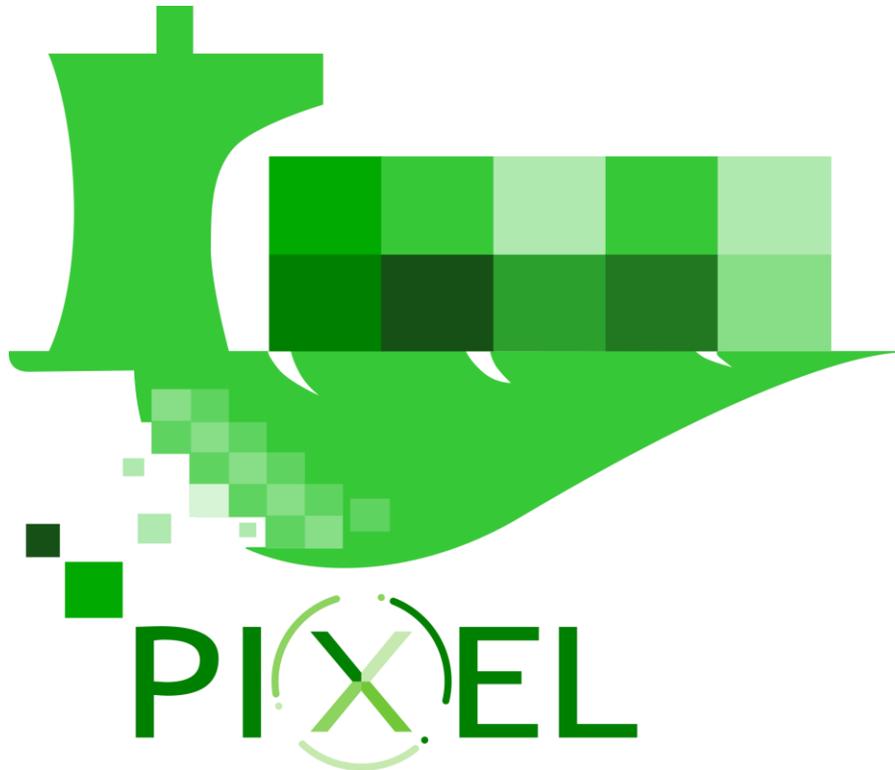


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D9.4 - Report on Dissemination Activities and Update of the Dissemination Plan v1

Deliverable No.	D9.4	Due Date	31-OCT-2019
Type	Report	Dissemination Level	<i>Public (PU)</i>
Version	1.1	Status	Final
Description	This deliverable reflects and formalizes the events, scientific actions and industrial dissemination planned. In this document, a comprehensive description of the PIXEL's role in every industrial niche, scientific forum and public exposure in order to maximize both innovation and impact.		
Work Package	WP9		

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Abstract

This deliverable has been created in the context of the Work Package 9 (*Exploitation, Dissemination and Communication*) of the H2020-funded project PIXEL (Grant No. 769355).

In this document we have summarised the actions taken in the first execution period of PIXEL regarding communication and dissemination. Besides, the document reflects the update of the Dissemination Plan that was delivered in month M6.

First of all, the Dissemination Plan is mentioned: how the Consortium has approached it, how it has been followed by the partners, the actions taken aligned with the agreed schedule and how it is evolving. The communication trends in the sector change, same as new events are created and PIXEL needs to adapt its plan and focus to meet the global objectives. Thus, thereafter an update made on this plan is depicted as well.

Later, a full report on the dissemination actions performed by the project from M6 until M18 takes place. The report is divided according to the different type of dissemination activities described in the predecessor document from where this deliverable comes (deliverable D9.3). Namely, the actions are split into: communication, scientific dissemination and industrial dissemination. Further sub-divisions are included for the sake of readability and introduced as sub-sections in the document.

Finally, conclusions and metrics are provided to globally understand where we stand and where we are headed to. An updated schedule of forthcoming events to attend by the Consortium is included as well.

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Table of contents

Table of contents	4
List of tables	5
List of figures	5
List of acronyms	7
1. About this document.....	8
1.1. Deliverable context	8
2. Dissemination plan	9
2.1. Plan compliance	9
2.2. Updates on the Dissemination Plan.....	9
3. Report on dissemination activities.....	10
3.1. Report on communication activities.....	10
3.1.1. Website	10
3.1.2. Video.....	16
3.1.3. Social networks.....	20
3.1.4. Supporting material.....	25
3.1.5. Communication KPIs evaluation M1-M18.....	30
3.2. Report on Scientific Dissemination activities	31
3.2.1. Publications.....	31
3.2.2. Other scientific dissemination actions	34
3.2.3. Scientific Dissemination KPIs	35
3.2.4. Scientific Dissemination KPIs evaluation M1-M18	39
3.3. Report on Industrial Dissemination	40
3.3.1. The Industrial prioritization	40
3.3.2. New methodology.....	42
3.3.1. Participation at events M1-M18.....	47
3.3.2. Liaison with Ports of the Future Network.....	50
3.3.3. Industrial Dissemination KPIs	51
3.3.4. Industrial Dissemination KPIs evaluation M1-M18	55
3.3.5. Future schedule of events to attend.....	56
3.4. Dissemination Matrix update	59
4. Conclusions	60

List of tables

Table 1. Deliverable context.....	8
Table 2. Video deliveries strategy in PIXEL.....	16
Table 3. Report on PIXEL Video Channel - M1 to M6	17
Table 4. Social networks report.....	20
Table 5. Recommendations of periodic content for Twitter.....	21
Table 6. Recommendations of periodic content for LinkedIn.....	21
Table 7. Newsletter – publication plan.....	26
Table 8. Global statistics – articles publication.....	31
Table 9. Publications PIXEL M7-M18.....	32
Table 10. Grant Agreement KPIs for Scientific Dissemination	36
Table 11. Scientific dissemination activities. Set of KPIs.....	37
Table 12. Classifications used within the progress assessment of KPIs.....	38
Table 13. Evaluation of Scientific Dissemination KPIs at M18.....	39
Table 14. The target groups. The Port / Industrial sector and others.....	40
Table 15. The list of assessment Criteria (Ca).....	41
Table 16. The event detection. The details of the event.....	43
Table 17. List of events tracking M1-M18.....	48
Table 18. Liaison with Ports of the Future Network	50
Table 19. Targeted values extracted from Pixel Grant Agreement	51
Table 20. Industrial dissemination activities. Set of KPIs.....	52
Table 21. Classifications used within the progress assessment of KPIs.....	54
Table 22. Industrial Dissemination evaluation at M18.....	55
Table 23. Events under observation to potentially be attended by PIXEL ports in M18-M36	57

List of figures

Figure 1. PIXEL landing page (website).....	11
Figure 2. Main menu of PIXEL website.....	12
Figure 3. Use-cases menu of PIXEL website	12
Figure 4. Publications menu of PIXEL website	12
Figure 5. Events and calendar PIXEL website.....	13
Figure 6. Website metrics – visitors	14
Figure 7. Website metrics – top referring sites.....	14
Figure 8. Website metrics – top pages.....	15
Figure 9. Website metrics – browser statistics	15
Figure 10. YouTube channel playlists.....	18
Figure 11. YouTube Analytics	19
Figure 12. Recommendations of speech in social media.....	21
Figure 13. Recommended voice characteristics for publishing in social media.....	22
Figure 14. Recommendations of social media posting.....	22
Figure 15. Tentative timetable of publications (tool used for publishing and tracking).....	22
Figure 16. Analytics LinkedIn - visitors.....	24
Figure 17. Analytics LinkedIn - visitors.....	24
Figure 18. T-shirt design (front and back).....	25
Figure 19. Folder created for Dissemination kit.....	26
Figure 20. PIXEL roll-up	27
Figure 21. New poster design.....	28
Figure 22. New leaflet	29
Figure 23. Monitoring tool for Scientific Dissemination KPIs	38
Figure 24. Procedure (11-step) for Industrial Events conduction.....	42
Figure 25. The industrial event preparation. The monitoring sheet.	45

Figure 26. People from PIXEL partners participating to the industrial events (GA)..... 52
Figure 27.. PIXEL partners attendance until June 2019..... 53
Figure 28. Screenshot of the table monitoring KPIs in OnlyOffice platform 53
Figure 29. Dissemination Matrix (M6 of the project) 59

List of acronyms

Acronym	Explanation
CA	Consortium Agreement
COREALIS	Capacity with a pOsitive enviRonmEntal and societAL footprInt: portS in the future era
CSA	Coordination and Support Action
DX.Y	Deliverable Y of work package X
EC	European Commission
ESPO	European Sea Ports Organisation
ETP	European Technology Platform
EU	European Union
GA	Grant Agreement
ICT	Information and communication technologies
IoT	Internet of Things
IMO	International Maritime Organization
IP	Intellectual Property
MX	Month X of execution of the project
OBOR	One Belt One Road
PEI	Port Environmental Index
PIXEL	Port IoT for Environmental Leverage
R&D	Research and Development
SJR	Scimago Journal & Country Rank
SMP	Small and Medium Ports
TX.Y	Task no. Y within WP no. X
WP	Work Package

1. About this document

The idea behind this deliverable is to report about the dissemination and communication activities performed by PIXEL partners between October 2018 and October 2019.

The report is provided according to the sections, tables, formats and plan established in M6 through the deliverable D9.3. Despite new things have been introduced in the whole dissemination management and execution, the basis is kept and the global storyline is being respected and followed.

This document will serve, later, as the reference point for the next update of dissemination report (D9.5) at the end of the project.

1.1. Deliverable context

Table 1. Deliverable context

Keywords	Lead Editor
Objectives	This deliverable must be considered as highly transversal, not being addressed to any particular goal of those listed in the GA. Nevertheless, following and updating the Dissemination/Communication plan is crucial for the impact creation of the outcomes of the project. A report on the activities assists in realising the impact and success of the project plan.
Exploitable results	PIXEL supporting material created in the context of this deliverable cannot be considered Exploitable Results themselves, but they will surely contribute to disseminate the results of the project and maximizing its scope and coverage in both academic and industrial field.
Work plan	<p>Associated tasks:</p> <p>T9.1 – Communication and impact creation: This deliverable reports about the activities of communication through digital means performed in the period M6-M18.</p> <p>T9.2 and T9.3 – Scientific and Industrial Dissemination: D9.4 reflects the update on the strategy to be undertaken by both the scientific and industrial partners with regard to dissemination, as well as, the activities already conducted till M18.</p> <p>T9.4 – Exploitation and Business plan: Deliverable D9.7 is more focused in T9.4, but in this document the relation with innovation is remarked and clearly, the whole exploitation line had to be aligned with industrial dissemination and communication.</p>
Milestones	N/A
Deliverables	<p>D9.3: The predecessor document. The Dissemination Plan has been the master document taken into account to perform the activities that are reflected in this deliverable. D9.4 follows and updates D9.3.</p> <p>D9.5: The next update of the report on Dissemination and Communication will be based on this deliverable.</p>
Risks	This deliverable does not match with any of the identified risks according to the GA, but concerns arise about the impact of it to the dissemination of PIXEL. Not reaching the expectations of quality and utility of the Dissemination plan, could mean an insufficient spread of the results of the project..

2. Dissemination plan

2.1. Plan compliance

Dissemination activities in PIXEL are targeted to specific communities, such as: (i) the several scientific communities of the different domain fields in PIXEL; (ii) the industrial communities that we direct ourselves to, in order to identify business opportunities, generate leads and commercial opportunities; (iii) the open source communities; (iv) the local governments and port authorities, etc. The tasks T9.2 and T9.3 are dedicated to coordinate these activities. Dissemination is divided in two different tasks depending on its nature:

Scientific dissemination is performed in PIXEL in order to maximize the visibility of the project in the community and academia. Attendance to congresses, giving presentations and other actions (further analysed in this document) have the following objectives:

1. To show PIXEL advances (beyond the state of the art) to the scientific community
2. To enhance PIXEL visibility among academia and other research agents
3. To take advantage of networking activities establishing synergies with other projects and scientific groups
4. To potentiate PIXEL technical flavour and bring latest trends to the transportation field

Industrial dissemination is conducted by the consortium through raising awareness also beyond the affected use case communities (the four pilot-host ports involved in the project). The specific objectives are:

1. To show the PIXEL solutions as a standard, customizable for every port agency and associated actors.
2. To advertise PIXEL technical achievements and prototypes: fundamental knowledge, methodologies and technologies developed during the project.
3. To provide adequate web visibility.
4. To accompany those dissemination actions with presence in international port and maritime solutions fairs, promoting and exhibiting PIXEL advances and benefits.
5. To be aligned and participate with CSA DocksTheFuture in all kind of dissemination events.

During the period M7-M18 the WP9 team has conducted all dissemination and communication activities that are being reported in this document, following the previous assumptions and goals.

2.2. Updates on the Dissemination Plan

During this Dissemination reporting period, not only the performance of activities has been conducted. It is normal that throughout the execution of a project some changes and refinements are needed to be included in a plan. This has been the case in PIXEL and, along this document, some updated/added/refined strategies are thoroughly exposed. The following list summarises the different items included in this document that must be considered from this moment an intrinsic part of the PIXEL Dissemination/Communication Plan:

- Video publication strategy – *see in section 3.1.2.1*
- Newsletter planning – *see in section 3.1.4*
- Website analytics tracking tool – *see in section 3.1.1*
- Social network planning – *see in section 3.1.3.1*
- Social networks tips and recommendations – *see in section 3.1.3.1*
- Twitter and LinkedIn Statistics – *see in section 3.1.3*
- Scientific dissemination KPIs – *see in section 3.2.3*
- 11-step procedure for Industrial Events conduction in PIXEL – *see in section 3.3.2*
- Industrial Dissemination KPIs – *see in section 3.3.3*

3. Report on dissemination activities

This section constitutes the report of the dissemination and communication activities carried out during the corresponding period of the project. In this case, D9.4, the period corresponds to M7-M18.

As it was designed, this section will be common to all of the three deliverables planned for Dissemination Report (due dates in M6, M18 and M36) and will be fulfilled accordingly.

The structure of the section has been designed to cover all the possible diffusion channels considered for communication and dissemination of PIXEL results.

For communication (Virtual Presence), the activity of (i) the website, (ii) the video channel and (iii) social networks will be tracked and finally reported. Additionally, new material created to represent the PIXEL image and concepts in events and communications, will be referred and described.

Regarding dissemination, this report will include the scientific activities performed (publications) and the participation in industrial events.

Finally, the report will be completed with the updated picture of the Dissemination Matrix.

3.1. Report on communication activities

3.1.1. Website

Considering that the PIXEL website is the main element of visibility of the project towards the outside world, it has been significantly improved from the previous release in terms of content, visualization and added functionalities. The base tool for editing purposes is still WordPress CMS, but it includes a new theme, more plugins and, consequently, more content.

The first version of the webpage was rather simple in order to gain fast visibility online (deliverable D9.1). Though it was updated with content and somehow improved by the time deliverable D9.3 was released, it was agreed by the PIXEL Consortium that a new design with more interactive content was necessary.

After several discussions and proposals, the new website was ready by late March 2019.

As already commented in D9.1, the target audience is wide and encompasses different profiles:

- *Project partners*: besides any internal collaborative tool, the project consortium's face is the website, which includes any relevant information and updated results
- *European Commission*: any related personal staff, including Project Officer, should have a fast way for accessing to project information, deliverables and other material.
- *H2020 related projects*: PIXEL is framed in the 'Port of the Future Network', with other 2 RIA projects (Corealis, Port-Forward) and one CSA (DocksTheFuture).
- *Specific industrial partners*: PIXEL is devoted to ports, therefore our primary stakeholders are those working in or for ports, and the way they can benefit, in terms of technology improvement for IoT and environmental awareness. This obviously determines the used language in our communication materials.
- *Specific research/academic partners*: PIXEL proposes state-of-the-art technologies architectures and applications (models and predictive algorithms) related to IoT and provides insights by exploiting real time sensor data, as well as historical data. Results are primarily communicated in form of conferences and papers, which are listed in the website.
- *General audience*: public in general, with a special interest in research projects

3.1.1.1. Website structure and content

The landing page (<https://pixel-ports.eu>) is depicted in Figure 1, which shows the main design. Some initial remarks in comparison to the previous version:

- The logo has been slightly updated
- The main background image is ‘corporative’ for all our current marketing material. It is displayed in a form of a slider, presenting the next upcoming event where PIXEL is participating.
- The slogan has been changed to better impact the industrial sector, including a pitch and a summary paragraph to clarify and summarize the core of PIXEL (the WHAT).
- The PIXEL video is also here as vivid content presenting PIXEL; there is already a design of a new video to be updated, while all videos from PIXEL are available through the PIXEL Youtube channel. In fact, they are suggested, once the PIXEL video has finished.
- Links to social networks are available, but a Twitter feed has been included to automatically generate updated content. Twitter is by far the most active social network in PIXEL, and the website depicts the latest four tweets; it has been monitored and confirmed during the first months of the project lifetime.
- Pilot ports are also easily found in the webpage, so that users directly see the target ports (the WHERE).
- At the bottom of the landing page, any relevant information (contact, project duration, GA reference number, etc.) is provided. The optional subscription to the PIXEL’s newsletter is also included, as well as the Data Protection Policy aligned with the GDPR.



Figure 1. PIXEL landing page (website)

The main menu (top right area) has been changed and enriched in several ways, Which will be described below. The ‘project information’ option is decomposed in various items:

- *Overview*: brief overview of the project with all relevant info
- *PIXEL concept*: PIXEL vision and mission
- *Objectives*: the seven PIXEL objectives briefly listed and summarized
- *Impact*: the five PIXEL impact briefly listed and summarized
- *Consortium*: PIXEL consortium, with logos, description and links
- *Advisory Board*: list of port related experts helping PIXEL to improve

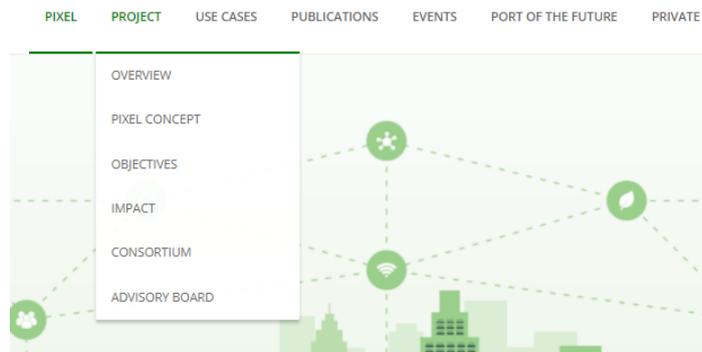


Figure 2. Main menu of PIXEL website

Under the tab ‘use cases’, there is the description the four use cases in PIXEL: energy management in GPMB, Intermodal transport in Monfalcone, Port-city integration in THPA and PPA, and Port Environmental Index as a cross-use case for all four ports. For each use-case, there is a summary in PDF file that users can download.

