

*ZERO-enabling Smart networked control framework for Agile cyber
physical production systems of systems*

**D7.5 - Dissemination, communication, standardization activities
report**

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List of Abbreviation

Abbreviation	Description
3GPP	3rd Generation Partnership Project
5G-ACIA	5G Alliance for Connected Industries and Automation
6G-IA	6G Smart Networks and Services Industry Association
AI	Artificial Intelligence
C&D	Communication and dissemination
CPSoS	Cyber Physical Systems of Systems
DIH	Digital innovation hub
ECSO	European Cyber Security Organisation
EDIH	European Digital innovation hub
EFFRA	European Factories of the Future Research Association
Eoi	Expression of interest
ETP	European Technology Platform
ETSI	European Telecommunications Standards Institute
EU	European Union
IEC	International Electrotechnical Commission
IDS	International Data Spaces
iDTA	Industrial Digital Twin Association
ISO	International Organization for Standardization
OPC-UA	Open Platform Communications - Unified Architecture
R&D	Research and Development
SDG	Sustainable Development Goals
SDO	Standards development organizations
SME	Small- to mid-size enterprise
SoA	State-of-the-art
SP	Standardisation Plan
WP	Work Package

Executive Summary

This deliverable represents the Zero-SWARM funded project's impact maximization plan, i.e., communication, dissemination & standardization. Exploitation plan will be treated separately on another document of the project, D7.2.

This document was developed in close coordination with all the other project Work Packages as part of Work Package 7 - Impact Maximization: Exploitation, Communication, Dissemination and Standardization. The presented strategy is intended to ensure that all activities have the greatest impact. The project aims to benefit from a high level of visibility among potential stakeholders and to benefit society and industry in general. All kinds of activities related to dissemination, communication, and standardization are required to accelerate the achievement of the objective. The document also identifies communication needs and objectives, describes our understanding of them, and sets the key audiences for the project and highlights the benefits that they can expect. A separate section of the document contains details about dissemination and communication tools, including the overall development plans for each group and key messages that should be delivered to the key groups of stakeholders. Moreover, the following document contains a detailed analysis of the standardization activities of this project, including its methodology, as well as the main standardization bodies. It also details how these bodies will be engaged in the project. The establishment of the plan of activities for the first year, including the key performance indicators, can be found in one of the chapters. Among the items mentioned before, the risk management plan is included in the deliverable.

1. Introduction

1.1 Purpose of the document

This deliverable has two main objectives: firstly, to provide an overview of the dissemination and communication activities in the Zero-SWARM project, and secondly, to provide a guide to standardization methodology and approach.

It is crucial that WP7 establish both Dissemination and Communication strategies, and standardization strategies from the start to ensure that all the activities it conducts will be successful in the long run. The deliverable contains key information on the target audience. In addition to identifying the key stakeholders, it provides an overview of the project's channels, as well as the objectives and needs of the activities. In this deliverable, the framework for the implementation of all C&D activities during the project's lifespan is outlined. The KPIs monitoring will be used to update this strategy once a year based on the results achieved and the information obtained. This document is intended to discuss and list the potential actions and ideas that could be taken regarding Zero-SWARM's communication, dissemination, and standardization strategies, as well as acting as a guide to track its execution.

1.2 Structure of the document

The document is arranged as follows:

- **Chapter 1** describes its objectives and purpose, as well as its structure;
- **Chapter 2** provides an overview of communication dissemination and standardization activities, describing their objectives and defining how they will be carried out. Another important part of the second chapter is the identification of key audiences, as well as how each stakeholder can benefit from participating in the Zero-SWARM project;
- **Chapter 3** presents a broad dissemination and communication strategy, and specific details on how these channels will be leveraged, and how they will be developed and implemented at different stages;
- **Chapter 4** contains an overview of the standardization process. There is a subchapter that outlines the main standardization bodies and describes how to engage them more effectively;
- **Chapter 5** describes the key performance indicators and provides some first guidelines for monitoring them and managing risks;
- **Chapter 6** provides the conclusion of the report and describes the following next steps after the document is successfully completed.

2. Aim and scope of the communication, dissemination, and standardization activities

Zero-SWARM – a unique project sponsored by European Commission under the Horizon Europe program, which focuses on the eco-design and operations of Cyber Physical Systems of Systems on real-life applications in diverse manufacturing sectors. With its multidisciplinary, human-centric approach and objective-oriented approach, the project aims to establish a carbon-neutral and digital production using open swarms, a non-public 5G network, active information continuum and digital twins.

The scope of communication activities expands when a transformed industry also has a transformational impact on society. A key purpose of dissemination is to showcase improvements in workers' conditions and greening of the economy, as well as technology development from a human-centered perspective. Thus, we will make the project comprehensive and accessible to stakeholders, including representatives of distant or opposing manufacturing branches, despite its complexity. Therefore, the published content should be informatively attractive to a wide scope of public as it aims to create a stable reliable community which will ensure the continuation of the project existence for many years after its official end, but not completion.

The main catalyst of the communication and dissemination activities is to make the path of adoption of the new technological solutions both: centralized, in terms of information (by using a variety of channels and tools), and widespread, in terms of its broad impact potential (by creating a community represented by stakeholders from different countries).

