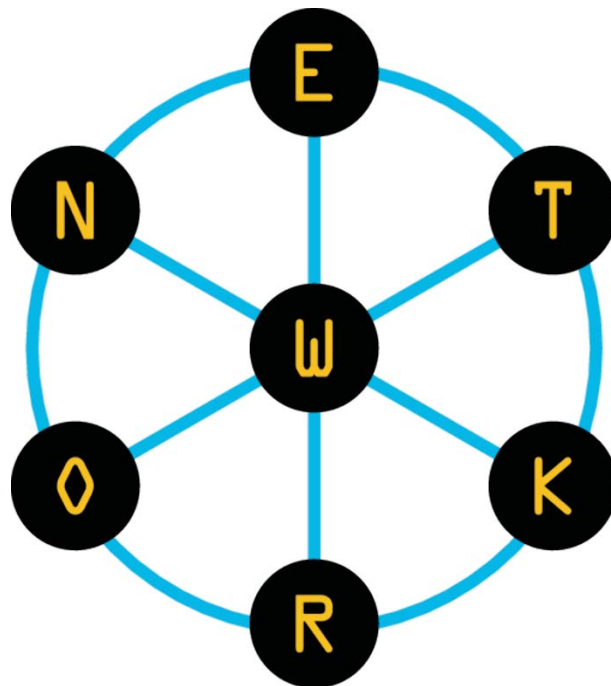


COST Action CA16235
**“Performance and Reliability of Photovoltaic
Systems: Evaluations of Large-Scale Monitoring
Data (Pearl PV)”**

Communication Plan



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1. Introduction

This document describes the dissemination and communication plan for the Cost Action “Pearl PV”, including the different tools, channels and means of communication that will be implemented throughout the project duration. The plan also describes the target groups of the dissemination strategy and it outlines the key dates related to planned actions and events. It contains the main strategic and operative guide that shall govern the overall project dissemination and communication activities. These guidelines will help to ensure that relevant information is shared with appropriate audiences on a timely basis by the most effective means. The dissemination activities will be continuously monitored during the project. The main objective of the communication activities is to raise awareness about the project activities and disseminate information in a consistent and coherent manner about its results and maximize its impacts.

2. Project description

The aim of Pearl PV is to improve the energy performance and reliability of photovoltaic (PV) solar energy systems in Europe leading to lower costs of electricity produced by PV systems by a higher energy yield, a longer life time eventually beyond the guaranteed 20 years as specified by manufacturers, and a reduction in the perceived risk in investments in PV projects. This objective will be achieved by analyzing data of the actual monitored long-term performance, defects and failures in PV systems installed all over Europe to quantitatively determine the absolute influences of components rated performance, key design of systems, installation, operation, maintenance practice, geographic location and weather factors on the performance, performance degradation over time and failure modes of these PV systems.

3. Project implementation

The project is carried out by a high-quality network of different actors from twenty-three (23) different countries in Europe, led by the Cost Action Chair Prof Angele REINDERS of the University of Twente in the Netherlands.

4. Scope of work and objectives

This document describes a general communication strategy and specific activities dedicated to communication of the Cost Action Pearl PV. The Communication Plan aims to address activities and communications that will:

- Inform and engage the relevant stakeholders in Europe;
- Raise awareness around the project and its communication activities, objectives and impact;

The content of this activity involves all the relevant tasks that will allow the accomplishment of the highest level of dissemination and diffusion of the project objectives, actions and results. This activity will run for the whole duration of the Action i.e. 05/10/2017 until 04/10/2021.

The specific activities proposed are:

- ✓ Communication with the stakeholders and dissemination of the project results.
- ✓ Continuous update of the Action's website.
- ✓ Development and distribution of informative material (newsletters, flyer, poster etc.).
 - Publication in national and international scientific and technical journals and conference proceedings.
 - Social media utilisation.
 - Organisation and participation in workshops, conferences & other events.

