

DELIVERABLE

Project Acronym: Symbiotic

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D1.5 - Dissemination Plan

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This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1. Executive Summary

During its duration the Symbiotic project will perform a number of dissemination actions, such as participation in events, press releases, etc. The present document aims to detail the road map for the dissemination effort the consortium has developed to guide their work during the duration of the project.

The deliverable was structured in successive sections as to follow a logic path, from a generic presentation of the project, to the final conclusions. The deliverable sections are thus organized in such a way that each section supports the next:

- Project Objectives: what the dissemination effort aims to accomplish;
- Target audiences: who are the intended receivers and their relevance to the project;
- Methods and tools: how the dissemination will be accomplished;
- Timing: estimated dates for the several efforts;
- Potential Risks: what factors might jeopardize the dissemination efforts, and counter strategies.

This document was conceived during the first year of the project's life based on careful analysis of the original contract's proposed tasks and schedule, further detailing it via discussion on realistic approaches to execute each of them.

2. Objectives

2.1 Project Objectives

The aim of the Symbiotic project is to develop an autonomous electrochemical biosensor that is lightweight, disposable and low cost, by using an innovative approach: hosting its bioreceptor element inside a passive direct methanol fuel cell (DMFC). This will allow to build an electrically independent, very simple, miniaturized, autonomous electrical biosensor. This work proposes a merge between electrical biosensors and fuel cells, combining the advantages of both areas of research in a single synergetic device.

In this envisaged innovative device, the electrical signal obtained from the DMFC is directly related to the concentration of the cancer biomarker in the sample analysed. The proposed electrochemical biosensor will be completely autonomous when using a DC powered user-friendly signalling interface.

2.2 Project Consortium

Six organisations are involved in the execution of the project, one of which (INOVA+) sub-contracted:

Num.	Short Name	Country	Long Name
1	ISEP	PT	INSTITUTO SUPERIOR DE ENGENHARIA DO PORTO
2	Imperial	UK	IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE
3	UNINOVA	PT	UNINOVA - INSTITUTO DE DESENVOLVIMENTO DE NOVAS TECNOLOGIAS
4	VTT	FI	Teknologian tutkimuskeskus VTT Oy
5	AU	DK	AARHUS UNIVERSITET
-	INOVA+	PT	Inovamais - Servicos de Consultadoria em Inovaco Tecnologica S.A.

Table 1– List of organisations that are part of the Symbiotic consortium

All partners in the consortium are involved in the dissemination effort, as part of the overall work package 1 work. INOVA+ was subcontracted to directly support and complement this effort, working in close relationship with the consortium partners.

2.3 Dissemination Objectives

Work Package 1 (WP1), led by ISEP, is responsible for building awareness to the project and its results, as well as to prepare its post-EC funded exploitation phase. The dissemination work has the following specific objectives:

- Create awareness: make the project known to industry and academia across Europe, through participation in conferences and workshops, and contacts with associates/clients;

- Disseminate project results: make the project results known in order to prepare their future exploitation;
- Feedback collection: obtaining responses from dissemination audiences in order to improve the project's work, and improve the future exploitation plan.

As part of the WP1's expected dissemination results, the Symbiotic dissemination work effort will produce during the project lifetime the following deliverables:

Num.	Title	Lead Partner	Delivery Date	
			Project Time	Calendar Time
D1.1	Website	ISEP	2	Jul 2015
D1.2	Project communication	ISEP	3	Aug 2015
D1.6	First White paper	ISEP	15	Aug 2016
D1.8	Section in a congress	ISEP	24	May 2017
D1.9	Dissemination report	ISEP	36	May 2018
D1.11	Dissemination Package	ISEP	3	Aug 2015
D1.13	Second White paper	ISEP	30	Nov 2017

Table 2 – List of dissemination-related deliverables from WP1

3. Target Audiences

The dissemination strategy considers the following primary target audiences:

- Scientific community: research centres, universities, and any other organisations dedicated to R&D in the health sector that could have an interest in the technology being developed;
- SMEs/large companies: companies of all sizes that could have an interest in the technology as systems deployers, business partners, or end users;
- Venture capitalists: entrepreneurs that could be interested in investing in the health monitoring area, and in the Symbiotic technology.
- Public sector: public sector organisations such as Health Ministries that could have an interest in supporting the deployment of new self-monitoring technologies for social, economic, or technological reasons.

