



COMMUNICATION STRATEGY

Project Title:

Solar-Biomass Reversible energy system for covering a large share of energy needs in buildings

Project Acronym:

SolBio-Rev

Work Package 9

Deliverable 9.1

“Communication Strategy and Plan”

Responsible for Deliverable:

DBC Europe S.A. (DBC)

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Contents

Contents	2
1 Introduction.....	3
2 Communication Strategy.....	4
2.1 Communication Objectives	4
2.2 Selected Target Groups	5
2.3 Communication Instruments and activities	5
2.3.1 Project Logo.....	5
2.3.2 Project external website.....	6
2.3.3 Project Leaflets and poster.....	9
2.3.4 Conceptual videos	11
2.3.5 Events and workshops.....	11
3 Communication channels	13
3.1 Online Communication channels	13
3.2 Offline Communication channels	14
4 Communication Roadmap.....	15
5 Expected Impact of the Communication Activities	17

1 Introduction

This deliverable describes the communication activities that will be carried out during the SolBio-Rev H2020 project by the SolBio-Rev consortium and outlines the actions that will be undertaken in order to make the project results available for the widest possible audience.

The SolBio-Rev project results will be communicated by the consortium, mainly via publication of papers in international journals and via participation at conferences. Every project partner will attend related exhibitions, workshops and conferences to widely present the project results and to promote solutions to potential customers. The communication plan will be updated as necessary during the project.

The communication strategy and plan for the SolBio-Rev project is detailed in this plan together with the anticipated project outcomes and its anticipated effects. The Plan defines the communication tools to be developed and used towards a successful dissemination of the Project and its results. The Project Grant Agreement (GA), through the Description of Action (DoA), contained the draft of this plan as part of the measures to maximise the impact of the Project. The Plan describes the dissemination goals, target audience and appropriate channels to provide regular flow of information.

The project team considers that a high level of awareness is one of the key conditions for successful exploitation of project results in the medium and long term. The main goal behind all communication activities is therefore to raise this awareness among the scientific community, potential end-user groups and stakeholders as well as the general public by providing information on the project as a whole and its scientific and technical outcomes in particular.

The communication strategy and plan is regarded as a management tool that enables the project team to properly plan and implement all required communication activities in order to achieve the identified main objectives and also to measure the level of success and potential impact on the most important target groups.

The Communication Plan is a living document subject to regular review and update, thus ensuring a detailed view of the plan of activities at all stages of the project. This approach will also allow for regular adjustments to the plan according to the measured level of impact at a given time of the project and in order to further increase the efficiency and effectiveness of ongoing communication activities.

2 Communication Strategy

The communication is based on an outcome-oriented approach and it is a key element to reach impacts. At the macro-level, the strategy is influenced by the three goals of EU research and innovation policy defined in 2016:

- (1) Open Innovation,
- (2) Open Science, and
- (3) Open to the world,

and outlined by tasks which in a simplified manner are:

- (i) to **plan** strategic communication activities,
- (ii) to **conduct** workshops and conferences that link SolBio-Rev to a much broader scientific and building sector stakeholder audience, and
- (iii) to **leverage** the unique capacities of the partners to achieve maximum possible dissemination to the relevant audiences.

Communication processes (newsletters, dissemination contacts) and high-quality baseline materials (e.g. website, logo, web-videos) will be underlying and constant throughout the project. A workshop series is scheduled for **targeting various stakeholder groups**. Maximum possible benefit will be sought from the industrial and pilot system development activities, which will be promoted for media coverage, with coverage of partner facilities, prototyping, and innovations to be sought afterwards. **Communication multipliers** in the form of **platforms** will be used to maximise outreach.

The methods and routes for communication of the SolBio-Rev project include:

- The internal communication of the results between partners will be made by circulating technical documents and memoranda that will be treated as confidential, in case they include any commercially sensitive information.
- Communication to the Commission will be carried out by frequent reports by the Coordinator.
- General communication to a variety of stakeholders (e.g. final users, society, industry, and academia) will be made through project leaflets, project website, workshops, and videos production.

