

CEER

**Council of European
Energy Regulators**



Smart Grids Week | Graz 2014

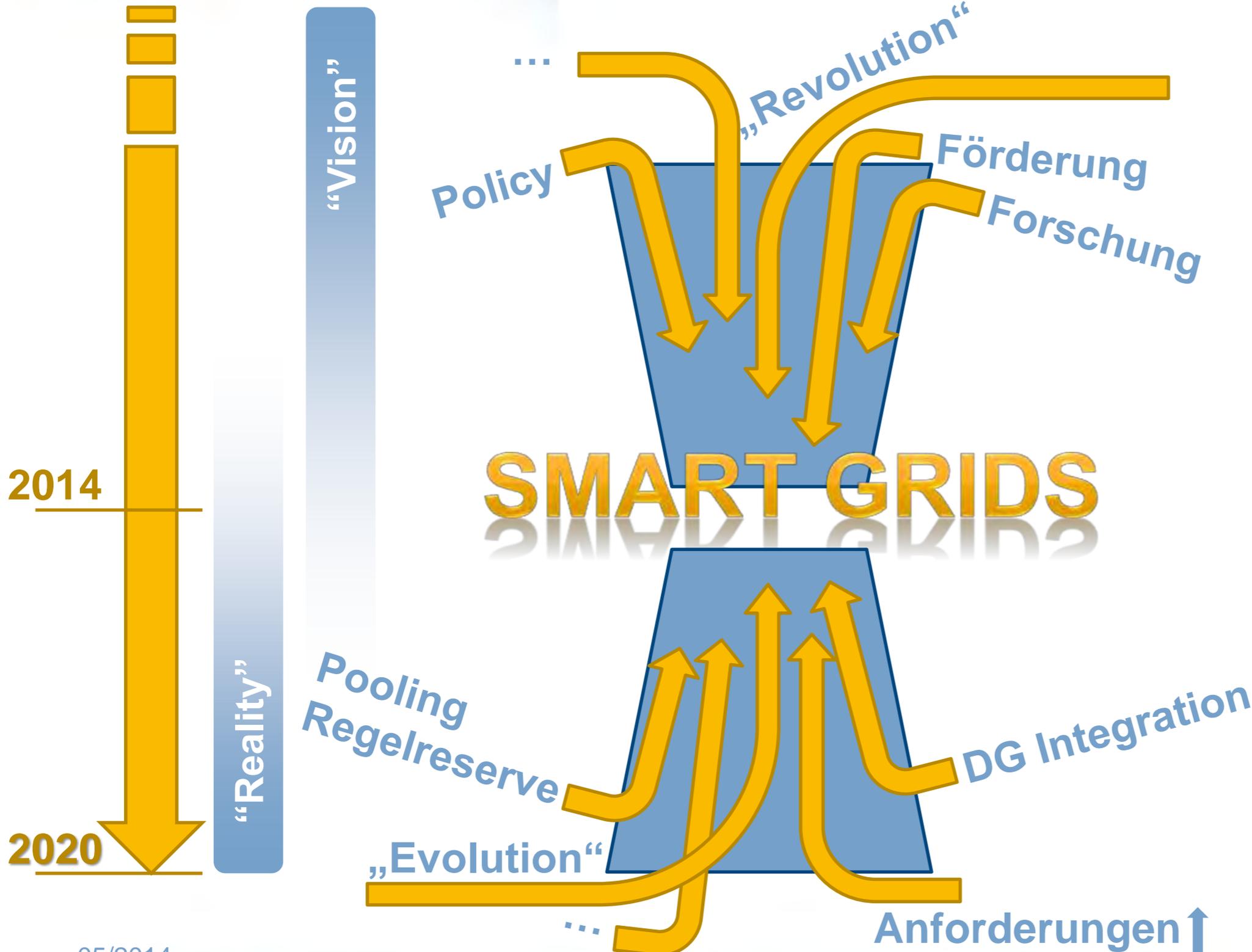
**Smart Regulations – aktuelle
Entwicklungen aus den
Europäischen Regulierungsaktivitäten**

Dr. Werner FRIEDL Chair of CEER EQS and Smart Grids TF
Graz, Mai 2014

Fostering energy markets,
empowering **consumers**.



Smart Grids: „Vision“ → „Reality“



...





Grundsatz-/Schlüssel Fragen I/II

Wie komplex/kompliziert soll/darf ein zukünftiges elektrisches Energiesystem sein? (brauchen wir neue Services/"Komplexität"?)

