Open Sea Operating Experience to Reduce Wave Energy Costs

Deliverable D8.12

Evaluation of the Dissemination and Communication Activities (final version)

Lead Beneficiary	TECNALIA
Delivery date	2019-07-22
Dissemination level	Public
Status	Approved
Version	3.0
Keywords	Dissemination, Key Messages, Target audience, Website, Open Access, Media, Events

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 654444

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Document Information

Grant Agreement Number	654444
Project Acronym	OPERA
Work Package	WP 8
Task(s)	T8.2 and T8.3
Deliverable	D8.12
Title	Evaluation of the Dissemination and Communication Activities (final version)
Author(s)	Pablo Ruiz-Minguela, Alberto Bonilla (TECNALIA)
File Name	OPERA_D8.12_Evaluation of D&C activities_TECNALIA_20190722_v3.0.docx

Change Record

Revision	Date	Description	Reviewer
0.1	31-05-2017	Outline proposal	Pablo Ruiz-Minguela
0.5	30-06-2017	Partial contents taken from technical description of project	WP8 partners
0.9	13-07-2017	Version for peer review	Sara Armstrong (UCC)
1.0	26-07-2017	Final deliverable for the EC	EC
1.5	05-07-2018	Updated version	WP8 partners
1.9	18-07-2018	Version for peer review	Fiona Devoy McAuliffe (UCC)
2.0	23-07-2018	Final deliverable for the EC	EC
2.5	24-06-2019	Version comprising all project activities	WP8 partners
2.9	12-07-2019	Version for peer review	UCC, Coordinator
3.0	22-07-2019	Final deliverable for the EC	EC

EXECUTIVE SUMMARY

The final version of the Evaluation of the Dissemination and Communication Activities (D8.12) presents the impact analysis and assessment of the dissemination and communication of the OPERA project spanning its full duration.

Periodic evaluation has been undertaken to guarantee that all stakeholders were reached and provided with appropriate information. This evaluation also had an important role in shaping periodic updates of the Plan for Dissemination and Communication (D8.2-3-4), by providing feedback on what aspects worked and what areas needed refinement. Not only were all partners engaged in the implementation of the plan, but also in its iterative formulation and review.

The following progress on the targets has been achieved by project end (Month 42).

Channel	Indicator	Objective	Progress	%
Web	No. of monthly visits	300	317	
	Duration of visits	2 min	1min 46s	
	No. of downloads per month	20	30	
	No. of referral sites (excluding partners)	10	9	
Open Access	No. of submitted scientific papers	8	8	
	No. of open access research data set categories	3	5	
Social Media	No. of posts	42	72	
	No. of contact updates per month (members)	500	4100	
	No. of visits to individual posts (views)	50	3200	
	No of likes	--	60	
Mass Media	No. of articles in ocean energy magazines	7	4	
	No. of press releases	4	24	
	No. of interviews	3	3	
Events	No. of attended conferences with presentations / posters	8	31	
	No. of oral communication at congresses & events	14	14	
	No. of attended industrial events and/or fairs	7	11	
	No. of events for the general public	4	27	
	No. of flyers distributed at events	600	600	
	No. of workshops organized	2	2	
	No. of registered people at workshops	30	55	

All foreseen dissemination channels have been used in the OPERA project. Although the **project website** is considered by the EC as the primary information source for the target stakeholders, it has been seen that **social media** channels are also important for the ocean energy sector audience. **Mass media** have been additional avenues for the promotion of the project objectives and results, particularly press releases. Besides, consortium partners have actively participated in external **events** and organised two project workshops which attracted a lot of interest. In terms of **open access** to scientific publications and research data, the progress is in line of the overall target. Dissemination efforts in the last year of the OPERA project were sustained with a particular emphasis on open access **publications**, articles in **ocean energy magazines** and the second **workshop** organisation.

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ABBREVIATIONS AND ACRONYMS

BMEW	Bilbao Marine Energy Week (Conference)
Dx.y	Deliverable numbered, for example D8.1
EC	European Commission
Mx	Month, for example M12 refers to month 12
OWC	Oscillating Water Column
TRL	Technology Readiness Level
Tx.y	Project task numbered, for example T8.2
WEC	Wave Energy Converter
WP	Work Package

1. INTRODUCTION

The ultimate success of the OPERA project strongly depends on well-coordinated dissemination and exploitation activities. Therefore, the beneficiaries of the OPERA project decided to include a specific work package for this purpose, namely WP8. Special focus has been put on disseminating project findings to the Ocean Energy sector, which is the main beneficiary of the novel technologies, data and knowledge.

Dissemination activities address raising awareness and getting the necessary feedback, as well as building understanding and facilitating adoption of project results by the different stakeholder groups who can directly benefit from the project. Dissemination activities have been performed at different geographical levels (i.e. local, regional and European).

OPERA's Plan for Dissemination and Communication (D8.2-3-4) defines the identification and classification of the target audience, the dissemination methods and goals, the schedule and complementarity of the activities, the measures to assess the impact of the dissemination activities, and the conditions to follow to ensure proper dissemination of the generated knowledge with regards to confidentiality, publication, and use of the knowledge.

The effectiveness of the Plan for Dissemination and Communication has been periodically measured during the project lifetime. The consortium decided to make the impact analysis and assessment in synch with the external project reviews, i.e. at Month 18, Month 30 and Month 42 (end of project). This gave the opportunity to focus the dissemination and communication activities and to align them with the exploitation plan.

Periodic evaluation was undertaken to guarantee that all stakeholders were reached and provided with appropriate information. It also had an important role in shaping successive iterations of the Plan for Dissemination and Communication, by providing feedback on what worked and what needed refinement. Not only were all partners engaged in the implementation of the plan, but also in its iterative formulation and review.

This document first summarises the overall strategy for dissemination and communication, that is to say, the plan purpose, key messages, target audience, tools and channels, and management. Then it describes the indicators used to monitor the dissemination and communication results. Finally, a list of the dissemination activities per main stage is included.

2. STRATEGY FOR DISSEMINATION AND COMMUNICATION

2.1 PURPOSE

The main purpose of the OPERA Plan for Dissemination and Communication was to ensure that those who can contribute to the development, evaluation, uptake and exploitation of the project outcomes could be identified and encouraged to interact with the Consortium on a regular and systematic basis. For this purpose, the Plan for Dissemination and Communication sought that the project research and practical outcomes were widely disseminated to the appropriate target audiences, at appropriate times along the project lifecycle, and particularly at key milestones, via appropriate methods.

It was important to maximise the impact on stakeholders outside the project Consortium in order to ensure that:

- The project was focused on the innovation needs of the sector;
- The knowledge gained was made available to all interested parties; and
- The project outputs could be adequately exploited.

Dissemination activities addressed raising awareness and getting the necessary feedback, as well as building understanding and facilitating adoption of project results by the different stakeholder groups who could directly benefit from the project. Communication activities complemented the OPERA dissemination activities towards increasing the outreach of the project's results, enhancing its visibility to stakeholders out of the core target groups of direct beneficiaries and permitting a two-way exchange.

The objectives of the dissemination and communication activities have been deployed in stages during the project lifetime. In addition to the central objective specified above, other objectives were targeted in the following stages:

- **Stage 1 (M1-M6): Raising awareness** of project's activities, outputs and benefits through diverse channels to audiences that did not require a detailed technical knowledge of the work carried out.
- **Stage 2 (M6-M18): Promoting a deeper understanding** of new knowledge and results for a number of audiences who could benefit from what OPERA project could offer.
- **Stage 3 (M18-M30): Engaging with target groups** to encourage their willingness to make use of project results.
- **Stage 4 (M30-M42): Influencing decision-making** within organisations regarding the uptake of OPERA outputs and supporting the implementation of the Exploitation Plan. This stage was the focus of the final version of the plan.

OPERA comprised these four levels of dissemination. For successful implementation of the dissemination and communication plan, we sought that the potential audience was aware of

OPERA's overall aims and objectives (in layman terms), as a precondition to acquiring a deeper understanding of the new knowledge and results. This allowed a greater overview of the potential uses of the OPERA project outputs. Finally, the dissemination for action promoted the willingness to make use of project results and influence decision-making.

The main elements of OPERA dissemination and communication strategy are summarised in the following figure and are later described in the document. The Plan for Dissemination and Communication defines the optimal and relevant interactions among these elements.

FIGURE 2.1: OVERVIEW OF OPERA DISSEMINATION & COMMUNICATION STRATEGY

2.2 KEY MESSAGES

The message component of the dissemination and communication strategy comprised the set of arguments, reasons and facts to be used to convince the targeted audiences of the value in using OPERA results.

Key messages intended to deliver relevant and meaningful content suited to communicate the OPERA value proposition to each of the target audiences. The OPERA project had a primary key message and 8 supporting key messages.

High level message:

"*OPERA will collect, analyse and share open-sea operating data and experience to validate and de-risk several industrial innovations for wave energy, taking them from a laboratory environment (TRL 3) to a marine environment (TRL 5), opening the way to long term cost-reduction of over 50%*".

Supporting key messages:

- *"OPERA will collect, stream and publish two years of open-sea operating data of both a floating WEC and a shoreline wave power plant"*;
- "*OPERA will de-risk innovations that lower mooring cost over 50% and enhance survivability";*
- *"OPERA will increase OWC power production 50% and improve reliability";*
- *"OPERA will advance predictive and latching control to enable 30% increase in power production";*
- *"OPERA will advance standards to reduce business risk and thus enable access to investment capital";*
- *"OPERA will reduce uncertainty, frequency, risk and cost of offshore operations";*
- *"OPERA will improve risk management and cost estimation with real data";*
- *"OPERA will maximise impact on the entire value chain and on society."*

In a similar way as with the objectives of the dissemination plan, the key messages were deployed with a different focus along the project lifetime:

- **Stage 1 (M1-M6):** The project exists …; The objectives of the project are …; The potential impact of the project is ... [completed];
- **Stage 2 (M6-M18):** Partners are working on the development of … [completed];
- **Stage 3 (M18-M30):** Preliminary results are … [mostly completed];
- **Stage 4 (M30-M42):** The project achievements are …; The impact of this developments is ...; Lessons-learned and recommendations are … [already started].

2.3 TARGET AUDIENCE

With a view to securing success in engaging stakeholders in using OPERA results, the focus of the project's dissemination and communication efforts targeted the entire ocean energy value chain.