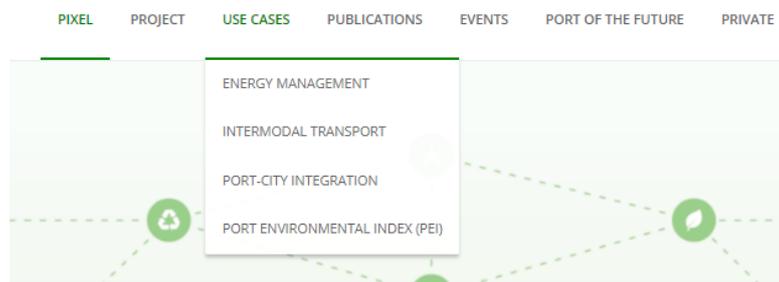


Figure 3. Use-cases menu of PIXEL website

The ‘publications’ section is probably the most important one, as it presents the outputs of the project, while they are being produced. PIXEL is devoted to bring its outputs as soon as they are available to the research and industrial community. This means, for example, that currently the website is already publishing (almost) half of all deliverables, without waiting till the end of the project. The same approach applies for the research papers, and conference presentations. Local media communication material and marketing material (logo, leaflet, poster, roll up and newsletters) are also provided.

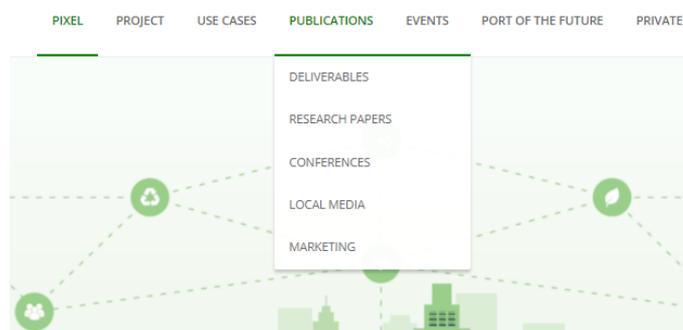


Figure 4. Publications menu of PIXEL website

Events can be easily tracked in a form of a Calendar with links to a more detailed information page (WHAT, WHEN, WHERE, WHO, WHY), containing a brief summary and photos. Such events are, for example, plenary meetings, scientific and industrial conferences, etc.

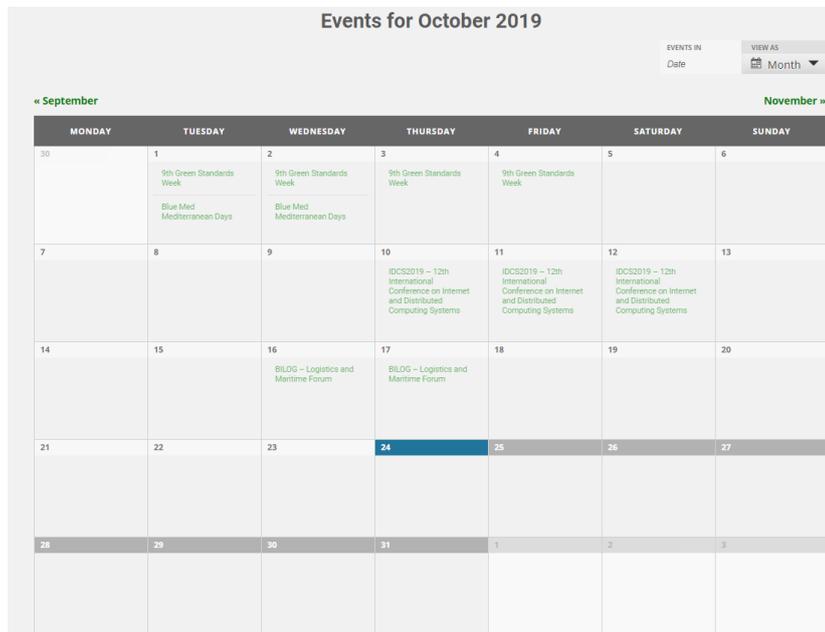


Figure 5. Events and calendar PIXEL website

The Port of the Future' section is dedicated to the cluster of projects involved: 2 RIAs (Corealis and PortForward) and the CSA (DocksTheFuture). Currently, it is mainly informative, but the goal is to show convergences among them, as the results will become available (mainly during the second half of the project), and even possible integration opportunities.

There is a 'private' section intended for internal use, to allow accessibility of intermediate software results during the project. As soon as the software is finalised, the aim is to shift everything to public platforms (e.g. github) with proper related documentation (e.g. Readthedocs). A link will be included in The PIXEL website

3.1.1.2 Additional functionalities

A set of additional functionalities is included in the PIXEL website:

- **Security:** the website includes a SSL certificate in order to browse securely from any fixed or mobile device
- **Privacy:** following the GDPR, the website includes proper management and clearly states the terms of service, privacy and cookies policy. Cookies are only used for building statistics of website usage. Most of current Wordpress cookie related plugins, include the necessary GDPR Cookie consent.
- **Statistics:** There are several ways to get statistics usage. Probably Google Analytics is the most common one, but the information is stored on external servers. The open source alternative (even if there are several) is Matomo, formerly known as Piwik, but also requires an external server. This tool is quite powerful and was tested for a while. However, after comparing it with other options and considering that there was no necessity for details, the consortium decided to use a simple Statistics plugin within Wordpress, which stores the information internally (hits, top visitors, browsers, etc.) and is very easy to manage. A short report provided by this plugin, is provided in the next section.

3.1.1.3 Website metrics and impact

Hereby, a wide vision of the user's traffic in the PIXEL Ports web is provided, as an overview of what was happening on the site, from the beginning of the new website in March 2019 until now (October 2019),

approximately seven months from the creation of the new PIXEL website. The report aims to show updated data about WordPress analytics. The WP statistics plugin, enables obtaining historical data since the new website was launched until now. In the following some graphs are provided .

Hit statistics and average visitors

The total number of visits from March, 20th 2019 until Oct 24th 2019 is **9388**, whereas the number of visitors is **4179**. This means that the average user browses through at least 2 pages on every visit. The average number of visits per day is approximately 20. Compared to the previous deliverable, 150 visits by mid October 2018 were reported, so the number has increased significantly. Note that the target is 2.000 visits (for the entire project duration which is 3 years), so this goal has already been reached.

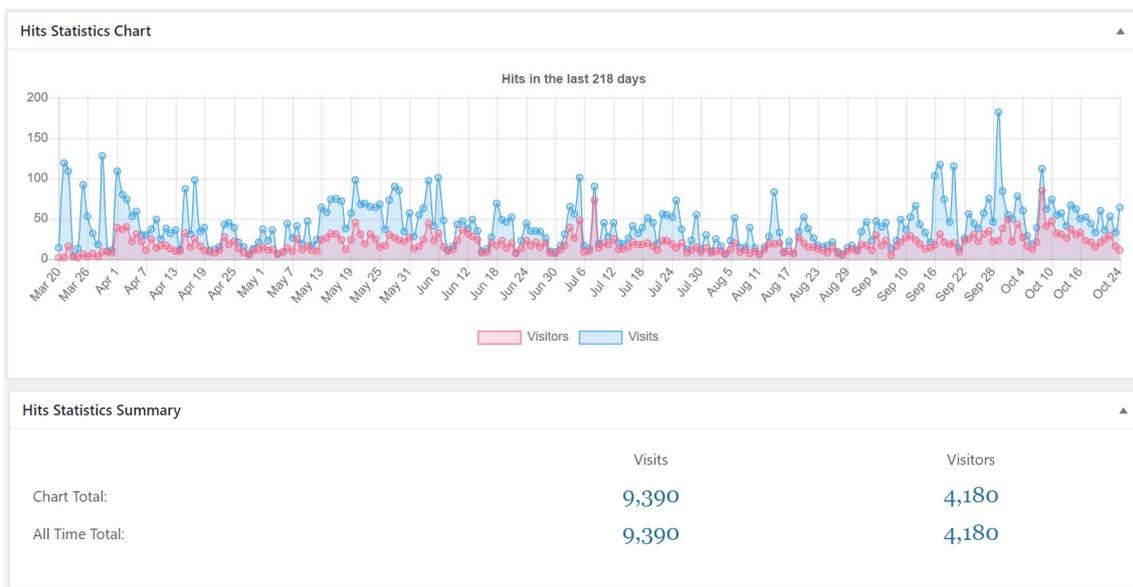


Figure 6. Website metrics – visitors

Top referring sites

Most of the website visits come from visitors accessing the site directly with the URL. The second source of visitors are from Google search engine (605 visits) and third from Twitter (93 visits). Twitter is the social network that provides most of the website visits, coming up next being LinkedIn. This is why there is a strong link between website and Twitter and there is a feed embedded in the webpage. The second general search engine, Bing, only provides 14 occurrences. Yahoo!, DuckDuckGo and Yandex are also supported, but no relevant results so far.

Rating	Site Url	Site Title	Server IP	References
1	pixel-ports.eu	PIXEL – Where IoT meets the Port of the Future	85.13.146.184	3,185
2	www.google.com	Google	216.58.213.196	605
3	t.co	t.co / Twitter	104.244.42.133	93
4	www.pixel-ports.eu	PIXEL – Where IoT meets the Port of the Future	85.13.146.184	3,185
5	www.google.fr	Google	172.217.16.67	17
6	www.bing.com	Bing	204.79.197.200	14
7	www.google.it	Google	172.217.19.67	11
8	www.xlab.si	XLAB XLAB	91.217.255.44	11
9	www.bilog.it	Bilog 2019 – The sustainable, connected and resilient road to 2030	89.119.84.29	9
10	www.linkedin.com	LinkedIn: Log In or Sign Up	185.63.145.1	8

Figure 7. Website metrics – top referring sites

Top pages

The most highly-visited page (by far) is the **landing page**, with 4683 visits. The second one is the **Consortium** page (325), with the **Deliverables** page, ranking third (295). The next ones are: Overview (289), Port of the Future (217), PIXEL Concept (187), Conferences (187), Advisory Board (173), Data Protection (157) and Energy Management (152).



Figure 8. Website metrics – top pages

Browser statistics

Most users are mainly accessing the PIXEL website via Chrome (43%) or Firefox (41%) browsers. Regarding the platforms, despite the diverse environments, users are mostly accessing via Windows (75% of the cases). This probably means that users are mainly employing desktop browsers and making little use of mobile devices (tablets, smartphones), even if the website has been built with a responsive design.

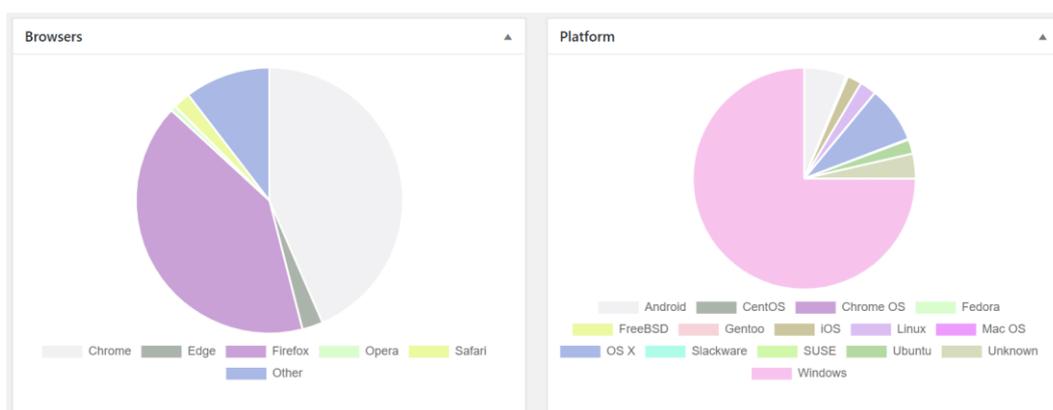


Figure 9. Website metrics – browser statistics

3.1.2. Video

3.1.2.1. Strategy

After the first 6 months of the project, the PIXEL WP9 team decided to establish a strategy and timetable to deliver multimedia material in form of videos. The purpose of this strategy was two-fold:

- To create a solid virtual presence and communication material** related with diverse aspects of the project. The video format was considered by PIXEL partners as the best way to inform **external people** about project advances, as it consists of a dynamic and light way of exposing content. The maximum duration should be moderate (~15 mins) and short videos are preferred.
- To create material for PIXEL partners.** Sometimes the WPs generate dense deliverables that are hard to read and take time to process and assimilate. Condensing information and outputs of technical modules and work packages into synthesized videos, can help, even internal partners in PIXEL, to better comprehend the different developments and advances.

With these ideas in mind, the WP9 team tackled the creation of a plan with very particular proposals. The suggested videos to be delivered, were agreed among the partners considering they may represent a holistic view of the technical and pilot-related work of the project during its whole lifespan.

In Table 2, there is the plan established regarding video deliveries and publications for PIXEL project, during its total duration. The different contents to be created were divided in the following types:

- Overview videos
- Presentation of partners and roles
- Technical modules
- Results
- Other

Table 2. Video deliveries strategy in PIXEL

TYPE	RATIONALE	PARTNER(S)	TITLE
Overview	Provide basic/initial description of the project	UPV	PIXEL an H2020-Funded Research Programme
		UPV	UPV PIXEL Presentation Coordination
Presentation	Present each partner of the consortium and link to the project	UPV	Coordination presentation
		XLAB	Innovation manager presentation
Technical	Present technical developments/components. Some slides to introduce the main ideas, some screen captures for showing how it works. 5 minutes presentation 3 iterations: - Iteration 1 : Due date: M14 (Co-located technical Meeting May) - Iteration 2 : Due date: M20 (before Review) - Iteration 3 : Due date: M33 (end of trials)	PRO	Architecture - Iteration 1
		MEDRI	PEI - Iteration 2
		CATIE	Energy model - Iteration 2
		SDAG,INSIEL	Transportation model - Iteration 2
		CREO	Pollution model - Iteration 2
		IPEOPLE	Port-City Environmental model - Iteration 2
		PRO	Dashboard - Iteration 2
		UPV	Operational Tools - Iteration 2
		ORANGE	Data acquisition layer - Iteration 2
		XLAB	Pixel information hub - Iteration 2
		XLAB	Predictive algorithms - Iteration 3
Results	Present intermediate or final results 5-10 min presentation Due date: Before the final review	ORANGE	Security & Privacy - Iteration 3
		CATIE,GPMB, CERTH	Energy trial in GPMB
		INSIEL,ASPM,SDAG, CERTH	intermodal trial in Monfalcone
		IPEOPLE, PPA, THPA, CERTH	Port-City integration
		MEDRI	Transversal trial PEI
		UPV, PRO	Summary of final result of the project
Other	Other videos detected and recorded	XLAB, CERTH	Exploitation
		AB member (C. Platias)	PIXEL overview from Babis Platias via interview
		AB member (R. Socorro)	PIXEL overview from R. Socorro via interview
		AB member (L. Kolar)	PIXEL overview from L. Kolar via interview

3.1.2.2. Videos created M7-M18

During the last 12 months of the project, the YouTube channel of PIXEL has been populated with **7 new videos**. Most of them, focus on the global perspective of the project and its outcomes, while in just a few, technical results and outputs from technological work that is being conducted in PIXEL are mentioned.

Table 3. Report on PIXEL Video Channel - M1 to M6

id	Full description	Diss. Domain	Date of publishing	Partners	Type of contribution
#VP.N.3	Video presentation of the coordination and main actions and WPs of PIXEL. UPV stuff recorded a video explaining the Project Execution structure and global vision in a non-lecture but more dynamic fashion.	PIXEL global	22-Mar-19	UPV	Video creator https://www.youtube.com/watch?v=gpkOKOa8zmQ&t=111s
#VP.T.1	Video presentation of the partner SDAG and hints of the Friuli-Venezia-Giulia use-case of PIXEL	PIXEL Logistics	17-Jan-19	SDAG	Video creators and recorders https://www.youtube.com/watch?v=7QonzUJR3Btw
#VP.N.5	Innovation Manager presentation. Joao Pita Costa (IM of PIXEL) recorded a .ppt-fostered video explaining the way that PIXEL innovation is being managed and the global exploitation aims and lines.	PIXEL global Innovation	28-May-19	XLAB UPV	Video script and presenter Video recorder and uploader https://www.youtube.com/watch?v=dRJgYZpdZSs
#VP.N.6	PIXEL overview by one member of our Advisory Board: Charalampos Platias. Global comments and answers to 3 key questions about external perspective of PIXEL. Conducted under interview format.	PIXEL global	28-May-19	UPV	Questions preparation Interview conduction Video recorder https://www.youtube.com/watch?v=3AgyazxWXxQ
	PIXEL overview by one member of our Advisory Board: Rafael Socorro. Global comments and answers to 3 key questions about external perspective of PIXEL. Conducted under interview format.	PIXEL global	28-May-19	UPV	Questions preparation Interview conduction Video recorder https://www.youtube.com/watch?v=3AgyazxWXxQ
	PIXEL overview by one member of our Advisory Board: Lucija Kolar. Global comments and answers to 3 key questions about external perspective of PIXEL. Conducted under interview format.	PIXEL global	28-May-19	UPV	Questions preparation Interview conduction Video recorder https://www.youtube.com/watch?v=YUMqjQ0feis&t=2s

#VP.I.1	PIXEL Architecture overview presentation. Technical Coordination of the project (PRO) presents the architecture that is being followed to implement the technology of the PIXEL solution. Conducted under lecture/.ppt format.	ICT-IoT	5-Oct-18	PRO UPV	Presenter. Creator of the video. Video recorder & upload https://www.youtube.com/watch?v=cJsrx1QehLo&t=1s
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The material produced has been aligned with the Strategy, summarising:

- **3 Presentation videos:** From the Coordination, presenting the managerial and technical aspects of PIXEL, in a short dynamic video, recorded at UPV premises and Valencia city. From SDAG (one partner included in the hinterland multimodal use-case) about their role and PIXEL relevance for the FVG region. From XLAB, namely the Innovation Manager, a video about the exploitation and innovation management and execution in PIXEL.
- **1 Technical video,** recorded by the Technical Coordinators (PRO), informing about the IoT architecture selected to frame all PIXEL modules and developments in.
- **3 “Other” videos.** During the 3rd Plenary Meeting, that took place in Valencia in May 2019 (M13), the members of the Advisory Board were invited to attend, in order to provide their view helping the course of the project. Three of those members agreed to be interviewed by UPV staff, with regards to their opinion on the project and similar questions. These interviews were recorded and published in YouTube after the proper permissions and acceptance. Despite not being planned, the WP9 team considered this action as very positive for PIXEL.

