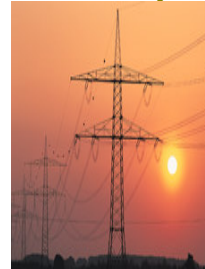




Strategic Research Agenda Working Group 3 **Demand & Metering –** Recap breakout session (07/04/06)



Maher Chebbo (on behalf of the group)
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and Chairman WG3 Demand and Metering

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Brussels, April 6-7 2006

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A group of experts from GenCo, DisCo, Retailing, Services companies, academies and Meter manufacturers contributed to WG3 Demand and Metering building a consolidated European industry vision.



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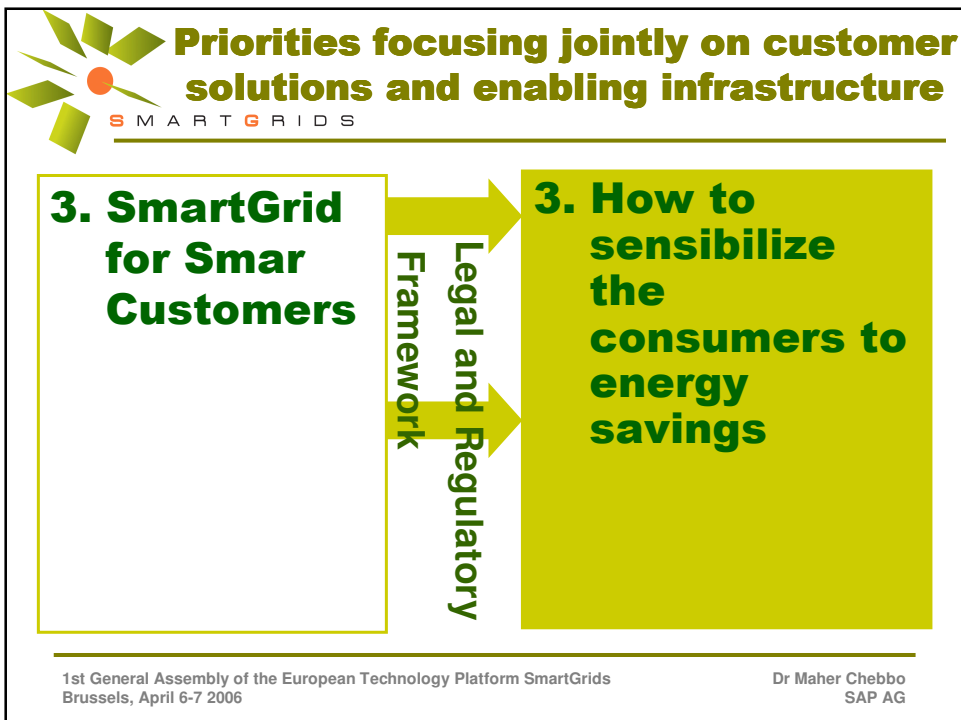
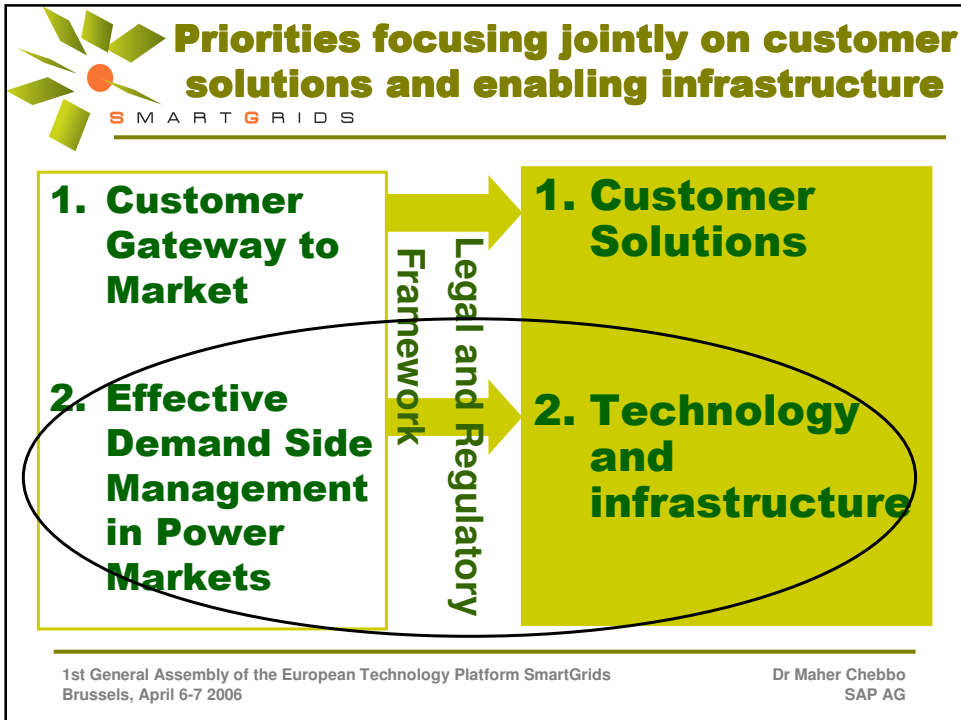
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9. Research Topics I