Keeping a strong focus on communication and dissemination activities, creating value, and actively sharing the project's success, its trials' process and progress, we ensure the high impact-driven exploitation of project results for the future of technology standardization and innovative products based on 5G.

The uniqueness of the Zero-SWARM project is defined by organizing the nodes, where the trials are going to be conducted. There are three nodes, all located in different parts of Europe: North (Finland and Sweden); Center (Germany) and South (Spain and Italy). It widens the scope of dissemination and allows us to pave the way to the variety of communities, making them the part of one common community sharing the Zero-SWARM assets.

Following the idea of minimizing the carbon footprint - Zero-SWARM project facilitates the establishment of ultra-high-speed energy efficient automation, collaborative intelligence, and human-asset cooperation for zero-error automated industry, for circular manufacturing and distributed zero waste plastic production for circular economy. Disseminating this via chosen tools we increase the attention to the trials, collaborate with the regional initiatives and networks, invite them to take part in trials and leverage the results to modify the approach to green manufacturing by all the potential stakeholders.

2.1 General understanding and approach

By increasing interest and awareness of the key target audience regarding the importance of the project in general and its trials in particular – we ensure the active implementation of communication and dissemination campaign, considering this factor as a key success measurement. Accurate and sagacious planning of activities is crucial for establishing the visibility as well as reliability of the Zero-SWARM initiative and the future exploitation of the trial outcomes.

Approaching the communication and dissemination activities as a complex task requiring the active cooperation of all the work packages and active contributions from all the partners, we aim to maximize the impact of the activities. Elaborated approach is committed to helping the community to smoothly integrate into the project ecosystem and provide their considered participation. Reaching the high level of visibility and full community engagement, we aim to make all work packages to benefit in getting support on their way to achieve their short-term and long-term-goals.

Talking about communication and dissemination, we need always to remember how it inseparably connected with the phases of the project, which are defined by the period of the conducted trials. We need to keep an eye on all the current activities, disseminating them precisely to make it accessible and clear for the community and potential adopters of the prototypes.

As our experimentation targets a wide range of stakeholders, society as a whole will benefit. Building the human-centric and resilient industry, we approach the communication activities as a way to reach out not only to the main pointed target audience, but also to a general public. We consider it as a chance to exchange knowledge regarding the concepts, which became a part of our everyday life.

The process of clarifying and understanding the general approach to Zero-SWARM project dissemination made us draft the pillars, which will help to fulfill the objectives described in the next paragraph. Among them are:

1. Building of a well-functioning internal communication architecture
2. Launch and constant update of the communication channels such as website, social media channels, podcast, workshops, newsletters, publications etc.
3. Establishment of the community building platform
4. Glossary elaboration to ensure the identical understanding and explanation of concepts we operate
5. Participation in cross sectorial events on which we can showcase the visible results of the trials.
6. For the project to succeed, we aim to follow the approach of making the communication bidirectional and proving its value and future benefits as we proceed. The importance of collaboration within the community becomes paramount for maximizing the Zero-SWARM impact.

2.2 Objectives and needs

In the Zero-SWARM project, maximizing the impact of all activities carried out - is the main objective of the dissemination and communication strategy. In order to achieve full community engagement and participation, we need to ensure that the labors of all work packages are highly visible. As far as possible, the project benefits the manufacturing sector and society as a whole, through the knowledge exchange and services it offers.

Taking into account the ambition for the project's success not to be limited by its lifetime – we can set some long-term objectives and put effort now to reach them after the end of funding.

Specifically, we strive to accomplish the following objectives of communication and dissemination activities:

Table 1: Communication and dissemination objectives

	Specific objectives	Relevant specific items and activities
Short-term objectives	Become visible	Develop a kit of visual identity items and use them while communicating internally or externally
		Promote the project on the social media and engage the partners to promote Zero-SWARM on their private sites and accounts.
		Participate in events and network
		Engage policy makers and different levels of public administration bodies
		Track the efficiency of dissemination channels to maximize their impact
Short-term objectives	Raise awareness of the project with the focus on its objectives, values, trials, activities	Fill the website with relevant content
		Follow the strategy on reaching out each particular stakeholder by creating content
		Inform policy makers and different levels of public administration bodies about project activities and goals
		Raise interest to the "green" climate neutral, circular and digitalized industry
		Consider and treat each trial as a separate mini campaign of communication and dissemination
		Constantly enrich glossary with new concepts and definition to ensure the complete understanding of the project and its processes by stakeholders
		Maximize the usage of a variety of communication tools and channels such as newsletters, podcast, scientific publications, webinars, Q&A sessions, etc.
		Intensify the promotion of human-centric approach
		Participate in industrial fairs and stakeholders' events to be visible and productive in face-to-face dissemination and networking

