



The Smart Grids landscape in Europe: lessons learned and current developments

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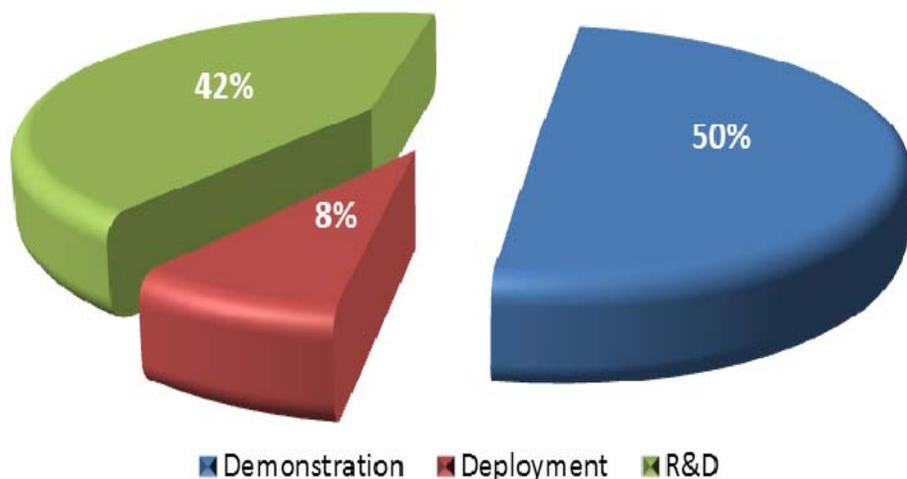
IE - Institute for Energy

Petten - The Netherlands

- Questionnaire sent in November 2010
- Over 300 projects received accounting for over 5 Billion Euros
- Screening of the projects to take out those which did not fall into the scope of our study or that didn't provide enough information for the analysis
- About 215 projects in the final catalogue, accounting for around 4.3 Billion Euros

- Overview of information received from projects
 - How are projects distributed along the various stages of the innovation chain?
 - Which countries are investing? Who are the main actors in Smart Grid development?
 - Which are the main areas addressed by the projects?