3.1.2.3 Statistics and other information

Regarding the YouTube channel itself, it is the portal used to “officially” deliver PIXEL videos. To the date, the videos are uploaded as soon as they are recorded and get approval from the authors. There is a total of 9 videos in the YouTube channel and they are organised according to their nature. For the structure, 4 playlists have been created (for now) that contain all of PIXEL material on this part, which will evolve as soon as new material is created.

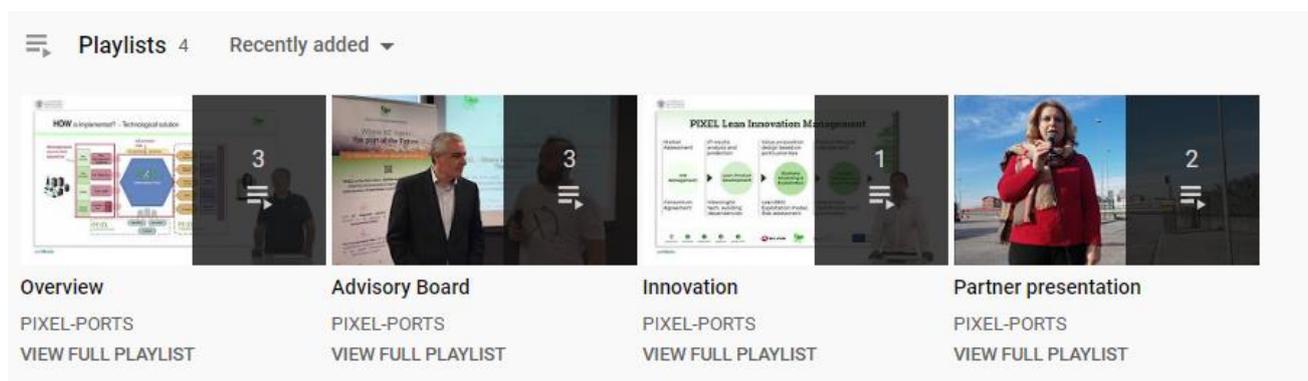


Figure 10. YouTube channel playlists

Graphics of view evolutions are depicted in the following figure, regarding the impact (in numbers) that the channel has up to today.. 9 videos have been uploaded, that sum up a total of 629 views, for 833 minutes watched and 17 permanent subscribers to our content.

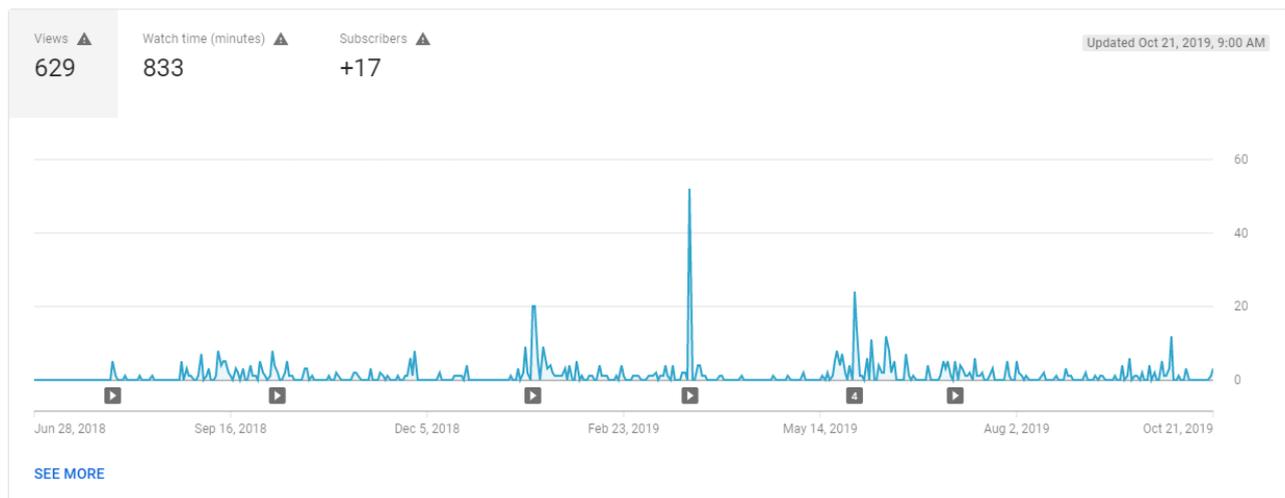


Figure 11. YouTube Analytics

3.1.2.4 Ongoing and future work

Following the plan depicted in 3.1.2.1, the activity on video creation will intensify in the next months. This is associated to the technical advance of the project, which is currently in its peak. In the next paragraphs there is a description of the main work to exert on this regard during the next 18 months:

- **Technical videos:** One video per each relevant technological action is planned. PIXEL main technological “standalone” results are: models, predictive algorithms, PEI and the different layers of the architecture implemented. Therefore, a single video for each component will be created, as soon as they advance and finish, and published at different moment in time..
- **Results videos:** Pilot deployment in the four ports being part of PIXEL are planned. The idea of this section is, to compile the videos during that phase of the project. After installation and integration, a proposal to the ports will be launched, where one member of the port can be filmed whether explaining the pilot outcomes, using the Dashboard or demonstrating these actions in any other manner.
- **Other:** This category was created in order to classify videos not matching the previous ones. It is intended to cover any action coming from sudden initiatives or suggested ideas from any partner. This section, potentially, videos of demonstrators at fairs or industrial events, joint multimedia material with the CSA and other actions of the like, will be included.

Official video of PIXEL

Furthermore, and according to the Grant Agreement, the PIXEL communication supporting material, needs to be renewed by the middle of the project, including a new official video of the project, as part of this material. This moment corresponds to the submission of this deliverable a.

At the moment of submission of this deliverable, the work of delivering the new official video of PIXEL, it is being finalized by the consortium. Despite not being available yet (recording processes usually take time), The script has already been defined and the video should be available soon.

3.1.3. Social networks

During the period M7-M18, social networks have been one of our most powerful tools of Communication. They have been used intensively to inform about forthcoming movements, past events and global advances of the project. They have been nurtured with multimedia content, images, news and other relevant sources of information, to confirm and demonstrate the PIXEL commitment with European research and maritime ports sector.

The advance on Social Networks during this dissemination reporting period, is shown in the following table containing the most current relevant data to each of them:

Table 4. Social networks report

PIXEL Social Media Channels	
Twitter	Tweets: 384 Following: 240 Followers: 191 Likes: 1093 Retweets: 369
YouTube channel	Videos: 9 Views: 629
ResearchGate	Presentations: 2 Reads: 89
LinkedIn	Network: 74 Visitors to the PIXEL Company Page: 63 Updates (reactions) to the PIXEL Company Page: 611
Facebook	Closed as official PIXEL channel

Regarding the website, more information can be found in this document at the section 3.1.1.

Regarding Twitter, more information can be found in the next sub-section: 3.1.3.2

Regarding LinkedIn, more information can be found in this document at the section 3.1.3.3.

ResearchGate is currently the least-used social network in the PIXEL spectrum. This is because, scientific outcomes of the project, are still at early stage. Despite having presented (and got accepted) several scientific articles, the majority of them are still pending to be published and made available to the Community. It is foreseen that for the next Dissemination reporting period a specific sub-section for this channel will be created, more content will be devoted and more attention will be placed on interpreting the results. For the time being, the number on the table above and the extensive reference to Scientific Dissemination in section 3.2 is considered enough.

Finally, the Facebook account needs a little bit of explanation. During the span of M7-M11 the members of the team observed the following phenomena regarding the use of Facebook as a channel for PIXEL communication and virtual presence:

- 1- It is probably not the best way to communicate about a H2020 RIA action due to the nature and target audience of FB social network.
- 2 - enough actions on other "more suitable" fora (Twitter, LinkedIn, YouTube and website) have been conducted/performed.
- 3 - Currently, PIXEL's impact in Facebook is not really relevant (29 followers vs, for instance, 108 followers in Twitter at that moment of the project).

Therefore, the Consortium agreed (through a Plenary Telco) to shut down its activities on Facebook. This was consulted with the Project Officer and it was accepted. Thus, this is the last time this channel is mentioned in a PIXEL report.

3.1.3.1 Strategy and recommendations

Right after finalising the deliverable D9.3, the WP9 team decided to establish an internal strategy for publications in social networks. The main ideas were clear (set in the global Dissemination/Communication plan), the objectives remain unaltered, but with the strategy setting the responsible partners for this communication (mainly, UPV, CREO and XLAB (Innovation Manager), a more productive performance could be accomplished.

The strategy was composed of three legs:

1. Tips and recommendations for social network
2. Tentative timetable of publications, with several periodic updates and actions and envisioning punctual contributions
3. Statistics and tracking of metrics of impact

In this sub-section we are describing both actions in order to let the reader understand why and how we have undertaken the previous points.

1. Tips and recommendations for social networks

After studying the way of conducting social network publications, and taking a look to other H2020 projects (such as INTER-IoT, ACTIVAGE, COREALIS, PortForward, MARISA or Flexiciency), the following “type of contents” were planned to be published periodically:

Table 5. Recommendations of periodic content for Twitter

Periodic actions	Information
Follow Friday - #FF	Follow 3-5 new accounts every Friday
Company Mission Statement	From time to time, simply post a declarative statement about something that matters to the project
Share relevant, local news	After request and checking monthly
Tiny custom pic	PIXEL info / forthcoming event/action



Table 6. Recommendations of periodic content for LinkedIn

Periodic actions	Information
Infographics	Each 3 months, at least one
Share relevant, local news.	After request and checking monthly



Afterwards, several recommendations were set about the tone and voice characteristics that need to be considered when publishing a new post in every PIXEL channel. The following image shows the common speeches that can be adopted in this regard, and squared in red the ones selected for PIXEL:

Voice characteristic	Description	Do	Don't
Passionate	We're passionate about changing the way the world works.	Use strong verbs Be champions for (industry) Be cheerleaders	Be lukewarm, wishy-washy Use passive voice
Quirky	We're not afraid to challenge the status quo and be ourselves.	Use unexpected examples Take the contrarian viewpoint Express yourself	Use too much slang or too many obscure references Use jargon, overplayed examples Lose sight of the audience and core message
Irreverent (secondary characteristic of quirky)	We take our product seriously; we don't take ourselves seriously.	Be playful Use colorful illustrations or examples	Be too casual Use too many obscure, pop-culture examples
Authentic	We're going to give you the tools and insight you need to make your job easier. That may not always be through our product.	Be honest and direct Own any issues or mistakes, and show how you will address them Stick to your word	Use marketing jargon or superlatives Overpromise Oversell the product's capabilities

Figure 12. Recommendations of speech in social media

Furthermore, in PIXEL we are aiming to follow the “Social Media Posting Best Practices” table below:

Figure 13. Recommended voice characteristics for publishing in social media

Social Media Posting Best Practices:	
• Target your Post (Facebook allows post targeting by location and interest)	• Use Hashtags
• Tap into what people are thinking about with holidays & current events	• Use video (particularly on Facebook)
• Share fan-created content	• Keep posts short
• Stick with the 80:20 rule - 80% educational, entertaining, fun content and 20% promotional (this can change if you're in ecommerce).	• Offer social media-exclusive Discounts
• Use images in every post	• Activate the comment section by starting the conversation and responding to comments
• Use quotes	• Include a CTA
• Ask questions	• Show behind-the-scenes
• Use testimonials	• Offer How-to guides
• Tag influencers, users and other brands you like	• Offer facts and trivia
• Be helpful	• Try "fill-in-the-blank" posts
	• Try "Caption this photo" posts
	• Try "Remember when?" posts

Figure 14. Recommendations of social media posting

2. Tentative timetable of publications

The T9.1 team is using a table-like document to update Twitter, LinkedIn and YouTube accounts according to the plan set in the deliverable D9.3 and adjusted to the recommendations that have just been exposed. An extract of that table, is in the following image:

Virtual presence activity	Channel	M11 - March 2019				M12 - April 2019			
		4-8	11-15	18-22	25-29	1-5	8-12	15-19	22-26
Infographic	LinkedIn				ok (PEI)				
Inspiring quote	Twitter + Ln			ok (25th)		ok			
Follow Friday	Twitter	ok	ok	ok	ok	ok	ok	ok	ok
Custom pic (PIXEL fact/event)	Twitter		CSA event		ok (TW)		ok		-
Check relevant local news	WS + LinkedIn								
Creation of Newsletter	Website								
Iteration 1 of videos	YouTube								
Iteration 2 of videos	YouTube								
Iteration 3 of videos	YouTube								
Other	Ws+Tw+Ln						CSA m	TW+Ln	

Figure 15. Tentative timetable of publications (tool used for publishing and tracking)

The idea is to keep control of the (periodic) content to be published, in order to create a consistent image and brand of PIXEL Virtual Presence, while at the same time, to keep track of the outside world trends.

3. *Statistics and tracking of metrics of impact*

- **Twitter Analytics:** For keeping track of the statistics (month by month), the **Twitter Analytics tools** is used, provided by Twitter portal, while a document has been created, that keeps a record of our evolution and the metrics obtained per month. This is an ongoing activity since month M9 of the project. The plan is to condense all this information and extend it from M1 and present it as a reflection and conclusions at the end of the project (M36) through deliverable D9.3. In this report, the information provided in section 3.1.3.2 helps the reader to understand our current impact metrics status.
- **LinkedIn Analytics:** This metrics are consulted in a 3-month frequency. The periodicity of the updates on this social network is lower than Twitter so it takes more time to comprehend patterns, react and post associated content (that also needs more preliminary work). Accordingly to Twitter, a full report on the metrics associated to LinkedIn is foreseen to be provided through the next T9.1 deliverable. In this report, the information provided in section 3.1.3.3 helps the reader to understand our current impact metrics status.
- **YouTube Analytics:** For YouTube, the same rationale applies but with a 6-month basis. This has been so till now, considering the nature of videos uploaded and the frequency. This is planned to be augmented from M18 on, and most likely the Consortium will consult these statistics in a per-request fashion. In this report, the information provided in section 3.1.2.3 helps the reader to understand our current impact metrics status.

3.1.3.2 Twitter

Twitter is the social network that has been more extensively used by PIXEL to communicate with global external audience. This has been the channel through which task T9.1 leaders have posted the advances of the project, have reacted to other entities' movements, have published news and events, and, in general, have made use of, in order to let the people know PIXEL.

For feeding Twitter, we are following all recommendations, timetables and tips exposed in this document (see previous sections) plus including multimedia content (diagrams, images, figures, news) that are internally validated by the T9.1 leader and the Innovation Manager of the project.

A summary of the Twitter statistics that have been achieved (each 2 months) during the period M1-M18 is the following:

	M1&M2	M3&M4	M5&M6	M7&M8	M9&M10	M11&M12	M13&M14	M15&M16	M17&M18
Link clicks	0	22	31	16	47	40	57	23	3
Likes	8	86	89	73	173	267	204	141	52
RTs	2	45	41	25	53	77	65	46	15

3.1.3.3 LinkedIn

For feeding LinkedIn we are following all recommendations, timetables and tips exposed in this document (see previous sections) plus including multimedia content (diagrams, images, figures, news) that are internally validated by the T9.1 leader and the Innovation Manager of the project.

A summary of the **LinkedIn Company Page** statistics that have been achieved (each 2 months) during the period M12-M18, can be seen in Figure 16 and Figure 17.

It must be mentioned that the Company Page was created on M12. Previously, the LinkedIn posts were made through the personal-like account of PIXEL, as if it was an individual entity posting. This decision was made after a discussion on how this is conducted normally in enterprises. Then, the whole WP9 team decided to switch the mode of publishing. Needless to say: strategy, content and everything else was kept the same. Using a

Company Page also makes it easier to track metrics and get useful information out of the posts thanks to the Analytics Tool provided freely by LinkedIn.

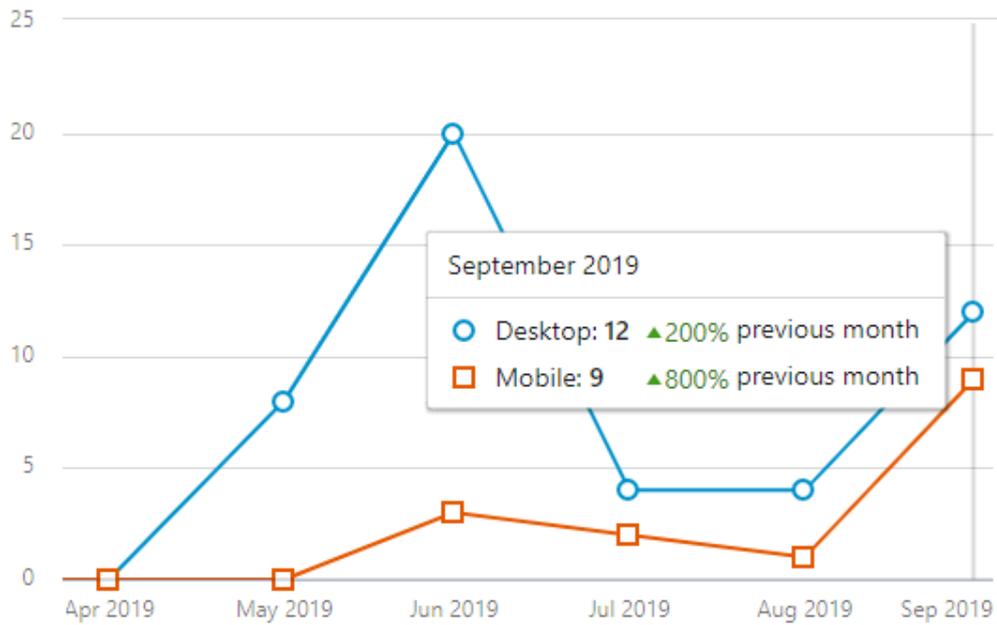


Figure 16. Analytics LinkedIn - visitors

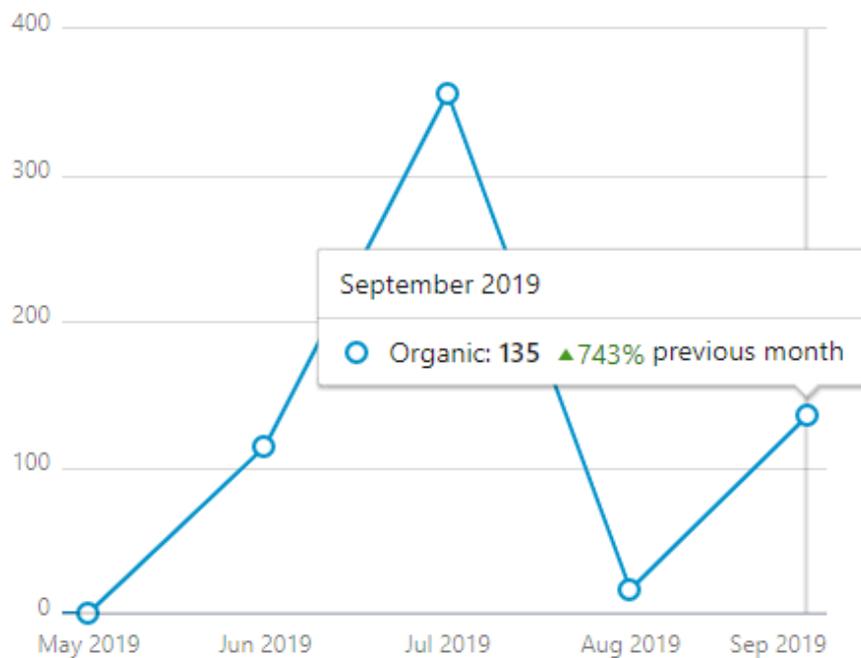


Figure 17. Analytics LinkedIn - visitors

3.1.4. Supporting material

According to our Dissemination/Communication Plan (deliverable D9.3), one of the key components of the Dissemination planning and execution, is to create and establish some common material to identify and show an image for the project.

