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Strategic Research Agenda Working Group 3: Demand and Metering

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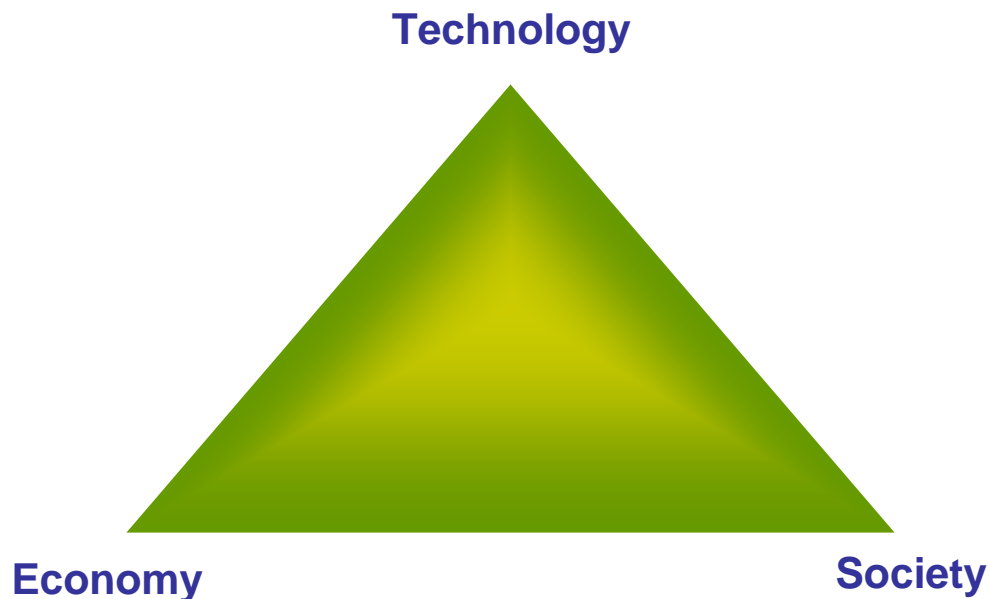
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Holistic vision is needed

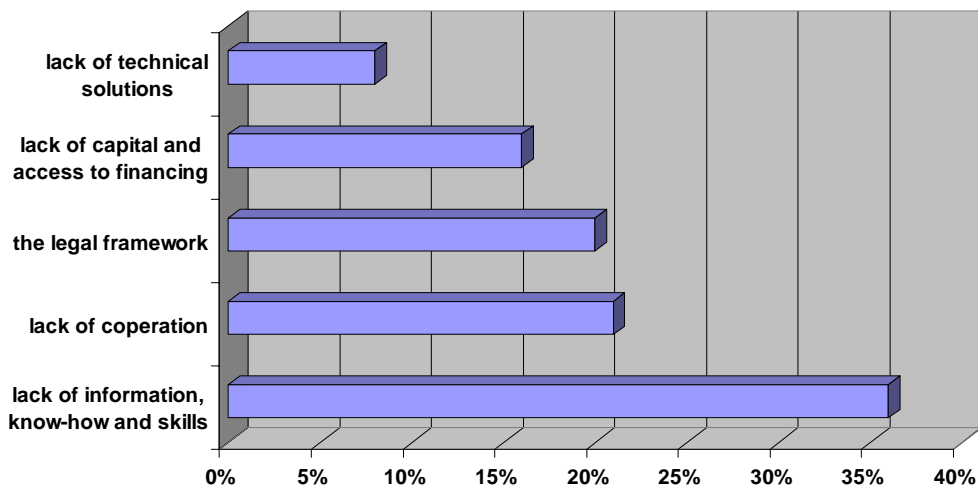
The magic triangle of DMS





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Barriers to changing energy consumption



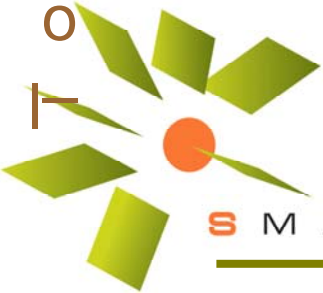
1. Low impact of missing technical solutions
2. Cost intensive solutions
3. Lack of incentives
4. Duplication of efforts
5. Lack of education

Source: World Sustainable Energy Days 2006; cumulative voting = 100%



Drivers for changing customers demand

- High energy costs
- Availability of energy-efficient technologies at low costs
- Increased consumer awareness and knowledge
- Easy access to real time information on energy use
- Leadership on sustainable energy use
- Incentive systems



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Behaviour: the forgotten half of energy demand



Education is key to
behavioral change



Education for increased sensitivity

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- Different educational approach for different consumer groups
- Primary and secondary education, adult education
- Highlighting consumer benefits is crucial (reduced bills, increased competitiveness, better comfort)
- Information on energy consumption and energy efficiency opportunities should be targeted, easy-to-use and allow tailor-made solutions
- Encourage partnerships
- Focus on harder-to-reach groups: industry, retailers, householders



Excellent educational programs already in place

- ❑ Kids4Energy: European program in nine European countries
- ❑ Eco-schools and green flag award (EU wide)
- ❑ CREATE UK - motivates and educates people in businesses, communities, and schools to achieve more sustainable use of energy and reduce carbon emissions
- ❑ Solarteur program provides courses for craftsmen and retailers (Austria)
- ❑ Sectoral guides for Engineers – Heating, Ventilation and Air-Conditioning (France)



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Information systems available to interested customers

- ❑ Energy Mirror Interface allows disclosure of energy usage in buildings (Netherlands)
- ❑ CO2online – "HeizCheck" measures annual household CO2 emissions, and calculates an energy efficiency rating (Germany)
- ❑ E-Control – "Quick-Check" energy efficiency calculator (Austria)



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Characteristics of EE Education / Information Programs in EU

- Diverse, interesting, relevant and of excellent quality
- High social, economic and environmental value in educating many diverse groups
- Accessible via a variety of media

...but un-coordinated and missing
the opportunity of producing the
best results



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Smart Grids need Smart Customers

- ❑ Identification and EU wide promotion of front-runner educational programs for different target groups
- ❑ Provision of easily accessible information on costs of consumed electricity (design of meters, etc)



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Overview of Research Topics

Research topic	->2015	2030+
Assessment of existing programs and identifying gaps	▶ ▶	
Designing tailor-made educational approaches to consumer groups	▶ ▶	
Implementation of education programs EU wide	▶ ▶	▶ ▶
Development of information provision on energy costs	▶ ▶	▶ ▶



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Thank you for your attention!

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