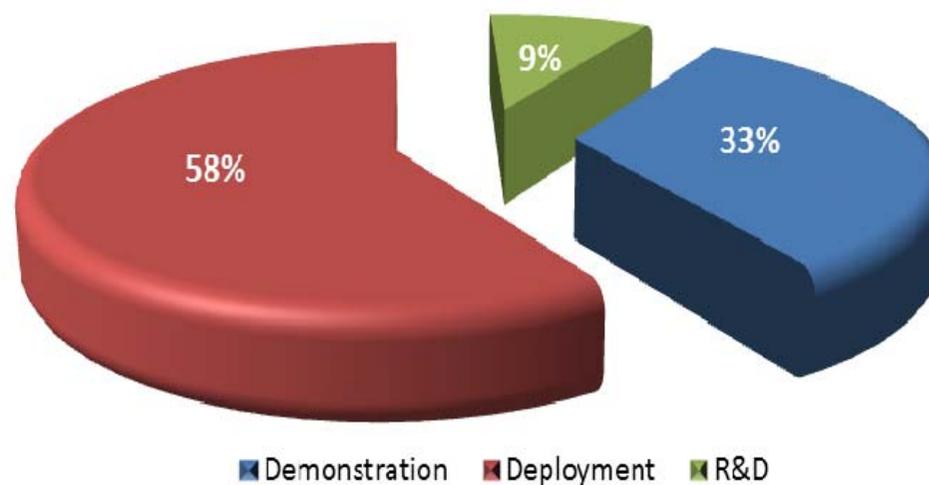
Number of projects

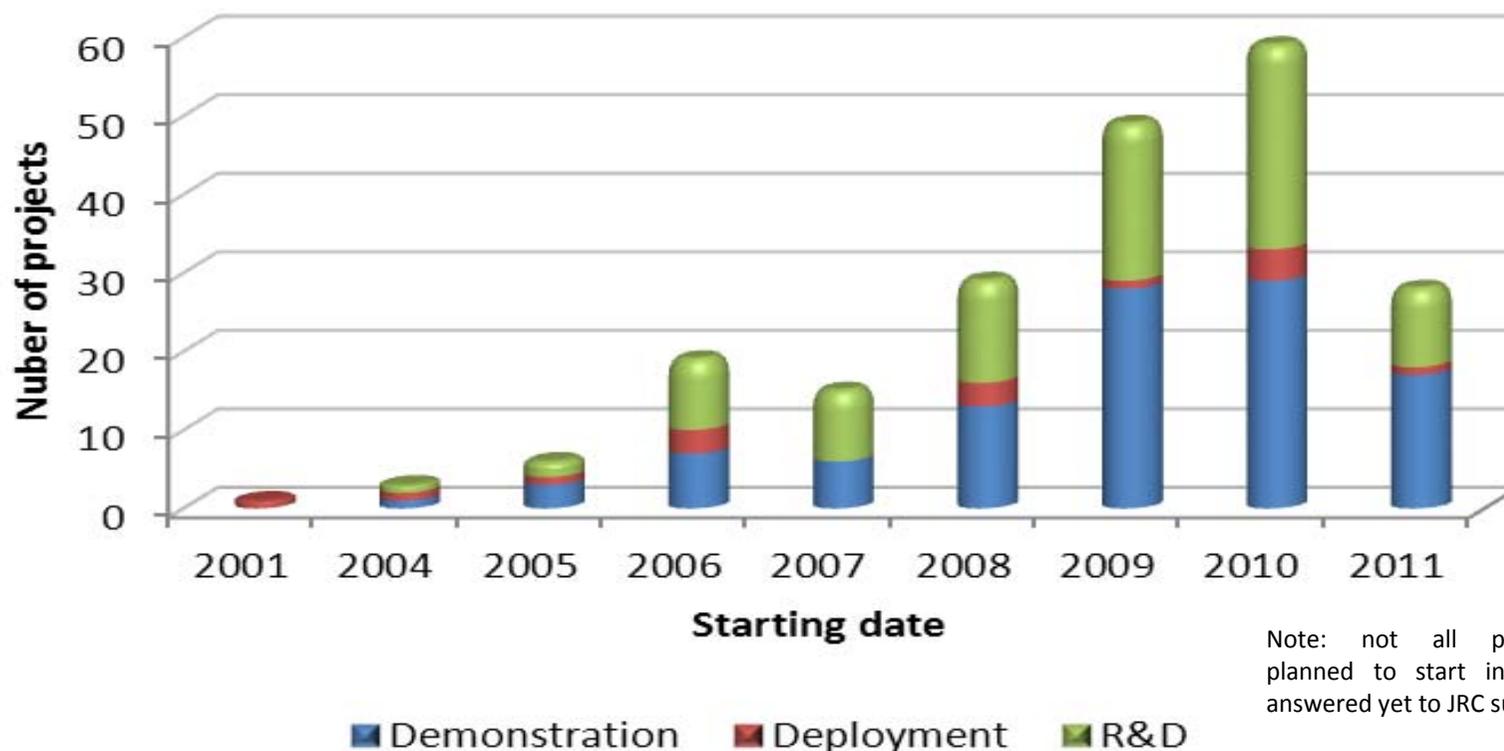


The collected projects span across all the stages of the innovation process, but the majority of them is in the demonstration phase.

