



Federal Ministry
for Economic Affairs
and Energy

Digitisation of the Energy Transition *in Germany*

Konferenz F-D zur Digitalisierung der Energiewende

Berlin, 11. Mai 2017



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I. Digitisation and Energy Transition

II. Legal framework in Germany

III. Outlook



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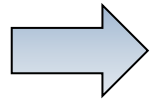
I. Digitisation and Energy Transition

II. Legal framework in Germany

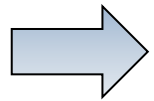
III. Outlook

Digitisation and Energy Transition

- Challenges of the energy transition demand **modernisation and digitisation**
- **Decentralisation and volatility of supply** demand data communication

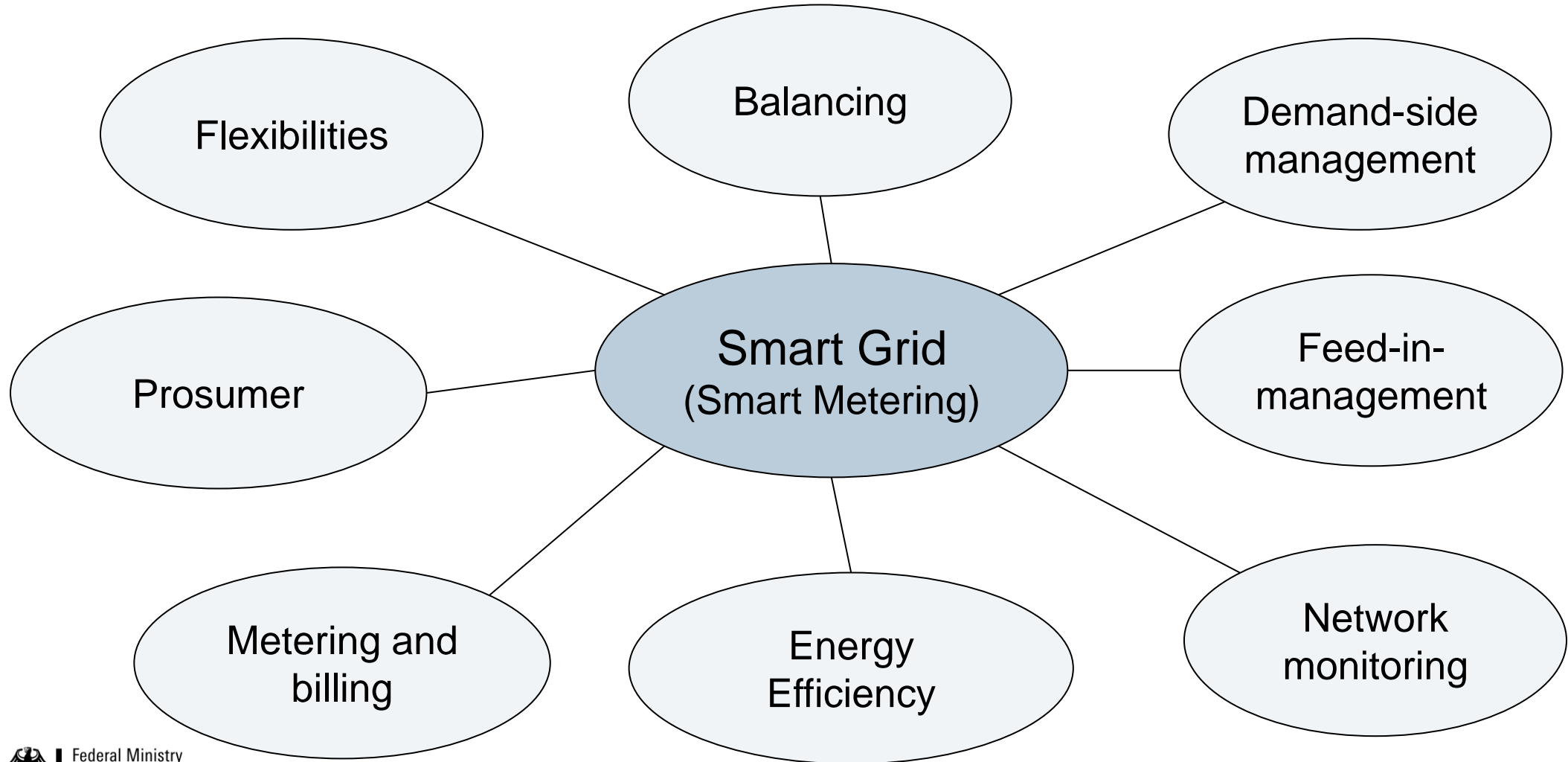


Connection of all stakeholders to the smart grid



Smart Metering needs to **support** the smart grid

Digitisation and Energy Transition



Clean Energy Package (Art. 19-24+Annex III EMD)

- Digitisation and Smart Metering figure **prominently**
- „**Active Consumer**“ as participant in energy market
- **Without** Smart Metering Systems **no** „activity“
