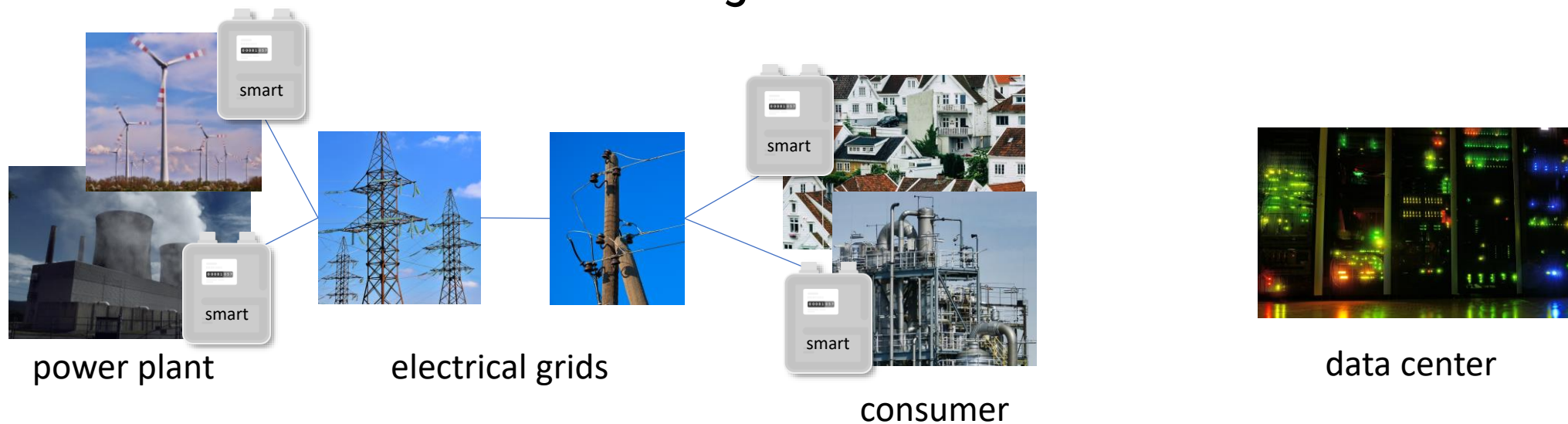




Smart Grid as building block of the energy transition

A topic of interest for IT-audits of SAI?

What makes our electrical grid smart?



smart metering systems transform the electrical grid into a smart grid

Pictures: pixabay.com

European regulation - Directive (EU) 2019/944

- Article 19

- “[...] Member States shall ensure the deployment in their territories of smart metering systems [...]”

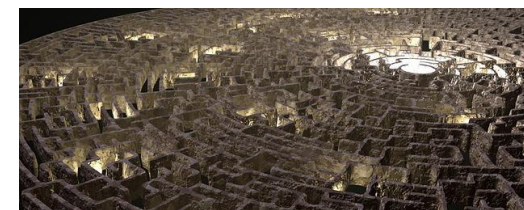
- Article 20 b

- “the security of the smart metering systems and data communication shall comply with relevant Union security rules, having due regard of the best

available techniques for ensuring the **highest level of cybersecurity protection** while bearing in mind the costs and the principle of proportionality;”

- Article 20 c

- “the privacy of final customers and the **protection of their data** shall comply with relevant Union data protection and privacy rules;”



Picture: pixabay.com

Smart meter rollout end of 2021



54%
Average of Share of final household consumers with intelligent (smart) meters among total households (metering points) as of 31 December 2021

