

**H2020-ECSEL-2015-2-IA-two-stage**  
**GA N°692482**

**EnSO**

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**Work Package 7**  
**Deliverable 7.5**

**Video and other dissemination material for project presentation**

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Martijn Springer - HENKEL

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Coordinator: Franck Dosseul – STMicroelectronics Tours - franck.dosseul@st.com

Participants:



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## Abbreviations

ENF	European Nanoelectronics Forum

## Document history

Date	Revision	Remarks
01.12.2016	0.1	Table of contents available, submitted to review team
31.12.2016	1.0	First draft available for transfer to review team
22.02.2017	1.1	Update, Implementation of final comments from review team
23.02.2017	2.0	Formal approval by the review team and by the project coordinator. For submission to the H2020 portal

## Review team

Name	Partner
Ramon Jane	GNF
Martijn Springer	HENKEL

## Coordinator's approval

Date	Name – STMicroelectronics Tours
Franck Dosseul	STMICRO



# 1 Introduction

This document describes the project's Dissemination materials to be proposed by the consortium. It may be revised annually in order to include new materials proposed by the members of the consortium.

## 2 Reminder of communication and dissemination target audience

As described in D7.2, the communication and dissemination activities will target the following types of audience with specific objectives.

### 2.1.1 Targeted audience within the project's own community

#### 2.1.1.1.1 Communication to EnSO partners

The audience within the project's own community is composed of (Industrial) engineers and (academic) researchers (permanent staff as well as participants recruited thanks to EnSO, e.g. researchers, postdocs, PhD students, students in internship, ...).

Communication to EnSO partners will aim at:

- Reinforce the interactions between partners and generate new collaborations within the consortium;
- Provide the information that partners can disseminate to their own networks, for instance to promote EnSO results (Demonstration Kits, publications, ...).

#### 2.1.1.1.2 Communication with ECSEL JU

This communication will be done through the own events of ECSEL JU, for instance the annual European Nanoelectronics Forum (ENF). ENF2016 (Roma, Italy, Nov. 23-24, 2016) was co-organised by AENEAS, CATRENE, ECSEL, the European Commission and PENTA. With a history that dates back to 2001, the annual ENF has forged a place in the agendas of everyone with interest in its domain from all sized businesses (Large, medium and small), to policy makers to researchers. The specific theme of ENF2016 was "Innovation along the Value Chain", which is perfectly in the scope of EnSO.

### 2.1.2 Targeted audience beyond the project's own community

The audience beyond the project's own community is composed of: research managers, company representatives, scientists... and all the scientific and industrial communities linked to the topics of this multi-disciplinary project, assembly and users. Also, EnSO results will be disseminated through scientific committees of EnSO partners. These scientific committees are composed of experts, policy makers, and industrial representatives.

Communication beyond the project's own community will aim at:

- creating synergies with policy makers to define and implement strategy mainly in European underdeveloped regions (RIS3, Cohesion policy);
- involving relevant industrial representatives to annual workshops or seminars to collect key information about macro-trends. Those industrial companies will be added to the associated stakeholder to exploit EnSO results. In order to stay competitive in Europe, SMEs must take every opportunity to use key enabling technologies.



- supporting SMEs with information and opportunities, which in the normal course of events they would have little or no time to address. The partnership provides significant support to these SMEs in delivering up to date information regarding emerging technologies and applications through the road mapping activities;

in turn, benefiting from these SMEs who will provide their vision of technologies, markets, new directives (implementation of EU RoHS and REACH directives), standardization, etc.

## 3 Communication Materials

### 3.1 Existing Communication Material

During the first year of the project, the consortium proposed the following communication materials:

#### 3.1.1 EnSO presentations

They consists in slides of presentation to be included to oral communications of EnSO partners. Three versions are prepared:

- a one-slide version;
- a short version (5 slides)
- and a long version (30 slides).

Last two with two degrees of description, so that partners can choose the most appropriate one depending on the type of event.

They are available on project public web site (<http://www.enso-ecsel.eu/dissemination-open-access/>) and on the internal communication platform ([www.myndsphere.com](http://www.myndsphere.com)).

