Open Sea Operating Experience to Reduce Wave Energy Costs

Deliverable D8.9

Communication Material (final version)

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EXECUTIVE SUMMARY

This document comprises Deliverable D8.9 of OPERA's Work Package 8 (WP8). It updates D8.8 and reports on the final set of communication material produced for the dissemination and communication activities of the OPERA project.

The communication material and visual identity of the project that has been developed to support the implementation of the Plan for Dissemination and Communication (D8.2 & D8.3) is made available on the dedicated project website (D8.1) for easy downloading to a wider international audience. All the information used for dissemination and communication purposes are tailored to the specific dissemination channel.

A wide range of communication materials have been produced to be used in the different dissemination channels comprising the following:

Material / Channel	Visual identity	Project document.	Press releases	Audio-visual	Disseminat. kit
Project website	✓	✓	✓	✓	
Open repositories	✓	✓			
Social media	✓	✓	✓	✓	
Mass media	✓		✓	✓	
Events	✓	✓		✓	✓

The visual identity encompasses the project logo, EU emblem, and document templates. The project presentation material mainly consists of the OPERA project leaflet, roll-up banner, standard project presentation and OPERA Summary Slide. Press releases will be produced at main project milestones. The audiovisual material includes public pictures, videos and partner logos. Last but not least, a dissemination kit will be compiled with diverse material for dissemination at workshops, public events and exhibitions, including the project leaflet, a pen drive, notebook/notepad and pen/pencil.

Although most communication materials have been available since the first stages of the project, some have been generated with results obtained during the project lifetime, such as press releases and audiovisual material.

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ABBREVIATIONS AND ACRONYMS

CC-BY-ND	Creative Commons Attribution No-Derivative
Dx.x	Deliverable numbered, for example D8.2
KoM	Kick-off meeting
WP	Work Package

1. INTRODUCTION

This document comprises Deliverable D8.9 of OPERA's Work Package 8 (WP8). It updates D8.8 and reports on the final set of communication material produced for the dissemination and communication activities of OPERA project.

WP8 involves the promotion of the OPERA project and its final results by providing targeted information to various audiences beyond the project's own community, including the media and the general public, permitting a two-way exchange.

The communication material and visual identity of the project that has been developed to support the implementation of the Plan for Dissemination and Communication (D8.2 & D8.3) is made available on the dedicated project website (D8.1) for easy downloading to a wider international audience. All the information used for dissemination and communication purposes are tailored to the specific dissemination channel.

A strong visual identity, with a distinct logo and branding style will guarantee a consistent design, which is essential for the overall recognition of the project. In this document, templates are defined to help maintain the integrity of the project through the production of high-quality materials. A consistent branding for a project exhibits the same design elements and colour schemes across all media. This means that all communication material used within the OPERA project as well as the website share the same or very similar design features to create a unified and recognisable brand.

A wide range of communication materials have been produced to be used in the different dissemination channels comprising the following:

Material / Channel	Visual identity	Project document.	Press releases	Audiovisual	Disseminat. kit
Project website	✓	✓	✓	✓	
Open repositories	✓	✓			
Social media	✓	✓	✓	✓	
Mass media	✓		✓	✓	
Events	✓	✓		✓	✓

Although most communication materials have been available since the first stages of the project, some have been generated with results obtained during the project lifetime, such as press releases and audiovisual material. Project reports, conference presentations and posters, magazine articles, scientific publications and datasets are part of the Plan for Dissemination and Communication of the project (D8.2 & D8.3) and are reported in the evaluation of these activities (D8.10).

You may find more details of these in the next sections.

2. VISUAL IDENTITY

2.1 PROJECT LOGO

After several suggestions for the design of the logo the consortium agreed on the logo in next figure.

- Font: Bauhaus 93
- Colours (R/G/B): 1: Dark blue: 37/79/119 2: Blue: 0/176/240

FIGURE 1. OFFICIAL OPERA LOGO

This logo has been included in the design and production of the OPERA website, document templates, leaflet, roll-up banner and PowerPoint presentations.

2.2 EU EMBLEM

In addition to the OPERA logo, any communication activity related to the OPERA project funded by the grant will display the EU emblem and include the following text to indicate that said result was generated with EU financial assistance: "*This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 654444*".