Stakeholder engagement is key to the success of any dissemination initiative, and stakeholder identification was the first and foremost important task in effective stakeholder engagement. One of the main tasks of OPERA was thus to define target audiences according to their interests, needs and drivers.

To achieve effective dissemination, it was necessary to understand stakeholder motivations. This enabled the Consortium to effectively engage, communicate with and promote dialogue between different stakeholders. Indeed, the combination of the stakeholders' relevance to OPERA and motivations helped to define specific communication strategies for different groups of stakeholders.

The target audiences for OPERA project dissemination have been grouped into five different categories, namely the scientific community, private sector, policy makers, public bodies and general public.

FIGURE 2.2: OVERVIEW OF OPERA TARGET AUDIENCE

The main roles of key OPERA stakeholders have been defined in next table.

TABLE 2.1: ROLE OF OPERA TARGET AUDIENCES

Role \ Audience	Scientific community	Private sector	Policy makers	Public bodies	General public
Enhance project visibility	✓	✓	✓	✓	✓
Give feedback on project development	✓	✓	✓	✓	✓
Share open sea experience	✓	✓	✓		
Create market opportunities		✓	✓		
Support sector development			✓	✓	
Promote benefits of ocean energy				✓	✓
Foster collaboration	✓	✓	✓	✓	

General public engagement ensured that the research activities were made known to society at large in such a way that they can be understood by non-specialists. The communication activities also addressed the public policy perspective of EU research and innovation funding, by considering aspects such as:

- Transnational cooperation in a European Consortium (i.e. how working together has allowed to achieve more than otherwise possible);
- Scientific excellence;
- Contributing to competitiveness and to solving societal challenges;
- Impact on everyday lives (e.g. creation of jobs, development of new technologies, better quality products, more convenience, improved life-style, etc.);

- Better use of results and spill-over to policy-makers, industry and the scientific community.

2.4 TOOLS & CHANNELS

Figure 2.3 presents an overview of OPERA tools and channels for dissemination, which are described in detail in the following chapters.

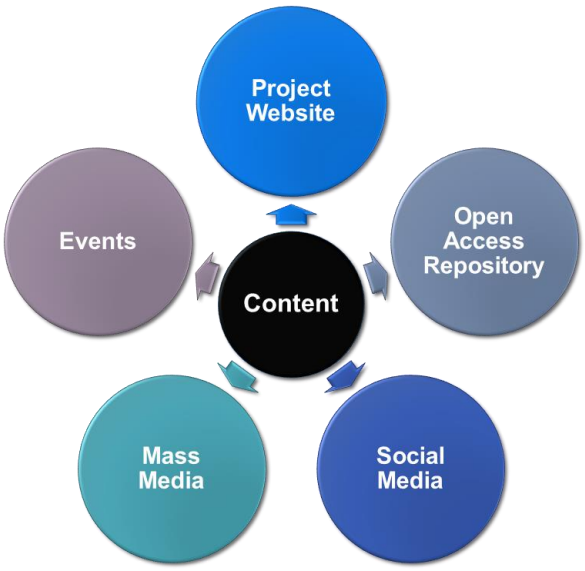


FIGURE 2.3: OVERVIEW OF DISSEMINATION CHANNELS

The **project website** has been the primary information source for the target stakeholders. **Open access** to scientific publications and research data was also important for the Consortium, and in particular for the applied research organisations and academia. The OPERA Consortium believed that **social media** was a good means of outreach to the public permitting a bidirectional communication. **Mass media** (i.e. radio, television, newspapers, specialist and technical publications and Internet) was conceived as additional avenues for the promotion of the project objectives and results. Last but not least, Consortium partners were actively participating in external **events** and in the organisation of two project workshops.

The table below matches target audience categories with the dissemination channels that will be used to address them.

TABLE 2.2: MAIN TARGET AUDIENCES AND CHANNELS

Audience / Channel	Scientific community	Private sector	Policy makers	Public bodies	General public
Project website	✓	✓	✓	✓	✓
Open repositories	✓	✓			
Social media	✓	✓	✓	✓	✓
Mass media		✓	✓	✓	✓
Events	✓	✓	✓	✓	✓

2.5 MANAGEMENT

Dissemination of project results as well as open access to scientific publications and research data has been governed by the procedure described in Article 29 of the EC Grant Agreement (EC-GA).

All Consortium partners were contributors to the dissemination and communication activities under the overall management of WP8 Leader, OCEANTEC-IDOM. They were using their industrial partnerships and research networks to contribute to:

- Identifying and informing about dissemination opportunities (e.g. events, publications, etc.);
- Providing relevant information and documentation to enrich the project website;
- Posting news and project results in social media;
- Presenting the project at relevant national and international conferences, workshops and other events;
- Supporting the promotion and organisation of OPERA workshops, in particular engaging key stakeholders to act as multipliers and to motivate participants;
- Updating the collaborative workspace, BOX, with all relevant dissemination activities and opportunities.

As T8.2 leader, TECNALIA has updated the Plan for Dissemination and Communication, and produced this final version which considers the results obtained and the exploitation remarks. This gave the opportunity to focus the dissemination and communication on the most relevant publications, events and stakeholders in order to achieve an effective and proactive dissemination aligned with the exploitation plan. The following figure shows the interrelationships between this plan and the various deliverables in WP8, as well the main update schedule.

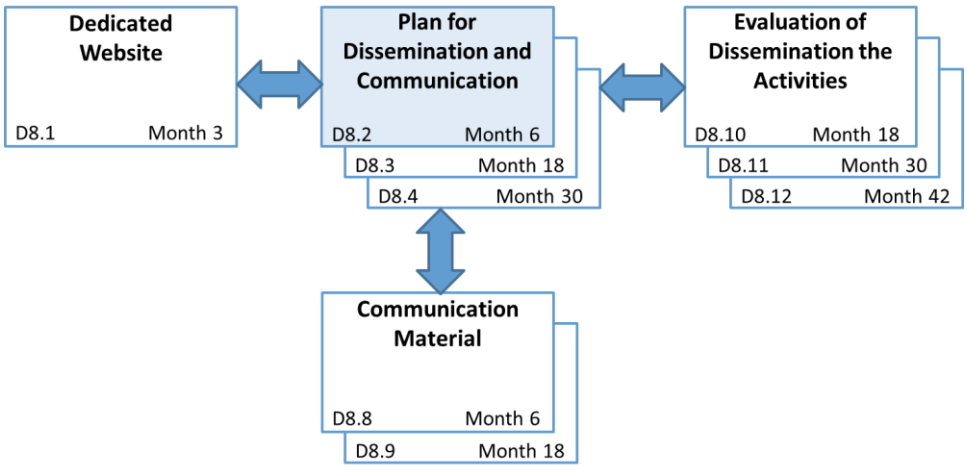


FIGURE 2.4: INFORMATION FLOW AND MAIN DISSEMINATION MILESTONES

3. MONITORING DISSEMINATION AND COMMUNICATION RESULTS

3.1 PROJECT WEBSITE

The web page has been regularly updated (on average, monthly updates). Moreover, the effectiveness of web page has been periodically analysed by means of the Google Analytics tool. This allows reports to be run on the website, giving a very clear picture of information such as:

- Number of sessions and page visits;
- Users count visiting the website and visit time;
- Languages and locations of visitors;
- Visits source.

The images below show three snapshots of the OPERA website analytics, namely sessions and user visits per month, country and source.

The number of users, sessions and its duration remained stable compared with the figures for the previous years. The website has attracted a high number new users and pages per session has roughly doubled. Most of the visits come from an organic search (mainly through google) or direct access. However, social networks and referrals have played an important role. Particularly, it is worthwhile noting LinkedIn listed on top. Spain, UK, USA and France concentrate more than half the visits. Finally, the OPERA URL address has also been promoted in partner websites, relevant web platforms and ocean energy initiatives such as Ocean Energy Europe.

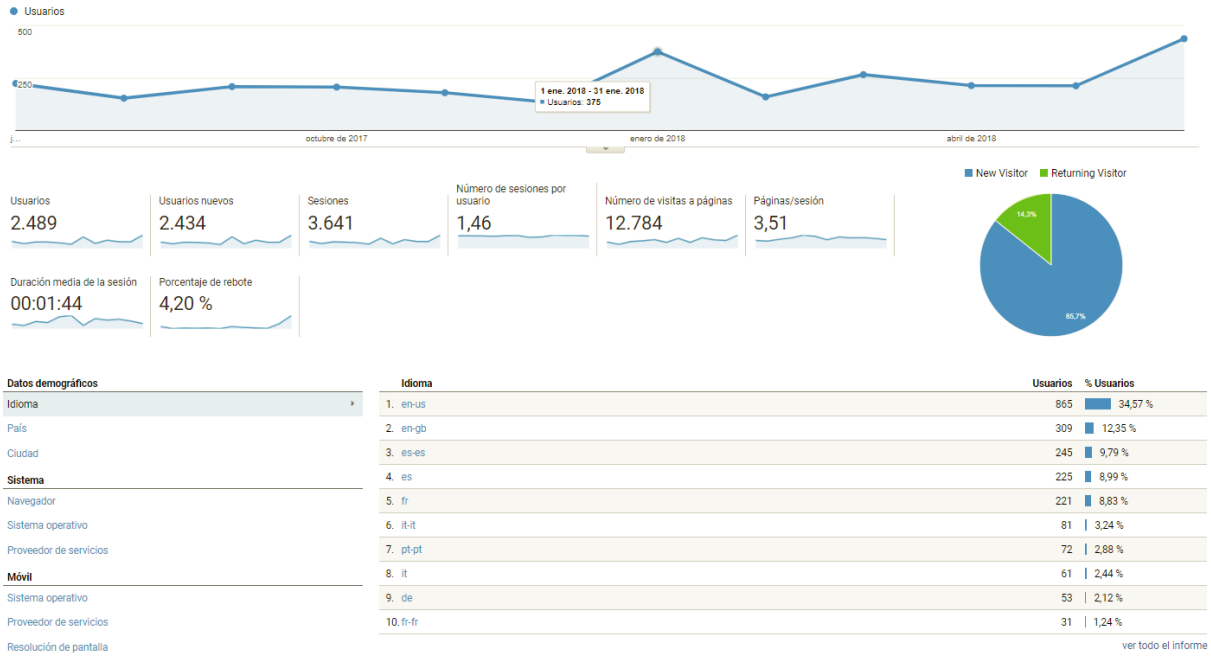


FIGURE 3.1: WEBSITE ANALYTICS PER MONTH

	País	Usuarios	% Usuarios
1.	Spain	479	19,04 %
2.	United Kingdom	328	13,04 %
3.	United States	310	12,32 %
4.	France	264	10,49 %
5.	Italy	142	5,64 %
6.	Portugal	124	4,93 %
7.	Ireland	94	3,74 %
8.	Germany	77	3,06 %
9.	Netherlands	62	2,46 %
10.	Belgium	56	2,23 %

