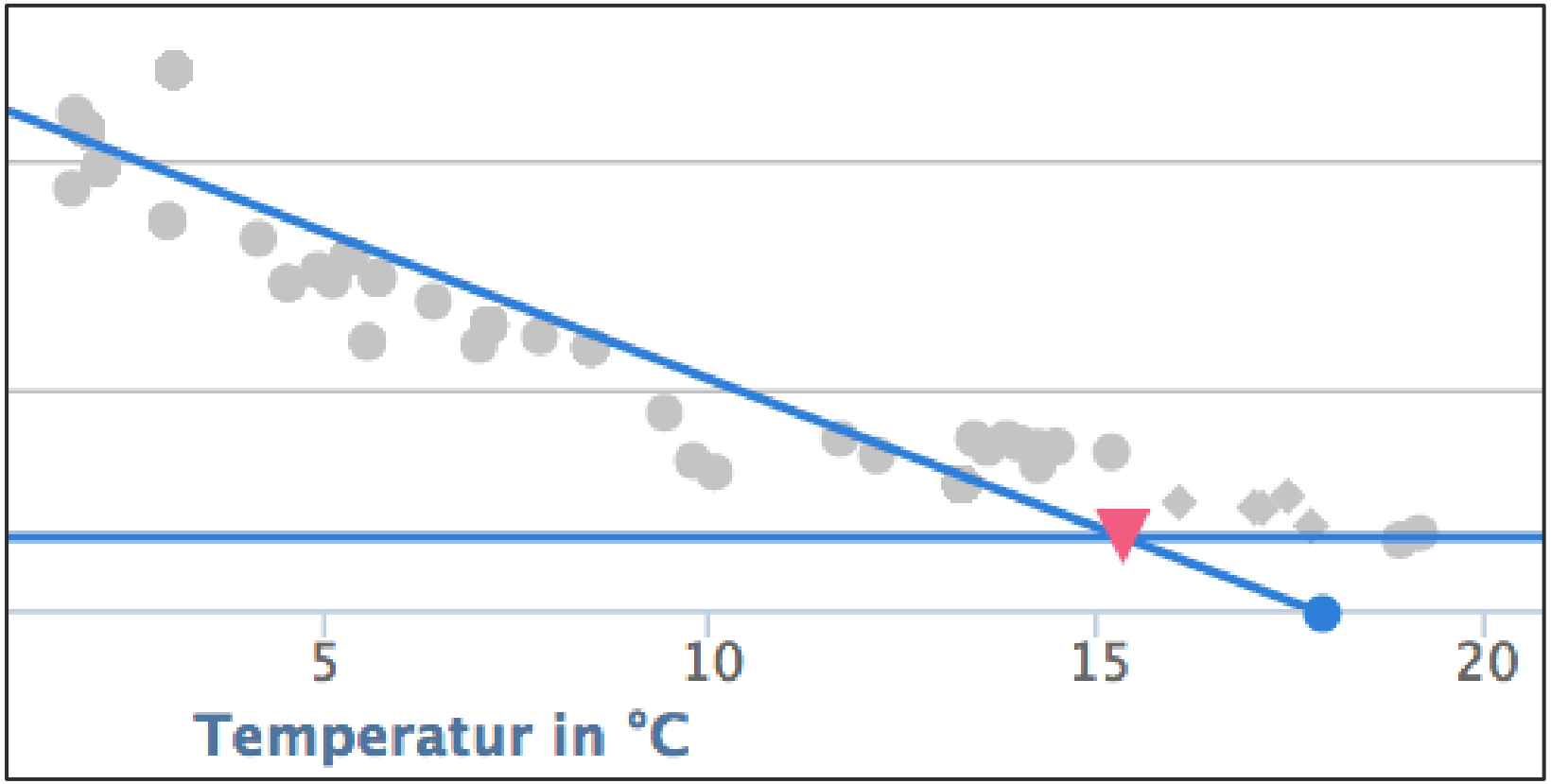
» Functions
  - Building efficiency class detection
  - Heating energy esimate for drinking water
  - Optimal boiler operation