In this sense, within the scope of one of WP9 tasks (T9.1), some material was created and set as “official” by the partners in the first 6 months of the project. **In the following bullet points, we aim at reporting the use that has been made of those official supporting materials in months M7 to M18:**

- **PIXEL official poster:** It has been the main supporting element during the first 12 months of the project. All related events attended by PIXEL (CSA-promoted, fairs and other actions) were supported by a printed version of the poster, which served very well our engagement aims, because the main objectives and characteristics of the project are reflected by a quick glance.
- **PIXEL official leaflet:** As it is a very lightweight material, the PIXEL Consortium has made use of the leaflets in order to let the audience of events know and have handy information of the project. The events attended from M5 on in which PIXEL has had an active participation role (presenters of a pitch, members of the organisation altogether with the CSA, internal meetings in ports...) were considered as potential niches for publishing the project. The leaflet has demonstrated to be a useful tool.
- **PIXEL stickers:** Several unities have been printed and are used altogether with the leaflets in the event to give a “PIXEL kit” to attendees/potential interesting contacts in the ICT/Ports sector.

This material was consequently published in the different diffusion channels according to the targeted audiences.

Report of new supporting material:

As planned, in this report we are relating the advancing that we have made in the following items:

- Create new ad-hoc material depending on the occasion, event to attend or any other rationale:
 - **T-Shirt:** With the aim of fostering PIXEL branding and boosting the identity of the partners with regards to their participation in the project, the T9.1 team designed a T-shirt. This action was also tackled considering that in the future PIXEL will (most likely) organize a workshop. The goal is to give a T-shirt to all workshop attendees in order to establish a common mindset about PIXEL identity and leitmotif.

The front of the T-shirt portrays the “X” of PIXEL with the three “legs” in which it is supported: environment (leaf symbol), logistics and IoT.



Figure 18. T-shirt design (front and back)

- **Folder:** To give the “PEI dissemination kit” to attendants of workshops, meetings or events organised by PIXEL we designed (and have printed some) a “folder” in which we can include agendas, leaflets, stickers and other information. This was already used and given to AB members.



Figure 19. Folder created for Dissemination kit

- **Newsletter:** We established a plan to periodically create newsletters to expose latest news in PIXEL every 6 months. The idea is to deliver in a document the following information: a) Coordination presentation/summary, b) Technical achievements (half-page), c) list of events attended, latest news and upcoming events and d) Insert relevant news (posts) from website (2-3 pages) The newsletter created is attached in this report in the Appendix PPP and the plan of publishing is as follows:

Table 7. Newsletter – publication plan

EDITION	DUE DATE	MINIMUM CONTENT
1	M13	1. Coordination presentation/summary
		2. Technical achievements (half-1page)
		3. List of events attended, latest news and upcoming events
		4. Insert relevant news (posts) from website (2-3 pages)
		Final layout & publication
2	M19	1. Coordination presentation/summary
		2. Technical achievements (half-1page)
		3. List of events attended, latest news and upcoming events
		4. Insert relevant news (posts) from website (2-3 pages)
		Final layout & publication
3	M25	1. Coordination presentation/summary
		2. Technical achievements (half-1page)
		3. List of events attended, latest news and upcoming events
		4. Insert relevant news (posts) from website (2-3 pages)
		Final layout & publication
4	M31	1. Coordination presentation/summary
		2. Technical achievements (half-1page)
		3. List of events attended, latest news and upcoming events
		4. Insert relevant news (posts) from website (2-3 pages)
		Final layout & publication
5	M37	1. Coordination presentation/summary
		2. Technical achievements (half-1page)
		3. List of events attended, latest news and upcoming events
		4. Insert relevant news (posts) from website (2-3 pages)
		Final layout & publication

This document will be duly delivered to the people inscribed in the mailing list that we have set for this purpose. This list is populated with the main project-related contacts and persons that indicate their email address through an ad-hoc form in the website (see section 3.1.1).

- **Roll-up:** This is a modern and fancy design that was provided by the professional design team of one of our T9.1 partners (XLAB) that reflected both best standards in visual design and own PIXEL colours, rationale and global idea.

The roll-up has been conceived to be printed just for a few times and be brought to the relevant fairs and events in which PIXEL can hold a booth or can have an important role. It has been used so far in several events: 1 internal meeting, 1 CSA-joint action and others.

It is noteworthy that this was the “second-round” official supporting material that was decided to be released earlier in the project (about M9) and it set the path of visual patterns for the rest: new website design, new poster and new leaflet. This way a common colouring and imaging in all of PIXEL dissemination assets has been established. Banners, headers and secondary images of Twitter and LinkedIn, were also changed to be adjusted to this design



Figure 20. PIXEL roll-up

- Update with newer and more modern design of both the poster and leaflet:
 - **New poster:** Drawing from the new design patterns and the wild card banner (crane, vessel, rail and city picture), the official poster of the project has been updated. Despite maintaining certain common elements, several components have been changed in order to reflect more loyally the status of the project. More technological elements (e.g. architecture) have been introduced, the quantity of information has been synthesized to avoid an “introductory” view and the global branding components have been wisely spotted (e.g. “X”).

It must be noted that this design is the one defined and agreed by the partners for the new poster. The image in Figure 21 might not be the final visualization, as it is currently going through a review and “polishing” phase, by a professional visual design team, in order to adapt it to the best design standards.

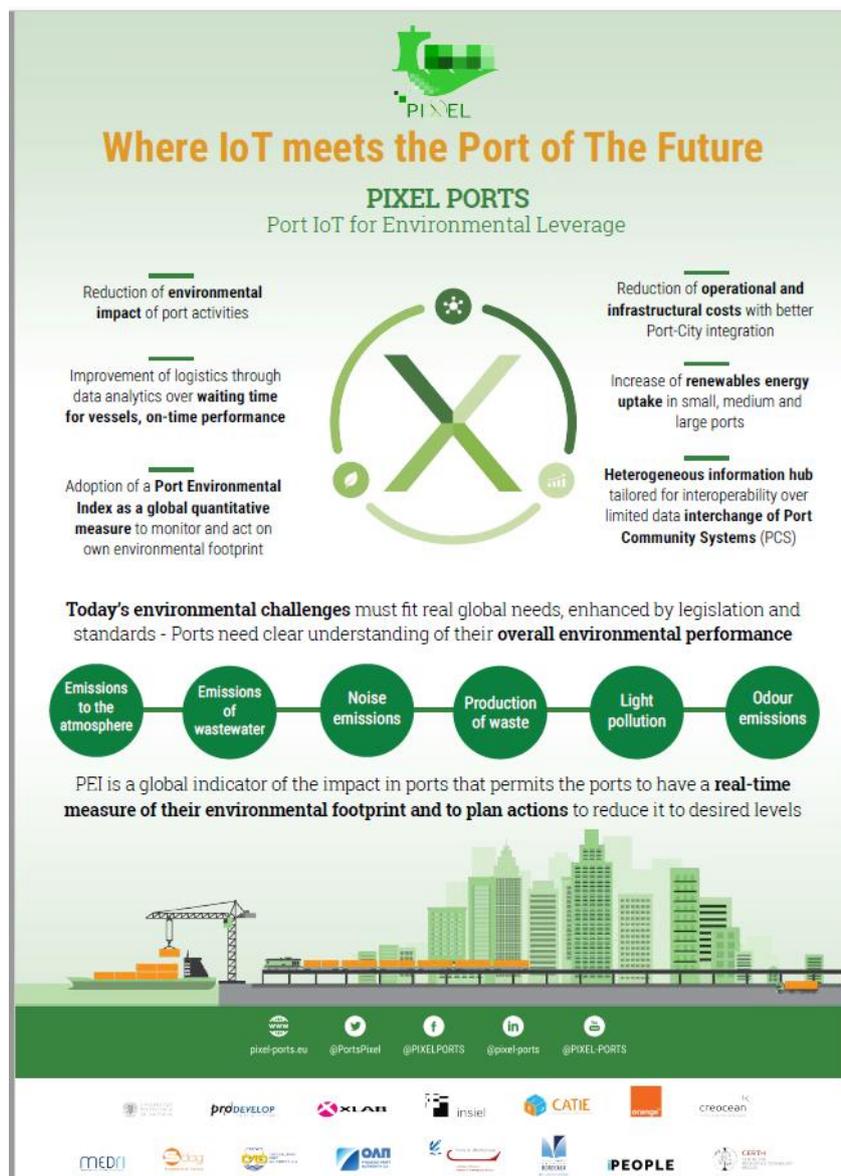


Figure 21. New poster design

- **New leaflet:** For the leaflet, the same rationale, that of the new version of the poster, applies. The design shown in the image below has been agreed among WP9 partners and it is being reviewed for visual polishing.

This supporting material will continue to be used for now, being brought to fairs and events for publicity and as a part of the “PIXEL Dissemination kit”.

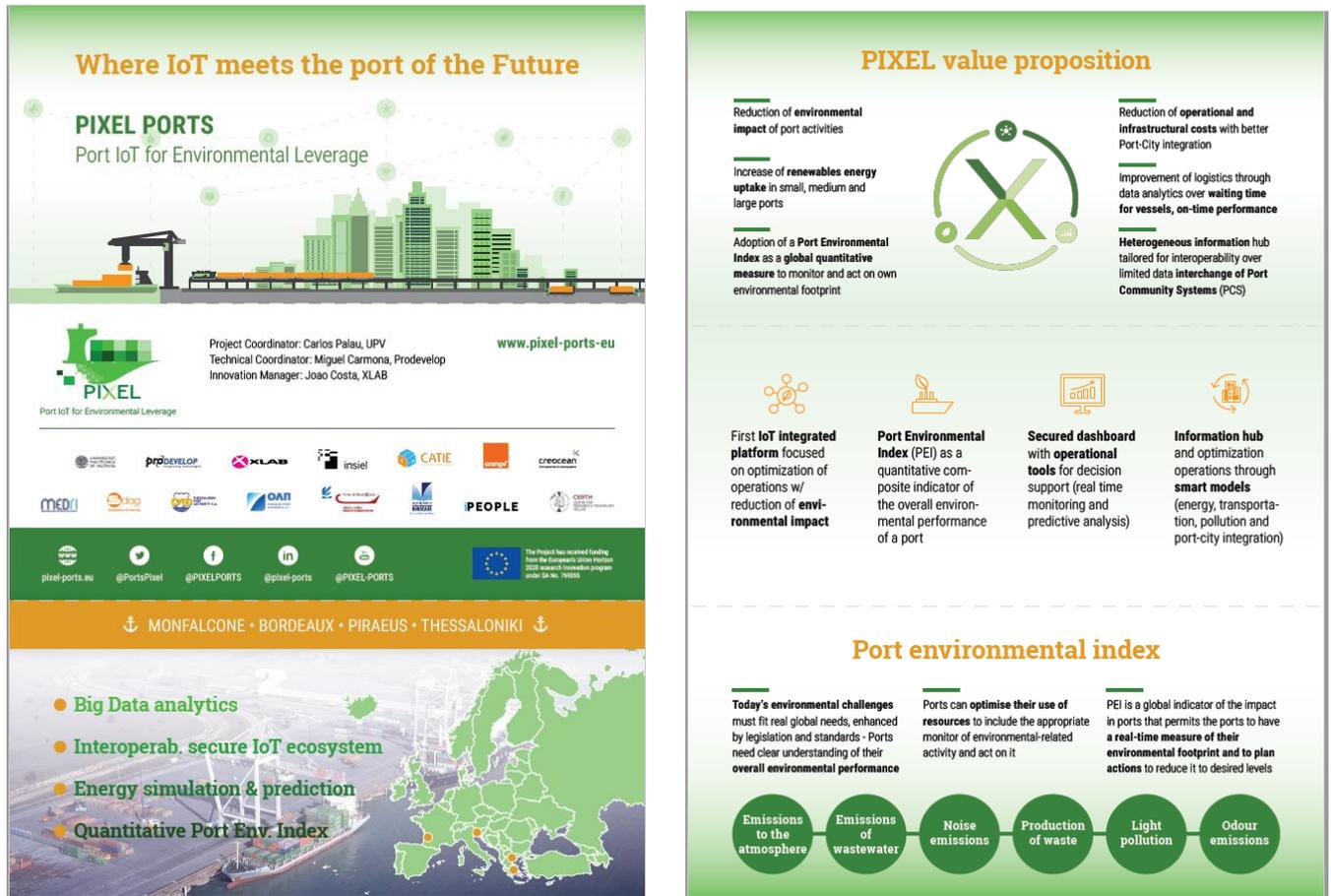


Figure 22. New leaflet

3.1.5. Communication KPIs evaluation M1-M18

According to the objectives set in the Grant Agreement, which were confirmed and updated through deliverable D9.3, the table below reflects the results of the evaluation of the Communication status at the first half of the project. In this action, the impact through social networks and the rest of virtual presence generator channels, is mainly evaluated. The report is done considering current values (M18).

Diffusion channel	Time / update	Final expected number	Current number and evaluation
Website	Updated every month	Number of accesses to the website Total of 2.000	Current: 4.166 This KPIS has been met and surpassed.
Social networks	Twitter	1 Tweet per week / 1 FB post per month. 400 total followers. 500 total tweets	190 followers; 384 tweets We are aligned with the objectives, the effort must be slightly enhanced.
	YouTube	25 videos. 2000 views.	9 videos; 633 views More videos are to come when technical results finish, so we foresee good commitment.
	ResearchGate	20 presentations. 2000 views	ResearchGate already evaluated in section 3.2.4
	LinkedIn	Profile Views: (updates of PIXEL Company Page) 1000 Network: +500	Network: 74, Updates: 611 Network number is far to meet the objective, that was very inflated.
	Facebook	Views: 3000 Mentions: 100	Facebook no longer a PIXEL channel.
Digital newsletters	Every 6 months	Number of subscribers: 50	Current number: 15 Efforts need to be put.
Project reports	As soon as deliverables are available	Number of times accessed Average of 20 per deliverable New objective: 100 visits.	This cannot be tracked. New equivalent KPI: Visits to “Deliverables”page Current value: 48. On track.
Web Portal	As soon as new developments and results are available	Number of news: 6 total news in the project	More than 10 events are included. 1 entry of news. The status is correct but more references to external news are needed
Media communication	Entire project duration	Number of expected press releases 15	3 press releases were made. This needs to be worked over, during the following period
Websites of the PIXEL partners	Entire project duration and after the project end	Number of visitors 15 per partner	At this moment of the project, it has been decided that this metric does not provide value for PIXEL nor relevant information for the partners. Thus, it is removed and not considered anymore.

3.2. Report on Scientific Dissemination activities

At the end of M6 of the project (when the deliverable D9.3 was submitted) little scientific dissemination was executed, as the technical work in PIXEL was still minimum. During this second Dissemination reporting period, the activity on Scientific Dissemination has been increased and enhanced by the technological advances going on in the project.

The task T9.3 aims to coordinate and orchestrate the actions on publications and other scientific dissemination initiatives. This has been done in collaboration with T9.2 considering that, for the majority of cases, the scientific articles that have been presented are addressed to open call for papers framed within bigger industrial events. At this point, the Industrial and Scientific Dissemination strategy merge. Therefore, the activity and planning has been conducted jointly to adjust the events to attend and the papers to be submitted to fairs and congresses, that could meet both objectives. However, there have been cases where this compromise cannot be met and partners attend to an industrial event without tackling scientific outreach and vice versa.

In the following sub-sections we aim at summarising the publications and other scientific dissemination actions that have been conducted during the period M7-M18 of the project.

3.2.1. Publications

3.2.1.1. Scientific publications

The PIXEL Consortium is committed on publishing the results of its findings in peer-reviewed journals as well as top-notch scientific and technical conferences in the field. To that end, Q1 scientific journals (the top 25% journals in the field) are targeted, with occasional publications in Q2 journals (the top 50%).

The idea is to adhere strictly to those commitments, but during this M7-M18 period the partners have been focused on producing excellent scientific results and communicate them to the community, via diverse fora. The events and congresses that our papers have been addressed, are heterogeneous and at this moment of the project, priority has been given to the most fit target audiences, in order to select the recipients of our work.

For tracking and planning scientific publications (equal than for other dissemination activities) an Excel sheet-based tool has been used, in which all the information associated to each initiative we tackle, is gathered (call for papers we address to).

The structure of this management tool is the following:

- Some columns were created to represent information of the paper proposal: authors, title of the paper, event associated and year.
- Some columns were created to track the current status: partner leading, writing status, deadline for submission, status of peer review and others.
- Some columns were created to incorporate information (once it is published) about publication: DOI, URL of access, proceedings, edition, publisher and ResearchGate link.
- Each time a new article presentation is addressed, a row is created and filled with all the information available. From that moment on, the appointed leader of the paper writing process, informs the T9.1 leader about the evolution of the status of the paper and it is duly reflected in the monitoring tool.