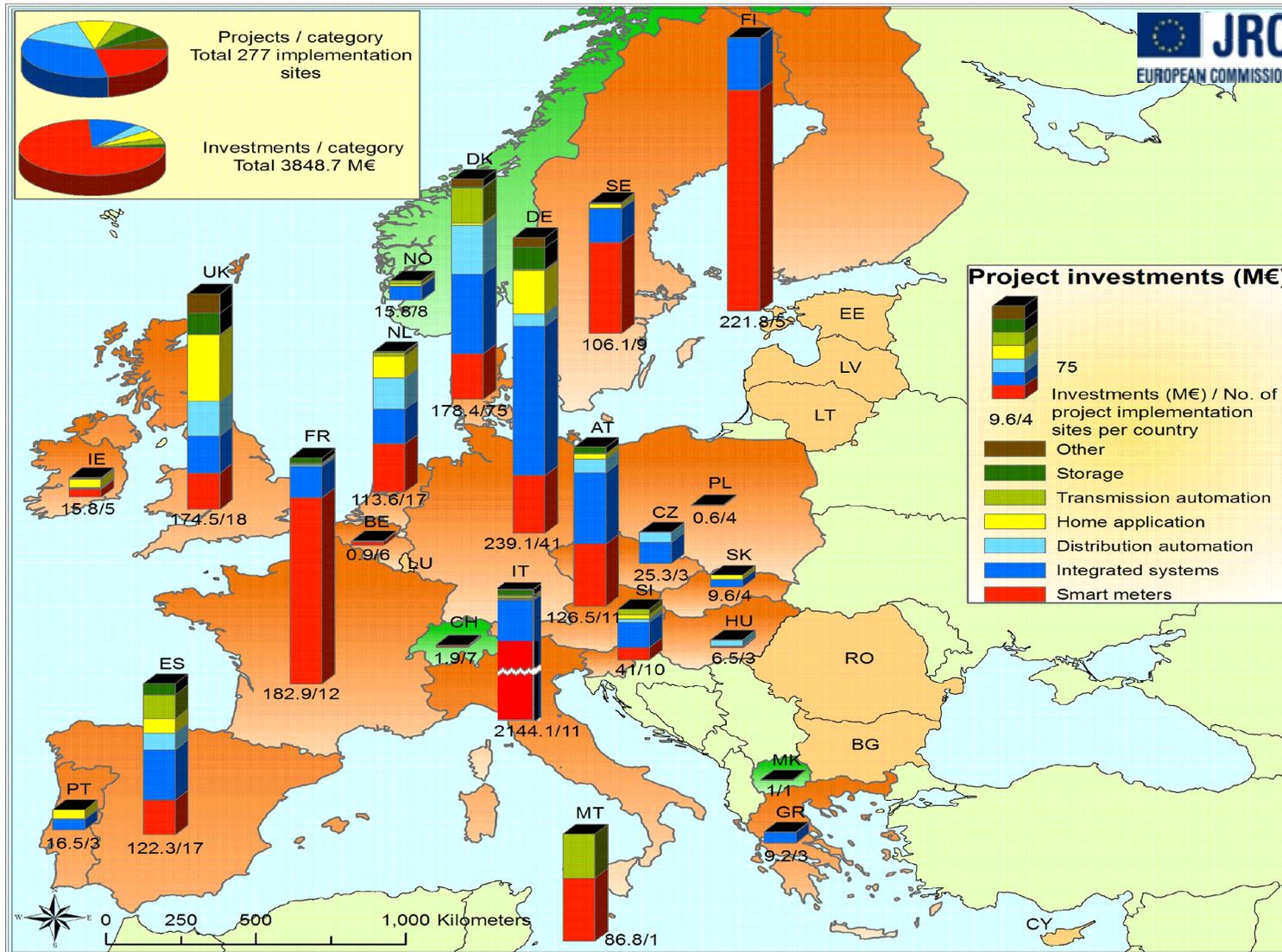
Deployment projects account for the greatest part of investments. Most of them are Smart Metering projects. **R&D and Demonstration projects** are mostly small-medium scale, but they have a wider portfolio of technologies and applications.

Budget (M€)