ver todo el informe

FIGURE 3.2: WEBSITE ANALYTICS PER COUNTRY

	Default Channel Grouping	Adquisición			Comportamiento			Conversiones		
		Usuarios ↓	Usuarios nuevos	Sesiones	Porcentaje de rebote	Páginas/sesión	Duración media de la sesión	Tasa de conversión del objetivo	Objetivos cumplidos	Valor del objetivo
		2.489 % del total: 100,00 % (2.489)	2.436 % del total: 100,08 % (2.434)	3.641 % del total: 100,00 % (3.641)	4,20 % Media de la vista: 4,20 % (0,00 %)	3,51 Media de la vista: 3,51 (0,00 %)	00:01:44 Media de la vista: 00:01:44 (0,00 %)	0,00 % Media de la vista: 0,00 % (0,00 %)	0 % del total: 0,00 % (0)	0,00 US$ % del total: 0,00 % (0,00 US$)
1.	Organic Search	1.368 (53,63 %)	1.295 (53,16 %)	2.026 (55,64 %)	0,84 %	3,55	00:01:39	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
2.	Direct	835 (32,73 %)	819 (33,62 %)	1.173 (32,22 %)	4,35 %	3,69	00:02:08	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
3.	Referral	210 (8,23 %)	201 (8,25 %)	270 (7,42 %)	31,48 %	2,75	00:01:03	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
4.	Social	138 (5,41 %)	121 (4,97 %)	172 (4,72 %)	0,00 %	2,99	00:01:06	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)

	Fuente/Medio	Adquisición			Comportamiento			Conversiones		
		Usuarios ↓	Usuarios nuevos	Sesiones	Porcentaje de rebote	Páginas/sesión	Duración media de la sesión	Tasa de conversión del objetivo	Objetivos cumplidos	Valor del objetivo
		2.489 % del total: 100,00 % (2.489)	2.436 % del total: 100,08 % (2.434)	3.641 % del total: 100,00 % (3.641)	4,20 % Media de la vista: 4,20 % (0,00 %)	3,51 Media de la vista: 3,51 (0,00 %)	00:01:44 Media de la vista: 00:01:44 (0,00 %)	0,00 % Media de la vista: 0,00 % (0,00 %)	0 % del total: 0,00 % (0)	0,00 US$ % del total: 0,00 % (0,00 US$)
1.	google / organic	1.335 (52,29 %)	1.262 (51,81 %)	1.966 (54,00 %)	0,86 %	3,49	00:01:39	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
2.	(direct) / (none)	835 (32,71 %)	819 (33,62 %)	1.173 (32,22 %)	4,35 %	3,69	00:02:08	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
3.	linkedin.com / referral	97 (3,80 %)	83 (3,41 %)	128 (3,52 %)	0,00 %	3,02	00:01:21	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
4.	bing / organic	29 (1,14 %)	28 (1,15 %)	55 (1,51 %)	0,00 %	5,55	00:01:33	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
5.	t.co / referral	24 (0,94 %)	23 (0,94 %)	25 (0,69 %)	0,00 %	2,68	00:00:06	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
6.	best-deal-hdd.pro <——— visit-us / referral	20 (0,78 %)	20 (0,82 %)	20 (0,55 %)	100,00 %	1,00	00:00:00	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
7.	continentalimmigration.co.in / referral	20 (0,78 %)	20 (0,82 %)	20 (0,55 %)	100,00 %	1,00	00:00:00	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
8.	exeter.ac.uk / referral	20 (0,78 %)	20 (0,82 %)	22 (0,60 %)	9,09 %	3,00	00:00:13	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
9.	get-more-freeer-visitors.info / referral	20 (0,78 %)	20 (0,82 %)	20 (0,55 %)	100,00 %	1,00	00:00:00	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
10.	emps.exeter.ac.uk / referral	14 (0,55 %)	12 (0,49 %)	16 (0,44 %)	0,00 %	3,94	00:00:57	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
11.	lnkd.in / referral	11 (0,43 %)	11 (0,45 %)	11 (0,30 %)	0,00 %	2,55	00:00:23	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
12.	marei.ie / referral	11 (0,43 %)	10 (0,41 %)	11 (0,30 %)	0,00 %	3,00	00:00:41	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
13.	bestofferhddeed.info / referral	10 (0,39 %)	10 (0,41 %)	10 (0,27 %)	100,00 %	1,00	00:00:00	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
14.	cordis.europa.eu / referral	10 (0,39 %)	10 (0,41 %)	47 (1,29 %)	0,00 %	2,51	00:00:19	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)
15.	getadsincomely.info / referral	10 (0,39 %)	10 (0,41 %)	10 (0,27 %)	100,00 %	1,00	00:00:00	0,00 %	0 (0,00 %)	0,00 US$ (0,00 %)

FIGURE 3.3: WEBSITE ANALYTICS PER SOURCE

The next table presents the initial indicators for measurement of success of the dissemination carried out through the website channel, the minimum objectives to be achieved, the progress achieved in the project and some qualitative remarks.

TABLE 3.1. IMPACT OF DISSEMINATION (WEBSITE)

Indicator	Objective	Progress	Comments
No. of monthly visits	300	317	Progress slightly above the initial objective. The website is well indexed in searches. Promotion in social media and relevant platforms can contribute to sustain the number of visits
Duration of visits	2 min	1min 46s	Progress slightly below the initial objective. More attractive deliverables and results could contribute to increasing the mean duration
No. of downloads per month	20	30	All public deliverables have been downloaded. D3.2 is top ranked with 54 downloads. The report with conclusions from the first industrial workshop has 32 downloads.
No. of referral sites (excluding partners)	10	9	Progress in line with the objective

3.2 OPEN ACCESS REPOSITORIES

Project partners were responsible for the publication of relevant results to scientific community by scientific publications. Moreover, the beneficiary aimed at depositing at the same time the research data needed to validate the results presented in the scientific publications.

Underlying research data consisted of selected parts of the general datasets generated, and for which the decision of making that part public has been made. Additionally, other datasets were related to any public report or be useful for the research community. They were selected and be published as soon as possible.

The next table presents the indicators for measurement of success of the dissemination carried out through the open access channel, the minimum objectives to be achieved, the progress achieved in the project and some qualitative remarks.

TABLE 3.2. IMPACT OF DISSEMINATION (OPEN ACCESS REPOSITORIES)

Indicator	Objective	Progress	Comments
No. of submitted scientific papers	8	8	Academic partners have been encouraged to publish in WP8 meetings. Progress in line with the initial objective. Besides, six papers were submitted but still under review by project end.
No. of open access research data set categories	3	5	Target allocated to partners with publications. 2 wave resource datasets, 1 biradial turbine performance dataset (Mutriku) and 1 power quality dataset (Mutriku) have been published.

Indicator	Objective	Progress	Comments
			D1.3 contains further experimental data for the testing of turbine and controls at BiMEP.

3.3 SOCIAL MEDIA

The traffic generated by social networks was also an important asset to enhance the visibility of the web portal in major search engines. On average, one action per month over the full project lifetime was considered.

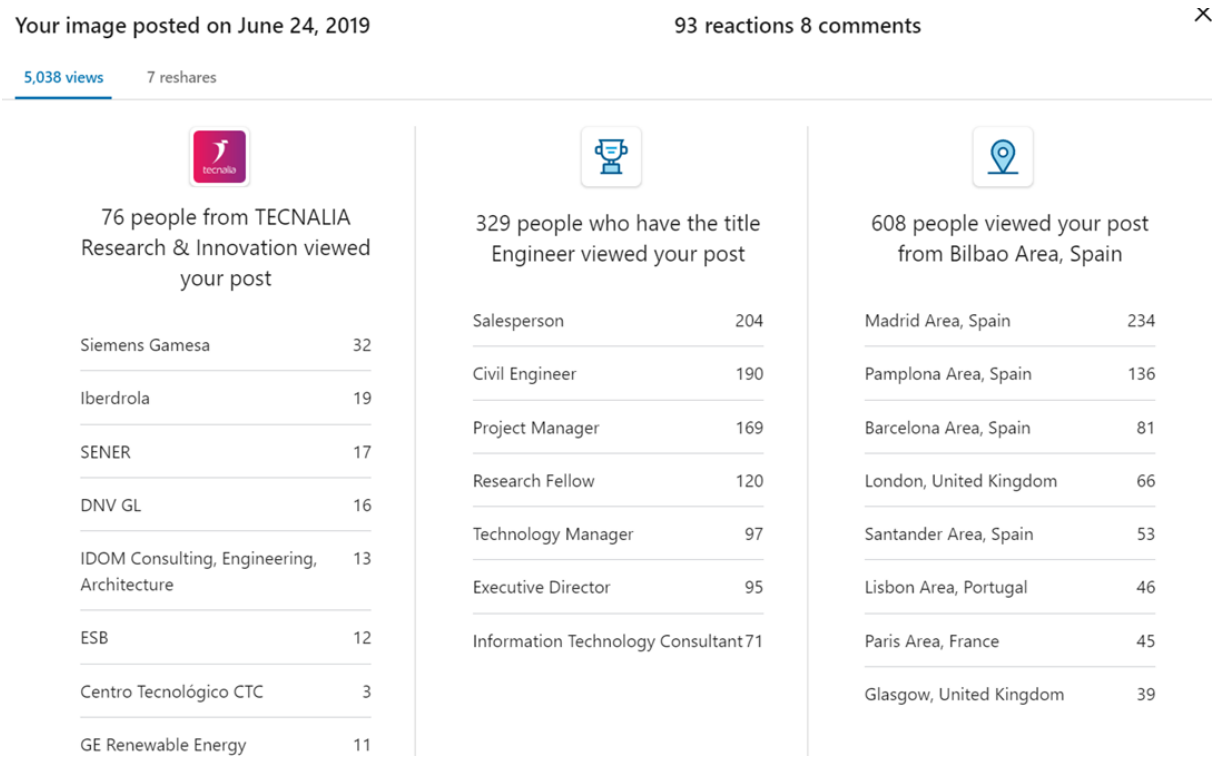
Different social media channels have been used in the OPERA project, such as LinkedIn, Facebook, Twitter, YouTube and ResearchGate. It was decided to use current partner profiles instead of creating bespoke ones in order to take advantage of existing community. The project created the hashtag #OPERAH2020 to aggregate all Twitter posts in the website.

