Project No. 609687

FP7-ENERGY-2013-IRP

ELECTRA

European Liaison on Electricity Committed Towards long-term Research Activities for Smart Grids

WP 12

Dissemination, Knowledge Transfer and Exploitation

Deliverable D12.2

IRP Communication and Dissemination Plan

25/01/2016

ID&Title	**D12.2** IRP Communication and Dissemination Plan	**Number of pages:**	48

Short description (Max. 50 words):

This document gives a comprehensive overview of the communication channels and tools designed the for an effective dissemination of ELECTRA activities and results.
Dissemination actions, web site statistics and exploitation of results obtained in the first two years of the project are presented and discussed.

Version	Date	Modification's nature
V0.01	02/07/2014	First Draft
V1.00	28/08/2014	Under review
V2.00	29/10/2014	Released
V3.00	27/04/2015	Revision 1 – Incorporation of a new section on website statistics (5.1.2) and of a new chapter on Exploitation of project results (Ch. 6)
V4.00	16/12/2015	Revision 2 – Chapter 3,4,5 completely revised. Dissemination actions and web site statistics of the first two years presented and discussed.

Accessibility

☒ PU, Public

☐ PP, Restricted to other program participants (including the Commission Services)

☐ RE, Restricted to other a group specified by the consortium (including the Commission Services)

☐ CO, Confidential, only for members of the consortium (including the Commission Services)

If restricted, please specify here the group:	

Owner / Main responsible:		
WP12 Leader:	Pietro Pinacci (RSE)	
Reviewed by:		
Project Coordinator:	Luciano Martini (RSE)	21/12/2015
Final Approval by:		
ELECTRA Technical Committee TOQA appointed Reviewer:	Graeme Burt (USTRATH) Viviana Cigolotti (ENEA)	21/01/2016

Authors

Name	Last Name	Organization	Country
Antonio	Guagliardi	RSE	Italy
Fabrizio	Garrone	RSE	Italy
Pietro	Pinacci	RSE	Italy

Copyright

Consisting of:

Coordinator	
Ricerca Sul Sistema Energetico – (RSE)	Italy
Participants	
Austrian Institute of Technology GmbH - (AIT)	Austria
Vlaamse Instelling Voor Technologisch Onderzoek N.V. - (VITO)	Belgium
Belgisch Laboratorium Van De Elektriciteitsindustrie - (LABORELEC)	Belgium
Danmarks Tekniske Universitet - (DTU)	Denmark
Teknologian Tutkimuskeskus - (VTT)	Finland
Commissariat A L'Energie Atomique Et Aux Energies Alternatives - (CEA)	France
Fraunhofer-Gesellschaft Zur Förderung Der Angewandten Forschung E.V – (IWES)	Germany
Centre For Renewable Energy Sources And Saving - (CRES)	Greece
Agenzia Nazionale per Le Nuove Tecnologie, L´Energia E Lo Sviluppo Economico Sostenibile - (ENEA)	Italy
Fizikalas Energetikas Instituts - (IPE)	Latvia
SINTEF Energi AS - (SINTEF)	Norway
Instytut Energetyki - (IEN)	Poland
Instituto De Engenharia De Sistemas E Computadores Do Porto - (INESC_P)	Portugal
Fundacion Tecnalia Research & Innovation - (TECNALIA)	Spain
Joint Research Centre European Commission - (JRC)	Belgium
Nederlandse Organisatie Voor Toegepast Natuurwetenschappelijk Onderzoek – (TNO)	Netherlands
Turkiiye Bilimsel Ve Teknolojik Arastirma Kurumu - (TUBITAK)	Turkey
University Of Strathclyde - (USTRATH)	UK
European Distributed Energy Resources Laboratories (DERlab)	Germany
Institute for Information Technology at University of Oldenburg (OFFIS)	Germany

Executive Summary

This document gives a comprehensive overview of the communication channels and tools designed for an effective dissemination of ELECTRA IRP activities and results.

To this purpose dissemination actions, web site statistics and exploitation of results obtained in the first two years of the project are presented and discussed.

A list of the main dissemination events organised by the ELECTRA IRP or at which Partners have contributed is presented.

A list of peer-reviewed papers delivered at International Conferences is also provided.

All the project events have been announced and publicized on the web site, where relevant documents/presentations have been uploaded and are available for download. Similarly details and summaries of all the peer-reviewed papers have been uploaded on the web site.

Concerning the web site, all the KPI values largely exceeded the fixed targets for the first half of the project. Moreover analysis of web site statistics suggests that, during the first year, the main purpose of visitors was to obtain information about the project goals and structure and get familiar with the site, while, in the second year, visits were more focused and addressed to get specific information on project outcomes such as deliverables, workshops presentations and papers, which have become progressively available.

Finally the exploitation of project results, with particular emphasis on Intellectual Property (IP) issues, is addressed. The main features of "*Electra Assessment Tool for Smart Grid Interface Standard"*, developed in WP4.3, have been communicated to the EERA Secretariat, in order to be included in the newly developed IP repository for all EERA Joint Programmes and IRPs.

Terminologies

Definitions

AB	Advisory Board
AIST - JP	National Institute of Advanced Industrial Science and Technology -Japan
BRP	Balance Responsible Party
CORDIS	Community Research and Development Information Service
CSIRO	Commonwealth Scientific and Industrial Research Organisation - Australia
DG	Distributed Generation
DSO	Distribution System Operator
EDSO4SG	European Distribution System Operators for Smart Grids
EERA	European Energy Research Alliance
EERA JP Smart Grids	European Energy Research Alliance Joint Programme Smart Grids
ELECTRA	European Liaison on Electricity Committed Towards long-term Research Activity
ENTSO-E	European Network of Transmission System Operators for Electricity
EPRI – USA	Electric Power Research Institute – USA
ERI – CN	Energy Research Institute - China
ETP SmartGrids	European Technology Platform Smart Grids
EU	European Union
FP7	Framework Program 7
ICB	International Coordination Board
IPR	Intellectual Property Rights
IRP	Integrated Research Programme
ISGAN	International Smart Grids Action Network; the International Energy Agency Implementing Agreement for a Co-operative Programme on Smart Grids
ITU	International Telecommunication Union
NDA	Non-Disclosure Agreement
JP	Joint Programme
SC	Steering Committee
SG	Smart Grids
SJTU – CN	Shanghai Jiao Tong University – China
T&D Europe	European Association of the Electricity

	Transmission and Distribution Equipment and Services Industry
TC	Technical Committee
TSO	Transmission System Operator
WP	Work Package

Abbreviations

D	Deliverable
M	Milestone
R	Report

Table of Contents

List of figures and tables

1. Introduction

The objective of ELECTRA WP12 is to disseminate and promote the knowledge and results produced within the project through a series of different activities and tools. The dissemination activities are designed according to the information requirements of each of the identified target groups interested in the knowledge gained within the ELECTRA IRP.
The dissemination actions defined within this document have three main objectives:

- To communicate the progress and the results of the project to the scientific community, industrial users and other stakeholders. In this framework, the key target group is constituted by the TSOs and the DSOs as well as the related European and national organizations (ENTSO-E, EDSO4SG, etc.), the ETP SmartGrids, and other associations and initiatives as EASE, ERA-NET Plus;
- To reinforce the EERA Joint Programme on Smart Grids and its partnership with industry by developing effective actions and coordinated approaches to foster knowledge transfer activities;
- To disseminate the innovative results emerging from this IRP to the smart grids stakeholders community through different tools and channels such as regular meetings with EU industry representatives and workshops, in order to increase IRP awareness and to promote feedback from industry stakeholders.

Sharing the knowledge gained in the project with the smart grids stakeholders is a main goal of the ELECTRA consortium; still, the confidentiality and Intellectual Property Rights (IPR) of the project partners involved will be preserved.
ELECTRA has the aim of providing project results that will have a wider impact during and beyond the lifetime of the project by conducting extensive dissemination activities and measures addressing all the stakeholders involved.

As the project progresses and results are obtained, dissemination activities will become more and more relevant and greater effort will be employed for the collection and synthesis of the main achievements and results.

1.1 Scope and structure of the document

The objectives which have already been prefixed in the ELECTRA DoW [1] need a strategy to be achieved. Thus, a Dissemination Plan is necessary to identify the channels and the actions to be undertaken for the purpose as well as to coordinate and manage the various partners' activities. This document constitutes the Dissemination Plan which coordinates and specifies the activities related to the communication aspect of the IRP.

In particular, the targets of this plan are:

- To propose a dissemination policy for the knowledge and know-how shared by the project;
- To define the objectives of the shared dissemination actions;
- To define the different types of communications;
- To identify the target audiences for each objective;
- To present a schedule of the dissemination actions along the four years of the project;
- To summarize the key factors of success for these shared dissemination actions;
- To propose a methodology to assess the effectiveness at delivering information to the addressed stakeholders based on measurements of stakeholder feedbacks.

This document constitutes a guideline to the dissemination strategy and the activities which are envisaged for the project; however, the plan will be subjected to continuous updates and improvements based on the actual needs of the ELECTRA project. Moreover, the plan can be improved considering the opportunities which may arise in due course. Therefore, though the communication strategy is expected to remain substantially unchanged, the approach to the activity is dynamic.

RSE is responsible for WP12 dedicated to the dissemination activities, knowledge transfer and exploitation of the results and will coordinate and collaborate with the project partners for efficient communication actions.

The document is structured to provide the general approach adopted by the ELECTRA Consortium towards the communication activities as well as a feedback of dissemination action performed in the first 24 months of the project.

The approach to the project communication is presented in Chapter 2 together with the dissemination strategy.

In Chapter 3 a list of the main dissemination events organised by ELECTRA or at which Partners have contributed is presented. A list of peer-reviewed papers delivered at International Conferences is also provided.

In Chapter 4 the main functionalities of the web site and statistics related to its utilization are presented and discussed.

Finally, in Chapter 5 the exploitation of project results is addressed, with particular emphasis on Intellectual Property (IP) issues.

2 Communication approach

Dissemination of project achievements is a priority for the IRP. This objective will be reached by producing a number of tools and organising events to communicate project results to stakeholders, both from the academic and the industrial sides.

2.1 Dissemination plan objectives

The following guidelines are taken into consideration to steer the various communication activities:

- To define (as far as possible) the main lines of actions that will be carried out during the duration of the project;
- To ensure an effective and appropriate communication when addressing different stakeholders;
- To gather feedback from relevant stakeholders through the necessary networking activities;
- To provide a strategic focus on the project communication needs to facilitate dissemination;
- To offer support to other work package leaders to ensure a good level of communication about their activities and results;
- To facilitate communication between the partners and towards external stakeholders;
- To plan, coordinate and monitor dissemination actions and presentations in external events.

The Dissemination Plan may be reviewed and updated throughout the project lifetime to ensure an efficient communication of the project progress and the results achieved, and proper feedback from external entities.

2.2 Dissemination strategy and phases

The project dissemination strategy has been planned according to four phases that are summarized in Table 2-1.

