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Social actors in emerging electricity systems

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Athens, 6th March 2018

JRC sites

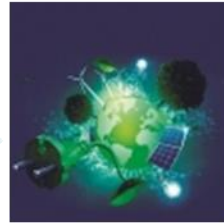
Headquarters in Brussels
and research facilities located
in **5 Member States:**

- Belgium (Geel)
- Germany (Karlsruhe)
- Italy (Ispra)
- The Netherlands (Petten)
- Spain (Seville)



JRC Smart Electricity Systems & Interoperability

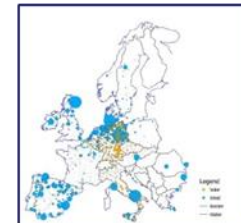
Assess



SMART-METERING
DEPLOYMENT



COST-BENEFIT ANALYSIS
SMART GRIDS



PROJECTS OF
COMMON
INTEREST

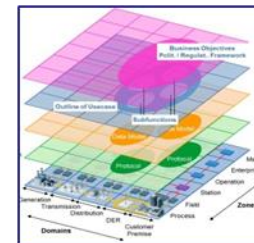
**Simulate
& Test**



RES INTEGRATION



REAL TIME SIMULATION



INTEROPERABILITY

Observe



SMART GRIDS LABS



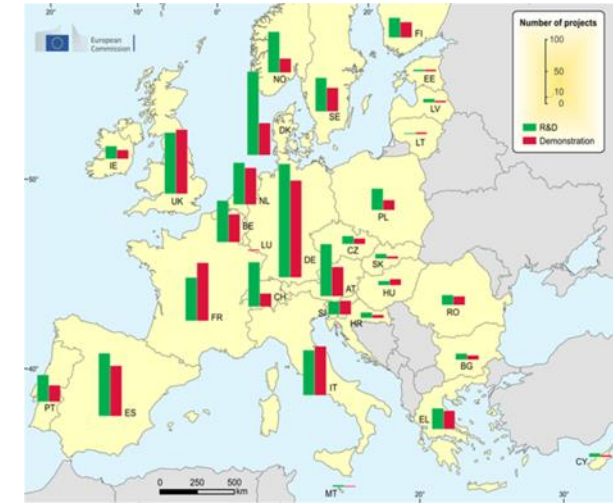
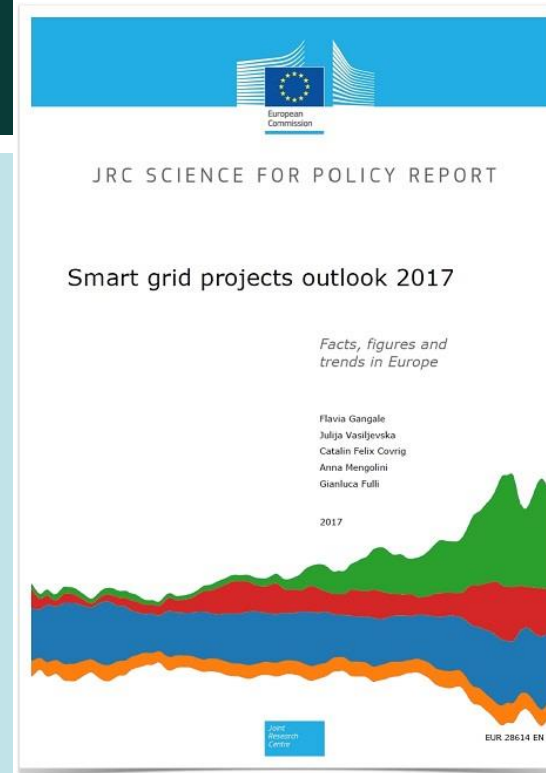
SMART GRIDS PROJECTS



