ESMIG

WE MAKE METERING SMART

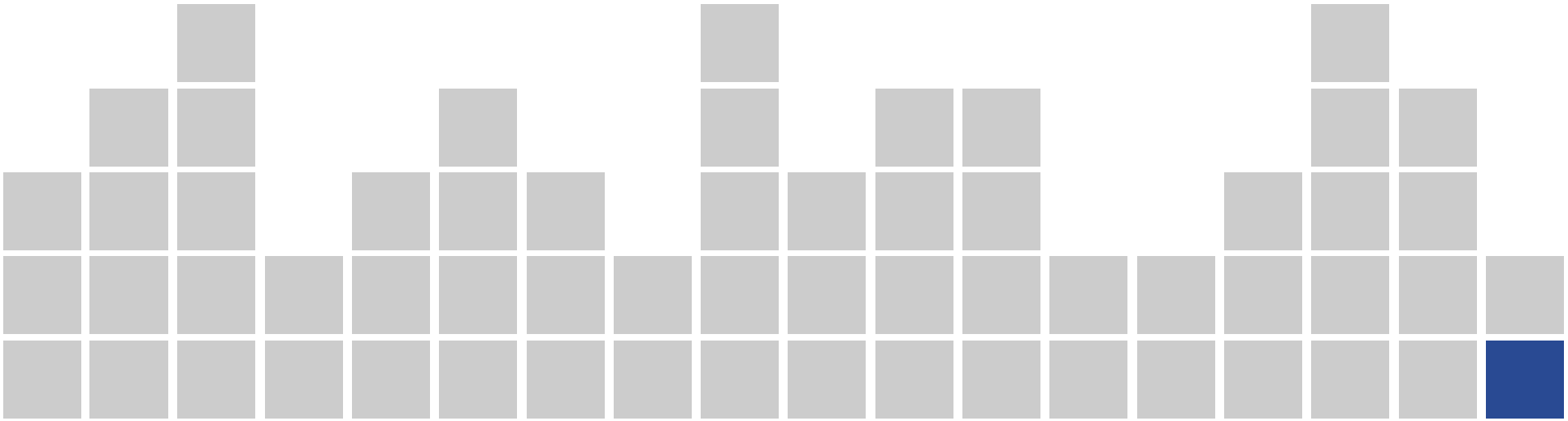
ERGEG Hearing on Smart Metering GGP with Respondents to the Public Consultation

2010.10.08

ESMIG position on “Data security and integrity”

Klaus-Dieter Axt

Operations Director ESMIG



ERGEG recommendation 29:

Customer control of metering data

… “The key is that the customer must be the one who decides who should have access to what data and when. The DSO would obviously need to have access to some data to be able to safeguard the basic operations as the network operator.”

For ERGEG it is of the utmost importance that the privacy of customers is protected. All reasonable endeavours have to be undertaken to ensure data security. ERGEG suggests that national solutions are applied but stresses the importance of cooperation with national agencies dealing with privacy issues, to make sure that the specifics relating to energy are taken into account.

Findings of Expert Group 2 of the Smart Grids Task Force

Intelligent

- collect minimum amount of personal information without diminishing quality
- communicate regarding collection, use and disclosure of personal information

Efficient

- meet consumer demand without compromising the privacy and security
- dispose personal information when no longer needed

Accommodating

- consumer preferences regarding use, retention, and disclosure of information
- make options accessible to the individual

Motivating

- consumers tailor personal information options
- obtain consent *before* disclosing any personal information

Opportunistic

- create new opportunities and markets by privacy-enhancing technologies

Quality-focused

- deliver information that is free of inaccuracies
- allow individuals to access to personal information and make corrections

Resilient

- resistant to data leakage and breaches of personal information
- reinforced with privacy and security protocols, such as privacy by default and breach notification protocol

"Green"