2.1 Communication Objectives

The communication objectives can be summarized as follows:

- to create awareness with respect to the SolBio-Rev project and its outcomes;
- to open up channels for dissemination and for exchanging technical information and results with the industrial and scientific community;
- to implement communication activities targeted to different stakeholders and potential users of SolBio-Rev in the future (authorities, security forces, security companies etc.);
- consequently, and in the scope of WP9 as a whole, to support the preparation of commercial exploitation (market research, business models, etc.);

- to actively promote the results of the project to the European Commission and to foster relationships with other projects and initiatives at European and national level.

2.2 Selected Target Groups

The targeted groups for communication of the project results are:

- Local authorities & EU/national/regional public bodies.
- Policy makers at energy efficiency and environmental related departments of local/national/EU agencies.
- Building Technical Systems companies (also including SMEs, large manufacturers, and contractors).
- Energy efficiency associations (e.g. BPIE, Ecofys, Kiwa, EHI, EHPA), innovation platforms (e.g. RHC).
- End users, owners and building managers/operators.
- Technology providers and installers and their professional associations and portals (e.g. BUILD-UP).
- Practitioners, building systems manufacturers: Architects, HVAC professionals, and professional associations.
- Academia, researchers and students in areas of sustainable development, energy, building energy systems.
- Energy services companies and related professionals.

2.3 Communication Instruments and activities

A number of activities will be undertaken by the project partners to guarantee that the project results are properly disseminated:

2.3.1 Project Logo

The logo will be used in all official communication regarding the SolBio-Rev project. It is easily recognizable, represents the project theme and will be included in all internal and external communications. The logo has already been developed since Month 1 and is presented in figure 1:



Figure 1: Project logo

2.3.2 Project external website

This is the official public website of the project. It will contain promotional information for the community such as public documents generated by the project as well as up to date information on the activities organized by the project.

The project website has already been developed on Month 2 by NTUA and regularly updated to report the latest research activities and major findings. All partners will be granted access to update information and the latest developments related to their work. The website, as a communication tool, will allow broad access to the public. The number of website visits is expected to exceed 10,000 over the project duration. The website address is <http://www.solbiorev.eu/>.

In the following figures (2, 3 & 4), we present a short overview of the main website pages.



Figure 2: Website front page

Work packages

[HOME](#)
[WORK PACKAGES](#)
[PUBLICATIONS](#)
[PARTICIPANTS](#)
[GALLERY](#)
[CONTACT](#)



Solar-Biomass Reversible energy system for covering a large share of energy needs in buildings

Renewable energy system integrated at the building scale

Work Package Title	Lead beneficiary
WP1 Project coordination and management	NTUA
WP2 Innovative SoBio-Rev components and configuration	ITAE
WP3 Simulation and smart control	NTUA
WP4 Prototypes design, production and commissioning	Daikin
WP5 System testing and technology validation	FAU
WP6 Social acceptance, potential for uptake and engagement	UOS
WP7 LCA, economic analysis and building integration	UDL
WP8 Dissemination and exploitation of results	DBC
WP9 Communication activities	DBC

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This project has received funding from the European Union's [Horizon 2020](#) research and innovation programme under grant agreement No 814945

GALLERY

[Kick Off Meeting](#)

[Home](#)
[Project concept](#)
[Abbreviations](#)

Figure 3: Website Work packages summary page

Gallery

[HOME](#)
[WORK PACKAGES](#)
[PUBLICATIONS](#)
[PARTICIPANTS](#)
[GALLERY](#)
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Solar-Biomass Reversible energy system for covering a large share of energy needs in buildings

Renewable energy system integrated at the building scale

Photo Album	Sample preview	Number of images
Kick Off Meeting		12

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Figure 4: Website Photo gallery

2.3.3 Project Leaflets and poster

Two project (4-page) leaflets will be produced by DBC. One was produced in Month 3 and the other will be produced in Month 30, and distributed in the planned events and to the public. About 5,000 leaflets are estimated to be distributed during the project. The already produced first project leaflet is presented in figures 5 & 6.