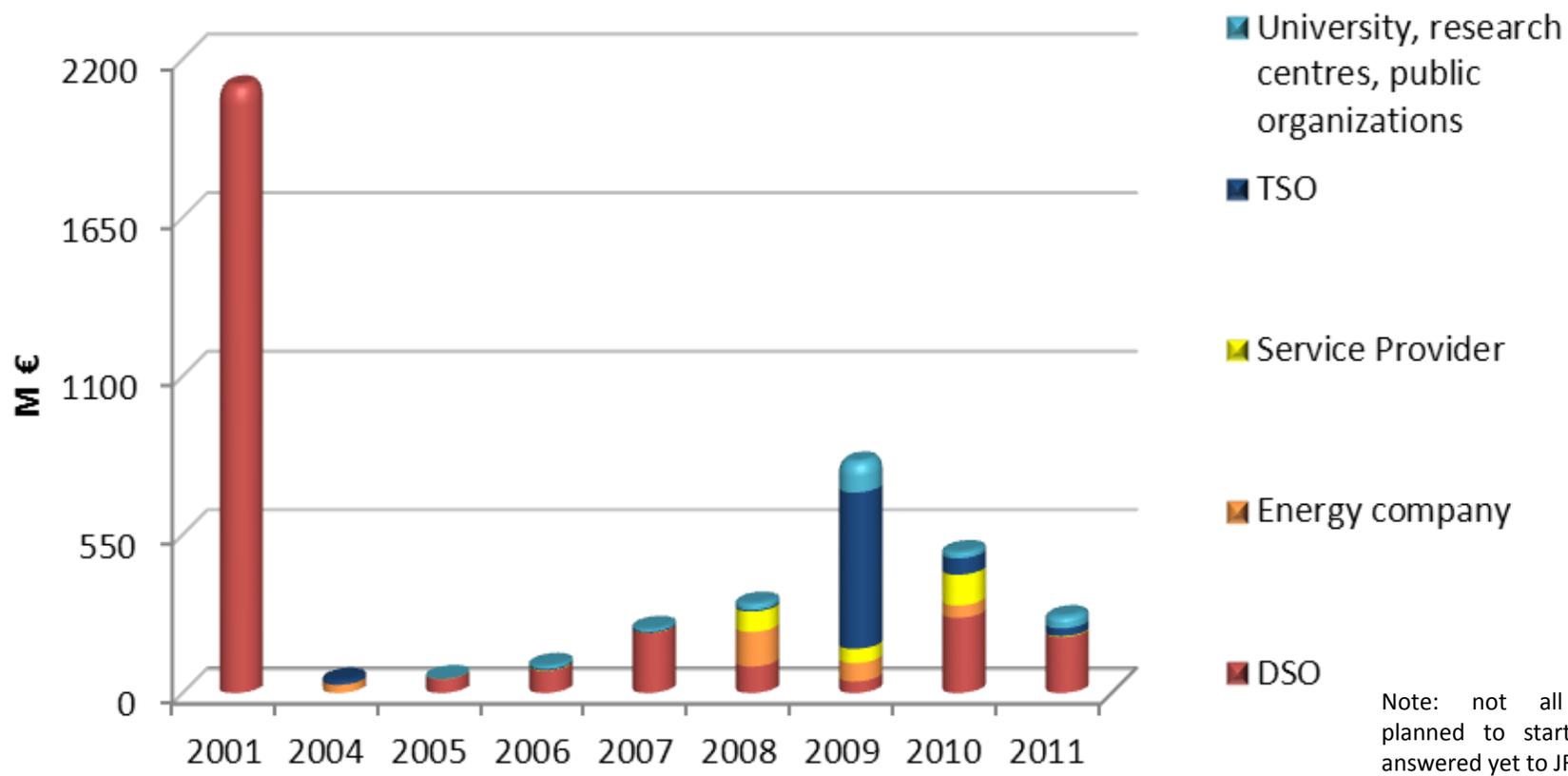




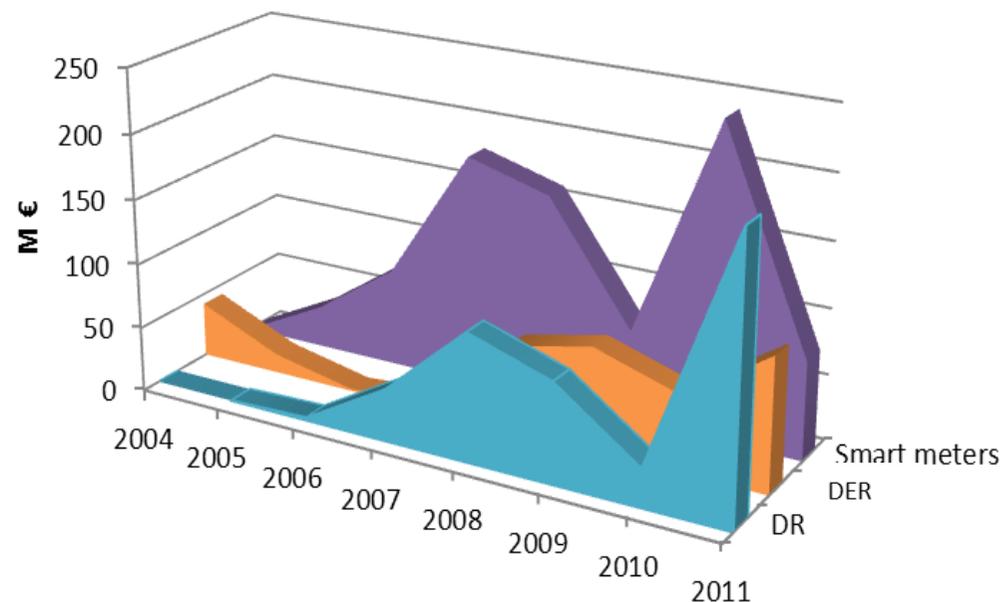
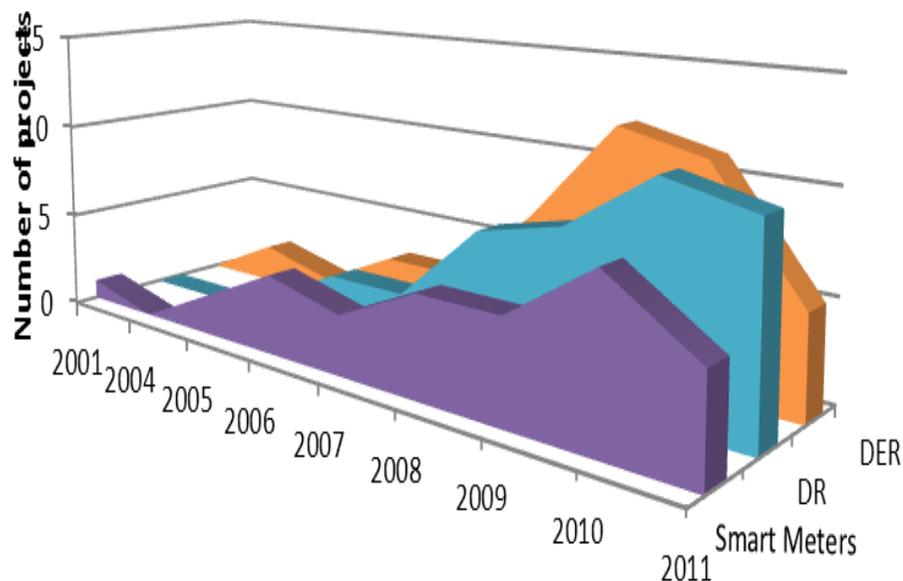
The increase in the number of demonstration projects with time shows a growing confidence in moving to the demonstration stage. On the other hand, the number of deployment projects has not increased dramatically since the first project in 2001. Most of them are Smart Metering projects.



Projects represented can span over more than country and can include more than one category. The following projects