



A European project supported within the 7th framework programme
for Research and Technological Development



WEB to Energy: Report of Landis+Gyr

July 27, 2010



Landis
|Gyr+



Why is Landis+Gyr part of the Project?

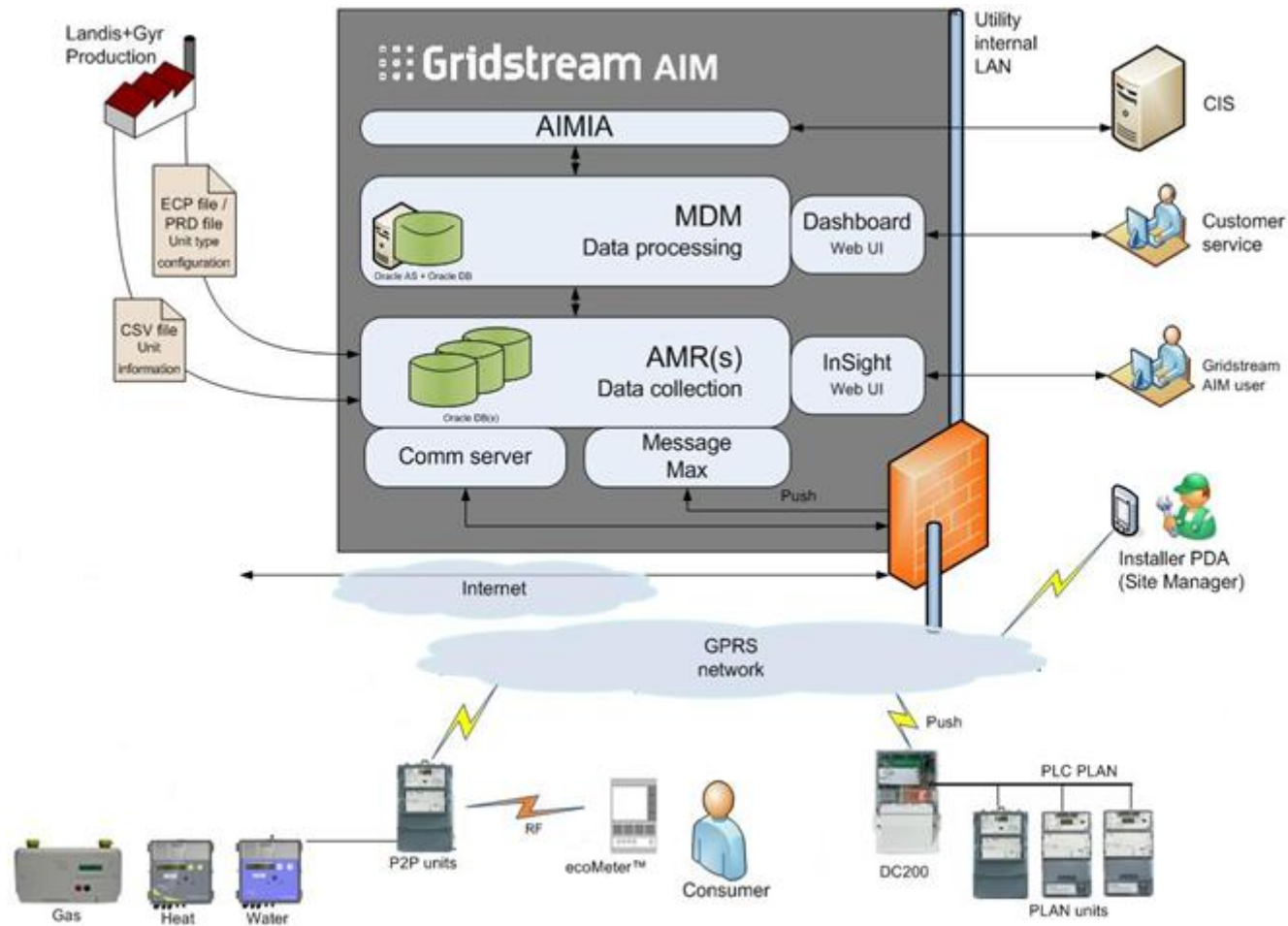


- Count +Care, the meter operator of HSE, is using the AMM-System including residential meters from Landis+Gyr.
 - AMM: Gridstream AIM
 - Communication: GSM/GPRS
 - Smart Meter: E350
- Leverage the existing AMM-system to be used in the W2E project
- The target: connect the current AMM-System to the *HEAG medianet*.