		Invite relevant stakeholders to join the Zero-SWARM Community
Short- and midterm objectives	Encourage active engagement with stakeholder group, internal and external partners, target audience	Be aware of each stakeholder needs
		Ensure easy access to all the sources of information
		Invite them to actively participate in project's life cycle processes
		Keep them updated by creating a relevant content trying not to overwhelm them taking into consideration the cross-sectorial character of the project
		Shape a well-functioning internal and external communication architecture
		Build a dynamic, highly effective and collaboration friendly ecosystem by using the community building platform
		Foster the cooperation and interaction of the different stakeholders involved in the Zero-SWARM Community
Midterm objectives	Popularization of the achieved results, their benefits and adoption opportunities	Constantly update the website
		Fill the social media account with relevant content and photos
		Make the trial results visible by recording the videos and publishing them
		Distribute the printed materials
		Raise awareness among the community to make each partner promote the project and its solutions on private social media space
		Emphasize the "zero"-policy of the project by showcasing the zero-emission, zero-waste manufacturing
		Highlight the uniqueness of each trial
		Enrich the glossary with the concepts and definitions explained in a simple way to make it comprehensive and attractive for representatives of different scope, broadening the target audience

		Facilitate matchmaking possibilities for SMEs via the Zero-SWARM Community
Midterm objectives	Explain the challenges and vulnerability areas of project's solutions and their adoption if found	Be able to explain in a clear way what kind of issue can limit the solutions' exploitation
		Minimize the negative impact on the project success by showcasing how to overcome the issue
		Describe risk management options
		Understand and disseminate the scope of the challenge for each stakeholder
Long-term objectives	Ensure the sustainability of Zero-Swarm solutions, keep the awareness and relevancy of the project after the end of funding	Make the website content accessible and comprehensive for general public
		Create a stable and closely connected community, which could be interested in sustaining the project for some years after its end.
		Create value in shared knowledge to the upskilled specialists
		Ensure high quality scientific publications, which are highly informative and unique enough to stay influential and relevant for an extended period of time
		Raise awareness of urge to apply the Zero-SWARM solutions to move faster towards climate neutral and smart manufacturing and society as a whole
		To bust the myths regarding 5G and showcase its value
		To leverage on the Zero-SWARM Community to reinforce collaboration and networking between initiatives supporting 5G technology

As you can see, this table of objectives points basically out our mission, our vision and our impact regarding communication and dissemination activities. In order to reach the maximum visibility and outreach possible for the Zero-SWARM project along the value chain, the crucial task is to develop targeted dissemination of and communication about Zero-SWARM technologies, outcomes, and communities, where the key pillar for succeeding in it - is to precisely define and understand our target audience and which message we want and need to disseminate.

2.3 Identification of key Target Audience and Stakeholders

Zero-SWARM considers as the project's target audience for communication and dissemination each stakeholder who is interested and involved in the development, adoption, implementation, and accreditation of green manufacturing solutions enabled by 5Gen technology. Briefly summarized, Zero-SWARM aims to remove the barriers to digitalization and green transformation of European industries by facilitating cross-sharing of experience and knowledge from different countries and technical backgrounds.

Accordingly, to Zero-SWARM's mission and objectives, ten groups of stakeholders were identified and presented in the table below. We aim to create an ecosystem, which can be achieved by reaching out to each stakeholder, creating value, and defining channels appropriate for each particular member of the community. Therefore, it is important to define possible personal benefits for each potential party of the ecosystem, and the notes regarding the enrichment of each are also included in the table:

Table 2: Key target audience and its benefits

	Target group	Type of stakeholder and its description	Their benefit from the project
TG1	SMEs	Private; Solutions, Products, Community, Expression of interest (Eol)	Increased efficiency, lowering costs, reduced waste, increased quality; increased revenue potential
TG2	Large companies	Private; Solutions, Products, Community	Increased efficiency, lowering costs, widening existing product portfolio, and introducing new products, indirect increase in profit margin
TG3	Research community, academia, and organizations	Public; Research results	Receive deals for industrial partnership, we engaged with SoA technology development, can enrich their technological product offering and service portfolio; can use the results in teaching work
TG4	Technology Solutions and Service provider	Private; Offering their services to technologies	New business opportunities; involvement in R&D; widening existing service portfolio
TG5	DIH's	Public; Project results (solutions and technologies), community, best practices (trial, results, early adopters, approach) with special focus on servicing SME's	Enrichment of product portfolio towards their customers, better value proposition and competitiveness on the market
TG6	Associations & Reference Initiatives	Public-Private; access to Projects results (solutions and technologies); offering services	Increase their offering towards their members; widely accepted definitions and best practices, increased revenue potential

		and network, community, best practices and definitions	
TG7	Standardization bodies and regulators	Public-Private: Create worldwide standards to foster consumer confidence and reach sustainable goals (i.e., SDGs:8, 9, 10, 12, 13 and EU Green deal)	Contribution based on the Zero-SWARM results for emergence of new standards that benefit larger number of companies
TG8	Policy makers	Public; playing a role in the emergence of a strong 5G-enabled manufacturing community at national and EU-level	Identifying policy and regulation gaps to boost the digital and green transformation of EU goals set by EU's 2030 Digital Decade vision and European industrial strategy
TG9	Other EU initiatives	Public	Exchanging finding and enhancing results, finding possibilities of joint activities, maximizing the project outreach
TG10	Citizens	Private	Indirect benefit by supporting sustainable and environmentally conscious lifestyle; increased quality of consumed product; raising awareness about digital and green transformation; improved work condition for industry workforce, skill development

The goal of Zero-SWARM is to create a rich and dynamic ecosystem of active members, representing all relevant stakeholders, fostering them to interact, chat, exchange knowledge, find synergies and get value from a community of peers in 5G and smart manufacturing areas. It is an important tool to realize the adapted open innovation diffusion practice by the project and sustainability of results beyond the project lifetime. The table of relevant stakeholders will be evaluated and redefined if needed throughout the project lifecycle.

