PROJECT DELIVERABLE REPORT

Introducing advanced ICT
and Mass Evacuation Vessel design
to ship evacuation and rescue systems

D9.1 PALAEMON Dissemination Plan and Activities Report

A holistic passenger ship evacuation and rescue ecosystem
MG-2-2-2018
Marine Accident Response

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Contents

Terms and Abbreviations

AR	Augmented Reality
EC	European Commission
EU	European Union
DSS	Decision Support System
IIoT	Industrial Internet of Things
ICT	Information and Communication Technologies
IPRs	Intellectual Property Rights
IoT	Internet of Things
KPIs	Key Performance Indicators
MEV	Mass Evacuation Vessel
MEPs	Members of the European Parliament
MX	Month X, X=1, 2, … 48
R&D	Research and Development
SWOT	Strengths, Weaknesses, Opportunities and Threats
VR	Virtual Reality
WP	Work Package

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Executive Summary

Deliverable 9.1 – Dissemination Plan and Activities Report (WP9) analyses in detail the strategic elements that constitute the plan to communicate PALAEMON to targeted audiences and disseminate the results of the project to efficiently convey the vision and goals of the project. These actions will be in line with the dissemination level described while complying with both EU and national data protection laws applicable. The consortium will disseminate and exploit project results as a whole and individually each partner, promoting the project both as an innovative concept but also as an applicable solution. To achieve these goals, PALAEMON's communication and dissemination is based on an array of activities intensifying the project's impact.

Consortium partners will work towards this direction utilizing their networks and influence in their field of expertise. The Consortium, aiming to successfully develop an innovative ecosystem for ship evacuation, will actively promote and raise awareness of the proposed system to all relevant stakeholders showcasing all dimensions of the system that ranges from wireless communication network installations to novel naval building architectures.

Towards these goals the main constituents of the plan will be:

1. Awareness
2. Scientific and Technological achievements
3. Demonstrational applications
4. Participation of end-users for continuous development

The plan will be carried out in three phases:

1. Initialization of project's promotional activities
2. Evolution towards Project Commercialization
3. Business strategy

Actions of the communication and dissemination plan will enhance sustainability of the project and maximize exploitation potential.

The plan will cover the following areas:

1. Project website
2. Project identity and branding
3. Social media strategy
4. Generation of positive media coverage and project publications release
5. Attending and/or hosting conferences, networking events, and/or workshops
6. Clustering with relevant projects and/or initiatives

Key stakeholders and user groups of the maritime and ICT world (ship operators, shipyards, leading software industries, IIoT hardware vendors, maritime safety equipment manufacturers) will be notified and facilitated to get involved during and after the project. The scientific community also belongs to the target audience of the project, covering areas from computer science to naval engineering. Knowledge areas relevant to the project cover most engineering disciplines, indicatively naval, software, mechanical, environmental, electrical, communications and others. Last, facilitators (EU institutions, public authorities, standardization bodies, associations, etc.) and the general public are to be addressed to raise awareness about the project and its achievements, fostering wider adoption of the developed system.

PALAEMON partners will be active in major forums and/or tradeshows in the fields of ICT, maritime industry, and naval engineering. A series of training and or showcasing sessions focused on system demonstration and integration, widening the user-base and gaining valuable feedback will also be held. In these actions, key stakeholders both from the academic and commercial world are part of the target audience. These initial steps lead up to the final stage of market introduction and enhance adoptability of the system. Third party contributors are expected to be part of this final stage and the dissemination plan will include content targeted to relevant stakeholders and delivered at a scheduled rate.

Additionally, associated European projects addressing relevant fields, will be identified and liaison actions taken to broaden the base of user groups and stakeholders. Expected outcomes are also the exchange of knowledge, ultimately leading to more targeted and efficient project implementation.

To objectively measure impact of dissemination activities PALAEMON will introduce a monitoring procedure by defining key performance indicators (KPIs) which aggregated with stakeholder and collaborator feedback will indicate the measure of success of the actions taken.

1   Introduction

The PALAEMON project dissemination plan contains an array of actions aiming to maximise the project's impact. In line with this objective, the PALAEMON plan focuses on establishing the optimal communication paths to the targeted stakeholders and keeping the audience up to date with activities and outcomes of the project. Additionally, the project will actively seek to connect with potential contributors to all stages of the project, from development and initial pilots to exploitation of PALAEMON outcomes. Ultimately this will lead to building a community of active participants to the development of the project following its progress throughout its lifetime. PALAEMON's communication and dissemination strategy aims directly to establishing channels for the exploitation of the project outcomes by utilising publicity and wider exposure generated by project activities and results during and after the project's lifetime, enhanced by means of informed targeted stakeholders.

1.1   Project vision and goals

PALAEMON's vision is to support the safety of passengers by providing a total solution for the evacuation of high-capacity passenger ships. PALAEMON aims to address the increased need for advanced passenger ship evacuation methodologies by defining a new ICT framework and radical rethink of mass evacuation systems with the introduction of MEVs with a wider scope than a sole technical proposition. Driven by the need to yield an end-to-end, uniform approach, PALAEMON redefines the issue of passenger ship safety by taking into consideration issues pertaining to cost, complexity, vulnerability, societal acceptance and ethics.

PALAEMON will perform all needed research, development, integration and awareness raising activities to yield a holistic system which are:

- adopting a Total Ship Mustering & Evacuation Approach, merging and balancing all relevant aspects in the delivery of a novel marine evacuation system.
- delivering by means of research, development and demonstration, a scalable framework and congruent prototype that will guarantee the seamless, real time and cost-efficient surveillance and monitoring of ships' decks – irrespective of their type – enhancing the safety of complex and hard to monitor infrastructures.
- introducing a ground-breaking approach in simulating the behaviour of important sub-systems, potential threats and the human factor. The resulting simulated environment will be used for the early design and testing of the PALAEMON components and it will also be exploited for the training of search and rescue operators.
- supporting a total Early Detection and Situational Awareness mechanism that will assist authorities and operators even in the most complex, remote or demanding localized spaces.
- assessing at runtime how activities or phenomena might evolve into an incident for the passenger ship, fusing different information data, thus establishing an active and dynamic safety framework, outperforming current passive and static frameworks.
- improving the sensor base and sensor intelligence to detect various kinds of illicit activity patterns with reduced rates of false alarms.
- setting a cornerstone for the standardization of equipment, processes and methodologies for marine evacuation at EU level, addressing the cross-cultural issues emerging from the diversity imposed by the passengers and their cultures, legislation, etc.

- safeguarding the societal acceptance of the proposed framework by adhering to the recommendations and expectations of the Societal Impact Expert Working Group.
- implementing visible demonstrations of an innovative and Unique Reference System for the PALAEMON Ecosystem.