In the table of the next page, (Table 9) the results obtained with regards to article publication in period M7-M18 have been summarised, while the table preceding (Table 8) provides a summary of their status, that will be updated later on in deliverable D9.5 with the information of all the papers presented during the project:

Table 8. Global statistics – articles publication

	Presented	Accepted	Success rate	Published	IoT/ICT (presented)	Environment (presented)	Logistics (presented)	Global (presented)
With congress	10	8	80%	1	6	3	1	3
No congress	1	1	100%	1	0	1	0	0

Table 9. Publications PIXEL M7-M18

Title	Authors	Lead partner	Event Associated	Event dates	Place	Deadline subm.	Status	Publication_Date
"Model of calculating a composite environmental index for assessing the impact of port processes on environment: a case study of container terminal"	Luka Traven, Igor Kegalj, Juraj Buksa	MEDRI	-	-	-	-	Presented and published	15th September 2018
"PIXEL: Where IoT meets the port of the future"	Miguel Angel Llorente	PRO	GreenPort Congress 2019	15/18-oct-19	Oslo (NW)	21/12/2018	Not accepted	-
"Enabling Industrial Data Space Architecture for Seaport Scenario"	David Sarabia-Jácome, Ignacio Lacalle, Carlos E. Palau, Manuel Esteve	UPV	IEEE 5th World Forum of Internet of Things	15th April 2019	Limerick (IRL)	15/01/2019	Presented and published	22nd July 2019
"The future of port-city ecosystems powered by IoT"	Joao Pita Costa	XLAB	Living Bits & Things 2019	June 2019			Not accepted	-
"Automated System for Ship Detection from Medium Resolution Satellite Optical Imagery"	Dejan Stepec	XLAB	OCEANS 2019	27/31-Oct-19	Seattle (US)	30/5/2019	Accepted, pending to be presented and published	-
"Modelling port operations towards environmental impact reduction: IoT infrastructure and scenarios"	Miguel Angel Llorente, Miguel Montesinos, Ignacio Lacalle, Carlos Palau, Aristos Halatsis, Annie Kortsari, Charles Garnier, Erwan Simon	PRO	TRA 2020	27/30-April-20	Helsinki	31/5/2019	Accepted, pending to be presented and published	-
"A new methodology for assessing the significance of environmental aspects of port operation: a use case of four pilot ports"	Igor Kegalj, Ignacio Lacalle, Teodora Milosevic, Zeljko Linscak, Carlos Palau, Luka Traven	MEDRI		27/30-April-20	Helsinki	31/5/2019	Accepted, pending to be presented and published	-
"Small and medium ports' activities modelling: introduction to the PIXEL approach"	Erwan Simon, Ignacio Lacalle, Charles Garnier	CATIE	Maritime Transport Congress 2019	10/12-Sept-19	Rome	18/6/2019	Presented, pending to be published	-

D9.4 - Report on Dissemination Activities and Update of the Dissemination Plan v1

"Towards environmental impact reduction leveraging IoT infrastructures: the PIXEL approach"	Ignacio Lacalle, Miguel Ángel Llorente, Carlos E. Palau	UPV	IDCS 2019	10/12-Oct-19	Napoli	07/10/2019	Presented, pending to be published	-
"Noise pollution – introduction to the state of the research and the implementation in the horizon 2020 project PIXEL"	Stjepan Piličić, Luka Traven, Teodora Milošević, Igor Kegalj, Ante Skoblar, Roberto Žigulić	MEDR I	Eight conference on Marine Technology	15/16-Nov-19	Rijeka	30/6/2019	Accepted, pending to be presented and published	-
" Air pollution dispersion modelling in port areas"	Teodora Milošević, Lado Kranjčević, Stjepan Piličić, Igor Kegalj, Luka Traven	MEDR I				30/6/2019	Accepted, pending to be presented and published	-

3.2.2. Other scientific dissemination actions

Whereas the main action regarding Scientific Dissemination consists of attempts to publish articles in relevant journal and event proceedings, these are not the only initiatives tackled in T.2 in the period M7-M18. According to the Dissemination/Communication plan, several other works must be covered by PIXEL, to ensure a proper scientific dissemination, generating visibility and engagement and contributing to the community, following the project's open publication mentality. As a quick summary, the following have been listed:

Other Diverse actions:

- **Press releases:** Several press releases have been made so far related to PIXEL objectives and advances. These initiatives are considered Scientific Dissemination, as they are embedded into technical magazines or websites and the majority of the audience has a scientific background and motivation. This type of dissemination is very interesting for PIXEL considering that, inserting our content in a piece of news, can reach a higher number of readers than, for example, on-purpose visitors to our website. Furthermore, having presence in relevant media, confers more sense of pervasiveness to the project:
 - Article at the official website of Universitat Politècnica de València. UPV is the Coordinator partner in PIXEL. This website has an average of 575 visitors monthly and the PIXEL banner was in the front page for three consecutive weeks.
 - Article by GPMB on the Journal Marine Merchande in the issue of July/August 2019, about PIXEL applied to real ports, the importance of tracking environmental performance and tackling greener initiatives in small and medium European ports.

Education

- **Lectures at university:** One of the impacts that PIXEL can show about Scientific outreach is to engage young researchers and students to pursue an academic career
 - Prof Carlos Palau recorded a presentation of the project that has been published and forwarded through internal channels in the faculty of Universitat Politècnica de València.
 - Prof. Luka Traven and Prof Igor Kegalj gave lectures at the Faculty of Medicine on the Rijeka University. These lectures were conducted at physical classes to students from different areas (mainly Environmental Sciences).
- **PhDs started:** Another important KPI to measure PIXEL Scientific Dissemination success is PhDs program being kick-started and tackled by new students about the technical aspects of the project (more about KPIs in the next chapter). For now, 4 PhD programs have started by people working directly in the project. 2 of them are related to the environmental technical part of the project (one about air pollution and another about noise pollution) and the other 2 are related to the architectural and IoT part of PIXEL (one about distributed systems and data sharing and another about IoT and prediction leveraging PIXEL architecture, to several interesting applications).

Open source contributions:

- **FIWARE data model request:** One of the technical modules the PIXEL architecture is composed of the Data Acquisition Layer. In few words, it is the technology responsible to bring the raw data into common data formats and make the changes and updates of the sensors (or other data sources) available to upper layers. For its implementation, a module called ORION is used, provided by FIWARE¹. ORION defines certain data formats for predefined data. In PIXEL we are leveraging those definition schemas to create our own, so as to be compatible with the technology. This action is prone to be submitted to FIWARE, in order to be included as contribution in the list of available data formats. This would mean a very significant contribution to the open source community. As soon as WP6 is more advanced, the T9.2 partners will initiate the actions for this inclusion.

¹ <https://fiware-orion.readthedocs.io/en/master/>

3.2.3. Scientific Dissemination KPIs

3.2.3.1. Strategy

As per normal functioning, Research and Innovation Action projects, experience an effect called “slow start” with regards to Scientific Dissemination. Normally, during the first year of execution of the project, the scientific outcomes are very little. This is due to several reasons: (i) teams are more focused on management of day-to-day operations, (ii) synergies are not perfectly synchronised yet, (iii) the practical planning is designed and (iv) technical results take time to be produced. This effect is even highlighted in software-based projects, as certain activities such as requirements gathering or setting up the necessary ICT infrastructure for developing/researching, are needed.

That’s why till the project has reached a considerable point of establishment, the Consortium had not defined a strategy for measuring Scientific Dissemination success yet. It has been just after month M12 of execution, when the first 4 milestones (MS1, MS2, MS3 and MS4) of the project have been achieved, when the definition of Key Performance Indicators (KPIs) and their identification has been done.

Scientific Dissemination activities are a long-term commitment from PIXEL toward the academic and scientific community. Through these actions, if well addressed, PIXEL can reach satisfactory levels of knowledge and positioning within its field of research (IoT in ports towards environmental impact reduction). T9.2 (and the whole WP9) team considers that identifying KPIs for analysing the advance on Scientific Dissemination is crucial, with the rationale being three-fold:

- i- It allows T9.2 management to detect whether enough actions are being carried out on this regard.
- ii- It allows T9.2 management to study whether the dissemination strategy was well planned and designed or whether it would need a refactoring.
- iii- It allows T9.2 management to monitor the current status of scientific dissemination outcomes and encourage partners to take further actions whatever their nature.

Thus, in order to create this monitoring and evaluation, the following strategy has been followed by the team in T9.2. The procedure listed thereafter, embarks both previous actions (identification, evaluation indices) and continuous activities that will be performed till the end of the project:

1. **Identification of KPIs:** Analysis of the indicators that could better represent the aims of Scientific Dissemination in PIXEL. A work of research and specification has been done to list a set of KPIs, with target values, that will be tracked in a timely manner.
2. **Monitoring of KPIs:** How to quantify and monitor the KPIS. This step consisted of establishing a methodology of monitoring, including associated tool, objectives and responsible people.
3. **Evaluation of KPIs:** When the moment of monitor the KPIs comes, the team needs to have clear instructions on how to evaluate the number. Depending on the established targets, in this step, the T9.2 team described the way of analysing the success of current status of Scientific Dissemination, in comparison to the final expected results. The evaluation will be done periodically.
4. **Further methodology:** Once the responsible of Scientific Dissemination is able to check the status of the evaluation of the KPIs (monitored), the partner should be able to move the whole strategy towards other directions or even to propose new actions to achieve the objectives.

In the next subchapters, the procedures followed in each of the previous steps are depicted, as well as the outcomes and figures achieved so far.

3.2.3.2. Identification of KPIs and targets

A set of Key Performance Indicators (KPIs) has been defined, to measure the efficiency and effectiveness of scientific dissemination activities carried out, during the whole life project process. As it is described in further sections, KPIs are scheduled to be measured on a regular basis.

The KPIs have been defined according to several sources. The T9.2 team carried out an activity of research, in order to identify which would be the most appropriate indicators to be included in PIXEL scope. Thus, the list has been inspired by:

- **PIXEL Grant Agreement:**

The first action performed to identify the KPIs was to review the commitments stated in the Grant Agreement. The paragraphs related to Scientific Dissemination are the following:

- *Academic and research partners will filter the innovative outcomes from PIXEL in order to generate knowledge, invent, investigate and analyse new concepts and technologies. They will assist in transferring the theoretical know-how into practice, and will provide opportunities for the training of new graduate and PhD students. Academic partners will have considerable impact in building up the competences of the new “breed” of experts, who will be needed in the coming years in order to be able to provide an insight and enable the combination of knowledge from the project innovative areas, through PhD and MSc theses, new courses and knowledge transfer through academic spin-off companies.*
- *The development of scientific publications and articles will promote the academia for enhancing the research in the field and sharing the latest achievements. Several Special Issues will be aligned with the content of the proposal; as key people of the academic partners are involved in the editorial board of highly referenced journals.*

The previous statements have served to understand the global positioning and mindset to address publications, academic outcomes and the rest of elements related to Scientific Dissemination.

Afterwards, the following table was included, as the targeted values:

Table 10. Grant Agreement KPIs for Scientific Dissemination

What	Description	KPI	For Whom
Publications	Key scientific publications at top tier conferences, workshops and magazine/journals/books	At least 2 per year; Total of 5 over the project's lifetime.	Scientific Community
Open source contributions	Contributions to open source actions (e.g., SENSINACT, WSO2 or Eclipse OM2M)	At least 1 per year	Scientific/industry community
Education	World-wide dissemination tours and industry-organized seminars at universities	At least 1 per year	Scientific/industry community

Thus, this table helped to define certain global indicators.

- **Other H2020/FP7 projects:**

The T9.2 team devoted effort during the first months to research other H2020/FP7-funded projects, in order to understand how other initiatives are/were measuring the impact and success of dissemination activities. Among those, focus was mostly placed upon the indicators targeting scientific activities (publications, open -source contributions, presentations in academia-oriented events, reach on the community...).

The projects that were of interest in this sense, were the following:

- INTER-IoT
- Transforming Transport
- Precious project
- Nova project
- COLISDER project
- CPSWarm project
- Flexiciency project
- MARISA project
- iSCAPE project

- **External references:**

Apart from RIAs/IAs funded by the European Commission, other actions were analysed in order to enrich and rebound the KPIs for monitoring Scientific Dissemination success. There is a multitude of initiatives that could be addressed, which the T9.2 team could not have been able to track them all. Nonetheless, a thorough research was performed, identifying the next ones as the most interesting:

- AgriFood Results
- Dissemination, Exploitation & Communication recommendations – KU Leuven
- EAP-Plus Webinar on R&I Impact Maximisation

- **Industrial Dissemination KPIs:**

The last reference considered for elaborating this list, has been the PIXEL Industrial Dissemination KPIs. Just before the scientific part has been addressed, the work in WP9 has been more focused on Industrial Dissemination and exploitation. Therefore, by the time to select the final KPIs for measuring Scientific Dissemination success, the agreed indicators for the industrial part were completed. That is why, those have served as inspiration as well for this activity.

As a result, the KPIs and relating success criteria / target value are specified in the following table:

Table 11. Scientific dissemination activities. Set of KPIs

Dissemination activity	Key Performance Indicator (KPI)	Target value (Total)*
Scientific papers publication	Number of submitted papers	10
	Number of papers published in international referenced journal	5
	Number of papers in international conferences	
	Number of PIXEL authors contributing to scientific papers	10
	Average number of different partners authoring each paper	2
	Total number of readers of scientific publications	80
Scientific Social Media	Number of followers in ResearchGate account	30
	Number of reads in ResearchGate	150
Scientific Dissemination events	Number of participated scientific events	6
	Number of posters at scientific events	2
Organization of scientific actions	Organization of webinars	3
	Organization of technical workshops at University	
	Average number of participants to each organised event	20
Open source contribution	Number of project's outcomes available as open source	>5 single components
	Number of contributions to open source initiatives	>3
Others	Number of PHD (presented or ongoing work) or end-of-degree projects related with PIXELt	5
	Number of new R&D Projects requested following PIXEL work	1

* Extracted from GA and/or set after reviewing other references

3.2.3.3. Monitoring of KPIs

The results of the scientific dissemination strategy, need to be continuously monitored in order to proceed with further evaluation on its effectiveness and its progresses and to formulate a change in requirements where necessary. In this sense, the strategy for monitoring the KPIs has been set as follows:

- **Methodology:** A shared spreadsheet has been created within the overall monitoring document, for the whole WP9 including these KPIs. A screenshot of this table can be seen at Figure 23. The responsible (see below), will continuously update that table after gathering the current information on publications, attendance to scientific events, etc.
- **Objectives:** To analyse the current effort done in Scientific Dissemination activities for allowing a further study of success, so as to propose corrective actions.
- **Responsible:** The responsible of monitoring the Scientific Dissemination KPIs, drawing from the current status of the different actions, is the partners assigned as task T9.2 leader: UPV.

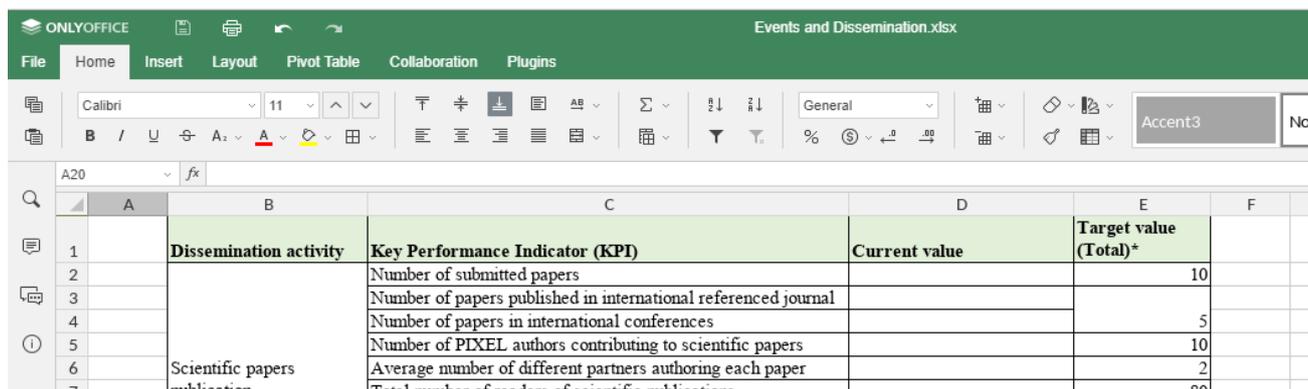


Figure 23. Monitoring tool for Scientific Dissemination KPIs

3.2.3.4. Evaluation of KPIs

The KPIs will be done **each 4 months**. The assessment will be done using known tools, from project and risk management, where the achievement is classified in categories, in order to follow the necessary implications from KPIs. This reporting data, will allow to analyse the dissemination activity and to plan responses/actions, evaluate and record effectiveness for the next period.

The following table shows the classification used within the progress assessment:

Table 12. Classifications used within the progress assessment of KPIs

Categories		General actions or measures
0	Immediate action necessary	KPI is below the expected value Improve the dissemination activities relevant to KPI
1	Needs further attention	KPI is slightly below expectations Further measures for improvement need to be discussed and addressed to partners
2	Good progress	KPI is on track with the dissemination plan and strategy No corrective actions are necessary Continue with the monitoring
3	Overachievement	KPI exceeds the expectations! The industrial dissemination plan is possibly under-evaluated Shift or concentrate efforts to other tasks (communication or not) with lower performances

3.2.3.5. Further methodology

After the evaluation, the T9.2 team, led by UPV may decide on taking corrective actions on the strategy and current performance of Scientific Dissemination activities. These will be conducted through telcos, taking advantage of currently scheduled WP9 teleconferences, within which a specific item will be added in the agenda. The responsible of the task (UPV), will propose actions that will be discussed with the partners. Decisions will be taken by consensus.

This whole process of KPI monitoring and evaluation will be reflected (to the eyes of the European Commission) through the deliverables D9.4 (this document) and D9.5.

3.2.4. Scientific Dissemination KPIs evaluation M1-M18

Following the instructions depicted in the previous sub-section, the table below reflects the results of the evaluation of the Scientific Dissemination status, at the first half of the project. As it has been indicated, this evaluation is performed every 4 months, but for the sake of simplicity in this report, they have all been condensed in a single table, that pretends to inform about the global evolution M1-M18.