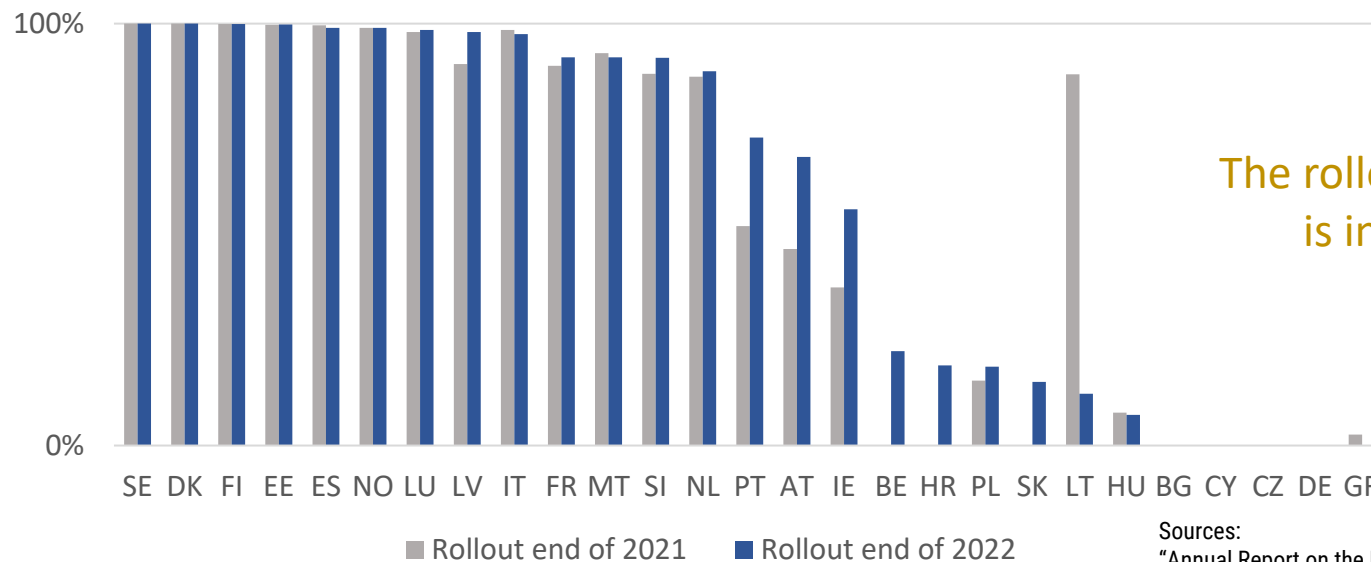
Graphic: „Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2021“ of the ACER, October 2022.

Source: CEER 2022

Note: No data for Ireland provided, data gathered from ESB Networks.