DSO OBSERVATORY

Smart grid projects Outlook 2017

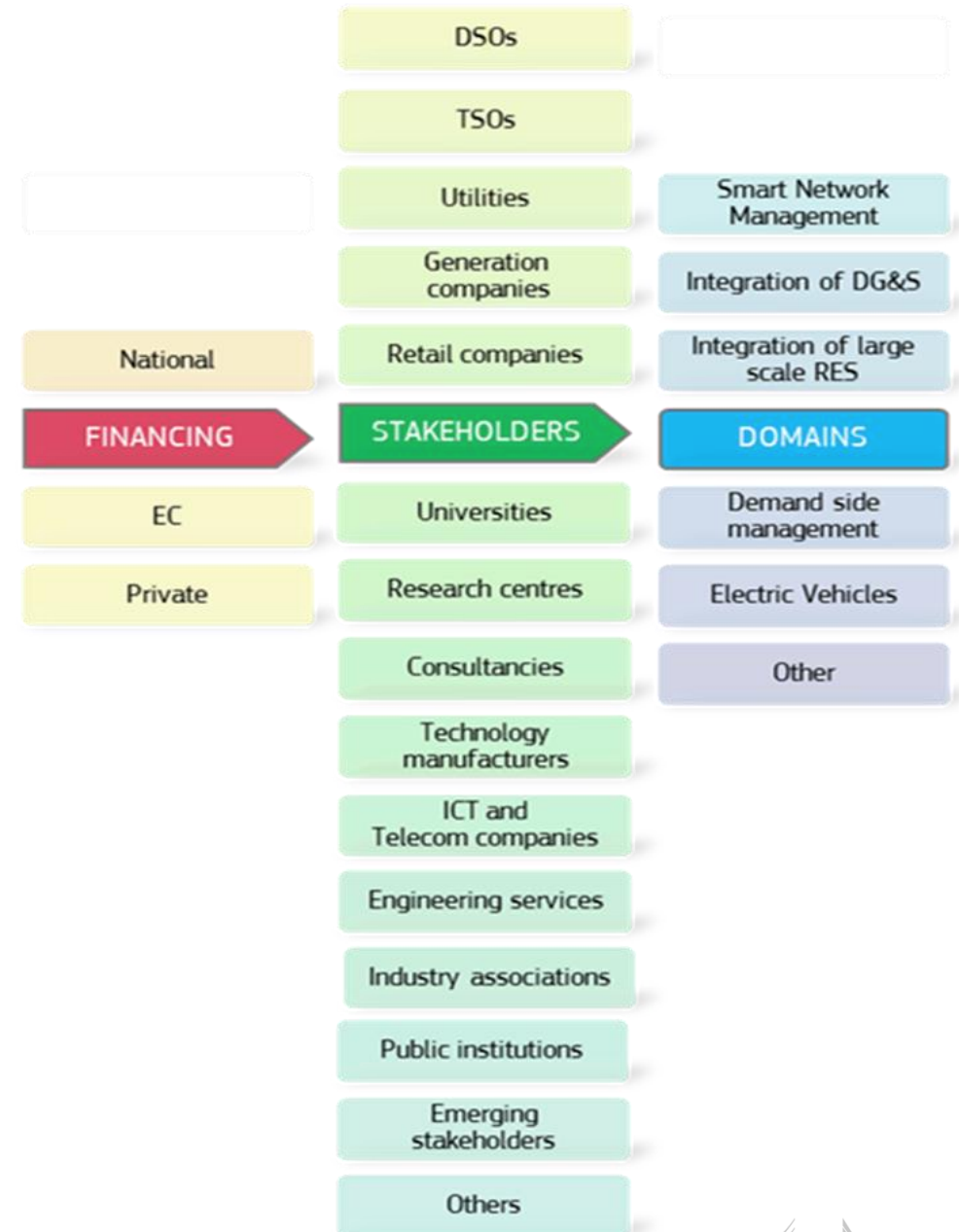
- **Number** of projects, **level** and **pace** of investment
- Sources of **financing** of SG projects
- Main **stakeholders** and emerging synergies
- Main **areas** of investment