Table 13. Evaluation of Scientific Dissemination KPIs at M18

Dissemination activity	Key Performance Indicator (KPI)	Target value (Total)*	31-oct-19		
			Current value	% of accomp.	Evaluation
Scientific papers publication	Number of submitted papers	10	11	110%	3
	Number of papers published in international referenced journal	5	1	40%	2
	Number of papers published in international conferences		1		
	Number of PIXEL different authors contributing to scientific papers	10	12	120%	3
	Average number of different partners authoring each paper	2	1,67	83,5%	2
Scientific Social Media	Number of followers in ResearchGate	30	7	23,33%	1
	Number of reads in ResearchGate	150	(RG count) 89	59,33%	2
Scientific Dissemination events	Number of participated scientific events	6	4	66,67%	2
	Number of posters at scientific events	2	0	0%	0
Organization of scientific actions	Organization of webinars	3	0	0%	0
	Organization of technical workshops for external audience at University		0		
	Average number of participants to each organised event	20	0	50%	0
Open source contribution	Number of projects outcomes available as open source	>5 single components	0	0%	1 N/A
	Number of contributions to open source initiatives	>3	0	0%	1 N/A
Others	Number of PHD (presented or ongoing work) o TFG related with the project	5	4	80%	2
	Number of new R&D Projects requested following PIXEL work	1	0	0%	1 N/A
	Collaboration with other R&D projects	4	2	50%	2

Conclusions

Papers publication is advancing very well. Overachievements in number and impact.

Scientific social media (ResearchGate) can be improved, but is not worrying. Once the papers presented get published and can be included in this channel, these indicators should improve.

The presence of PIXEL in Scientific Dissemination Events is very good, but the partners need to take **immediate actions on organising scientific workshops or events**, inviting external people in order to improve the KPIs on this part. This will be tackled in the following months and during year 2020.

Contributions to open source are still not visible, because the modules are not completely packaged and finalised yet. These KPIs expect to be met by M36, considering the very good work in WP5, WP6 and WP7.

The rest of KPIs are considered normal and with a good evolution during the first half of the project.

3.3. Report on Industrial Dissemination

The General objective is extracted from the Grant Agreement: “to organize in a coherent way the activities leading to maximize impact for the overall project. The main objective for each partner is to have a structured, complete and achievable business model strategy and a proper communication of results”.

The specific objectives are:

“- To exhibit PIXEL prototypes in primarily industrial events.

- to transfer PIXEL results to operations and product development departments.

Industrially, this dissemination will be accompanied with presence in international port and maritime solutions fairs (such as AIVP and EU - Horizon 2020 and CEF - events), going together and being upheld by these pilot host ports involved in the project, promoting and exhibiting PIXEL advances and benefits.”

Following the GA and Dissemination Plan in deliverable D9.3, the target groups that have been taken into account, in order to prioritize Industrial Dissemination have been:

Table 14. The target groups. The Port / Industrial sector and others

Primary - Customers in the port industry sector
The Port authorities of: <ul style="list-style-type: none"> • The PIXEL partner’s ports. • The Small and Medium sea Ports (SMP) and inland Ports of the three ports participating countries: Italy, Greece, France and oversea territories.
The stakeholders in the port area of the PIXEL ports: <ul style="list-style-type: none"> • The terminal / port operators (car, cruise, container, passenger, bulk). • The shipping agency / company, association, research centre and industry.
The stakeholders of the Small and Medium sea Ports (SMP) and inland Ports of the three ports participating countries: <ul style="list-style-type: none"> • The stakeholder activities related for landing / storage / transportation: containers, liquid bulk, dry bulk, energy industry, bio-industry, petrochemical (LNG, biofuel, oil, chemistry), off-shore, cruise...
Secondary - Intermediate actors, e.g. industry and port associations
The European and worldwide Port associations The European industry / company associations (logistics, transport, manufacturers, environment) The European ships associations Other than ports (airports, generic multimodal terminals and transportation, coastal cities)

Apart from this target groups preferences, there are other factors that have been taken into account in the period M7-M18, for PIXEL’s Industrial Dissemination.

3.3.1. The Industrial prioritization

We describe below the method proposed to select industrial events linked with PIXEL’s technical achievements. This prioritization step, is included in the Step 1 of the procedure to follow for the event preparation (11 steps – see chapter 5 next pages).

These objectives design the framework of the participating PIXEL’s partners to Trade fairs and conferences, and the expected results / returns on investments of such participations.

To meet these objectives, we also need to correlate our presence to the industrial events, with the PIXEL’ exploitable results or technologies, that have been produced (maximum use of the existing technical information), or are to be produced. The timing will influence many decisions: What resources do we have available? The schedule of technical results is the “roadmap” of the PIXEL’s partner, wanting to participate to industrial events. The right strategic marketing / commercial issue is to provide good products / results to the expectation of the customers.

The identification of the opportune marketing event platforms, to best deliver the required event objectives (sales, relationships,) is truly linked with the resources available for dissemination.

A list of criteria (Ca) in order to prioritize the events, can be seen in the following table (table15). Three levels are proposed: L1: High level of priority – L2: Medium level of priority – L3: Low level of priority (no participation is required).

Table 15. The list of assessment Criteria (Ca)

Assessment Criteria (Ca)	Level	Action
Ca1 The PIXEL's partner is a member of the NGO or Group organizing the event or the PIXEL's partner is currently participating to this event, and plan to attend the event by its own	L1	The PIXEL's partner will participate to the event disseminating PIXEL's material (posters, leaflets) and presenting paper and/or participating to the exhibition
Ca2 Audience: Target groups or invitee profiles assisting to the event (conference or trade fair or exhibition): Primary - Customers in the port industry sector Secondary - Intermediate actors, e.g. industry and port associations	L1	Participation to confirm with the WP9 leader
	L2	Participation to confirm with the WP9 leader – Priority is given to the primary Target group
Ca3 Programs / Topics of the Trade fair / Exhibition and Conference: Strongly linked with all the technical and scientific development / results of the PIXEL project: Environmental tools to assess impact (PEI); Technology to enable interoperability (IoT); Software products for modelling and prediction (Alg); Sensors and IoT infrastructure (Hw) Linked with one of PIXEL developments / Results: PEI or IoT or Alg or Hw Without links with the technical and scientific development / results of PIXEL project	L1	Participation to confirm with the WP9 leader /
	L2	
	L3	/
Ca4 Physical attendees (primary and secondary targets): 1 000+ 250+ Intimate event	L1	/
	L2	/
	L2	/
Ca5 Event reputation / Venue reputation / Benchmarking efficiency: official links, frequency, users attending, organizer: High (number of positive ratings up to 50) Medium (number of positive ratings up to 10)	L1	/
	L2	/
Ca6 Marketing event outcomes: Primary objectives: Strengthening relationships (existing customers and broad stakeholders) – Intelligence and learning Secondary objectives: Media and “word of mouth”	L1	/
	L2	/

The objectives of this classification are to help the PIXEL partners and the managing board, to better organize the PIXEL dissemination and communication tasks, when selecting industrial events (conference, round tables and exhibition).

3.3.2. New methodology

After M6, the need and opportunity to attend Industrial Events from the side of PIXEL partners, were clearly increased. In order to track down both the potential events to attend and the outcomes, details and other information out of each of them, a new methodology was created and agreed among the partners.

The General objective is extracted from the Grant Agreement: “to organize in a coherent way the activities leading to maximize impact for the overall project. The main objective for each partner is to have a structured, complete and achievable business model strategy and a proper communication of results”.

3.3.2.1. The procedure to follow for event preparation and tracking: the 11 steps approach

The procedure for each industrial event detected / selected is described on the scheme below (**Figure 1**) for the three aspects:

1. The confirmation of attendance to the event: Steps 1 to 3;
2. The preparation: the responsibility, the material to prepare/to be brought, the marketing campaign to implement, ... – Steps 4 to 8;
3. The attendance to the event – Step 9;
4. The outcomes of the event – Steps 10 and 11: dissemination and monitoring actions...

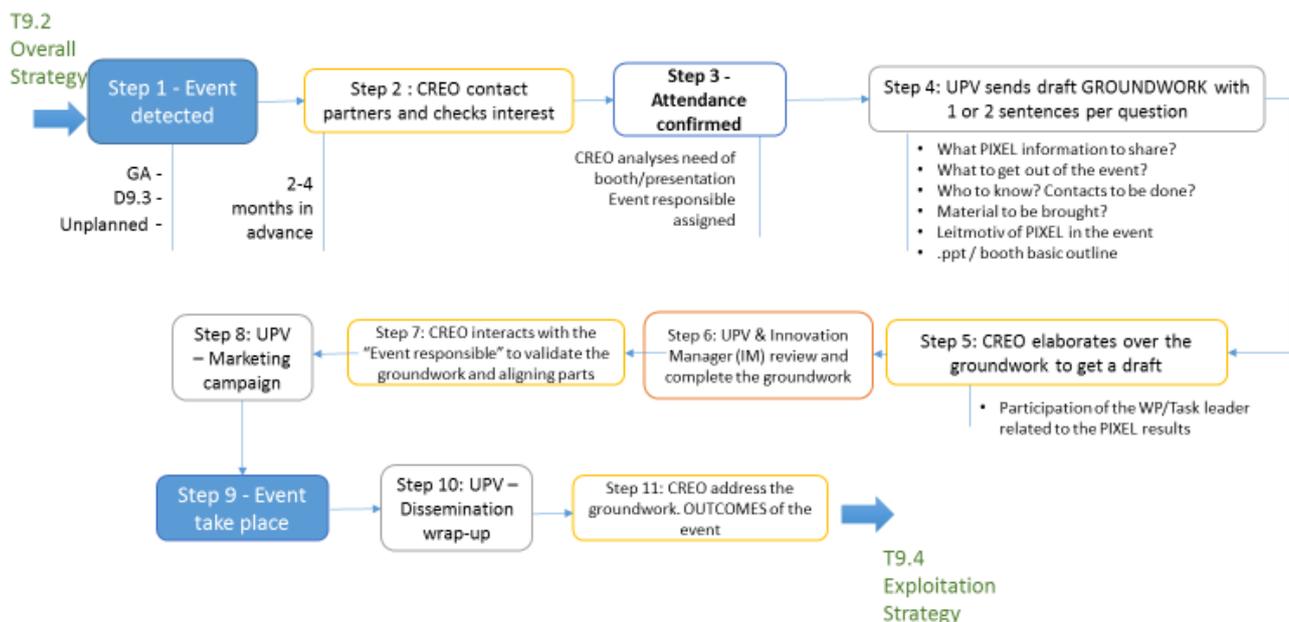


Figure 24. Procedure (11-step) for Industrial Events conduction

3.3.2.1.1. Step 1: The events detection

The tasks to be managed – supervised by Creocan - for this Step 1 – are the following:

- The industrial event research (proposed mostly by Pixel’s partners and completed by the web page event) and checking of technical and commercial interest (confirmation of: the topic of interest, the date / the subject / the professional attendance / the type of event (conference and / or exhibition)). All events are reported in the “Events and Dissemination” Excel file in PIXEL Only Office portal (<https://onlyoffice.pixel-ports.eu/products/projects/tmdocs.aspx#22>) and briefly described.
- The selection of the industrial events (the seminar, the trade fair, or the exhibition/booth) according to:

- PIXEL's objectives of achievement.
- PIXEL' priorities.
- PIXEL' results or demonstrations (for exhibition) in progress (both technical and commercial domains).
- The availability of partners.
- The results:
 - A selection of industrial events, an assessment and the recommendations related to the events to prioritize (see previous chapter);
 - A full list of industrial events with the following details (if possible):

Table 16. The event detection. The details of the event

Event type:
Potential exhibition:
Event language(s):
Attending fee:
Registration deadline:
Online event:
Event Website:
Organized by:
Contact details:
Number of delegates:
Target groups:
Theme addressed:

3.3.2.1.2. Steps 2-3: The confirmation of attendance

The support service is provided by Creoccean. The tasks to be managed for these two steps, are the following:

- Which PIXEL's partner to address?
 - Result: The interest and the attendance of few partners is confirmed.
- Who is assigned as the event's responsible?
 - Results: (i) A member/officer of the participating PIXEL's partners is proposed to attend the event and manage the PIXEL's supports to it (assisted by the WP9 cells and Task leader), (ii) the participation of PIXEL's partner is confirmed/validated.
- Which PIXEL's partners is (are) attending?
 - Result: The attendance of few other PIXEL's partners is confirmed.
- For the conference or event attendance / participation, what is the key information to follow: calls for Workshop / Industry track presentation / Evaluation and experiments for abstract / paper / poster / demos:
 - The number of words (abstract), the number of pages (paper), the template / structure / format (poster).
 - Other information: the biography of the speaker(s), the headshot photo, the PIXEL's logo.
 - The submissions due / Speaker notification dates (abstract, paper and poster).
 - Result: all information is provided to the attendees.
- For the Exhibition participation, the key elements are listed below:
 - The Exhibitor checklist:
 - The visa information, the stand booking [stand number, size, location, number of open sides,];
 - The accommodation booking;

- The exhibitor profile (website, if any);
- The exhibitor manual;
- Health and safety declaration form to complete;
- The registration;
- E-invitation to send to client.
- Result: All information is provided to the attendees.

Figure 25 (that needs to be filled in, at the beginning of the Step 2) - describes all the information related to the industrial event preparation, with the corresponding schedule.

At the end of the Step 3, the event attendance is confirmed, and to guarantee the place/participation the registration fees are paid.

3.3.2.1.3. Step 4: The framework of the participation

The framework of the event participation is provided by UPV. The contents for this Step 4 are the following:

- What is the PIXEL's updated information to share? technical, commercial, and/or general;
- What to get out from the event?
- Who knows whom? The objective is also to connect and to strengthen the connection(s) with other participants and/or delegates;
- Which supporting material(s) / tool(s) is (are) to prepare / to be brought;
- Which is the format of participation? Paper/ poster / stand-booth;
- What is the budget for participating to the event (referring to the GA).

The result to achieve is: to target PIXEL results and achievements to promote.

3.3.2.1.4. Step 5: The groundwork preparation: draft.

This groundwork information is supervised by Creocan (Task 9.3 leader) and UPV (WP leader). The Step 5 includes the following tasks:

- The detailed conditions to attend the event (conference and/or exhibition):
 - the general Info-session,
 - the general agenda / program,
 - the application form to fill in,
 - the registration / admission fees and cancellation,
 - the payment obligations,
 - the submission form (abstract) to the call (the A4 / letter model, the number of pages, the html or .pdf format, the contents of the abstract, the topics of interest),
 - the submission system: online?
 - the duration of the presentation slot (with question),
 - the number of authors expected to present the material to the conference / exhibition,
 - the supporting material available (goods and services exhibited),
 - the exhibitor portal,
 - the timing and conference schedule,
 - the participants and the audience,
 - the socializing event (if any),
 - the stand / booth space and build up, the stand / booth reduction, ...

The result to achieve is: to provide all the details and conditions to participate to the event (conference, round-table, exhibition, show-case).

Figure 25. The industrial event preparation. The monitoring sheet.

Name of event:		Partners to contribute:																		
Dates:																				
Place:																				
Type of event (conference / booth):																				
Organised by:		Partner responsible:																		
Main topics:																				
Abstract / Expression of Interest (Eoi) :		X words/pages																		
Deadline:																				
Final paper (conference / booth) :		X words/pages																		
Deadline:																				
Publication (conference):																				
TASK	Partner	<i>Week 1</i>	<i>Week 2</i>	<i>Week 3</i>	<i>Week 4</i>	<i>Week 5</i>	<i>Week 6</i>	<i>Week 7</i>	<i>Week 8</i>	<i>Week 9</i>	<i>Week 10</i>	<i>Week ..+1</i>	<i>Week ..+2</i>	<i>Week ..+3</i>	<i>Week ..+5</i>	<i>Week ..+6</i>	
Selection of topic	ALL																			
First draft	?																			
Contributions from partners	?																			
Draft completion	?																			
Review and approval	IM & CREO																			

Conference / booth topics
The following list covers the topics to be presented at the industrial event:

Topic chosen:
??

Abstracts and Eoi should clearly state the purpose, results and conclusions of the work to be described in the final application. Final acceptance will be based on the full-length paper, which if accepted for publication must be presented at the conference or demonstrated at the exhibition
Online submission:

Final paper / final demonstration description
Online submission:

3.3.2.1.5. Step 6: The groundwork review and completion

The review and completion of this groundwork step mainly concern:

- The completion on the marketing aspects in accordance with the thematic of the event (provided by the Innovation/marketing task manager).
- The validation of the information (paper/poster/demonstration) to present (conference) and/or to exhibit (provide by the WP9 manager).

The result to achieve is: to get the technical and commercial supports from PIXEL partners, to finalize the dissemination for the event.

3.3.2.1.6. Step 7: The groundwork finalization

The technical support objective, for the 9.3 Task manager to the attendee(s), is to provide the final verification / finalization of the last information / tool(s) necessary for the participation to the event, as the following:

- The agenda of the event (printed program),
- The detail information-session supporting material (mobile application, proceedings, exhibition),
- The timing,
- The participants list (if available),
- The social event (if any), ...

The result to achieve is: to update and validate the information with the event responsible before the PIXEL participation.

3.3.2.1.7. Step 8: the marketing campaign

The marketing campaign is managed by the Innovation / marketing task manager (T9.4) and supervised by the WP9 Manager. The following tasks are included in this Step 8:

- The creation of a marketing plan for the participation at each event:
 - The publication of attendance to the event at website and social media²;
 - The publication of a blog post about a related topic to the event booth;
 - The invitation over social media, to participate to the event;
 - The invitation over the newsletter mailing list to the event;
 - The publication in PIXEL twitter, while event is happening³;

The results are:

- The evaluation of the presentation / participation performance, such as the number of participants / listeners / discussions you had / the business cards you collected, ...
- The major objective is to promote the PIXEL's results and to satisfy the listeners / the audience (strengthening relationships with other ports, association members, business partners).

3.3.2.1.8. Steps 9-10: The monitoring and wrap-up of the event

Communication:

The communication actions by PIXEL's attendees and T9.4 Manager are the following:

- An engagement of the PIXEL's volunteer(s) to participate to the dissemination process;
- To publish pictures (exhibition and conference events), to do and disseminate paper / poster (conference and exhibition) using media platform (twitter, ...);

² PIXEL online: <https://pixel-ports.eu/>. and LinkedIn: <https://www.linkedin.com/in/pixel-ports/>

³ Twitter: <https://twitter.com/PortsPixel>

- A media strategy: Think digital and networking on the PIXEL's Website / Platform and Twitter media, LinkedIn.

The result to achieve is: to promote efficient PIXEL information/data during the event.