Smart meter rollout end of 2022

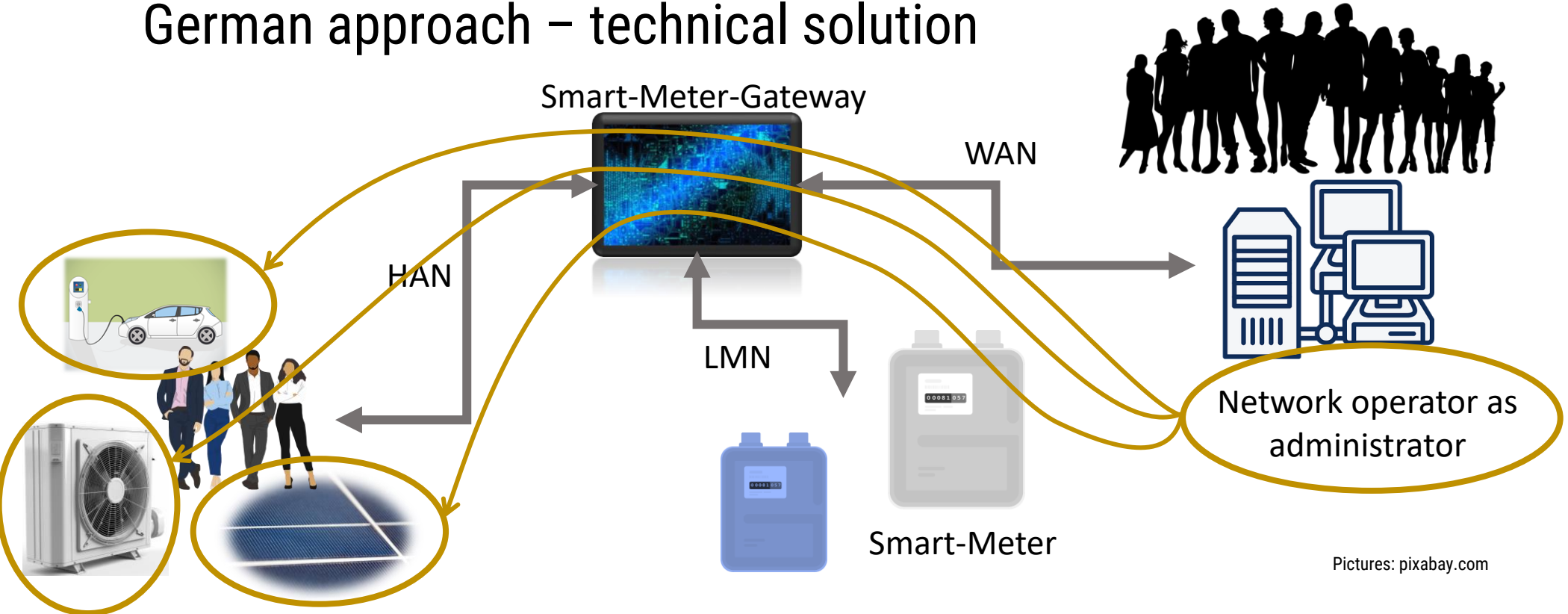


The rollout of smart metering systems is in full swing around Europe

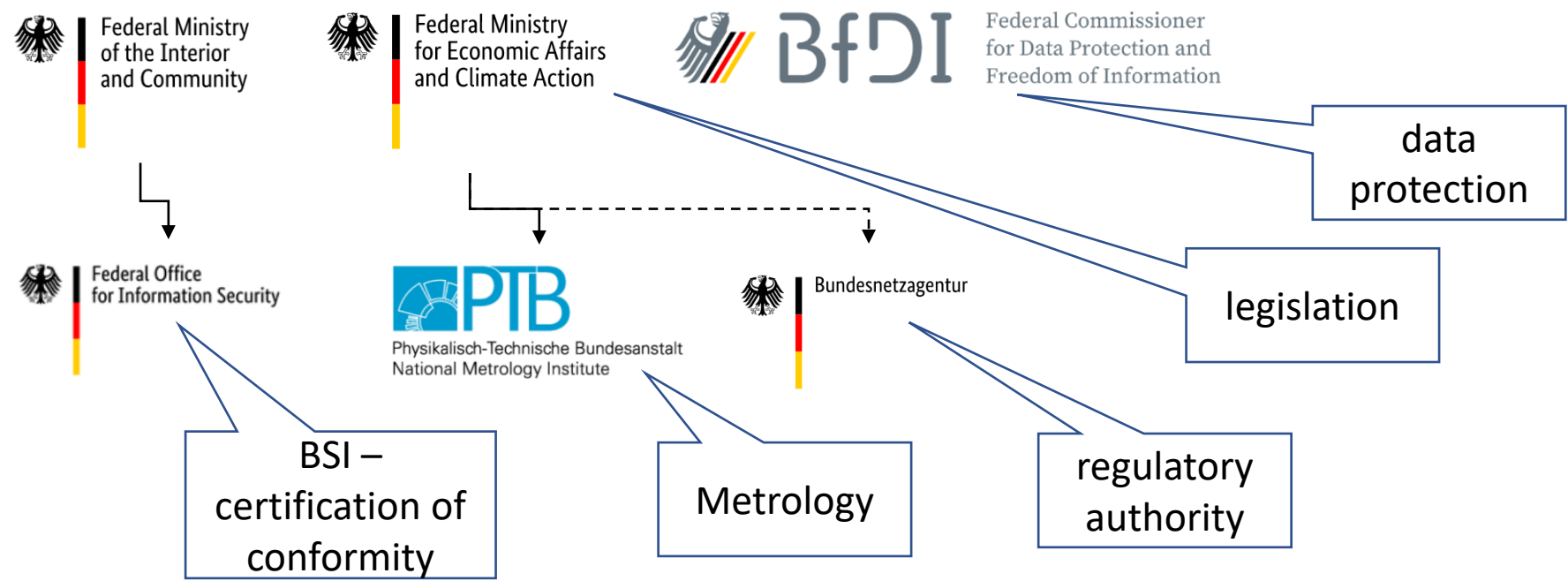
Sources:
"Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2021" of the ACER, October 2022.
"Energy Retail and Consumer Protection 2023 Market Monitoring Report" of the ACER, September 2023.