- Smart Metering Systems **connect consumers** and „**prosumers**“ to the Smart Grid
- **Non-discriminatory** data access for relevant stakeholders



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I. Digitisation and Energy Transition

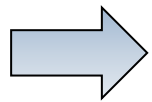
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II. Legal Framework in Germany

Challenges for the administration:

- Buildup of a **standardised communication infrastructure**
- **Data Security** and **Data Protection „by design“**
- Creating of **investment incentives**
- **Consumer acceptance**



Digitisation of the Energy Transition Act



Digitisation of the Energy Transition Act

1. Basic principles
2. Smart Meter Rollout and price caps
3. Technical Standards for Smart Meter Gateways

1) Basic principles

- „**Smart-Grid-ready**“ Smart-Meter-Gateway as **key element**



- **Data security** and **IT-security** by design



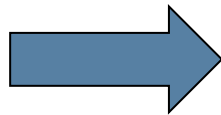
Digitisation of the Energy Transition Act

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2) Smart Meter Rollout and price caps

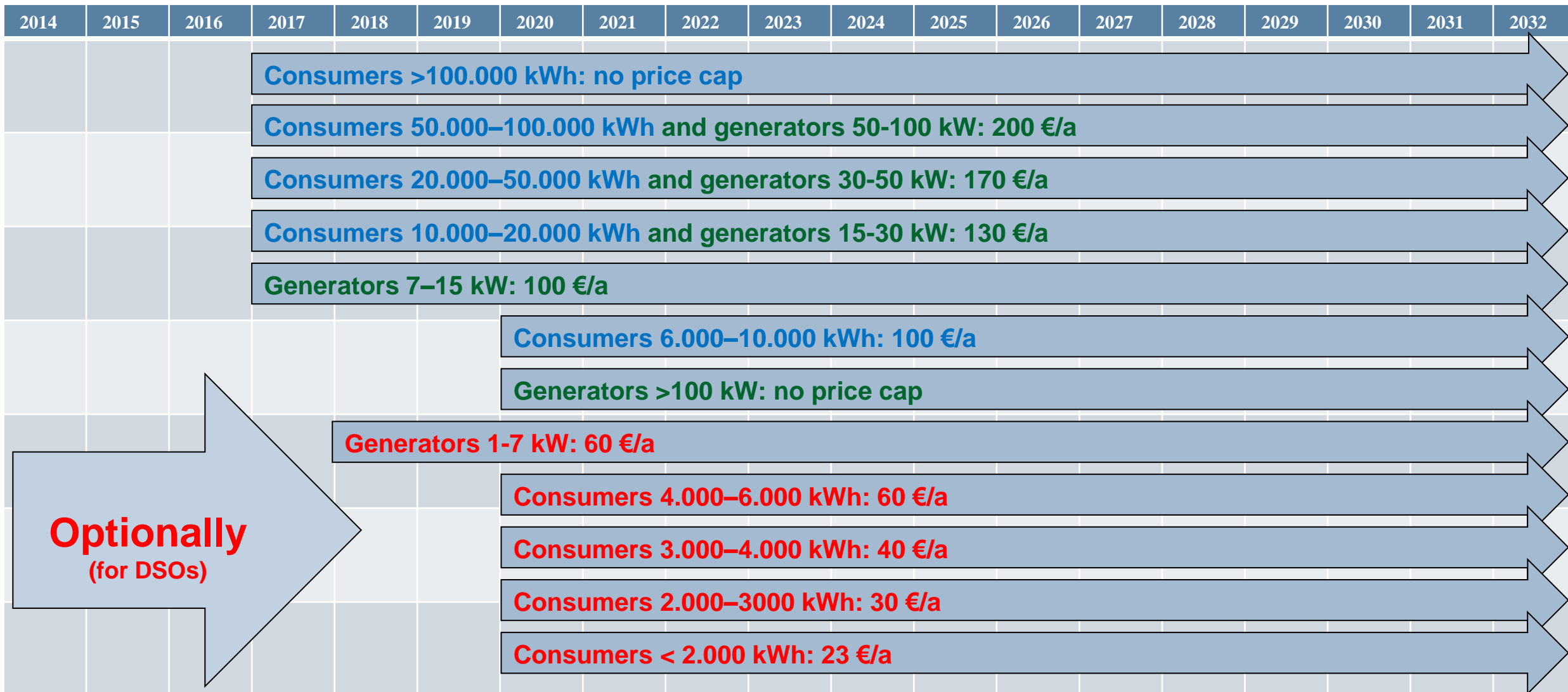
Result of the **cost benefit analysis** (2013):