3. Communication and Dissemination strategy

By disseminating and communicating the results of the definition, development, and implementation of the project, including trials to be displayed, we will increase the diffusion of benefits. To disseminate the information, various activities will be considered and implemented: focus will be on submitting the information to relevant target audience and facilitating the dialogue or polylogue among its members as well as organization and participation in a variety of events, workshops etc. In addition to stimulating the market, stakeholders, and policy makers, our plan also targets raising public awareness. Therefore, the vital role of communication and dissemination activities in the project is beyond controversy.

Before describing the communication and dissemination strategy, the main phases of the project lifecycle should be indicated with the main items identified. Taking into account that the core of the project are trials, which are going to be conducted in the midterm of the project we splinted its timeline, which duration is 30 months, into three stages and set the following priorities:

Launching: 1-6 month

- Launching of the website
- Launching of the social media accounts
- Establishment of community portal
- Establishment of communication tools
- Development of the community
- First internal workshops
- First set of definitions in the glossary
- First blog, podcast items published
- Warm up of the audience before the trials

Consolidation: 7-24 month

- Active dissemination of conducted trials and their results
- Focus on community building and keeping it engaged
- Launch of newsletters
- Publication of first articles
- Production of printed materials
- Promotion of the project by participation in events
- Enriching the glossary with more concepts and definitions related to trials

Sustainability: 25-30 month

- Focus on community unity
- Dissemination of prognoses the solutions applicability and impact
- Dissemination of best practices and lessons learnt
- Promotions of the solutions and search defining of their adopters
- Participation in last internal and external events
- Try to foresee the possibilities of the project sustainability and implement by the end of funding the items, which could ensure its existence and development.

To achieve the overall success of Zero-SWARM, a comprehensive set of dissemination, communication, and community-building tools, and activities have been developed with the clear ambition to support and accelerate the growth of zero-waste manufacturing enabled by 5G and the green digital transformation of industries. We enhance visibility of project activities to relevant stakeholders, facilitate exploitation of the results of the Zero-SWARM projects, and promote the development of innovative solutions based on the results of the trials by implementing a coordinated strategy. To increase its effectiveness, we are going to assess and shift (if necessary) its focus on different stages of the project based on the current needs and requirements, as well as possible challenges.

Specific Dissemination activities and Communication channels and tools - they imply the strategy that should cover the results achieved by the project in the main concepts and intentions aimed at by Zero-SWARM and are listed and described in the following chapter.

3.1 Visual identity

Project branding and reputation building efforts have been supported by a logo that will be used in all communications and dissemination activities visuals and publications. A major value, which is represented in the logo of Zero-SWARM, is its commitment to zero emission, zero pollution, zero waste, zero inventory, zero ramp-up time, and zero accident policies that are designed to make solutions fit for a circular economy and enhance their sustainability.



Figure 1: Project's logo and corporate colors

The offered colors palette will be integrated into each template, which is going to be used for communication and dissemination activities. Members of the consortium can use different templates to present information internally, to other project partners, or externally when sharing information with a wider audience



Figure 2: Presentation template sample

3.2 Communication channels: implementation and development items

There is a variety of available communication channels for this project, chosen accordingly to what the consortium has found to be an efficient and effective method for sharing and spreading project progress, results and successes. Listed below are some of the tools and channels that will be used. Depending on the possible shift in strategy, feedback received, and KPI results, we will assess and enhance this list if necessary. Along with descriptions of each tool, the list includes steps on how each one can be implemented and progressed through the three phases of a project's lifecycle.

3.2.1 Website

The Zero-SWARM website is at a middle stage of development. It is going to be the most complete and full source of centralized information regarding the project overview, activities, and outcomes for the external stakeholders. It is linked to all the social media channels, additional dissemination material and holds all publicly relevant information under the following tabs:

- Home: it is the main entry point for the website, which includes a brief description of the Project
- What: in this section, you'll learn more about Zero-SWARM's goals and objectives, along with its key pillars
- News: contains all the latest news and information about events and actions that have been carried out by the members of the consortium.
- Why: here is an introduction to the Zero-SWARM's assets, their potential impact, and its landscape
- Who: each of the consortium members is listed here, along with their official logo and a brief description of their project. Furthermore, it includes a map showing the locations of our nodes
- Publications: all publications will be available for download in this section, which will include every outcome already produced.
- Glossary: the definition of the project related concepts and terms the amount of which will be constantly growing and put into the glossary alphabetically ordered and linked to the texts they can be seen
- Contact: the information on how to get in touch with the project managers, along with the links to the social media accounts, can be found here. Here the visitor can also become a newsletter subscriber

Following screenshot presents the home page of the project's website.



