



CONTROL AND OPTIMISATION FOR ENERGY POSITIVE NEIGHBOURHOODS

COOPERATE

Deliverable D7.2

Dissemination Plan



Dissemination Level: Public

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Abstract This document describes the COOPERaTE dissemination plan and related issues. These issues include the launching of the COOPERaTE website and portal and the preparation of the COOPERaTE fact sheet. Dissemination activities regarding COOPERaTE in conferences and journals are also described in this report. RWTH, as project coordinator was responsible for this dissemination deliverable with all partners contributing their individual dissemination plans. The website was also created by RWTH and again all partners contributed material related to their work within the context of COOPERaTE. The process of presentations at a variety of scientific and industrial events (conferences, journals, workshops, trade fairs, standardisation meetings) is open throughout the duration of the COOPERaTE project.

Keyword list Dissemination, Conference, Journal, Workshop, Standardisation

Document History

Date	Revision	Comment	Author/Editor	Affiliation
July 29, 2013	1	Initial draft version	Ulrike Gohil	RWTH
July 30, 2013	2	Information on Website	Kanali Togawa	RWTH
Aug 13, 2013	3	Information on stakeholder workshop and scientific conferences/workshops	Keith Ellis	INTEL
Aug 18, 2013	4	Information on scientific conferences/workshops, scientific journals and magazine	Nicholas Good	UMAN
Sept 10, 2013	5	Minor comments	Yasmine Assef	EMBIX
Sept 29, 2013	6	Information on the fact sheet, press releases	Kanali Togawa	RWTH
Sept 30, 2013	7	Some additions	Dirk Pesch	CIT
Oct 18, 2013	8	Press releases and subsequent media articles	Jean-Bernard Sers, Yasmine Assef	BOUYGUES, EMBIX
Oct, 18, 2013	9	Final version	Antonello Monti	RWTH

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Executive Summary

This reports summarizes all the performed and planned dissemination activities within the project Cooperate. These activities are at the same time in the direction of public awareness about the project and in the direction of a more specific scientific dissemination.

1 WP7 Dissemination Plan: Overview

The dissemination plan is part of Work Package 7 Dissemination & Exploitation, under task 7.2, with the dissemination activities being an on-going activity over the duration of the project. As part of the dissemination strategy the following activities are foreseen in relation to this:

- Development of a dissemination plan for individual and collective exploitation of the project results
- Develop dissemination material in different formats (posters, leaflets, presentations) to reach the intended target audiences (templates for presentations, deliverables etc. for COOPERaTE material have been defined)
- For global dissemination of project results make appropriate material available through the project website <http://www.cooperate-fp7.eu/> avail of European Commission dissemination channels such as newsletters and web sites when possible
- Obtain and analyse feedback from targeted end users, summarise the dissemination results and lessons learned. This will be achieved through the organisation of a stakeholder workshop (WP1, Task 1.1) during the first 6 months of the project.
- To foster and strengthen communication among the consortium partners, a tool (Gabo:milliarium) has been set up to enable the exchange of information and support the interaction between partners by having all project specific content accessible in a centralised repository.

Proposed activities including the target and scope considered under the dissemination plan are outlined in **Table 1** below.

Table 1: Summary of Proposed Dissemination Activities for COOPERaTE

Proposed Dissemination Activity	Expected Timeframe	Target Audience	Reach
Project Website and Gabo tool	Month 9 (June 2013)	Consortium members, with publically accessible dissemination material being available through the project website for all interested parties	Consortium level: Gabo tool Global: project website
Project fact sheet	Month 5 (February 2013)	All interested parties	Global: accessible via project Website
Stakeholder Workshop	Month 6 (11 March 2013)	Key stakeholders from the relevant areas such as: <ul style="list-style-type: none"> • Energy providers • Building 	European

Deliverable Title: Dissemination Plan

Dissemination Level: Public

		automation <ul style="list-style-type: none">• Information Technology• Local authorities• End users	
Publications – scientific conferences & workshops	Over project duration at national and international level	Scientific Community	Global
Publications – scientific journals	Over project duration targeting high impact relevant international journals	Scientific Community	Global
Publications – industrial conferences & workshops	Over project duration at national and international level	Industry (end users including facility managers, property managers, system integrators, BMS vendors, electrical contractors, developers, etc.)	Global
Trade Fairs	Over project duration at national and international level	Industry (end users including facility managers, property managers, system integrators, BMS vendors, electrical contractors, , etc.)	Global

1.1 Publicity Plan

During the initial phase of the project the primary communication channels for raising awareness of COOPERaTE are:

- Project website, <http://cooperate-fp7.eu/>
- Publicity material in the form of a PowerPoint project presentation & a project fact sheet publically available via the website

After the initial 6 months of the project (when the COOPERaTE architecture, requirements specifications and use cases have been defined in consultation with the stakeholder community) the dissemination channels will be further extended to also include:

- Publicity material in the form of leaflets and posters

- Continuous update of the News section on the Website
- Presentations of project results at events aimed at the building automation sector and scientific community (control, middleware, semantics, sensor network sectors).
- Publications presented at relevant events or published in relevant journals or magazines
- Press releases about the project
- Tutorials at relevant conferences/workshop to engage with the R&D community

External mailing lists

Other publication channels involving social media will be explored throughout the project time frame and may be considered as a potential dissemination stream with options being:

- LinkedIn
- Twitter

The activity of dissemination through Social Media will only start when the field tests will be running and will allow a continuous public report of the results obtained during the experimental phase of Cooperate.

2 COOPERaTE Website

The COOPERaTE project website (main page shown below in **Figure 1**) has been operational since Month 9 (June 2013) and is accessible at <http://cooperate-fp7.eu/>. The website will act as the public gateway throughout the COOPERaTE project. Highlights of research and development results, proof of concept trials and announcements of COOPERaTE will be posted on the website.

The website includes:

- Publicly accessible pages that are aimed at dissemination and includes a description of the project, the objectives, an overview of the work packages and demonstration sites. In addition publicly available deliverables, scientific papers (when possible), the COOPERaTE fact sheet and other dissemination material including presentation material, posters & leaflets will be available for download.
- Publicly accessible pages that outline the structure of the project COOPERaTE and role of the partners. Links to the partners websites are also provided..
- A frame on the main page where the main COOPERaTE news are reported

The website is structured as follows:

- Home
- Consortium
 - Management
- Project structure
 - Deliverables
- Dissemination
- Demonstration
- News
- Contact

An overview of the layout can be found in Figure 1.



COOPERaTE

Control and Optimization for Energy Positive Neighbourhoods

Home

Home

Consortium

Project structure

Dissemination

Demonstration

News

Contact

Background and Motivation

Buildings are responsible for 40% of energy consumption and 36% of EU CO₂ emissions, whilst the transportation sector is responsible for about 30% of the EU CO₂ emissions. Achieving energy performance of neighbourhoods, including buildings, transportation systems and other supporting systems, is key to achieving the EU Climate & Energy objectives, namely a reduction of 20% of greenhouse gas emissions compared to 1990 levels by 2020 and a 20% energy savings in primary energy use by 2020. These challenging environmental targets can be met only by a mix of energy-saving and energy-efficiency measures, together with other relevant actions achieved through research and innovation. Improving the energy consumption and holistic performance of buildings and neighbourhood systems is a cost-effective way of fighting against climate change and improving energy security, while also creating new markets and new job opportunities, particularly in the building sector.

Goals of COOPERaTE

COOPERaTE will develop an open, scalable neighbourhood service and management platform that integrates local monitoring and control functions with a cloud based service platform for the delivery of innovative energy management, security and other services in order to progress towards energy positive neighbourhoods and achieving 2020 targets. COOPERaTE will carry out a substantial validation of the concepts in two validation sites, the Bouygues Challenger campus and the CIT Bishopstow campus.

In doing so, COOPERaTE addresses the challenges of the call by developing management and control systems, and decision-support systems addressing the dynamics of energy supply and demand in neighbourhoods. COOPERaTE will optimise the use of energy beyond the buildings, include the integration of renewable energy sources and the connection to the electricity distribution grid, and will consider appropriate business models.

Latest NEWS

25.04.2013 [First general meeting](#)

11.03.2013 [Stakeholder workshop in Cork](#)

28.02.2013 [Workshop on modeling](#)

Project Information

Project acronym: COOPERaTE

Project number: 600063

Project start date: 1st October 2012

Duration: 36 months

Funded by: EU FP7

Challenge 6: ICT for a low carbon economy

Objective: EEB-ICT-2011.6.5 ICT for energy-positive neighbourhoods

Coordinator:

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Internal Login

[Internal Login](#)



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Figure 1: COOPERATE Website

3 Project Fact Sheet

The COOPERaTE fact sheet is publicly accessible on the COOPERaTE website and outlines the technical workflow for COOPERaTE, the proof of concept validation sites together with the expected impact that the COOPERaTE project will deliver with key measurable outcomes being identified.