Wrap-up and monitoring:

A wrap-up session must include the following aspects:

- The PIXEL attendees' feedback to PIXEL's partners following the event with:
 - The satisfaction / feeling;
 - The originality of the event: value / Topics.
 - The business environment of the event;
 - The debrief during PIXEL's meeting (Plenary meeting and reporting);
 - The details related to the target groups with potential beneficiaries.
- The PIXEL's networking: dissemination of the information related to the first outcomes of the event.
- The monitoring of the contacts list to:
 - Send technical details if necessary;
 - Inform later about the PIXEL's progress.

The result to achieve is: to efficiency communicate within PIXEL partners.

3.3.2.1.9. Step 11: The event outcomes

The event outcomes are the following:

- **The results:** the targeted communication and technical exchanges / discussion, the marketing utility, the technical / marketing environments.
- **The utility / opportunity of participating to the event:** the practical interest, the contacts (booth – Participative “customers [new]”), the strengthening relationships (platforms).
- **A market event assessment.**

3.3.1. Participation at events M1-M18

In the next pages the Dissemination events attended by the PIXEL Consortium are described, in the whole half period of the project. This is done, because in D9.3 they were not reported in a common format.

For tracking and planning events attendance, an Excel sheet-based tool has been used, in which all the information associated to each initiative tackled, is gathered. The structure of the tool is the following:

- Some columns were created to represent information of the paper proposal: date, event, place, concept
- Some columns were created to identify the type of event: scientific/industrial, IoT/environment/logistics.
- Some columns were created to indicate PIXEL role: participants, leader, presentation/participation
- All this structure is accompanied with a legend of colours, to represent the status of each event. This is related to the two initial columns. These two represent: initial status (if it was tracked/came without having it planned) and final status (if the event was finally attended or not). This will assist WP9 team in analysing, at the end of the project, the level of commitment with the original plan and it also allows to react and change the planning accordingly, during the project execution.

*Note 1: the table includes also Scientific Dissemination events. This is maintained because, despite being scientifically-oriented, they were events and fairs attended by PIXEL partners in global dissemination context.

*Note 2: Not all attended events meant PIXEL presentation or exposition. At some events, PIXEL partners attended just as participants or part of the audience

*Note 3: The colour-code applied to the document can be consulted in section 3.3.5..

Table 17. List of events tracking M1-M18

I S	F S	Date	Event	Place	Concept	Type of event	Involved partners	Leader	PIXEL participation
		June-2018	Workshop with Port of Quebec	Quebec, Canada	PEI - Cross Event with Ports	Scientific Dissemination	GPMB		Presentation and debate
		29/30-Oct-2018	DocksTheFuture Workshops with Experts	Port of Leixões, Oporto	CSA Event - Thematic Workshop	Dissemination - Project Liaison Meeting	XLAB. CERTH, PRO		Debate and poster
		6-Nov-2018	CID ALICE - New Global Routes: OBOR	Athens	ALICE event	Dissemination - Project Liaison Meeting	UPV		Pitch
		27th/28th Nov-2018	FIWARE Global Summit	Malaga, Spain	IoT - Technical Event	Technical congress	PRO, UPV, ORANGE		Pitch
		6/7-March-2019	TEN-T Atlantic Corridor Working Group meeting	Lisbon, Portugal	Working Group on Ports - Atlantic Corridor TEN-T	Industrial Dissemination	UPV, GPMB	UPV	Pitch
		18/20-March 2019	Green Logistics Expo	Padova, Italy	Intermodal Transport and industrial Logistic event	Industrial Dissemination			-
		3/4-April-2019	Workshops and Mid-term Conference CSA	Trieste	CSA Event - Conference	Dissemination - Project Liaison Meeting	UPV, XLAB, ASPM, SDAG	UPV	Presentation and debate
		15/18 April - 2019	IEEE 5th World Forum of Internet of Things	Limerick, Ireland	IoT - Technical Event	Scientific Dissemination	UPV	UPV	Presentation and two papers.
		21/22-May-2019	FIWARE Global Summit	Genoa, Italy	IoT - Technical Event	Scientific Dissemination	ORANGE, CATIE, ASPM		-
		16/17-May-2019	European Maritime Days	Lisbon, Portugal	CSA related Event	Industrial Dissemination	XLAB (IM)	XLAB (IM)	Debate and short pitch during the session
		5/6-June-2019	Three Seas Initiative - 2019 Business Forum	Ljubljana, Slovenia	Maritime & Transport Event	Industrial Dissemination	XLAB	XLAB	Presence of XLAB
		22/23-May-2019	ESPO Conference 2019	Livorno, Italy	PEI - Environment Port/Transport/Industry Event	Industrial Dissemination			
		3/4 June-2019	AIOTI Flagship Event 2019	Amsterdam, Netherland	IoT - Technical Event	Scientific Dissemination	ORANGE		

D9.4 - Report on Dissemination Activities and Update of the Dissemination Plan v1

	13-June-2019	Export Summit (Greek Exporters Association)	Thessaloniki (Greece)	Transport and Logistic Event	Industrial Dissemination	CERTH	CERTH	Presentation
	25/27-June-2019	MED Ports Casablanca	Casablanca, Morocco	Transport and Logistic Event	Industrial Dissemination	ASPM, PRO		
	6/7-June-2019	AIVP / Construisons la Ville Port 2030	Riga, Latvia	Environmental and PEI Event	Industrial Dissemination	GPMB, ASPM, XLAB, CREO	GPMB	
	4/7-June-2019	Transport Logistic	Messe Munchen (Germany)	Transport and Logistic Event	Industrial Dissemination	SDAG, ASPM, INSIEL	SDAG	ESPOORG booth.
	18/20-June-2019	TOC Europe	Ahoy Rotterdam, Netherland	Transport and Logistic Event	Industrial Dissemination	PRO	PRO	Audience
	17/21-June-2019	IoT Week 2019	Aarhus, Denmark	IoT - Technical Event	Scientific Dissemination	UPV, CATIE, PRO, INSIEL, ASPM		
	9/11-July-2019	Black Sea Ports & Shipping	Constanza, Romania	Transport and Logistic Event	Industrial Dissemination	ASPM	ASPM	
	4/6-September-2019	Baltic Ports Conference	Stockholm, Sweden	Transport and Logistic Event	Industrial Dissemination	CERTH	CERTH	Presentation
	10/12-Sept-2019	Maritime Transport Conference 2019	Rome, Italy	Port transport Industry Event	Industrial Dissemination	UPV, CATIE	CATIE	Journal Paper accepted
	18-Sept-2019	ITS4 Climate Smart Mobility and Climate	Bordeaux	PEI - Environment - Technical Event	Scientific Dissemination	CATIE, GPMB	CATIE	
	1/2-October-2019	BlueMed days (Thema: smartport-smartship-greenport-greenship)	Toulon, France	PEI - Environment - Technical Event	Industrial Dissemination	CREO	CREO	Round tables
	10/12-October-2019	IDCS2019 - 12th International Conference on Internet and Distributed Computing Systems	Napoli, Italy	IoT - Technical Event	Scientific Dissemination	UPV, PRO	UPV	Paper presented
	17/18 October-2019	BILOG - Logistics and Maritime Forum	La Spezia, Italy	CSA - Joint participation in an event	Industrial Dissemination	PEOPLE	PEOPLE	Presentation

3.3.2. Liaison with Ports of the Future Network

One of PIXEL priorities is networking with other H2020 projects with relevant objectives. An official request of collaboration will be made to the leading partners of the relevant projects, at the start of the PIXEL project.

Having this clear, the main interaction of PIXEL project (and partners) with other initiatives will be through the called “**Ports of the Future Projects**” network. This naming has been created after the Coordination and Support Action funded under the same topic than PIXEL: [DocksTheFuture](#).

A **common joint integrated Dissemination Strategy** was planned in summer 2018 for all the projects, to maximize impact and visibility towards the Port of the Future. After a series of teleconferences among the CSA and the projects (having PIXEL represented by WP9 leader (UPV)), the plan was finalised. The summary of the plan was included in the predecessor document of this deliverable (D9.3).

Consequently, during the period M7-M18, PIXEL has been involved in several actions according to the plan. In order to report the main work performed in this regard, there is a table below. The table includes the information about **how** PIXEL has collaborated with the CSA and **how** PIXEL has participated in several initiatives both with DocksTheFuture and individually with other projects of the Ports of the Future Network.

Table 18. Liaison with Ports of the Future Network

Action	Promoted by	Participants	Description/comments
Two-monthly telcos (total of 4)	CSA	Ports of the Future Network	Plan common events, sharing views on the evolution of the Ports of the Future.
Telco with PortForward	PIXEL	PIXEL, PortForward	Establish a continuous exchange of ideas and information flow between the two projects (innovation & exploitation regards)
Telco with COREALIS	PIXEL	PIXEL, COREALIS	
Teleconference	CSA	Ports of the Future Network ALICE	Liaise with ALICE ETP,
DocksTheFuture Workshops with Experts (30 Oct 18)	CSA	Ports of the Future Network	Event attended by XLAB, PRO and CERTH on behalf of PIXEL. A poster exposition was made.
CID ALICE - New Global Routes: OBOR (6 Nov 18)	ALICE	PIXEL COREALIS PortForward	Event attended by UPV on behalf of PIXEL. A presentation was made.
Workshops and Mid-term Conference CSA (3-4- April-19)	CSA	Ports of the Future Network	Event attended by UPV, XLAB, ASPM, SDAG on behalf of PIXEL. Two presentations were made.
European Maritime Days (16/17-May-19)	European Commission	Ports of the Future Network	Event attended by our Innovation Manager. A presentation was made.
BILOG - Logistics and Maritime Forum (May-19)	CSA	Ports of the Future Network	Event attended by IPEOPLE on behalf of PIXEL. A presentation was made

3.3.3. Industrial Dissemination KPIs

3.3.4.1. Strategy

The aim of dissemination activities in PIXEL is to help achieve the overall goals of the project and maximise the project's impact through a strategic approach. The task is to share (dissemination) the PIXEL results effectively to a wide range of industrial stakeholders who have an interest in, concern about or are affected by Transport & Logistics, Environmental and PEI, and ICT & IoT technologies and the PIXEL applications.

Key objectives include ensuring easy access to information and results for industrial stakeholders (target groups), engaging with customers and providing demonstrations and developer tools. The general strategy is: i) To increase knowledge by informing industrial and community sectors about implementation of PIXEL actions and innovation; ii) To progressively increase dissemination activities as PIXEL demonstration results are obtained, moving from initially assuring wide awareness of the PIXEL project to creating favourable conditions for target groups uptake, towards the end of the project; iii) To maximise impact on attitude of target audiences by supporting the project and PEI developments.

To measure the dissemination progress and impact at project level, a number of quantifiable Key Performance Indicators (KPIs) have been established, based on an assessment of project size and reach, mix of partners and allocated resources.

Once the dissemination activities begin; it is essential to consider how to evaluate the effect that industrial dissemination strategy has on delivering the message/results to pre-identified targets groups.

The dissemination activity is a long-term relationship with PIXEL target groups (Chapter 3 and Table 1). KPIs measure progress and analyse the data to push toward higher goals and help create an analytical foundation for project management decision-making.

A set of Key Performance Indicators (KPIs) has been defined to (i) maximise the visibility of the project and to (ii) measure the efficiency and effectiveness of industrial dissemination activities carried out during the whole life project process. KPIs are scheduled to be measured on a regular basis.

For this purpose, that is to assess KPIs, in the following sub-chapter, we define KPIs and their relevant success value and interpretation:

- Identification of KPIs and target values;
- Monitoring of KPIs;
- Evaluation of KPIs;
- Dissemination review

3.3.4.2. Identification of KPIs and target values

The KPIs and relating success criteria / target value, are specified in the following tables.

The first action performed to identify the KPIs, was to review the commitment stated in the Grant Agreement. The paragraph related to Industrial Target values are extracted from the Grant Agreement:

Table 19. Targeted values extracted from Pixel Grant Agreement

What	Description	KPI	From Whom
Workshops, showcases	Final dissemination workshop with presentation of PIXEL's results, open call for papers and industry session	Total of 2 over the project's lifetime	Scientific/industry community
Industry events	"Marketing-oriented" presentations at industry events (exhibitions and fairs e.g., TOC, SIL, SITL, CES) or in bilateral discussions with ports and related entities.	At least 2 per year	Industry community

On-site visits to field trial	Selected user and stakeholder groups, e.g. ports, public authorities or solution developers	At least 2 during project lifetime	Industry community
Clustering and liaising	Project Liaison Meetings, informing about PIXEL’s results and establishing synergies with other relevant transport projects	2 during the project lifetime	Other related projects, CSAs and EC initiatives

The KPIs and relating success criteria / target value are specified in the following table:

Table 20. Industrial dissemination activities. Set of KPIs

Dissemination activity	Key Performance Indicator (KPI)	Target value (Total)*
International industrial events (exhibitions, conferences)	Number of attended events where PIXEL is represented	14
	Number of PIXEL people participating to events	23
	Number of conferences where PIXEL is presented	14
	Number of PIXEL partners participating to events	8
	Number of PIXEL partners attending booth	Several per year
	Number of follow-up activities resulting from the events	Several per year
	Number of event where promotional material were presented/distributed	Several per year
Showcases at the test sites (x3)	Port of Monfalcone (It)	1
	Port of Bordeaux (Fr)	1
	Ports of Piraeus-Thessaloniki (Gr)	1
	Number of participants to each organised showcase	> 10
Liaison with other European projects	European projects: CSA, ALICE, COREALIS, PortForward, DocksTheFuture	Several per year
Interviews with targets	Number of interviews with end-user communities (target groups)	Several per year

* Extracted from GA.

The Figure below summarizes the people from PIXEL’s partners who will have to participate to industrial events (referring to the Grant Agreement [GA]).

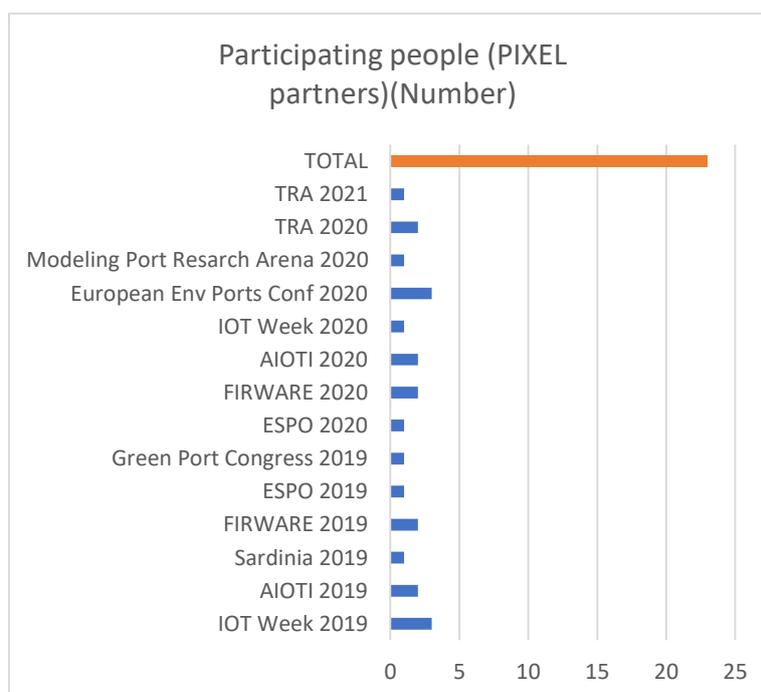


Figure 26. People from PIXEL partners participating to the industrial events (GA)

The graph below updates the PIXEL participation to industrial events until June 2019:

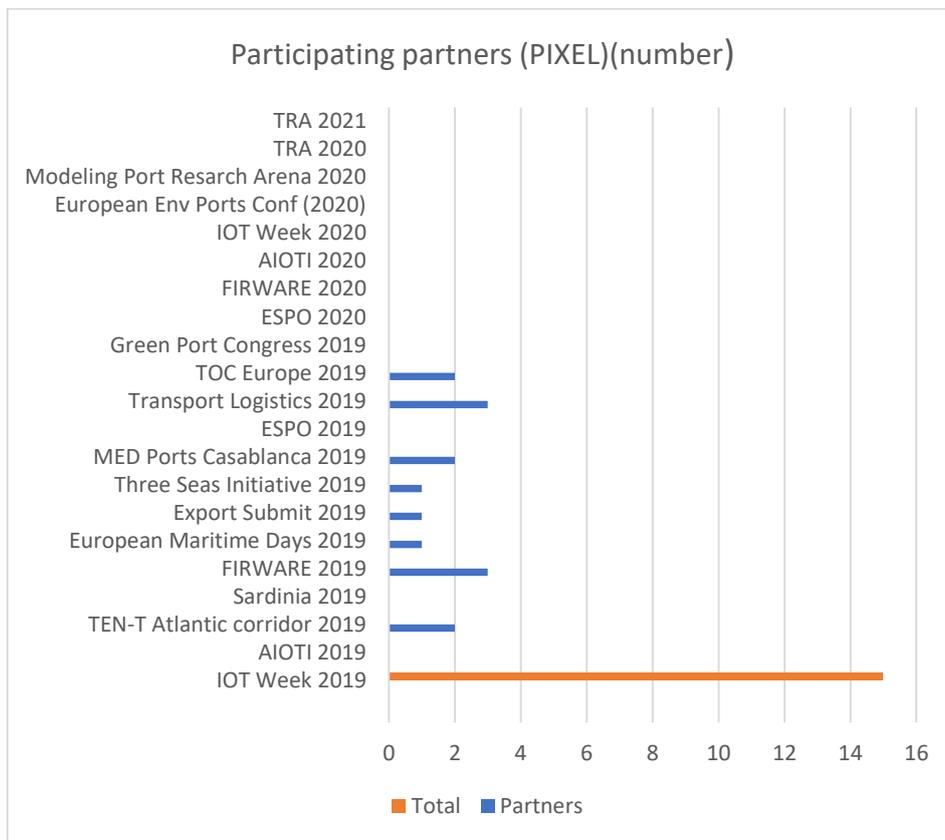
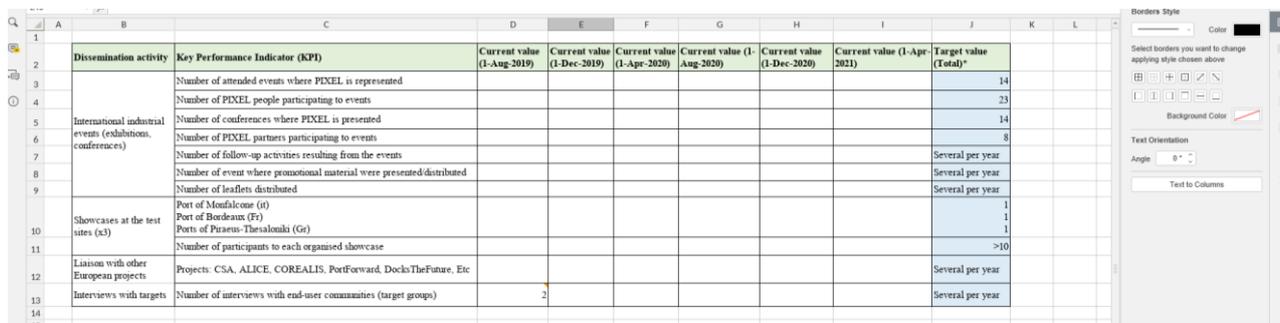


Figure 27.. PIXEL partners attendance until June 2019

3.3.4.3. Monitoring of KPIs

In order to assess the effectiveness of industrial dissemination mechanisms, the Key Performance Indicators (KPIs) will be used continuously to monitor the dissemination activity by the PIXEL project. In this sense, a shared spreadsheet has been created within the overall monitoring document, for the whole WP9, including these KPIs. A screenshot of this Table can be seen at the following figure. The responsible (T9.3 leader: Creocan) will continuously update that table, after gathering the current information from its dissemination activities: attendance to industrial events, organizing workshop in PIXEL ports, etc. ensuring that the focus of dissemination will be allocated using the most efficient mechanisms.