Figure 3: Website homepage

The website will be regularly revised and ready for updates depending on the project's needs and assessment of its visibility, effectiveness, and demands for its particular or alternative relevant content.

The implementation and development plan of the Zero-SWARM website:

Table 3: Overall "Website" channel development plan

Launch	Consolidation	Sustainability
- Establishment of the website architecture - Development of its sections and filling it with the initial relevant content - Definition of first set of terms in glossary - Setting up a section for subscribers to the newsletter and mailing list	- Keeping the website up to date with all its contents update of the website content and adding the information regarding trials - Raising the number of described concepts in glossary	- Website content maintenance - Publish the trial results as soon as possible and solutions - Enrich the glossary with the last concepts and terms

3.2.2 Blog posts

Through blogs, the website will provide regular updates on the project, the progress of the development process, detailed analysis of trials and their outcomes, provide information on a wide range of topics, facilitate communication with relevant stakeholder groups, and all types of announcements and publications related to the achievement of sustainability development goals.

The initial action items for the project's blog look as follows:

Table 4: Overall "Blogposts" channel development plan

Launch	Consolidation	Sustainability
Publication of first blog post	Production of blog posts related to the trials, and their outcomes	Writing of the blog posts on the solutions offered by the project, challenges, and lessons learnt

The active dissemination of the relevant information posted in blog will be provided via social media and other communication channels and partially included into the newsletter

3.2.3 LinkedIn

Various aspects of the project will be communicated via LinkedIn, including the development process, results of trials, participation opportunities, as well as exploitation analysis. The channel will also serve as a means of sharing project news and success with all levels of stakeholders.

Our aim is to create a strong, resilient community, which will find our content valuable and will be actively sharing news related to the project and using the hashtags. Among them should be our internal partners, who will repost the posts to the account of their organizations.

As for the plan – it looks the following way:

Table 5: Overall "LinkedIn" channel development plan

Launch	Consolidation	Sustainability
- Establishment of the account - Obtaining the first audience - Publication of the first posts - Starting the campaign on the trial's promotion - Promotion of the website - Dissemination of the blog posts - Keep focus on the events dissemination	- Increasing the number of followers through regular interactions - LinkedIn campaign on the trials being conducted and their results - Active events dissemination - Maintaining a regular blog post sharing - Focus on showcasing and partner presentation, especially those, who conduct and facilitate the trials - Promotion of the podcast	- Emphasis on the impact and trials outcomes - Campaign on lessons learnt from the project - Preparation to handover of the account

3.2.4 Twitter

This project involves the establishment of a Twitter account that will convey news and outcomes of the project and engage the community.

Engagement of stakeholders and public engagement are essential to the success of dissemination and communication efforts.

The following steps in account development should be undertaken:

Table 6: Overall "Twitter" channel development plan

Launch	Consolidation	Sustainability
- Establishment of the account - Obtaining the first audience - Publication of the first posts	- Increasing the number of followers through regular interactions - Campaign on the trials being conducted and their results - Active events dissemination - Maintaining a regular blog post sharing	- Emphasis on the key impact and trials outcomes - Campaign on solutions implementation

- Starting the campaign on the trial's promotion - Promotion of the website - Dissemination of the blog posts - Keep focus on the events dissemination	- Campaign on promotion of the "green" policy of the project - Focus on showcasing and partner presentation, especially those, who conduct and facilitate the trials	Preparation to handover of the account
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3.2.5 Podcast

Aiming to enlarge the audience outreach of the project, the consortium included into the list of communication and dissemination channels a podcast. It is going to be a series of episodes (5-10 minutes) explaining a variety of topics in simple words. At first, it will be information on a very high level, which will allow us to prepare the audience to more detailed explanation of trials and the results. But even though the further podcast episodes will be related to a technical part of the project – the use of simple and clear language will help the information to be comprehensive to a wide scope of audience. The public can start exploring the project through podcasts, which will be promoted heavily through social media. More detailed plans can be found below:

Table 7: Overall "Podcast" channel development plan

Launch	Consolidation	Sustainability
Recording of the first episodes, which will provide the audience with the initial information regarding Zero-SWARM: its aim, objectives, mission, and vision	Production of the episodes which will disseminate information regarding the conducted trials, their outcomes, implementation, and impact	Production of final episodes with focus on social impact, contribution to digital green transformation, lessons learnt and adoption of solutions

3.2.6 Glossary

The goal of C&D activities, despite the complexity of the project, is still to build a community that will include both the general public and those with technical backgrounds. To simplify complicated Zero-SWARM project topics and challenges, we are developing a glossary of terms that will provide simple explanations of a variety of terms. An approach similar to that used with the podcast will be used. In the initial set of terms, definitions will be included that provide the audience with a high-level understanding of the project. The following terms will make it easier for users to dive deeper into the processes undertaken by partners, as the terms and concepts under which they operate will be clarified.