- EU-Scenario (Rollout of 80%) **not** economically reasonable
- **Low** energy savings and load shift benefits for **households**
- Key benefit must be **integration of renewable energy**



Negative in the sense of the Third Energy Package
Smart grid functionalities needed for justification of a rollout
Potential shall be **maximised** (applications for **all sectors**)

2) Smart Meter Rollout and price caps



2) Smart Meter Rollout and price caps

Demand-Response units:

- electromobiles
- heat pumps
- storage heatings

have to install smart metering systems in order to **benefit from their flexibility**

2) Smart Meter Rollout and price caps

Minimum requirement (where **no** smart metering system is installed):

Installation of digital meters with

- **Visualisation features** according to **energy efficiency directive**
- **Interface** to be connected to the Smart Grid via Smart-Meter-Gateway
- **Price cap: 20€ /year**

2) Smart Meter Rollout and price caps

Responsibility for rollout and operation:

- Generally **DSOs**
- **Transfer to third party is possible**, then call for entries
- Making use of **supporting services** (Gateway-Administration) possible
- **Obligatory** call for entries if rollout-quota **below 10% in 3 years**

Regulatory **separation** between tasks as **DSO** and tasks as **metering point operator** → **cost transparency** and **competition**

2) Smart Meter Rollout and price caps

- Overall Investment: Approx. **€ 10-20 bn.**
- Rollout start only with **3 certified** Smart Meter Gateway companies + administrators and **approval of the Federal Office for Information Security**
- Rollout has **not** started yet (expected for the end of 2017)