A screenshot of a utility management dashboard. The top section is titled 'UTILITY PROCESSES' and contains five icons: 'CUSTOMER SERVICE' (a person with a headset), 'BILLING' (a computer monitor), 'INFORMATION MANAGEMENT' (a person holding a tablet), 'BALANCE SETTLEMENT' (a person at a desk), and 'NETWORK FUNCTIONS' (a person at a desk). Below this is a section titled 'AMM SOFTWARE' with a bar chart and two buttons: 'MDM' and 'AMR (HES)'. The next section is 'COMMUNICATION' with four buttons: 'GSM/GPRS', 'ETHERNET', 'PSTN', and 'PLC'. The bottom section is 'METER PARK' with a photo of a residential building at night and a button labeled 'RESIDENTIAL METERING'.

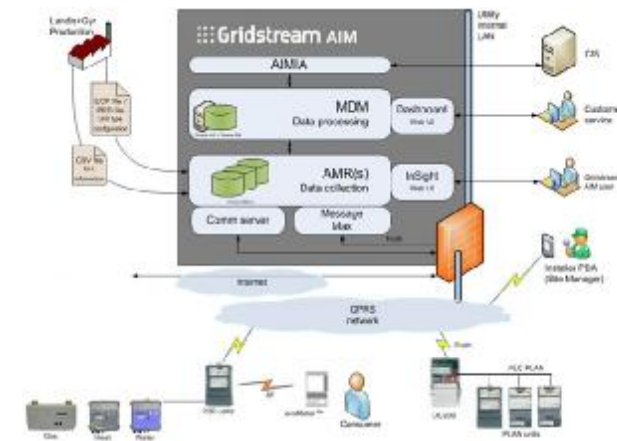
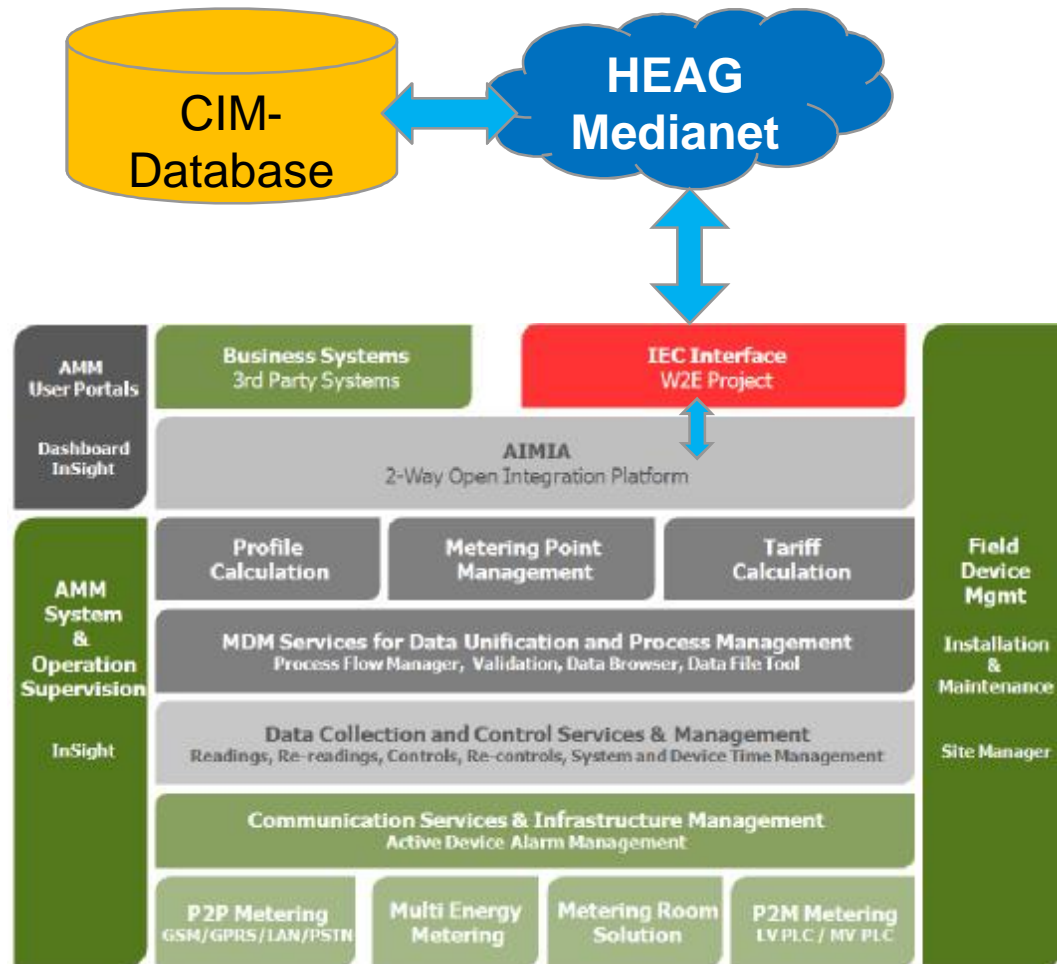