The European flag is the emblem of the European Union. The European flag symbolises both the European Union and, more broadly, the identity and unity of Europe.

FIGURE 2. EU EMBLEM

When displayed together with another logo, the EU emblem will have appropriate prominence.

2.3 DOCUMENT TEMPLATES

Templates for the most relevant project documentation have been prepared by means of Microsoft Office 2010. It is compulsory to use the templates for all the documentation generated within OPERA project.

The documentation templates are the followings:

- Deliverables.
- Technical notes.
- Meetings minutes.
- Presentations.
- Internal WP Progress Report.

FIGURE 3. MAIN DOCUMENT TEMPLATES

3. PROJECT PRESENTATION MATERIAL

A short, jargon-free publishable summary of the project will be permanently available for download on the website and regularly updated in different formats.

3.1 PROJECT LEAFLET

The project leaflet contains key messages for different stakeholders, namely a short summary on the project, main objectives, a description of the overall approach and methodology as well as information on OPERA's consortium and contact information.

The project leaflet is available on the project website at: http://opera-h2020.eu/wp-content/uploads/2017/06/Opera-Leaflet.pdf

The size of the page is 297x210 mm. It was designed by TECNALIA and the content was prepared and agreed with the entire Consortium.

Leaflets will be handed out at events throughout the project, including international marine energy conferences, workshops, congresses, exhibitions and meetings, as part of the dissemination kit given to attendees. For instance, it has been distributed at the Annual Ocean Energy Europe Conference and Exhibition in Brussels (2016), Seanergy Conference in France (2017) and the Marine Energy Week Congress in Bilbao (2017).