Table 2-1 The four phases of the ELECTRA IRP dissemination plan

Strategy project timeframe	Dissemination objectives	Associated dissemination activities and tools
Initial project phase	To establish methodologies to achieve the goals, ensuring effectiveness of the communication channels To present the project and create interest in it To involve the industry representatives in the evaluation of the scenario in which the ELECTRA consortium will operate and the expected impact	Creation of project web site and, eventually, activation of social media Definition of the Advisory Board Definition of the International Coordination Board Involvement of stakeholders addressing different target groups Participation in conferences and events to introduce the project Preparation of an official poster and a flyer to increase visibility

Strategy project timeframe	Dissemination objectives	Associated dissemination activities and tools
Implementation	Inform the stakeholders community on the project progress and receive suggestions Identification of feedback mechanism Make the project results available to stakeholders while respecting confidentiality, IPR and foreground	Keeping the web site updated with the latest news for the external audiences Organization of dedicated webinars and meetings Organization of dedicated technical workshops at National, European and world-wide level Organization of dedicated technical events with relevant EU projects Participation in conferences and events, either at the national and international level Monitoring and reviewing the communication schedule against the plan Checking the quality of the activities and of the dissemination material
Provision of Project recommendations for broad dissemination	To provide European regulators with inputs for changes in the regulatory framework and market architectures To support activities developed within the scope of the European Electricity Grid Initiative providing recommendations for deployment of developed tools To support activities aimed at informing the public about smart grid initiatives and smart energy management To provide country specific recommendations highlighting issues in the implementation of the developed tools To indicate open research questions and indicate a roadmap for future research	Participation in international conferences and events Final project event and related presentation of the main results Press release announcing key findings Organization of dedicated technical events with relevant EU projects Promote participation of regulatory authorities representatives from countries represented in the project to project workshops and events Targeted informative messages containing key findings and contact details to defined list of stakeholders
Exploitation of results	To make project results available for future research/developments and	Final alignment of research activities with industrial stakeholders

Strategy project timeframe	Dissemination objectives	Associated dissemination activities and tools
	cooperation with other R&D and demonstration projects To foster the industry in deploying and further developing the innovative solutions prodiced by ELECTRA	Exploitation of the research activities at the industrial stage Live demonstrations of ELECTRA innovative tools and control strategies at Laboratory level

2.3 Dissemination procedures

Dissemination and communication activities are taken into account by WP12 which is coordinated by RSE with the contribution of all the partners. RSE is responsible for the regular updating of the dissemination plan as well as of the dissemination activities described in this document.

In order to deliver effective dissemination initiatives, the project Consortium will work according to the following rules:

- The Steering Committee will be informed of all communication actions well before they are executed. Every partner willing to carry out any kind of communication action must communicate this activity to RSE with reasonable advance notice (at least 15 days).
- A calendar of actions will be produced on a yearly basis to enable planning to begin as soon as possible. Nevertheless, flexibility will be kept in order to accommodate dissemination opportunities, such as invitations to international events.

2.4 Dissemination stakeholders and related channels

The evolution of power system and the large penetration of RES imply a redefinition of the interactions among different actors in the electricity context. Along with technological developments, it also requires the revision of market design and regulatory frameworks. To this purpose, different target groups have been identified.

Distribution system operators (DSOs): particular attention is drawn to other European DSOs as the developed tools and methods shall enable them to take on new (and evolve their existing) roles. Due to the large deployment of distributed generation at medium and low voltage levels, the DSOs will face new challenges. Thus, the IRP should pay special attention to involve DSOs in the project, creating an efficient collaboration for the definition of innovative solutions.
The main targeted dissemination channel will be EDSO for Smart Grids (EDSO4SG), which represents approximately 70% of the electricity metering points and involves more than 30 European DSOs in Europe in the association, enabling a wide dissemination of the project results and targeting crucial entities of future power systems;

Transmission System Operators (TSOs): with the increased share of DG connected to LV and MV grids as well as increasingly more active consumers (prosumers), an improved cooperation and coordination between TSOs and DSOs are needed to ensure system security is not jeopardised. Therefore, new tools and methodologies must carefully consider the specific requirements and be disseminated accordingly; for instance, an innovative management of ancillary services is expected to be a major outcome of the IRP, counting on a cooperation of grid management entities at horizontal level.

The main dissemination channel will be represented by ENTSO-E which, being part of the Advisory Board (AB), will be involved in setting new grid requirements and developing innovative solutions as well as targeting leverage for the project impact at the European level.

DER producers: one of the expected outcomes of the project is the development of new control schemes for frequency and voltage regulation for which it is foreseen the involvement of distributed generation assets. The main dissemination channels used for these players are the European renewable energy associations which will be invited to join the Advisory Board and participate in the organised events, such as T&D Europe and ETP Smart Grid.

Consumers (domestic as well as industrial and commercial consumers): the progressive activation of demand management needs to be taken into account while developing the new tools and methods for the DSOs. The same principle applies as in the case of generation: the load should become better observable and controllable. Therefore, the requirements on the demand side are to be analysed in the project and the results – so far it will impact consumer behaviour – communicated to the wider audience.
The project website will be the main tool to establish a communication with them. The subscription to the official mailing list and to the activated social media will allow them to receive regular updates on the project status and outcome

New market players (aggregators, BRPs): through the provision of system relevant services, new emerging grid players may support the network operation and contribute to the creation of the future European smart grid. For this reason, the new control architectures may be designed also taking into consideration the contribution they can provide for grid management.

T&D equipment manufacturers and ICT industry: involvement of stakeholders from the industry is envisaged to be of major concern in the IRP as they constitute the means of developing innovative equipment for the future grid.

Stakeholders from the industry will be invited to participate at the organised events.

Scientific community: the technologies developed and demonstrated within the project are envisaged to contribute to standardisation activities. Moreover, the findings of RTD activities conducted within ELECTRA can serve as a basis for further scientific research. Therefore, an open dialogue and knowledge sharing with the relevant institutions is of major importance. Discussing the project results and ensuring close collaboration within the scientific community is of vital necessity.

The consortium will join the scientific conferences and submit official papers/articles to peer-reviewed journals, magazines, etc.

National governmental authorities and regulatory bodies: as these institutions are setting the arena for the players to operate in, the uptake of future proposed DSO roles and associated services proposed within ELECTRA strongly rely on the adaptation of current regulatory regimes. Therefore, these policy makers will be addressed through closed consultations.

Main dissemination channels used:

- Ad-hoc workshops will be organised and representatives from Regulatory Authorities and Standardization Organizations will be invited. The main targeted entities are the technical committees of CEN/CENELEC/ETSI;
- Invitation of representatives of various NRAs to the Advisory Board of ELECTRA;

Related SET-Plan initiatives: to reach an even wider audience, the Consortium will inform related SET-Plan initiatives about the project results. The key initiatives identified are:

- European Smart Grid Technology Platform (ETP SmartGrids), especially the working group Network Operations and Assets (WG1) and the working group Demand-Side, Metering & Retail (WG3);
- Wind Technology Platform: Working Group 3 “Grid integration”;
- European Photovoltaic Technology Platform.

For each of these initiatives, the chairman of the targeted working group will be registered in the official mailing list to receive regular updates on the project and will be invited to join the Advisory Board.

European Commission: the dissemination strategy draws special attention to the EC, as a political institution and executive body of the EU. The EC is interested in learning about the project results also because of the funds it provides.

Main dissemination channels used:

- All the dissemination activities will be measured with appropriate KPIs in order to give the EC a clear understanding of the impact of the dissemination activities;
- The project officer is invited to join the Advisory Board in order to receive regular updates on the project status, commitments and achieved results;
- The project officer will be registered in the official mailing list to receive regular updates on the project.

“Twin” projects: the five IRPs which were selected by CORDIS FP7 for funding (IRPWIND for JP Wind, CHEETAH IRP for JP Photovoltaic Solar Energy, STAGE STE IRP for Concentrated Solar Power, and MATISSE IRP for JP Materials for Nuclear) agreed to share information, procedures and tools to pursue a close collaboration which shall facilitate the project management and enhance the results on the basis of proper exploitation of synergies.

2.5 Knowledge transfer bodies

An Advisory Board (AB) has been established to gather all the relevant stakeholders, receiving their input and suggestions about the IRP workflow and expected results, but at the same time keeping the management of the operational aspects of the project as efficient as possible. The Advisory Board of the project will be composed of stakeholders belonging to the target groups mentioned in chapter 1, ensuring the diversity of the actors involved as far as possible and the involvement of the main groups interested in smart grids.
The present list of participants to the Advisory Board is shown in Table 2-2:

Table 2-2 List of Advisory Board members

Organization name	Partner type
EDSO4SG	DSO Association
ENTSO-E	TSO Association
T&D EUROPE	Association of electricity transmission and distribution equipment and services industry

Organization name	Partner type
ETP SmartGrids	Technology Platform for the electricity networks of the future
GRID4EU	EU project Consortium
EASE	European Association for Storage of Energy
KIC InnoEnergy	
ERANET Plus	

The AB is set to:

- Give advice on all important matters of substance. In particular, it issues upon request an opinion and recommendations on the decisions of the Technical Board regarding the IRP;
- Bring a continuous interface with the Power Network research community which might be involved in the future implementation of the RTD road map.
- Advise and provide inputs on specific R&D needs and priorities;
- Guide and help the IRP to align its activity towards the key medium- to long-term R&D challenges;
- Advise on revisions of the IRP scope, goals and progresses;
- Help in defining suitable and effective KPIs to be applied to research activities;
- Receive a continuous update about the main research outcomes and become one of the main targets for knowledge transfer.

Members of the Advisory Board will be asked to sign a dedicated NDA with the Coordinator acting on behalf of the Consortium before he/she is allowed to provide advice to the AB. Moreover, the IRP has plans to organize workshops and seminars for dissemination purposes, but also provide training and formation courses for young researchers and engineers from R&D organizations and grid stakeholders. Five AB meetings are envisaged according to the DoW and a schedule of AB meetings has been set. However, it may be adjusted during the progress of the project, ensuring the consistency of results presented based on the results achieved.

An International Coordination Board (ICB) has been established to gather relevant stakeholders interested in smart grids also outside the EU borders. Targeted entities are associations and regulatory agencies which operate at an international level, universities and research centres from non-EU countries. Then, the ICB enables the project to be leveraged at an worldwide perspective, aiming at showing the EU research activity towards relevant stakeholders and at obtaining international support and recognition.
A preliminary list of participants to the International Coordination Board is shown in Table 2-3:

Table 2-3 International Coordination Board members and observers

Organization name	Partner type
CSIRO – Australia	Research institute
EPRI – USA	Research institute

Organization name	Partner type
AIST - Japan	Research institute
SJTU – China	University
ERI – China	Research institute
ISGAN – Int.	CEM and International Energy agency
ITU – Int.	The International Telecommunication Union
INESC P&D - Brazil	University and Research Institute
NEDO – Japan	Funding Agency (Observer)
DOE - USA	Funding Agency (Observer)

This board will also ensure that the main messages of the European research community reach a wider international audience, highlighting the leadership of European smart grids technologies and solutions. The board will also define the foreseen International Cooperation (INCO) activities of ELECTRA IRP as well as in the related EERA JP SG R&D plan for the 2014-2017 period.

3 Dissemination actions and events

3.1 Dissemination events in the first two years of the project

The list of the main dissemination events organised by the IRP or at which ELECTRA Partners have attended have attended and contributed during the first and the second year of the project are shown in

Table 3-1 and Table 3-2, respectively.

It can be noted that, during the second year, an increased number of dissemination events has been organized/attended, allowing to spread the ELECTRA results and achievements on technical issues to a wide audience.

