



## e-balance

### Exploitation activities

Editor:	Juan Jacobo Peralta (CEMOSA)
Dissemination level: (Confidentiality)	PU
Suggested readers:	European Commission, DSO, energy aggregators, city authorities, large energy producers, distributed energy producers, home automation industry
Version:	1.0
Total number of pages:	11
Keywords:	Energy Management System, Demand Response, Power System, Resilience, Smart-meter, Algorithms, Prediction, Business Models, End-users.

---

#### *Abstract*

This document aims at describing the project's exploitation activities carried out during the project to introduce the most promising e-balance's results into target markets: electric grid automation, new electric services for DSOs, aggregators and customers, distributed renewable energy resources, among others.

---

---

**Disclaimer**

---

This document contains material, which is the copyright of certain e-balance consortium parties, and may not be reproduced or copied without permission.

The information contained in this document is the proprietary confidential information of the e-balance consortium and may not be disclosed except in accordance with the consortium agreement.

The commercial use of any information contained in this document may require a license from the proprietor of that information.

Neither the e-balance consortium as a whole nor a certain party of the e-balance consortium warrant that the information contained in this document is capable of use, or that use of the information is free from risk, and accept no liability for loss or damage suffered by any person using this information.

The information, documentation and figures available in this deliverable are written by the e-balance partners under EC co-financing (project number: 609132) and does not necessarily reflect the view of the European Commission.

**Impressum**

[Full project title] Balancing energy production and consumption in energy efficient smart neighbourhoods

[Short project title] e-balance

[Number and title of work-package] WP7 Dissemination and Exploitation

[Document title] Exploitation Activities

[Editor: Name, company] Juan Jacobo Peralta, CEMOSA

[Work-package leader: Name, company] Noemi Jiménez Redondo, CEMOSA

**Copyright notice**

© 2017 Participants in project e-balance

## List of authors

Company	Author
IHP	Krzysztof Piotrowski Peter Langendörfer
INOV	Augusto Casaca J.P. Taveira Mario S. Nunes António Grilo Martijn Kuipers
EDP	João Almeida
UMA	Daniel Garrido Manuel Díaz Jaime Chen
CEMOSA	Juan Jacobo Peralta Noemi Jiménez Redondo Ana Navas Torrejón Raúl Serrano Reina
UTWE	Marjin Jongerden
ALLI	Marcel Geers
IPI	Jaroslawn Kowalski
LODZ	Bozena Matusiak Witold Bartkiewicz Grzegorz Podgórski Piotr Czerwonka Jerzy Zieliński
EFA	Alberto Bernardo Paulo Delfim Francisco Basadre

## Table of Contents

List of authors.....	3
Table of Contents .....	4
List of Tables.....	5
Abbreviations .....	6
1 Introduction.....	7
2 Exploitation Activities.....	8
2.1 Related activities during the project.....	8
2.2 Other exploitation actions non-related to dissemination events.....	10
References .....	11

---

# List of Tables

Table 1. Dissemination activities and other actions related to exploitable results ..... 8

## Abbreviations

DSO	Distribution System Operator
ICT	Information and Communication Technologies
IPR	Intellectual Property Rights
LVGMU	Low Voltage Grid Management Unit
R&D	Research and Development
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
SGAM	Smart Grid Architecture Model
TRL	Technology Readiness Level

# 1 Introduction

European research projects are encouraged to explore markets to exploit results and services generated through the collaboration and participation with other companies and academic institutions. During project development, generated foreground can achieve a significant technology readiness level (TRL) to reach markets or can just improve the state-of-the-art of certain technology or scientific field. In this process, conceptual results with low TRL like methodologies, prototypes, simulations requires exploitation plans mainly focused on progressing in the state-of-the-art by new projects, dissemination of the obtained results through scientific community to arise the general interest, demonstrate the solution in relevant environments, participation in conferences, among others. On the other hand, results with medium-high TRL that have been demonstrated in real environments require actions aimed to commercialisation and industrialisation. In any case, definition of an effective strategy to create an off-the-shelf product or service requires identifying customer needs, existing technologies, socio-economic frameworks and regulations to assess the exploitation potential thereof.

From the beginning of the project, the e-balance partners have provided their know-how and background in different areas to fulfil the technological, social and business development goals. The background description allows detecting and describing the connection between the progress in the state-of-the-art and the contribution of every partner in project outcomes. In this way, the exploitation roles (leaders or contributors) for each partner can be formally described for next steps beyond the project, both individually and in associations, in order to avoid potential conflicts regarding IPR protection.

During the project, every partner and working groups of e-balance have obtained specific outcomes related to energy balancing, communication, security systems, automation systems, sensing, social analysis and business models. These results belong mainly to partners that have led the development, implementation or integration of project's solutions, whilst others have just contributed to the successful finalisation of corresponding activities. Therefore, the foreground description allows detecting the leaders and contributors of project's foreground in order to define later which results are suitable to be exploited and which partners should lead or support the market introduction of them. In addition, all the results are related to certain demonstrator (Bronsbergen or Batalha) and use cases, what constitutes the first attempt to detect the main target market, in this case end-users or grid operators for Bronsbergen or Batalha respectively.

This document is the public release of the exploitation plan of e-balance and thus the description of results (foreground) and market strategies adopted are strictly confidential and they are not included thereof. For further information, visit the website <http://ebalance-project.eu/> or contact with the project coordinator (IHP).