The next table presents the indicators for measurement of success of the dissemination carried out through the social channel, the minimum objectives to be achieved, the progress achieved in the project and some qualitative remarks.

TABLE 3.3. IMPACT OF DISSEMINATION (SOCIAL MEDIA)

Indicator	Objective	Progress	Comments
No. of posts	42	72	Progress well above the initial objective for the project.
No. of contact updates per month (members)	500	4,100	The social media channel with the largest targeted audience has been the LinkedIn profile of TECNALIA Offshore Renewable Energy. At the time of writing this deliverable it gathers a network of 4,100 direct contacts from the targeted audience for the project.
No. of visits to individual posts (views)	>50	3,200 (average)	Individual post views have shown a steadily growing trend, from just 200 views at the beginning to close to 7,600 views recently. Interestingly, most views came from second network of contacts.
No of likes	Ø	60 (average)	The impact is significantly magnified as a result of social network member likes, which automatically redistributes the post to all their contacts.

The next figure shows the results of the most viewed post regarding the second round of open-sea testing: “MARMOK-A-5 waves goodbye to BiMEP”.



https://www.linkedin.com/feed/update/urn:li:activity:6549372950682845184/

FIGURE 3.4: MOST VIEWED POST IN LINKEDIN

3.4 MASS MEDIA

The mass media channel encompassed several dissemination results such as articles in ocean energy magazines, press releases and local radio/TV interviews.

The next table presents the indicators for measurement of success of the dissemination carried out through the mass media channel, the minimum objectives to be achieved, the progress achieved in the project and some qualitative remarks.

TABLE 3.4. IMPACT OF DISSEMINATION (MASS MEDIA)

Indicator	Objective	Progress	Comments
No. of articles in ocean energy magazines	7	4	Progress slightly below the target for the project, even if effort has been made to seek additional channels in cooperation with the industrial partners
No. of press releases	4	24	Project research activities attracted high interest from journalists. As a result, a much higher number of press releases has been produced.

Indicator	Objective	Progress	Comments
No. of interviews	3	3	Good progress. Key project milestones (installation of the WEC prototype) and local events such as the BMEW have attracted interest of audiovisual media.

3.5 EVENTS

Relevant events were identified and updated in the life cycle of the OPERA project. Indicators for this dissemination channel tracked the number and type of attended events, number of presentations, registered people at organised workshops and distribution of dissemination material.

The next table presents the indicators for measurement of success, the minimum objectives to be achieved, the progress achieved in the project and some qualitative remarks.

TABLE 3.5. IMPACT OF DISSEMINATION (EVENTS)

Indicator	Objective	Progress	Comments
No. of attended conferences with presentations / posters	8	31	Progress well above the initial objective for the project
No. of oral communication at congresses & events	14	14	Progress in line with the initial objective.
No. of attended industrial events and/or fairs	7	11	Progress well above the initial objective
No. of events for the general public	4	26	The owners of the test infrastructures and IDOM-OCEANTEC have disseminated the project during the regular general public visits
No. of flyers distributed at events	600	600	All flyers distributed in exhibitions. Updated multimedia material been prepared for events.
No. of workshops organized	2	2	Progress in line with the initial objective
No. of registered people at workshops	>30	55	Progress above the initial objective. More attendees achieved since the workshop was linked to a sector event.

4. LIST OF DISSEMINATION AND COMMUNICATION ACTIVITIES

The objectives of the dissemination and communication activities were mainly deployed in stages during the project lifetime.

Stage 1 (M1-M6): Raising awareness of the project's activities, outputs and benefits through diverse channels to audiences that do not require a detailed technical knowledge of the work carried out.

Stage 2 (M6-M18): Promoting a deeper understanding of new knowledge and results for a number of audiences who can benefit from what OPERA project can offer.

Stage 3 (M18-M30): Engaging with target groups to encourage their willingness to make use of project results.

Stage 4 (M30-M42): Influencing decision-making within organisations regarding the uptake of OPERA outputs and supporting the implementation of the Exploitation Plan.

4.1 STAGE 1 (M1-M6): RAISING AWARENESS

4.1.1 OPEN ACCESS

1 Scientific Publication

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
IST	27/04/2016	Energy Journal (Elsevier)	Design of oscillating-water-column wave energy converters for self-powered sensor buoys	J. C. C. Henriques, J. C. C. Portillo, L. M. C. Gato, R. P. F. Gomes, D. N. Ferreira, A. F. O. Falcão	IST

4.1.2 SOCIAL MEDIA

2 Entries in LinkedIn

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	22/02/2016	TECNALIA Marine Energy Group (LinkedIn)	Open Sea Operating Experience to Reduce Wave Energy Cost	Pablo Ruiz-Minguela	ALL PARTNERS
TECNALIA	02/05/2016	TECNALIA Marine Energy Group (LinkedIn)	OPERA website up and running!!	Pablo Ruiz-Minguela	

4.1.3 MASS MEDIA

3 Press Releases

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	11/02/2016	Local newspapers, InnovaSpain	El Ente Vasco de la Energía y TECNALIA participan en un proyecto europeo para reducir en un 50% el coste de la energía de las olas	Alberto Bonilla, Imanol Zenborain	TECNALIA, EVE
TECNALIA	19/02/2016	Tecnalia's website & OEE	OPERA, PLAYING WITH WAVES FOR A LOW CARBON ENERGY FUTURE	Alberto Bonilla	TECNALIA
GM	15/06/2016	Global Maritime website	Global Maritime To Provide Mooring & Risk Management Support to EU Wave Energy Project	Paul Goodwin	TECNALIA

4.2 STAGE 2 (M6-M18): PROMOTING NEW KNOWLEDGE AND RESULTS

4.2.1 OPEN ACCESS

1 Scientific Publication

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
IST	01/07/2017	Automatica (Elsevier)	A high-order Discontinuous Galerkin Method with mesh refinement for optimal control	Henriques, J.C.C., Lemos, J.M., Eça, L., Gato, L.M.C., Falcão, A.F.O.	IST

1 Research Dataset

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	20/07/2017	ZENODO	DS_Wave_Mutriku: Wave resoruce at Mutriku (Spain)	Joannès Berque	OCEANTEC, EVE

4.2.2 SOCIAL MEDIA

21 Entries in LinkedIn, 5 in ResearchGate, 5 in Twitter, 2 in Facebook and 1 in YouTube

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	01/08/2016	TECNALIA Marine Energy Group (LinkedIn)	OCEANTEC prototype deployment in BiMEP (OPERA project)	Pablo Ruiz-Minguela	OCEANTEC, BIMEP

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	20/09/2016	TECNALIA Marine Energy Group (LinkedIn)	Regional minister for economic development visits site of manufacture of first Basque wave-power generating device	Pablo Ruiz-Minguela	OCEANTEC, EVE, BIMEP
TECNALIA	13/10/2016	TECNALIA Marine Energy Group (LinkedIn)	OCEANTEC deployed at BiMEP its first wave energy converter !!!!!!!	Pablo Ruiz-Minguela	OCEANTEC, BIMEP
TECNALIA	10/11/2016	TECNALIA Marine Energy Group (LinkedIn)	Wave energy device successfully deployed at BiMEP site	Pablo Ruiz-Minguela	UNEXE, OCEANTEC
TECNALIA	30/11/2016	TECNALIA Marine Energy Group (LinkedIn)	OPERA Project has published D5.1	Pablo Ruiz-Minguela	
TECNALIA	18/11/2016	TECNALIA Marine Energy Group (LinkedIn)	Environmental Monitoring System Sucessfully Deployed at Mutriku	Pablo Ruiz-Minguela	EVE
TECNALIA	20/12/2016	TECNALIA Marine Energy Group (LinkedIn)	Directional wave buoy sucessfully deployed at BiMEP	Pablo Ruiz-Minguela	BIMEP
TECNALIA	03/02/2017	TECNALIA Marine Energy Group (LinkedIn)	OPERA's bi-radial turbine-generator set in the final assembly stage	Pablo Ruiz-Minguela	KYMANER
TECNALIA	24/02/2017	TECNALIA Marine Energy Group (LinkedIn)	OPERA VIDEO: OCEANTEC's WEC deployed at BiMEP	Pablo Ruiz-Minguela	ALL PARTNERS
TECNALIA	01/03/2017	TECNALIA Marine Energy Group (LinkedIn)	Tests of novel elastometric mooring tethers	Pablo Ruiz-Minguela	UNEXE, OCEANTEC
TECNALIA	13/03/2017	TECNALIA Marine Energy Group (LinkedIn)	OPERA took part at the Danish Partnership for Wave Energy	Pablo Ruiz-Minguela	
TECNALIA	30/03/2017	TECNALIA Marine Energy Group (LinkedIn)	The CEO of Oceantec Marine Energy, Patxi Etxaniz, has presented today latest company achievements at the Marine Energy Week	Pablo Ruiz-Minguela	OCEANTEC, BiMEP