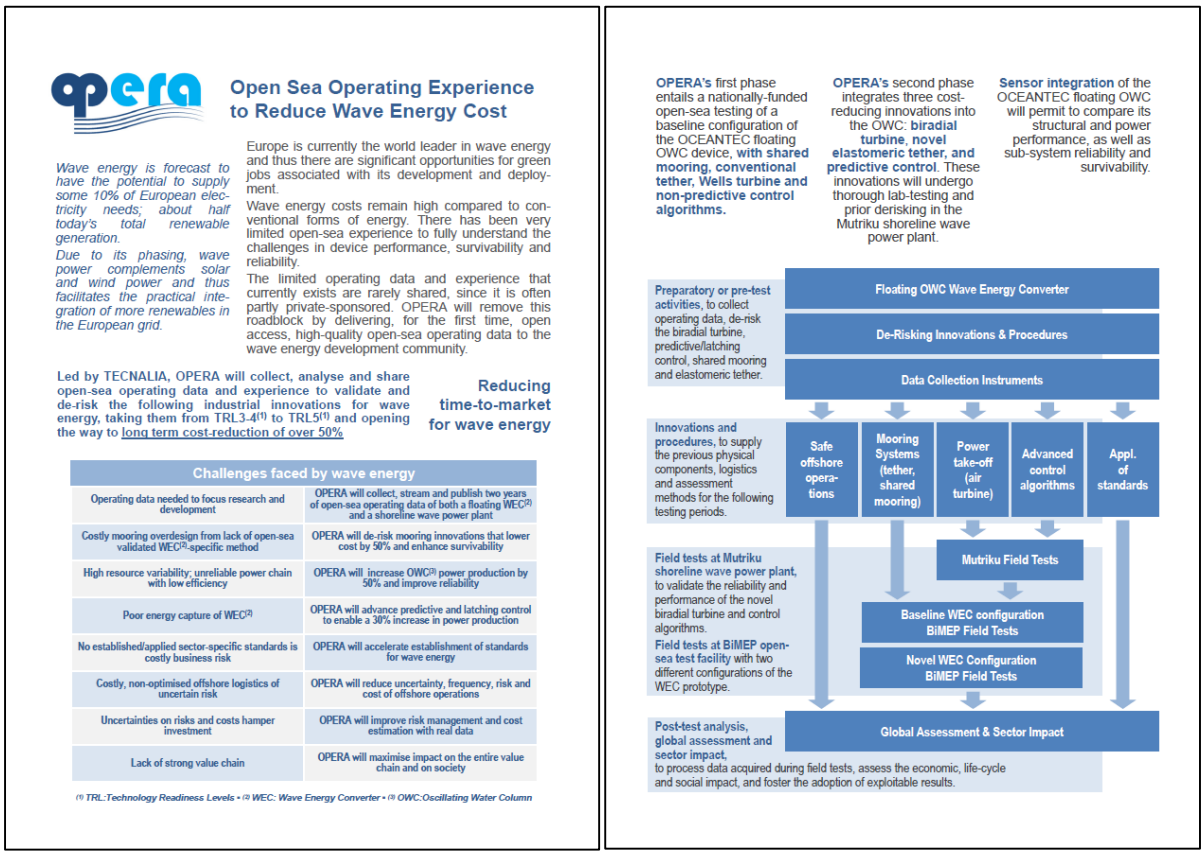


FIGURE 4. OPERA LEAFLET. FINAL VERSION.

3.2 ROLL-UP BANNER

A roll-up banner with the image of the OPERA project will be used in events and exhibitions to promote its main objectives.

The roll-up banner displays the main project message: "*Long term cost-reduction of 50% for wave energy through:*

- *The validation and de-risking of four industrial innovations*
- *Delivering open access, high-quality open-sea operating data to the wave energy development community*"

The banner is available for download on the project website: http://opera-h2020.eu/wp-content/uploads/2016/03/Roll-up-Opera_final.pdf

The size of this roll-up banner is 800x2000 mm. It has been designed by EVE and the content has been prepared and agreed with the entire Consortium. The banner design is shown in the next figure.

FIGURE 5. OPERA ROLL-UP BANNER. FINAL DESIGN.

The roll-up has already been used in exhibitions at the Conference and Exhibition of the Ocean Energy Europe 2017 in Brussels, the Marine Energy Week held in Bilbao in April 2017 and in several meetings of the Basque ocean energies working group formed, by Basque companies of the sector, among others.

3.3 STANDARD PROJECT PRESENTATION

A PowerPoint presentation has been created for members of the Consortium to use when presenting the project at internal meetings, external conferences or fairs. The presentation can be tailored to the time available at a particular event as far as the content remains the same. Based on the project leaflet, it gives more information on the project concept and key results.

The size of the page is 254x190 mm. It was designed by TECNALIA and the content was prepared and agreed with the entire Consortium.

The standard presentation is available on the project website at: http://opera-h2020.eu/wp-content/uploads/2016/03/OPERA_T8.3_Official-Presentation_TECNALIA_20170714_v1.4.pdf

FIGURE 6. STANDARD OPERA PRESENTATION

3.4 OPERA SUMMARY SLIDE

A single PowerPoint presentation slide has been produced for Consortium members to acknowledge their participation in the OPERA project within other presentations. It condenses the key project messages and activities.

The size of the page is 254x190 mm. It was designed by TECNALIA and the content was prepared and agreed with the entire Consortium.

The single-presentation slide is available on the project website at: http://opera-h2020.eu/wp-content/uploads/2017/06/OPERA-in-one-slide.pdf

FIGURE 7. OPERA SUMMARY SLIDE. FINAL VERSION.

4. PRESS RELEASES

4.1 KICK-OFF MEETING

A press release concerning the Kick-off meeting (KoM) of the project was issued at project start, and was developed for the main regional media and translated for the global audience.

It was prepared by TECNALIA and EVE, and agreed with the entire Consortium.

The KoM press release is available in the project website at: http://opera-h2020.eu/?p=222

Opera, Playing with Waves for a Low Carbon Energy Future

by Alberto Bonilla | Mar 21, 2016 | News |

Wave energy is forecast to have the potential to supply some 10% of European electricity needs; about half today's total renewable generation. Due to its phasing, wave power complements solar and wind power and thus facilitates the practical integration of more renewables in the European grid. Europe is currently the world leader in wave energy and thus there are significant opportunities for green jobs associated with its development and deployment.

Wave energy costs remain high compared to conventional forms of energy. There has been very limited open-sea experience to fully understand the challenges in device performance, survivability and reliability.

