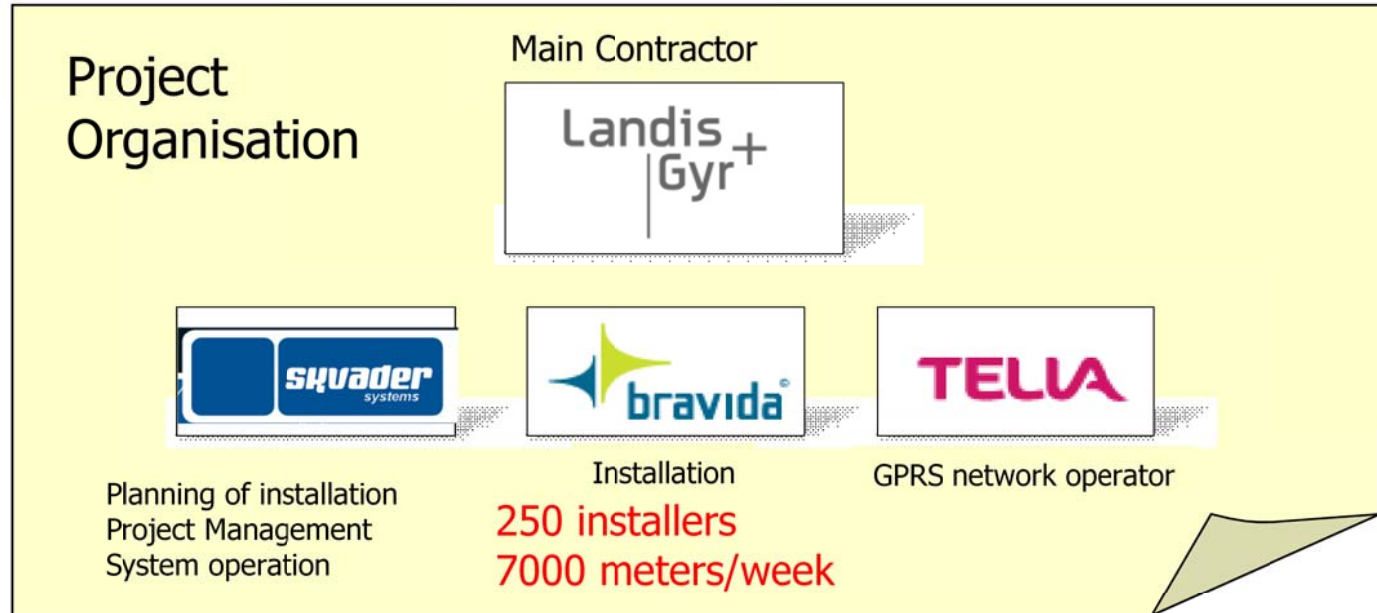
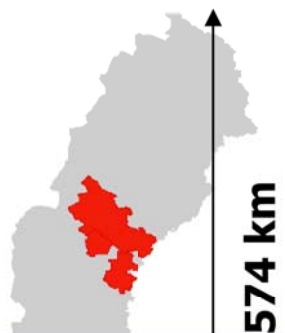


Smart Metering: towards an European standard fulfilling the market and legal requirements