PALAEMON brings together all stakeholders of the value chain; from the collection of user requirements, to the iterative development and validation of the system's technical specifications & the performance of pilot demonstrations and integrity tests, the involved user groups – ship operators, citizens, first responders, crisis managers, resource/ infrastructure managers, and public agencies - will be integral cogs.
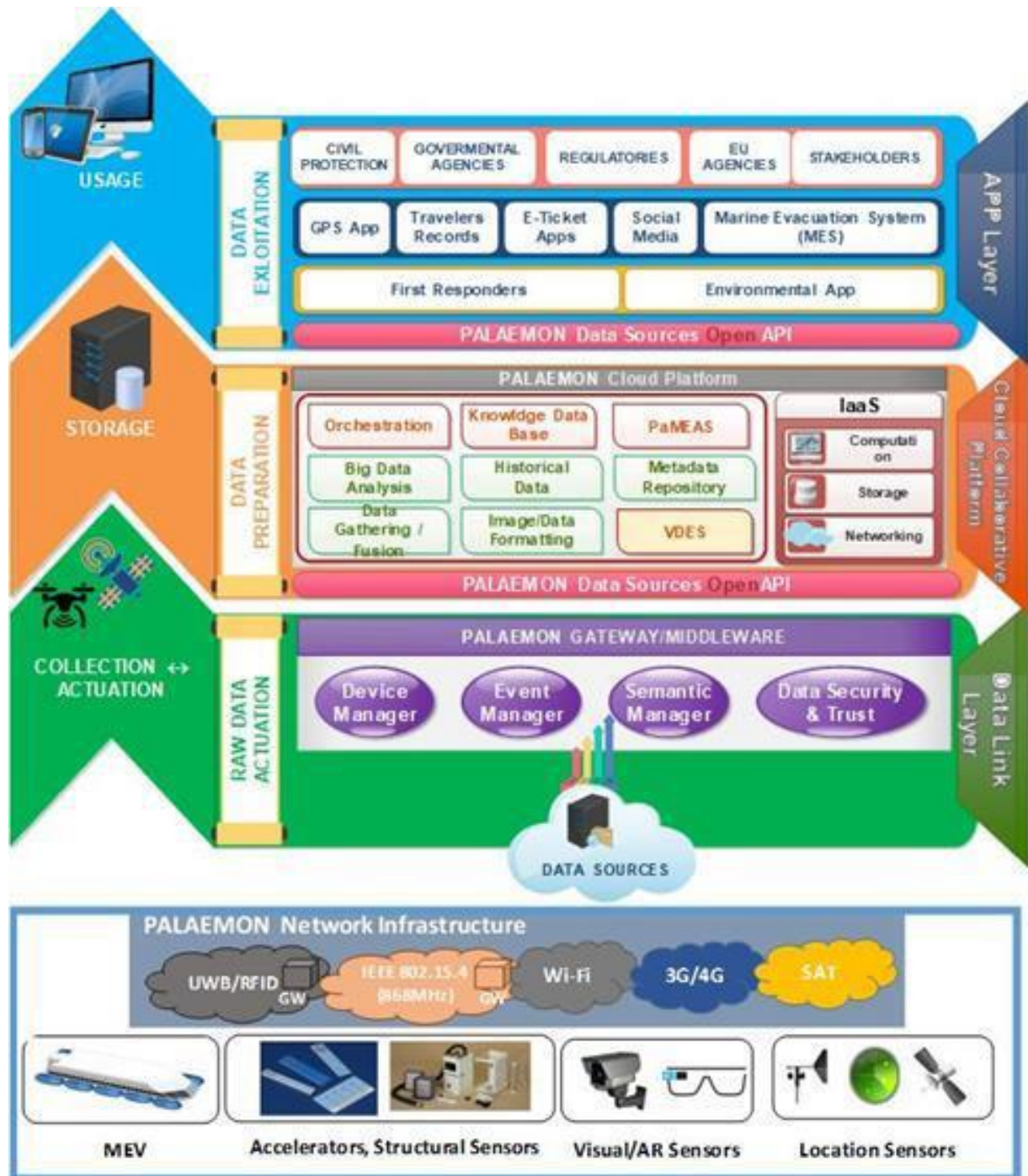

Figure 1 PALAEMON Architecture

1.2   Project impact

The cruise industry is a highly concentrated business in terms of players and markets, where vessel deployment strategies are affected by market and operational considerations and one of the fastest-growing sectors of an already rapidly expanding tourism industry. This is perhaps unsurprising, given the advantages that cruise ships enjoy relative to on-land resorts and vacation spots carrying some average of 2000 passengers (with vessels accommodating 8000 passengers already in service), giving cruise lines a rich and captive supply of vacationers. With the enormous increase in capacity, the ever-larger ships and the limited number of viable cruising areas for these larger ships, it is questionable as to whether the industry will adapt to the changing circumstances over the next years.

The core of the cruise industry experience is to provide a pleasant recreation for the customer. When a mishap/disaster on a cruise ship occurs, it can put the customer at serious risk. Although most cruise lines reported on commitments, fewer reported on specific initiatives, and still fewer provided meaningful assessments of their impacts or performance. PALAEMON will give the floor to technology partners to introduce novel, optimized and integrated approaches to potential end-users, providing them, in turn, with an excellent opportunity to understand potential weaknesses or limitations of current technologies and provide a new insight into cruise line mishaps evaluation research to lay a foundation of operator preparedness.

The expected impacts of PALAEMON are the new innovations focusing on the benefit of businesses and the empowerment of the maritime industry via enabling efficiency and effectiveness of the maritime services, will have a profound impact with respect to Big Data adoption in the transport (maritime) sector plus targets to contributing in the policy making and standardization. Further, the consortium aims to open new areas for socioeconomic research, open up new markets for ICT solutions across the EU relating maritime business and at the same time accelerate start-up time-to-market on solutions meant for the maritime market. PALAEMON will furthermore, facilitate an opportunity to innovative small and medium European companies to join forces with incumbent European industries for the delivery of advanced technology solutions in a niche domain. It will also be the platform for the cross-fertilization of ideas and approaches under the greater PALAEMON vision.

1.3   Task and deliverable intra-project relations

All PALAEMON partners are expected to actively participate and contribute towards achieving the communication and dissemination goals, whilst benefiting from opportunities in their respective field. All stakeholder groups are represented in the PALAEMON consortium from academia, industry, including specialists in communications and big data analysis, naval engineering, IoT hardware platforms, regulatory boards, wireless solutions, incident management software developers, VR/AR specialists, shipyards as well as maritime end-users. This balanced team of experts holds knowledge and expertise in a diversity and of areas as well as in great depth, therefore, covering both horizontally and vertically the needs of dissemination of related work. Every partner compliments the consortium with a unique skillset and insight based on specific know-how and their geographical location.

The following reports and demos related to the communication and dissemination of project results will be delivered during the PALAEMON lifetime:

- PALAEMON Project Website at M3.