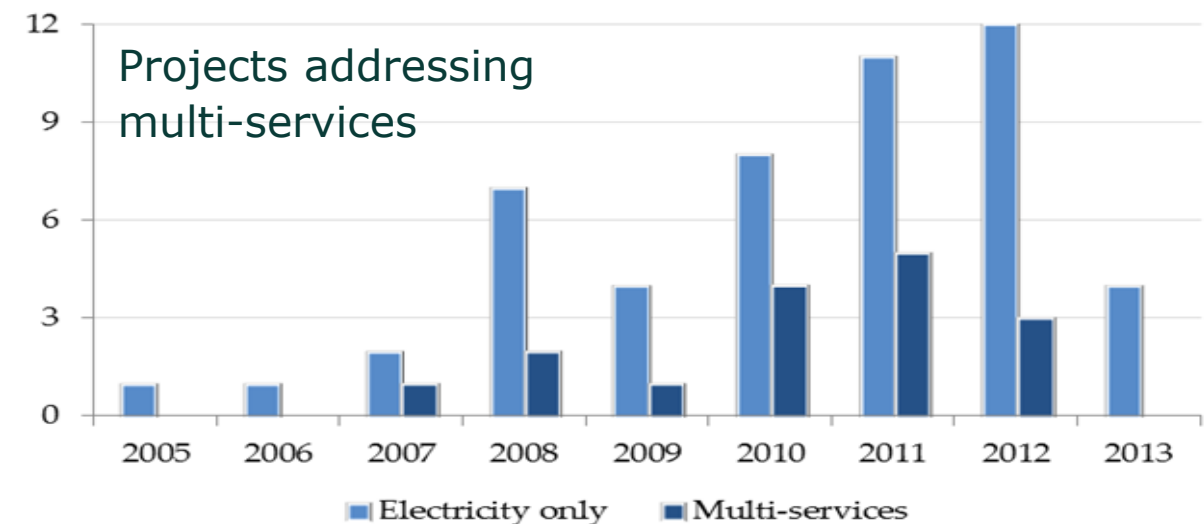
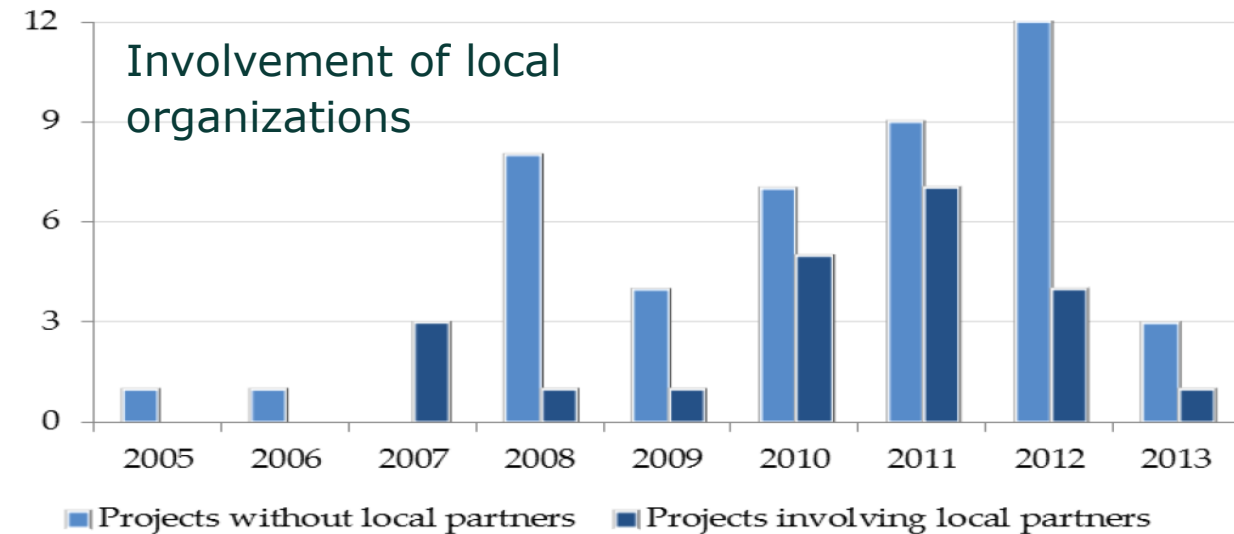