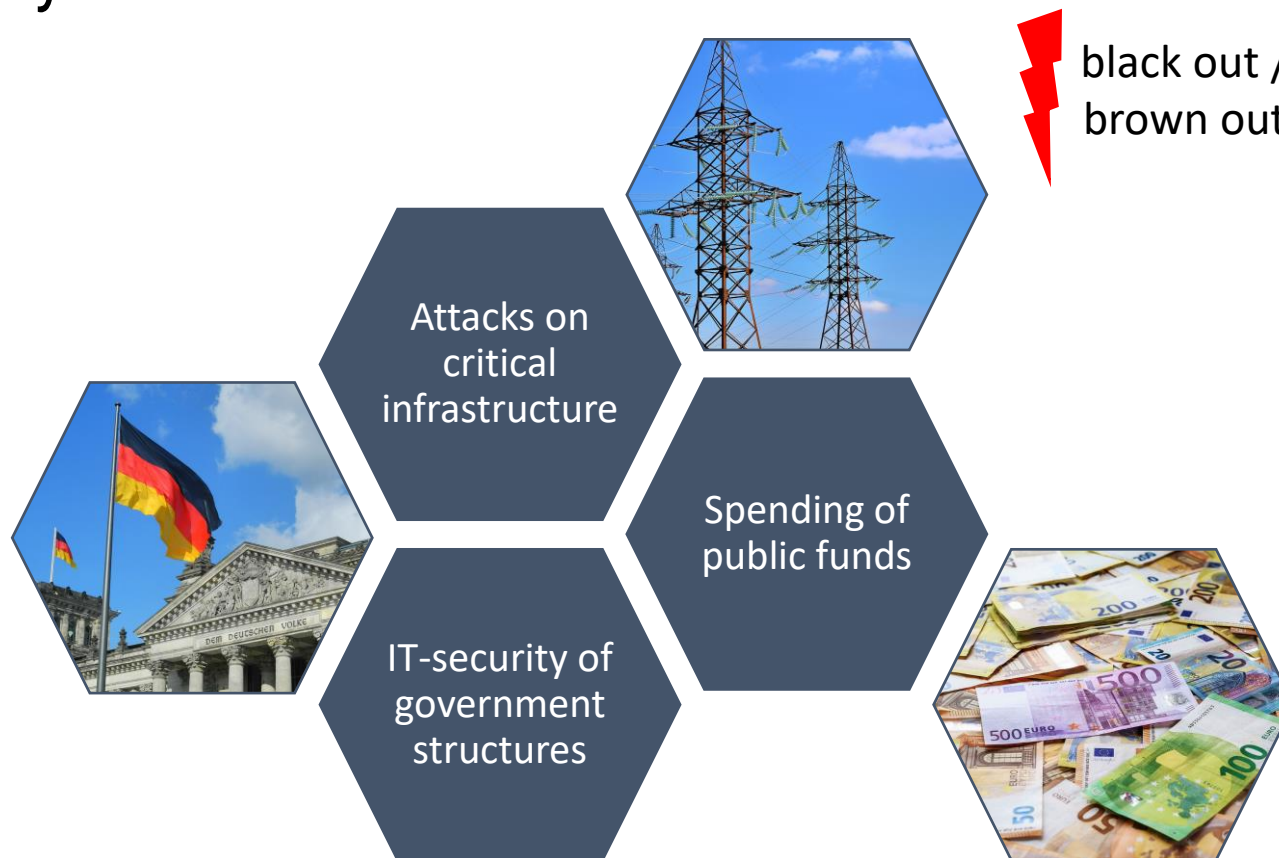
German approach – technical solution



German approach – Responsibilities

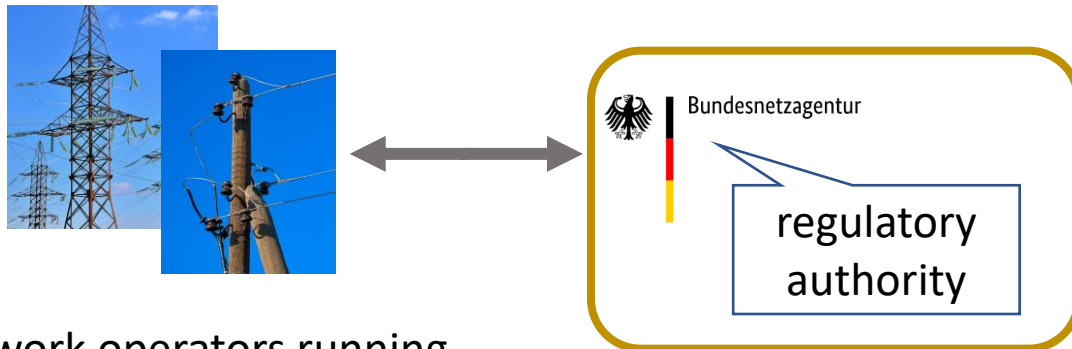


Why are we interested in this?



Pictures: pixabay.com

Ideas and Audit questions



How does our regulatory authority supervise those companies?

Network operators running critical infrastructures

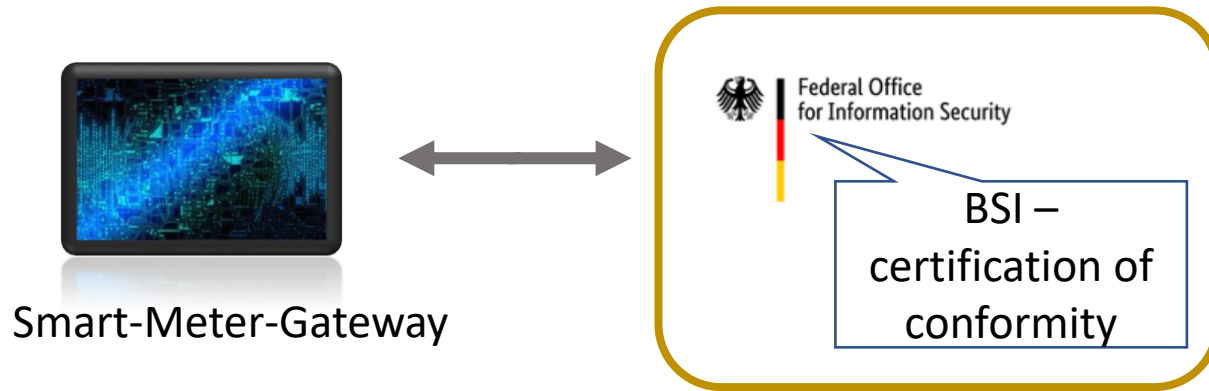


Administrators of Smart-Meter-Gateways



Pictures: pixabay.com

Ideas and Audit questions



How does the certification process work?

Pictures: pixabay.com

Ideas and Audit questions



Government infrastructure

What **additional IT-security risks** do government structures face?

Does this change the risk for **deliberate power outages**?

Which **information might be revealed** through the Smart Meter Gateway?

Pictures: pixabay.com



A short survey

- Are smart metering systems a relevant topic in your current or planned audits?
- Do you have audit experience regarding smart metering systems?
- Do you consider smart metering systems a relevant topic for future IT-audits?



Pictures: pixabay.com



Thank you very much!

Picture: pixabay.com