



Smart TSO-DSO interaction schemes, market architectures and ICT Solutions for the integration of ancillary services from demand side management and distributed generation

Project Website with dedicated access to project partners

D7.1

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 691405

Issue Record

Planned delivery date	31/03/2016
Actual date of delivery	25/05/2016
Status and version	FINAL

Version	Date	Author(s)	Notes
1.0	19.05.2016	Ilina Hristova	
final	24.05.2016	Ilina Hristova	

About SmartNet

The project SmartNet aims at providing architectures for optimized interaction between TSOs and DSOs in managing the exchange of information for monitoring and for the acquisition of ancillary services (reserve and balancing, voltage regulation, congestion management) both at national level and in a cross-border context. Local needs for ancillary services in distribution systems are supposed to co-exist with system needs for balancing and congestion management. Resources located in distribution systems, like demand side management and distributed generation, are supposed to participate to the provision of ancillary services both locally and for the system in the context of competitive ancillary services markets. Through an in-depth and a simulation in a lab-environment, answers are sought for to the following questions:

- Which ancillary services could be provided from distribution to the whole system (via transmission)?
- Which optimized modalities could be adopted for managing the network at the TSO-DSO interface and what monitoring and control signals could be exchanged to carry out a coordinated action?
- How the architectures of the real time markets (in particular the balancing markets) could be consequently revised?
- What information has to be exchanged and how (ICT) for the coordination on the distribution-transmission border, starting from monitoring aspects, to guarantee observability and control of distributed generation, flexible demand and storage systems?
- Which implications could the above issues have on the on-going market coupling process, that is going to be extended to real time markets in the next years, according to the draft Network Code on Electricity Balancing by ENTSOE?

Different TSO-DSO interaction modalities are compared with reference to three selected national cases (Italian, Danish, Spanish) also supposing the possibility of a cross-border exchange of balancing services. Physical pilots are developed for the same national cases.

Partners



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Executive Summary

As part of the project general communication and dissemination activities (Task 7.1.), the project website was created consisting of a public area and a restricted area. The public area of the webpage with the information regarding the project, its partners, events and publications has been accessible as of the end of M3. The developments on the restricted area continued after the project webpage was officially launched and partners started using it in M5 of the project. The restricted area allows for communication, document sharing and storage among the project partners (and Stakeholders, when and where relevant). Together with the launch of the website, a set of parameters were defined to monitor the impact of the same.

1 Introduction

As part of task 7.1., General communication and dissemination activities, EUI, in cooperation with the Project Coordinator (RSE) and with the contribution of all the project partners, created the project website. The public area of the project website is accessible since the end of M3 of the project at www.smartnet-project.eu , while the restricted area since M5.

The present document outlines the structure of the project website (both public and restricted area) as well as the parameters that will be used to monitor and measure the impact of this communication and dissemination tool.

2 Project Website Structure and Impact Monitoring

The project webpage has a public area open to everybody and a restricted area that can be accessed by project partners only that provides quick-links to file storage and event management solutions through the Google Apps for Work service. While most files in the Google Drive folder are restricted, a directory for sharing with external stakeholders has also been set up.

The public area of the project webpage is maintained and updated by WP7 Leader. The public area of the Project Website (www.smartnet-project.eu) is structured in a way to provide:

- overall information about the project
- information about the project consortium
- information about the stakeholders involved and a place for the project consortium to launch consultations with the same
- access to the project related publications
- calendar of project related events
- latest news
- list of useful links


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ABOUT THE PROJECT

The SmartNet project arises from the need to find answers and propose new practical solutions to the increasing integration of Renewable Energy Sources in the existing electricity transmission network. The subsequent technological innovation is not only affecting the structure of the electricity markets, but also the interactions between

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As an effect of the increasing amount of generation produced by Renewable Energy Sources (RES) with variable generation pattern and of the big changes affecting distribution (deployment of distributed generation, local storage and flexible loads), future distribution networks will inject a growing amount of energy into the transmission system. Variable generation located in distribution could be operated together with local storage and active demand in order to provide local services for the distribution grid (voltage regulation, congestion management) as well as services for the entire system through the connection point to the transmission grids.

Till now, distribution networks have been managed with a fit-and-forget philosophy. In the future, strict real-time coordination will be needed between the different actors that are involved in the provision of ancillary services. Optimising the interface between TSOs and DSOs will prove a crucial factor to ensure the achievement of an overall efficiency target.


Different TSO-DSO interaction modalities are compared on the basis of national key cases (Italy, Denmark, and Spain); where physical pilots will be developed to monitor transmission's distribution parameters and investigate modalities for the acquisition of ancillary services from specific resources located in distribution systems.

[Download the project brochure](#)

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22 partners from 9 EU countries: #SmartNetProject puts together academia, research organizations & industry.



