



EirGrid Group Customer Conference 2012

25th October 2012

Delivering the Power System of tomorrow



Smart Grid

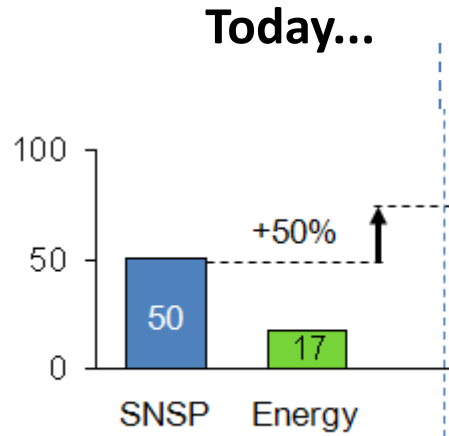
Ciara Corby

25th October 2012



The System Needs Smart Grid Solutions

**Renewable Levels
in Electricity**



...2020...

.. and beyond

**Operational
Complexity**

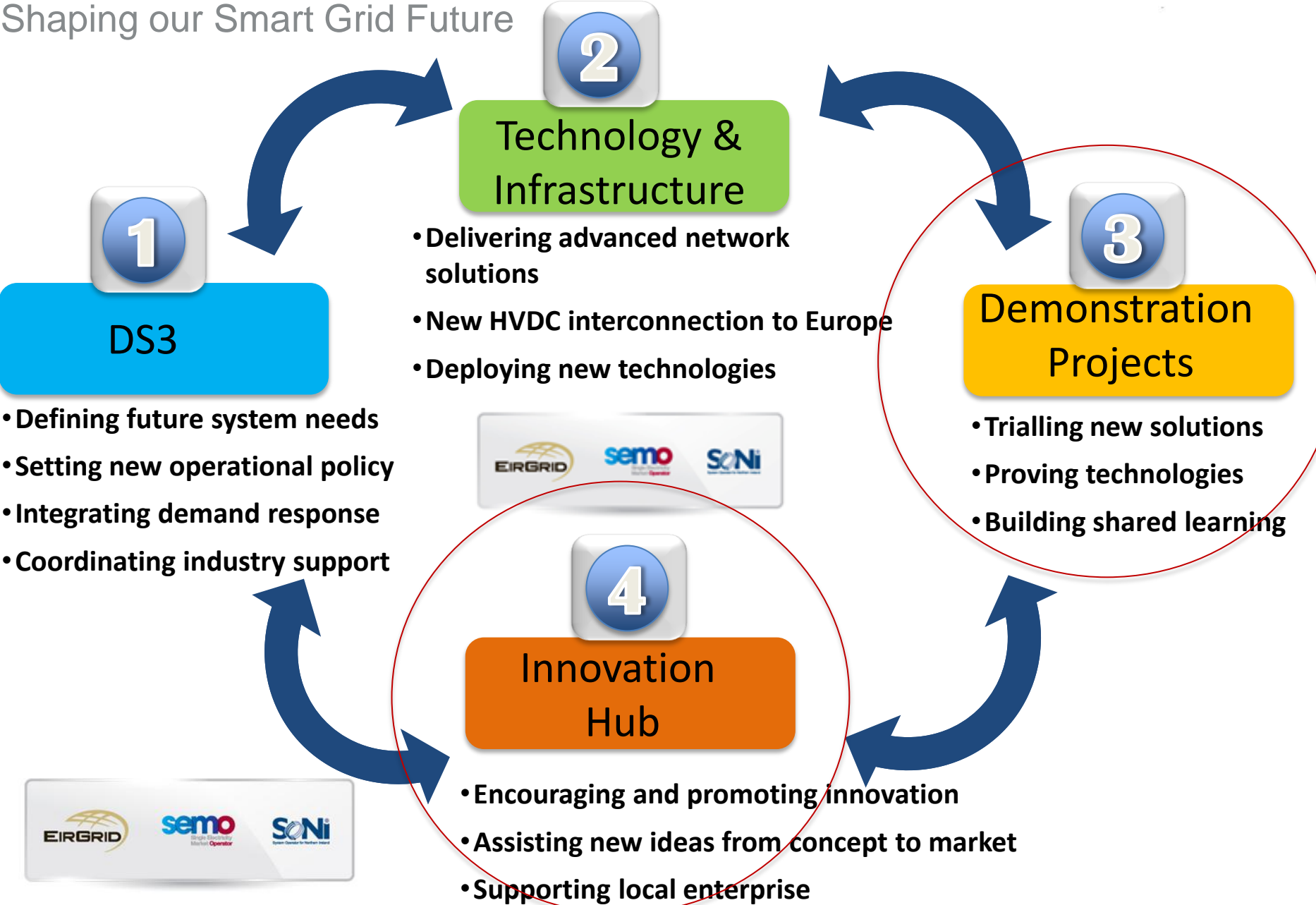


**User
Participation**



Our Smart Grid Programme

Shaping our Smart Grid Future



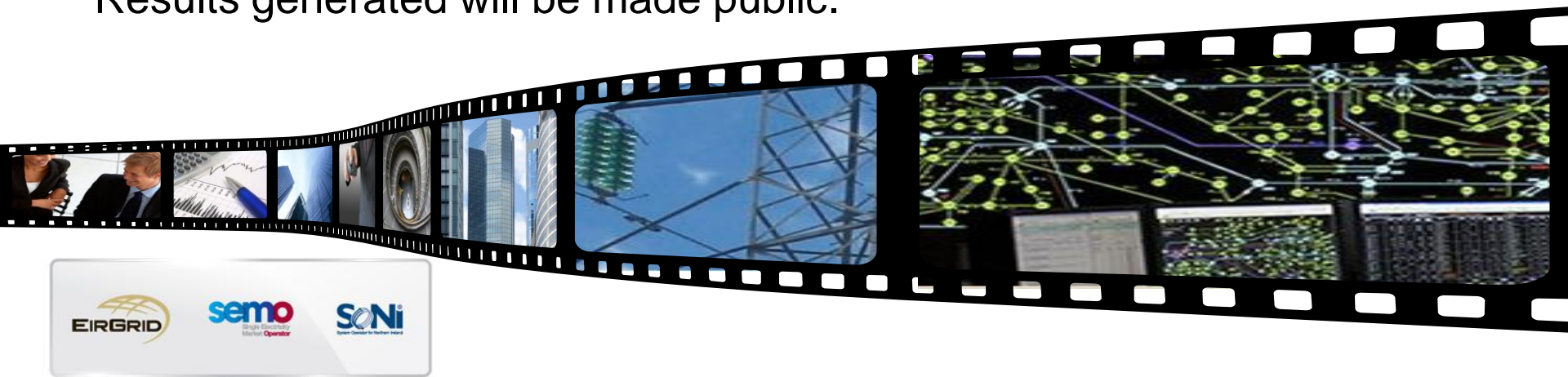
Demonstration Projects

Issued call to demonstrate new Smart Grid concepts including:

- Demand side management
- System Operation – e.g., advanced voltage control
- System Services – e.g. reserve provision
- Transmission Technology types

2 Projects selected, healthy pipeline of additional projects

Results generated will be made public.



Glen Dimplex Quantum – Greenway Project

- Demonstrate how the Glen Dimplex Quantum space and water heating system can be deployed as an aggregated demand side management tool
- Green Way will identify and make available up to 1,000 properties
- Demonstrate how a distributed population of energy stores can be switched on and off remotely in response to an operational command.
- EirGrid will facilitate grid level monitoring of the system's responsiveness