The objectives of the dissemination and communication plan are to:

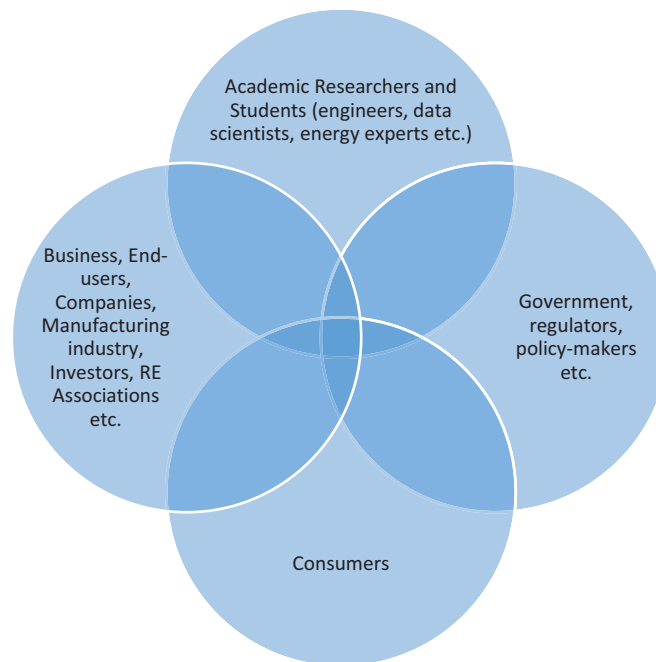
- Identify the target groups, communication tools and distribution channels for the project dissemination and communication activities.
- Create an identity to the project through graphically coherent material.
- Plan how to share the knowledge gained in the project, i.e. to which target groups each activity and results are relevant, as well as the adequate channels to address these.
- Define the period for dissemination and communication activities and the responsible partner for the implementation.
- Interact with a wide audience through the internet, promotional materials and events

The Science Communication Manager (SCM) will be in charge of developing, maintaining and managing the Communication Strategy of Pearl PV. Key responsibilities of the SCM are to:

- ✓ Plan and coordinate the implementation of communication activities at project level.
- ✓ Set the tone for internal and external communications.
- ✓ Maintain records of communication activities.
- ✓ Be the central point of contact with the Cost Association for communication activities only.
- ✓ Provide information to interested partners and other stakeholders in a convenient format.

5. Targeted audience

The main stakeholders of the Pearl PV project are as follows:



The communication activities will target the audiences above with the main purpose of giving support to the dissemination activities by:

- Raising the level of awareness about the importance of PV system performance and reliability.
- Engaging the stakeholders during conferences, workshops and other targeted events.
- Promoting the interest on innovation and competitive PV systems, and environmental sustainability.
- Sharing the results and outcome of the project.

6. Project visual identity

University of Twente will design the project logo that will be used together with the Cost logo. All dissemination materials will be prepared in line with the visual identity of the Action to enable effective “branding” of the project. The design of the project website will also represent the project identity. The logos will appear on all public documents, publications etc. in order to increase visibility of the Action. Partners are going to be provided with some working tools that will be used and adopted along the project’s implementation such as:

- ✓ Template for PowerPoint presentations
- ✓ Template for word documents
- ✓ Template for posters
- ✓ Business cards

7. Communication Strategy

The present document is designed to support the overall and specific communication and visibility objectives of the project. Specifically, it is aimed at detailing the structure and the goals of the two main levels of the project communication strategy:

- Internal communication
- External communication

The strategy sets up approaches and tools in order to keep the stakeholders regularly informed and to ensure the visibility of the project. On visibility, the strategy contains the requirements to be undertaken by all implementing members of the Cost Action, and suggests activities that may be incorporated to build a strong communication and visibility plan. Communication objectives are the following:

- ✓ Ensure effective communication between groups;
- ✓ Ensure timely notices for requirements/meetings;
- ✓ Ensure optimum results for all communications and project expectations;
- ✓ Measure the results of the communication strategy execution and revise accordingly;
- ✓ In order to maximize the impact of communication efforts:
 - Activities need to be timely;
 - Information used must be accurate;
 - Messages should interest the target audience(s);
 - Activities should be appropriate in terms of resources (human and financial);
- ✓ Effective communication is critical to the successful implementation of the project, in order to ensure that the project results are disseminated to the widest possible audience;
- ✓ Communication activities will be implemented in partnership relations with other relevant/similar programmes or initiatives.