are not represented in this Picture: Kriegers Flak, a Super Grid project between Germany and Denmark, total investment of 507 M€; Smart Meter Roll-out and AMI in UK, estimated investment of 11897 M€; Smart Meter Roll-out in Sweden, spanning in approx. 150 projects and amounting to a total investment of approx.1500 M€.



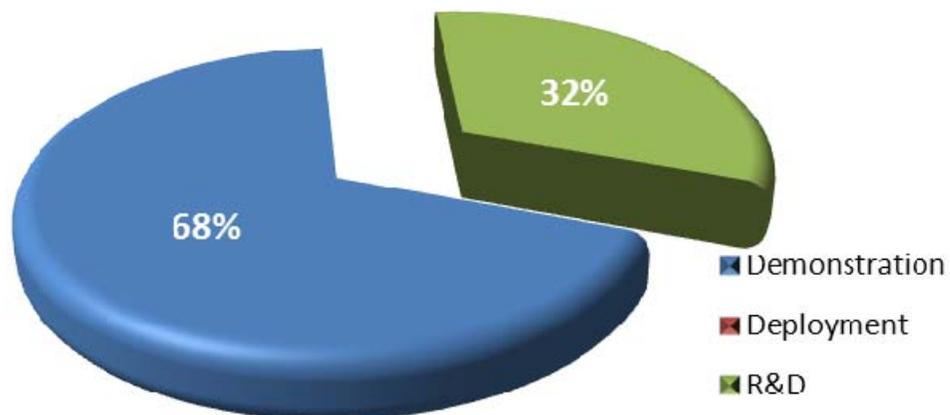
Network operators play a key role in smart grid development. Some smart grid solutions require multidisciplinary competencies and integration of different technologies.