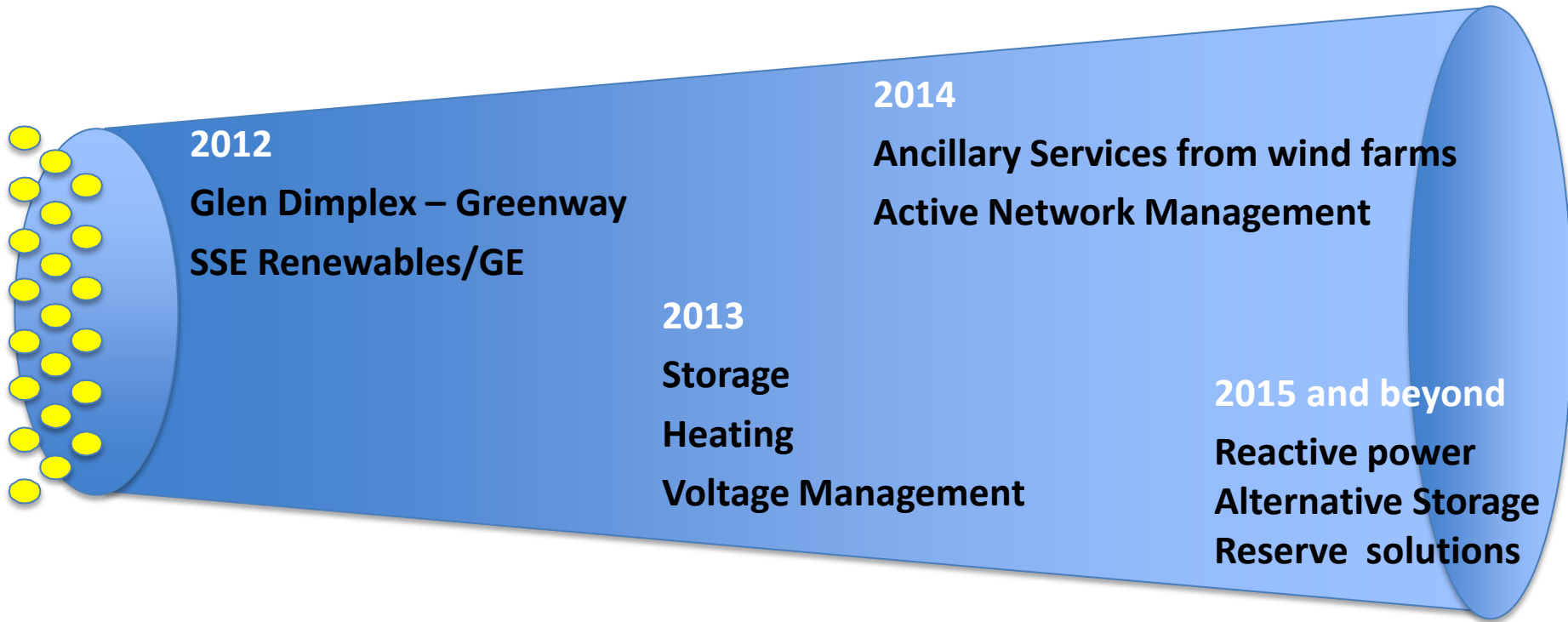
Fast Frequency response (SSE Renewables/GE)

- Demonstrate fast frequency response from a Wind Farm Power Station using GE's WindINERTIA™ Control
- Demonstrate the automatic additional aggregate MW response from a WFPS during a frequency disturbance
 - Identify what is the minimum MW capability which can be provided at all MW output ranges in normal operation,
 - Determine what the time frames are where this MW injection can be achieved during the time period in advance of the POR timeframe.
 - Determine how can the performance be monitored.



Demonstration Project Pipeline

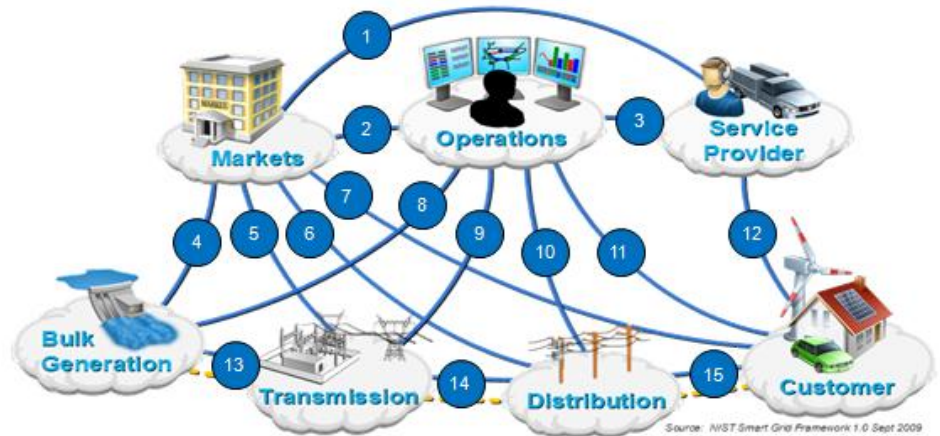
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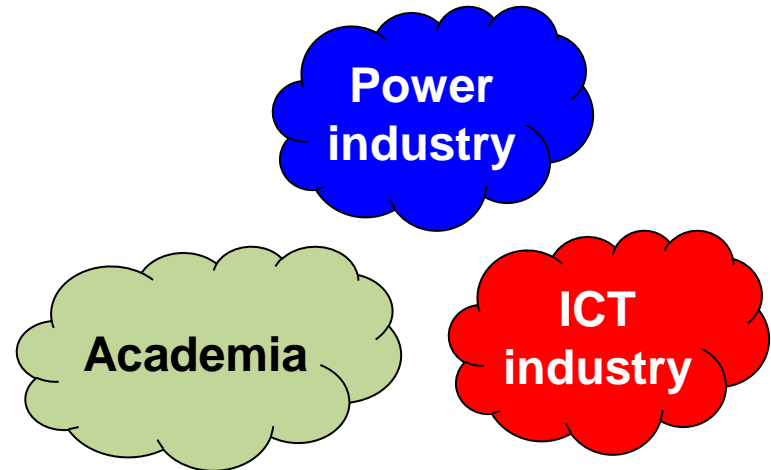
Smart Grid Innovation Hub