More in detail some dissemination events **have been targeted to specific audience groups**, including:

- 7th FP EU projects such as EvolvDSO, Grid4EU, IDE4L, DISCERN (three joint workshops organized, agenda in Annex 1);
- EU and extra-EU grid stakeholders (oral presentations and posters at SET plan conference, Innogrid2020+, ISGAN International workshop; organization of ELECTRA - ETP WG1 Joint Workshop).

Other dissemination actions have been focused on **specific objectives**, such as:

- to establish stable relationships with B.R.I.C.S. countries. Namely a Joint Brazilian – ELECTRA smart grids workshop has been organized and INESC P&D Brazil has become member of the International Coordination Board (ICB) of ELECTRA (Agenda in Annex 2);

- to provide feedback on the Researcher Exchange Programme (REX) undertaken in WP9. Namely the first ELECTRA REX Workshop has been organized in Vienna at the EDST2015 Conference, where the six successful participants in REX Call 1 presented the results of their researches and shared their experience of exchange working in leading global smart grid organisations (Agenda in Annex 3, details are provided in D9.2).

Finally, synergies with EERA JP SG has been systematically pursued (oral presentations at EERA Annual Congress, joint ELECTRA – JP SG Steering Committee in Riga and 1st EERA SG General Assembly in Bilbao). In fact, of particular relevance is the 1st EERA SG General Assembly where, among others, EDSO4SG and ENTSO-E participated to a round table on EU SG industry needs and updated results of ELECTRA have been presented in four technical panels (Agenda in Annex 4).

The above events have been publicized on the web site, where relevant documents/presentations are available for download.

An important dissemination tool is the presentation of papers at International Conferences. **Nineteen peer-reviewed papers** (eighteen oral and one poster) have been presented at eight international Conferences held in European countries (NL, BE, UK, Luxembourg, Latvia, Austria, DK) and in Russia from May up to September 2015. All the papers have been included in Conference Proceedings. Details are provided in Table 3-3.

Furthermore two chapters of Handbooks have been published in 2015 by ELECTRA Partners, RSE and DTU RSE and DTU (details in

Table 3-4).

Details and summary of all the papers listed in Table 3-3 and of handbook chapters have been uploaded on the ELECTRA web site.

Finally the following paper has been submitted to a scientific journal, IEEE Transactions on Smart Grids, on 25 September 2015:

K. Mentesidi, E. Rikos, R. Garde, M. Aguado, The implementation of a Fuzzy Logic Controller for the Operation of a Diesel Genset in Minigrids for Rural Electrification,

Publication is expected at the beginning of 2016.

Further dissemination actions at national level, have been undertaken by Partners. For example IEn published two papers on national scientific journal (in Polish, details in Table 3-5).

Moreover DTU organized two meetings with stakeholders: with DONG on 14th Jan 2015 in Virum (DK) and with Energinet on 20th May 2015 in Fredericia (DK). In both meetings ELECTRA project was presented and the control room was visited to get knowledge of its functionality, in order to properly address WP 8 activities.

Finally, in

Table 3-6, the technical meetings and workshops organized in the first 24 months are reported and compared to the initial planning of the project (see table B2.4.1 at pag. 107 of Part B of DoW).

It can be noted that organized technical meetings/workshops are almost on schedule with project early planning. Only International Workshops is in advance while the 2nd Workshop on researchers Exchange will be organized in 2016 , since exchanges haven't yet been completed.

Table 3-1 Main dissemination events during the first two years of activity

CONFERENCE / EVENT	ELECTRA Contribution	Date and Place
EERA Annual Congress	IRPs session panelist	9 April 2014, Brussels (BE)
EERA JP / ELECTRA IRP Smart Grids Workshop	3 Sessions	8 May 2014, Glasgow (UK)
Italian Coordination meeting	Organization	28 May 2014, Milano (IT)
ETP Steering Committee meeting	Presentation of Internal Report R3.1 by selected partners	6 June 2014, Brussels
Horizon 2020 WP 2015 - LCE5 Workshop @ ENTSO-E	Joint JP Wind - JP SG presentation	18 June 2014, Brussels (BE)
HubNet Symposium	Keynote	10 Sept. 2014, Glasgow (UK)
IRED2014 ELECTRA Workshop	Side-event Workshop SC Members	17 Nov. 2014, Kyoto (JP)

Table 3-2 - Main dissemination events second year of activity (2015)

EVENT	ELECTRA Contribution	Date and Place
SET Plan Conference	Oral presentation	10th-11th December 2014, Rome (IT)
ELECTRA - ETP WG1 Joint Workshop	Ten oral presentations in three sessions	17th December 2014, Brussels (BE)
IDE4L (-DISCERN-ELECTRA-EvolvDSO) Workshop	Oral presentation	19th March 2015, Aachen (DE)
ELECTRA – GRID4EU Joint Workshop	Four oral presentations	30th March 2015, Brussels (BE)
ENTSO-E R&D Committee meeting	Oral presentation	31th March 2015, Brussels (BE)
Innogrid2020+	Poster and oral presentation	31th March 2015, Brussels (BE)
ELECTRA – EvolvDSO Joint Workshop	Five oral presentations	15th April 2015, Brussels (BE)
EERA Annual Congress	JP SG representative oral presentation and poster	30th April 2015, Brussels (BE)
IEEE PowerEng2015	Keynote Organization of a special session on smart grids Three oral presentations	11th-13th May 2015, Riga (LV)
CIRED 2015	Oral presentation and poster	15th-18th June 2015, Lyon (FR)
IEEE PowerTech 2015	Oral presentation	29th June – 2nd July 2015, Eindhoven (NL)
Smart grids BW-Platform and CoSSMic project Workshop	Oral presentation	14th July Konstanz (DE)
EDST 2015	Special session on REX 1st call organized, six presentations	8-11th September 2015; Wien (AT)
ISGAN International Workshop	Two oral presentations; Special session on ELECTRA	14-15th September 2015, Lecco (IT)
1st EERA-ELECTRA General Assembly	Oral presentations Four technical panels	6th October, Bilbao (ES)
Joint Brazilian – ELECTRA smart grids Workshop	Eleven oral presentations	11-12th November 2015 Florianopolis (Brazil)

Table 3-3 – Peer re-viewed papers presented at International Conferences in the second year of activity (2015)

Authors	Title	Conference date and place
L. Martini	Smart Grids Development and European Research Coordination	IEEE PowerEng. 2015, Riga (LV), 11-13 May 2015
A. Morch, S.H.l Jakobsen K.Visscher, M. Marinelli	Future control architecture and emerging observability needs	IEEE PowerEng. 2015, Riga (LV), 11-13 May 2015
A. Obushevs, I. Oleinikova	Market Design for Electricity Ensuring Operational Flexibility	IEEE PowerEng. 2015, Riga (LV), 11-13 May 2015
L. Martini, L. Radaelli, H. Brunner, C. Caerts, A. Morch , S. Hänninen, C. Tornelli	ELECTRA IRP approach to voltage and frequency control for future power systems with high DER penetration.	23rd Int. Conf. on Electricity Distribution, CIRED 2015 15-18 June 2015, Lyon (FR)
J. Merino, E. Rodriguez, C. Caerts, K.Visscher, R. D'hulst, E. Rikos, A. Temiz	Scenarios and requirements for the operation of the 2030+ electricity network	23rd Int. Conf. on Electricity Distribution, CIRED 2015 15-18 June 2015, Lyon (FR)
I. Oleinikova	European Energy Reseach Activities on the Smart Grids	6th Int. Conf. on Liberalization and modernization of power systems, St. Petersburg (Ru), June 25-27, 2015
K.Visscher, M. Marinelli A. Morch, S.H. Jakobsen	Identification of observables for future grids – the framework developed in the ELECTRA project	IEEE PowerTech 2015, Eindhoven (NL), 29 June - 2 July 2015
M. Rezkalla, M. Marinelli, J. Hu, K. Heussen, and H.W. Bindner	Distribution Management System and Identification of New Requirements in the Smart Grid Context	50th IEEE Int. Universities Power Engineering Conf. (UPEC 2015), Staffordshire (UK) , 1-4 Sep. 2015
M. Pertl, M. Marinelli, and H. W. Bindner	Phase Measurement Unit Data Interpretation for Improved Real Time Grid Power Quality Monitoring	50th IEEE Int. Universities Power Engineering Conf. (UPEC 2015), Staffordshire (UK) , 1-4 Sep. 2015
M. Uslar, J. Masurkewitz	A Survey on Application of Maturity Models for Smart Grid: Review of the State-of-the-Art	3rd Int. Conf. on ICT for Sustainability (ICT4S 2015) Copenhagen (DK), 7-9 Sept. 2015
R. D'hulst, J. Merino Fernandez, E. Rikos, D. Kolodziej, K. Heussen, D. Geibel, A. Temiz, and C. Caerts	Voltage and frequency control for future power systems: the ELECTRA IRP proposal	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
A. Frascella, J. Swiderski, G. Proserpio, E. Rikos, A. Temiz, A. Babs, M. Uslar, S. Brachetti, G. Graditi	Looking for the unified classification and evaluation approach of SG interface standards for the purposes of ELECTRA IRP	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
J.. von Appen, J.H. Braslavsky, J. K. Ward, M. Braun	Sizing and grid impact of PV battery systems - a comparative analysis for Australia and Germany	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
R. D'hulst, J. Verbeeck, C. Caerts, M. Syed, A. Zaher, G. Burt	Frequency Restoration Reserves: Provision and Activation Using a Multi-Agent Demand Control System	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)

Authors	Title	Conference date and place
K. Heussen, M. Uslar, C.Tornelli	A Use Case Methodology to Handle Conflicting Controller Requirements for Future Power Systems	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
K. Mentesidi, E. Rikos, R. Garde, M. Aguado	Implementation of a Fuzzy Logic Controller for Virtual Inertia Emulation	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
A. Prostejovsky, O. Gehrke, A. M. Kosek, F. Coffele, A. Zaher	Distributed Framework for Prototyping of Observability Concepts in Smart Grids	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
M. H. Syed, G. M. Burt, J. K. Kok, R. D'Hulst	Demand Side Participation for Frequency Containment in the Web of Cells Architecture	Int .Symposium on Smart Electric Distribution Systems & Techn. (EDST 2015), 8-11 Sept. 2015, Wien (AT)
K. Heussen, , O Gehrke, H. H. Niemann,	On Early Conflict Identification by Requirements Modeling of Energy System Control Structures	ETFA 2015 - IEEE Int. Conf. on Emerging Technology & Factory Automation, Luxembourg, Sept. 8-11, 2015

Table 3-4 – Chapters in Handbooks

Authors	Chapter Title	Hanbook details
Mathias Uslar, Christine Rosinger, Stefanie Schlegel, Rafael Santodomingo- Berry	Aligning IT Architecture Analysis and Security Standards for Smart Grids	Advances and New Trends in Environmental and Energy Informatics, Marx Gomez J., Sonnenschein M., Vogel U., Winter, A. Rapp B. Giesen N. (Eds.), Springer International Publishing DOI: 10.1007/978-3-319-23455-7
Mustafa A. Biviji, Luciano Martini, Michele De Nigris, DJ Kang, Dan Ton	Global survey of smart grids activities	SGD019 Wiley Smart Grids Handbook, in press

Table 3-5 - Papers published on national scientific Journals

Authors	Title	Journal
Swiderski J.	Zastosowania modelu SGAM architektury referencyjnej elektroenergetycznych sieci inteligentnych w świetle europejskich prac normalizacyjnych Application of SGAM (reference model of smart grid architecture) in the light of European standardization works	Wiadomości Elektrotechniczne, no. 6, 2015, p. 3-14 (in Polish)
Swiderski J.	Transmisja danych w elektroenergetycznych sieciach inteligentnych z perspektywy modelu ich referencyjnej architektury SGAM i europejskich działań normalizacyjnych" ("Data transmission in electrical smart grids in the light of the model of their reference architecture SGAM and European standardization efforts	Przegląd Telekomunikacyjny, no. 7, 2015, p. 649 – 654 (in Polish).