**EnSO "Energy for Smart Objects"**  
(ECSEL H2020 project, 2016-2020)

EnSO "Energy for Smart Objects" project is focusing on an essential generic need within IoT, providing **Autonomous Micro Energy Sources (AMES)** :

Sensor → Data processing → Data transmit

Thermolectric  
Photovoltaic  
Motion & Piezoelectric

AMES : Autonomous Micro Energy Source

Energy Harvesting → Smart Wireless Charging → Power conditioner → Energy Storage

**Main EnSO's objectives :**

- Demonstrate the **competitiveness** and **manufacturing readiness** of EnSO energy solutions (AMES) in Europe.
- Develop and demonstrate high capacity (> 20mA.h) and high density (> 300Wh/l), low profile, shapeable, long time, rechargeable **micro battery product family** supported by efficient and reliable **energy harvesters** as well as easy **charging**
- Disseminate and **standardize EnSO energy solutions** with easy to use demonstration kits **for a large number of use cases**

More info at <http://www.enso-ecsel.eu/>

EnSO has been accepted for funding within the Electronic Components and Systems For European Leadership Joint Undertaking in collaboration with the European Union's H2020 Framework Programme (H2020/2014-2020) and National Authorities, under grant agreement n° 692482

Figure 1 : EnSO 1-slide presentation

Figure 2 : EnSO 5-slides (short) presentation





Figure 3 : EnSO 30-slides (main) presentation

### 3.1.2 EnSO poster & leaflet

A poster (to be used as well in ECSEL report) was prepared in collaboration with ECSEL communication department for the European Nanoelectronics Forum - ENF2016 (Roma, Italy, Nov. 23-24, 2016). It is available on the project public web site (<http://www.enso-ecsel.eu/dissemination-open-access/>) and on the internal communication platform ([www.myndsphere.com](http://www.myndsphere.com)).

# EnSO

Energy for Smart Objects

**Objectives**  
EnSO will set up a unique European ecosystem in the field of high-performance autonomous miniature energy-harvesting power sources that will enable developing new innovative microelectronic systems for IoT market in Europe.

The scope of project encompasses energy solutions for powering "smart" objects in Smart Society, Smart Health and Smart Energy key applications. EnSO will develop high reliability assembly technologies of reusable and customizable micro batteries, energy harvester and power management building blocks, and set up a competitive high volume production. The project will demonstrate the competitiveness of EnSO energy solutions for powering the autonomous Smart Objects.

EnSO Project will disseminate EnSO energy solutions with easy to use demonstration kits, and support autonomous smart objects prototyping in a large number of use cases, to foster the take-up of emerging markets.

**Relevance and Impact**  
As an ECSEL Innovation Action, EnSO's work addresses the market replication, demonstration and technological introduction activities. EnSO ecosystem will involve all of the value chain - from key materials and tools to many demonstrators in different fields of application.

EnSO will bring innovative energy solutions to market, including definitive differentiation for electronic smart systems based on customizable, generic building block technologies. EnSO innovations, in terms of advanced materials, advanced equipment and multi-physical co-design of heterogeneous smart systems, will contribute to the Semiconductor Process, Equipment and Materials thrust.

EnSO project combines the advanced industrial capabilities of 6 pilot lines & advanced technological platforms with competences in state-of-the-art microbattery, energy harvesting solutions and assembly & packaging solutions.

**Technical Innovation**  
In order to demonstrate the competitiveness of EnSO energy solutions for powering the autonomous Smart Objects, EnSO will:

- develop high reliability assembly technologies of reusable micro batteries, energy harvester and power conditioning building blocks for Autonomous Micro Energy Sources (AMES)
- develop and demonstrate very high capacity (> 30 mAh) and very high density (> 300Wh/l), low profile, reusable, long life time, rechargeable micro battery product family (multiple voltages, low internal resistance, short circuit tolerant, high temperature assembly)
- develop customizable smart recharge and energy harvesting enabling technologies for AMES.