The limited operating data and experience that currently exists are rarely shared, since it is often partly private-sponsored. Led by TECNALIA, OPERA – Open Sea Operating Experience to Reduce Wave Energy Cost, will remove this roadblock by delivering, for the first time, open access, high-quality open-sea operating data to the wave energy development community. OPERA will collect, analyse and share open-sea operating data and experience to validate and de-risk industrial innovations for wave energy opening the way to long term cost-reduction of over 50%.

OPERA's first phase entails a nationally-funded open-sea testing of a baseline configuration of a Wave Energy Converter (WEC); a floating Oscillating Water Column (OWC) device developed by OCEANTEC, with shared mooring, conventional tether, Wells turbine and non-predictive control algorithms.

OPERA's second phase integrates three cost-reducing innovations into the OWC: a biradial turbine, novel elastomeric tethers, and predictive control algorithms. These innovations will undergo thorough lab-testing and prior de-risking in the Mutriku shoreline wave power plant.

Sensor integration of the OCEANTEC floating OWC will permit to compare its structural and power performance, as well as sub-system reliability and survivability.

The project will perform field tests at Mutriku shoreline wave power plant (Gipuzkoa-Spain), to validate the reliability and performance of the novel biradial turbine and control algorithms; and field tests at bimep open-sea test facility (Bizkaia-Spain) with two different configurations of the WEC prototype.

Process data acquired during field tests will allow post-test analysis, global assessment and sector impact to assess the economic, life-cycle and social impact, and to foster the adoption of exploitable results.

To make this ambitious project a success, OPERA's consortium involves different experienced stakeholders for the whole value chain of the wave energy sector: TECNALIA (Spain), OCEANTEC (Spain), Biscay Marine Energy Platform – bimep (Spain), Ente Vasco de la Energía – EVE (Spain), IBERDROLA Engineering and Construction (United Kingdom), Global Maritime (United Kingdom), DNV GL (United Kingdom), The University of Edinburgh (United Kingdom), The University of Exeter (United Kingdom), Kymaner (Portugal), Instituto Superior Técnico – IST (Portugal), University College Cork – UCC (Ireland).

FIGURE 8. KOM PRESS RELEASE

4.2 PRESS RELEASES AT MAIN MILESTONES

Press releases have been produced, and will be produced at main project milestones in order to increase their impact. The following tentative schedule is envisaged:

- August 2016: Manufacture of the first Basque wave-power generating device.
- October 2016: First deployment of OCEANTEC's floating OWC prototype at BiMEP offshore test site.
- March 2017: Tests of novel elastometric mooring tethers.
- May 2017: Installation of bi-radial turbine at Mutriku test site.
- Spring 2018: Second deployment of Floating OWC prototype at BiMEP.
- Summer 2018: Data collection and preliminary results of the first open-sea testing programme.
- Summer 2019: Decommissioning of prototype; final results.

Press release content will be prepared and agreed between all relevant parties, including notification of where and when press releases are going to be made.

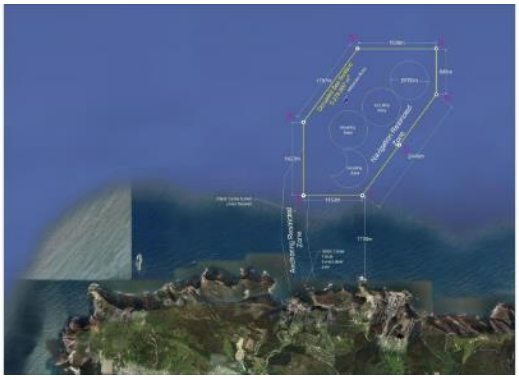
5. AUDIOVISUAL MATERIAL

5.1 PUBLIC PICTURES

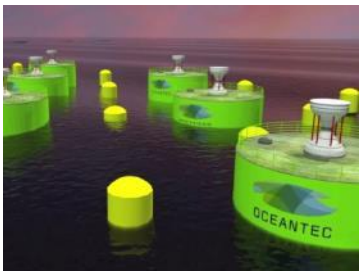
The following images are free to use to communicate the project. They have been used in the project website and are available in the internal collaborative workspace, BOX: https://tecnaliaresearchinnovation.box.com/s/utd2k4mhi7h46ctebzbd8myik676xvm6

The images have a short caption and attribution so that these can be acknowledged when used.