8. Communication Plan

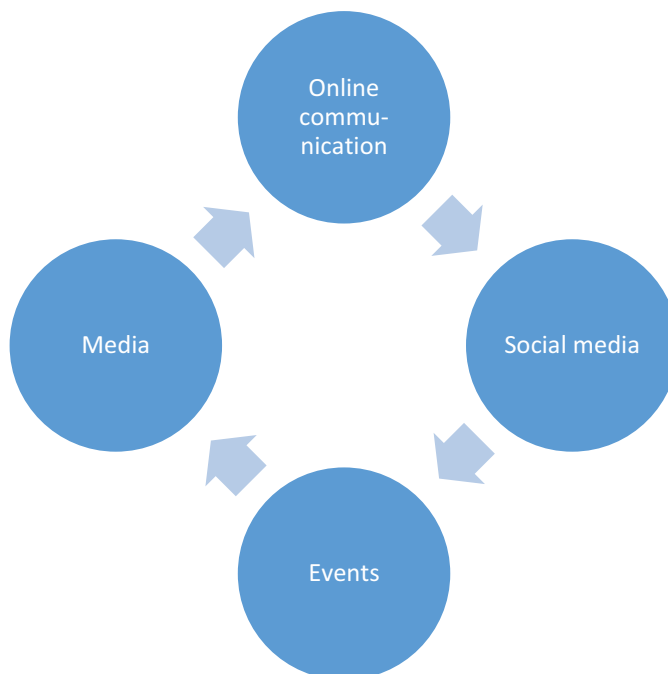
8.1. Internal communication

The project seeks to be transparent both in relation to the project participants as well as external stakeholders with interest in the subject. Both the dedicated webpage of the project and University of Twente's SharePoint environment will be utilized throughout the project's implementation. SharePoint is an online collaboration environment for storing, organizing and sharing information and is accessible from almost all devices. SharePoint will be used only by Action members using a password that will be provided and can be accessed on the following link: <https://sharepoint.utwente.nl/>

In addition to the above, Skype and Skype for Business will be used for communication among the project partners.

8.2. External communication

The external communication and dissemination activities will be implemented using different approaches in order to diversify and maximise the outreach to the target groups and all the stakeholders accordingly. They include:



The table below summarizes the different channels, methods, tools and materials, which will be used during the project.

Audience	Channel	Tools	Timeline/ Grant Period	Implementation by	
MC and Members	Online communication	Internal communication	SharePoint	28 February 2018	All partners
All stakeholders and public		Project website at www.Pearl PV-cost.eu/	- At least 6 dedicated pages (researchers & early career investigators) (MoU)	28 February 2018	Researchers/ ECIs
			- At least 4 dedicated non-specialist pages	Ongoing	Communication Team
All stakeholders and public		Partners' websites	Links to the Action website, news about the Action	28 February 2018	All partners
All stakeholders and public		Partners' newsletters	News about the Action, links to the Action website	Ongoing	All partners
Network of Action Members	Social media	Twitter, LinkedIN	Dedicated Cost Action accounts, members' posts using agreed hashtags	Set up of accounts by 5 April 2018 Ongoing process (at least 3 posts per month)	Communication Team (in collaboration with Core Group)
All stakeholders	Events	Workshops, conferences*,	Presentation of action activities, posters,	Valorization Panel Meeting #1, 22nd	Industry Liaison Manager and other

		valorization meetings etc.	<p>flyer dissemination, roundtable, panel discussions etc.</p> <p>- At least 10 scientific publications presented (MoU) (researchers)</p>	<p>January 2018 (morning)</p> <p>Valorization Panel Meeting #2 (date to be decided)</p> <p>Valorization Panel Meeting #3 (date to be decided)</p> <p>Valorization Panel Meeting #4 (date to be decided)</p> <p>Valorization Panel Meeting #5 (date to be decided)</p> <p>Valorization Panel Meeting #6 (date to be decided)</p> <p>Valorization Panel Meeting #7 (date to be decided)</p> <p>Final Conference May-Oct 2021 (date to be decided)</p>	<p>members assisting with this activity.</p> <p>Core Group</p>
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All stakeholders and public	Media	Newsletters	One Newsletter every quarter (total 16?)	Newsletter #1 – 30 April 2018	Newsletter Editor
All stakeholders	Scientific publications	Journals etc.	<ul style="list-style-type: none"> - At least 4 scientific articles (researchers) (MoU) - At least 1 special issue of international journal (MoU) - At least 1 open access edited book (researchers) - At least 4 publications (early career investigators) 		Researchers/EICs