In addition to the above the consortium also considers a number of secondary target audiences. These are audiences which will not be specifically targeted, but which could nevertheless be exposed to the project as a result of other dissemination activities (e.g. the project Web site, a paper publication, participation in one event, etc.). In this case the consortium will respond to their interest in an individual basis, and, should it be considered there is potential for the involvement of other similar organisations, adapt the dissemination plan to also target them. Secondary targets include:

- Organisations outside the health sector: entities which are not part of the primary targets of the dissemination work, but that nevertheless could have an interest in the results of the project.
- General public: all individuals, related or not to the core target audiences that show an interest will be given information on the project work. While they are not considered to be potential partners or end users, it is believed that the raising of awareness to the self-monitoring area in general and the Symbiotic solution in particular will provide positive coverage and word-of-mouth activity that might raise interest in other parties.

4. Dissemination Methods and Tools

4.1 Introduction

There are a wide variety of dissemination methods and tools envisaged to be mobilized and used by all project partners: project Web site, contact networks, participation in conferences and relevant events, press releases and publications in media, etc. While these are the planned activities, the consortium will try to take advantage of any other dissemination opportunities that might arise during the project's duration.

Experience has shown that dissemination plans involving several different activities (such as in this case) will often have uneven results, with some activities being more successful than others. As such the consortium will also adopt a flexible position in order to change and adapt the plan should the feedback prove it necessary.

The table below gives a quick summary on the relationship between the target groups and the dissemination methods and tools.

Dissemination activity	Target Groups	Means and Tools
Local dissemination of project results	<ul style="list-style-type: none"> - Private or public organisations - General public 	<ul style="list-style-type: none"> - Personal contact - Meetings - Press releases - Web site
Dissemination of general applicability world wide	<ul style="list-style-type: none"> - Public sector service - Companies (system integrators, end users) - Venture capitalists, 	<ul style="list-style-type: none"> - Printed materials - Personal contact - Web site
Dissemination of commercial potentials	<ul style="list-style-type: none"> - Companies (system integrators, end users) - Venture capitalists, - Public sector service organizers 	<ul style="list-style-type: none"> - Distribution network of partners - Newsletters - Personal contact - Meetings
Dissemination of the scientific results	<ul style="list-style-type: none"> - Scientific community - Companies interested in the developed products 	<ul style="list-style-type: none"> - Scientific papers - Event participation - Patents

Table 3 – Relationship between targets and means of dissemination

4.2 Project Web Site

The project's website (deliverable D1.1), which is located at symbiotic-project.eu, was designed by ISEP and INOVA+ in the second month of the project.