Gridstream AIM system overview





Connecting the existing AMM-System to W2E



Scope of Landis+Gyr:

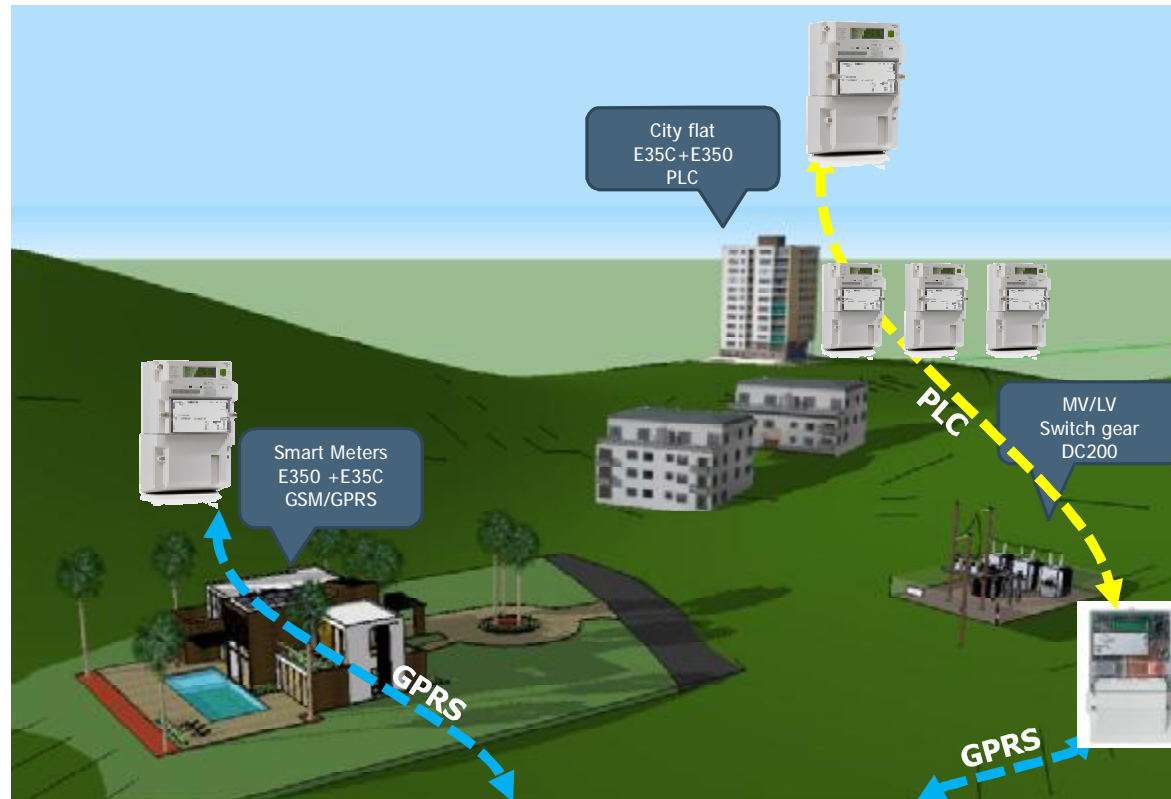
- provide information on the AIMIA interface to enable a third party (UTinnovation) to develop the IEC converter/interface



