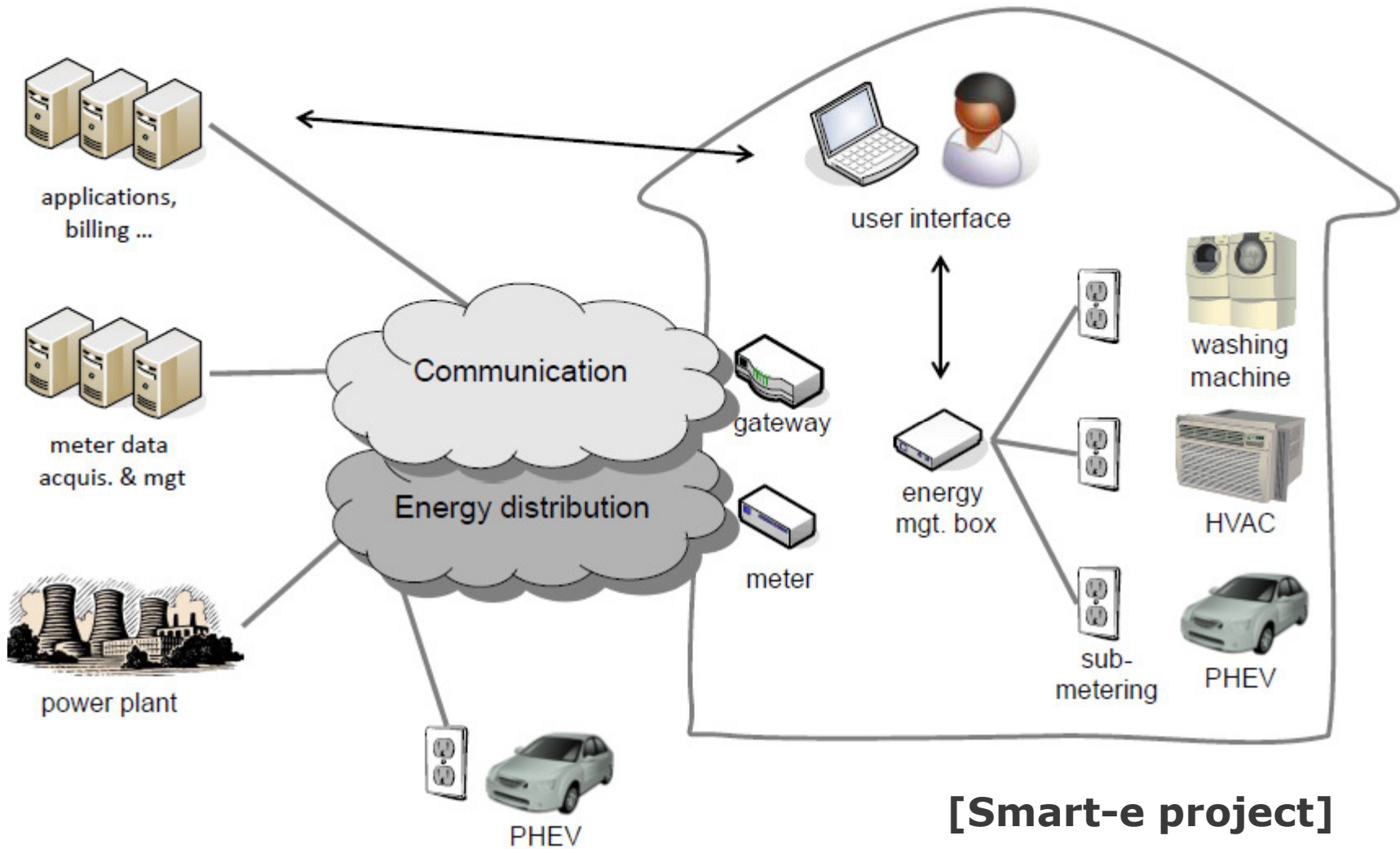


**ICON PITCH:**  
**Security for smart metering/smart grids**  
iMinds 16/12/2010

**Ingrid Verbauwhede,  
Stefaan Seys  
K.U.Leuven IBBT-COSIC**

# Smart Grids



[Smart-e project]

# Context and Need

*Providing a secure and privacy friendly infrastructure for the up grids*

- Many initiatives always successful
  - eNovat
  - "Slimme"
  - IBBT S



- Not provided in the "slimme meter" has lead to a

## Context and Need

- The smart grid will enable distributed applications (charging poles at shopping centres, etc.); without countermeasures, this will allow location tracking, which may leak personal data:
  - Where you live, where you work, when you work, when you are abroad, how often you visit the pharmacist, etc.
- Combination of smart grids with modern payment methods (e.g., NFC phone or RFID built in car) requires strong authentication methods, while still providing privacy.
- In house wireless actuators will require low-power authentication methods -> low-power embedded security
- COSIC has been active in this domain:
  - Low power public key implementations, secure and privacy friendly road tolling, oblivious transfer schemes, etc.

# Research Goals

- Enabling privacy preserving data collection for billing, etc.
- Providing a secure infrastructure for authenticated data collection (fraude prevention)
- Secure integration of modern paymethods (NFC, RFID)
- Low-power embedded security for the in-house actuators
- Providing a regulatory/legal framework to cover the remaining privacy risks.
- Building a demonstrator

# Looking for Partners

- Vendors, manufacturers active in this field.
- Service providers
  - Distribution,
  - Data Network
  - Payments
  - Charging poles,
- Software (end-user application) providers
- Etc.