

Informationstag "IT-Sicherheit im Smart Grid"

Berlin, 23.05.2012

Wie viel Sicherheit braucht das Smart Grid?

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What is security?

"There is no 100% Security!"

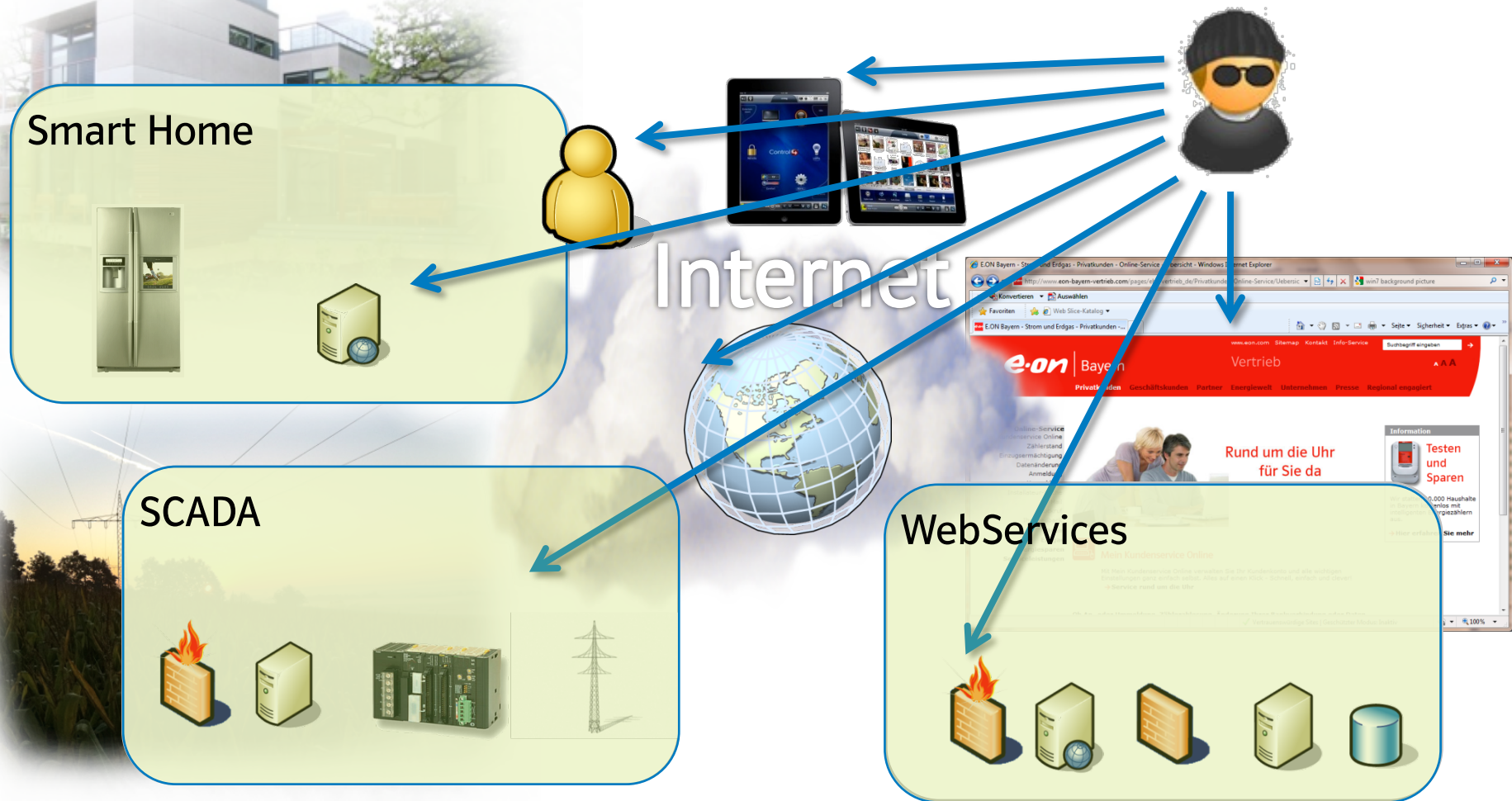
"Security is a process, not a product."