Table 3-6 - Comparison of technical meetings and workshops organized in the first half of the project with original planning

	20 14												20 15												20 16												20 17											
Date	dic	Ja	Fe	Ma	Ap	Ma	Jun	Jul	Au	Se	Oc	No	Di	Ja	Fe	Ma	Ap	Ma	Jun	Jul	Au	Se	Oc	No	Di	Ja	Fe	Ma	Ap	Ma	Jun	Jul	Au	Se	Oc	No	Di	Ja	Fe	Ma	Ap	Ma	Jun	Jul	Au	Se	Oc	No
month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
WP1	**Technical meetings & workshops with stakeholders and projects**																																														
planned					1				2				3				4				5			6				7				8				9				10				11		
made							1					2				34	5						6																							
WP2	**International workshops on collaboration with ISGAN**																																														
planned																								1																					2		
made																						1																							
WP9	**Workshop on researchers exchange**																																													
planned																		1						2							3													4		
made																						1																							
WP12	**International workshops**																																													
planned																	1												2															3		
made												1												2																						
WP12	**Targeted technical dissemination workshops and Seminars**																																													
planned												1							2										3							4					5				6		
made						1																		2																						

Legend:

WP1	1. EERA ETP Steering Committee meeting, 6th June 2014, Brussels (BE) 2. ELECTRA - ETP WG1 Joint Workshop, 17th December. 2014, Brussels (BE) 3. IDE4L-DISCERN-ELECTRA-EvolvDSO Joint Workshop,19th March 2015, Aachen (DE) 4. ELECTRA – GRID4EUJoint Workshop,30th March 2015, Brussels (BE) 5. ELECTRA – EvolvDSO Joint Workshop, 15th April 2015, Brussels (BE) 6. Technical panels at 1st EERA-ELECTRA General Assembly, 6th October, Bilbao (ES)
WP 2	Special ELECTRA session at ISGAN International Workshop,14-15th September 2015, Lecco (IT)
WP9	1st REX workshop at EDST 2015, 8-11th September 2015; Wien (AT)
WP12	1. ELECTRA Workshop Iat RED2014, 17 Nov. 2014, Kyoto (JP) 2. Joint Brazilian – ELECTRA smart grids Workshop, 11-12th November 2015, Florianopolis (Brazil)

WP12	1. EERA JP / ELECTRA IRP Smart Grids Workshop, 8th May 2014, Glasgow (UK) 2. 2nd ELECTRA - ETP WG1 Joint Workshop, 10th December 2015, Brussels (BE)

3.2 Dissemination events planned in 2016

It is expected that, during the year 2016, more focused dissemination actions will be undertaken, according to progresses of both RTD and CSA activities.

For example the main technical outcome of the project, i.e. the so called "Web-of-Cells" concept will be presented in the 2nd ELECTRA - ETP WG1 Joint Workshop on 10th December 2015, in Brussels (agenda in Annex 5).

Joint Workshops with other EU project, not yet approached the first half of the project will be organised Specifically Laborelec will organize a workshops with the Mas²tering FP7 project (GA N° 619682) on the Topic "Increased flexibility in LV networks by Multi-Agents Systems".

Moreover four workshops with stakeholders at national level have been already planned (see the table below).

Stakeholder names	Topic	Tentative date and location	ELECTRA ref. Partner
FINGRID Oyj (Finnish TSO)	Concept of Web of Cells	A technology forum arranged in autumn, Finland	VTT
The Norwegian Smart Grid Centre (TSO, DSOs, R&D organisations)	Concept of Web of Cells	Second part of 2016, Norway	SINTEF
Belgian DSO : Ores, Eandis, Sibelga	Concept of Web of Cells Observability in MV Networks Control Schemes for the use of flexibility	Second part of 2016, Belgium	Laborelec
UK smart grid academic research community, plus industry colleagues	Update on ELECTRA progress & discussion between projects	"UK Smart Grid Research Symposium", 13-14 Sept. 2016, Glasgow, UK	USTRATH

ELECTRA Partners also are planning to submit/present papers in the following International Conferences, where are involved in the Scientific and/or in the Organizing Committee:

- 13th European Energy Market Conference, EEM 2016, Porto, Portugal, June 6-9, 2016
- CIRED Workshop Electrical networks for society and people, Helsinki, Finland, June 14-15, 2016
- 19th Power Systems Computation Conference (PSCC), June 20 – 24, 2016 Genoa (IT)
- IEEE-PES Innovative Smart Grids technologies, ISGT Europe, Ljubljana, Slovenia, October 9-12, 2016
- 6th International Conference on Sustainable Energy Information Technology", SEIT 2016, Madrid, Spain, 23-26 May 2016

- 7th International Conference on Integration of Renewable Energy and Distributed Energy Resources (IRED), Canada, October 24-26

4 Project web site

The project website is the main tool developed for ELECTRA dissemination activity.

It provides all the stakeholders with access to the project results, updates on the project status and initiatives planned.

In this chapter, after a brief description of the web site characteristics, statistics relative to visits in the first two years of the project are presented and discussed.

4.1 Web site main characteristics

The website [1] is designed, operated and maintained by RSE.

The website is constituted by a public area and a restricted area for the project Partners. The public area enables a common user to be informed about the project structure, its objectives, the main results achieved and the partners involved. A specific section, highlighted in the homepage, is dedicated to provide the user with updates on news and events related to the IRP. Public material, such as official deliverables and workshos material, is also available for download. For more details, deliverable D12.1 “Website Availability” describes the content and the structure of the website.
The website aims to spread the information regarding ELECTRA and the related initiatives. In this sense, the web offers unique opportunities to reach the greatest number of people worldwide and for this reason it constitutes one of the main dissemination tools to attract more visitors. Stakeholders will be provided with a direct web link to the project documents available on the webpages in order to facilitate the access; in this way, they will be periodically informed about the latest outcomes of the specific tasks of the project.
Project Partners are able to access the restricted area from the main page, which will be exclusively used by the consortium to exchange and share documents, to organize internal meetings, to exchange information among project members thanks to a forum and to share the material presented at the technical workshops.
In order to provide the EC with objective measurements in terms of achieved project visibility, *Google Analytics* tools has been activated, in particular monitoring the number of unique visitors and their geographical access, the number of downloads of public documents and the number of stakeholders subscribed. Examples of web site statistics are reported in section 4.2.

The project website is regularly updated through the “Content Management System” managed by RSE, that allows publishing, editing and modifying its content based on the project needs.

4.2 Web site statistics

A summary of web site statistics[1] in the period between April 1st, 2014 and November 30th, 2015[2] is shown in Figure 4-1.

The average number of accesses to the web site has slightly increased during 2015; however an important peak can be noted in the period December 2014 -February 2015, i.e. in correspondence with the end of the first reporting period and of the review meeting (February 10th-11th 2015) .

In order to have a better understanding of the access trends, available web site statistics of the first project year (April - November 2014) have been compared to the corresponding period in 2015. As shown in Table 4-1, both sessions and users have slightly increased in 2015 (7.6% and 16.4%, respectively) while the pages visited in each session have remarkably decreased (from 8.15 to 5.56). Moreover the average time per session is slightly decreased.

This data suggests that, during the first year project the main purpose of visitors was to obtain information about the project goals and structure and get familiar with the site, while, in the second year, visits were more focused and addressed to get information on project outcomes such as deliverables, workshops presentations and papers, which have become progressively available.

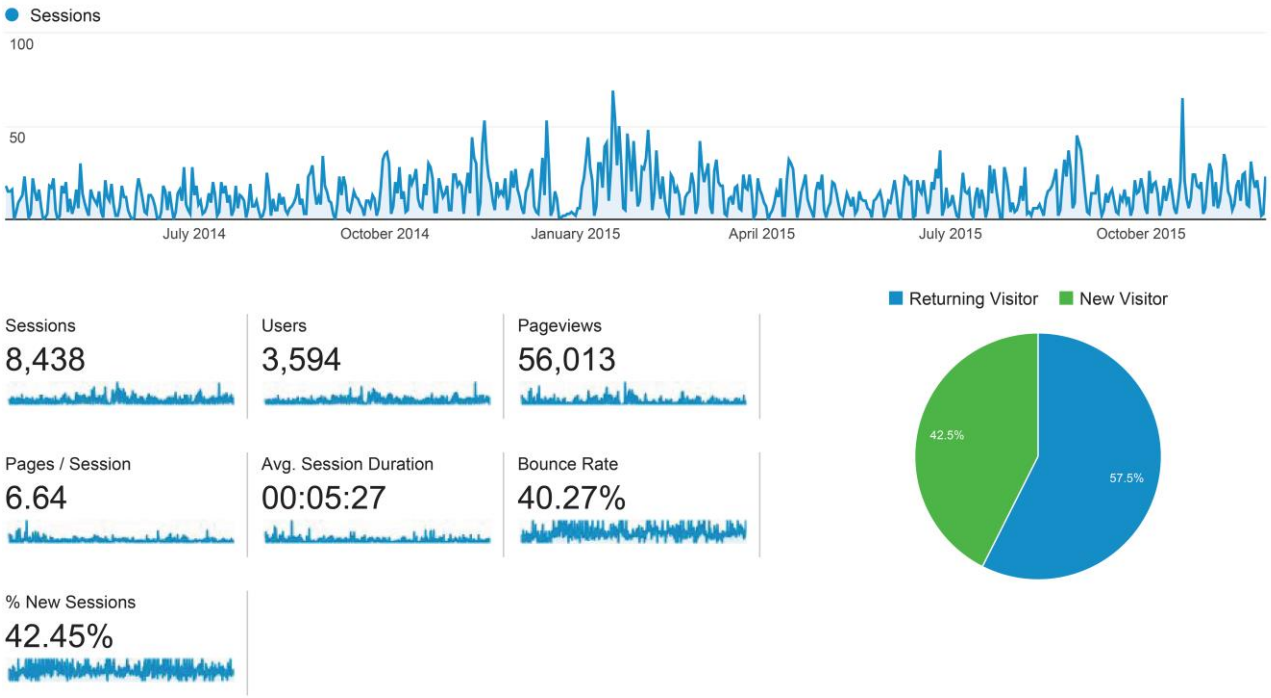


Figure 4-1 Web site statistics for the period 1st April 2014 - 30th November 2015

Table 4-1 - Comparison of web site statistics in 2014 and 2015 (period 1st April – 30th November)

	Sessions number	Users number	page views	page/session	Average session duration (min:sec)
2014	3015	1295	24570	8.15	06:25
2015	3244	1507	18038	5.56	05:07

[1] All the statistics presented in this chapter do not include RSE and his stakeholder (GSE).
[2] Google service on web site statistics has been activated on April 1st 2014.