- Deliverable "D9.1 Dissemination Plan and Activities Report" at M12 (outlining the dissemination strategy and main activities centred around dissemination and communication of PALAEMON outcomes identifying ad hoc contingency measures if needed).
- Deliverables D9.2 "Dissemination Activities Report" at M36 (assessing results of the dissemination plan).

D9.1 is organized in 2 main sections, dedicated to the description of a) the communication and dissemination strategy, channels, and activities (chapters 2 and 3), and b) the monitoring and evaluation of the communication and dissemination activities (chapter 4). Also, in chapter 5 an overview of the knowledge dissemination management and protection strategy is provided.

2   General communication and dissemination strategy

To convey the importance of the project, high visibility and promotion of active interaction with key stakeholders is needed for the industry and public to understand the importance, the added value and eventually embrace and justify the investment of capital and effort to support this research innovation action. Consequently, delivering the highest possible impact to stakeholders outside the project partnership through its dissemination strategy, is highly important so that the consortium can achieve the objectives as formulated below:

- Full exploitation of the project outputs and use in their design intended application, for example through real-life installations of the developed solutions.
- Knowledge and information generated is shared through the project and made available to all interested organizations and key stakeholders.
- Breakthroughs produced by the project will be adopted and used by other entities, fuelling further inter or cross disciplinary development.
- The project will reach decision-makers to contribute to improving future policies.
- The project will initiate the processes of revising safety regulations.
- The benefits of the project in services, employment, and the economy will be efficiently brought to society.

Critical information to be communicated to the relevant audience is:

- Vision: The highest level of project overview defining the objectives, strategic relevance and key facts. It will evolve along the project and be reviewed periodically to describe the true goal of the project.
- News: The consortium will disseminate achievements and results. Main focal points are the novelties introduced by PALAEMON towards a safer way of dealing with maritime incidents. Increasing safety, inclusion of special needs groups and human life value. The integrated technological outcomes are to be exhibited and communicated to the public to showcase the applied research paradigm in service of human lives.
- Promotion of events and event results.

The consortium will keep track of the communication and dissemination plan throughout the project period. It is expected that all partners involved in PALAEMON will use their industrial partnerships, standardization activities and long-standing experience in EU funded projects to contribute to the communication and dissemination activities over the project duration. The dissemination activity report, that will be issued (M36), will assess results of the communication and dissemination plan and will identify ad hoc contingency measures if needed.

Palaemon ecosystem is a complex mechanism of software and hardware modules that cooperate by means of a central Decision Support System (DSS), meaning that focus can be easily diverted, and value diluted by segmentation of value perception. Therefore, to ensure that impact of project advances is communicated, the following project outputs will be disseminated as widely as possible:
- Ready for use PALAEMON Mass Evacuation Vessel prototypes,
- PALAEMON Incident Management Platform
- PALAEMON Operational Centre & Academy Training program
- User Guidelines and Lessons-learned
- Training session and material

Among the strategic goals of dissemination activities is to promote the proposed solutions as compatible and interoperable with existing systems. Seamless integration and standardization compliance are essential tools for the dissemination of project results and interaction with market stakeholders.

2.1   Communication and dissemination objectives

The main communication and dissemination objectives are defined on two parallel axes:

- Effective and sustainable dissemination of knowledge among and beyond the members of the consortium (during and beyond the lifetime of the project)
- Promotion of the exploitable foreground of the PALAEMON results.

Activities will be led by EFB and practiced by all partners.

All the critical results obtained during the project will be integrated in WP8 to validate and demonstrate the PALAEMON ecosystem in real life use cases. In this light, the consortium will take all appropriate actions to report about these results and provide adequate and effective protection of knowledge created in the project, having due regard to the legitimate interests of the contractors concerned and their IPRs.

In particular, the objectives according to the communication and dissemination axis are the following:

- Public awareness: project achievements communicated to the key user groups and stakeholders (with expertise in maritime, ICT and IoT technology landscape), the scientific community and the public.
- Facilitate sharing of knowledge inside the consortium and establish a comprehensive outreach function connecting the research community, academia, private sector and other industry bodies and financial institutions.
- Ensure the alignment of the project activity with calendar events of relevant EU programmes and initiatives.
- Share the technical results of the project with the scientific community interested in the topics addressed by the project to promote the research and receive useful inputs from other scientists and international communities.
- Promote, where applicable, the familiarization and use of tools, technologies, deliverables, and other results of the project to the PALAEMON stakeholder community.
- Facilitate the acceptance and utilisation by the market of the developed solutions.

To effectively reach targeted audiences, language of the publications will be adapted as needed. General public accessible project resources, objectives, activities and results will be communicated by using accessible and common language emphasizing on value generated and less on technical details. On the other hand, dissemination actions intending to inform the scientific community, policy makers and industry of project results are going to be formulated in a more technical and scientific language, ensuring accuracy and detail in the complex subjects.

2.2   Stakeholder mapping

The dissemination of PALAEMON results will create awareness and transfer knowledge from the project team to the project stakeholders and other interested parties. Aspiring to influence groups throughout Europe and internationally, thus reaching a large and diversified audience, contribution to exploitation of results will be significant in laying groundwork for a high adoptability rate. Within the consortium stakeholder engagement will be a focal point, outlining structured forms of interactions to efficiently incorporate respective contributions in project advances. PALAEMON targets various parties that fall into the categories presented in Table 1

Table 1 Targeted Stakeholders

Technology providers
- Scientific Community
- Non-Profit Organizations
- Security & Forensic Science
- Technology and Services Industry
- Gamification Industry
- Robotics and Autonomous Systems Industry
- Cloud Computing and Orchestration
- Cloud Service Industry
- Big Data/Machine Learning/Artificial Intelligence

End-users
- Passenger Ship, Cruise Ships manufacturers
- First responders in marine emergencies
- Large ship operators

Facilitators
- EU Institutions (EC, European Science Foundation, MEPs)
- National public authorities (industrial committees, national regulation authorities, ministry and regional councils)
- Standardisation Bodies
- Related EU-funded projects
- Organizations & EU Alliances in topics addressed by PALAEMON
- European Technology Platforms and respective clusters
- Public Bodies & Organizations