## 2 Exploitation Activities

### 2.1 Related activities during the project

During the project, the e-balance consortium has carried out the following dissemination activities and actions to promote the exploitable results in workshops and industrial exhibitions (see Table 1). Other dissemination activities like scientific publications and participation in conferences are described in [1].

Table 1. Dissemination activities and other actions related to exploitable results

Event (Date)	Partners	Results
18th Science Picnic of Polish Radio and the Copernicus Science Centre (Science Fair) (May 2014)	 NATIONAL INFORMATION PROCESSING INSTITUTE	Exhibition of e-balance technologies and concepts in the Annual Scientific Fair of Warsaw.
Advanced 3rd SAB Workshop (Sep 2014)	 NATIONAL INFORMATION PROCESSING INSTITUTE With the support of EDP	EDP received an invitation from FP7 Advanced project to participate within their workshop focussing social studies. EDP participated as WP2 leader and OPI as task 2.5 leader.
Workshop on Smart Electric Energy (Jan 2015)		Presentation of "Energy Efficiency - Expectations, Perspectives and Prospective". A brief presentation of the e-balance project was made, highlighting the goals for energy efficiency.
InovGrid Suppliers - Opportunities for the National Industry (March 2015)		Presentation of Smart Grid concepts within the framework of R&D pilot projects by EFA. A brief presentation of the e-balance project was made, highlighting the common approach as regards to INOVGRID.
ENERGEIA Workshop - Dispersed Renewable Generation: Challenges, Current Developments and Technology Trends (March 2015)		Presentation of the e-balance project by EFA. A brief presentation of the e-balance project was made, highlighting the goals for a better accommodation of PV microgeneration.
CIRED 2015 - 23rd International Conference and Exhibition on Electricity Distribution		Efacec has disseminated the e-balance, namely by presenting the G-Smart product, highlighting the new embedded features for the Batalha demonstrator under the LVGMU concept and within the e-balance architecture.
Sustainable Energy Week (Jun 2015)	 Ingeniería y Control	Participation with BESOS, NobelGrid, Growsmarter and URBGrade projects (European FP7 and H2020 projects). Roundtable debate about business models and cost-effectiveness of solutions proposed.

Event (Date)	Partners	Results
Sustainable Places (Sep 2015)	 With support of IHP and LODZ	Presentation of e-balance business models in collaboration with the following European projects: CityOpt, iURBAN, AMBASSADOR, OPTIMUS, R4SC, INDICATE and BESOS. Sharing of different approaches regarding market actors, social and business dimension. <b>Most of projects are aligned with the business models proposed by e-balance.</b> Current regulations and the configuration of current electric market were pointed out as the main barrier. <b>Identification of strengths and weaknesses to address future market implementation.</b>
CIVIS project workshop (Sep 2016)	 With the support of CEMOSA	Presentation of e-balance results, sharing experiences with other European projects: CoSSMic, ElectriCITY, Empower, Energaware, Flexiciency, GrowSmarter.
CoSSMic workshop (Oct 2016)		Presentation of e-balance results, sharing experiences with other European projects: CIVIC, NOBELGRID, FLEXMETER, SUCCESS.
Smart City World Expo (Nov 2016)	 With the support of CEMOSA	3-days congress. Booth shared with other European Projects under the ECTP. More than 30 visits during the first day from Latin-America, Europe and Asia.  Demonstration of G-smart, poster presentation and flyers distribution.  Output: companies, research centres and regional governments interested in the replication potential.
DAREED workshop (Nov 2016)		Presentation of e-balance results, especially the <b>two common exploitation results</b> (energy balancing services and energy resilience services). Interested companies in future exploitation and integration of the results: ENDESA (Spanish DSO) and ISOTROL (Spanish enterprise from the ICT sector), among others. Other result: increasing network with other research projects and companies involved.
Rynek Energii Journal, SEED international conferences in Krakow, EEM international conferences among others. (2014-2017)	  University of <b>LODZ</b>	Several conference papers during the project and beyond prepared.
CIRED 2017 – 24th International Conference and Exhibition on Electricity Distribution		Efacec has disseminated the e-balance, namely by presenting the self-healing (FDIR) and energy efficiency features (OPF/VOS), highlighting the new embedded features for the Batalha demonstrator under the TLGMU and MVGMU concepts, within the e-balance architecture.

## 2.2 Other exploitation actions non-related to dissemination events

### LODZ:

- Contact with Żywiecki energy cluster and Mazowsze energy cluster has been done. Both companies are interested in the results of e-balance project, especially know how and demo site results. Results of social studies and possibility of implementing developed business model are under consideration by both companies. If the results of project are satisfying, both companies are ready to declare close cooperation in preparation a new project proposal for further testing and enhancing developed solutions in polish conditions.
- Cooperation with business and local DSO (PGE SA, ASM- Market Research and Analysis Centre etc.)

### INOV:

- Protection of result: “Dynamic control method of power injected into the power grid by distributed generators” Patent no. PCT2015000040.

## References

- [1] A. N. Torrejón, “Deliverable 7.2 - Dissemination Activities,” e-balance project (European Union’s Seventh Framework Programme - grant agreement no. 609132), Málaga (Spain), 2017.