To confirm this suggestion, statistics about pages visited in 2104 and 2015 are shown in Table 4-2 and Table 4-3, respectively. As expected, visits to pages related to project activities and results significantly increased in 2015: namely *call for application, public deliverables, and papers*, are ranked at the 3rd, 6th and 7th place among the most frequently visited pages. It can be noted that the statistics about *call for application* is related to the *Mobility program* and, specifically, to the three Research Exchange calls (opened on November 2014, July 2015 and October 2015 respectively), thus confirming the interest of the scientific community for this activity of ELECTRA.

Furthermore, in order to allow a better comparison, data of table 12 and 13 have been cleansed of home pages and restricted area[3] visits (see Table 4-4); in such a way the above described trend appears in a more definite way.

Table 4-2 - Pages visited in the period 1st April 2014 - 30th November 2014

	Page Title	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit
		24,570 % of Total: 100.00% (24,570)	14,904 % of Total: 100.00% (14,904)	00:00:54 Avg for View: 00:00:54 (0.00%)	3,014 % of Total: 100.00% (3,014)	36.42% Avg for View: 36.42% (0.00%)	12.27% Avg for View: 12.27% (0.00%)
1.	ELECTRA IRP - Home	**5,593 (22.76%)**	3,441 (23.09%)	00:01:23	2,047 (67.92%)	35.16%	23.53%
2.	ELECTRA IRP - Login	**2,260 (9.20%)**	1,025 (6.88%)	00:00:27	80 (2.65%)	33.75%	5.58%
3.	Document Manager	**1,712 (6.97%)**	950 (6.37%)	00:00:34	9 (0.30%)	44.44%	3.50%
4.	ELECTRA IRP - ELECTRA IRP	**1,459 (5.94%)**	1,014 (6.80%)	00:01:19	414 (13.74%)	32.37%	18.51%
5.	ELECTRA IRP - Calendar	**787 (3.20%)**	427 (2.87%)	00:00:44	5 (0.17%)	80.00%	4.70%
6.	ELECTRA IRP - Technical Workshops	**471 (1.92%)**	263 (1.76%)	00:00:25	33 (1.09%)	15.15%	3.18%
7.	ELECTRA IRP - About ELECTRA IRP	**461 (1.88%)**	341 (2.29%)	00:01:18	33 (1.09%)	66.67%	23.64%
8.	ELECTRA IRP - 1st Tech. Workshop 2014_05_08 Glasgow	**446 (1.82%)**	238 (1.60%)	00:00:46	63 (2.09%)	31.75%	11.88%
9.	ELECTRA IRP - Partners	**442 (1.80%)**	344 (2.31%)	00:01:31	16 (0.53%)	50.00%	22.62%
10.	ELECTRA IRP - Restricted	**345 (1.40%)**	217 (1.46%)	00:00:26	6 (0.20%)	16.67%	4.64%
11.	WP04	**336 (1.37%)**	189 (1.27%)	00:00:22	1 (0.03%)	0.00%	1.49%
12.	ELECTRA IRP - Links	**323 (1.31%)**	201 (1.35%)	00:00:51	15 (0.50%)	80.00%	12.07%
13.	WP03	**259 (1.05%)**	122 (0.82%)	00:00:25	0 (0.00%)	0.00%	3.47%
14.	ELECTRA IRP - Project Structure	**258 (1.05%)**	173 (1.16%)	00:01:20	25 (0.83%)	64.00%	14.34%
15.	ELECTRA IRP - Call for Application	**251 (1.02%)**	41 (0.28%)	00:01:21	0 (0.00%)	0.00%	2.79%
16.	D3.2 Functional Architecture and Use Case workshop	**243 (0.99%)**	91 (0.61%)	00:00:32	1 (0.03%)	0.00%	3.70%
17.	ELECTRA IRP	**219 (0.89%)**	155 (1.04%)	00:00:19	13 (0.43%)	53.85%	21.00%
18.	T6.1	**217 (0.88%)**	128 (0.86%)	00:01:10	2 (0.07%)	50.00%	8.29%
19.	ELECTRA IRP - Technical Committee	**212 (0.86%)**	77 (0.52%)	00:00:56	0 (0.00%)	0.00%	1.42%
20.	Task4.1	**208 (0.85%)**	113 (0.76%)	00:00:37	0 (0.00%)	0.00%	5.29%

[3] Access only of ELECTRA members

Table 4-3 - Pages visited in the period 1st April 2015 -30th November 2015

	Page Title	Pageviews	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit
		18,038 % of Total: 100.00% (18,038)	11,569 % of Total: 100.00% (11,569)	00:01:07 Avg for View: 00:01:07 (0.00%)	3,244 % of Total: 100.00% (3,244)	43.90% Avg for View: 43.90% (0.00%)	17.98% Avg for View: 17.98% (0.00%)
1.	ELECTRA IRP - Home	**4,081 (22.62%)**	2,799 (24.19%)	00:01:24	1,852 (57.09%)	33.21%	24.82%
2.	ELECTRA IRP - ELECTRA IRP	**1,356 (7.52%)**	995 (8.60%)	00:01:22	256 (7.89%)	51.56%	21.17%
3.	ELECTRA IRP - Call for Application	**1,238 (6.86%)**	876 (7.57%)	00:02:32	474 (14.61%)	67.93%	46.61%
4.	ELECTRA IRP - Login	**1,100 (6.10%)**	527 (4.56%)	00:00:32	58 (1.79%)	48.28%	7.09%
5.	Document Manager	**844 (4.68%)**	329 (2.84%)	00:00:31	2 (0.06%)	50.00%	3.55%
6.	ELECTRA IRP - Public Deliverables	**677 (3.75%)**	275 (2.38%)	00:00:36	18 (0.55%)	16.67%	5.61%
7.	ELECTRA IRP - Papers	**666 (3.69%)**	261 (2.26%)	00:01:01	18 (0.55%)	38.89%	7.81%
8.	ELECTRA IRP - About ELECTRA IRP	**516 (2.86%)**	400 (3.46%)	00:01:24	41 (1.26%)	48.78%	27.13%
9.	ELECTRA IRP - Technical Workshops	**407 (2.26%)**	218 (1.88%)	00:00:44	14 (0.43%)	57.14%	6.39%
10.	ELECTRA IRP - Partners	**405 (2.25%)**	336 (2.90%)	00:01:32	28 (0.86%)	57.14%	27.65%
11.	ELECTRA IRP	**314 (1.74%)**	225 (1.94%)	00:00:31	22 (0.68%)	40.91%	15.61%
12.	ELECTRA IRP - Mobility	**304 (1.69%)**	198 (1.71%)	00:00:51	26 (0.80%)	42.31%	13.82%
13.	Application Form	**253 (1.40%)**	101 (0.87%)	00:04:13	9 (0.28%)	33.33%	14.62%
14.	ELECTRA IRP - Project Structure	**243 (1.35%)**	157 (1.36%)	00:00:52	19 (0.59%)	21.05%	11.93%
15.	ELECTRA IRP - Links	**204 (1.13%)**	173 (1.50%)	00:00:39	10 (0.31%)	60.00%	15.69%
16.	ELECTRA IRP - Mailing Lists	**190 (1.05%)**	60 (0.52%)	00:02:13	0 (0.00%)	0.00%	10.53%
17.	ELECTRA IRP - Project Deliverables	**178 (0.99%)**	103 (0.89%)	00:00:33	2 (0.06%)	0.00%	7.87%
18.	ELECTRA IRP - Restricted	**155 (0.86%)**	91 (0.79%)	00:00:14	0 (0.00%)	0.00%	2.58%
19.	ELECTRA IRP - Calendar	**122 (0.68%)**	85 (0.73%)	00:00:27	1 (0.03%)	100.00%	8.20%
20.	ELECTRA IRP - Dissemination	**120 (0.67%)**	87 (0.75%)	00:00:13	2 (0.06%)	50.00%	5.83%

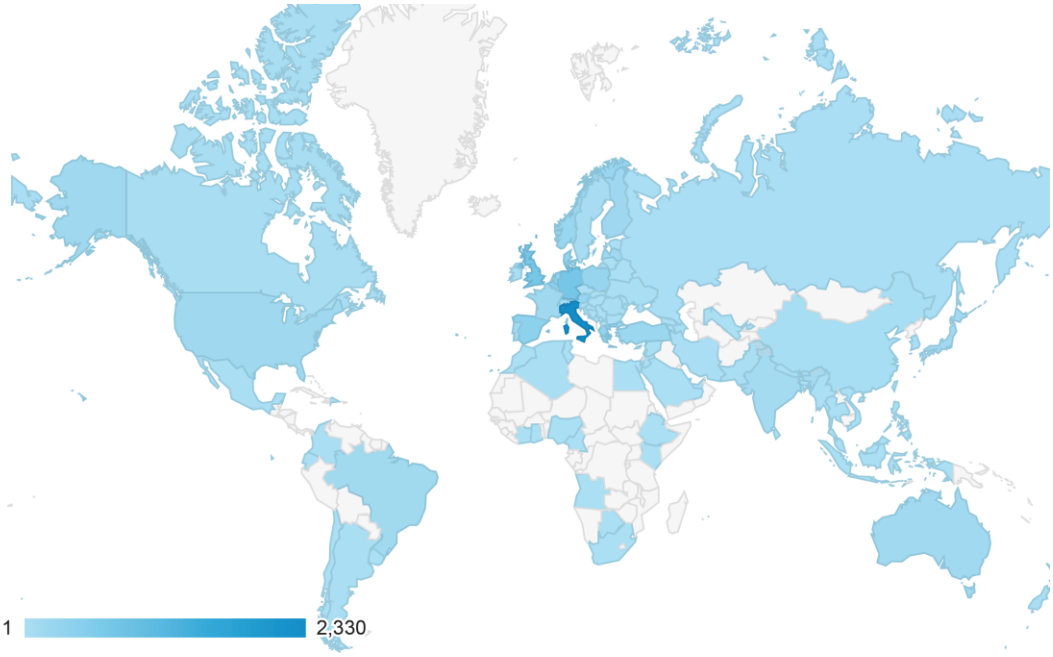
Table 4-4 - Pages visited in 2014 and 2015: data cleansed of home pages and restricted area visits

	2014		2015	
Page Title	**Page views**	**Unique page views**	**Page views**	**Unique page views**
ELECTRA IRP - Technical Workshops	471	263	407	218
ELECTRA IRP - About ELECTRA IRP	461	341	516	400
ELECTRA IRP - 1st Tech. Workshop 2014_05_08 Glasgow	446	238		
ELECTRA IRP - Partners	442	344	405	336
ELECTRA IRP - Links	323	201	204	173
ELECTRA IRP - Project Structure	258	173	243	157
ELECTRA IRP - Call for Application	251	41	1238	876
ELECTRA IRP - Public Deliverables			677	275
ELECTRA IRP - Papers			666	261
ELECTRA IRP - Mobility			304	198
Application Form			253	101
Total	**2652**	**1601**	**4913**	**2995**

To complete data analysis, the geographic location of users in the first part of the project, is shown in Table 4-5. Although users are spread in several countries of the world, most of them come from Europe and in particular from Italy (27.6%). Among non-EU countries, USA and Brazil provides the higher number of visits. These trends have not significantly changed in 2015. It is expected, however, that this statistics could improve in the second part of the project, when the internationalization of the activity and, in particular contacts with overseas countries, will increase.

Finally web site-statistics relative to project KPIs are summarized in Table 4-6. All the monitored values largely exceed targets fixed for the first 24 months (ref. D11.1).