Research topics	->2015	2020+
Tailored tariffs for different customer groups (Benchmark: 10 different tariffs for residential, commerce and DG plus separate tariffs for industries and for DG operators)	▶ ▶	
Business models for different market players in different market contexts (DSO, ESCO, Energy Traders, Metering Service Companies, Wholesalers, Energy Suppliers)	▶ ▶	
DR-Programs based on AMM & IC technologies for large scale application (Energy savings of 5% in 5 years where AMM & ICT has been introduced)	▶ ▶	

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9. Research Topics II

Research topic	->2015	2020+
Energy Data Management for large scale applications	▶ ▶	
Service Oriented Architectures and ICT solutions	▶ ▶	
Simulation and evaluation models for DSM-Programs	▶ ▶	
Economic solutions for home automation and energy management systems	▶ ▶	▶ ▶
Simplified and real-time billing and multi metering	▶ ▶	

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9. Research Topics III

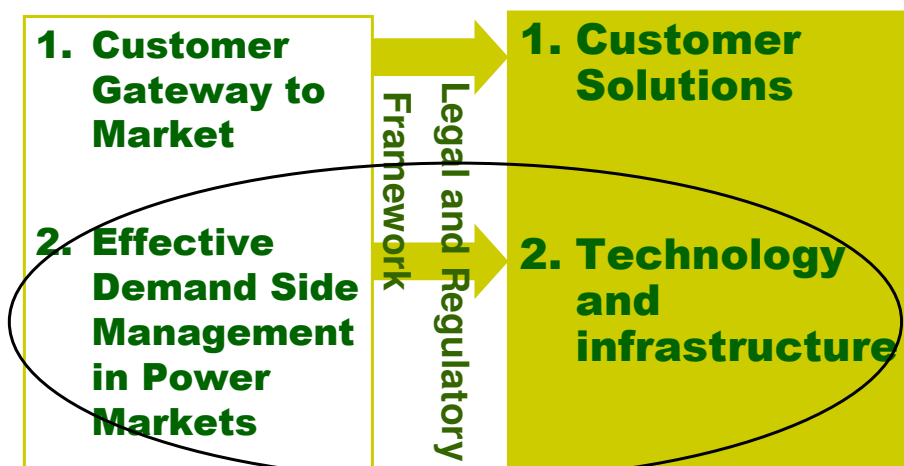
Research topic	->2015	2020+
Business Cases and Market Entry of innovative Value Added Services (Benchmark: 5 successful market entries in 10 years)	▶▶	
Smart grid operation through active distribution networks (Benchmark: 20 different pilot grid segments in 5 years, 100 in 10 years)	▶▶	▶▶
Real time energy balancing in distribution networks		▶▶
Energy on demand		▶▶