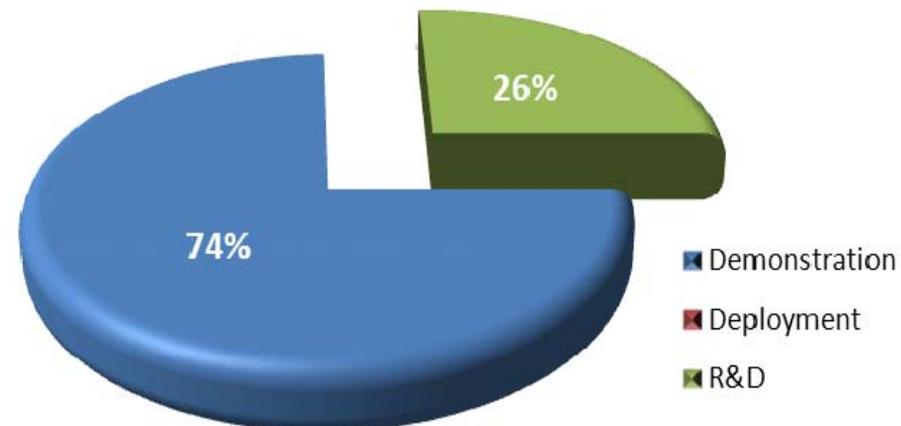
Integration of **Distributed Energy Resources (DER)** steadily growing

Demand Response (DR) projects, testing dynamic pricing and consumer participation, are growing in numbers (smart meters as key enabler)

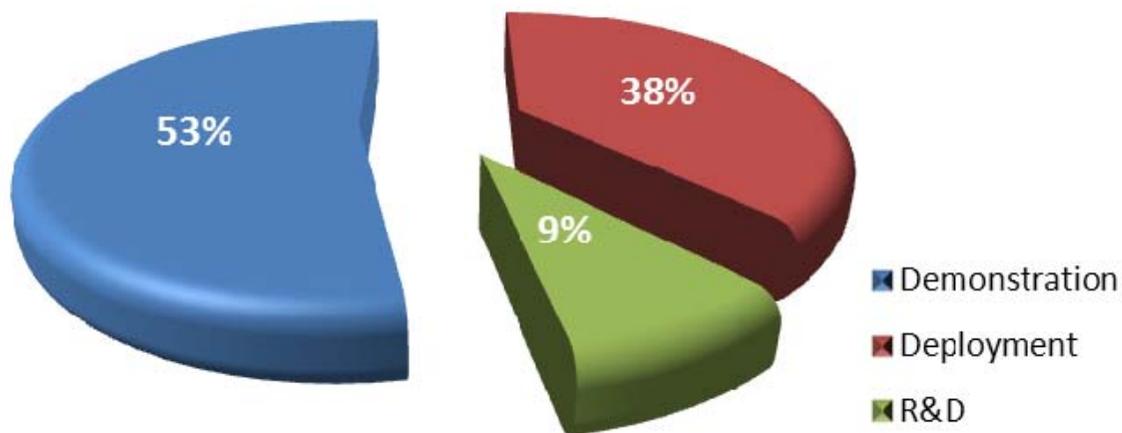
Distributed Energy Resources



Demand Response



Smart metering



- The catalogue offers an updated and comprehensive overview of the Smart grid projects developments in the EU, but does not aim to be exhaustive: the data collection is still ongoing!
- The results of our study will be published at the end of June;
- Need for a coordinated and continuous mapping of Smart Grid initiatives at National and European level.

**Thank you for
your attention**

Institute for Energy
<http://ie.jrc.ec.europa.eu/>

Smart Electricity Systems
<http://ses.jrc.ec.europa.eu/>