Demonstration and Use

COOPERATE will carry out a substantial validation of the concepts in two validation sites, the Bouygues Challenger campus in France and the CIT Bishopstow campus in Ireland. The validation will demonstrate how the proposed platform and services will move the two neighbourhoods towards energy positivity and how much energy and CO2 emissions reduction can be achieved.

- The Challenger campus is a single use neighbourhood of office buildings and road and parking spaces. It consists of a number of office buildings, extensive photovoltaic based local electricity generation, large scale electricity storage capabilities, and a number of electric vehicle charging points.
- The main campus of CIT is a mixed use neighbourhood consisting of buildings with offices and laboratory spaces, a sports centre and student accommodation. Local generation is based on two wind turbines, a number of gas fired CHPs, and battery based storage capabilities.

Project Partners



Project partners	Country
RWTH Aachen University (Coordinator)	DE
Bouygues Construction	FR
Cork Institute of Technology	IRL
EMBIX	FR
Intel	IRL
United Technologies Research Center	IRL
University of Manchester	UK



Control and Optimization for Energy Positive Neighbourhoods

Project Coordinator
RWTH Aachen

Project start date
1st October 2012

Total Cost
5,8M

Project website
www.cooperate-fp7.eu

Duration
36 months

EC contribution
3,6M Euro

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Scientific, Economic and societal Impact

The project aims to demonstrate the impact and benefits of ICTs to improve the energy management of a neighbourhood, and their environmental performances through an online Neighbourhood Management System. By visualising and tracking energy consumption, consumers are sensitized to the high importance of energy topics and develop consumption awareness, helping to reduce the final energy bill and CO2 emission. Increasing consumer's acceptance and willingness to participate could be essential for dimensions and validity of the results gained. The consumer appeal will be enhanced by adding features not directly related to the energy services to raise the societal interest. The final goal is a real-time information system at the neighbourhood level, helping people to optimise their energy consumption while keeping them connected into a new concept of local community. From a Grid perspective, the Energy management System is a key enabler of integration of the neighbourhood in the Smart Grid.

- #### Key features
- COOPERATE will target a reduction in energy consumption and in CO2 emissions through local generation, in the order of 10%-15% within one or both of the test sites.
 - A publicly available guideline will be developed, describing how an energy positive neighbourhood can be achieved, including the specification of ICT requirements for different types of buildings and spaces within a neighbourhood.
 - At least 3 new cloud based energy management services will be created, based on the integration of local generation with demand side management in the neighbourhood. Additionally, at least 2 new cloud based services beyond energy management will be developed, enhancing the consumer appeal.

Technical Approach

COOPERATE will develop an open, scalable neighbourhood service and management platform:



This platform will link local monitoring and controls systems such as building automation systems, SCADA systems used for microgrid control and other power systems control functions in the neighbourhood with a cloud based service delivery platform. This will be achieved by developing a local middleware layer with service interfaces that link to the cloud platform.

The local middleware layer will also allow local, real-time control functions to be implemented which are required to execute local demand and supply balancing and grid connection control. Multi-layered optimisation algorithms will be developed for energy management services including energy usage detection, state estimation for the multi-energy system, electric vehicle charging and demand side management that measures and controls to shape demand.

The control and optimization algorithms will consider the uncertainty in models, and variability and uncertainty in

heterogeneous loads, environmental and operating conditions as well as weather forecasts.

Key Innovation

Buildings are responsible for 40% of energy consumption and 36% of EU CO2 emissions. Achieving optimal energy performance of neighbourhoods, including buildings, transportation systems and other supporting systems, is key to achieving the EU Climate & Energy objectives, namely a reduction of 20% of greenhouse gas emissions compared to 1990 levels by 2020 and 20% energy savings in primary energy use by 2020. These challenging environmental targets can be met only by a mix of energy saving and energy efficiency measures, together with other relevant actions achieved through research and innovation.

Improving the energy consumption and holistic performance of buildings and neighbourhood systems is a cost-effective way of fighting against climate change and improving energy security, while also creating new markets and new job opportunities, particularly in the building sector.

COOPERATE addresses these challenges by developing management and control systems, as well as decision support systems addressing the dynamics of energy supply and demand in neighbourhoods. COOPERATE will optimise the use of energy beyond the buildings, including the integration of renewable energy sources and the connection to the electricity distribution grid, and will consider appropriate business models.