Haben "wir" die Möglichkeit/(Wahl) das el. Energiesystem zu "vereinfachen"? (was wird passieren, wenn regulierte Unternehmen ein System entwickeln, welches sie glauben, dass sie in Zukunft brauchen werden?)

Wer soll die Rolle/Themen-Führerschaft für neue Geschäftsideen übernehmen? (Was brauchen (neue) Marktteilnehmer/Aggregatoren?)

Needs
assessment

Priority
check

Quantity
check

Incentives

CEER Smart Grids reports ...

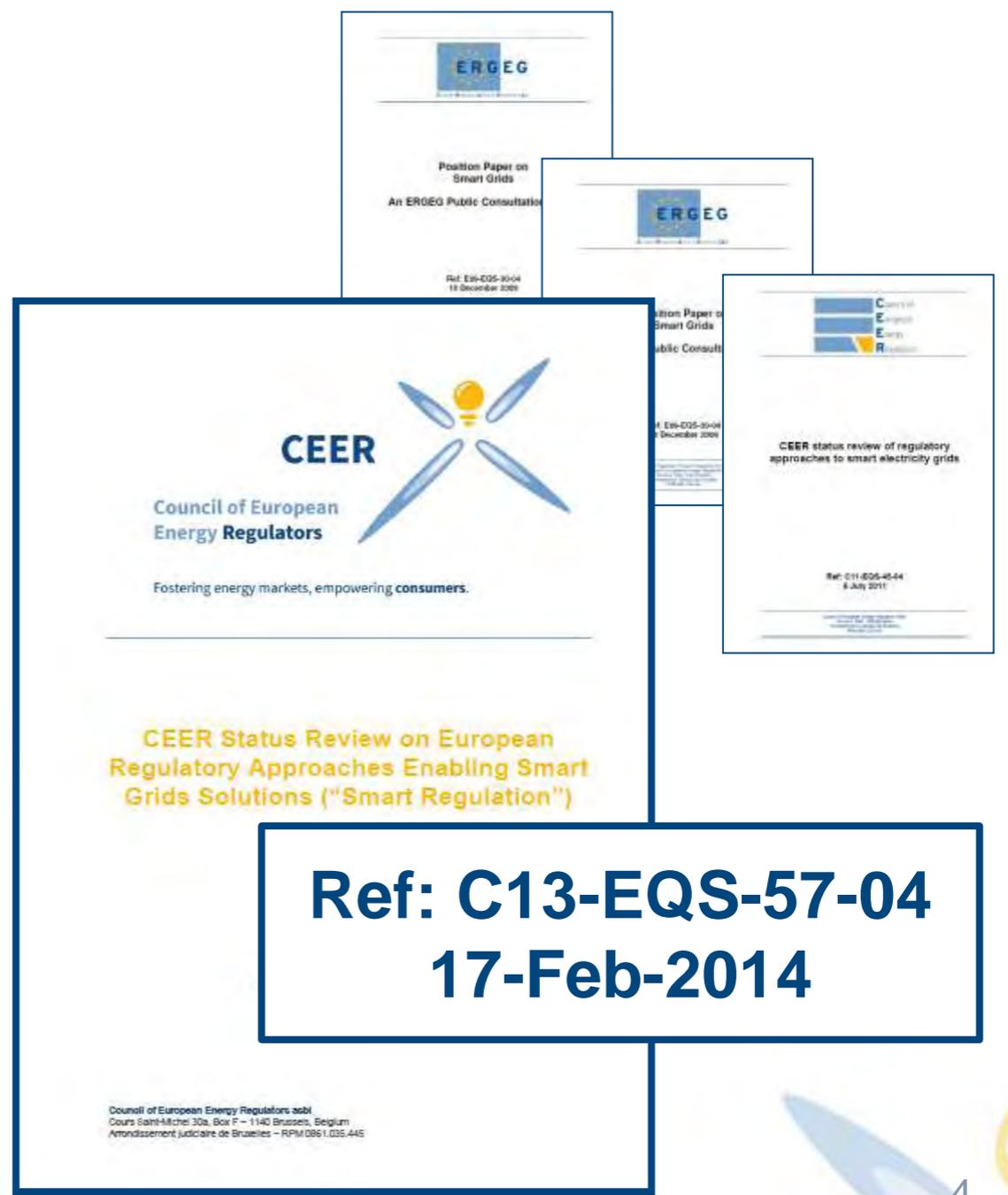
Position Paper in 2009

Conclusion Paper in 2010

Status review in 2011

- *CEER Status Review on European Regulatory Approaches Enabling Smart Grids Solutions (“Smart Regulation”)*
 - ▶ The definition of smart grids
 - ▶ The regulatory and commercial challenges
 - ▶ Plans for implementation of smart grids
 - ▶ Encouraging innovative solutions in el. networks
 - ▶ Cost benefit analysis
 - ▶ Potential performance indicators

the report is based on the responses among CEER members (27 of 32 members)