2.3 SWOT

To define a strategy in alignment with the project's unique profile, a SWOT (Strengths/Weaknesses/Opportunities/Threats) analysis is conducted. The dimensions examined are viewed in respect to their communication and dissemination perspective. The result of this analysis is a comprehensive and holistic view of the plan to be implemented, with key findings emerging through the use of a SWOT analysis. Both accelerants and barriers of the project are identified, allowing for targeted and efficient planning, maximising the potential and momentum of the consortium while providing insight to less favourable factors. Eventually, the project and stakeholders establish direct and salient communication pathways.
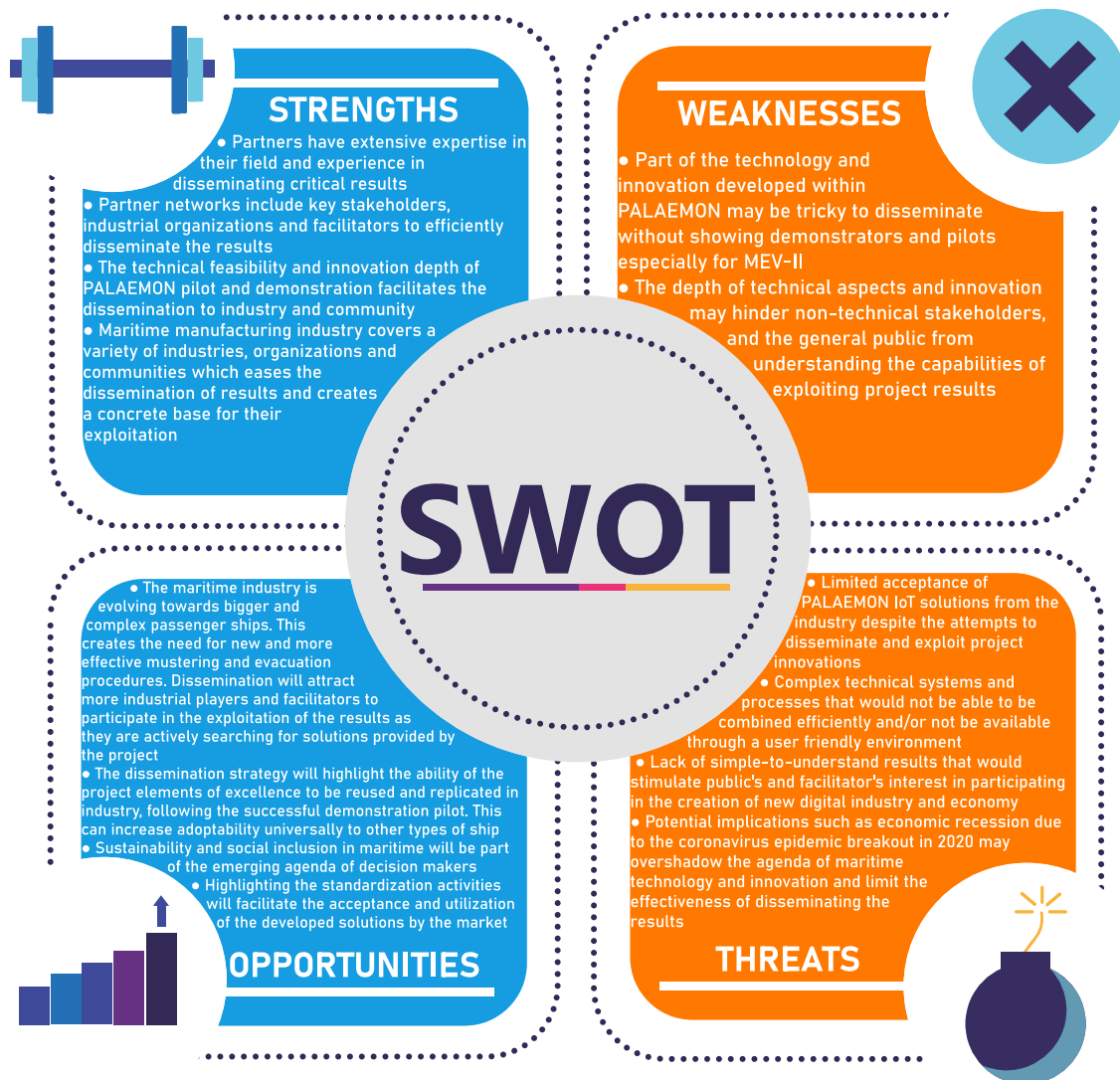
Designed by gstudioimagen / Freepik

Figure 2 PALAEMON's communication and dissemination plan SWOT analysis

3   Detailed communication and dissemination plan

The communication and dissemination activities will be carried out through 4 strategic pillars described in Table 2

Table 2 Communication and disseminations strategic pillars towards exploitation

Communication and dissemination of results (according to the dissemination level defined)			
Awareness	**Consolidation of scientific and technological achievements**	**Pilot run**	**Participation of users for further developments**
Make the project and its vision known in the relevant target groups. Primary instruments will be the PALAEMON website and the presence in social networks (Facebook, Twitter, LinkedIn, and YouTube), the participation to relevant conferences, the promotion of project activities, and the partnering of end-users.	Presentation of research articles and technical demonstrations at key conferences and workshops, peer-reviewed publications, presence in R&D focused media, as well as building up a community of interested developers and scientists.	Highlighting PALAEMON ecosystem developed as a proof of concept. Primary target groups will be maritime industries/ship operators as well as developers, integrators and providers of ICT products. The goal is to demonstrate to the target groups the benefits and opportunities provided by PALAEMON.	Mobilization and engagement of technical actors to utilize PALAEMON results and develop new products.
Exploitation			

The PALAEMON communication and dissemination strategy is structured in 3 main phases according to Table 3

Table 3 Communication and dissemination phases towards exploitation

Project evolution		
Preliminary project promotion Y1	**Project commercialization Y2**	**Business strategy Y3**
• Agreeing upon the communication strategy and future activities • Creating initial awareness in the markets related with the project objectives and scope	• Create more "targeted awareness" regarding PALAEMON technologies with key players and potential users • Inform the target market about the technological benefits of PALAEMON.	• Maximize target market and industry awareness regarding the PALAEMON ecosystem • Ensure compatibility and interoperability with what already exists in the market through standards

		• Contribute to ensure the project sustainability and full exploitation	

| **Exploitation** | | | |

In Table 4 the objectives, activities, and channels to carry out the communication and dissemination strategy throughout PALAEMON project are shown:

Table 4 Communication and dissemination objectives, activities and channels throughout the project.

	Communication and dissemination objective	Year 1	Year 2	Year 3
DISSEMINATION COMMUNICATION	**Create project website**	Take project website live, including the information about vision, objectives, consortium members, etc. – Post of developments and news	Keep the website updated with project results and news – update the website with portal information and open data repository	Keep the website updated with project results and news – Update open data repository and add access to the PALAEMON open repository platform
	Create project identity and branding	Create project branding and identity. Finalize logo and colour scheme	Revise/update branding and identity (if necessary), according to developments	Revise/update branding and identity (if necessary), according to developments
	Implement effective social media strategy	YouTube – Video live with 1500 hits Facebook – 1000 followers Twitter – 100 tweets, 1000 followers	YouTube – 3 Videos live with 5000 hits Facebook – 3000 followers Twitter – 500 tweets, 3000 followers	YouTube – 5 Videos live with 10000 hits Facebook –5000 followers Twitter – 1000 tweets, 5000 followers
	Generate positive media coverage and release project publications	2 newsletters 2-5 project publications (articles and/or papers and/or presentation) At least 10 blog entries	2 newsletters 4-8 project publications At least 50 blog entries	3 newsletters 5-10 project publications more than 100 blog entries
	Attend and/or host conferences, networking events, and/or workshops	Attend and/or host up to 3 relevant networking events or workshops addressing the target	Attend and/or host up to 5 relevant networking events or workshops addressing the target	Attend and/or host up to 5 relevant networking events or workshops addressing the target

		communities, stakeholders and end-users.	communities, stakeholders and end-users.	communities, stakeholders and end-users.
	Cluster with relevant projects and/or initiatives	Cluster with 1 relevant project or global initiative, including other MG projects	Cluster with 2 relevant projects or global initiatives	Cluster with 5 relevant projects or global initiatives

Targeted stakeholders can be grouped in 3 main categories: the "Sector" group, the "End-Users" and the "Facilitators". Dissemination activities address primarily and secondarily the correspondent audience groups. Table 5 correlates actions and reached groups.