The Challenge

Convergence of thinking of all actors within the power industry



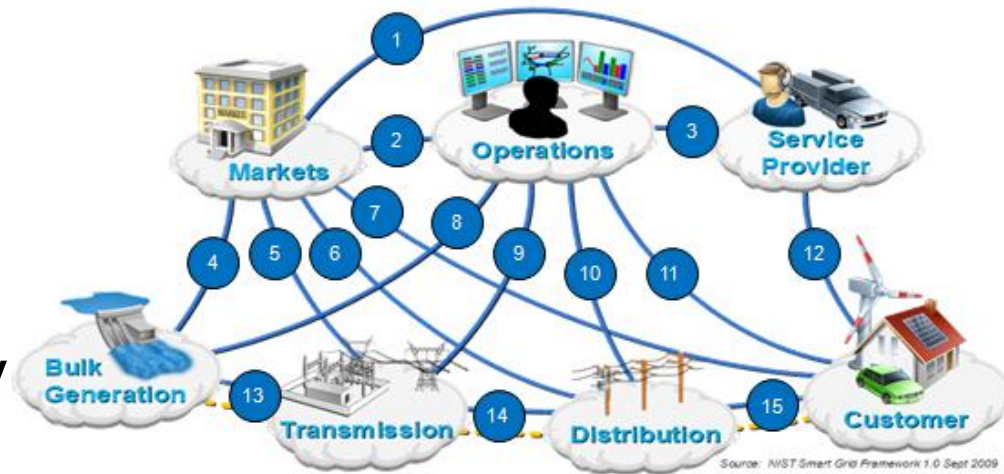
- **Power industry** who conceive & specify Smart Grid systems / applications
- **Academia** who offer advanced ICT technologies based on research
- **ICT industry** who build the systems / applications



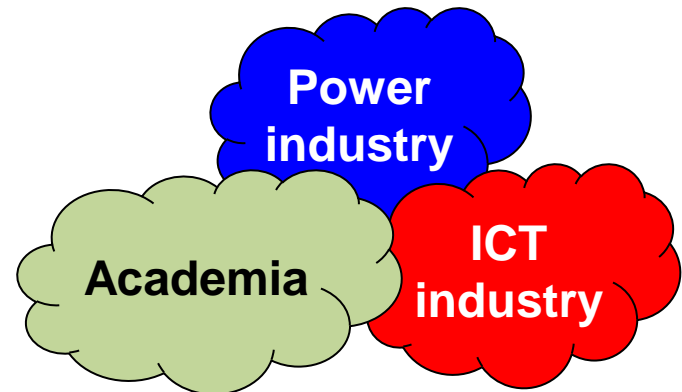
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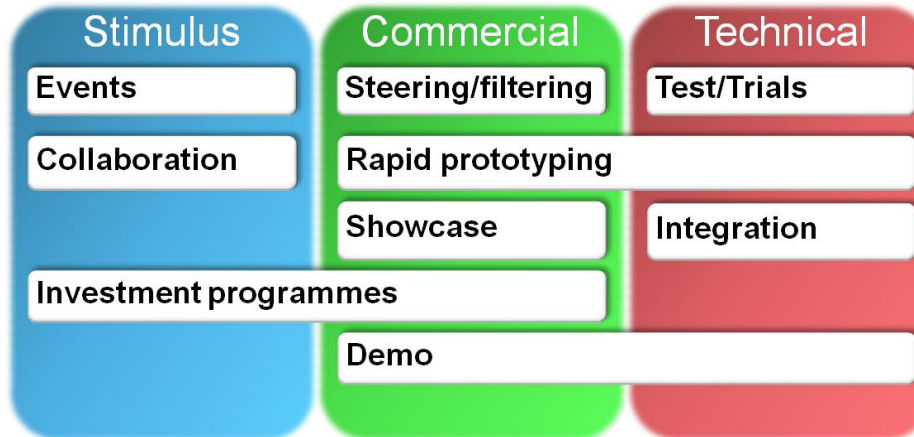