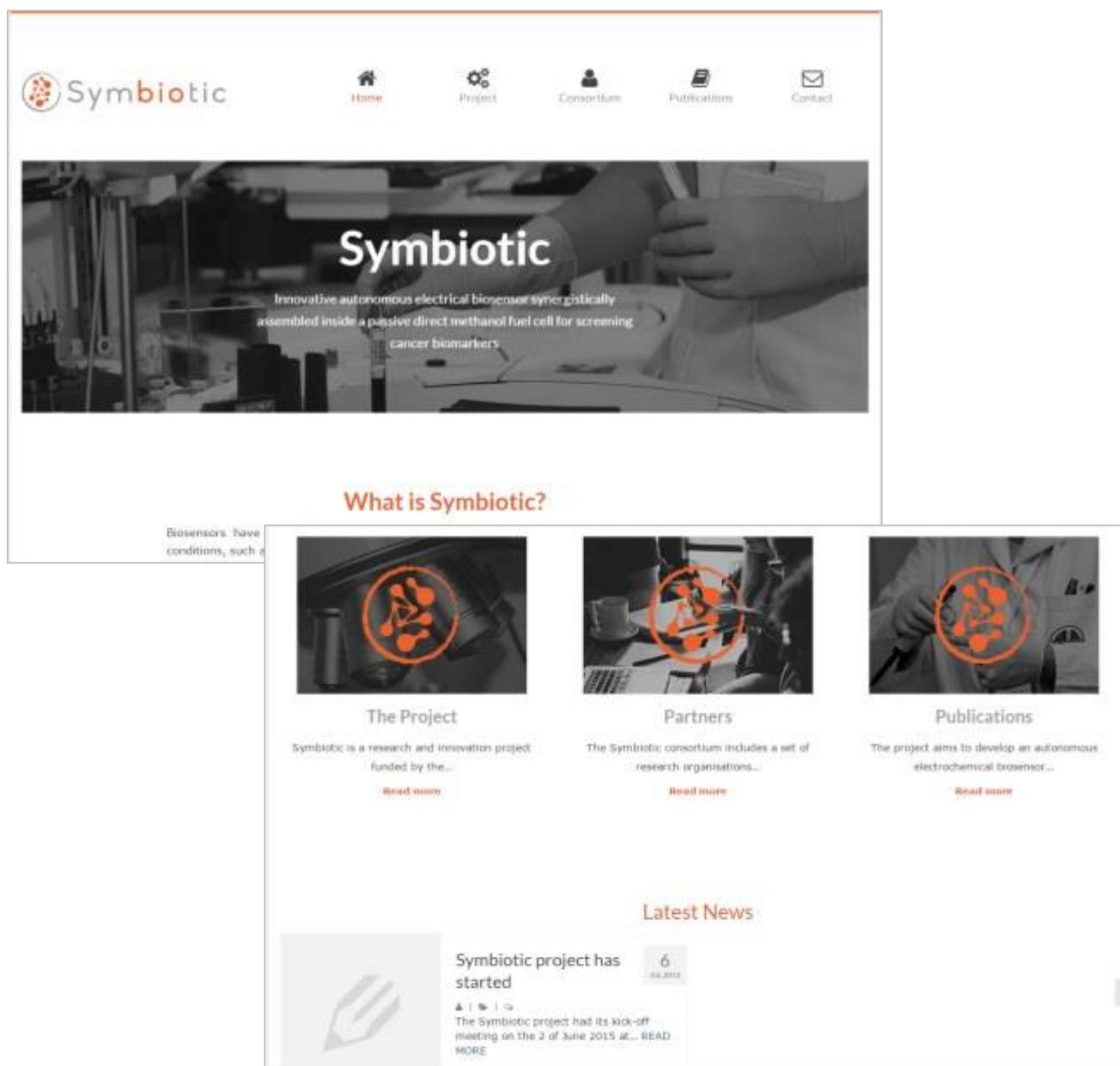


Figure 1 – Website main page

The final website includes several features with the intent to help disseminate the Symbiotic project as much as possible, and it will be maintained and updated regularly by INOVA+, with the support of the consortium partners. Features include:

- **News:** this is the same type of news reports that already exists in many websites, with relevant developments, both in the project or related to it, being listed in the front page ordered by date. News content include title, date and description;

- Description/fact sheets: a description of the project. This content will be continually maintained to include updates and correction of mistakes on the basis of new project developments, input from the users, the Commission, the monitoring performed by the partners, or any new information deemed relevant;
- Partners/Contacts: quick description of the consortium partners;
- Dissemination Materials: PowerPoint presentation, Leaflets, and other promotion material will be made available for download for any interested parties;
- Restricted Area: part of the Web Site that requires a login to access, used by the project partners for project management. All of the project's deliverables, partner contacts, work plan, contract, and other restricted information is available there for the consortium.

4.3 Client/Associate Contacts

Most of the consortium partners have long worked on the health and fuel cell R&D areas, and have a large number of associate organisations and clients that have an interest on them. These networks of contacts are a prime resource for dissemination which the Symbiotic will use to build awareness and collect feedback.