Table 5 Dissemination Actions and Targeted Audience

Communication & Dissemination Supports and Channels	Stakeholder category		
	Sector	**End-Users**	**Facilitators**
Create project website	**Primarily**	**Primarily**	**Primarily**
Create project identity and branding	**Primarily**	**Primarily**	**Secondarily**
Implement effective social media strategy	**Primarily**	**Primarily**	**Primarily**
Generate positive media coverage and release project publications	**Primarily**	**Primarily**	**Primarily**
Attend and/or host conferences, networking events, and/or workshops	**Primarily**	**Primarily**	**Secondarily**
Cluster with relevant projects and/or initiatives	**Primarily**	**Secondarily**	**Primarily**

3.1   Project communication

3.1.1   Visual identity and acknowledgments

The project logo shown in Figure 3, will be used in all communication activities and channels (project website, public deliverables, articles, presentations, flyers, press releases, etc.). The project partners' logos are already used in the PALAEMON website and may be used in communication products (posters, presentations, etc.) on a case-by-case base.

Figure 3 PALAEMON logo

Templates for deliverables, project presentations, meeting agendas, minutes, posters, leaflets, etc. will be available to all consortium partners through PALAEMON Freedcamp platform using their credentials.

All publications or any other communication and/or dissemination material related to the project shall include project logos and acknowledgement statements (i.e. "…funded by the H2020 PALAEMON project – GA 814962…").

3.1.2   Project website

The website of PALAEMON project (snapshots of PALAEMON website sections are shown in Figure 4) was created in August 2019 and is accessible online on https://palaemonproject.eu/. A Google analytics account was set up to facilitate tracking of the website's main statistical parameters.
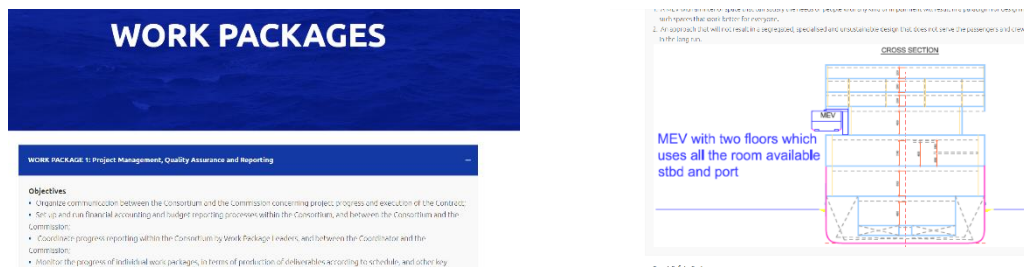
Figure 4 Snapshots of PALAEMON project website sections (https://palaemonproject.eu/).

The website will contribute to raising public awareness of project activities and achievements among the key user groups and stakeholders, the scientific community, the facilitators, and the general public.

In accordance with the description of work in WP9, the website includes the project description, prospects, a place for news & events related to the PALAEMON topics and announcements, as well as a calendar to add information about forthcoming events and tasks (workshops, meetings, and deadlines). Furthermore, it contains a place for the download of public documents, including all project publications as well as links to other relevant sites, such as PALAEMON partners' relevant projects, relevant EC sites, platforms for various domains, etc.

The project website also includes a direct link to the consortium's project management system/repository (Freedcamp). Freedcamp repository allows the on-line collaboration between partners, facilitating the exchange of documents, exchange of messages in the form of e-mails, and support for discussion lists where partners can put articles about intermediate project results. All the intermediate results of the project (internal management/progress reports, deliverables, presentations, papers, data sets, software, etc.) will be available to the partners through the platform connected to the website.

The website will be updated with news, developments, and results throughout the project's duration as part of the general dissemination and exploitation strategy. Furthermore, it will be available, updated, and maintained for at least 4 years after the project's completion. The partner responsible for the website management will be EfB (WP9 "Raising Awareness, Standardisation and Exploitation Roadmap" leader) and the project coordinator.

3.1.3   Social networks

PALAEMON accounts/pages were created in the following social media platforms to communicate and disseminate project activities, results, and achievements:

Table 6 Social media platforms used by PALAEMON

PALAEMON social media platforms	Aim
Facebook	Facebook is set up mainly to share information with the general audience by posting mainly photos from meetings, events, and outreach activities. Facebook groups will be utilized to share

https://www.facebook.com/PalaemonProject

PALAEMON information with more recipients

Twitter

https://twitter.com/PalaemonProject
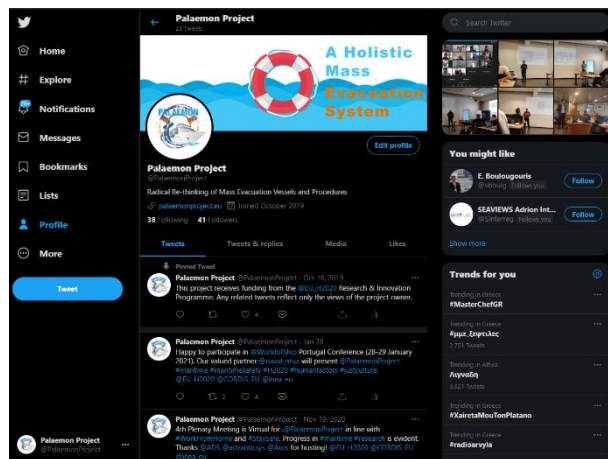
Twitter will be used mainly to communicate with stakeholders by posting short news and announcements related to PALAEMON activities, as well as achievements

LinkedIn

https://www.linkedin.com/company/palaemon-project/
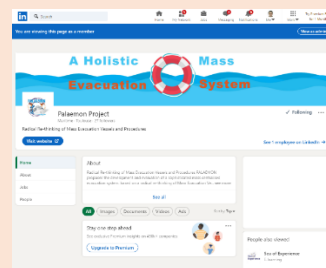
LinkedIn will be used mainly to communicate with stakeholders by posting short news and announcements related to PALAEMON activities, as well as achievements