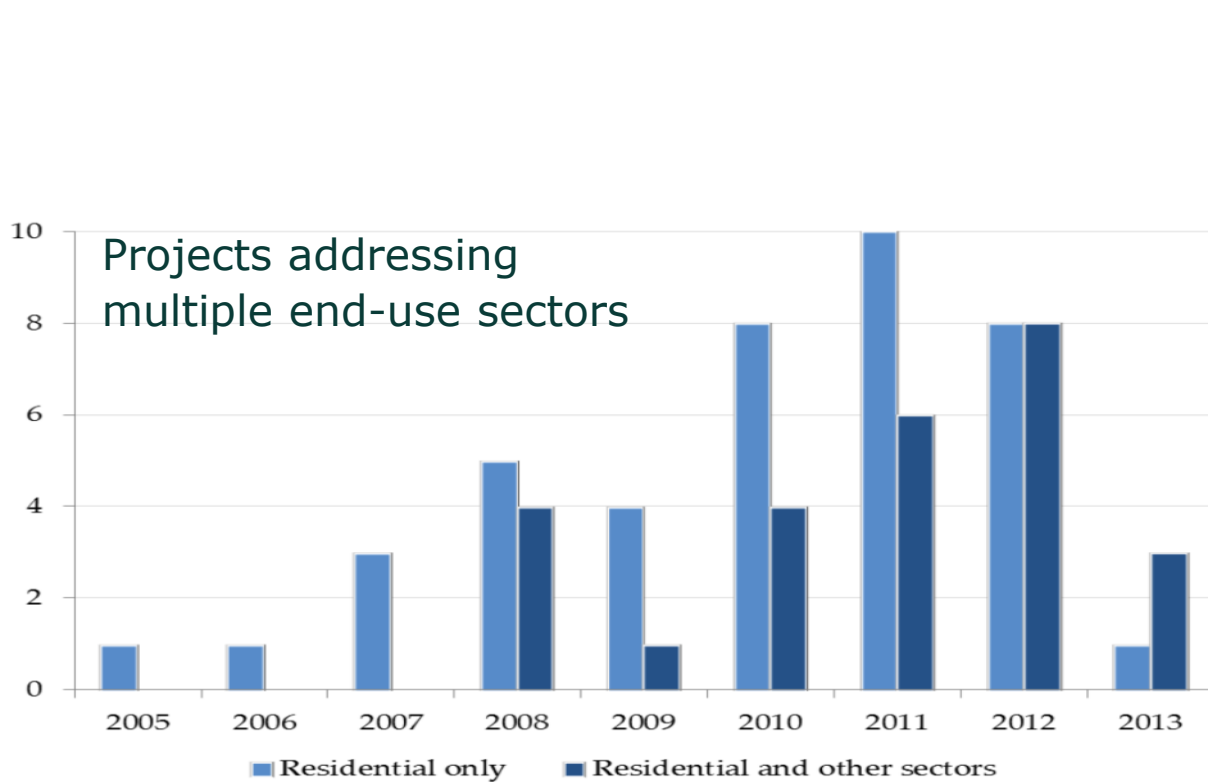
<http://ses.jrc.ec.europa.eu/smart-grids-observatory>