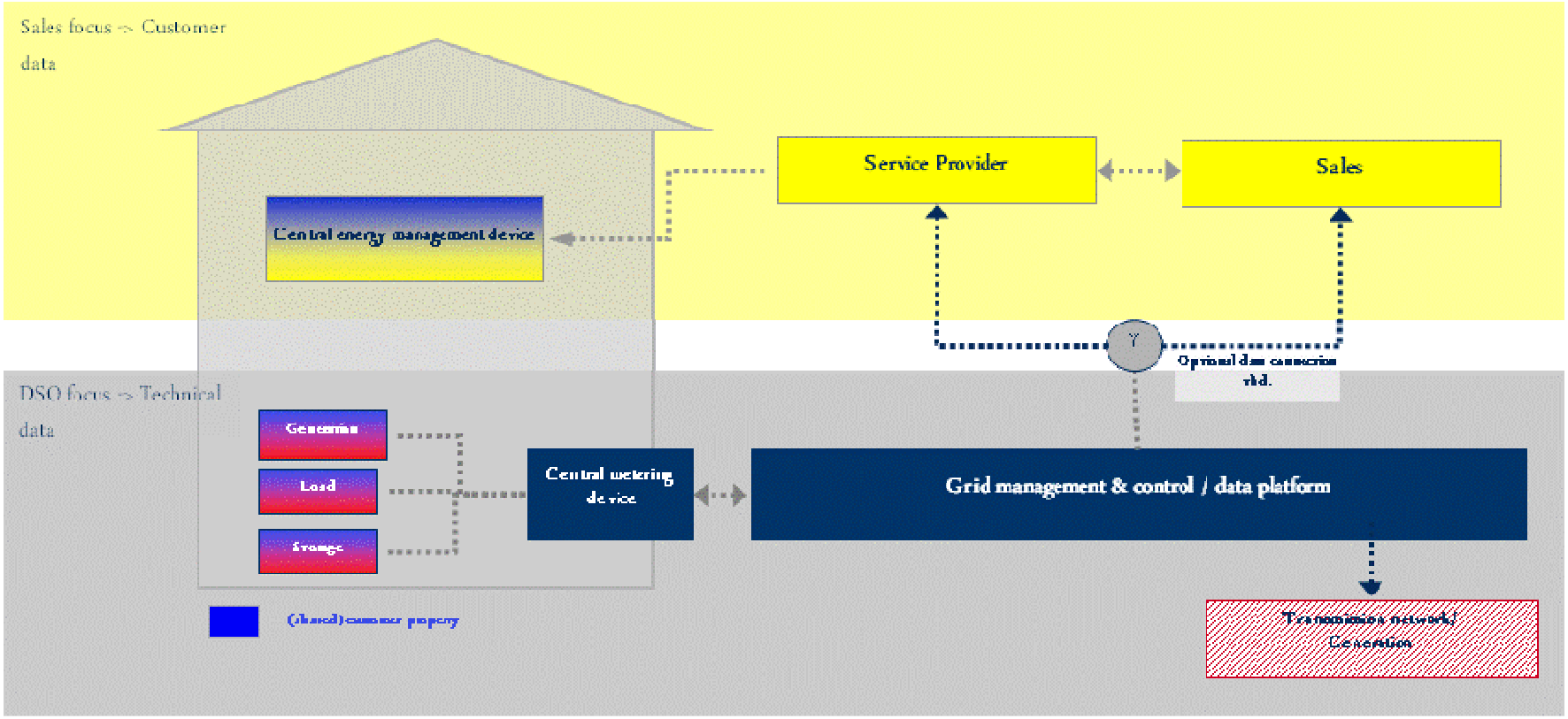
- ensure consumer trust in the Smart Grid, fostering greater participation by individuals leading to environmental improvement

Possible Solutions

- Explicit customer consent
- Aggregating data
- Pseudo/ Anonymizing data
- Further legal guidelines

General: Data needed for invoice purposes can be gathered

Smart Grid – possible differentiation between customer and technical data (illustrative)



Data Privacy - Ways forward

Multiple solutions:

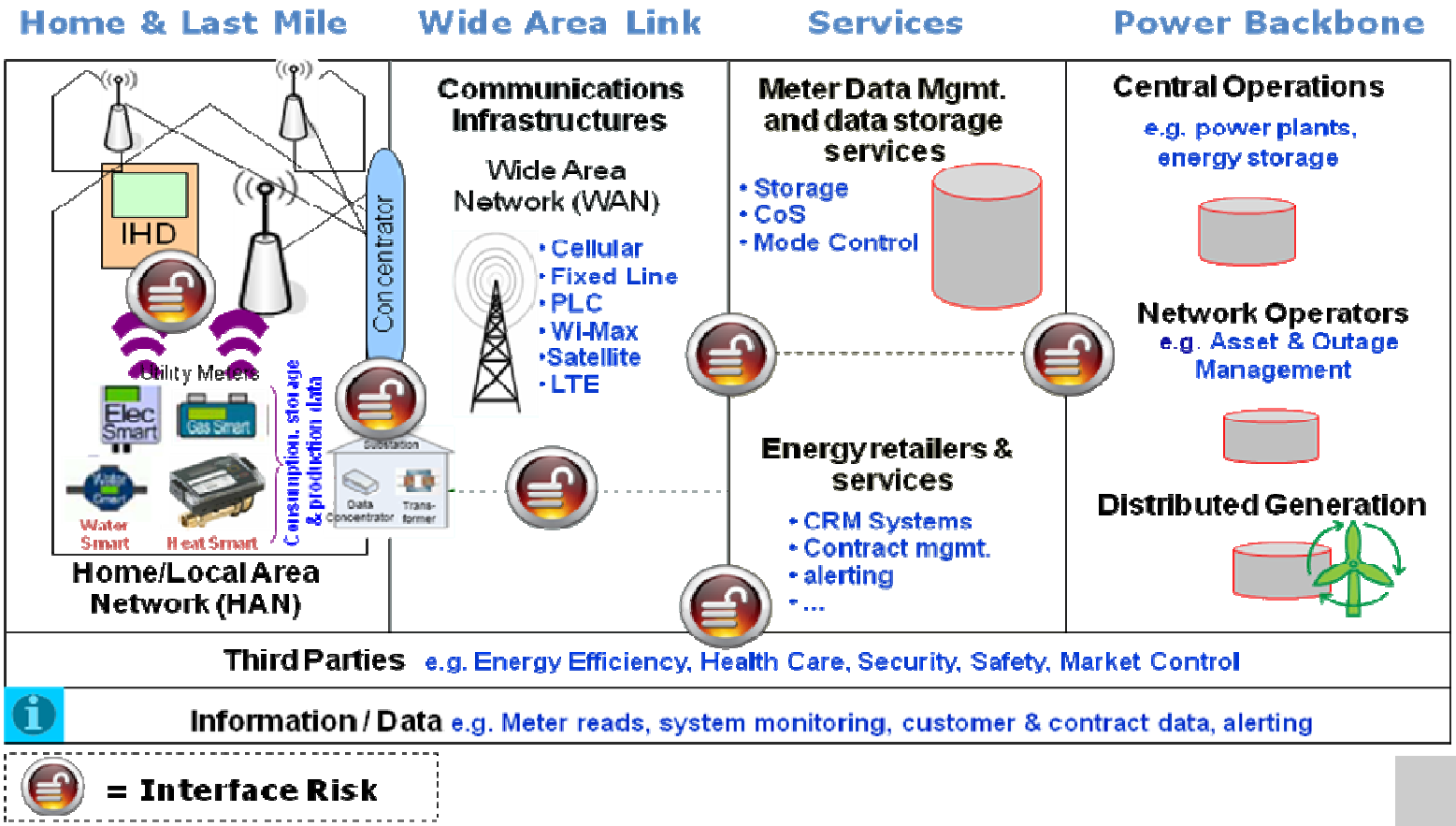
- Get customer consent
- Data aggregation
- Anonymization of data
- Additional legal regulation

The Smart Grids Expert Group 2 (SG-EG2) to draft detailed recommendations and will be involved in developing a smart grids mandate by the end of 2010.

ESMIG recommendation:

ERGEG and national regulators should include the recommendations and future outcomes of the SG-EG 2 and of the SG mandate to ESOs, in the guidelines and recommendation 29 or make reference to these crucial activities.

Data Security (Smart Metering and Smart Grids)



Comparison of Crypto-Systems in Smart Metering

As per now:

- DLMS relies completely on symmetric encryption
- ZigBee SEP offers the use of symmetric and asymmetric encryption

Symmetric Encryption

- ✔ Easy to integrate
- ✘ Keys to be pre-shared
- ✘ Scales rather poorly
- ✔ Fast computation

Asymmetric Encryption

- ✘ Requires special infrastructure
- ✔ No shared secret needed
- ✔ Excellent scalability
- ✘ Comparatively complex

Solution

Initiate encryption with asymmetric cipher, generate random symmetric and continue with symmetric cipher

Summary Security

- Security needs to be holistic and end-to-end to be successful
- Necessary technologies and mechanisms are available today, but they have to be included into Smart Metering
- Main focus areas for vendors are the **Implementation** and **Deployment Process** of security
- Target for security measures: effort of breaking is higher then gain from breaking it
- The Smart Grids Expert Group 2 (SG-EG2) to draft detailed recommendations and will be involved in developing a smart grids mandate by the end of 2010.

ESMIG recommendation:

ERGEG and national regulators should include the recommendations and future outcomes of the SG-EG 2 and of the SG mandate to ESOs, in the guidelines and recommendation 29 or make reference to these crucial activities.

Summary

- Privacy cannot be neglected to make Smart Metering a success
- Customer trust in Smart Metering needs to be established
- Data security needs to be taken forward in Smart Metering
- Smart Metering/Grid standards are developed further, new standards will emerge.

ESMIG

WE MAKE METERING SMART

European Smart Metering Industry Group

Boulevard A. Reyers 80
B-1030 Brussels, Belgium
DDI: +32 2 706 8257
secretariat@esmig.eu

www.esmig.eu