To this end each partner will identify from its overall list of contacts the ones they judge to be either potentially interested in the technologies the project is developing, or that might help in the dissemination effort by using their own networks of contacts. Once the relevant target organisations and individuals are identified they will be contacted, and based on the received feedback as well as their knowledge of the contacts' interests, the consortium will decide how to best communicate with them (e.g. a contacted research organisation that expresses an interest in the technology could then be involved in the future technical exploitation of the project results; a company could expresses interest could be involved in the commercial exploitation, etc.).

4.4 Participation in Events and Conference

Over the run of the project the consortium partners will participate in many events of various types such as conferences, workshops, etc., in the health monitoring and fuel cell areas. Whenever possible the partners will use this as an opportunity to raise awareness for Symbiotic, by talking to participants, distributing leaflets, and collecting contacts and feedback that might prove of interest for the preparation of the exploitation plan, and the post-EC funded phase of the project.

In addition to the above, at the middle of the project an international congress will be selected for holding a section dedicated to the project. Possible congresses are the EFCF, and the ICCMR biannual event.

4.5 Publications in Media and Patents

Most of the partners are organisations that are involved in R&D activities and regularly publish papers on scientific journals. Over the run of the project several partners have planned to publish papers that involve the results obtained in it, with the full acknowledgement of Symbiotic (and the EC). These publications thus provide an important source of dissemination as they expose the project to both the scientific community, and the organisations/projects that work on the full cell area.

The Intellectual Property developed in the project will be patented. This serves as a dissemination means as well, particularly among the scientific community and large companies which have a direct interest in new developments in the health and fuel cell fields.

4.6 Other

The consortium will create and regularly update a leaflet / brochure on the Symbiotic project, which can then be given by the consortium partners at events, to interested parties, to contacts, etc.

Another possibility under consideration is the advertisement of the project on web sites from other projects or organisations in relevant sectors. This and other potential dissemination channels will depend on opportunity based on contacts with other projects and entities that show an interest in Symbiotic.

Another consideration is the creation of a newsletter. This is based on the perceived interest from the entities and individuals contacted during the dissemination activities (particularly event participation and personal contacts). Should there be a sufficiently large audience the consortium will create a periodic newsletter detailing the latest developments in the project and the overall full cell and energy sectors.

As mentioned the consortium will try to take advantage of any unexpected opportunities that might arise during the project. These might include dissemination channels which at the present are not considered, or use in new ways of those that are.

5. Timing

Timing is an important variable in the Dissemination Strategy plan in terms of its impact on the purpose and key messages of the dissemination activities. For example, actions taken in the extremes of the project's life might not have the required effect; too soon and there's not enough results, too late and potential interest from organisations will not come in time to help shape the final business plan.

The timings of several of the dissemination initiatives are fixed in some way outside the control of the consortium, e.g.:

- Participation in events is dependent on their dates;
- Unexpected dissemination opportunities (e.g. contacts by interested parties).

For the remainder activities the consortium will plan the timings depending on such considerations as the current state of the project or the approaching of some relevant milestone.

The planned dissemination actions per partner are as follows:

ISEP

Action	Topic	Expected Month
Presentation	Presentation of the project to the Science and Higher Education Minister	Feb 2016
Presentation	Presentation of the project to a representative of The Jenner Institute, Oxford University	Mar 2016
Presentation, Press Release	Presentation in a TV channel (Porto Canal), plus press releases, of the project and its intended results	May 2016
Event Participation	Presence at the Biosensors 2016 conference, Gothenburg, Sweden	May 2016
Event Participation	Presence at the Graduate Student Symposium on Molecular Imprinting 2017, Porto, Portugal	Mar 2017
Event Participation	Presence at the EFCF2017, Lucerne, Switzerland	Jul 2017
Event Participation	Presence at the 10th International Conference on Molecular Imprinting, 2018	2018
Scientific paper	Publication of at least 4 scientific papers resulting from research done during the project lifetime	-
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-

IMPERIAL

Action	Topic	Expected Month
Event Participation	Presence at various conferences related to the areas covered by the Symbiotic project	-
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-