*"Security is a trade-off.
We have to weigh the security we get against the price we pay for it."*

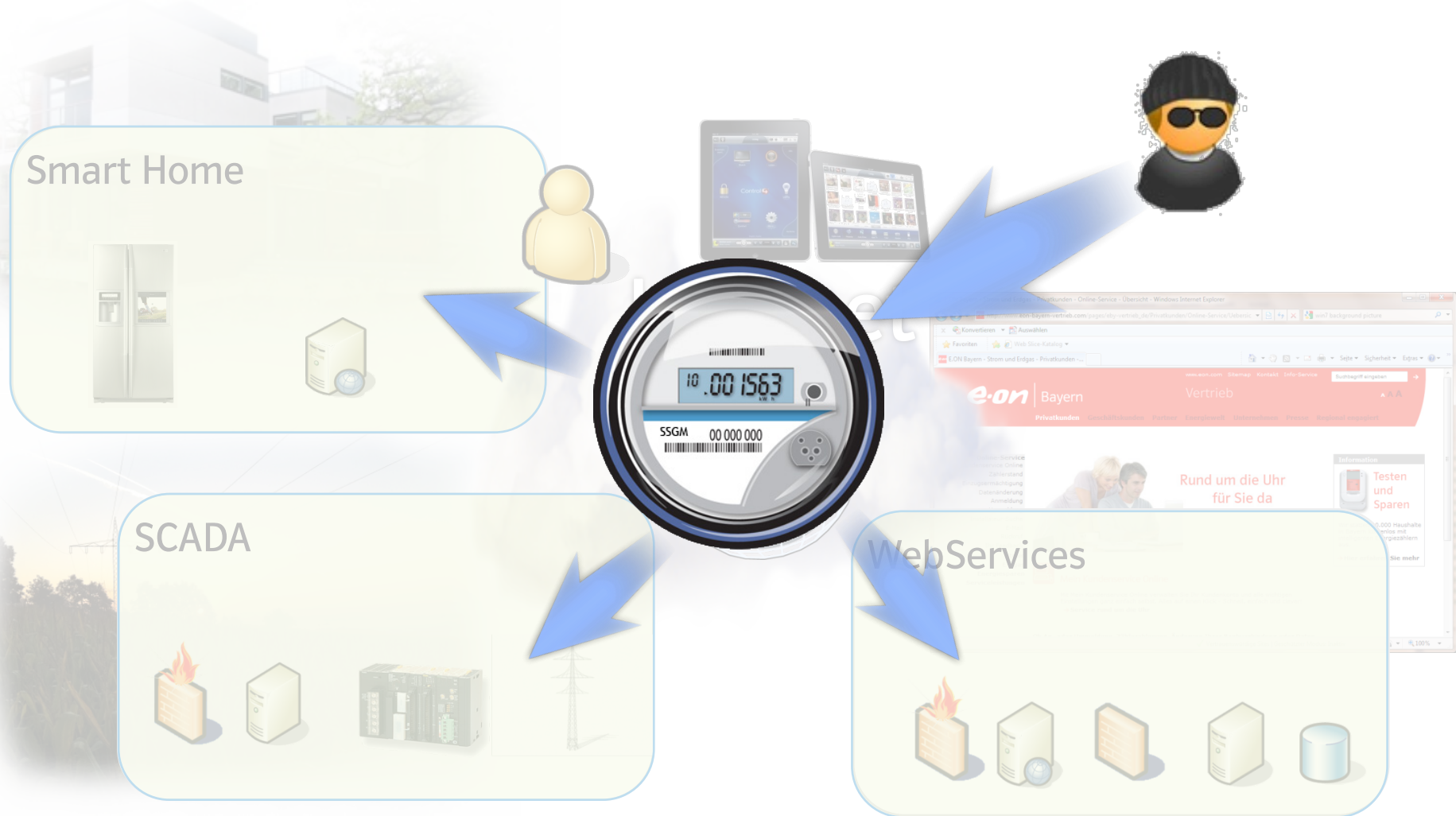
"Security is a chain - it's only as secure as the weakest link."