Figure 2: Fact sheet for COOPERATE

4 Stakeholder Workshop

COOPERATE consortium organized a **Stakeholder Workshop** at **Cork Institute of Technology on March 11th 2013**, as planned in the Description of Work (DOW). The workshop had the following objectives

- present COOPERATE's scope for an open, scalable neighbourhood service and management platform enabling energy positive neighbourhoods
- present the draft COOPERATE use cases and services of the COOPERATE platform that addressed
 - Energy-related neighbourhood management
 - Non-energy related neighbourhood management
- inform and seek feedback from the stakeholder community to help align the COOPERATE use cases and services with stakeholder interests

In support to this effort **interviews with various stakeholders took place in Paris throughout March 2013**. Key stakeholders from diverse areas such as energy providers, building automation, information technology, local authorities, research institutes and also end users participated in the interviews.

The key objective of the workshop and the interviews was to motivate and engage the stakeholder community to review, clarify and brainstorm on the COOPERATE use cases. The stakeholder representatives were requested to provide their specific, realistic and constructive feedback based on their line of business perspective and experience on two key questions:

- Are COOPERATE's use cases relevant and realistic based on the stakeholders perspective?
- Is COOPERATE going to make impact based on the stakeholders perspective? What Impact: business, social, environmental, other?

A template was established for capturing and presenting the use cases and associated application services, which is based on similar templates such as the 'Energy Information Standards (EIS) Alliance Customer Domain Use Case' template. Essentially the template was developed to capture answers of the stakeholders to the following:

1. what is the challenge, need, goal that is addressed?
2. who is involved or should be involved ?
3. what is the concept narrative?
4. what are the key considerations?
5. can you illustrate the concept?
6. what is the potential economic value?
7. what are the high-level ICT requirements?

The workshop attempted to answer as many of the above questions as possible. The output has been captured in deliverable D1.1 "Report on requirements and use-cases specification".

5 Labels

The COOPERaTE project has been labeled within the cluster “Systematic” Paris Region, by the Smart Energy management thematic group (Gestion Intelligente de l’Energie).

The French Cluster Systematic brings together more than 650 key players in the Paris Region area, each of them working in the field of software-dominant systems with a strong societal dimension.

At the heart of the digital revolution, the goal of Systematic is to develop the regional economy, boost the competitiveness of local companies and support employment growth by leveraging innovation, training and partnership opportunities.

<http://www.systematic-paris-region.org/en/annuaire-projets>

6 Publications

6.1 Scientific Conferences and Workshops

The COOPERaTE project will target top quality international conferences to maximise the scientific and technical impact of the project output among the scientific community. As part of this, the project consortium has participated in and aims at the following conferences among others:

Name	URL
Demonstration stand at the showcase of the Open Innovation 2.0 event at the Conference on Sustainable Economy and Society in Dublin, May 20 th -21 st 2013	http://ec.europa.eu/digital-agenda/en/conference-sustainable-economy-society
Presentation at Smart Grid Paris 2013	http://www.smartgridsparis.com/
Presentation at ICT for Sustainable Place, Nice, September 9 th -11 th	http://www.resilient-project.eu/events
eeSemantics community	http://www.adapt4ee.eu
University of Manchester/National Grid showcase event	Internal Event, no URL
Innovative Smart Grids Technologies Europe 2014	(URL for 2013 conference) http://www.ieee-isgt-2013.eu/index.html
PowerTech conference 2015	(URL for 2013 conference) http://powertech2013.grenoble-inp.fr/
Innovative Smart Grids Technologies Europe 2015	URL for 2013 conference) http://www.ieee-isgt-2013.eu/index.html
IEEE International Instrumentation and Measurements Technology Conference 2014	http://imtc.ieee-ims.org
IEEE International Instrumentation and Measurements Technology Conference 2015	http://imtc.ieee-ims.org
Power Systems Computational Conference 2014	http://www.psc2014.net/index.php?p=start
Participation in the	http://www.adapt4ee.eu/adapt4ee/

VoCamps organized by Adapt4EE	
Domain-Specific modeling workshop	http://www.dsmforum.org/events/DSM13/
International Workshop on The Globalization of Modeling Languages	http://gemoc.org/gemoc2013/
IEEE Workshop on Applied Measurements in Power Systems 2014	Link to 2013 edition: http://amps2013.ieee-ims.org/category/conference-year/2013
IEEE Workshop on Applied Measurements in Power Systems 2015	Link to 2013 edition: http://amps2013.ieee-ims.org/category/conference-year/2013
IEEE Power and Energy Society General Meeting 2014	http://pes-gm.org/2014/
Eco-City World Summit, Copenhagen 2014	http://www.ecocity-2013.com
ACM BuildSys 2014/2015	http://www.buildsys.org current website covers 2013 event
IEEE IECON 2014/2015	http://www.iecon2013.org/ website of 2013 event
ACM/IFIP/USENIX International Middleware Conference 2014/2015	http://www.middleware-conference.org/ website covers 2013 event and past events
Sustainable Buildings conference series 2014/2015	http://sbconferences.org/
EU Smart Cities conference 2014/2015	http://eu-smartcities.eu/content/smart-cities-annual-conference-budapest-5-6-june-2013 website of 2013 event
CIBSE ASHRAE technical symposium 2015	http://www.cibse.org/index.cfm?go=events.view&item=4703 2014 event website