Table 4-5 - Geographic locations of web-site users



Country	Acquisition			Behavior			Conversions	
	Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Goal Conversion Rate	Co
	8,438 % of Total: 100.00% (8,438)	42.55% Avg for View: 42.45% (0.22%)	3,590 % of Total: 100.22% (3,582)	40.27% Avg for View: 40.27% (0.00%)	6.64 Avg for View: 6.64 (0.00%)	00:05:27 Avg for View: 00:05:27 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	
1. Italy	**2,330** (27.61%)	31.89%	743 (20.70%)	30.77%	10.47	00:09:18	0.00%	
2. Germany	**742** (8.79%)	48.79%	362 (10.08%)	46.63%	4.01	00:03:08	0.00%	
3. United Kingdom	**692** (8.20%)	41.04%	284 (7.91%)	43.21%	5.01	00:03:26	0.00%	
4. Belgium	**443** (5.25%)	33.18%	147 (4.09%)	30.02%	6.34	00:04:08	0.00%	
5. Spain	**401** (4.75%)	45.64%	183 (5.10%)	36.41%	8.68	00:06:14	0.00%	
6. Greece	**338** (4.01%)	31.66%	107 (2.98%)	27.22%	7.42	00:06:21	0.00%	
7. Netherlands	**333** (3.95%)	39.64%	132 (3.68%)	53.75%	3.50	00:03:05	0.00%	
8. Denmark	**319** (3.78%)	45.77%	146 (4.07%)	35.11%	4.92	00:03:03	0.00%	
9. Austria	**283** (3.35%)	27.56%	78 (2.17%)	33.22%	6.32	00:04:34	0.00%	
10. Poland	**265** (3.14%)	34.72%	92 (2.56%)	49.06%	5.95	00:04:30	0.00%	
11. Norway	**226** (2.68%)	26.99%	61 (1.70%)	26.11%	6.87	00:04:33	0.00%	
12. Turkey	**193** (2.29%)	39.90%	77 (2.14%)	32.12%	5.71	00:04:35	0.00%	
13. Finland	**182** (2.16%)	21.98%	40 (1.11%)	20.33%	9.73	00:08:45	0.00%	

14.	Latvia	170 (2.01%)	34.71%	59 (1.64%)	36.47%	5.16	00:03:01	0.00%
15.	United States	156 (1.85%)	92.31%	144 (4.01%)	66.67%	2.60	00:01:56	0.00%
16.	France	152 (1.80%)	64.47%	98 (2.73%)	38.82%	4.14	00:03:59	0.00%
17.	Brazil	144 (1.71%)	92.36%	133 (3.70%)	88.89%	1.40	00:00:41	0.00%
18.	Portugal	136 (1.61%)	45.59%	62 (1.73%)	33.09%	5.68	00:03:08	0.00%
19.	Australia	121 (1.43%)	31.40%	38 (1.06%)	74.38%	2.35	00:02:48	0.00%
20.	Japan	103 (1.22%)	50.49%	52 (1.45%)	40.78%	3.52	00:05:14	0.00%
21.	India	79 (0.94%)	91.14%	72 (2.01%)	69.62%	1.97	00:02:26	0.00%
22.	Switzerland	64 (0.76%)	48.44%	31 (0.86%)	60.94%	5.12	00:03:56	0.00%
23.	Sweden	45 (0.53%)	60.00%	27 (0.75%)	46.67%	4.00	00:04:50	0.00%
24.	China	43 (0.51%)	46.51%	20 (0.56%)	58.14%	10.58	00:14:06	0.00%

Table 4-6 - Project KPIs relative to the web site users

Project KPIs		First 24 months	TARGET First 24 months	TARGET Total 48 months
G5	Number of visits per month for project website	421	>300	>500
G6	Number of registered users to access public project documents	116	>35	>70
G7	Number of links that refer to project website (referral number)	45	>35	>80
G8	Numbers of countries with more than 50 visits within a period	22	>20	>30

5 Exploitation of project results

In order to properly define the exploitation plan of project results, involvement of industrial stakeholders (manufacturers and end users) is a key requirement. In particular stakeholders' involvement is essential to insure that the final outcomes of ELECTRA (TRL 3-4) can be transferred to prototype level (TRL 5-7).

In the first half of the project, AB and ICB members and grid stakeholders in general, have been mainly involved in highlighting the ELECTRA activities in line with their industrial needs and providing feedback on early results.

In the second half of the project, their involvement will progressively increase, since the details of the Web-of-Cells and of the Smart Grid Architecture Model (SGAM) implementation are now almost defined and results of proof of concept tests will become progressively available.

Nevertheless in the first part of the project some important issues related to the exploitation have been addressed. The ELECTRA Technical Committee (TC) has initiated a cooperation with the EERA Secretariat concerning the newly developed **Intellectual Property (**IP) **repository for EERA JPs and IRPs**. The ultimate goal of this activity is to potentially boost the transfer to the market of results generated by the IRP.

The IP repository is an instrument that aims to help IRPs/JPs in sharing access to their relevant IP assets and promoting their research results towards targeted third parties.

From interactions at JPC level with the EERA Secretariat, it has been revealed that an EERA "IP Helpdesk" will soon be available to support **JPs** and related **Integrated Research Programmes** in**:**

- identifying the relevant IP assets (Background)
- performing state-of-the art search
- arranging access rights agreements
- drafting a plan for the exploitation of the research results
- detecting the right sources of funding for the proof-of-concept of research results.

A web-based showcase will also be available to be used to promote the results generated by IRPs/JPs externally.

In this frame the ELECTRA TC has identified an IP asset developed in WP4.3 suitable to be included in the EERA IP Repository: i.e. the "Electra Assessment Tool for Smart Grid Interface Standard" (**EAT-SGIS**) and, accordingly, has communicated its features to the EERA Secretariat (see Table 5-1).

EAT-SGIS defines a methodology and related tool for assessing and classifying the ICT interoperability standards and specifications for Smart Grid interfaces. The final result of the application of EAT-SGIS to a specific standard is a rich schedule, summarizing and evaluating its features, which could be "extracted" from the tool and stored. This stored data can be further used, for example, in documents or databases.

Although the tool is not yet fully developed, it can be noted that those responsible for the IEC task force within TC57 have asked for the possibility of using EAT-SGIS for the Technical Committee activities of SG standards evaluation.

This can be considered an important step in order to receive effective feedback on this tool and finalize in a proper way its development.

Other IP assets such as the web of the cells concept are now under evaluation and their features will be communicated to the EERA Secretariat in the second half of the project.

Table 5-1 - Template for the submission of IP assets in the EERA IP Repository

Item	ENEA #1
Title	EAT-SGIS (Electra Assessment Tool for Smart Grid Interface Standard)
Type of Asset [*background; foreground; sideground*]	Foreground
Short description	A reference method and a related tool for assessing and classifying the ICT interoperability standards and specifications for Smart Grid interfaces
Longer description	EAT-SGIS define a methodology and the related tool for assessment of and information collection about SG interface standards. The final result of the application of EAT-SGIS to a specific standard is a rich schedule, summarizing and evaluating its features, which could be "extracted" from the tool and stored. This stored data can be further used, for example, in documents or databases.
WP of reference	WP4
Organisation leader	ENEA
Contact person	Angelo Frascella
Email	angelo.frascella@enea.it
Second Organisations in charge of managing the asset (if any)	IEN, RSE, CRES, TUBITAK, OFFIS
Contact persons	Jacek Swiderski, Gianluigi Proserpio, Evangelos Rikos, Armağan Temiz, Mathias Uslar
Email	j.swiderski@ien.gda.pl, gianluigi.proserpio@rse-web.it, vrikos@cres.gr, armagan.temiz@tubitak.gov.tr, uslar@offis.de
IPR [*Patent, Utility Model, Software/Database/Copyright, Trademark, Industrial Design, Trade Secret, Other]*	Model
IPR Status [*Pending; Granted*]	Not applicable
Technology keywords	Interoperability Standards, SGAM, Smart Grid
Special conditions for the access to such Asset?	Free access

6 Conclusions

This document gives a comprehensive overview of the communication channels and tools designed for an effective dissemination of ELECTRA activities and results.

To this purpose, dissemination actions, web site statistics and exploitation of results of the first two years of the project are presented and discussed.

A list of the main dissemination events organised by the IRP or at which ELECTRA Partners have attended and contributed has been presented. During the second project year, an increased number of dissemination events such as workshop and technical meetings **targeted to specific audience groups** has been organized/attended, allowing the spread of ELECTRA results and achievements on technical issues to a wide audience.

Moreover nineteen peer-reviewed papers have been presented at eight international Conferences held in European countries in 2015. All the papers have been included in Conference Proceedings.

All of the above events have been publicized on the web site, where relevant documents/presentations are available for download. Similarly, details and summaries of all the papers have been uploaded to the web site.

It is expected that, according to the progress of both RTD and CSA activities, more focused dissemination actions can be implemented in the second half of the project. Accordingly a preliminary list of the events already planned in 2016 has been provided.

The official project website is considered the main tool for dissemination, where all the stakeholders can get information regarding project results, updates on the project status and initiatives planned.

To this purpose the main functionalities of the web site have been described and statistics relative to visits in the first two years of the project have been presented and discussed.

All the values of KPIs relative to the web site largely exceed the mid-term targets. Moreover analysis of the data available suggests that, during the first year, the main purpose of visitors was to obtain information about the project goals and structure and get familiar with the site, while, in the second year, visits were more focused and addressed getting information on project outcomes such as deliverables, workshop presentations and papers, which have become progressively available.

Finally, the exploitation of project results with particular emphasis on the issue of Intellectual Property (IP) has been addressed. Relatedly, the ELECTRA Technical Committee has initiated a cooperation with the EERA Secretariat concerning the newly developed IP repository for EERA JPs and IRPs. To this end, the main features of the “Electra Assessment Tool for Smart Grid Interface Standard”, developed in WP4.3, have been communicated to the EERA Secretariat.

7 References

[1] ELECTRA Description of Work – Annex I

[2] http://www.electrairp.eu (ELECTRA IRP web site)

[3] ELECTRA Deliverable D11.1 - Updated list of ELECTRA KPIs with initial values

8 Disclaimer

The ELECTRA project is co-funded by the European Commission under the 7th Framework Programme 2013.

The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Commission.

The European Commission is not responsible for any use that may be made of the information contained therein.