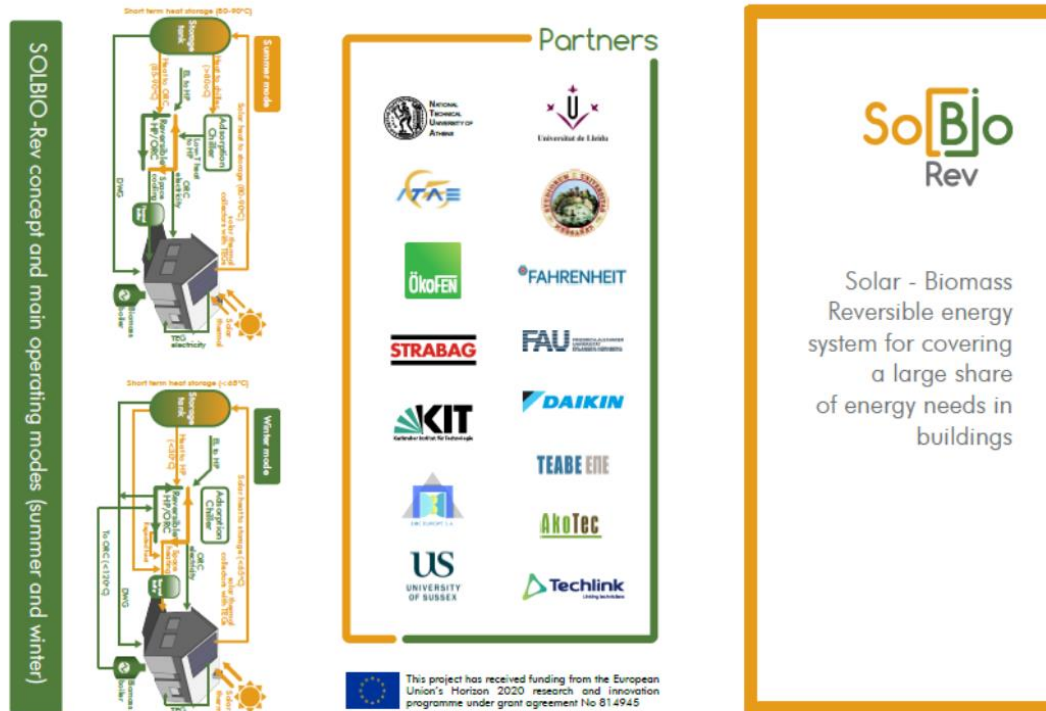


Figure 5: Project leaflet – phase A

Objectives

The core objective of the SolBio-Rev project is to combine promising renewable energy technologies based on solar, ambient and bioenergy, having at the core an innovative heat pump-based configuration and to allow the efficient application of this solution, without any geographical restriction at least in the EU.

The overall objective of the proposed SolBio-Rev system is to cover a very high energy share in a variety of buildings in a cost-effective manner, and at the same time secure the needs of the users.

Impact

The very high energy share of the SolBio-Rev solution results to a reduction of the dependence on fossil fuels by up to 70%, thus aiding on EU energy security of supply, for: (1) heating with gas commonly used in EU, with boiler efficiency of 90%, (2) cooling with standard electrical chillers or air-conditioners (powered by grid electricity generated from fossil fuels), with an average COP of 2.5, and (3) electricity needs from gas-fired power plants, with a typical thermal efficiency of 40%, including transmission and conversion losses.

The technologies developed will have extended lifetime expectancy of at least 20 up to 40 years. Moreover, SolBio-Rev's materials and components will be selected to maximise their (re-)useability or recyclability, contributing to the circular economy. Reducing air pollutant emissions: SolBio-Rev solution reduces air pollutants emitted for heating (e.g. from gas/oil boilers) and for electricity production (e.g. from power plants), including cooling production.

The use of the SolBio-Rev system in EU buildings of various sizes and types could lead to the reduction of primary energy consumption of the whole building sector (including single-family houses) by 40% (compared to the current energy consumption of 430 Mtoe/year) and 15% of CO₂ emissions.