YouTube

YouTube channel will be used to communicate with both stakeholders and the general public through videos from project pilot demonstrations and technology achievements, as well as events, and other activities

https://www.youtube.com/channel/UCbAoYtI5RLoiLmoqFC6tEXQ

3.1.4   Mass media and general public

The PALAEMON project will also share the dissemination material through alternative channels (i.e. press, TV) using accessible language to ensure that different audiences can access them in the most suitable format. All dissemination options for the general public will focus on visualizing and making complex data, procedur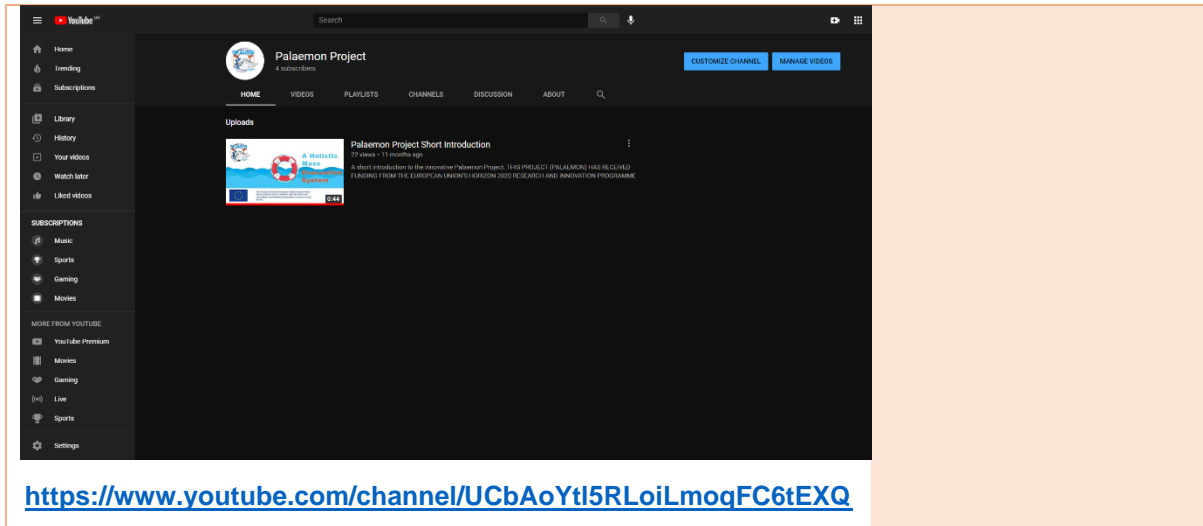es, and manufacturing/industrial processes more "digestible" to the general public. Therefore, the communication strategy includes press releases, articles, interviews, podcasts, slideshows and videos, which will mainly be related to the PALAEMON pilot demonstrations to reach the general public and highlight the PALAEMON technology and solutions, as well as to underline the capabilities for future developments. In this light, a short project film (3-5 minutes long) will be created (1 year to 6 months before the end of the project) in order to make the project understandable for the public.

3.2   Project dissemination

3.2.1   Academic conferences and fairs

Every year, the project will take part to major forums and/or trade shows in the fields of manufacturing, industrial automation, and related technologies as well as relevant co-events organized by respective exhibitions. Partners will present the PALAEMON solutions in co-located thematic conferences and/or workshops, which could be organized in parallel with project plenary meetings to foster collaboration among all partners and participants. PALAEMON will support different international conferences, forums, and events. In addition, PALAEMON will develop specialized workshops inside these conferences to attract the community, share ideas, and present the results from the project. In addition to this academia-oriented dissemination, PALAEMON will organize/attend/follow industrial/exploitation meetups and workshops to highlight the advantages of adopting PALAEMON technology and solutions by the market.

Contributing to the promotion of PALAEMON will also be a closing event open to the public at the European Parliament, which will present results and outcomes of the project to policymakers. This will be a vital opportunity to raise the profile of PALAEMON at its conclusion and present the results to a prestigious audience from the European institutions.

Presentations and feedback sessions will take place at major forums, conference sessions, or trade shows, to facilitate reaching potential stakeholders. In Table 7, several targeted events (conferences, fairs, workshops, webinars, etc.) are shown:

Table 7 Targeted events

Targeted event (conference, fair, workshop, webinar, etc.)	Field	Website
Arctic Shipping Forum	Maritime	https://pame.is/arcticshipping forum#contact-forum-organizers
Baltic Sea Ports & Shipping	Maritime	
Cruise Lines International Association (CLIA) Conference	Maritime	https://cruising.org/en/events
Composite-Expo	Materials	http://www.composite-expo.com/
Euromaritime & Eurowaterways	Maritime	https://www.euromaritime.fr/9-visitors
Euronaval	Maritime	https://www.euronaval.fr/
Future Port Bilbao	Maritime	https://www.eventseye.com/fairs/f-future-port-bilbao-25046-1.html
International Conference On Maritime Technology And Engineering (MARTECH)	Maritime	http://www.centec.tecnico.uli sboa.pt/martech2020/
International Maritime Association of The Mediterranean (IMAM)	Maritime	http://www.imamhomepage.o rg/
Iot Week	Tech	https://iotweek.org/
ITS European Congress	Transport	https://itsineurope.com/
ITS World Congress	Transport	https://itsineurope.com/
JEC World Composites	Materials	https://www.jec-world.events/
Marine Maintenance World Expo	Maritime	https://www.marinemaintena nceworldexpo.com/
MAST (Maritime Systems & Technology) Europe	Maritime	https://mastconfex.com/
Navalia	Maritime	https://www.navalia.es/es/
Navexpo	Maritime	http://www.navexpo.com/fr/
Posidonia	Maritime	https://posidonia-events.com/
Seatec	Maritime	http://sea-tec.it/
The Future of Transportation World Congress	Transport	https://www.thefutureoftrans portconference.com/en/
Transport Research Arena (TRA)	Maritime	https://traconference.eu/
World of Shipping Portugal	Maritime	https://www.worldofshipping. org/

3.2.2 Scientific publications

Scientific publications constitute an effective way to disseminate high-level technology information, attract the interest of the scientific community and stakeholders and pave the way for the efficient exploitation of the results. Partners will preferably submit the results for publication in peer-reviewed journals. Also, PALAEMON results and technology solutions will

be presented in scientific/technology/industry trade journals and/or magazines specialized in sectors related to the project objectives. Table 8 records several scientific and trade journals/magazines where the PALAEMON partners will submit their papers/articles.