Thomas Schaub, Landis+Gyr, Switzerland

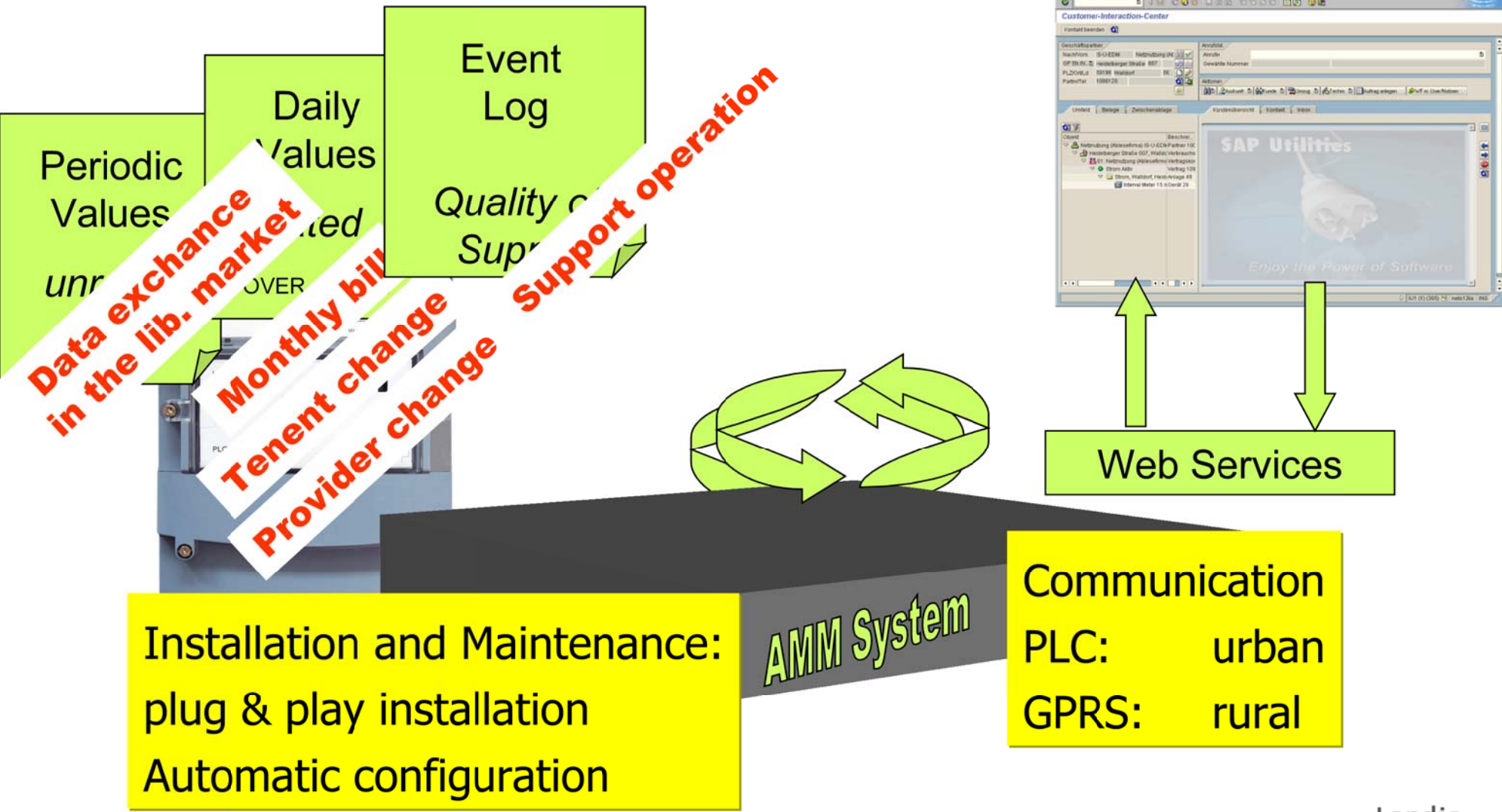
The Scandinavian experience: an example



Data delivery:

- + Reading residential meters: daily, values frozen at 00:00
- + Delivery of residential meter values: monthly
97% within 24h; 100% within 5 days
- + Delivery of C&I meter values: load profile, daily before 06:00
- + Delivery of instantaneous values: 10 min after request
- + ...

Advanced Meter Management (AMM) end-to-end solution



The new European requirements for smart metering

- open, interoperable systems and components
-> standard applications, standard protocols
- integration of gas, heat and water
- new services to end-customers
- exploitation of new communication technologies:
Internet Protocols, PLC -> OFDM, radio -> Zigbee

Major European Initiatives

Iberdrola PRIME

Open standard for next generation PLC based on OFDM

Landis+Gyr:

-> integration into existing (P-LAN, DLMS) framework

NL Utility / Manufacturer Group



Kema, Eneco, Nuon, Essent, Delta + L+G, Act

defining
supporting
application
for PLC
communi

... and Germany ?

Some organisations are driving their own solutions

- MUC
- SML
- M-Bus
- ...