ANNEX 1 - JOINT WORKSHOPS WITH OTHER EU PROJECTS

Joint workshop - IDE4L- DISCERN - ELECTRA – EVOLVDSO,

19th March 2015, Aachen (DE)

Purpose: present ELECTRA project and get knowledge of results of other EU projects

(ELECTRA project presented by Mattia Marinelli, DTU)

Workshop Agenda:

- 9.00 – 09.30 Introduction
- 9.30 – 10.30 IDE4L Project presentations
- 10.30 - 11.00 Coffee break & Collection of discussion topics
- 11.00 - 11.45 DREAM Project presentations
- 11.45 - 12.30 EvolvDSO Project presentations
- 12.30 - 13.30 Lunch Break & Collection of discussion topics
- 13.30 - 14.15 INCREASE project presentations
- 14.15 - 15.00 Related projects: CEER, DISCERN, ELECTRA
- 15.00 - 16.00 Coffee Break & Collection, grouping and selection of discussion topics
- 16.00 - 18.00 Discussion

Agenda

Introduction

9:40 – 9:50 Welcome address
Patrick van Hove, EC DG – Research & innovation

9:50 – 10:30 Welcome and introduction to the workshop objectives
Luciano Martini, RSE and Remy Garaude Verdier, ERDF

Part 1: Voltage control in the German and Italian Demos of GRID4EU

10:30 – 10:55 GRID4EU German Demo (led by RWE): The challenges of implementing an algorithm for loss optimal network reconfiguration
Anton Shapovalov, TUD (Technical University of Dortmund)

10:55 – 11:20 GRID4EU Italian Demo (led by ENEL) – Integration of DERs in MV networks: advanced voltage control for increasing the network hosting capacity
Diana Moneta, RSE (Ricerca sul Sistema Energetico)

11:20 – 11:45 Open Technical Discussion
Thomas Drizard, ERDF (Moderator)

Part 2: Control schemes for the use of flexibility - concepts from Electra

11:45 – 12:10 ELECTRA – Web-of-cells control concept
Chris Caerts, VITO and Julia Merino, TECNALIA

12:10 – 12:30 ELECTRA – Observables and concept of control triple for voltage and frequency control
Andrei Morch, SINTEF

12:30 – 13:00 Open Technical Discussion
Nikos Hatziargyriou, ETP SmartGrids (Moderator)

Part 3: Flexibilities – Approaches from Electra and return of experience from the GRID4EU French Demo

14:15 – 14:25 ELECTRA – Requirements for future Control Rooms
Carlo Tornelli, RSE (Ricerca sul Sistema Energetico)

14:25 – 14:50 ELECTRA – Flexibility potential characterization for control purposes
Seppo Hanninen, VTT

14:50 – 15:20 GRID4EU French Demo (led by ERDF) – Use of flexibility: a DSO point of view
Thomas Drizard, ERDF (Electricité Réseau Distribution France)

15:20 – 15:50 GRID4EU French Demo (led by ERDF) – The challenges of implementing a coordinated control of dispersed Battery Energy Storage Systems
Georges Kariniotakis, Armines

15:50 – 16:30 Open Technical Discussion
Henrik Bindner, DTU (Moderator)

Conclusion

16:30 – 16:45 Summary and conclusion of the workshop
Luciano Martini, RSE and Remy Garaude Verdier, ERDF

JOINT WORKSHOP ELECTRA – EvolvDSO

15th April 2015, Brussels (BE)

AGENDA

Time	Topic
10:00	**Arrival and Coffee**
10:30	**Welcome and Introduction** Chris Caerts (VITO)
10:45	**EvolvDSO presentation** Marco Baron (ENEL)
11:15	**Electra presentation** Thomas Strasser (AIT)
11:45	**Interaction, slack, first Q&A**
12:00	**Lunch**
13:00	**Web-of-Cells architectural concept** Chris Caerts (VITO)
13:45	**Web-of-Cells Observables and Monitor solutions: preliminary ideas** Klaas Vischer (TNO)
14:15	**Web-of-Cells Control-loop solutions (subsystems) : preliminary ideas** Klaas Vischer (TNO)
14:45	**Interaction, discussion, feed-back, prioritization related to the concept and preliminary ideas of solutions**
15:15	**Control Room needs and requirements** *Presentation of the questionnaire to the DSO* Laurence Cornez (CEA)
15:45	**Summary and preliminary conclusions**
16:30	**End of the workshop**

ANNEX 2 – INTERNATIONAL WORKSHOPS

THE ROLE OF COMMUNICATIONS AS CRITICAL ENABLER FOR THE DEVELOPMENT OF SMART ENERGY SYSTEMS Auditorium – Casa dell'Economia - Chamber of Commerce of Lecco Lecco – Italy - 14-15 September 2015	
Monday September 14	
08.30 – 09.00	Registration and welcome coffee
09.00-09.15	Introduction: Michele de Nigris – ISGAN Chair
09.15 – 10.15	Welcome speeches • Vico Valassi – President of the Lecco Chamber of Commerce • Marcello Capra - Italian Ministry of Economic Development • Livio Gallo – Director Enel Global Infrastructures and Networks • European Commission – Anne Houtman – Principal Adviser to the Director General – DG Energy – European Commission
10.15 – 10.30	Keynote speech: Stefano Besseghini – CEO RSE SpA
10.30 – 10.45	Coffee break
11.00 – 12.45	**Session 1: Communications as enablers of integrated services – smart cities**
	Expert voice: Paul Budde – Chairman Smart Grid Australia
	Round table discussion – Moderator – Ludwig Karg – CEO Baum Consult – Germany • Wolfgang Neldner – Neldnerconsult – Germany (project in Berlin) • Bram Sieben – ALLIANDER (City of Amsterdam) • Dr. Joshua D. Rhodes (Postdoctoral Researcher, Webber Energy Group/Energy Institute, University of Texas at Austin) • Ali Askar Sher Mohammad – Chief Operating Officer – SEDA - Malaysia • Reji Pillai – Chairman India Smart Grids Federation – India
12.45-13.45	Lunch break
13.45-15.30	**Session 2: Communications for smart grids: requirements, architectures, security and standards**
	Expert voice: Dr. Yoshiaki Ichikawa - Chairperson of ISO/TC268/SC1
	Round table discussion – Moderator – HELFRIED Brunner – AIT – ELECTRA - ISGAN • Flavio Cucchietti – Telecom Italia • Sebastian Lehnhoff - OFFIS – Germany/Carlo Tornelli RSE Italy • Poul Heegaard – NTNU – Norway • Kris Vandaele – Fifthplay – Belgium • Pedro Blanco - Head of Telecom Assets and Services – Iberdrola (Spain) • Sasha Sud - Senior Manager, Smart Grid and Energy Data - Canada
15.30-15.45	Speech from Min. Enrico Granara – Coordinator for multilateral activities in the Mediterranean area and the Gulf region - Directorate General Political Affairs and Safety – Ministry of Foreign Affairs
15.45-16.00	Coffee break
16.00-18.00	**Session 3: Communications for smart grids: Policy, Regulation, data privacy and Markets**
	Expert voice: Luca Lo Schiavo – Autorità per l'Energia Elettrica il Gas e il Sistema Idrico (AEEGSI) – The Italian National Energy Regulator
	Round table discussion – Moderator: Ronnie Belmans – Energyville - GSGF • Anne Houtman – Principal Adviser to the Director General – DG Energy – European Commission • Milad HAMIDZADEH – TUV – Project ENERGISE – Germany • Maher Chebbo – SAP – European Technology Platform • Paddy Turnbull – Chairman GSGF / Account Director GE Energy Ireland
18.00-18.15	Wrap up and closing messages for the day – Russel Conklin – DoE – ISGAN Vice Chair
18.15-20.15	Walking dinner through the posters and exhibition
20.30-22.00	Lyric and symphonic gala – music from Donizetti, Rossini e Verdi – Director: Lorenzo Passerini – Orchestra Antonio Vivaldi

Tuesday September 15			
08.30 – 09.00	Registration		
09.00-09.30	Introduction • Ronnie Belmans – EnergyVille – CEO GSGF • Luciano Martini – RSE - ELECTRA		
09.30 - 10.00	Keynote speech: Jerry O'Sullivan Deputy CEO of the ESB group		
10.00 – 10.30	Coffee break		
10.30 – 12.00	**Session 4: Communications for smart grids: Achievements in projects and specific applications – smart meters – Infrastructure – data handling – data analytics**		
	Round table discussion – Moderator: Karin Widegren – ISGAN Vice Chair • Martin Dunlea - ORACLE • Gianpiero Carocci - Vodafone • Nick Singh – ESKOM – South Africa • Ajoy Rajani, Senior Vice President, Reliance Infrastructure & Chair of ISGF Working Group on Communications – India		
12.00-13.30	**Session 5: Communications for smart grids: Achievements in projects and specific applications – Demand response**		
	Round table discussion – Moderator: Paddy Turnbull – Chairman Global Smart Grid Federation / Account Director GE Energy Ireland • Yoji Arikura – NEDO – Japan • Joachim Lindborg - "Intelligent energy" – Sweden • Luis Fischer – Eirgrid – project E3 – Ireland • Elena Yatsenko – Donskie Technologii - Rostov TechnoPark Project - Russia		
13.30-14.30	• Lunch break		
14.30-16.00	**Session 6: Communications for smart grids: Achievements in projects and specific applications – Network automation**		
	Round table discussion – Moderator: Michele de Nigris – ISGAN Chair – RSE - acting • Rémy Garaude Verdier – ERDF – Project GRID4EU • Daniele Stein – Enel Global Infrastructures and Networks – Italy • Dong Jin Geum – KEPCO – South Korea • Henrik Bindner – DTU – Denmark – ELECTRA • Xianzhang Lei - Europe Office of SGCC - China		
	• Wrap up and closing of the workshop – Michele de Nigris – ISGAN Chair		
16.00-16.15	Fairwell tea		
16.15-18.00	**Session 6: Parallel events related to specific smart grids initiatives**		
	SIRFN	ELECTRA	Eranet Smartgrids plus
18.00-20.00	Networking – walking through the posters and exhibition		

(*): invited and waiting for final acceptance

"Towards International Cooperation"
Joint Brazilian – ELECTRA
Smart Grids Workshop

November 11-12, 2015
Florianópolis, Brazil

Program

11th November 2015

(Wednesday)

08:00 – 08:30 Workshop Opening - Welcome Coffee

08:30 – 08:40 Welcome address (**Mauro Rosa**)

08:40 – 09:00 ELECTRA and EERA JP SG goals and approach (**Luciano Martini**)

09:00 - 10:30 **Session 1** - *Research Infrastructure and lab facilities: studies & testing*

ELECTRA Speaker: Luciano Martini (RSE) and Henrik Bindner (DTU) (60 min)

- The importance of smart grids research infrastructures in EU countries and the JRC Smart Grid Laboratory Inventory (15min)
- ELECTRA specific actions on international cooperation by ELECTRA (15min)
- ELECTRA researchers exchange scheme: REX call 3 dedicated to extra-EU countries (15min)
- The intelligent systems research infrastructure SYSLAB and examples of smart grid controller testing (15min)

BRASILIAN Speaker: Marcelo Lobo (UFSC – INEP) e Ricardo Ruther (UFSC - Fotovoltaica) (30 min)

- UFSC's research infrastructure
- UFSC's Solar Energy Research and Capacity Building Center
- Smartgrids related research in Brazil: relevance and future trends

10:30 – 10:45 Coffee break

10:45 – 12:00 **Session 2** - *Integration of intelligent components in power systems (new constituents and security procedures); SG ICT and Control Systems Interoperability - Security issues*

ELECTRA Speaker: Anna Mutule (IPE) (30 min)

- Integration of intelligent components in power system
- Phasor measurement unit application

BRASILIAN Speaker: Carlos Gouveia (IB - UFCG) e Marcelo Agostine (UFSC) (45 min)

- Measurement, supervision and control
- The experience with the project *TECCON* (Technology of Fiber Optic Sensors to Supervise, Control and Protect Electrical Energy Systems)
- The experience with the project *MedFasee BT* (Synchronized Phasor Measurement System)

12:00 – 14:00 Lunch break and networking

14:00 – 15:00 **Session 3** - *Power Electronics in the Grid*

ELECTRA Speaker: Rui Araújo (INESC Porto) (30 min)

The proliferation of power electronics in the grid as a main driver towards smart grids

BRASILIAN Speaker: Roberto Coelho (UFSC – INEP) and Telles Lazzarin (UFSC – INEP)(30 min)

- The quality of electrical energy
- The experience with the project *MICROGER* (Impacts of the Insertion of Micro Grids and

15:00 – 15:45 **Session 4** - *Impact of the Grids in the Current Protection Systems*

BRASILIAN Speaker: Flavio Lemos (UFRGS) and Leonardo Bremermann (UFSC – IB) (45 min)

- Framework of static analysis – simulation aspects and analysis
- The impacts of microgrids on the reliability of distribution systems

15:45 – 16:00 Coffe break

16:00 – 16:45 **Session 5** - *Smart Grids and Climate Changes - How can Smart Grids contribute to minimize the impact of external factors alterations associated to climate changes.*

ELECTRA Speaker: Nuno Fidalgo (INESC Porto) (45 min)

The use of smart grids as a strategy for climate change mitigation

16:45 – 18:00 Round table on the topics discussed during the day.