Table 8 Targeted scientific journals

Targeted journal / magazine	Field	Website
ACM Journal on Emerging Technologies in Computing Systems	Industrial systems, artificial intelligence, automation, and informatics	https://dl.acm.org/journal/jetc
ACM Transactions on Embedded Computing Systems	Industrial systems, artificial intelligence, automation, and informatics	https://dl.acm.org/journal/tecs
ACM Transactions on Reconfigurable Technology and Systems	Industrial systems, artificial intelligence, automation, and informatics	https://dl.acm.org/journal/trets
Advances in Engineering Software	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/advances-in-engineering-software
Automation World Magazine	Industrial systems, artificial intelligence, automation, and informatics	https://www.automationworld.com/
Business & Management	Business	https://www.springer.com/gp/business-management
Computers & Industrial Engineering	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/computers-and-industrial-engineering
Computers & Operations Research	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/computers-and-operations-research
Computers in Industry	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/computers-in-industry
Control Engineering Magazine	Industrial systems, artificial intelligence, automation, and informatics	https://www.controleng.com/
Frontiers in Marine Science	Maritime	https://www.frontiersin.org/journals/marine-science
Human and Ecological Risk Assessment: An International Journal	Safety	https://www.tandfonline.com/toc/bher20/current
IEEE Access	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6287639
IEEE Embedded Systems Letters	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=4563995
IEEE Internet of Things Journal	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=6488907

IEEE Journal on Emerging and Selected Topics in Circuits and Systems	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/document/8734822
IEEE Sensors Journal	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=7361
IEEE Transactions on Circuits and Systems I: Regular Papers	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=8919
IEEE Transactions on Computers	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=12
IEEE Transactions on Industrial Electronics	Industrial systems, artificial intelligence, automation, and informatics	http://www.ieee-ies.org/pubs/transactions-on-industrial-electronics
IEEE Transactions on Industrial Informatics	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=9424
IEEE Transactions on Industrial Informatics	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=9424
IEEE Transactions on Industry Applications	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=28
IEEE Transactions on Parallel and Distributed Systems	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=71
IEEE Transactions on Visualization and Computer Graphics	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=2945
IEEE/ACM Transactions on Networking	Industrial systems, artificial intelligence, automation, and informatics	https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=90
Informs Journal on Applied Analytics	Industrial systems, artificial intelligence, automation, and informatics	https://pubsonline.informs.org/journal/inte
International Journal of Automation and Control	Industrial systems, artificial intelligence, automation, and informatics	https://www.inderscience.com/jhome.php?jcode=ijaac
International Journal of Naval Architecture and Ocean Engineering	Maritime	https://www.journals.elsevier.com/international-journal-of-naval-architecture-and-ocean-engineering/
International Journal of Sustainable Transportation	Transportation	https://www.tandfonline.com/toc/ujst20/current
International Journal of Tourism Research	Tourism	https://onlinelibrary.wiley.com/loi/15221970
International Journal on Marine Navigation and Safety of Sea Transportation (TransNav)	Maritime	https://www.transnav.eu/

Journal for Maritime Research	Maritime	https://www.tandfonline.com/toc/rmar20/current
Journal of Artificial Intelligence Research	Artificial Intelligence	https://www.jair.org/index.php/jair
Journal of Computational Design and Engineering	Engineering	https://academic.oup.com/jcde
Journal of Risk Analysis and Crisis Response	Safety	https://www.atlantis-press.com/journals/jracr
Journal of Sustainable Tourism	Tourism	https://www.tandfonline.com/toc/rsus20/current
Journal of Systems Architecture	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/journal-of-systems-architecture
Maritime Business Review	Maritime Business	https://www.emeraldgrouppublishing.com/journal/mabr
Maritime Policy & Management	Maritime	https://www.tandfonline.com/toc/tmpm20/current
MDPI AI Journal	Artificial Intelligence	https://www.mdpi.com/journal/ai
MDPI Electronics	Industrial systems, artificial intelligence, automation, and informatics	https://www.mdpi.com/journal/electronics
MDPI Sensors	Industrial systems, artificial intelligence, automation, and informatics	https://www.mdpi.com/journal/sensors
Microprocessors and Microsystems	Industrial systems, artificial intelligence, automation, and informatics	https://www.journals.elsevier.com/microprocessors-and-microsystems
Pacific Science Review	Maritime	https://www.sciencedirect.com/journal/pacific-science-review
Research in Transportation Business & Management	Transportation	https://www.journals.elsevier.com/research-in-transportation-business-and-management
Safety Science	Safety	https://www.journals.elsevier.com/safety-science
Ship Technology Research	Maritime	https://www.tandfonline.com/toc/ystr20/current
Ships and Offshore Structures	Maritime	https://www.tandfonline.com/toc/tsos20/current
Technological Forecasting and Social Change	Technology Management	https://www.journals.elsevier.com/technological-forecasting-and-social-change
WMU Journal of Maritime Affairs	Maritime	https://www.springer.com/journal/13437/

3.2.3   Demonstration activities

A major pilot demonstration of MEV-I and training sessions related to PALAEMON pilots and solutions will be held in cooperation with key stakeholder groups, to enable new users to experiment and provide their feedback. Expected participation goal is at minimum 30 delegates, including PALAEMON end-users, who are expected to actively promote and participate in each session. The events will take place in facilities complying with the technical requirements of the demonstrational activities' nature. Responsible partners for each subsystem of PALAEMON demonstrated are expected to facilitate new users' experimentation and hands-on experience with the exploitable developed solutions. Training sessions, planned towards the end of the project, will commence the final product development and market introduction. The above will also be complemented with publishable data (e.g. results, architectures, models etc.) generated during the demonstration activities, available through open access online repository of PALAEMON website.

The value of demonstration and training sessions lies within the potential to accelerate project solutions towards higher levels of maturity, near market introduction. They also promote PALAEMON technology to stakeholders that can further develop upon the foundation laid by PALAEMON project. The activities constitute a strong testimonial of applicability, that has a strong impact on stakeholder commitment and confidence to the validity and reliability of the results generated. As such, they are key step preceding commercial exploitation of foreground.

3.2.4   Networks / Collaborations

As part of our project dissemination strategy, liaisons with associated European projects that address similar challenges will be made. The objective is to extend the reach of the project to interested user groups and stakeholders, ensure the exchange of knowledge and better implementation of the project.

As several members of the consortium are or have been involved in previous and current linked innovation projects, they expanded their networks by working successfully on critical tasks with several other entities. They exchanged knowledge and experience and built confidence for new collaborations and the efficient exploitation of the synergies created between them.

Besides, a strategy will be set out for international cooperation supporting networking between projects, clusters and program managers, and participation of third-country entities (maritime industry), as well as a try to step-up engagements with international organizations and multilateral fora.

Furthermore, the cooperation with other MG-2-2-2018 projects aims at exploiting synergies between the projects and increasing the impact of the initiative. It entails contributions to the following activities:

- Help to organize and participate to joint events for dissemination and ecosystem building (at least twice per year).
- Exploit synergies between projects in areas to be agreed among the projects.
- Work with CSAs to exploit synergies, increase impact, allow for easier take-up of digital technologies, and support the transfer of skills and know-how.