» Building owner Benefits
  - Improved building diagnosis and cost saving
  - Early detection of accidents and technical probelms

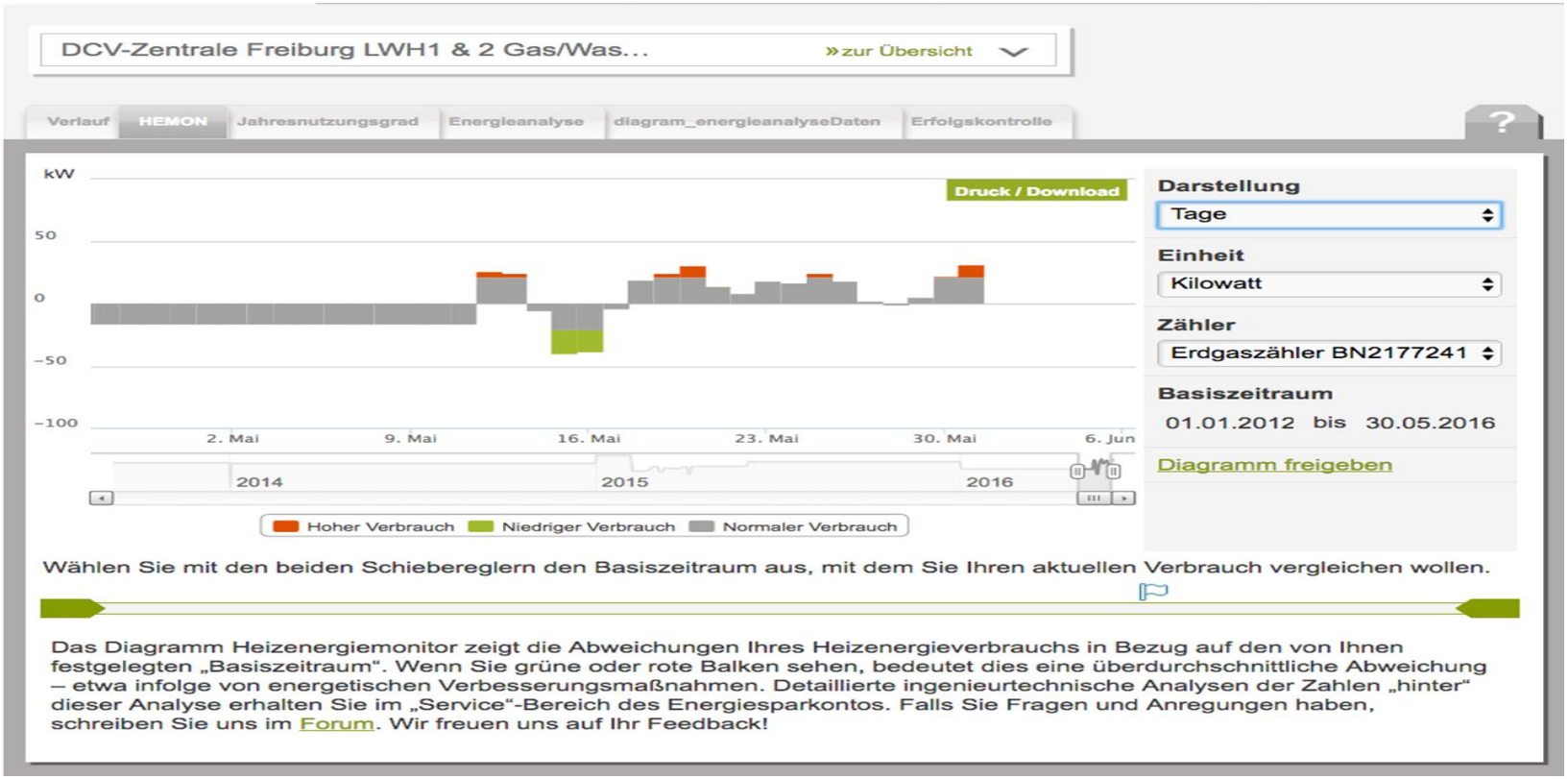
CARITAS PILOT RESULTS



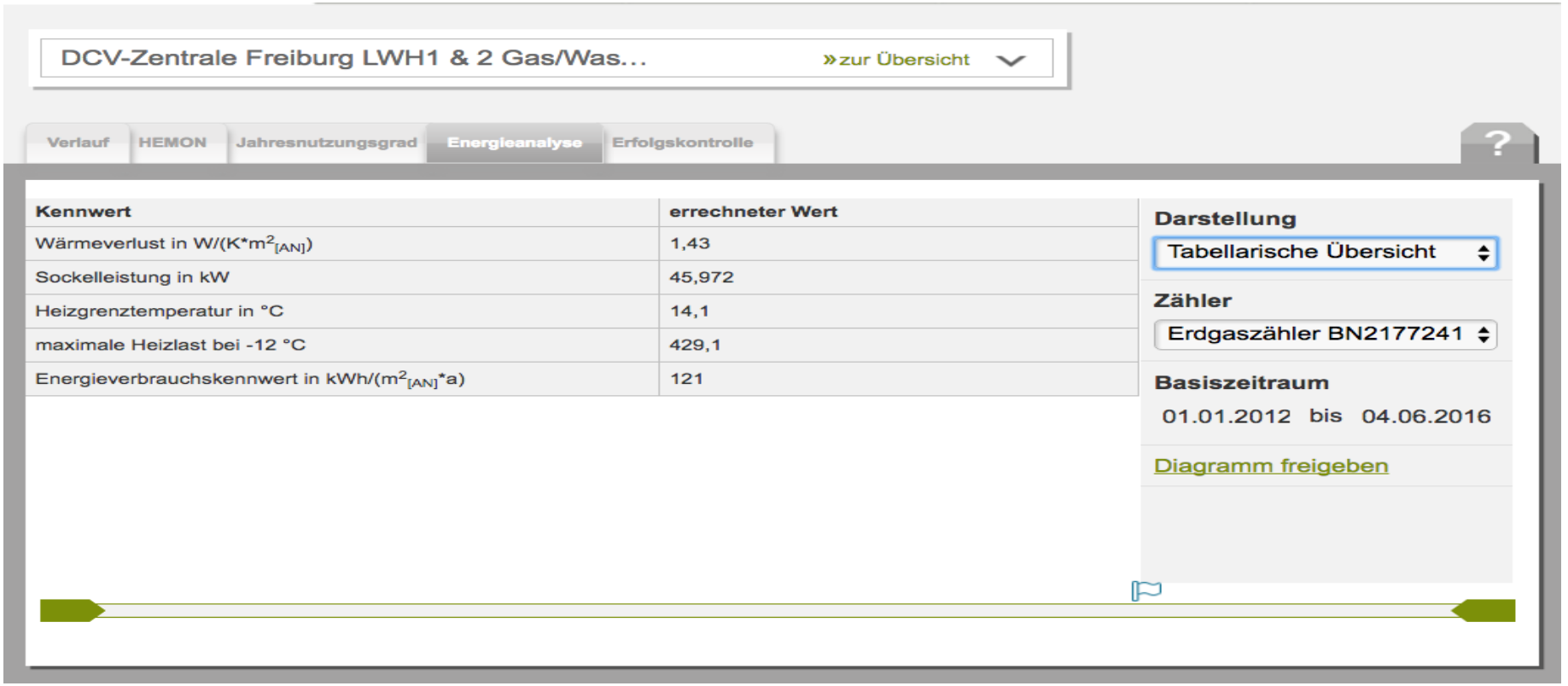
CARITAS PILOT RESULTS



CARITAS PILOT RESULTS



CARITAS PILOT RESULTS



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 utilties (new services)
- Approach is future proof for BSI via cyble upgrade and Discovergy is available as partner to reduce utilities investment risk

THANK YOU

Itron

www.itron.com