Smart grid projects Outlook 2017

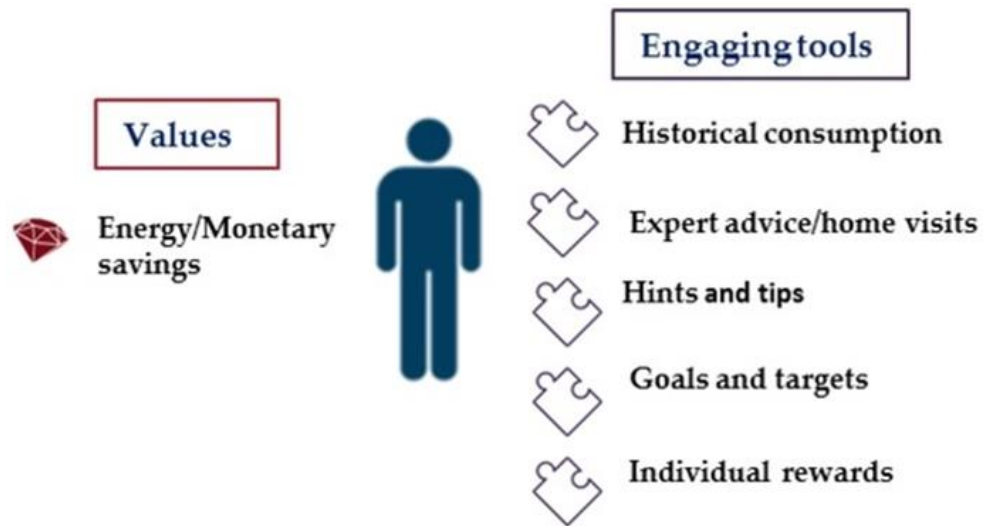
- **950** smart grid
- **4.97** billion EUR investment
- **2900** organizations
- **800** implementation sites



Demand side Management in SG pilots – Trends



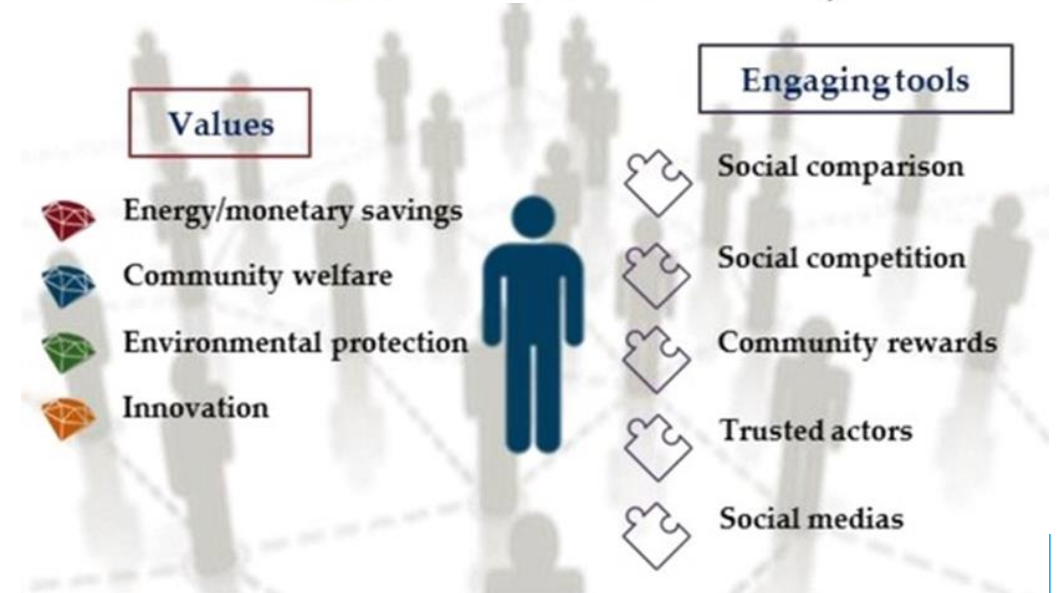
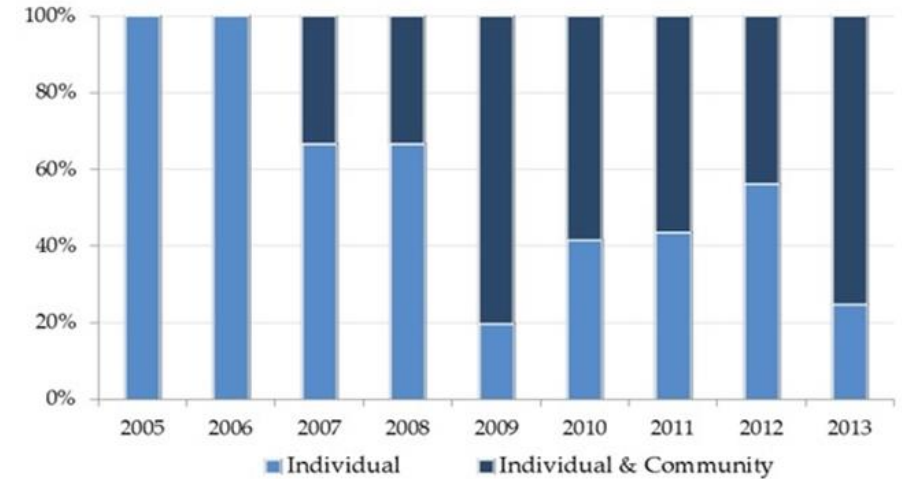
Demand side Management in SG pilots - Trends