Attack scenarios in today's world



Attack scenarios in tomorrow's world



Attacker Motivation



An Attacker will look for

- the weakest link across the whole security chain
- which holds the minimum risk
- and gives the best ROI (Return on Intrusion)

Attack Scenarios

Scenario One – cheap electricity

Scenario Two – cheap electricity for everybody

Scenario Three – hacking surrounding infrastructure via the meter

Scenario Four – Targeted Attacks (espionage, vandalism & terrorism)

Scenario Five – Cyber War



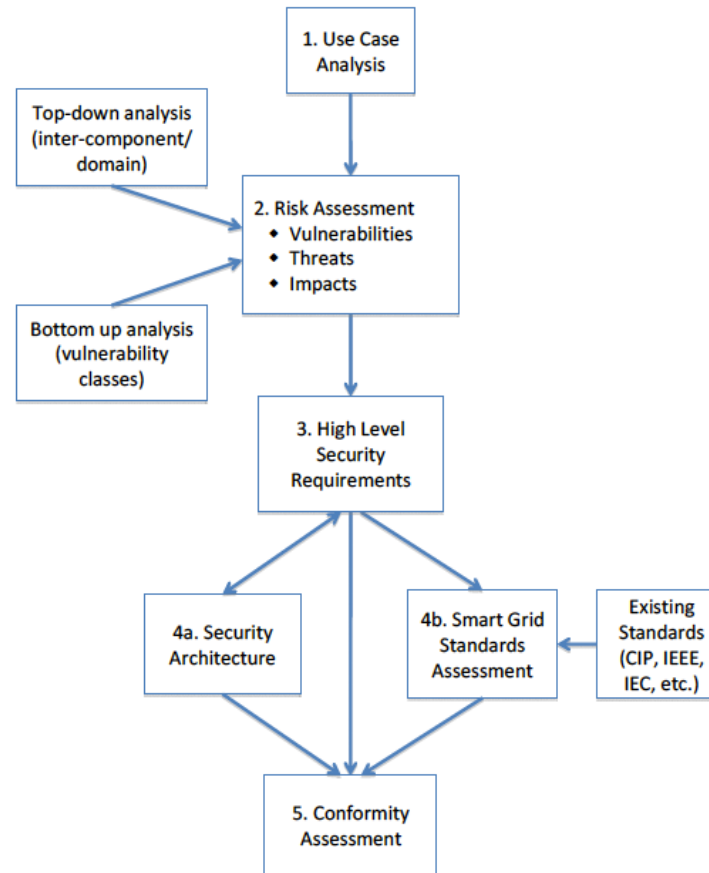
Security – Not a Technical Problem



Photo: Tobias Hellsten/ToHell

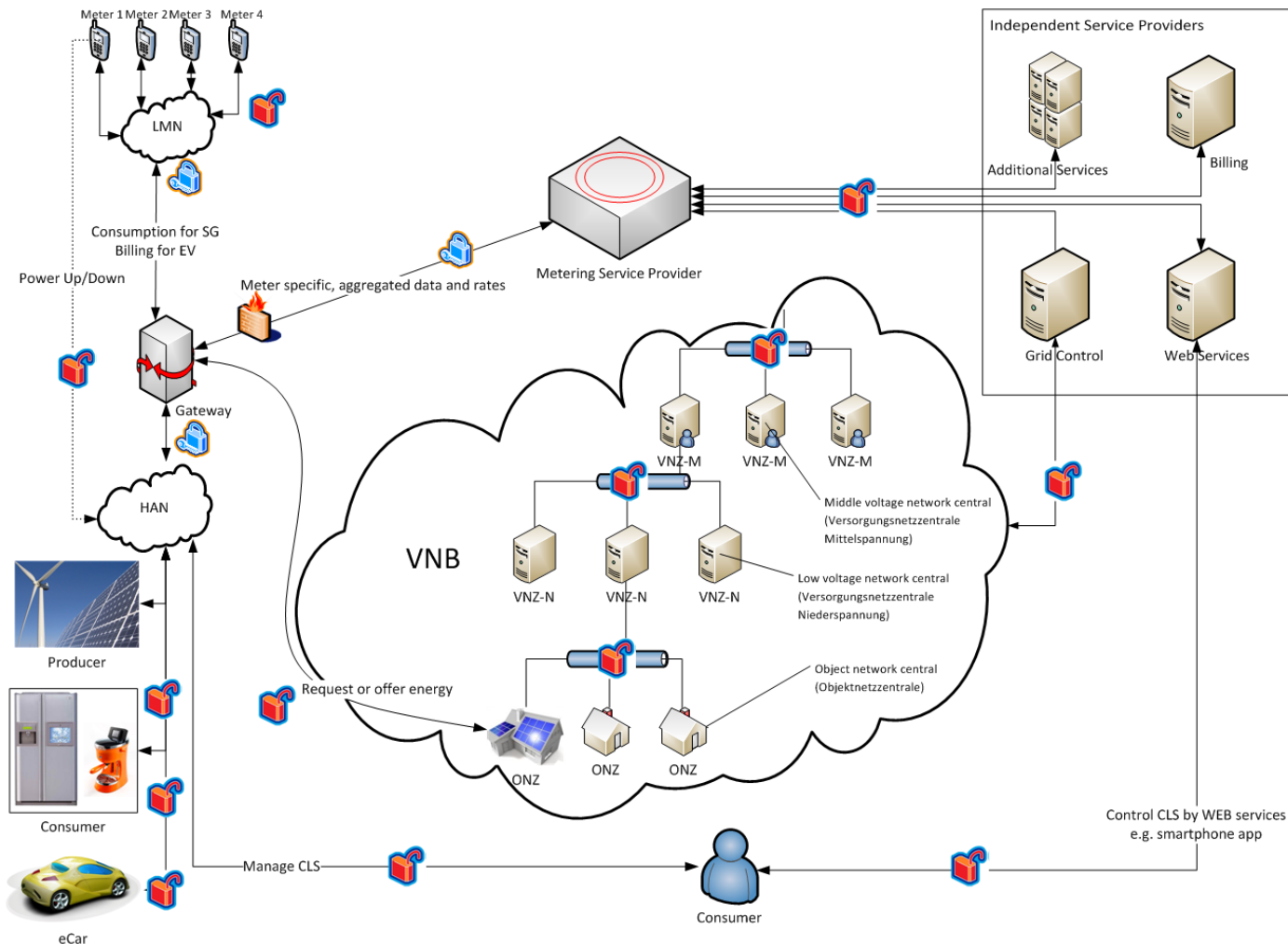
NIST - Modell

Smart Grid Cyber Security Strategy



Source:
NISTIR 7628 - Guidelines for Smart Grid Cyber Security: Vol. 1, Smart Grid Cyber Security Strategy, Architecture, and High-Level Requirements

Security within the future Smart Grid



Conclusion

- Design a Smart Grid Modell
- Separate the functions like Metering, Administration, Grid Operation and define the related security requirements per function based on the threats of these functions.
- Design a smart grid architecture including information security aspects (“Security by Design”) based on use-cases and expected processes.
- End to End Security means discussing the MID in Europe.
- Use Best Practices from other IT areas to secure the embedded world
- Identify the remaining risks and contrast them with costs to minimize them.
- Create Transparency for the risks in order to make the responsible people take the right decisions.
- Find responsible decision makers **per function** and not for the “Smart Grid”





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Thank you for your attention
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