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CEER Status Review on European Regulatory Approaches Enabling Smart Grids Solutions (“Smart Regulation”)

Ref: C13-EQS-57-04
17-Feb-2014

Council of European Energy Regulators asbl
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... and results of the CEER - “smart regulation”- report



• Regulatory and Commercial Challenges

- Barriers(Regulations) vary at national level
- Challenges include: integration of RES and EV, customer engagement in DSR, data protection (smart meters)
- Adaptation of regulatory mechanisms and commercial and regulatory arrangements for smart grid development
- Emerging issues include information collection and handling, technology and investment risks, interoperability issues and standards

• Roles and Responsibilities

- DSO has major role in smart grid development along with NRAs and TSOs to a lesser extent
- Combination of stakeholders involved in DSR but DSO is dominant
- DSO is expected to have a role in DSR for smart grid (and for domestic customers)
- DSO will be involved in DSR for domestics
- Customers themselves will be / are involved in a few countries

• Incentive Mechanisms

- Demonstration projects funded by network charges, government budgets & ‘other’ sources (EC funds, DSO budgets, funding institutions)
- Regulatory mechanisms are in place to incentivise DSOs to undertake innovation projects
- Incentives funded by combination of network charges, national government & EU funding
- Static time of use tariffs or load control through remote means will be used to incentivise DSR





work programme for SG TF EG3 in 2014/15 (I/II)



	WP I	WP II	WP III
	Flexibility	Regulatory and commercial arrangements	Incentives, mechanism & structure
Issues:			
Topics to cover:			
Deliverables:			



structured into three sequential phases





work programme for SG TF EG3 in 2014/15 (II/II)