20:00 *Workshop Dinner*

ANNEX 3 - FLYER FOR REX CALL 2 AND WORKSHOP

ELECTRA PARTNERS

RSE · AIT · vito · ENEA · TNO innovation for life · tecnalia · LABORELEC · KAPE CRES · Fraunhofer IWES · INESCPORTO · cea · SINTEF · DERlab · OFFIS · Strathclyde Glasgow · MAM · DTU Technical University of Denmark · VTT

Contact informations

ELECTRA IRP website link
www.ElectraIRP.eu

Graeme Burt – graeme.burt@strath.ac.uk
Viviana Cigolotti – viviana.cigolotti@enea.it

European Commission

EERA Smart Grids Joint Programme

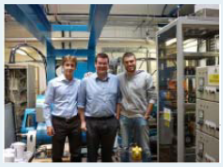
electra Turn On the Grid of the Future

European Liaison on Electricity Committed Towards long-term Research Activity Integrated

ELECTRA REX

A Researcher Exchange Programme for Smart Grids

Pre-announcing the second Call for Applications



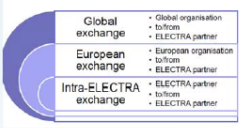
ELECTRA IRP

The ELECTRA Integrated Research Programme on Smart Grids brings together the partners of the EERA Joint Programme on Smart Grids (JP SG) to reinforce and accelerate Europe's medium to long term research cooperation in this area and to drive a closer integration of the research programmes of the participating organisations and of the related national programmes.

ELECTRA offers assistance to support transnational and international researcher exchanges to or from ELECTRA partners that will complement and enhance the collaborative research undertaken within the research programme and associated EERA Joint Programme. This enhancement will be seen in the work of the visiting researcher engaging with the host team and accelerating key smart grid concepts and solutions aligned with the objectives of the ELECTRA IRP.

ELECTRA REX PROGRAMME

ELECTRA's Researcher Exchange (REX) Programme offers the opportunity for ELECTRA partners and European or International collaborators to work closely together through an exchange of staff. The scheme is open to participants from research organisations and industry, including SMEs. A range of options are available:



Three types of ELECTRA REX exchanges

Host organisations are encouraged to offer elements of training, and so this represents an excellent development opportunity, especially for early career researchers.

ELECTRA REX supports:

- increased coordination across smart grid research programmes, complementing the work of EERA JP;
- personal development of early career researchers;
- enhanced impact from the laboratory demonstration within the ELECTRA IRP.

INTERESTED IN APPLYING?

REX Call 2 will be issued at the end of June 2015.
Click the Mobility Tab at www.electrairp.eu for more.

ELECTRA REX WORKSHOP

The programme offers the opportunity to the visiting researcher to embed themselves within the environment of the host institution throughout the duration of their exchange, conduct collaborative research in support of the JP and IRP objectives, and write up their results in joint publications.

REX Call 1 was published late 2014 and 6 proposals have been successfully approved.

REX call 1 researcher Alexander Prostejovsky (DTU) at PNDC, University of Strathclyde

The first ELECTRA REX Workshop on Smart Grid Researcher Exchanges will take place in Vienna at the EDST2015 symposium, 8-11 September. The main objectives of this dedicated workshop are to allow the participants in the first exchanges to:

- disseminate the results of their exchanges, their methods and experience;
- share their experience of exchange working in leading global smart grid organisations.

SAVE THE DATE—8-11 September 2015!!!!
For more information, www.electrairp.eu .


Pictures of the first ELECTRA REX dissemination workshop in Vienna

ANNEX 4 - EERA GENERAL ASSEMBLY AGENDA

General Assembly Programme
Morning Session

from	to	Content	Speakers/ Chairs	Objectives
8:30	9:00	**Registration**		
9:00	9:15	**Welcome and Introduction to the GA. Objectives of the day and Agenda approval**	**Angel Díaz** (Tecnalia) and **Luciano Martini** (RSE)	Reinforce the added value of EERA JP Smart Grids as a key element to achieve the EC goals, and to meet the R&D challenges for the Smart Grids industry in the coming years
9:15	9:30	**EERA Smart Grids JP Overview**	**Luciano Martini** (RSE)	
9:30	10:50	***Round Table 1:*** **"How EERA Smart Grids Joint Programme could contribute to EU Industry needs? The perspective from different stakeholders and the way forward"**	**Roberto Zangrandi**, EDSO4SG **Antonio Iliceto**, ENTSO-E WG R&D Convenor **Norberto Santiago**, ETP SmartGrids **Jacek Wankowicz**, EERA ExCo representative **Henrik Dam**, EC DG ENER **Patrick Van Hove**, EC DG RTD	
10:50	11:15	**Break**	*Opportunity to visit TECNALIA selected Labs:* ***Bidelek Sareak Smart Grids showroom***	
11:15	11:50	***Round Table 2:*** **"Strategy and perspectives of different EERA JPs"**	EERA Representatives: **Marta Serrano Garcia,** JP NM **Daniela Velte**, JP e3S **Isabelle Suedmeyer**, JP Storage **Helfried Brunner**, JP Smart Cities **Salvatore Amico Roxas**, EERA Secretariat	
11:50	12:45	**EERA SG JP Governance issues. Report on last year activities and key milestones for the next period. Questions from the General Assembly to the Steering Committee**	**Luciano Martini** (RSE)	Time dedicated to management and governance issues, to explain what has been done so far and what is foreseen for the next period. A wide slot of time has been reserved for questions from the JP members to the Coordinator/SC.
12:45	13:45	**Lunch break**	*Opportunity to visit TECNALIA selected Labs:* ***Microgrids testing platform and Electric Vehicle charging infrastructure***	

EERA JP on Smart Grids – 1st General Assembly (Oct. 6th 2015, Bilbao)

General Assembly Programme
Afternoon Session

from	to	Content	Speakers / Chairs	Objectives
13:45	14:30	**Technical panel 1:** **Increased network observability** - New observables, network data collection, smart metering for grid operation, PMUs at distribution level	*Chairs:* **Klaas Vischer** (TNO), **Andrei Morch** (SINTEF) *Speakers:* • **Michael Pertl**, DTU (DK) • **Abdullah Nadar**, TUBITAK (TU) • **Klaas Visscher**, TNO (NL)	The objective is to generate technical discussions on topics of interest for the Smart Grids. This slot takes around 3h, and the discussion topics are connected to the research activities that the EERA SG members are carrying on in ELECTRA. The discussion is organized around round tables and/or dedicated presentations.
14:30	15:15	**Technical panel 2: New System Operator roles and Control room of future network** - Web of Cells control architecture, TSO and DSO roles, cooperation between System Operators - Control Room of the future network (needs, requirements, new visualization strategies, data analytics tools, LV SCADA)	*Chair:* **Henrik Bindner** (DTU) *Speakers:*	
15:15	15:45	**Break**	*Opportunity to visit TECNALIA selected Labs:* ***THOR - High Power converters test facility***	
15:45	16:30	**Technical panel 3: Grid flexibility and Ancillary Services provision** - Exploitation of flexibilities, flexibility services descriptions, flexibility characterization, new frequency/voltage control schemes, etc. - Ancillary services drivers and prescribers: market design, regulation framework	*Chairs:* **Andrei Morch** (SINTEF), **Emilio Rodriguez** (TECNALIA) *Speakers:* • **Irina Oleinikova,** IPE (LV) • **Andrea Angioni,** E.ON Energy Research Center at RWTH Aachen University (DE) • **Andrei Z. Morch,** SINTEF (NO)	
16:30	17:15	**Technical panel 4: Advanced network simulations and power system testing** - PHIL, CHIL, co-simulation, use cases, testing requirements and methods, etc.	*Chair:* **Helfried Brunner** (AIT) *Speakers:* • **Ignasi Cairo,** IREC (ES) • **Graeme Burt,** University Strathclyde (UK)	
17:15	17:30	**Wrap up and conclusions**	**Luciano Martini** (RSE)	

EERA JP on Smart Grids – 1st General Assembly (Oct. 6th 2015, Bilbao)

ANNEX 5 – 2ND ELECTRA/WG1 ETP SMART GRID WORKSHOP

2nd ELECTRA / WG1 ETP Smart Grids Joint Technical Workshop: The Web of Cells and alternative Concepts

New Architectures for the Grid of the Future

CDMA Building, Room No. 1/SDR1
21 Rue du Champ de Mars, 1050 Brussels
10 December, 2015

Agenda 9:15 - 17:00	
9:15 - 9:40	*Registration and welcome coffee*
9:40 - 9:50	Welcome *Patrick van Hove, European Commission*
9:50 - 10:00	Introduction *Luciano Martini, RSE and Venizelos Efthymiou, FOSS*
10:00 - 10:15	The grid of 2035+: Why do we need new architectures? *Helfried Brunner (AIT, ELECTRA)*
10:15 - 10:45	The Web of Cells Concept *Chris Caerts (VITO, ELECTRA)*
10:45 - 11:30	Future plans and changes in the grid - Challenges put forward by3 EU projects: EvolvDSO - *Daan Six, VITO* Grid4EU - *Ilaria Losa, RSE* IDE4L - *Andrea Angioni, Aachen RWTH University*
11:30 - 12:00	*Coffee break*
12:00 - 13:00	Alternative Concepts: - Future Network Management Systems: A Centralised Approach *Luis (Nando) Ochoa, the University of Manchester, UK* - Network Control solutions based on an Edge Computing Architecture: Paving the way towards the Web of Cells *Eloy Gonzalez and Leonardo Benitez, INDRA* - FractalGrid: An innovative Project for future Smartgrid Architectures based on multiscale and fractal Modelling *Nicolas Retiere, INP Grenoble and Georges Kariniotakis, MINES ParisTech* - The multi-energy systems dimension in the Web of Cells concept *Pierluigi Mancarella, The University of Manchester*
13:00 - 14:00	*Networking lunch break*
14:00 - 14:15	Introduction to the Discussion *Goran Strbac, Imperial College London*
14:15 - 15:15	Discussion Part 1 *Moderators: Goran Strbac, Luciano Martini, Venizelos Efthymiou*
15:15 - 15:30	*Coffee break*
15:30 - 16:50	Discussion Part 2 *Moderators: Goran Strbac, Luciano Martini, Venizelos Efthymiou*
16:50 - 17:00	Closing remarks
17:00	*End of the workshop*