Digitisation of the Energy Transition Act

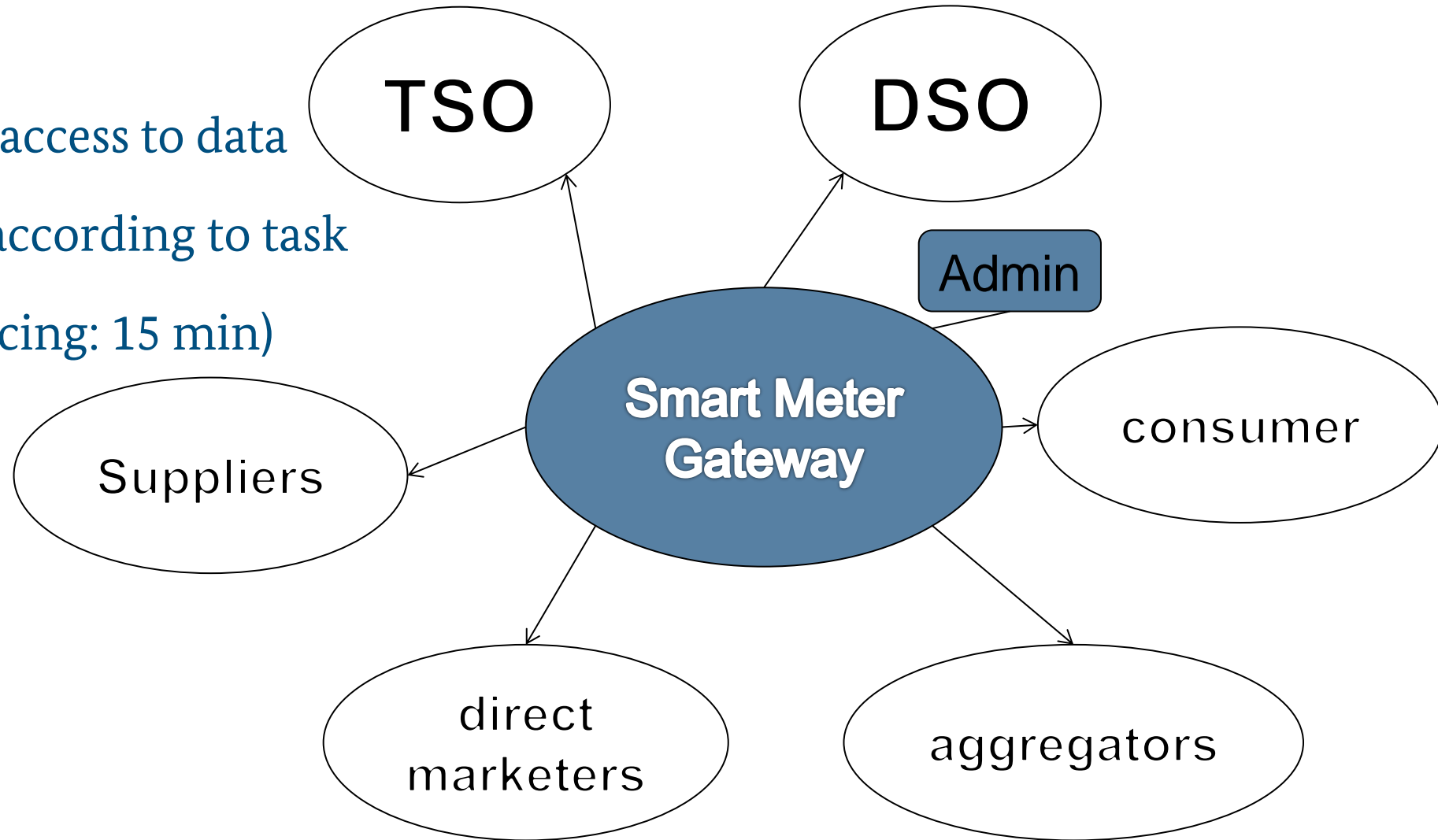
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Protection Profiles and Technical Guidelines

- Responsible: **Federal Office for Information Security (BSI)**
- Dialogue with **all relevant stakeholders**
- **Smart Meter Gateway as secure communication platform** for
 - Automated meter reading (electricity, heat, gas, water)
 - Energy savings (consumption transparency)
 - Flexible tariffs
 - Smart Grid-functionalities (feed-in and load management, network monitoring, network balancing)
 - Smart-Home applications

Data communication

- Non-discriminatory access to data
- Metering interval according to task
(for example balancing: 15 min)





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- **Further development** of the **Smart-Meter-Gateway** as **Smart-Home** platform
- Incentives for **demand response**, especially integration of **e-mobility** into the distribution network
- Legal framework for **prosumers**
- **Evaluation** of the regulation of **communication networks** for smart grids



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Merci beaucoup!