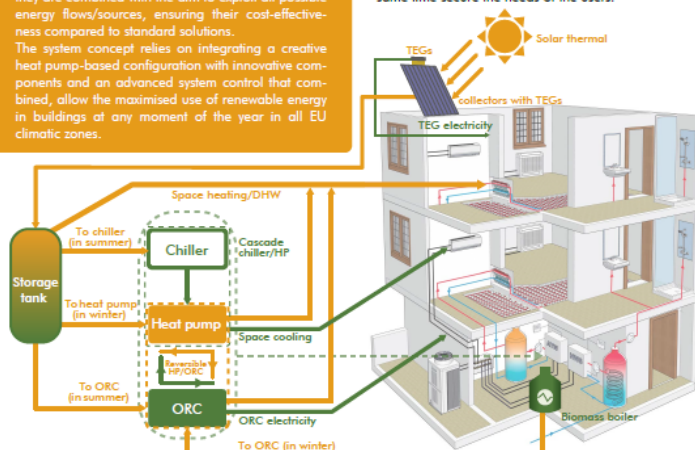


Figure 6: Project leaflet – phase B

Moreover, a project poster has already been produced to increase visibility of the project during project meetings, events and workshops. The Project poster is presented in figure 7 below:

Solar - Biomass Reversible energy system for covering a large share of energy needs in buildings

SoBio - Rev Project Concept

The SoBio-Rev project concept is to develop a configuration based on renewables that allows covering all heating and cooling demand and a variable electricity demand from sun up to even 100% in a cost-effective manner. This configuration is based on solar ambient and biomass, while it is suitable to be installed in various building types and sites without any geographical restriction. The main technologies included have already proven their performance and they are combined with the aim to exploit all possible energy flows/nodes, ensuring their cost-effectiveness compared to standard solutions.

The system concept aims at integrating a creative heat-pump-based configuration with innovative components and an advanced system control that combined, allow the maximised use of renewable energy in buildings of any moment of the year in all EU climatic zones.

Objectives

The core objective of the SoBio-Rev project is to combine promising renewable energy technologies based on solar, ambient and biomass, having at the core an innovative heat-pump-based configuration and to allow the efficient application of the solution, without any geographical restriction or limit in the EU.

The overall objective of the proposed SoBio-Rev project is to cover a very high energy share in a variety of buildings in a cost-effective way, either in the same time across the needs of the users.

Impact

The very high energy share of the SoBio-Rev solution results in a reduction of the dependence on fossil fuels by up to 70%, thus making an EU energy security of supply. It will heating with gas commonly used in EU, with fuel efficiency of 90%, CO₂ loading with standard electrical charges or air-conditioning powered by grid electricity generated from fossil fuels, with an average COP of 2.5, and 0% additional costs. The system can also produce hot water for space heating, with an average COP of 2.5, and 0% additional costs. The technologies developed have extensive field experience of at least 30 years in Europe. Moreover, SoBio-Rev's materials and components will be selected to ensure their availability or recyclability contributing to the circular economy. Reducing air pollutant emissions: SoBio-Rev solution reduces air pollutants emitted for heating as well as from district heating and for electric power generation.

The use of solar energy helps in reducing the carbon footprint and the resulting global warming.

The use of biomass in EU buildings of various sizes and types could lead to the reduction of primary energy consumption of the whole building stock (including single-family houses) by 40% (compared to the current energy consumption of 430 Mtoe/year) and 12% of CO₂ emissions.

Partners

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 816111.

EneC
Flanders Research Institute for Energy and Environment
FORTUM
US Energy Research Center
STRAAG
KIT
FAU
BENTON & BOWLES
TEAM EE



Figure 7: Project poster

2.3.4 Conceptual videos

Two conceptual videos will be developed by month 6 and 42 respectively, illustrating the concepts, activities and testing facilities, developed by the consortium partners. These will be uploaded in the project website and advertised in known portals, press publications, social networks, YouTube, Twitter, LinkedIn, and other social media.

2.3.5 Events and workshops

Three workshops will be organised during the project to engage different stakeholder groups, as follows:

1. A research and innovation workshop for the EU building research community and innovative companies, exhibiting the pilot building with the installed prototype SolBio-Rev system at FAU with anticipated participants number of 100-150. Month: 36-39, location: Germany, organised by FAU.
2. An industry workshop for the building industry stakeholder to showcase the operating prototype system at NTUA, with anticipated participants number of 80-100. Month: 40-43, location: Greece, organised jointly by NTUA and DAIKIN.
3. A policy-related workshop for future renewable energy systems in buildings within the EU SustainableEnergy Week (EUSEW) in Brussels. The processed results of the surveys in WP6 will be also presented in this event. During the last year of the project, location: Belgium, organised jointly by DBC and UOS.