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	05/04/2017	TECNALIA Marine Energy Group (LinkedIn)	OPERA project meets in Bilbao from 4-6 April for their first General Assembly meeting	Pablo Ruiz-Minguela	ALL PARTNERS
TECNALIA	26/04/2017	TECNALIA Marine Energy Group (LinkedIn)	PERIODIC INSPECTION OF MUTRIKU PRESSURE GAUGE -OPERA project	Pablo Ruiz-Minguela	
TECNALIA	22/05/2017	TECNALIA Marine Energy Group (LinkedIn)	TESTING OF THE OPERA PROJECT'S NOVEL AIR TURBINE HAS ALREADY STARTED AT THE MUTRIKU WAVE POWER PLANT: TURBINE OPERATED AT FULL POWER ON THE FIRST DAY OF TESTING	Pablo Ruiz-Minguela	ALL PARTNERS
TECNALIA	26/05/2017	TECNALIA Marine Energy Group (LinkedIn)	Open-sea testing of the OPERA project is catching up quite interest!	Pablo Ruiz-Minguela	EVE, BIMEP, OCEANTEC, IST, KYMANER
TECNALIA	01/06/2017	TECNALIA Marine Energy Group (LinkedIn)	Download the outcomes of the workshop here!	Pablo Ruiz-Minguela	
TECNALIA	04/07/2017	TECNALIA Marine Energy Group (LinkedIn)	Novel bi-radial turbine-generator set tested at laboratory under variable unidirectional flow	Pablo Ruiz-Minguela	IST, KYMANER, EVE
TECNALIA	12/07/2017	TECNALIA Marine Energy Group (LinkedIn)	Canary Islands at the centre of Marine Renewable Energies	Pablo Ruiz-Minguela	OCEANTEC
OCEANTEC	29/09/2016	Oceantec Marine Energy (LinkedIn)	Ending up the WEC assembly to start the countdown to go into the sea very soon	José Luis Aguiriano	
OCEANTEC	03/01/2017	Oceantec Marine Energy (LinkedIn)	Accessing the MARMOK-A-5 WEC for some equipment supervision work	José Luis Aguiriano	
EVE	05/08/2016	EVE Facebook	Oceantec and @EVEuskadi working on the new WEC to be tested at Bimep for a year #opera-h2020	Imanol Zenborain	OCEANTEC, BIMEP

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	14/10/2016	EVE Facebook	First wave-powered generating device installed at #Bimep	Imanol Zenborain	OCEANTEC, BIMEP
EVE	08/11/2016	EVE Twitter	Opera-h2020.eu and the wave energy cost-reduction at OEE2016 Brussels	Imanol Zenborain	
EVE	21/12/2016	EVE Twitter	New turbines already installed in the WEC	Imanol Zenborain	OCEANTEC, BIMEP
EVE	14/02/2017	Youtube	Opera project video: https://youtu.be/57T5yorqHSg	Imanol Zenborain	ALL PARTNERS
BiMEP	30/03/2017	BiMEP Twitter	The successful @BilbaoMarine about to finish with the interesting workshop of the #OPERAH2020 project	Dorleta Marina	TECNALIA
BiMEP	23/06/2017	BiMEP Twitter, LinkedIn	The ambassador of Canada and the Commercial Minister of the Embassy, visit BiMEP #OPERAH2020	Dorleta Marina	
UNEXE	13/10/2016	ResearchGate	OCEANTEC deployed at BiMEP its first wave energy converter	Sam Weller	OCEANTEC, BiMEP
UNEXE	08/11/2016	ResearchGate	Wave energy device successfully deployed at BiMEP site	Sam Weller	OCEANTEC
UNEXE	04/01/2017	ResearchGate	Directional wave buoy successfully deployed at BiMEP	Sam Weller	TECNALIA, OCEANTEC, BiMEP
UNEXE	06/02/2017	Twitter	Tether performance scale testing at our Dynamic Marine Component	Sam Weller	
UNEXE	01/03/2017	ResearchGate	Tests of novel elastometric mooring tethers	Sam Weller	TECNALIA, OCEANTEC, BiMEP
UNEXE	11/07/2017	ResearchGate	The Importance of Getting Your Feet Wet: Field Measurements from the OPERA Project	Sam Weller	

4.2.3 MASS MEDIA

1 Article in Ocean Energy Magazine

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
GM	05/10/2016	Power and Energy Solutions	OPERA on the waves	Paul Goodwin, Pablo Ruiz-Minguela, José Luis Aguiriano	GM, TECNALIA, OCEANTEC

9 Press Releases

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	13/10/2016	OPERA website, Tecnalia's website & OEE	OCEANTEC deployed at BiMEP its first wave energy converter	Alberto Bonilla	OCEANTEC, EVE
TECNALIA	22/05/2017	OPERA website, social networks	TESTING OF THE OPERA PROJECT'S NOVEL AIR TURBINE HAS ALREADY STARTED AT THE MUTRIKU WAVE POWER PLANT: TURBINE OPERATED AT FULL POWER ON THE FIRST DAY OF TESTING	Alberto Bonilla	ALL PARTNERS
TECNALIA	01/06/2017	OPERA website, social networks	First practical experiences of open-sea operation. Workshop at the Bilbao Marine Energy Week 2017	Alberto Bonilla	
EVE	04/08/2016	OPERA & EVE's website	Regional minister for economic development visits site of manufacture of first Basque wave-power generating device	Imanol Zenborain	
OCEANTEC	12/10/2016	Local & internet news	OCEANTEC INSTALA EN BIMEP SU PRIMER DISPOSITIVO PARA EL	José Luis Aguiriano	TECNALIA, EVE

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
			APROVECHAMIENTO DE LA ENERGIA DE LAS OLAS		
UNEXE	08/11/2016	OPERA website, UNEXE website	Wave energy device successfully deployed at BiMEP site	Alberto Bonilla, Lars Johanning	OCEANTEC
UNEXE	02/03/2017	UNEXE news	Elastometric mooring tether performance testing advances wave energy project	Lars Johanning	UNEXE, OCEANTEC
UNEXE	01/03/2017	OPERA website, UNEXE website, Wave&Tidal Magazine (Spring issue, 2017)	Tests of novel elastometric mooring tethers	Alberto Bonilla, Lars Johanning	OCEANTEC
KYMANER	02/05/2017	Wavec Newsletter, Facebook and derived news on internet media	Economia do Mar: tecnologia de ponta nacional assume destaque em projecto europeu	José Varandas	IST, EVE, OCEANTEC

3 Interviews in Radio/TV

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
BIMEP	12/10/2016	http://www.eitb.eus/es/noticias/economia/videos/detalle/4441301/han-botado-captador-energia-olas-creado-euskadi/	El captador de energía de las olas creado en Euskadi ya está en el mar	EITB	OCEANTEC, BIMEP

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
OCEANTEC	29/03/2017	https://www.eitb.eus/es/radio/radio-euskadi/programas/boulevard/detalle/4735863/boulevard-marine-energy-week/	Interview to Patxi Etxaniz, during the Marine Energy Week, Bilbao	EiTB	
TECNALIA	30/03/2017	https://www.youtube.com/watch?v=FZuIYUjJTD0&index=1&list=PLN-39WH_gkoi7oE3_iBxeqi1NMId2jOTC	Interview to Pablo Ruiz-Minguela, Coordinator of the OPERA project, during the Marine Energy Week, Bilbao	tvER, Renewable Energies TV	

4.2.4 EVENTS

9 Conference Presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	09/03/2017	Danish Partnership for WavePower 2017 (Copenhagen)	OPERA project presentation at the Danish Partnership for Wave Power	Pablo Ruiz-Minguela	
TECNALIA	23/11/2016	1nd clustering meeting on H2020 projects in the area of Ocean Energy (Brussels)	OPERA: Short Project Presentation & Dissemination Activities	Pablo Ruiz-Minguela	
OCEANTEC	23/11/2016	JERME 2016 (Madrid)	EXPERIENCIA EN MAR PARA REDUCIR EL COSTE DE LA ENERGIA DE LAS OLAS	José Luis Aguiriano, Pablo Ruiz-Minguela	TECNALIA

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
OCEANTEC	24/03/2017	Colegio de Ingenieros industriales de Bizkaia	Energía de las olas: La experiencia Oceantec	Borja de Miguel	
OCEANTEC	30/03/2017	III Bilbao Marine Energy Week	Wave Energy: an industry with a bright future	Patxi Etxaniz	
OCEANTEC	30/03/2017	III Bilbao Marine Energy Week. Opera Workshop	How O&M influenced MARMOK-A-5 design	Borja de Miguel	
OCEANTEC	29/06/2017	ENERMAR 2017 (Gran Canarias)	OCEANTEC experience in Open Sea conditions to Reduce Wave Energy Cost	Patxi Etxaniz, Raúl Rodríguez	TECNALIA, EVE
OCEANTEC	18/05/2017	Universidad de Mondragón	Energía de las olas: La experiencia Oceantec	Urtzi Lazcano	
OCEANTEC	05/07/2017	Oceaneranet Workshop (PLOCAN)	How O&M influenced MARMOK-A-5 design	Patxi Etxaniz	
UEDIN	06/12/2016	IES Conference 2016	The OPERA project	David Crooks	
IST	20/01/2017	2017 Maynooth University Wave Energy Workshop	Control of the PTO system of OWCs: feedback vs model predictive control	Joao Henriques	

6 Oral Communications

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
UNEXE	06/07/2017	PRIMaRE 2017 (Southampton)	The Importance of Getting Your Feet Wet: Field Measurements from the OPERA Project	S.D. Weller, L. Johanning	
IST	25/10/2016	AWTEC 2016 (Singapour)	Rated power and control of and oscillating-water-column wave energy converter	António Falcao, Joao Henriques, Luís Gato	

IST	12/06/2017	Portuguese Meeting on Optimal Control - EPCO2017 (Lisbon)	A new high-order Discontinuous Galerkin Method for the numerical solution of continuous and bang-bang optimal control problems	Henriques, J.C.C., Lemos, J.M., Eça, L., Gato, L.M.C., Falcão, A.F.O.	
IST	25/06/2017	OMAE 2017 (Tronheim)	A Comparison of Bi-radial and Wells Air Turbines on the Mutriku Breakwater OWC Wave Power Plant	Joao Henriques, Wanang Sheng, António Falcao, Luís Gato	UCC
IST	25/06/2017	IFAC 2017 (Toulouse)	A Discontinuous Galerkin Method for optimal and sub-optimal control applied to an oscillating water column wave energy converter	Joao Henriques, J. M. Lemos, L. Eça, J. N. H. Valerio, L. M. C. Gato, A. F. O. Falcao	
UCC	11/04/2017	EVER 2017 (Monaco)	Applying Hardware-in-the-Loop capabilities to an ocean renewable energy device emulator	James Kelly and Ross Christie	

5 Exhibitions Attended

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
KYMANER	27/10/2016	WavEC seminar Blue & Renewable Tomorrow (Lisbon)	Roll-up and B2B meetings presentation	José Varandas	
EVE	08/11/2016	OEE 2016 (Brussels)	Stand 24: Roll-up, video, leaflets	Imanol Zenborain, Olatz Ajuria	EVE, TECNALIA
EVE	22/03/2017	Seanergy 2017 (Normandy)	Stand: Video, leaflets	Olatz Ajuria, Dorleta Marina, JL Villate, Patxi Etxaniz	EVE, BiMEP, TECNALIA, OCEANTEC
TECNALIA	28-30/03/2017	BMEW 2017	Stand: Roll-up, video, leaflets	Pablo Ruiz-Minguela, Patxi Etxaniz, Yago Torre-Enciso, Olatz Ajuria	OCEANTEC, EVE, BiMEP