*The organization of external workshops and participation in external events such as conferences will be decided on an ongoing basis and the table in Section 8.9 will be updated accordingly for this purpose.

8.3. Online communication

Online communication includes all channels through which the target groups and stakeholders can reach the project on the Internet. This will be done through the project's website, and partners' websites (links to the Cost Action). In addition, online press will be used for the release of articles. The Science Communication Manager will monitor the results, based on the information provided by the member of the Action and the Core Group. Moreover, the University of Twente will constantly update the website with news about the Action's activities, such as short training scientific missions and training schools and announce them several weeks before taking place. The newsletter and press releases will be distributed via the project website as well as via mailshots to the networks of contacts of the members/action participants. Press releases will be drafted by the Science Communication team in collaboration with Core Group members and newsletters by the Newsletter Editor with input from other members

Project website (<http://pearlpv-cost.eu/>)

A professional and user-friendly website will be developed for the Cost Action with the aim of making the project's results publicly available, offering easy access from anywhere in the world and working as a strong dissemination tool addressing all stakeholder groups. The website will be linked to e-Cost, the future data bank and the Sharepoint. The website will provide information on the project results, project activities and events as well as information on other relevant issues. The website will be updated regularly by Core Group members, who will get access so as to enable them to edit (parts of) the content. The focus of the website will be on the provision of relevant information to interested stakeholders, including information for the different working groups. The website will include the Cost features, Cost logo, EU emblem and accompanying text as indicated in the Dissemination Guidelines of the programme.

Members and participating organisations' websites

All project partners will include a link to the Pearl PV website in their own organisation's website. This permits a higher traceability and outreach.

8.4. Social media

Communication has experienced, in recent years, a high level of interpersonal connectivity and of information generated in the network. This fact encourages progress towards more collective forms of knowledge sharing, among other things. Through social networks we will aim to provide timely and up to date information about project activities, interacting thus with the target groups involved and concerned by the Action. All the content that will be uploaded on the projects' website will also be shared across the project's social media accounts. By doing so, we will gain more visibility for the project, managing thus, to extend the coverage of the project and improve our Google search ranking.

The Action members will make use of their own institutional social media accounts (LinkedIn and Twitter) to distribute news on a regular basis.

Whenever possible, the news will also be distributed through the official social media channels of Cost Association (i.e. <https://twitter.com/COSTprogramme>, <https://www.linkedin.com/company/cost-office>). These accounts will be used as additional distribution channels of the project results.

8.5. Flyer

Informational material need to convey a rounded impression of the project in a way designed to draw attention and create interest. Texts should be short and simple and photographs should be used where possible, to illustrate the action and its context. All material produced in paper form should also be made available in electronic form, so that it can be sent by e-mail and posted on both the internet and social media. An informative flyer will be produced at the beginning of the project and distributed to the relevant target groups. It will contain information about the project, an overview of the topics of the working groups and activities, and include information about how to join the Action. The flyer will be distributed mainly in electronic format. A poster describing the Action will also be adjusted, following the design of the flyer to be consistent.

8.6. Newsletters

A newsletter will be published every quarter (MoU) in order to report on the project activities and develop awareness about the topics tackled but more importantly about the Action and the network. The Newsletter will be edited by Dr Sarah McCormack of the Trinity College Dublin in collaboration with the Core Group members. The main contents of these newsletters shall include, but shall not be limited to, the following items:

- Welcome note
- A brief summary of the newsletter content
- Reporting on events
- List of relevant coming workshops, training schools, short-term scientific missions etc.
- Progress of the Action in terms of publications and activities/results
- Personal stories

The first newsletter will be published after the internal workshops, scheduled in March-April 2018.