Events. The Consortium members will present the project results in at least 15 international conferences, industry fairs and congresses, focussing on energy efficiency in buildings, renewable energy systems, and heating/cooling systems for buildings. The tentative list of the most attractive events in which consortium partners will participate is: World Building Sustainable Forum, EnerSTOCK, The Sustainable Building Conference, Eco-Build Conference, International Conference on Sustainable Construction and Design, EUSEW, ISES World Conference. Finally, the pilot systems at NTUA and FAU will attract visibility, and presented to various stakeholders (e.g. researchers, technology providers, building associations, end-users) during open information days, organised in parallel to other events.

The project has already participated in the 5th International Seminar on ORC power Systems, with NTUA hosting and DBC participating in the Seminar activities. The project gained high visibility through the stand in the „European Corner“, with more than 100 attendees and participants receiving information about the project objectives.

We present below (figure 8) photos from the 5th ORC seminar held in Athens between 9 and 11 September 2019.



Figure 8: Participation in 5th International Seminar on ORC power Systems

3 Communication channels

Considering how large of a place digitalization has taken in recent years, it would be difficult to ignore social networks when communicating. The evolving uses and practices of advertisement have completely undermined traditional communication.

Before the advent of the Internet, the buying experience was linear and the information was given strictly in a vertical fashion: companies and brands would announce a new product, consumers would see it in a store, and would then decide on whether or not to buy it.

Today, it is no longer possible to reach target audiences in the same way. They express themselves, consult and compare opinions, place and remove products from their shopping cart, and take their time. In order to be effective in reaching the project prospects, it is necessary to have smarter communication strategies.

There are two communication channels at our disposal: online and offline communication, and we present below the main channels that are going to be used to meet the project communication objectives.

3.1 Online Communication channels

Online communication tools are the main channels for SolBio-Rev dissemination: not only do they represent the best way to reach a wide audience at European and international level at limited costs, but they also enable a more dynamic form of communication, in which the target groups can receive information under various formats and also have the possibility to interact with the project and among themselves.

The main Online Communication channels that are going to be used for the project purposes are as following:

1. Website
2. Twitter
3. LinkedIn
4. Other social media when necessary
5. Newsletters sent by email

The selection of the above channels was made taking into account the following:

- Target audiences include mostly academic and business organisations, so the use of twitter and linkedin as „more professional“ tools was more suitable.
- The above online communication tools can be combined with other external or offline tools, increasing the project awareness and its objectives.
- The communication manual and HORIZON 2020 communication instructions favor the use of the above online communication channels for all H2020 projects

Social Media

The SolBio-Rev project will use various social media to disseminate its results and outputs, and in general to share experience and participate in conversations about the project's issues. So far the project has set up active accounts in the most used professional social media:

- Twitter and
- LinkedIn

Other social media used by the project will be either YouTube and Vimeo in case there will be videos to be published and distributed. The use of Facebook will be also evaluated and discussed. Finally, researchers involved in the SolBio-Rev project will use some online channels that are specifically for scientific community and academic networks, such as Research Gate and Academia.eu. On these social media the project will advertise the scientific papers and outputs produced for SolBio-Rev by the researchers.

3.2 Offline Communication channels

This process of making the results and deliverables of a project available to the stakeholders and to the wider audience is the main objective of all dissemination efforts. Offline dissemination has the added advantage of being a physical, tangible entity that occupies space. Sometimes it can be brought along and distributed, other times it simply imposes on the audience. But it represents a channel that is hard to overview and that engages by addressing several of the senses simultaneously. This opens for a more visual engaging way of raising awareness about the project, its aims, activities and results.

It is advantageous to follow certain rules when offline material – regardless of what strategies that is to be implemented; well prepared headlines, use colours wisely, focus on the benefits – and keep the tone and the message aligned to the intended target audience.