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Priorities focusing jointly on customer solutions and enabling infrastructure



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Overview of Research Topics

Research topics	->2015	2020+
Telecommunications media Manageable, reliable and secured	▶	
Protocols and services Aiming at interoperability of different devices	▶	
Hardware and software design&development Low cost for mass-production	▶▶	▶▶
DSM-Programs based on AMM & IC standard technologies for large scale application	▶	▶▶

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Overview of Research Topics

Research topic	->2015	2020+
Bidirectional communications to-from smallest load / generator	▶	
Security / Manageability / Reliability	▶▶	
Communications services and data model standardization	▶▶	
Distributed large scale data processing and applications	▶	
Load model and forecast	▶	
Tariff management and settlement	▶	

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Outcome workshop WG3 : Topic 1

Seminar Topic 1: The Vision – sharpening our insights
Do you share the Vision for Electricity Networks of the Future and how might the vision be refined?

- i) Yes, the working group shares the vision with some refinements**
 - a. Energy on demand anywhere and any time**
 - b. Creative decentralized (at the meter level) one way communication rather than 2 ways communications**
 - c. Smart multi-metering for electricity and gas (gaps ?)**
 - d. User front-end for business customers**
 - e. Timing is crucial (speed up research)**
 - f. Broadband services, IP (Internet protocol)**
 - g. Study Telecom like devices/GSM where Meters not centric**
 - h. Consumer becoming supplier should be treated in WG3**
 - i. Bundling of Utilities services (& broadband) to reduce costs**
 - j. New retailing business model (Consumption information and incentives at time of buying)**

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Outcome workshop WG3 : Topic 2


Seminar Topic 2: The Customers – anticipating their needs and opportunities

Are the needs of customers adequately identified and how will these differ in the future from those of today? Are the strategic topics aligned with these needs and is the ranking proposed consistent with the user's priorities?

- i) Add the research topic of studying customer's requirements**
- ii) Association of consumers as an additional stakeholder**
- iii) Include the gender aspect**
- iv) Ageing society**
- v) No ranking so far**
- vi) Awareness at early age: tailored consumer's education**

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Outcome workshop WG3 : Topic 3


Seminar Topic 3: Evaluation Projects – achieving cost-effective validation projects

What are the characteristics of a successful validation project, how might it best be structured as regards collaborative partners, funding, location and so on?

- i) Project team comprising multiple expertise driven by utilities and or industries**
- ii) Cost effectiveness of solution**
- iii) Define the right Key performance indicator**
- iv) Include customers in specification, testing and evaluation phase**
- v) Robustness > European solution preferred**
- vi) Validation of interoperability**
- vii) Selection of test sites, lighthouse project: take into consideration potential savings and cost benefits for the real cases**

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Outcome workshop WG3 : Topic 4

Seminar Topic 4: Risks & Solutions – securing success

What are the risks that may prevent the realisation of the vision and how might the Flexible Framework best be developed to eliminate or minimise them?

- o Lack of standardisation**
- o Consistent regulatory framework**
- o Convergences of interests of different stakeholders**
- o Lack of incentives in smart investment**


Questions

What are the real marginal cost of energy generation for the short term?

- o Not discussed**

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Outcome workshop WG3 : Topic 4

Seminar Topic 4: Risks & Solutions – securing success

What are the risks that may prevent the realisation of the vision and how might the Flexible Framework best be developed to eliminate or minimise them?


- **Lack of standardisation**
- **Consistent regulatory framework**
- **Conversion of interest of different stakeholders**
- **Lack of incentives in smart investment**

Questions

What are the real marginal cost of energy generation for the short term?


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Priorities focusing jointly on customer behaviour and his early awareness

3. SmartGrid for Smart Customers



Legal and Regulatory Framework

3. How to sensibelize the consumers to energy savings

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