Floating OWC (OCEANTEC)

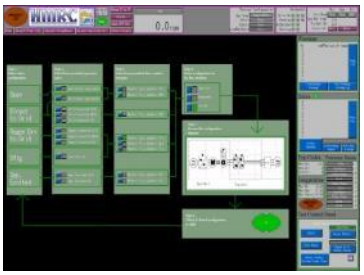


General layout of the open-sea test facilities (BiMEP)

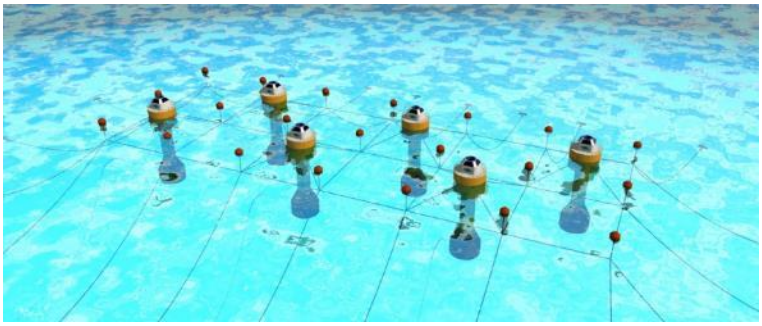


Floating OWC farm (OCEANTEC)

Bi-radial turbine (KYMANER)



Electrical test rig control screen (UCC)



Shared mooring array configuration (OCEANTEC)

Elastomeric tether on deck (UNEXE)

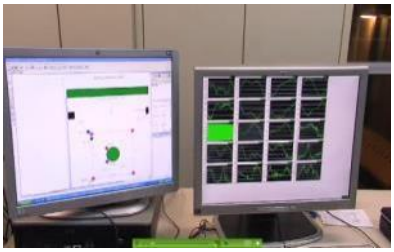
Subsea cable laying vessel (BiMEP)

Turbomachinery test rig (IST)

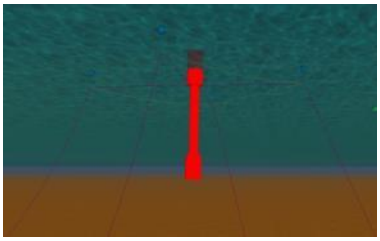
Air view of Mutriku shoreline plant (EVE)

Air view of open-sea test location (BiMEP)

Met-ocean buoy (BiMEP)



Tank testing monitoring (OCEANTEC)



Single cell mooring system (OCEANTEC)

Elastomeric mooring tether (UNEXE)

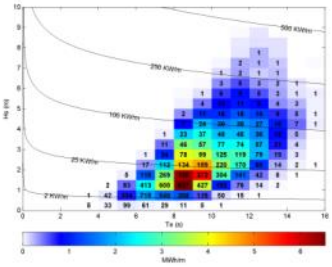
Bi-radial turbine (KYMANER)

Bi-radial turbine (IST-KYMANER)

Electrical PTO test rig (UCC)

Mutriku shoreline chambers (EVE)

Staged validation of control algorithms (TECNALIA)

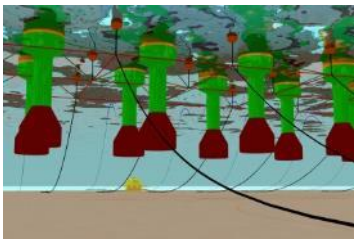


Scatter diagram (BiMEP)

Support vessel (BiMEP)

Towing operation (OCEANTEC)

Up-pending operation (EVE)



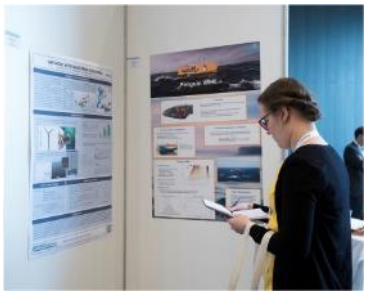
Array shared mooring (OCEANTEC)