Smart Grid Innovation Hub

- A collaborative initiative between EirGrid, SONI and the NDRC (National Digital Research Centre) to promote the development of innovative Smart Grid solutions with entrepreneurs and companies on the island of Ireland
- NDRC is dedicated to “accelerating research from idea to income”
- A facility – ‘the Sandbox’ to enable prototyping, test, integration and demonstration of Smart Grid systems and applications
- Commercialisation support structures, project spaces, access to a network of experts, leading to investment
- Industry Group to provide guidance and input to the work of the Smart Grid Innovation Hub and also facilitate the sharing of information

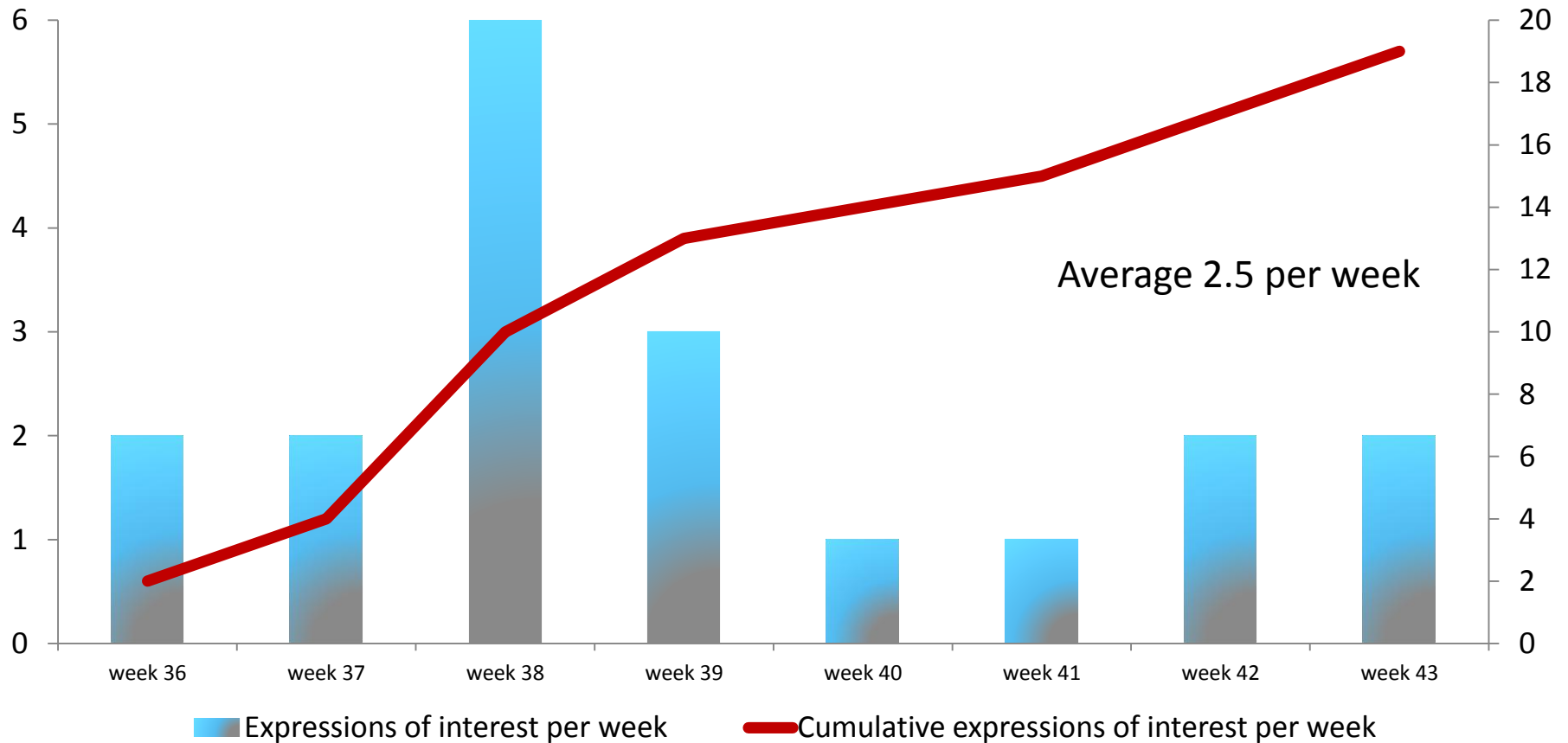


Smart Grid Innovation Hub Programme



Expressions of interest

Number of expressions of interest per week



Conclusions