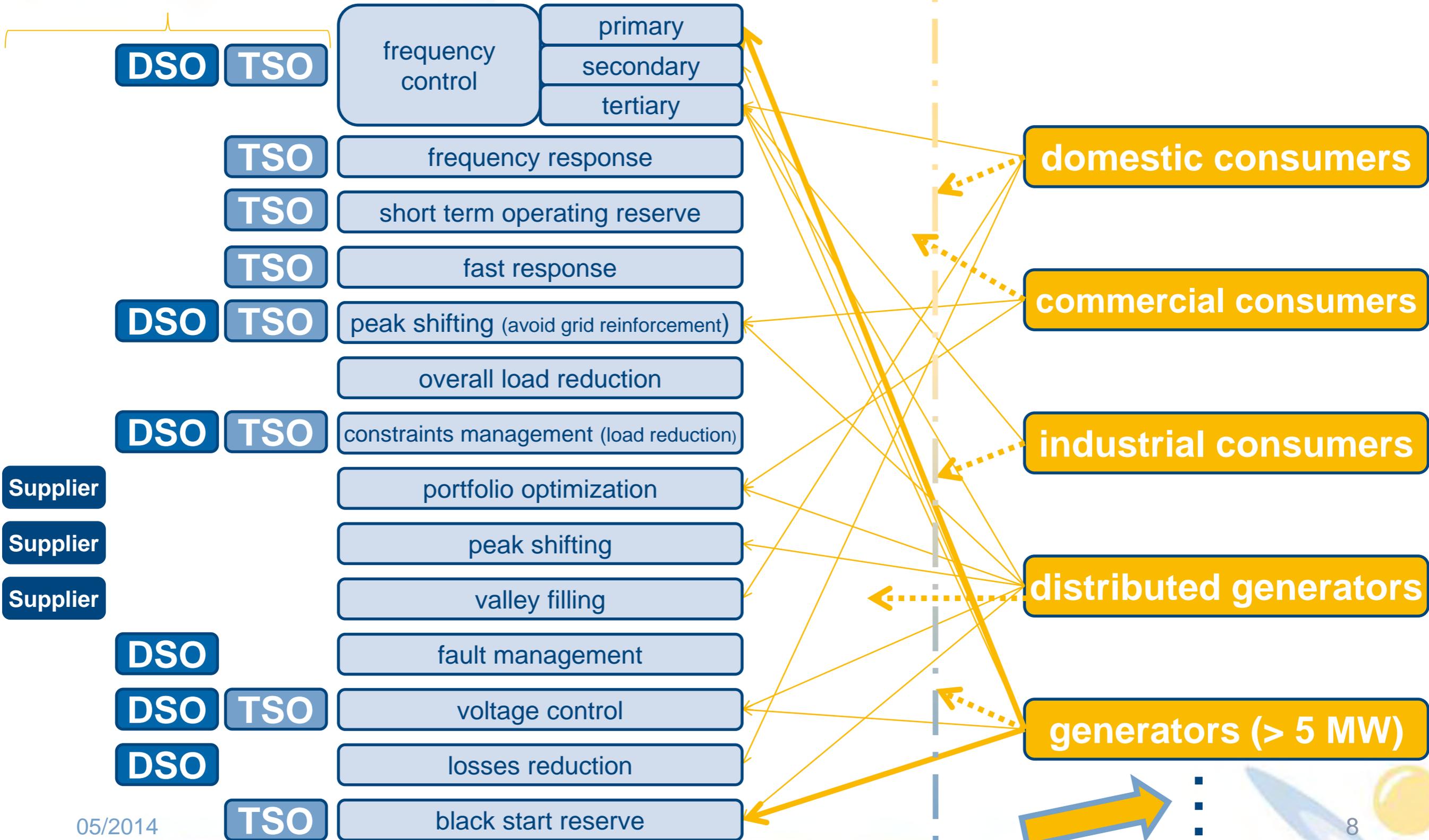
	WP I	Flexibility	WP II	Regulatory and commercial arrangements	WP III	Incentives, mechanism & structure
Issues:		<ul style="list-style-type: none"> a) Understanding what services the system needs b) Understanding consumer opportunities and requirements/consumer segmentation 		<ul style="list-style-type: none"> a) Adequate evolution of competitive market and services b) Limited market for new services 		<ul style="list-style-type: none"> a) Uncertainty for investors to invest in smart grids b) General misunderstanding of smart grids c) Limited transparency on investments in smart grids
Topics to cover:		<ul style="list-style-type: none"> a) Analysis of potential flexibility and customer requirements b) Maturity of technologies for cost-effective flexibility c) Best practices and Cost Benefit Analysis 		<ul style="list-style-type: none"> a) Roles and responsibilities of stakeholders b) Commercial and regulatory arrangements to facilitate trading provisions of smart grid services 		tbd
Deliverables:		<ul style="list-style-type: none"> a) List of products and services per consumer segments to improve the overall efficiency of the grids and enable all users to participate actively in the energy market 		<ul style="list-style-type: none"> a) List of new products: description and design b) Regulatory aspects 		tbd



list of products and services

provider

national differences





list of products
and services

provider

national differences

1

(draft!!!) cross-impact matrix (draft!!!)

2

could be based
on a delphi poll

	primary	secondary	tertiary	frequency response	short term operating reserve	fast response	peak shifting (avoid grid reinforcement)	overall load reduction	constraints management (load reduction)	portfolio optimization	peak shifting	valley filling	fault management	voltage control	losses reduction	black start reserve	
domestic consumers	0	0	1	0	0	0	0	1	1	1	2	2					10
commercial consumers	0	1															15
industrial consumers	0																23
distributed generators	1																18
generators (> 5 MW)	3													1	3		30
	4	7	9	7	6	6	8	5	1	8	6	6	0	9	10	4	

NOT COORDINATED !!!