There are a number of media outlets that can be used for offline dissemination. These can be divided in the following very general categories;

1. FLYER, BROCHURE, BOOKLET. Professional flyers, brochures and any other custom printing.
2. POSTER, EVENT STAND. Communication materials to highlight SolBio-Rev at events, conferences and workshops.
3. WORD, POWERPOINT TEMPLATE. Project templates to facilitate the work of partners and improve consistency and impact.
4. COPYWRITING. Press releases, presentations and other content writing services

Project public deliverables

A major expression of external dissemination is the production of deliverables. Over the entire project duration, the SolBio-Rev consortium will produce a wide range of official and public deliverables. All of them will be made available on the project website resources area in order to spread the project excellence and disseminate knowledge as widely as possible.

Action Plan:

1. Project deliverables are drafted using the Word template designed at the beginning of the project. This is available on ownCloud – the SolBio-Rev projects password protected fileservers.
2. A list of key deliverables to be reviewed by the Advisory Board before final submission to the EC will be drafted

3. The final compressed PDF version of public deliverables is uploaded on the project website in the public access section, or on the restricted page, depending on the dissemination level of the deliverable.

Project publications

The SolBio-Rev consortium commits to release tailored publications showcasing project outputs, in open access peer-reviewed journals or specialised magazines. Some of these will be tailored for specific events, most notably meetings in standardisation bodies. Other publications will be prepared each time the project has key findings to disseminate. In addition, project partners will possibly contribute to eJournals, blogs and newsletters targeting a larger public with shorter articles and news, as well as to policy oriented publications to enhance project outreach to policymakers. Those publications will be based on the results of the activities, including but not limited to development guides, study reports, recommendations, lessons learned, and event outcomes.

4 Communication Roadmap

In the following page (table 1) we present a draft timetable of Communication activities throughout the project duration.

Table 1: draft timetable of Communication activities throughout the project duration

	<u>Tool/Activity</u>	1st semester	2nd semester	3rd semester	4th semester	5th semester	6th semester	7th semester	8th semester
1	Decisions on the overall Strategy, Planning and specific Activities	x							
2	Project logo and website	xx							
3	Preparation of promotional Materials (depending on the project needs)	x	x	x	x	x	x	x	x
4	Social Media pages creation and update	x	x	x	x	x	x	x	x
5	Workshops	x						x	x
6	International conferences	x	xx	xx	xx	xx	xx	xx	xx
7	Conceptual videos		x				x		x
8	Scientific publications	x	xx	xx	xx	xx	x	xx	xx

5 Expected Impact of the Communication Activities

Through SolBio-Rev's focus on "Energy share of more than 70%" in a variety of EU buildings, the project expects to influence and stimulate the scientific and technological collaboration between academia and business community in the field of renewable energy systems. Important topics within standardization work and smart cities deployment will be among the areas.

Another important goal of SolBio-Rev is to turn European renewable energy systems research and researchers more relevant and competitive. Bringing European technology and values onto a worldwide marketplace will open for many new opportunities. Promoting and integration of widely accepted guidelines and standards will receive special attention in order to achieve a better energy share in buildings.

Creating knowledge and material that later on will be included in papers and official documents and be open and influence renewable energy systems development and public decisions is yet another goal. Information and results from dissemination activities will be gathered and analysed in order to identify strengths and weaknesses in the communication.

Goals have been defined, and KPIs will represent data the success rate can be measured against and alternative be used to adjust the dissemination or communication strategies. A list of indicators that will be used as basis contains these elements:

Table 2: List of communication KPIs

Indicator	Goal
Website	- Number of visits to the website per year - Number of visit to the website per month - Percentage of only 1 visit - Percentage of monthly new visits - Average time of visits - Top 5 keywords - Top 5 web pages visited - Gender ratio (male/female)
Printed publications and materials	- Number of journal, conference publications - Events with posters from SolBio-Rev - Number of leaflets disseminated
Participation in workshops, events, conferences, fairs and congresses	- Contributions external events by May 2023 (month 48) - Workshops to engage different target groups
Media	- Conceptual videos
Social media	- Twitter tweets - Twitter retweets - LinkedIn followers - LinkedIn posts