6.2 Scientific Journals and Magazines

The COOPERate project will target top quality scientific journals in order to maximise the scientific and technical impact of the project output among the scientific community. The COOPERaTE academic and research partners also plan to propose special call for papers for selected high impact scientific journals. As part of this, the project consortium aims at the following IEEE, ACM, Elsevier and Springer journals among others:

Name	URL
Energy Policy	http://www.journals.elsevier.com/energy-policy/
IEEE Transactions on Smart Grid,	http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?reload=true&punumber=5165411
IEEE Transactions	http://ieee-ims.org/publications/transactions-tim

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on Instrumentation and Measurements	
IEEE Transactions on Industrial Informatics	http://tii.ieee-ies.org
IEEE Transactions on Power Delivery	http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?reload=true&punumber=61
IEEE Control Systems Technology	http://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=87
IEEE Pervasive Computing	http://www.computer.org/portal/web/computingnow/pervasivecomputing
Pervasive and Mobile Computing	http://www.journals.elsevier.com/pervasive-and-mobile-computing/
Energy and Buildings	http://www.journals.elsevier.com/energy-and-buildings/

7 Press releases

In order to reach a larger audience, press statements have been released in different countries. The table below lists activities in this area, including available information on the type of media by which it was used.

Release by	Date
Agence France Presse press release	June 4, 2013
Le Figaro	June 4, 2013
Business Immo	June 4, 2013
Connaissance des Energies	June 4, 2013
Romandie	June 4, 2013
Direct Gestion	June 5, 2013
Le Nouvel Observateur	June 5, 2013
France Transaction	June 5, 2013
Comparatif-OPCI	June 5, 2013
Construction21	June 6, 2013
Immobilier Locatif	June 6, 2013
Territorial	June 6, 2013
Energie en Questions	June 7, 2013
Direct Gestion	June 7, 2013
RWTH Aachen University press office	June 10, 2013
BATIJOURNAL	June 10, 2013
Batiactu	June 13, 2013
CERCAD	June 13, 2013
Smartplanet	June 14, 2013
BFM TV.com	June 21, 2013
COOPERATE announcement on FP7 Ireland website http://www.fp7ireland.com/News.aspx?WCI=htmResults&WCU=CBC=View,DSCODE=LIVE,NEWSITEMID=6-N69	July 13, 2013
Irish Times: http://www.irishtimes.com/news/technology/future-city-life-on-display-in-dublin-technology-showcase-1.1400315	May 20, 2013
Video on SiliconRepublic.com: http://www.siliconrepublic.com/digital-life/item/32805-oi2012/	May 20, 2013

8 Tutorials

The COOPERATE team plans to develop and deliver tutorial material focused on a process towards energy positive neighbourhoods and related technologies. Such tutorial(s) can be delivered at major international conferences. Conferences such as IEEE IECON or the CIBSE ASHRAE technical symposium offer opportunities to deliver such tutorials focused on automation and control aspects around energy positive neighbourhoods or neighbourhood building energy management.

IEEE IECON 2015	http://www.iecon2013.org/ website of 2013 event
CIBSE ASHRAE technical symposium 2015	http://www.cibse.org/index.cfm?go=events.view&item=4703 2014 event website

9 Conclusion

The main dissemination activities undertaken in this reporting period include the development of the COOPERaTE website with the design of the COOPERaTE branding material including the COOPERaTE logo and banner as used throughout the project website as well as in the report templates and the publicity material including the COOPERaTE fact sheet and presentation (available for download on the COOPERaTE website).

Project wide and partner specific dissemination targets have been identified and summarised according to the dissemination activity type (i.e., scientific and industrial conference, journals workshops and trade fairs). In addition the Stakeholder workshop has already been held in Cork (Ireland) at the very beginning of the project to support the development of the first deliverable of the project.

While key dissemination targets for COOPERaTE have been identified within this deliverable the dissemination activities will grow as the project progresses and the challenge for the future is to ensure the continued widespread dissemination of COOPERaTE R&D results to key audiences through means of appropriate communication methods.