basis for prioritisation

sumers

nsumers

sumers

nerators

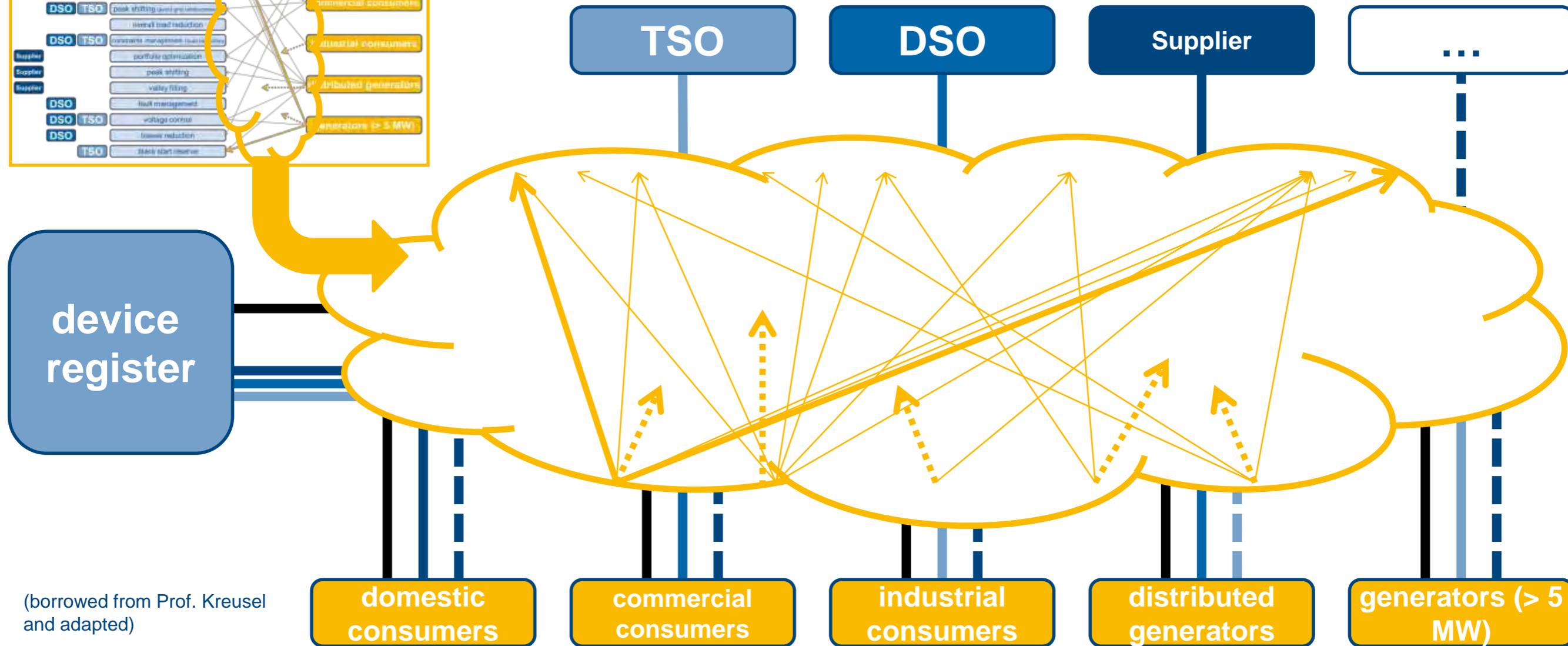
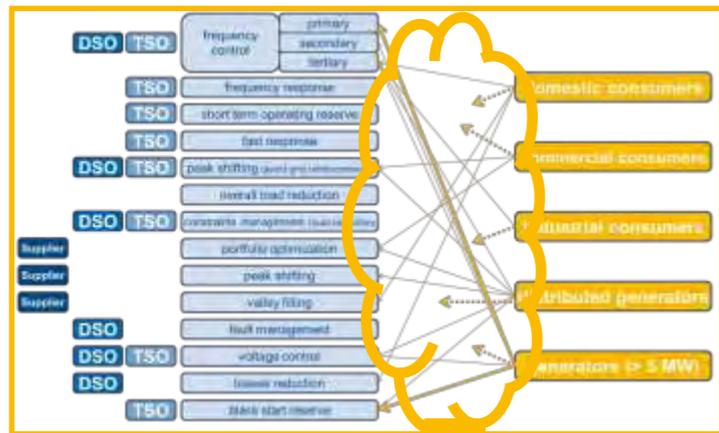
5 MW)

3

quantification

3,5 Mio.
25 Mio.
5,0 Mio. ...
xy Mio.
xy Mio. ...
per 1.000.000 grid connections
0,5 Mio.

device connection platform instead of vertical/"direct" solutions ?/!/? ...



(borrowed from Prof. Kreusel and adapted)

— automated registration (mandatory), structural information
 == examples for case-by-case using of operational data



Grundsatz-/Schlüssel Fragen II/II



- What kind of regulation is needed to ensure grid operator neutrality acting as market facilitator and a cost efficient operator?
- Which tools will be necessary to enhance (better) data exchange between market participants?
- How to incentivise demand response / new energy services from customers and/or market participants?
- ...

Thanks for your attention!

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