OCEANTEC	13/03/2017	TC 114 Marine energy - Wave, tidal and other water current converters	Roll-up, video, leaflets, prototype	Patxi Etxaniz	

1 Workshop Organised

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	30/03/2017	Ocean Energy Conference - BMEW 2017	Open Sea Operating Experience To Reduce Ocean Energy Costs	Pablo Ruiz-Minguela, Imanol Zenborain, Dorleta Marina	EVE, BiMEP

15 General Public presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	15/02/2017	Visits to testing facilities	Mutriku Wave Power Plant visit Vocational training school (Zubigune Fundazioa) 25 people	Olatz Ajuria	-
EVE	15/02/2017	Visits to testing facilities	Mutriku Wave Power Plant visit ENEL 1 person	Olatz Ajuria	TECNALIA OCEANTEC
EVE	17/03/2017	Visits to testing facilities	Site visit to Mutriku test site of the Vicepresident of the European Commission Maros Šefčovic.	Olatz Ajuria	EVE

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	07/04/2017	Visits to testing facilities	Mutriku Wave Power Plant visit University of the Basque Country 25 people	Olatz Ajuria	
EVE	04/05/2017	Visits to testing facilities	Mutriku Wave Power Plant visit University of Mondragón 20 people	Olatz Ajuria	
EVE	15/05/2017	Visits to testing facilities	Mutriku Wave Power Plant visit University of the Basque Country 30 people	Olatz Ajuria	
EVE	24/05/2017	Visits to testing facilities	Mutriku Wave Power Plant visit PLOCAN - Oceanic Platform of the Canary Islands 2 People	Olatz Ajuria	
EVE	25/05/2017	Visits to testing facilities	Mutriku Wave Power Plant visit John Huckerby - former IEA OES chaiman 1 person	Olatz Ajuria	TECNALIA
OCEANTEC	17/05/2017	Pint of Science	Retos y oportunidades de la energía de las olas	Endika Aldaiturriaga, Borja de Miguel	
OCEANTEC	19/05/2017	Visits to testing facilities	Visit of ENEL to MARMOK-A-5 at BiMEP	Patxi Etxaniz	
OCEANTEC	26/05/2017	Visits to testing facilities	Visit of Iberdrola Renewables to MARMOK-A-5 at BiMEP	Patxi Etxaniz	
OCEANTEC	29/05/2017	Visits to testing facilities	Visit of Bridon-Bekaert to MARMOK-A-5 at BiMEP	Patxi Etxaniz	
OCEANTEC	13/07/2017	Visits to testing facilities	Visit of MERIC to MARMOK-A-5 at BiMEP	Patxi Etxaniz	

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
IST	08/05/2017	Visits to testing facilities	Visit of Managing Director of NewEnergyWorld and staff during the dry tests at IST laboratory	Luis Gato, Jose Varandas	KYMANER
IST	11/05/2017	Visits to testing facilities	Visit of Director of EDP Inovação during the dry tests at IST laboratory	Luis Gato, Jose Varandas	KYMANER

4.3 STAGE 3 (M19-M30): ENGAGING WITH TARGET GROUPS

4.3.1 OPEN ACCESS

2 Scientific Publications

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	01/01/2018	OMAE	Numerical Simulation of Control Strategies at Mutriku Wave Power Plant	Faÿ, François-Xavier; Kelly, James; Henriques, João; Pujana, Ainhoa; Abusara, Mohammad; Mueller, Markus; Touzon, Imanol; Ruiz-Minguela, Pablo	UCC, IST, UNEXE
UNEXE	04/02/2018	Ocean Enegineering (Elsevier)	Assessing the performance durability of elastomeric moorings: Assembly investigations enhanced by sub-component tests	T. Gordelier, D. Parish, P.R. Thies, S. Weller, P. Davies, P.Y. Le Gac, L. Johanning	UNEXE

1 Research Dataset

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	22/11/2017	ZENODO	DS_Wave_BiMEP: Wave resoruce at BiMEP (Spain) – Dataset updated on 13/07/2018	Joseba Lopez Mendia	OCEANTEC, BIMEP

4.3.2 SOCIAL MEDIA

15 Entries in LinkedIn

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	30/08/2017	TECNALIA Marine Energy Group (LinkedIn)	First technical results of H2020 OPERA project disseminated at EWTEC 2017	Pablo Ruiz-Minguela	IST, UNEXE, UEDIN
TECNALIA	05/10/2017	TECNALIA Marine Energy Group (LinkedIn)	First version of wave resource data at Mutriku (Spain)	Pablo Ruiz-Minguela	EVE
TECNALIA	25/10/2017	TECNALIA Marine Energy Group (LinkedIn)	Ocean Energy Europe Conference & Exhibition, 25 - 26 October in Nantes	Pablo Ruiz-Minguela	ALL
TECNALIA	27/10/2017	TECNALIA Marine Energy Group (LinkedIn)	INEA reviews technical progress of H2020 OPERA project in Brussels	Pablo Ruiz-Minguela	ALL PARTNERS
TECNALIA	01/12/2017	TECNALIA Marine Energy Group (LinkedIn)	#OPERAH2020 project publishes high quality wave resource time series at BiMEP Biscay Marine Energy Platform test site.	Pablo Ruiz-Minguela	OCEANTEC, BIMEP
TECNALIA	14/12/2017	TECNALIA Marine Energy Group (LinkedIn)	MARMOK-A-5 celebrates its first anniversary in the water connected to the grid	Pablo Ruiz-Minguela	OCEANTEC, BIMEP
TECNALIA	05/03/2018	TECNALIA Marine Energy Group (LinkedIn)	DNV GL has issued the statement of compliance after the in-depth design assessment of OCEANTEC's MARMOK-A-5	Pablo Ruiz-Minguela	OCEANTEC, DNV GL, BIMEP
TECNALIA	23/03/2018	TECNALIA Marine Energy Group (LinkedIn)	Open sea operating experience from H2020 OPERA project to be disseminated at ICOE2018	Pablo Ruiz-Minguela	TECNALIA, IST, OCEANTEC
TECNALIA	26/04/2018	TECNALIA Marine Energy Group (LinkedIn)	OPERA project meets in Porto from 18-20 April for their second General Assembly meeting	Pablo Ruiz-Minguela	ALL

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	12/06/2018	TECNALIA Marine Energy Group (LinkedIn)	OPERA Project stand at ICOE2018	Pablo Ruiz-Minguela	ALL
TECNALIA	13/06/2018	TECNALIA Marine Energy Group (LinkedIn)	Open sea operating experience to avoid repeating early engineering mistakes in wave energy	Pablo Ruiz-Minguela	ALL
TECNALIA	15/06/2018	TECNALIA Marine Energy Group (LinkedIn)	OPERA project prepares for the second round of open-sea testing at BiMEP	Pablo Ruiz-Minguela	ALL
TECNALIA	27/06/2018	TECNALIA Marine Energy Group (LinkedIn)	A sophisticated new type of mooring rope has been successfully deployed	Pablo Ruiz-Minguela	TECNALIA, OCEANTEC, UNEXE, BiMEP
UEDIN	13/06/2018	Policy and Innovation Group - LinkedIn	OPERA H2020: Improvements on Life-cycle assessment (LCA)	Tianna Bloise-Thomaz	ALL
UEDIN	14/06/2018	Policy and Innovation Group - LinkedIn	OPERA H2020: Accelerating the establishment of standards for the wave energy sector	David Crooks	ALL

4.3.3 MASS MEDIA

2 Articles in Ocean Energy Magazine

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	12/02/2018	Wave and Tidal Energy Network	Basque Country special issue	various	TECNALIA, OCEANTEC, BiMEP, EVE

TECNALIA	13/06/2018	OES report	Spotlight on Ocean Energy	various	TECNALIA, OCEANTEC, BiMEP, EVE

10 Press Releases

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	13/09/2017	OPERA website, social networks	OPERA Consortium awarded the Yoshio Masuda Memorial Price at EWTEC 2017	Alberto Bonilla	ALL PARTNERS
TECNALIA	27/10/2017	OPERA website, social networks	INEA reviews technical progress of H2020 OPERA project in Brussels	Alberto Bonilla	ALL PARTNERS
TECNALIA	27/10/2017	OPERA website, social networks	MARMOK-A-5 celebrates its first anniversary in the water connected to the grid	Alberto Bonilla	OCEANTEC, BiMEP
TECNALIA	05/03/2018	OPERA website, social networks	One step forward to de-risk wave energy technologies	Alberto Bonilla	OCEANTEC, DNV GL, BIMEP
TECNALIA	23/03/2018	OPERA website, social networks	Open sea operating experience from H2020 OPERA project to be disseminated at ICOE2018	Alberto Bonilla	TECNALIA, IST, OCEANTEC
TECNALIA	26/04/2018	OPERA website, social networks	OPERA project meets in Porto from 18-20 April for their second General Assembly meeting	Alberto Bonilla	ALL
OCEANTEC	01/10/2017	Wave & Tidal	One year supplying electricity to the Grid	Oceantec	
GM	10/10/2017	AltEngergy Mag, PES Wind	Global Maritime and Other OPERA Consortium Members Win Prize for Presentations at European Wave & Tidal Energy Conference	Paul Goodwin	ALL PARTNERS

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
UNEXE	27/06/2018	OPERA website, UNEXE website, Marine Energy	A sophisticated new type of mooring rope has been successfully deployed at a cutting-edge wave energy device, marking a significant new milestone for the project	Alberto Bonilla, Lars Johanning	TECNALIA, OCEANTEC, BiMEP
IST	07/12/2017	OES News Bulletin (November)	Portugal: Development of a bi-radial turbine	Luis Gato	KYMANER, OCEANTEC, EVE, BIMEP