Dissemiation activity	Key Performance Indicator (KPI)	Current value (1-Aug-2019)	Current value (1-Dec-2019)	Current value (1-Apr-2020)	Current value (1-Aug-2020)	Current value (1-Dec-2020)	Current value (1-Apr-2021)	Target value (Total)*
International industrial events (exhibition, conferences)	Number of attended events where PIXEL is represented							14
	Number of PIXEL people participating to events							23
	Number of conferences where PIXEL is presented							14
	Number of PIXEL partners participating to events							8
	Number of follow-up activities resulting from the events							Several per year
	Number of event where promotional material were presented/distributed							Several per year
Showcases at the test sites (x3)	Number of leaflets distributed							Several per year
	Port of Mouloules (it)							1
	Port of Bordeaux (Fr)							1
Liaison with other European projects	Port of Piraeus-Thessaloniki (Gr)							1
	Number of participants to each organized showcase							>10
Interviews with targets	Projects: CSA, ALICE, COREALIS, PortForward, DocksTheFuture, Etc							Several per year
	Number of interviews with end-user communities (target groups)		2					Several per year

Figure 28. Screenshot of the table monitoring KPIs in OnlyOffice platform

Different KPIs that are currently planned to be established are detailed more thoroughly in advance. Target values of the dissemination KPIs have been defined below. The timeliness of measures will be monitored, in terms of deviations from the GA. The results of the dissemination strategy will be constantly monitored / compared to target values. We propose to perform continuously the monitoring. During the plenary meetings, all the partners will be informed about the current status of KPI's performance.

3.3.4.4. Evaluation of KPIs

The KPIs will be listed continuously. The assessment will be done using known/available tools from project and risk management, where the achievement is classified in categories in order to follow the necessary implications from KPIs. This reporting data (in the platform OnlyOffice) will allow to analyse the dissemination activity and to plan responses/actions and then to evaluate and record effectiveness for the next period.

The following table shows the classifications used within the progress assessment:

Table 21. Classifications used within the progress assessment of KPIs

Categories		General actions or measures
0	Immediate action necessary	KPI is below the expected value Improve the dissemination activities relevant to KPI
1	Needs further attention	KPI is slightly below expectations Further measures for improvement need to be discussed and addressed to partners
2	Good progress	KPI is on track with the dissemination plan and strategy No corrective actions are necessary Continue with the monitoring
3	Overachievement	KPI exceeds the expectations! The industrial dissemination plan is possibly under evaluated Shift or concentrate efforts to other tasks (dissemination or not) with lower performances

3.3.4.5. Dissemination Review

Each project partner is required to submit its activities to Task 9.3 leader after the dissemination work is finished.

Each PIXEL partner is responsible for recording their dissemination actions with the following structure (according to a form in a Sheet available in OnlyOffice (project online repository)):

[Date, Event name, Event description, location, PIXEL's participants, nature of participation, number of attendees, feedback and added values, pictures],

and reporting them to WP9 leader and Task 9.3 leader.

The submission to WP9 leader, will assist in planning forward and if necessary, will take countermeasures in a preventive manner.

3.3.4. Industrial Dissemination KPIs evaluation M1-M18

Following the instructions depicted in the previous sub-section, the table below reflects the results of the evaluation of the Industrial Dissemination status at the half of the project. As it has been indicated, this evaluation is performed every 4 months, but for the sake of simplicity in this report, they have been condensed in a single table that pretends to inform about the global evolution over the period M1-M18.

Table 22. Industrial Dissemination evaluation at M18

Dissemination activity	Key Performance Indicator (KPI)	Target value (Total)*	31-oct-19		
			Current value	% of accomp.	Evaluation
International industrial events (exhibitions, conferences)	Number of attended events where PIXEL is represented	14	21	150%	3
	Number of PIXEL people participating to events	23	15	71,43%	2
	Number of conferences where PIXEL is presented	14	12	85,71%	2
	Number of PIXEL partners participating to events	8	12	125%	3
	Number of follow-up activities resulting from the events	Several per year	Several	-	-
	Number of events where promotional material were presented/distributed	20	4	20%	1
	Number of leaflets distributed	100	40	40%	2
Showcases at the test sites (x3)	Port of Monfalcone (it) Port of Bordeaux (Fr) Ports of Piraeus-Thessaloniki (Gr)	1 1 1	0	0%	1 N/A
	Number of participants to each organised showcase	>10	0	0%	1 N/A
Liaison with other European projects	Projects: CSA, ALICE, COREALIS, PortForward, DocksTheFuture, Etc	4 per year (12 in total)	9	75%	2
Interviews with targets	Number of interviews with end-user communities (target groups)	4 per year (12 in total)	3	33%	1

Conclusions

Attendance to Industrial Events is going very well. PIXEL is represented and presented in several relevant events and the participation from PIXEL partners is quite good. 12 out of 15 partners have already represented the project in one or more industrial dissemination actions.

Several KPIs were too much abstract and generic in D9.3 and needed to be refined during this period. Regarding the provision of supporting material from PIXEL partners to potential contacts when attending events, we have set 20 as 100 units as the reference figures to reach. In that department we are advancing as expected, but some extra effort is foreseen, something that will hopefully be solved with the new strategy of industrial events conduction (section 3.3.2).

The same happened to the interaction with CSA and liaison with other European projects. 12 (3 per year) are considered as a good target number, regarding common actions/events/initiatives to be tackled jointly.

Again, equal logic applied to the number of interviews with potential external end-users. The objective has been (ambitiously) set as 12, while currently 3 have been conducted.

The new strategy will also assist in tracking the most complicated KPI. Follow-ups after events are usually hard to be measured, thus for this period a valid number to take as a reference, has not been considered. This will be polished through the next deliverable (D9.5).

3.3.5. Future schedule of events to attend

Following the same schema than in section 3.3.1, in the table of the next page the Dissemination events planned to be attended are described, or those that have been identified and are under observation for possible attendance (check the methodology in section 3.3.2).

Note 1*: The table is continuously worked over. Therefore, it only represents the capture of a timeframe of the situation. This means that no intention, plan or comment must be considered as final or as a commitment from the PIXEL Consortium.

Color code:

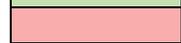
	Already attended
	Won't be attended
	Confirmed attendance
	Official request (with doc.) sent, pending to be confirmed or rejected
	Detected interesting event - Not identified in GA nor in D9.3
	Detected event in D9.3 - Not identified in GA - Come up during project execution
	Planned event since the GA (with budget)

Table 23. Events under observation to potentially be attended by PIXEL ports in M18-M36

I S	F S	Date	Event	Place	Concept	Type of event	Partners
		11/14-Nov-2019	ICHCA International 20/20 Cargo Vision Conf & Exh	Malta	Transport and Logistic Event	Industrial Dissemination	PRO
		19/20-Nov-2019	Smart Ports Barcelona	Barcelona	Summit on port operations.	Industrial Dissemination	?
		Early 2020	Workshop with Port of Quebec	Quebec, Canada	PEI - Cross Event with Ports	Scientific Dissemination	?
		19/21 Feb-2020	Big Data From space	EU	Satelite imagery	Industrial Dissemination	XLAB
		19/20 Feb-2020	Smart Ports Summit	London, UK	Automating processes. Standardising information flow. Optimising the supply chain	Industrial Dissemination	?
		Feb-2020	DocksTheFuture Workshops	??	CSA Event - Thematic Workshop	Dissemination - Project Liaison Meeting	UPV, PRO, MEDRI
		18/19 March-2020	IoT World	Paris	IoT - Technical Event	Industrial Dissemination	CATIE, ASPM
		27/30 April-2020	TRA (Transport Research Arena) 2020	Helsinki, Finland	Logistic & Transport Event	Scientific Dissemination	PRO, CERTH
		May-20	Final Conference CSA-DocksTheFuture	??	CSA Event - Conference	Dissemination - Project Liaison Meeting	UPV, PRO, XLAB
		May-20	European Environmental Ports Conference –2020	??	ACI Maritime Ports Event	Scientific Dissemination	UPV, INSIEL, MEDRI
		May-20	FIWARE Global Summit	??	IoT - Technical Event	Scientific Dissemination	ORANGE
		12/13 May-2020	The IoT showroom SIDO	Lyon	IoT - Technical Event	Industrial Dissemination	CATIE, ASPM
		28/29 May-2020	ESPO Conference 2020	Oslo, Norway	Port transport Industry Event	Industrial Dissemination	CERTH
		9/11 June-2020	BEYOND 2020 World sustainable built Environment conference (https://beyond2020.se/)	Gothenburg (Sweden)	PEI - Environment Event/Exhibition	Scientific/Industrial Dissemination	?
		May/June-2020	AIOTI Flagship Event 2020	¿?	IoT - Technical Event	Scientific Dissemination	ORANGE

D9.4 - Report on Dissemination Activities and Update of the Dissemination Plan v1

	2/6 June-2020	The 2020 Ocean Conference	Lisbon, Portugal	Environmental and PEI Event	Scientific Dissemination	?
	9 June-2020	NAFEMS UK Conference 2020 - Engineering Modelling, Analysis and Simulation Community	Milton Keynes (UK)	Environmental and PEI Event	Industrial dissemination	?
	10/12 June 2020	Environmental Impact 2020 - 5th International Conference on Environmental and Economic Impact on Sustainable Development	Seville, Spain	Environmental and PEI Event	Scientific/Industrial Dissemination	?
	?-2020	TEN-T days	Croatia	Transport and Logistic Event	Industrial Dissemination	CATIE, PPA
	??-2020	NAFEMS France Conference	France	Environmental and PEI Event	Industrial Dissemination	CATIE, ASPM, XLAB
	1/5 June-2020	IoT Week 2020	Dublin (Ireland)	IoT - Technical Event	Scientific/industrial Dissemination	INSIEL
	May-2020	2nd Workshop	¿?	PIXEL Workshop - Ports	PIXEL Workshop	
	22/25 Sept-2020	INNOTRANS	Berlin	Transport and Logistic Event	Industrial Dissemination	SDAG, INSIEL, XLAB
	Sept-Nov - 2020	ALICE ETP Event	¿?	ALICE event	Dissemination - Project Liaison Meeting	CERTH
	September-2020	Modelling Port Research Arena	¿?	Maritime modelling and simulation	Scientific Dissemination	CATIE
	Nov-2020	ALICE ETP Event				
	Nov-2020	3rd Workshop - Codecamp	¿?	PIXEL Workshop - Codecamp	PIXEL Workshop	
	April-2021	TRA (Transport Research Arena) 2021	¿?	Logistic & Transport Event	Scientific Dissemination	UPV

3.4. Dissemination Matrix update

The current status of the Dissemination Matrix, at the moment of the submission of this deliverable (M18), is the following:

	ICT & IoT			Transport & Logistics			Environmental & PEI		
	id	Description	Partners	id	Description	Partners	id	Description	Partners
SCIENTIFIC DISSEMINATION EVENTS	#S.I.1	Paper in "IEEE 5th World Forum of Internet of Things"	UPV	#S.T.1	Workshop with Port of Quebec	GPMB	#S.E.1	Paper in "Environmental Monitoring and Assessment"	MEDRI
	#S.I.2	Paper in OCEANS 2019	XLAB	#S.T.2	Paper in Maritime Transport Congress 2019	CATIE, UPV	#S.E.2	Paper in TRA2020 about PEI	MEDRI, UPV
	#S.I.3	Paper accepted in TRA2020 about IoT architecture	PRO, UPV, CATIE, CERTH	#S.T.3	Presentation of article after #S.T.2	CATIE	#S.E.3	Paper in 8th Conference in Marine Technology - Air pollution	MEDRI
	#S.I.4	Paper in IDCS 2019	UPV, PRO				#S.E.4	Paper in 8th Conference in Marine Technology - Noise pol.	MEDRI
	#S.I.5	Presentation of article after #S.I.1 action	UPV				#S.E.5	Presentation at ITS4 Climate Smart Mobility and Climate	CATIE, GPMB
	#S.I.6	Presentation of article after #S.I.4 action							
INDUSTRIAL DISSEMINATION EVENTS	#I.I.1	Participation in FIWARE Global Summit	UPV, ORANGE	#I.T.1	Workshop of the Atlantic Corridor - EU (DG MOVE) - Algeciras	GPMB	#I.E.1	Presentation at BlueMed days (smart-greenport-greenship)	CREO
				#I.T.2	DocksTheFuture Workshops with Experts	XLAB, PRO, CERTH			
				#I.T.3	CID ALICE - Event with the CSA	UPV			
				#I.T.4	Presentation at TEN-T Atlantic Corridor, Lisbon	UPV, GPMB			
				#I.T.5	Workshops and Mid-term Conference CSA	UPV, XLAB, ASPM, SDAG			
				#I.T.6	European Maritime Days with the CSA	XLAB			
				#I.T.7	Three Seas Initiative - 2019 Business Forum	XLAB			
				#I.T.8	Presentation at Export Summit (Greek Exporters Association)	CERTH			
				#I.T.9	Presentaton at MED Ports Casablanca	ASPM			
				#I.T.10	Presentaton at Transport Logistic in Munchen	ASPM, SDAG, INSIEL			
				#I.T.11	TOC Europe in Rotterdam	PRO			
				#I.T.12	Black Sea Ports & Shipping in Constanta	ASPM			
				#I.T.13	Baltic Ports Conference	CERTH			
				#I.T.14	Presentation at BILOG forum with the CSA	IPEOPLE			
VIRTUAL PRESENCE	#VP.I.1	Architecture overview presentation video	PRO	#VP.T.1	SDAG presentation video	SDAG			
		id			Description			Partners	
		#VP.N.1			First release of the website of PIXEL http://pixel-ports.eu/			UPV, IPEOPLE	
		#VP.N.2			Promotional video of PIXEL			UPV, IPEOPLE	
		#VP.N.3			Introductory video to PIXEL done by Coordination			UPV	
		#VP.N.4			New website launched			All WP9 partners	
		#VP.N.5			Innovation Manager video			XLAB (Innovation Manager), UPV	
		#VP.N.6			AB members interview videos			UPV - AB members	
	#VP.N.7			2nd round of supporting material: T-shirt, folder and new versions of poster and flyer			All WP9 partners		
	#VP.N.8			Delivery of 1st PIXEL Newsletter					

Figure 29. Dissemination Matrix (M6 of the project)

4. Conclusions

The second dissemination reporting period of the project has been marked, by the execution of the Dissemination/Communication plan established through the deliverable D9.3.

On-the-field actions have been executed both in Industrial and Scientific Dissemination. The presence of PIXEL in relevant events and fairs both in the Transport/Logistics sector and in the IoT/ICT technological realm has been enhanced. Furthermore, very successful scientific value has been provided to the Consortium, via the acceptance of 9 papers in different journals and editorials. Although the main focus has been placed on the novel environmental impact assessment approach (PEI), attention was diverted to IoT, logistics and modelling field. The common view of the project has been reinforced, through the creation of supporting material for dissemination such as posters, leaflets, stickers and T-shirts. This has also laid the foundations for further creation of “kits” to be delivered in events and leveraged for branding and publicity aims. All of this has been accompanied by a continuous presence in social networks, through which we aim at creating a strong community based on open source, research projects and good environmental and port-related agents. Additionally, continuously posting short and dynamic videos, in order to let the global audience know PIXEL in a light and entertaining way.

This document includes the report of those actions, according to different classifications, and hereafter the reflection that the WP9 team has done, after analysing the objective data, is translated:

The progression on Communication is considered satisfactory. It can be observed in section 3.1, that we are improving our metrics, while being aligned with the objectives set. Furthermore, all our channels are updated and synchronised with each other (one event published to happen via Twitter – event finished described in the website and LinkedIn). Additionally, a unique and recognisable identity has been created (banner, “X”, hashtags) offering a unique branding and style in all the Virtual Presence channels.

Regarding Scientific Dissemination progress, papers have been presented (and getting accepted) to different congresses and journals. Furthermore, diverse activities are on track, tackling various initiatives such as PIXEL in Education or aiming at contributing to open source. Something that needs to be urgently addressed on this matter, is organising workshops to external scientific communities, in order to let them know and learn from the technical advances the project is achieving. This is very important, with a view to maximising the outreach of the project.

Finally, focusing on Industrial Dissemination reflections, are considered as heterogeneous. On the one hand, a tremendous effort to be present at relevant and important events is made. In the majority of them, PIXEL is presented through a pitch or exposed through a poster session. It is worth to mention that the collaboration with the CSA, as well as the joint participation in events, is being satisfactory huge. However, IoT and environmental-related industrial events have been left aside this first half of the project. This might respond to various factors, but it is considered mainly due to the lack of “showable” results, that will be available very soon. That is why, the Consortium is convinced about the normalisation of this condition, during the forthcoming months. As a matter of fact, the finalisation of technical outcomes will help to increase these figures, as it will allow the Consortium to apply for booth and demonstrators in important industrial events in 2020 and 2021.

To sum up, the performance on dissemination and communication is considered satisfactory, but there is still a long way to go, in order to achieve the ambitious objectives set at the beginning, from the proposal phase.

The second half of the project, needs to be characterised by a markedly dissemination-oriented character. Technical actions will need to have corresponding communication reaction, and the conclusions extracted from the diverse WPs, must become actionable dissemination assets.