Communication to/from the smart meter

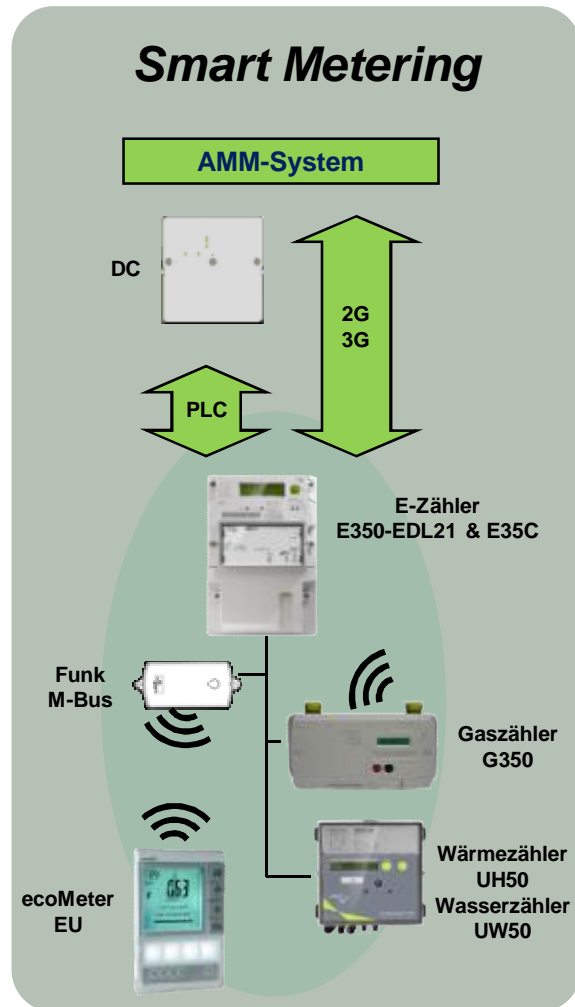
- .
- GSM/GPRS
 - point-to-point communication
 - high service reliability (response time etc.)

Options for Smart Meters used in the W2E project





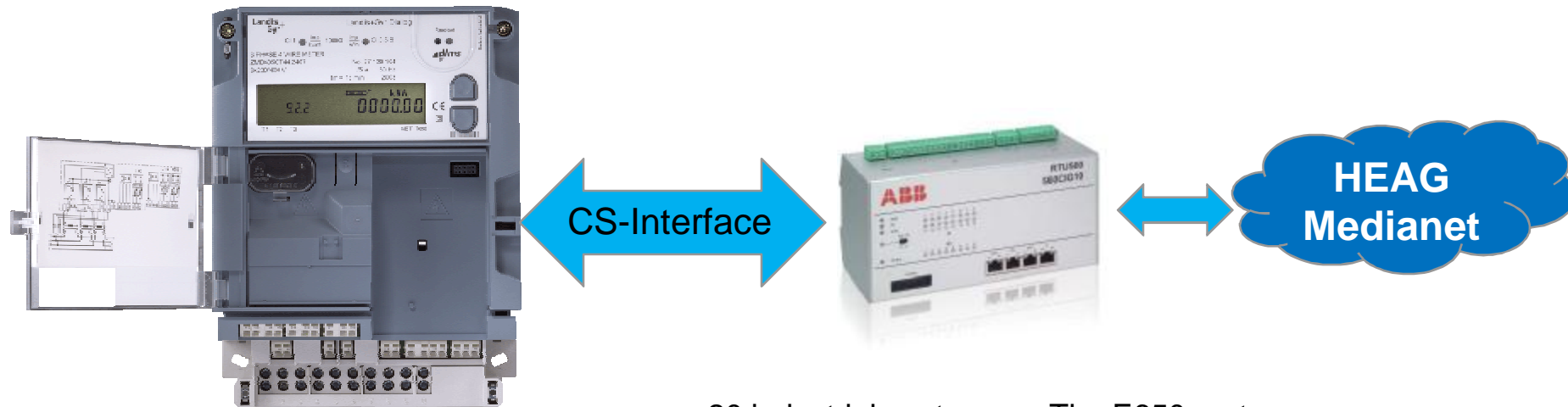
Objective no 1 in B.1.1 of annex 1: Customer Integration



- 200 residential customers: The E350 meter is the interface to the customer
 - The meter supports up to 6 tariffs
 - Tariffs are activated based on a time schedule (e.g. HT -> 6:00-22:00; NT -> 22:00-6:00). Different schedules at different days are supported (e.g. on weekends different tariff activations)
 - New tariff schedules can be downloaded at any time
 - The meter is equipped with a loadprofile (1h or 15 min. interval), which is usually not used for billing purpose.
- Optional Home-Display (not part of W2E)
 - consumption of electricity, gas or water in €, kWh, liter (actual and last interval)
 - CO₂ consumption (actual and last interval in kg CO₂/h)
 - historical consumption data for the last day, last week and last month



Industrial meters for Power Producers



+ Different Interfaces available:

- CS (20mA)
- RS232
- RS485
- M-Bus
- PSTN
- GSM
- GPRS

• 20 industrial customers: The E650 meter

- measuring active energy
- measuring reactive energy
- load profile used for billing purpose
 - synchronized to full hour
 - usually 15 minute interval
 - billing registers: energy and/or power
 - power quality: voltage, current, frequency
- dlms protocol



Summary and Status

- We will provide the information on the AIM interface
- We will provide 180 smart meters for residential applications
 - E350 meter with GSM/GPRS communication modules
- We will provide 20 industrial meters for power producers
 - E650 meters with CS interface