Project management (TECNALIA)

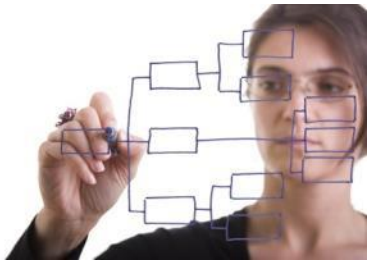
Dissemination: EC Vice-President visit to Mutriku shoreline plant (EVE)

Dissemination: international conferences (TECNALIA)

Dissemination: Exhibitions (TECNALIA)



Dissemination: Poster sessions (TECNALIA)



Project planning (TECNALIA)

FIGURE 9. PUBLIC IMAGES

Public images will be distributed under a Creative Commons Attribution No-Derivative licence (CC-BY-ND). This licence allows copy and redistribution of the material in any medium or format for any purpose, as long as it is not altered and appropriate credit is given to the author.

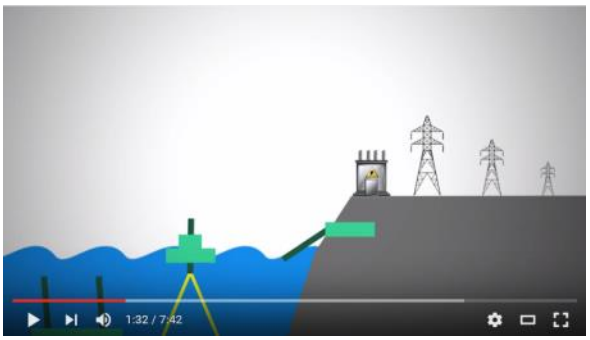
Further picture records of the events, workshops, congresses, as well as the inland and offshore testing works will be uploaded to the website and social media such as Flickr (www.flickr.com).

5.2 VIDEOS

Several videos are available on YouTube (www.youtube.com) and on the OPERA website to educate about ocean energy, and to give a greater understanding of the project innovations.

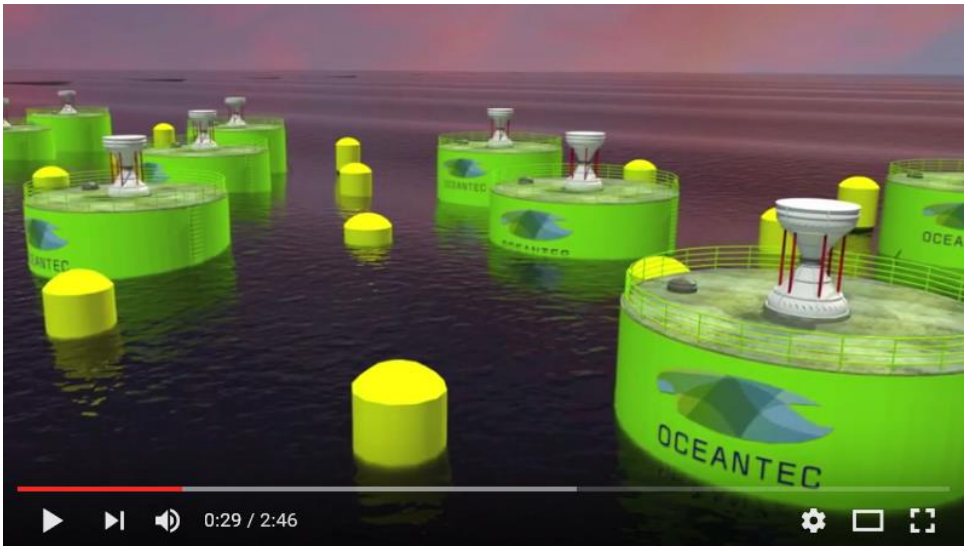
About ocean energy:

EVE Marine Energy: https://www.youtube.com/watch?v=CtKOSj4SdSw



The official OES movie about Ocean Energy: https://www.youtube.com/watch?time_continue=5&v=B1vzxhiqOXQ

About the project innovations:



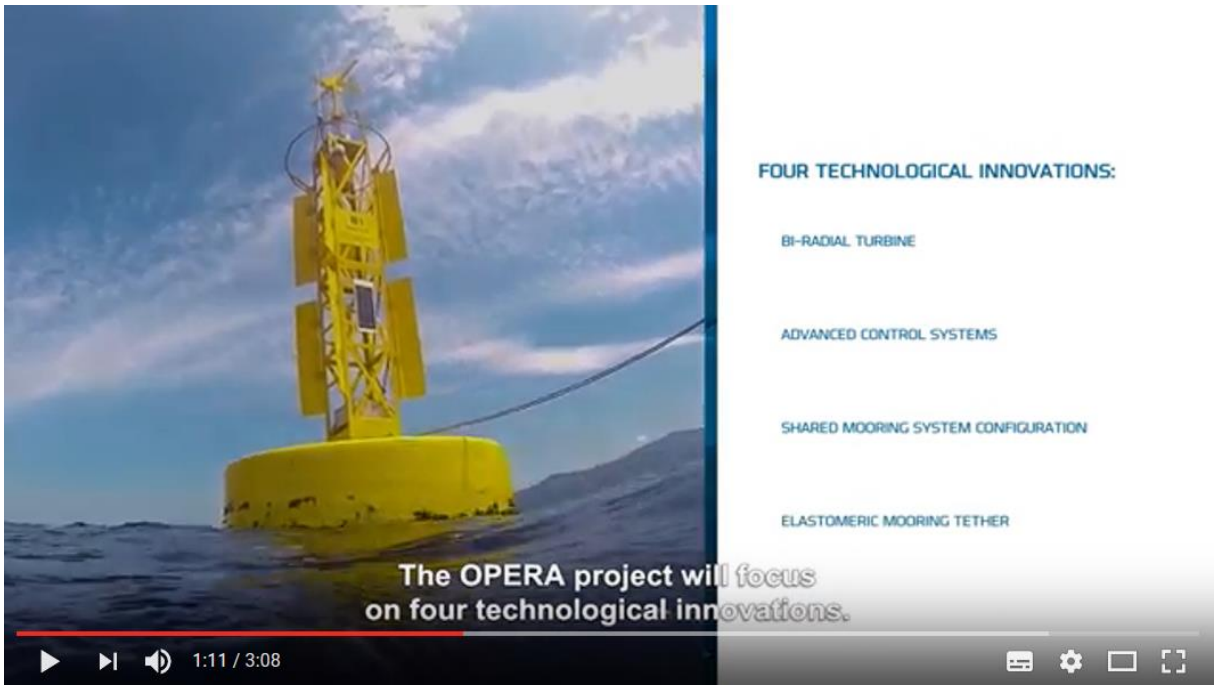
Floating OWC Device: https://www.youtube.com/watch?v=J2aBLNepy4o

Mooring tether tests in DMAC: http://opera-h2020.eu/wp-content/uploads/2016/03/Tether_5th-Feb2013-001_v2.mp4

Bi-radial turbine laboratory tests: http://opera-h2020.eu/wp-content/uploads/2016/04/CORES-001-v3.mp4

Other videos/animations will be produced throughout the project.

The first OPERA video has been released showing the installation of the prototype at BiMEP, the open-sea test site, as well as the key project goals and main innovations.



Official project video: https://youtu.be/57T5yorqHSg and http://opera-h2020.eu/?p=731

The video is exhibited in every visit to the Mutriku wave power plant. Among the visitors who have already watched this release in Mutriku are Maros Sefcovic, Vice-President of the European Commission and Markku Markkula, President of the European Committee of the Regions.

5.3 PARTNER LOGOS

Partner logos are used on the project website, project leaflet, single presentations, roll-up banner and in general may be used in any future communication material.

FIGURE 10. PARTNER LOGOS

6. DISSEMINATION KIT

A dissemination kit will be compiled with diverse material for dissemination at workshops, public events and exhibitions.

This kit will contain material customised with the visual identity of the project, such as:

- Project leaflet.
- Pen drive containing videos, selected deliverables and other dissemination material.
- Notebook or notepad.
- Pen/pencil.
- Attendee badges for workshops.

FIGURE 11. DISSEMINATION KIT (ILLUSTRATIVE)