8.7. Infographics

Infographics will be designed containing data which is interesting for targeted stakeholders as well as for the EU in general, even EU institutions at a central level. These may be used on the website, in conferences and workshops as posters.

8.8. Media

Media is known to be an effective way to reach not only stakeholders, but also the public. The members of the Network will look for opportunities to publish articles about the project in local and European journals.

8.9. Conferences and events

In order to achieve the maximum exposure of the project results and to encourage the involvement of the stakeholders, the members of the Action in collaboration with the WG leaders and the Action Chair will present Pearl PV in major relevant conferences and workshops. A number of forthcoming events have been identified and are listed in the below table. This list will be continuously updated with new events as suggested by the Network of actors. To facilitate this process, the list of forthcoming conferences and events will be shared with the Action participants as a separate document.

Title	Date	Location	Action Member
1. 3rd eseia International Conference on SMART ENERGY SYSTEMS IN CITIES & REGIONS.	10-12 April 2018	Dublin, Ireland	tbc
2. WCPEC-7 World Conference on Photovoltaic Energy Conversion	10-15 June 2018	Hawaii, USA	Action Chair/Vice-Chair
3. 35th EU PVSEC 2018	24 - 28 September 2018	Brussels, Belgium	Action Chair/Vice-Chair
4. Sunday	November 2018	Netherlands	tbc
5. IEEE PVSC-46	24-28 June 2019	Chicago, USA	tbc
6. PVSEC-28	4-8 November, 2019	Xian, China	tbc

9. Monitoring

An action of communication can be defined as “effective and efficient” when it reaches and is received correctly by its target. The effectiveness and efficiency of the actions of information and public awareness depend on (i) the content transmitted, and (ii) the channel used. The target audience should then recognize the information transmitted and understand it, as it was intended by the publisher of the news. In order to measure the efficacy of the tools included in this Plan, the SCM will keep track on the below-mentioned indicators that will determine the efficient implementation of the Communication Plan. For consistency purposes it is suggested to perform this exercise at the same time as reporting to the Cost Association.

- ✓ Appearance of the logo in all material and dissemination activities created under the Action.
- ✓ Number of visits to project’s website.
- ✓ Quantity of appearances in media (e.g. articles published in press/online, interviews etc.).
- ✓ Number of events attended by network members relevant to the Action.
- ✓ Number of newsletters and flyers disseminated.
- ✓ Number of recipients/subscribers of the Action’s newsletter.
- ✓ Number of conferences and workshops organized.
- ✓ Number of Tweets on the Action’s Twitter account and re-tweets.
- ✓ Number of followers on the Action’s Twitter account.
- ✓ Number of members on the Action’s LinkedIn account.
- ✓ Number of presentations of the Action at conferences or events (presentation, poster, paper).
- ✓ Number of scientific publications.

The table below suggests the indicators to be used for monitoring the activities undertaken for communication purposes on an annual basis:

Indicators	Year 1 (Oct 17 – Oct 18)	Year 2 (Oct 18 – Oct 19)	Year 3 (Oct 19 – Oct 20)	Year 4 (Oct 20 – Oct 21)
Logo	Appearance of the logo in all material and dissemination activities created under the Action.	Appearance of the logo in all material and dissemination activities created under the Action.	Appearance of the logo in all material and dissemination activities created under the Action.	Appearance of the logo in all material and dissemination activities created under the Action.

Number of visits to project's website	3000	2000	1000	1000
Quantity of appearances in media.	10	10	10	10
Number of events attended by network members relevant to the Action.	5	5	5	5
Number of newsletters disseminated.	4	4	4	4
Number of flyers disseminated.	500	500	500	500
Number of recipients/subscribers of the Action's newsletter	150	200	250	250
Number of conferences and workshops organized.	2	2	2	2
Number of Tweets on the Action's Twitter account and re-tweets	50	50	50	50
Number of followers on the Action's Twitter account	100	100	100	100
Number of members on the Action's LinkedIn account	100	100	100	100
Number of presentations of the Action at conferences or events (presentation, poster, paper)	2	2	2	2
Number of scientific publications	1	2	3	4

In addition, project partners must ensure that:

- ✓ Signed list of participants in hardcopy is kept for all workshops, conferences, seminars and events organised under the project.