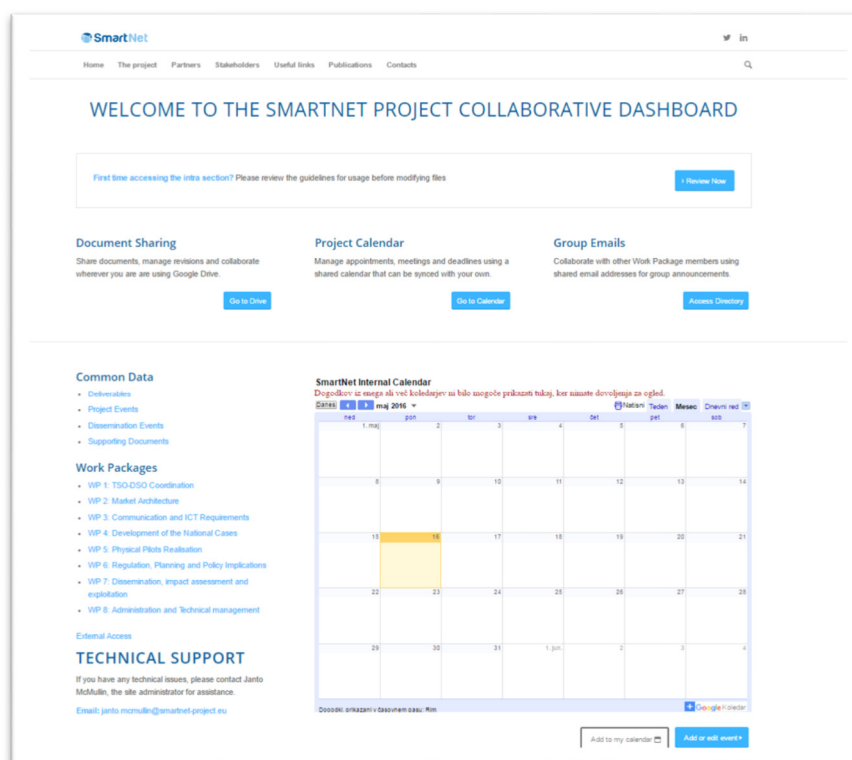
The restricted area of the project webpage can be accessed by the project partners only and will be used for storing and sharing of project documents (official documents, templates, deliverables and documents related to each of the WPs.). It is also a working area for all the project related documents. Multiple sharing is guaranteed by means of links with the Google Docs platform.

The restricted area is built up upon Google Apps for Work (Google Drive, Google Groups and Google Calendar). This allows for the easy creation of mailing lists and member management (using Google Groups), as well as the possibility to integrate with the Google Drive desktop application, have world-class documentation for resolving technical issues, and effectively manage multiple users editing documents using Google Drive's inbuilt revision features.

The restricted area of the website functions as a portal to the relevant Google Apps, and features the following items:

- **A tree of directories** for hosting all internal usage files (non-finalized deliverables and other internal documents), that can be edited in a shared way by exploiting the features by Google Drive;
- **A Google Calendar widget** for programming the internal events of the SmartNet consortium (web conferences, physical meetings, dissemination events, etc). To ensure visibility from external public, the calendar located in the public web area has to be used instead.

Groups and mailing lists were also created to facilitate the management, communication and exchange between project partners involved in various WP/Tasks.



The WP7 leader will be responsible for monitoring accesses and preparing reports regarding the impact of the website as a communication and dissemination tools.

The following parameters will be monitored:

- For the SmartNet newsletter, information on subscriptions, open rates and click-through to the website will be provided after every send using the inbuilt analytics of Mailchimp, the email list manager used.
- For the website, we will monitor using Google Analytics, Google Tag Manager and Google Search Console. We will report on:
 1. Monthly views by traffic sources and how each one performs to identify strengths and weaknesses.
 2. The performance of the site, including details on browser, country and mobile vs desktop speed.
 3. Analysis of the content of the site, focussing on which pages attract the most views, and which pages have the highest 'bounce' rate (leave the site after only viewing one page).
 4. Which websites are referring traffic to our website so we can analyse how partnerships and social media are performing.
 5. Specific analysis of social media (how many users go through to the website to read content, what social actions they take)

New parameters may be added during the implementation of the project.

To ensure maximum visibility to the website, we are using a Search Engine Optimisation application (Wordpress SEO by Yoast) to analyse the content of the site to fit into best practices. We generated a site-map and submitted this to Google for indexing, and are using Google Page Speed Insights to analyse the performance of the site and identify issues to fix. To improve 'page authority' we encourage all partners to create links to the project on their own institutional websites.

New proposals on ways to generate content that can attract visitors may be added during the implementation of the project.