Table 7: Overall "Glossary" channel development plan

Launch	Consolidation	Sustainability
Adding to the glossary up to 20 terms to ensure the overall understanding of the project	Extending the glossary by adding terms related to trials	Completing the glossary with the definitions related to the solutions and trial's outcomes

3.2.7 Newsletter

Using an e-mail distribution list, the project will launch a newsletter. Besides updating stakeholders on Zero-SWARM's objectives and progress, the bi-annual newsletter features innovative solutions and challenges on the way to achieving the project's goals, as well as technologies and methodologies that are behind the best practices for creating 5G enabled prototypes. This newsletter promotes upcoming events, reports on previous events, informs of new publications, and announces podcast episodes as part of all project initiatives. A form on the project's website allows anyone to subscribe to the newsletter, not only institutional members.

Table 8: Overall "Newsletter" channel development plan

Launch	Consolidation	Sustainability
- Preparation of the content to be shared - Collecting of the initial set of contacts - Launch of the first newsletter	- Collection of content on rolling basis - Extending the list of newsletter recipients - Sending the newsletters	- Continuous collection of content - Expanding the list of recipients of the newsletter - Distributing the last newsletter

3.2.8 Events

Our C&D strategy considers participation in different kinds of events as one of the most effective ways to gain, spread, and foster technological knowledge sharing, best practices, and lessons learnt about green resilient sustainable manufacturing. By being visible at a variety of fairs, attending conferences and spreading printed materials there, and coordinating project interactive events such as webinars, Q&A sessions, and workshops (internal and external), we are able to reach out to stakeholders farther and more efficiently.

As events are a strategic communication channel, we will make every effort to be productive and efficient by participating in and organizing events. The detailed action plan will be created during the launch period and will outline all activities. During the consolidation stage, Zero-SWARM participation in industrial fairs and stakeholders' events will be supported by the planned demonstrators and demonstrators (as soon as possible during the course of the project). Additionally, certain steps will be taken to create synergies and collaborations with national and European networks and projects.

Table 9: Overall "Events" channel development plan

Launch	Consolidation	Sustainability
- Mapping the events Zero-SWARM should take part at - Creating a plan for events to be organized	- Following the organizational plan in organizing events. - Focus on demonstrators' promotion - Participation in the selected events	- Organization in the last project events - Focus on highlighting the results, solutions, and impact of the project - Participation in last events

3.2.9 Video materials

Videos will be produced as part of the project, which will be displayed at events and constitute a significant part of the website. The process of the trial's conduct and its outcomes will be captured on the video. Each video will be promoted via social media and a teaser will be published before the main video is made widely available for viewing. As the trials will be the only recorded content, the initial plan looks like as follows:

Table 10: Overall “Video materials” channel development plan

Launch	Consolidation	Sustainability
Preparation to the videos being recorded	- Production of the video materials as trials are being conducted - Promotion of the videos - Using the videos at the events	Using the videos at the events

3.2.10 Visual and printed materials

The project plans to create a variety of dissemination materials, such as flyers, booklets, and roll-ups.

We will distribute the booklets and flyers at events and provide them as downloadable PDFs on the website. Partners can use the printed materials to promote Zero-SWARM at events to which we do not participate or are not directly related, but our partners do.

Project partners will develop banners for use in online dissemination and communication activities and roll-ups to support the promotion activities taking place at physical events.

In accordance with the timetable of selected events, the plan for producing the visual materials will be adjusted to the current needs of the project. Note that, to guarantee data protection and confidentiality, this action will follow the current available mechanism in the project, i.e. The Data Management & Quality Assurance Board is chaired by the PC and consists of members of the Zero-SWARM consortium (TM, WP leaders and trial owners / facility owners – on demand basis). The Data Management & Quality Assurance Board is responsible for the Project’s data management and quality assurance.

In addition, we do not handle personal data except, when necessary, in which case the partners follow the standard procedure according to the EU GDPR directive, obtained through the person’s consent and applying anonymization upon the collected data when applicable (**Error! Reference source not found.** on D1.1). As a general principle, for produced data, the producer of the data will own it.

Table 11: Overall “Printed and visual materials” channel development plan

Launch	Consolidation	Sustainability
- Production of the first banner to promote the start of trials conduction - Development of the first flyer providing the high-level information about t Zero-SWARM project - Development of the first generic roll-up	- Production of banners advertising the trials and their results - Production of flyers and booklets containing the information regarding the trial, which already was conducted and promoting the coming one - Development of a roll up, which will refer to the trials which are currently conducted	- Production of the flyers ad booklets disseminating the trials results - Production of the banner representing the impact and potential of Zero-SWARM solutions

3.2.11 Scientific publications

The goal is to create new high-quality knowledge in several domains, like AI, 5G mobile communication, and others. In order to accelerate knowledge dissemination, we aim to create and publish white papers and articles. A variety of high-quality journals and influential and high-impact conferences will be used for dissemination of scientific and technical material, as well as online resources, training materials covering the technical part of the project and providing guidance on Zero-SWARM prototypes. Our vision on the timeline of scientific dissemination activities is presented below:

Table 12: Overall “Scientific publications” channel development plan

Launch	Consolidation	Sustainability
- Selecting the journals, magazines and conferences to be published at - Collecting materials for the white paper	- Production and publication of the white paper - Publication of articles in the selected journals, magazines and conferences - Collecting materials for the next white paper	- Production and publication of the white paper - Publication of articles in the selected journals, magazines and conferences

3.2.12 Alliances

With the focus on key stakeholders which can uptake the project's outcomes and highly benefit from them, we consider the establishment of collaboration with other entities and alliances with ongoing projects and relevant reference associations as one of the crucial facilities to maximize the impact of Zero-SWARM project and raise awareness and involvement in the process of green and digital transformation. The alliances give us the opportunity to engage with other communities, share knowledge, and ensure that the Zero-SWARM project is relevant to a wider audience.