From...

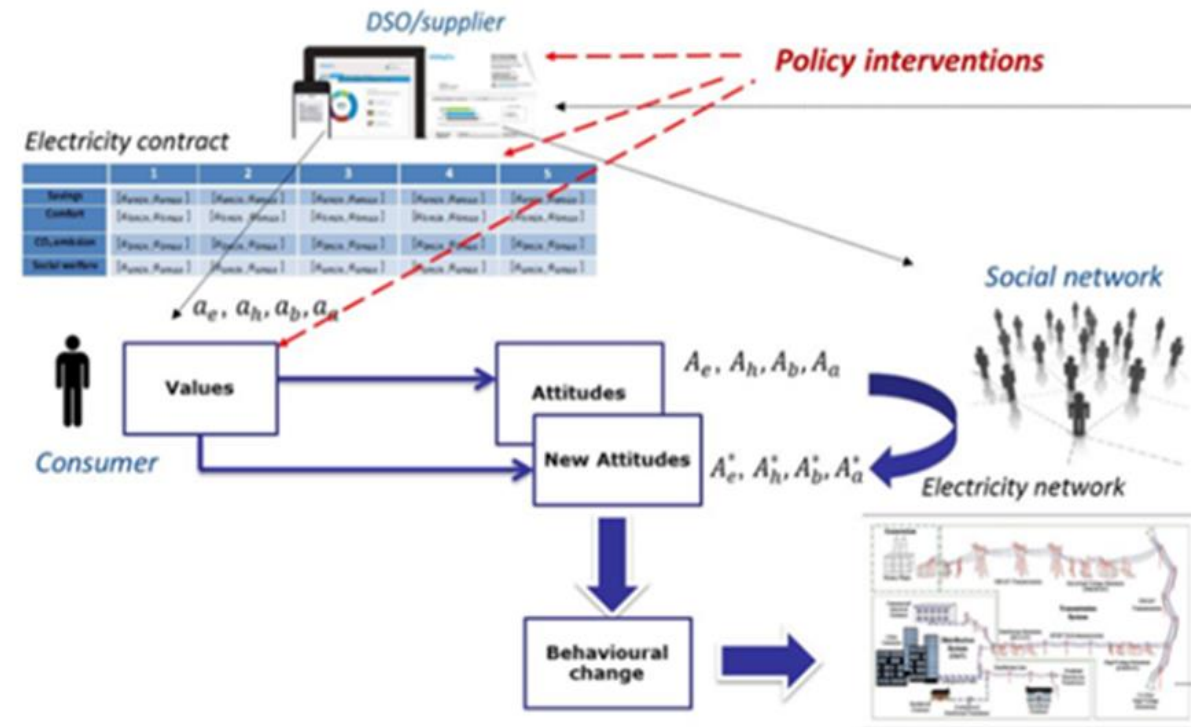


... To



Modelling complexity in emerging electricity systems - ABM

- Modelling interactions between **social actors** and **technical system**
- Identify **emerging behaviours** of energy actors
- Identify **leverages** to promote sustainable energy consumption **behaviours**



An Agent-Based Model of Electricity Consumer: Smart Metering Policy Implications in Europe, Journal of Artificial Societies and Social Simulation 20 (1) 12, 2017



Thanks

Questions?

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