Several networks and collaborations targeted for PALAEMON project are listed in Table 9.

Table 9 Networks and collaborations targeted for PALAEMON

Network / Collaboration	Type	Aim	Field	Website
ISOLA	H2020 Project	Liaison, Knowledge exchange	Maritime Security	https://isola-project.eu/
SafePASS	H2020 Project	Liaison, Knowledge exchange	Maritime Security	http://www.safepass-project.eu/
Searchandrescue	H2020 Project	Liaison, Knowledge exchange	Safety and Crisis Management	https://search-and-rescue.eu/
SmartSea	H2020 Project	Liaison, Knowledge exchange	Maritime Security	https://www.smart-sea.eu/

3.2.5   Other activities

Additionally, in order to contribute to the formation of common practices at the EU level, PALAEMON will publicly deliver a handbook that will present lessons learned during the project, suggest best practices in the area and give tips that in the long term will help to achieve key architectural reforms to the smart industry field. The PALAEMON consortium includes partners from the whole relevant value chain in order to address the multidisciplinary and heterogeneous challenges of the specific topic.

4 Monitoring and evaluation of dissemination activities

Dissemination activities are frequently evaluated by participants and content consumers by means of feedback. However, to have a structured procedure and comparable results, monitoring activities are going to be performed regularly to ensure that impact of dissemination is at expected level. Monitoring will cover horizontally all events and activities performed, from scientific publications to social media participation, to keep track of dissemination plan alignment and execution progress. Analytics will be collected throughout the project to define impact of actions executed. KPIs examined provide measurable assessment of objective achievement and dissemination results.

Through use of commonly accepted KPIs, project partners are enabled to self-evaluate and monitor their communication and dissemination results to their targeted audiences, giving them also, if the situation arises, insight to corrective/additional actions. In Table 10, KPIs used for monitoring the communication and dissemination plan are presented. The data gathering process for KPIs will be based on established service providers like Google analytics for websites, built-in to social media platforms analytics reports as generated within and any other reliable analytics provider. Progress monitoring will be reassessed on a semester basis, based on data acquired by above sources and partner data of the last 6-months, subsequently enabling the consortium to identify hotspots and compile information to corrective actions to overcome underperformance.

Table 10 The PALAEMON communication and dissemination KPIs and success criteria

Channel	KPI	Success criteria
Project website	Number of visits	≥ 5000 after year 3
	Presence in related websites	≥ 10 after year 3
Project identity and branding	Number of leaflets	≥ 1 after year 1 (+ updates)
	Number of posters	≥ 1 after year 1 (+ updates)
	Number of PPT presentations	≥ 1 after kick-off (+ updates)
Marketing	Number of newsletters	≥ 1 per semester
	Number of press releases	≥ 3 after year 1
	Number of posters	≥ 1 per semester
Social media	Number of Facebook likes	≥ 50 after year 2 ≥ 100 after year 3
	Number of Facebook posts	≥ 3 per semester for the 1st year ≥ 6 per semester for years 2-3
	Number of Twitter followers	≥ 50 after year 2
	Number of Twitter posts	≥ 3 per semester for the 1st year ≥ 6 per semester for years 2-3
	Number of LinkedIn likes	≥ 100 after year 2 ≥ 200 after year 3
	Number of LinkedIn posts	≥ 3 per semester for the 1st year ≥ 6 per semester for years 2-3
	Number of LinkedIn connections	≥ 350 after year 3
	Number of YouTube views	≥ 200 after year 3
	Number of posts shared (in total)	≥ 50 after year 2 ≥ 100 after year 3
Publications	Number of papers and/or proceedings and/or presentations	≥ 2 after year 1 ≥ 6 after year 2 ≥ 11 after year 3

	Number of open access repository uploads	≥ 1 per year
	Number of project videos and/or podcasts, and/or slideshows Number of total views (YouTube views included)	≥ 5 after year 3 ≥ 1000 views
	Website entries	≥ 100 after year 3
	Best practices & lessons-learned handbook	=1 after year 3
Events	Number of external events (conferences, networking events, and/or workshops)	≥ 3 per year (on average), after year 1 ≥ 5 per year relevant networking events and/or workshops, addressing the target stakeholders and users, after year 1
	Number of demonstration and/or training sessions	≥ 3 after year 1
	Number of External events	≥ 30+ at the end of the project

5   Knowledge dissemination management and protection strategy

In PALAEMON dissemination and communication roadmap, as also stated and defined in detail within the Consortium Agreement, personal data processing is going to be executed in compliance with EU and national laws governing data protection. Foreground deemed to be disseminated will be protected with consideration to legitimate interests. Prior to any dissemination action, involved partners will be notified and asked for consent. All publications, patent applications and in general any dissemination activity shall have clear and visible indication of the Community's financial assistance.

Partner control over dissemination and communication actions will be guaranteed by subjecting every action to approval of the generated foreground IPR owner. Should the foreground be generated by more than one partner and clear allocation of work to each contributor is impossible, all involved parties will have to give their consent to disseminating actions. Partners define background and may exercise their right to exclude it from dissemination and communication actions as they see fit.

Knowledge management will be exercised in a three-step process, covering the lifecycle of publicly available research data generated within the project. First step is to gather and shape information. Following step is to index and appropriately disseminate it. Last step is to allow for a period of information to be adopted and used by the audience, facilitating the creation of new knowledge.

6   Conclusions

This report describes all elements needed for a comprehensive and targeted communication and dissemination strategy to serve the vision and goals of PALAEMON project. It entails organization of and participation in dissemination activities relevant to maritime lifesaving equipment, ICT and IoT integration in maritime operations, incident management procedures, etc. with the main goal to promote and communicate advances and solutions developed within the project.

To achieve this goal, project partners will actively participate in conferences and workshops, enabling them to inform stakeholders of developed solutions and networking within the research community by knowledge exchange. A great contribution towards adoption of the proposed solution will be the demonstration and training activities, allowing end-users for a hands-on experience of the system. Consequently, these actions will lead to favourable exploitation conditions, increasing familiarity and recognition of PALAEMON, and engaging stakeholders to the integration of the proposed added value service in their ships. Furthermore, as stated above PALAEMON aspires to become a standard in inclusive and safe evacuation systems, going beyond a single purpose system to a holistic ecosystem integrated to ship operational procedures at various levels. The main digital toolbox to accomplish this goal includes the project website and social media platforms. To extend the reach of the project, facilitate knowledge exchange and accelerate implementation, PALAEMON will establish liaisons with affiliated European projects addressing similar topics widening stakeholder and user base.

Keeping track of progress will be achieved by assessing systematically KPIs, monitoring communication efficacy and target reach accuracy. Information deliverance to stakeholders, academia, end-users and general public will be observed and actions will be adapted accordingly to ensure intended outcomes.