During each phase of the project, the target projects and organizations will be defined and reached out to.

Table 13: Overall “Alliances” channel development plan

Launch	Consolidation	Sustainability
Establish communication alliances with recently funded research projects and organizations.	- Establish communication alliances with recently funded research projects and organizations. - Joint activities, like workshops, publications, event participation, etc.	- Establish communication alliances with recently funded research projects and organizations. - Joint sustainable activities, like book chapters, white papers, etc.

3.2.13 Zero-SWARM Community

The Zero-SWARM Community aims to create a rich ecosystem of active members (representing all Zero-SWARM's stakeholders) who interact, find synergies, and get value from a community of peers. It will contribute to build an active ecosystem around and beyond the project.

The main objective is to create a thriving community where all Zero-SWARM's stakeholders: (1) share best practices, use cases, and general news and events related to 5G technology, (2) learn about the project's value proposition, (3) find all information about the project.

The Zero-SWARM Community will be hosted in the FundingBox platform and will be the place to:

- Ask any questions about the Community itself and the Zero-SWARM project.
- Learn about the latest announcements regarding the project.
- Improve the visibility of the project.
- Post any notifications.
- Engage and obtain feedback from potential technology adopters during the development of the Zero-SWARM solutions.

The Zero-SWARM Community will be further described in D.7.3.

Table 15: Overall “Zero-SWARM” channel development plan

Launch	Consolidation	Sustainability
• Set-up the Community in the FundingBox platform and invite relevant stakeholders to join.	• Establish the strategy to communicate the project’s progress to the Community. • Promote the interaction among the members of the Community.	• Establish strategic alliances to guarantee the sustainability of the Community.

3.3 Identification of key content

By defining target audiences and key channels, we are logically led to the point at which we need to identify the main message we want to share with each group, as well as the clusters of messages that will be communicated.

Identifying key content is important not only for communication and dissemination activities, but also for community building, which is vital to project success. In order to engage the key stakeholders, we need to know which messages they are interested in and have an idea of what they might expect from us.

The table below shows the key messages we have margined for each target group. This table is going to be revised and the point of the message can be shifted or changed.

Table 16: Key message to be disseminated

	Target group	Key message
TG1	SMEs	Invite SMEs to participate at Zero-SWARM as early adopters through EoI to express their needs from one side and from the other side to validate and uptake the project results
TG2	Large companies	Invite them to participate at Zero-SWARM community to express their real-life needs
TG3	Research community, academia, and organizations	Open results of Zero-SWARM to EU academic communities to foster co-creation, info, and knowledge exchange

TG4	Technology Solutions and Service provider	Zero-SWARM is constantly looking for top-quality technology providers, to strengthen its offer with the latest technologies on the market
TG5	DIH's	Zero-SWARM will open its results and best practices towards DIH's and allow them to offer better value to their customers. DIHs can suggest relevant regional SMEs to Eol call for early adopters
TG6	Associations & Reference Initiatives	Zero-SWARM has already a track-record here. We will collaborate with them, share project results, and make them available for all members
TG7	Standardization bodies and regulators	Zero-SWARM partners are already contributing to many standardization bodies. We will continue pushing our project outcomes there. Also, we will continue working with the key associations defining scenarios and supporting the industry in their twin transition
TG8	Policy makers	Engaging with the policy makers through the EDIHs network in EU. Also, Zero-SWARM partners have influential role in key national and regional platforms
TG9	Other EU initiatives	Definition of a set of activities aligned with a liaison strategy with synergies and collaboration with existing European project and wider initiatives which could include events, workshops, joint white papers, webinars among others
TG10	Citizens	Zero-SWARM is open and sees value in every private person interested in learning more and indirectly benefiting for the general well-being of the citizens of the EU and their sustainability goals

With the aim of conveying the messages to our audience, we outlined the various content clusters. Among the groups of content that need to be communicated by this project are:

- 1 Information about the overall project, the main points.** The outline and description of Zero-SWARM vision and mission, its policy, value and aim to shift the industrial paradigm towards green production, introduction to the main processes conducted within the project.
- 2 Technical details and updates on trials conducted, technical solutions,** including the items of the main objectives of the project such as, zero-touch framework establishment, AI-enabled operations management, a cloud-edge platform development, etc.
- 3 Details on technical accomplishments, breakthroughs, potential impact and adoptions opportunities. Dissemination of trials results,** its implementation and early adoption opportunities, as well as industrial and social benefits,

- 4 **Information on the lessons learnt, challenges and risks from experimenting and its management.** Lessons learned from the project results and the trials, including repurposing methods and best practices.