4.3.4 EVENTS

15 Conference Presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	05/12/2017	2nd clustering meeting on H2020 projects in the area of Ocean Energy (Brussels)	OPERA: Short Project Presentation & Highlight of Technical Results	Pablo Ruiz-Minguela	
TECNALIA	12/06/2018	ICOE2018	Open Sea Operating Experience to Avoid Repeating Early Engineering Mistakes in Wave Energy	Pablo Ruiz-Minguela	ALL PARTNERS
OCEANTEC	17/10/2017	Jornada de desarrolladores de MRE (MERIC)	Energía de las olas: experiencia desde el desarrollo hasta la operación	Patxi Etxaniz	
OCEANTEC	18/10/2017	Universidad Católica de Santiago	Energía de las olas: Una industria con futuro brillante	Patxi Etxaniz	

OCEANTEC	19/10/2017	ECIM	Energía de las olas: operación y biofouling.	Patxi Etxaniz	
OCEANTEC	20/10/2017	Universidad de Concepción	Energía de las olas: Una industria con futuro brillante	Patxi Etxaniz	
OCEANTEC	07/11/2017	CTC	Energía de las olas: experiencia de operación	Patxi Etxaniz	
OCEANTEC	23/11/2017	Jornada APTE	Energía de las olas: Oceantec energías marinas	Borja de Miguel	
OCEANTEC	27/04/2018	GTEO	Experiencia obtenida de dos inviernos de operación en el mar.	Patxi Etxaniz	
OCEANTEC	01/06/2018	Universidad de Mondragón	Energía de las olas: La experiencia Oceantec	Urtzi Lazcano	
OCEANTEC	12/06/2018	ICOE2018	Operating Experience of MARMOK-A-5 OWC Wave Energy Converter at BiMEP	Endika Aldaiturriaga	OCEANTEC
GM	03/05/2018	All Energy 2018 (Glasgow)	OPEN SEA OPERATING EXPERIENCE TO REDUCE WAVE ENERGY COSTS	Paul Goodwin	ALL
UEDIN	13/06/2018	ICOE2018	OPERA H2020: Improvements on Life-cycle assessment (LCA)	Tianna Bloise-Thomaz	ALL
UEDIN	14/06/2018	ICOE2018	OPERA H2020: Accelerating the establishment of standards for the wave energy sector	David Crooks	ALL
IST	13/06/2018	ICOE2018	Test Results of a 30 kW Self-rectifying Biradial Air Turbine-Generator Prototype	Luís Gato	IST

8 Oral Communications

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	29/08/2017	EWTEC 2017 (Cork)	Novel Predictive Latching Control for an Oscillating Water Column Buoy	François-Xavier Faÿ, Margarita Marcos, Eider Robles	TECNALIA
UEDIN	30/08/2017	EWTEC 2017 (Cork)	Demonstration of Socio-economic Cost of Energy Analysis of a Wave Energy Converter Array	D. Crooks, A. D. de Andres, E. Medina-Lopez, H. Jeffrey, P. Ruiz-Minguela	TECNALIA
UNEXE	29/08/2017	EWTEC 2017 (Cork)	Open sea OWC motions and mooring loads monitoring at BiMEP	S.D. Weller, D. Parish, T. Gordelier, B. de Miguel Para, E.A. Garcia, P. Goodwin, D. Tornroos, L. Johanning	OCEANTEC, GM
IST	29/08/2017	EWTEC 2017 (Cork)	Latching and Peak-Power Control of an Oscillating Water Column Based on a Discontinuous Galerkin Method	Henriques, J.C.C., Lemos, J.M., Gato, L.M.C., Falcão, A.F.O., Portillo, J.C.C.	IST
IST	29/08/2017	EWTEC 2017 (Cork)	Performance of the Self-rectifying Biradial Air Turbine with Fixed Guide Vanes Arranged into Concentric Annular Rows	Carrelhas, A.A.D., Maduro, A.R., Gato, L.M.C., Henriques, J.C.C., Falcão, A.F.O.	IST
IST	29/08/2017	EWTEC 2017 (Cork)	Design and optimization of fixed guide-vanes arranged into concentric annular rows for a self-rectifying biradial air-turbine	Maduro, A.R., Gato, L.M.C., Henriques, J.C.C., Ferreira, D.N.	IST
IST	19/06/2018	OMAE 2018 (Madrid)	Numerical Simulation of Control Strategies at Mutriku Wave Power Plant	Fay, F.-X., Kelly, J., Henriques, J.C.C., Pujana, A., Abusara, M., Mueller, M., Touzon, I., Ruiz-Minguela, P.	TECNALIA, IST, UNEXE, UCC
IST	08/07/2018	IJCNN (Rio)	Short-term prediction in an Oscillating Water Column using Artificial Neural Networks	Fernandes, M.P., Vieira, S.M., Henriques, J.C.C., Valério, D., Gato, L.M.C.	IST

4 Exhibitions Attended

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	25/10/2017	OEE 2017 (Nantes)	Stand: Roll-up, video, leaflets	Olatz Ajuria, Dorleta Marina, JL Villate	EVE, BiMEP, TECNALIA
EVE	12/06/2018	ICOE2018	Stand: Roll-up, video, leaflets	Olatz Ajuria, Pablo Ruiz-Minguela, JL Villate	EVE, TECNALIA
TECNALIA	20/11/2017	EUSKAMPUS 2017 (Bilbao)	Poster: Comparison of control strategies for the Biradial turbine in the Mutriku wave power plant	François-Xavier Faÿ, Ainhoa Pujana, Pablo Ruiz-Minguela, Eider Robles	TECNALIA
KYMANER	12/12/2017	Wavec seminar 2017 (Lisbon)	Demonstration and testing infrastructures for the development of the blue economy	José Varandas	KYMANER

9 General Public presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	30/11/2017	Visits to testing facilities	BiMEP and Mutriku Wave Power Plant visit MERIC -Centro de Investigación e Innovación en Energía Marina 4 people	Olatz Ajuria	BiMEP OCEANTEC
EVE	20/03/2018	Visits to testing facilities	Mutriku Wave Power Plant visit Vocational training school (Zubigune Fundazioa) 25 people	Jon Lekube	
EVE	23/04/2018	Visits to testing facilities	BiMEP and Mutriku Wave Power Plant visit IDAE - Institute for the Diversification and	Jon lekube	BiMEP

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
			Saving of Energy 5 people		
EVE	15/05/2018	Visits to testing facilities	Mutriku Wave Power Plant visit Air conditionning equipment manufacturer 12 people	Jon Lekube	
EVE	28/05/2018	Visits to testing facilities	Mutriku Wave Power Plant visit Energy Agency of Andalucia 4 People	Jon Lekube	
EVE	08/06/2018	Visits to testing facilities	BiMEP and Mutriku Wave Power Plant visit MORE - Master on Offshore Renewable Energy 12 people	Jon Lekube	BiMEP
OCEANTEC	25/04/2018	Visits to testing facilities	Visit of St Joseph de Hazparne Institute (France) to MARMOK-A-5 at BiMEP	Urtzi Lazcano	
OCEANTEC	09/11/2017	Other visits	Visit of LTU to OCEANTEC offices	Patxi Etxaniz	
OCEANTEC	15/11/2017	Other visits	Visit of South Africa Delegation to OCEANTEC offices	Patxi Etxaniz	

4.4 STAGE 4 (M31-M42): INFLUENCING DECISION-MAKING

4.4.1 OPEN ACCESS

4 Scientific Publications

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
UEDIN	27/06/2019	Energies	O&M Models for Ocean Energy Converters: Calibrating through Real Sea Data	Tianna Bloise Thomaz, David Crooks, Encarni Medina-Lopez, Leonore van Velzen, Henry Jeffrey, Joseba Lopez Mendia, Raul Rodriguez Arias and Pablo Ruiz Minguela	TECNALIA
IST	01/07/2019	Renewable and Sustainable Energy Reviews	Test results of a 30 kW self-rectifying biradial air turbine-generator prototype	A. A. D. Carrelhas, L. M. C. Gato, J. C. C. Henriques, A. F. O. Falcão, J. Varandas	Kymaner
IST	15/07/2019	Renewable and Sustainable Energy Reviews	Dynamics and control of air turbines in oscillating-water-column wave energy converters: analyses and case study	J. C. C. Henriques, J. C. C. Portillo, W. Sheng, L. M. C. Gato, A. F. O. Falcão	UCC
IST	15/07/2019	Renewable Energy	Oscillating flow rig for air turbine testing	F.X.Correia da Fonseca, J. C. C. Henriques, L. M. C. Gato, A. F. O. Falcão	

6 Scientific Manuscripts (pending approval)

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA		Renewable Energy	Development and real sea testing of a predictive controller in the Mutriku wave power pant	François-Xavier Fay, Eider Robles, Marga Marcos, Endika Aldaiturriaga, Eduardo F. Camacho	IDOM-OCEANTEC
TECNALIA		Renewable Energy	Comparative assessment of control strategies for the biradial turbine at the Mutriku OWC Plant: Simulation and Hardware-in-the-Loop experiments	François-Xavier Faÿ, J.C.C. Henriques, James Kelly, Markus Mueller, Moahammad Abusara, Wanan Sheng, Marga Marcos	UNEXE, IST, UCC
UNEXE		Renewable Energy	Field measurement and numerical simulations: comparison and validation of dynamic response and mooring loads from field measurements	Sam D. Weller, Arini N. Rhahida, B. de Miguel Para, E.A. Garcia, P. Goodwin, D. Tornroos, Lars Johanning	IDOM-OCEANTEC, GM
IST		Renewable Energy	Design and experimental validation of guide-vanes arranged into multiple concentric annular rows for a self-rectifying biradial air-turbine	A. R. Maduro, L. M. C. Gato, A. A. D. Carrelhas, J. C. C. Henriques, D. N. Ferreira	
IST		Energy	Experimental study of a self-rectifying biradial air turbine with guide-vanes arranged into multiple concentric annular rows	A. A. D. Carrelhas, L. M. C. Gato, J. C. C. Henriques, A. F. O. Falcão	
UCC		Energies	Applying International Power Quality Standards for Current Harmonic Distortion to Wave Energy Converters and Verified Device Emulator	James Kelly, Endika Aldaiturriaga, Pablo Ruiz-Minguela	IDOM, TECNALIA