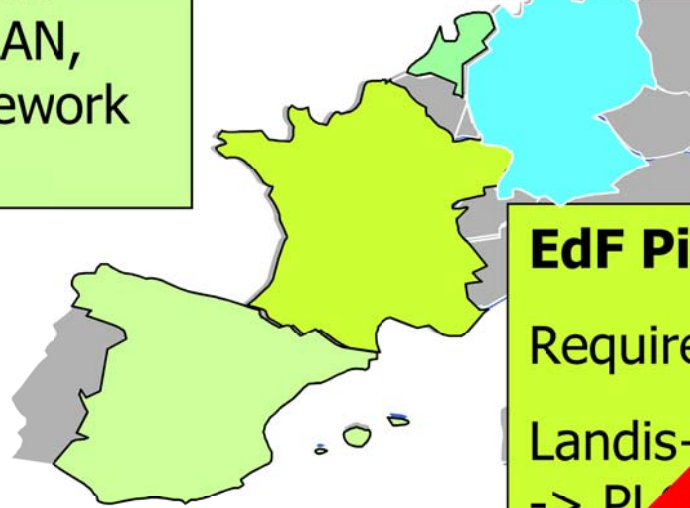
EdF Pil

Requirements

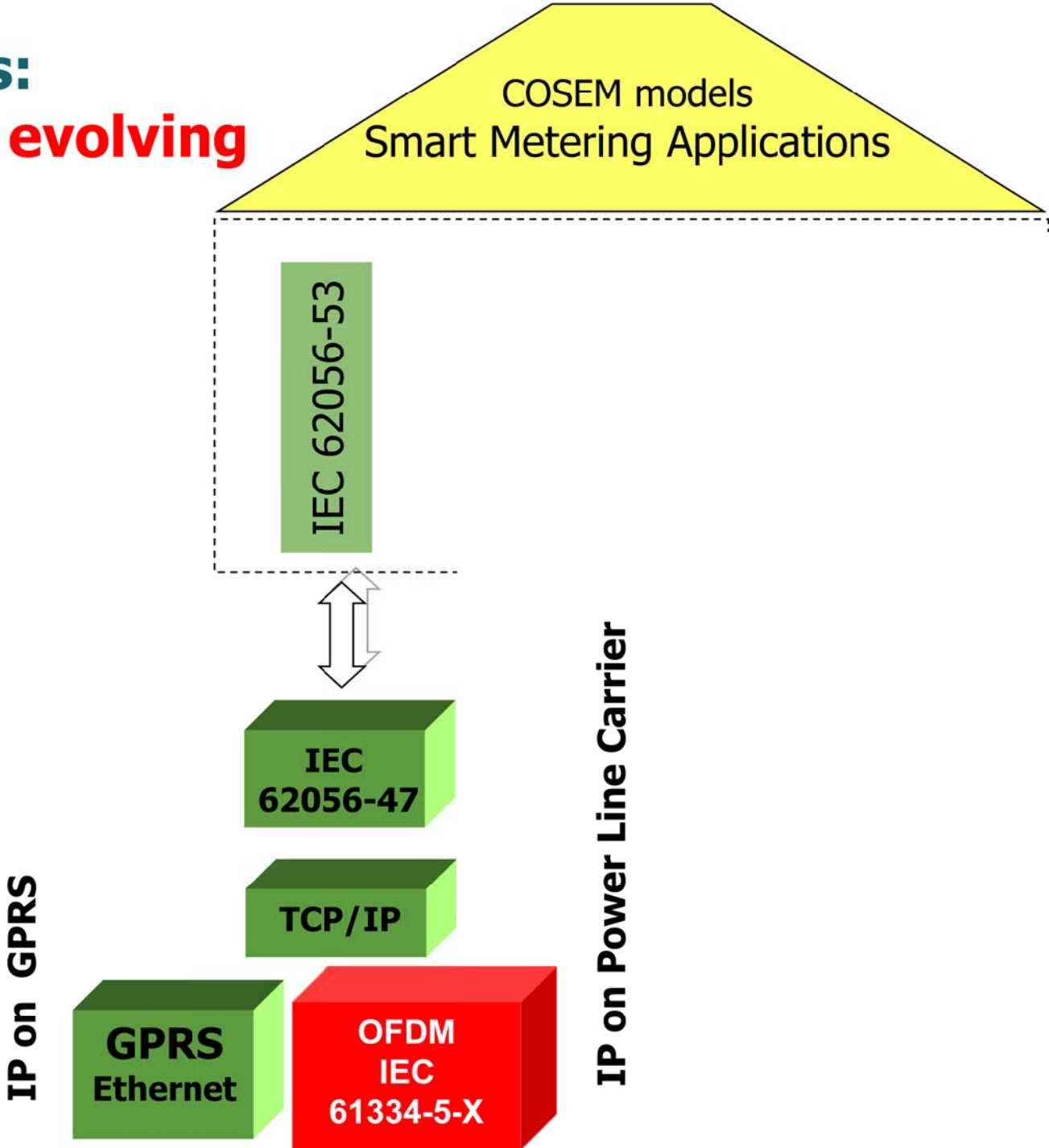
Landis+Gyr + pa
-> PLC IEC 613
-> Applications:

- registers
- profiles
- disconnecter control
- power limiter
- M-bus master setup

90 % applicable to any



Standards: existing - evolving



The EU Dilemma on Smart Metering

National law on Smart Metering shall not prevent an MID meter from being accepted all over Europe

... but an MID meter is NOT smart !