EnSO will then demonstrate and evaluate the AMES design and manufacturing capability based on generic key enabling building blocks

<b>Spain</b> ENSO-ELECTRONICS TOURS SAS CONSORCIO A INNOVACION ET AX ENERGIA ALTERNATIVA SOLAR DE LIVIA MALA ENERGIA UNIVERSITAT FRANCISCA SARRASIN TEIXEIRA UNIVERSITAT DE LISBONA ALFARIS	<b>Belgium</b> ON RESEARCH <b>Belgium</b> STICHTING MATERIAALS NV MATERIAAL UNIVERSITEIT DE LISB <b>China Republic</b> STICHTING SCIENTIFIC DESIGN AND APPLICATIONS CENTRE FOR NANOELECTRONIC TECHNOLOGY FRANCE <b>Austria</b> PROJEKTENTWICKLUNG FÜR FORSCHUNG DER ANGENOMMENEN TECHNOLOGIE <b>Hungary</b> APPLIED MATERIALS LTD AND LTD ANALOG SERVICE AND JENSEN BAKKI OPUS TECHNOLOGIES GmbH VON ARSINOE GmbH	<b>Spain</b> ENSO TECHNOLOGIES SL SOLIMATERIALS SL ASOCIACION LEGAL CONEXION SUPERIOR DE SERVICIOS ELECTRONICOS SANTIAGO <b>Israel</b> BAP SCHNEIDER AG
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www.enso-ecsel.eu  
Start  
1-1-2016  
Duration  
48  
Total Investment  
6M €  
Participating organisations  
30  
Number of countries  
6

Figure 4 : EnSO poster prepared for ENF2016



### 3.1.3 Audio-visual material

Beginning 2017, video presenting ST pilot lines will be published on the website:

- Thin film microbattery - ST TOURS

For others, such as (planned to date)

- Heterogeneous assembly & packaging - NORDSON
- Printed substrate - MEYER BURGER

this will be discussed during the first quarter 2017.

Such videos will be accessible and made available through a website page (<http://www.enso-ecsel.eu/dissemination-open-access/videos/>) after an email contact, in order to moderate the access and use.

Other videos provided by the Consortium will be published as well providing that they grant authorisation.

## 3.2 Planned Communication Material

### 3.2.1 Press releases

A press release will be prepared after each period review and assessment of project progress. It will be communicated through the website, Cordis and partners channels.

### 3.2.2 e-newsletter

E-Newsletter will be prepared on a quarterly basis, starting from Year 2. The aim of the **newsletter** will be to present:

- Technology achievements and project outcomes: demos, milestones, participation to conferences, interviews of EnSO partners,...
- News on the worldwide technologies in the scope of EnSO.

### 3.2.3 Project Audio-visual material

The consortium expects to prepare a short video, outlining the concept of the EnSO project, the expected benefits from its implementation and achievements of the project. It will be prepared during second half of the project.

### 3.2.4 Use-cases/Demonstrators Audio-visual Material

As a result of implementation and validation of 15 use cases and demonstrators planned in WP6 it is proposed to generate specific communication material in order to support presentation and discussion of results to different audience both within and outside our Community. Some kind of simple or more elaborated audio-visual material of each use-case will become a basic tool for dissemination and exploitation activities associated to WP6 and these materials are foreseen for second half of the project.



### 3.2.5 AMES demonstration kits

The consortium will develop demonstration kits during year 2 and year 3, they will be presented by EnSO partners in events.

Demonstration kits for marketing: different demonstration kits will be manufactured on year 3, with different energy harvesting technologies. These kits will be available to the general public, who will have to order it on EnSO website (short term) or via electronic component distributors (for instance: <https://www.adafruit.com/> or <http://www.digikey.com/> ). Some partners may also distribute some demonstration kits to their own networks.

An application module, based on AMES subsystems models, will be developed on year 4 and will be available online on EnSO website, allowing people to explore the AMES and to estimate the energy harvested in particular conditions.

### 3.2.6 Poster

A poster presenting AMES technologies and performances will be prepared and updated in parallel with the evolution of the demonstration kits.

### 3.2.7 Social media

Social media will be developed and implemented from Project Year 2. The project will use Researchgate, LinkedIn, Twitter, and Youtube as additional distribution channels of the project results. The project will set up its own social media on LinkedIn where it will make use of existing discussion groups dedicated to IoT. Smart society, etc

## 4 Next steps

This deliverable will be updated on an annual basis to take into account the production of new materials.