2 Research Datasets

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
IST	24/05/2019	ZENODO	H2020 OPERA Project - Mutriku database: Operating data collected at the Mutriku wave power plant from July 2017 to June 2018	Joao Henriques	TECNALIA, IDOM, EVE
UCC	12/07/2019	ZENODO	H2020 OPERA Project - Voltage and current data for IEC 62600-30 power quality monitoring from the Mutriku Wave Power Plant and Lir National Ocean Test Facility electrical laboratory	James Kelly	TECNALIA, IDOM, EVE
IDOM	23/07/2019	ZENODO	Online data query - BiMEP turbine and control testing	Endika Aldaiturriaga	TECNALIA, BiMEP

4.4.2 SOCIAL MEDIA

23 Entries in LinkedIn

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	31/08/2018	TECNALIA Marine Energy Group (LinkedIn)	OPERA's biradial turbine shipped to workshop for its assembly into MARMOK-A-5	Pablo Ruiz-Minguela	TECNALIA, OCEANTEC, KYMANER, EVE, BiMEP
TECNALIA	07/09/2018	TECNALIA Marine Energy Group (LinkedIn)	H2020 OPERA project publishes results from biradial turbine testing campaigns at Mutriku	Pablo Ruiz-Minguela	ALL

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	30/10/2018	TECNALIA Marine Energy Group (LinkedIn)	OPERA participates at OEE2018	Pablo Ruiz-Minguela	TECNALIA, OCEANTEC/IDOM, BiMEP, EVE
TECNALIA	06/02/2019	TECNALIA Marine Energy Group (LinkedIn)	More data streams for the assessment of long-term cost reductions in H2020 OPERA	Pablo Ruiz-Minguela	ALL
TECNALIA	14/02/2019	TECNALIA Marine Energy Group (LinkedIn)	Open sea operating experience from H2020 project at the Bilbao Marine Energy Week	Pablo Ruiz-Minguela	ALL
TECNALIA	22/02/2019	TECNALIA Marine Energy Group (LinkedIn)	New Opera video showcases progress and results	Pablo Ruiz-Minguela	ALL
TECNALIA	20/03/2019	TECNALIA Marine Energy Group (LinkedIn)	Workshop of H2020 Ocean Energy projects at INEA	Pablo Ruiz-Minguela	
TECNALIA	27/03/2019	TECNALIA Marine Energy Group (LinkedIn)	OPERA project meets in Bilbao from 27-28 March for their third General Assembly meeting	Pablo Ruiz-Minguela	ALL
TECNALIA	15/04/2019	TECNALIA Marine Energy Group (LinkedIn)	New report from ETIP Ocean mentions research progress in OPERA project	Pablo Ruiz-Minguela	ALL
TECNALIA	30/04/2019	TECNALIA Marine Energy Group (LinkedIn)	OPERA and MET-CERTIFIED co-organise workshop on the application of IEC standards	Pablo Ruiz-Minguela	ALL
TECNALIA	15/05/2019	TECNALIA Marine Energy Group (LinkedIn)	Exciting week at All Energy 2019 for OPERA	Pablo Ruiz-Minguela	GM, UCC

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	28/05/2019	TECNALIA Marine Energy Group (LinkedIn)	OPERA H2020 Final Event	Pablo Ruiz-Minguela	
TECNALIA	03/06/2019	TECNALIA Marine Energy Group (LinkedIn)	Technical visit of Master REM students to BiMEP	Pablo Ruiz-Minguela	
TECNALIA	25/06/2019	TECNALIA Marine Energy Group (LinkedIn)	MARMOK-A-5 waves goodbye to BiMEP	Pablo Ruiz-Minguela	ALL
TECNALIA	27/06/2019	TECNALIA Marine Energy Group (LinkedIn)	OPERA Final Event - Open Sea Operating Experience to Reduce Wave Energy Cost	Pablo Ruiz-Minguela	ALL
TECNALIA	19/07/2019	TECNALIA Marine Energy Group (LinkedIn)	OPERA Finale	Pablo Ruiz-Minguela	ALL
EVE	20/02/2019	Youtube	New Opera video: https://www.youtube.com/watch?v=Px26idK701c	Imanol Zenborain	ALL PARTNERS
EVE	05/10/2018	LinkedIn	Refitted MARMOK-A-5 is bobbing again in BiMEP	Olatz Ajuria	All
EVE	30/10/2018	LinkedIn	Last results of MARMOK-A5 develpoment and recent reinstallation at BiMEP under OPERA	Olatz Ajuria	OCEANTEC/IDOM, BiMEP
EVE	20/02/2019	EVE Facebook	Ocean energies at work at BiMEP test centre, in the framework of OPERA European Project.	Imanol Zenborain	ALL
EVE	20/06/2019	EVE Twitter	OPERA European project finishes 3 years of work with relevant industrial innovations and an operational cost reduction of 50% for wave energy.→ http://opera-h2020.eu @bimep_sa @tecnalia #euskalenergia	Imanol Zenborain	ALL

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
IST	04/10/2018	Facebook	Biradial turbine was already assembled at the Marmok and moved offshore to BiMEP.	Ana Carrelhas	OCEANTEC, KYMANER, BiMEP
IST	04/10/2018	Facebook	Control room during MARMOK-A-5 redeployment at BiMEP	Ana Carrelhas	OCEANTEC, BiMEP

4.4.3 MASS MEDIA

1 Article in Ocean Energy Magazine

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	29/05/2019	SETIS Magazine	No. 20 - Ocean Energy: Design tools for ocean energy farms: the importance of optimising farm layout to minimise costs	Pablo Ruiz-Minguela, Vincenzo Nava	ALL

2 Press Releases

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	05/10/2019	OPERA website, social networks	Refitted MARMOK-A-5 is bobbing again in BiMEP waters	Alberto Bonilla	ALL
TECNALIA	27/06/2019	OPERA website, social networks	OPERA Final Event - Open Sea Operating Experience to Reduce Wave Energy Cost	Alberto Bonilla	ALL

4.4.4 EVENTS

5 Conference Presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	14/03/2019	3rd clustering meeting on H2020 projects in the area of Ocean Energy (Brussels)	OPERA: Short Project Presentation & Highlight of Technical Results	Pablo Ruiz-Minguela	TECNALIA
IDOM-OCEANTEC	13/02/2019	IV Bilbao Marine Energy Week	Proyecto OPERA: Open Sea Operating Experience to Reduce Wave Energy Cost	Patxi Etxaniz	ALL
GM	16/05/2019	All Energy 2019 (Glasgow)	OPEN SEA OPERATING EXPERIENCE TO REDUCE WAVE ENERGY COSTS - PROJECT UPDATE	Paul Goodwin	ALL
IST	13/11/2018	V Marine Energy Conference 2018 (Bilbao)	R&D on wave energy conversion at Instituto Superior Técnico, Lisbon: forty years of story and prospects for future work	Antonio Falcao	IST
UCC	27/09/2018	ETIP webinar	Applicability and Extension of IEC Technical Specifications Using Open Sea Data	Fiona Devoy McAuliffe	ALL

2 Exhibitions Attended

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
TECNALIA	30/10/2018	OEE2018 (Edinburgh)	Stand: Roll-up, video, leaflets	Pablo Ruiz-Minguela, Yago Torre-Enciso, Dorleta Marina, Olatz Ajuria, Jon Lekube, Patxi Etxaniz, Borja de Miguel	BiMEP, EVE, OCEANTEC/IDOM
GM	15/05/2019	All Energy 2019 (Glasgow)	Stand: Roll-up, video, leaflets	Paul Goodwin	ALL

3 General Public presentations

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
EVE	30/11/2017	Visits to testing facilities	BiMEP and Mutriku Wave Power Plant visit MERIC -Centro de Investigación e Innovación en Energía Marina 4 people	Olatz Ajuria	BiMEP OCEANTEC
EVE	20/03/2018	Visits to testing facilities	Mutriku Wave Power Plant visit Vocational training school (Zubigune Fundazioa) 25 people	Jon Lekube	
EVE	23/04/2018	Visits to testing facilities	BiMEP and Mutriku Wave Power Plant visit IDAE - Institute for the Diversification and Saving of Energy 5 people	Jon lekube	BiMEP

1 Workshop Organised

Lead partner	Date	Channel (name)	Title of the dissemination material	Authors	Involved Partners
UCC	14/05/2019	AllEnergy 2019 Exhibition and Conference in Glasgow	APPLICATION OF THE IEC STANDARDS: REAL WORLD EXPERIENCE FROM THE OPERA & MET-CERTIFIED PROJECTS	Florent Thiebaut, Dr James Kelly, Dr David Crooks, Dr Lars Johanning, Peter Scheijgrond, John Griffiths	EVE, UNEXE, UEDIN

5. CONCLUSIONS

The effectiveness of the Plan for Dissemination and Communication has been periodically measured in order to guarantee that all stakeholders were reached and provided with appropriate information. This periodic assessment provided useful feedback on what worked and what needed refinement, it gave the opportunity to shape future iterations of the Plan for Dissemination and Communication and helped align it with the exploitation plan.

The objectives of the dissemination and communication activities have been deployed in stages during the project lifetime. In this last reporting period, the dissemination and communication activities were mainly focused on influencing decision-making within organisations regarding the uptake of OPERA outputs and thus supporting the implementation of the Exploitation Plan.

Although the **project website** is considered by the EC as the primary information source for the target stakeholders, it has been seen that **social media** channels are also important for the ocean energy sector audience. For instance, the most viewed post in LinkedIn during the project had more than twice the number of views than the total number of sessions of the website over a 12-month period. Unfortunately, a high number of views in social networks does not directly translate into more visits to the project website.

Mass media have been additional avenues for the promotion of the project objectives and results. A large number of news and press releases has been uploaded in the project website and further disseminated through social networks, which have significantly increased their impact. The combination of different channels for the dissemination of the same communication material has proved to be quite an efficient way of communication to reach the target audience.

Besides, consortium partners have actively participated in large number of external **events** and organised two project workshops (i.e. on operating experience at sea and on application of standards) which attracted a lot of interest. It is worth mentioning a significant number of visits targeted at the general public to the test infrastructures and the prototype.

In terms of **open access** to scientific publications and research data, the progress is roughly in line of the overall target.

Dissemination efforts in the last year of the OPERA project have been sustained with a particular emphasis on open access **publications**, articles in **ocean energy magazines** and the second **workshop** organisation.

6. REFERENCES

[1] D8.1 Project website, OPERA 2016.

[2] D8.9 Communication Material, OPERA 2017.

[3] ZENODO. Available at: http://www.zenodo.org/

[4] D8.7 Data Management Plan, OPERA 2018.