Smart
Metering

MIND THE TRAP

made by **MID**

The EU Mandate to provide the standards



The EU Project to prepare the standards

SEVENTH FRAMEWORK PROGRAMME

ELECTRICITE DE FRANCE
ENDESA
ENEL
IBERDROLA
NETBEHEER NL
RWE

ACTARIS
ELSTER
LANDIS+GYR
ZIV MEDIDA

ADVANCED DIGITAL DESIGN
CURRENT TECHNOLOGIES
ST MICROELECTRONICS
USYSCOM

CESI
KEMA
UNI KARLSRUHE

CENELEC
DLMS USER ASSOCIATION



Open Public
Extended Network
metering

Industry's requests to legal bodies:

- + Set precise rules concerning:
 - scope of metrology (where does the meter end - where does the communication unit start)
 - consumer data protection
- + Do not re-define the IEC standards
 - Contribute to the IEC WGs if the existing standards do not fulfill your requirements.

legal insecurity kills business

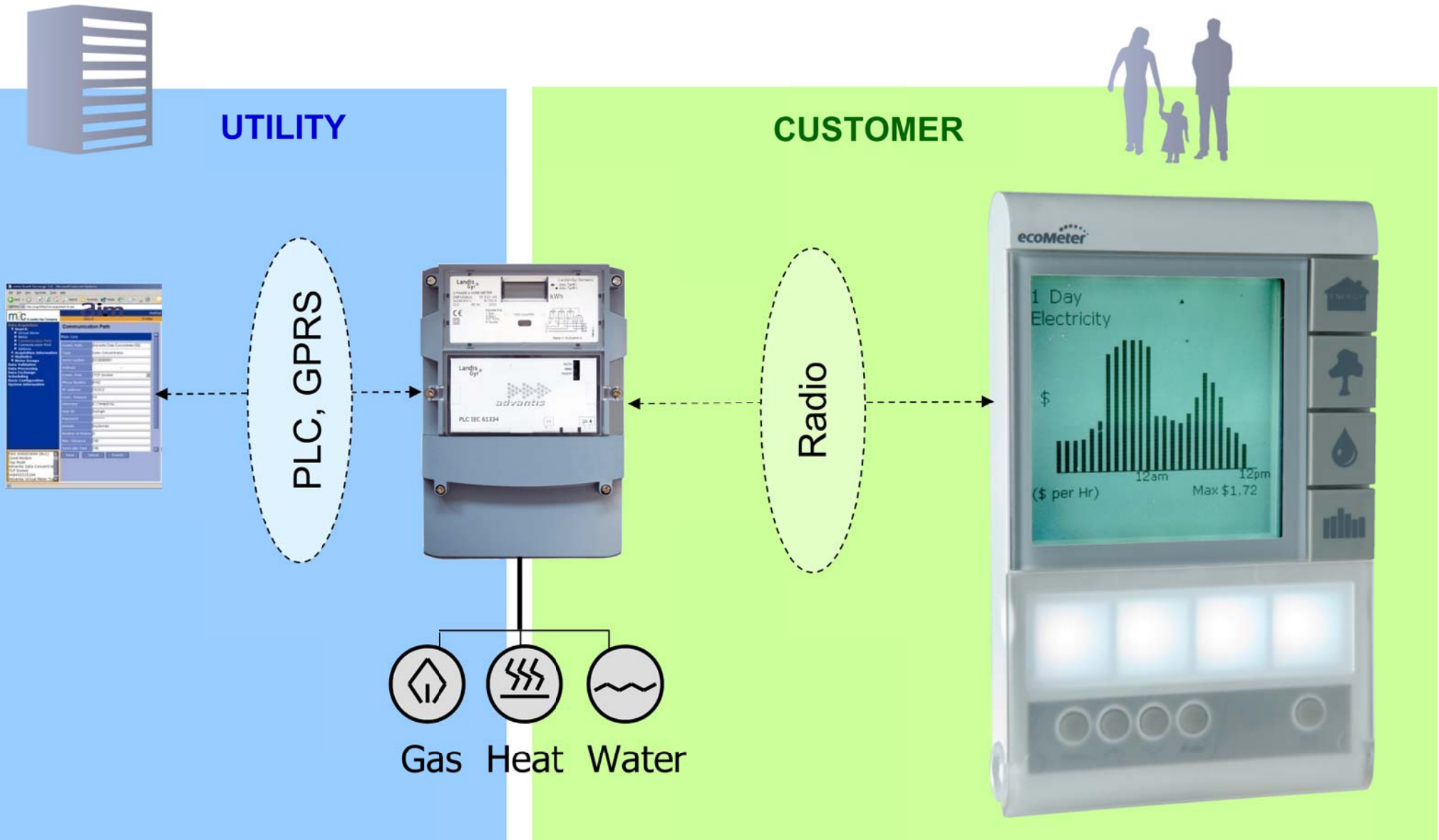
A close-up of a hand holding a yellow cloth, positioned above the main text box.