- ✓ Presentations are in accordance with the specific template provided.
- ✓ Photos are being taken as evidence of action implementation.

We developed a spreadsheet (annex 1) to document all the dissemination activities carried out during the project and to monitor them using different metrics (e.g. number of publications, number of visits to the project website, number of flyers distributed). The spreadsheet will be available in SharePoint and can be edited by all partners at any time. The SCM will remind the members to update it particularly prior to reporting and MC meetings. The file is divided in the following sheets:

- Publications
- Events
- Website references
- References in social media
- Mailshots (i.e. newsletters or informational material sent etc.).

10. Risks and Mitigation Measures

The implementation of the communication plan can be influenced by a wide range of factors, both internal and external.

DESCRIPTION OF THE RISKS	PROPOSED RISK-MITIGATION MEASURES
Low level of engagement/Disengagement of the Action members	Ensure equal interaction with all the members of the Action to ensure regular updates on activities.
Low level of awareness about the activities of Pearl PV from the expert community and the general public	Regular updates of quality content related to the Action's activities on the available Communication Channels (especially on the Action's Webpage and Social Media Platforms)
Lack of structure in the communication activities	Set-up regular editorial meetings with the communication team of the Action and chaired by the Science Communication Manager to define the content and schedule of the communication activities.
Noncompliance to the agreed templates and/ or formats of documents, reports etc.	These will be agreed upon and made available to all from the initial stages. The Science Communication Team will monitor throughout the project and intervene to take corrective actions, where necessary.

Insufficient effort by partners to publicize the project and its results at the nation or European level	The Science Communication Team will monitor effort at regular intervals and will discuss progress during MC meetings with the Core Group and Chair/Vice-Chair, so as to prevent or correct such incidences.
Lack of interest by stakeholders groups in the project	Efforts will be made at the initial project stage and throughout the lifecycle of the project through valorization panel meetings, workshops etc. to engage and interact with the stakeholders to prevent or correct such incidences.
Poor quality of printed or other material delivered by a sub-contractor	The Science Communication Team will monitor the material produced. If it occurs, sub-contractors will be asked to replace the products as per instructions given in the beginning free of charge.

11. Role of the partners

The SCM in close cooperation with the Coordinator of the Cost Action, will be responsible for the project’s dissemination and communication plan, guarantee consistency in the message delivered and ensure all the targets are successfully reached. All partners will contribute to the implementation of the stakeholder and public engagement strategy and play a key role in networking with stakeholders. Specifically, the consortium will be responsible for:

- Creating a bridge between the project and the networks they are involved in;
- Providing input to the content of the project’s website, communication materials and media channels;
- Disseminating the activities and results of the project through to their social media channels;
- Disseminating the activities and results of the project at specific events/fairs.

12. Data processing

Data coming from the project website usage, social media, dissemination and networking activities will be electronically stored. Action members will also directly provide information about specific companies, contact people, etc., from the target groups of interest for the project. No personal information beyond name, corporate email address and company address and telephone will be stored. The network and the Cost Association officers will have access to this information. No use of this information unrelated to the project will be made. Any public data published on the website can be used also by third parties. SharePoint on the other hand can only be used by Network members with a password that will be provided by the Chair.

13. Contacts

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14. Annex 1

	NAME OF PUBLICATION/JOURNAL	DATE	TITLE OF ARTICLE	WEBSITE (LINK)	AUTHOR(S)	NOTES
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	TYPE OF REFERENCE	WEBSITE	NETWORK MEMBER	NOTES
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	TYPE OF REFERENCE	WEBSITE	NETWORK MEMBER	NOTES
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	TYPE OF REFERENCE	WEBSITE	NETWORK MEMBER	NOTES
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	TYPE OF REFERENCE	WEBSITE	NETWORK MEMBER	NOTES
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	TYPE OF MAILSHOT (E.G. NEWSLETTER, PRESS RELEASE)	DATE	TARGET AUDIENCE	NETWORK MEMBER	NUMBER OF RECIPIENTS	NOTES
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