UNINOVA

Action	Topic	Expected Month
Event participation	Presence at the 3rd Austrian Biomarker Symposium, Austria	Mar 2016
Event participation	Presence at the Biosensors 2016 conference, Gothenburg, Sweden	May 2016
Event participation	Presence at the E-MRS Fall Meeting 2016, Poland	Sep 2016
Event participation	Presence at the SBPMat Brasil 2016, Brasil	Sep 2016
Event participation	Presence at the E-MRS Spring Meeting 2017, France	May 2017
Event participation	Presence at the E-MRS Fall Meeting 2017, Poland	Sep 2017
Event participation	Presence at the Biosensors 2018 conference, USA	May 2018
Scientific paper	Publication of at least 4 scientific papers resulting from research done during the project lifetime	-
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-

VTT

Action	Topic	Expected Month
Event participation	Presence at the Printing for Fabrication 2016 conference, Manchester, UK	Sep 2016
Scientific paper	Bachelor thesis by Vesa Koiramäki, to the Metropolia University of Applied Sciences Bio and Food technology, Finland	2016
Event participation	Presence at the ECS meeting by Electrochemical society, Washington DC, USA	May 2017
Scientific paper	Scientific peer-reviewed open access paper published at the Journal of Power Sources / Journal of Electrochemical Society / Biosensors and bioelectronics	2018
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-

AU

Action	Topic	Expected Month
Event Participation	Presence at various conferences related to the areas covered by the Symbiotic project	-
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-

INOVA+

Action	Topic	Expected Month
Event participation	Presence at the Researcher's Night initiative, Portugal	Sep 2016
Event participation	Presence at the International technology conference Web summit, Lisbon	Nov 2016
Event participation	Presence at the International Business Technology Conference & Exhibition event CEBIT 2017, Hannover	Mar 2017
Event participation	Presence at the Researcher's Night initiative, Portugal	Sep 2017
Event participation	Presence at the International Business Technology Conference & Exhibition event CEBIT 2017, Hannover	Mar 2018
Presentation	Presentation of the project to relevant business associates and clients according to opportunity	-
Web-site	Publication on news and scientific articles as generated by the project	-

6. Potential Risks and Counter Methods

As with any work there are a number of risks involved in the dissemination effort. The consortium has identified a number of such risks, and methods to counter them:

- **Risk:** the ways organisations in different countries are used to be made aware of information varies widely (e.g. in one country companies are accustomed to consult printed media, while in another digital sources are preferred), thus creating the risk of the Symbiotic project failing to make itself known to part of its potential audience.

Counter Strategy: the dissemination strategy is designed to use a large variety of informational channels: modern dissemination tools such as project website and e-mailing services and more conventional approaches like publications, participations in events, and personal visits. Thus entities in different countries are offered access to varied formats of tailor-structured information provided by the experienced project teams (technical knowledge and communication skills) of the partnering organisations in the Symbiotic consortium.

- **Risk:** the dissemination strategy fails to fully communicate all relevant information to the target audiences that show an interest in the project.

Counter Strategy: the dissemination strategy plans opportunities for person-to-person contacts with entities through participation in events, and use of the vast network of contacts from the consortium partners for personal communication, as well as by virtual communication through the project web site.

- **Risk:** resistance to change / unwillingness to take advantage of the opportunities offered by the new technology.

Counter Strategy: having the willingness to try new technologies or the capacity to see fresh opportunities is a difficult, often resource-consuming process that requires persistence and commitment. In an increasingly innovation-driven economy it will be very difficult for entities to escape the need to take advantage of new developments or risk falling behind. This "inevitability" angle will be explored in the dissemination efforts to overcome the potential scepticism of the contacted entities, as most of them will probably see the great advantages offered by improved monitoring devices.

- **Risk:** entities prefer a competing technological solution.

Counter Strategy: there are two main factors that influence the choice of a technology by an organisation: cost and performance. In the former case the Symbiotic work clearly focuses on developing a solution that is affordable and can be mass-produced at low cost. In the latter case the technology will offer a self-monitoring tool that is mobile and very easy to use, which should make it compare favourably with rival solutions.