**Smart Metering
for
the Consumer !**

A full-body image of a referee in a black and white striped shirt, white pants, and a black cap with a white stripe. He has a whistle in his mouth and is looking directly at the camera.

Regulator

Smart Metering – transparency for the consumers



Consumption awareness is ...

Economical awareness



Ecological awareness



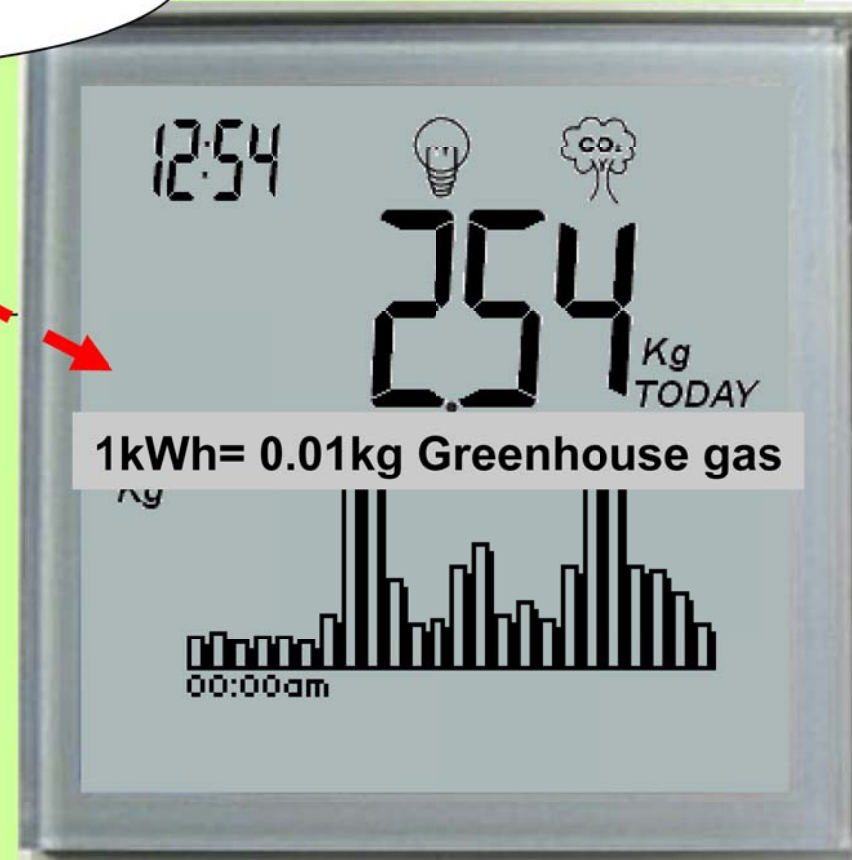
Global Warming – switch to green energy



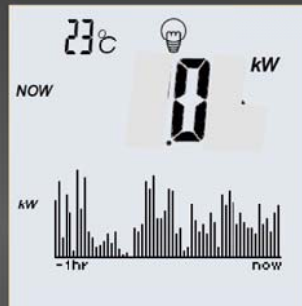
I want green energy



PLC



Thank you for your attention



Smart Metering - efficient energy use