These are four pillars, which determine the content to be communicated to the particular target group. We consider it as one of the prior ways to maximize the project impact and ensure the growth of the community is to build on these groups of contents, using a variety of channels, and revising them methodically and regularly.

4. Standardization strategy

Data and technology standards represent one of the most important but probably least discussed elements of today's digital landscape. The standards ensure that goods or services produced in a specific industry come with consistent quality and are equivalent to other comparable products or services in the same industry. Standardization also helps in ensuring the safety, interoperability, and compatibility of goods and services produced.

Harmonising and interaction with standardisation bodies is one of the key value propositions and achievements of Zero-SWARM. As a mission, the Zero-SWARM project aims to render the so-far missing bridge between different standards development organizations (SDOs), pre-standards development organizations (pre-SDOs), and reference initiatives, aiming to boost the green and digital transition of manufacturing sector.

It is foreseen in WP7 and in the project sustainability plan. We already have identified a wide range of standardisation and reference initiatives that from one side influence Zero-SWARM in the design phase and from the other side will be influenced by the project results. Given that, Zero-SWARM plans to prepare an extensive Standardisation Plan (SP) in the first 6 months of the project which will remain as a live document during the project execution. SP will provide guideline and will track all SDOs, pre-SDOs, and reference initiatives that the project will interact with. Such interaction will be done through partner with established relationships and established membership with SDOs and reference initiatives. It provides a methodological and targeted approach to maximize the generated impact.

4.1 Understanding, approach, and methodology

In this subsection we will explain the methodological approach of Zero-SWARM towards SDOs, pre-SDOs, and reference initiatives. T7.4 will harmonize Zero-SWARM work with SDOs, pre-SDOs, and reference initiatives relevant activities, aiming to first learn from them and later on promote new work items. The project has a potential to interact and influence three main domains of telecommunication and 5G, operational technologies and automation as well as data technologies and cybersecurity. In the next subsection 4.2, we will present an initial sketch of SP that includes our interaction approach towards several key organizations such as 3GPP, IEC, GAIA-X, IDSA.

To better understand the methodological approach of Zero-SWARM, first, it is worth to pose the project activities with respect to SDOs, pre-SDOs, and reference initiatives. As shown below, in a broad sense we can divide the standard life cycle into the 3 main stages:

- 1 **Pre-development:** it is the very early stage of standardization process which focuses on due diligence, research, and permitting. This stage is often the most variable in duration and normally it is done outside of the SDOs, pre-SDOs, and reference initiatives. Investing at this stage carries the greatest and most varied risks because there are many unknowns and uncertainties and for the same reason such a preparation prior to development usually seems very costly and unachievable for many institutions, public or private, mainly academia and SMEs. Despite that one of the biggest success factors in different standardization activity lies in putting extra focus and effort into the first phase of the process, as known as the “pre-development phase”. By doing a thorough pre-development, we can ensure that we have diverse idea generation, correct preliminary study, concept generation and definition, and feasibility planning (the right equipment for a specific activity and a realistic budget and timetable). Ultimately, putting more effort and thought into pre-development makes the process as a whole less costly for the owner. It also reduces the risk of mistakes and miscalculations, as well as ensures the end-result is a high quality.

Here is the place where public private investments like Zero-SWARM can play a huge role. By providing enough funding for co-creation among partners, it can boost the presence and impact of European companies in different arenas. Zero-SWARM provides a perfect platform to better

understand the needs and usage, to come up with a tailor-made design that suits the surroundings, to choose the right solutions, to check the compliance with rules and regulations, to think about optimization and sustainability before pushing an idea into the SDOs, pre-SDOs, and reference initiatives.

- 2 **Development:** It is a process that involves many individuals, companies, and often governments. Major standard and pre-standard organizations typically fall into two areas: national/regional and international. National standards apply only to the country in which they are adopted (although they may be adopted or referenced by any organization or country). National standards bodies may be government-sponsored or independent. International standards are generally applicable worldwide. There are two basic methods for developing standards. The majority of standards today are developed using the consensus process, which allows any party that may be significantly or materially affected by the standard under development to comment. The second method relies on a process utilizing a group of experts familiar with writing standards. This type of group tasked with developing a document may not be expert on the topic and will rely on outside experts to advise it. Such a process is typically closed to outside comment until an official review is conducted. In 4.2, we try to provide some high-level insight about the process of some selected SDOs, pre-SDOs, and reference initiatives. What is important here is that Zero-SWARM as a project will not directly enter into this stage. The project only support partner(s) who are participating and contributing to the standardization development process in the best effort manner.
- 3 **Outreach:** this stage is also carried out directly by the SDOs, pre-SDOs, and reference initiatives. It focuses on how each target audience should be reached and which channels will be used to communicate with them. Different bodies utilize various methods for this purpose, e.g. publishing the standard documents on their websites, holding workshops, etc. By default, Zero-SWARM as a project will not participate on this action, unless it is officially requested by a SDO, pre-SDO, or a reference initiative. Nevertheless, the project within the scope of its communication and dissemination activity tries to find proper synergies on this.

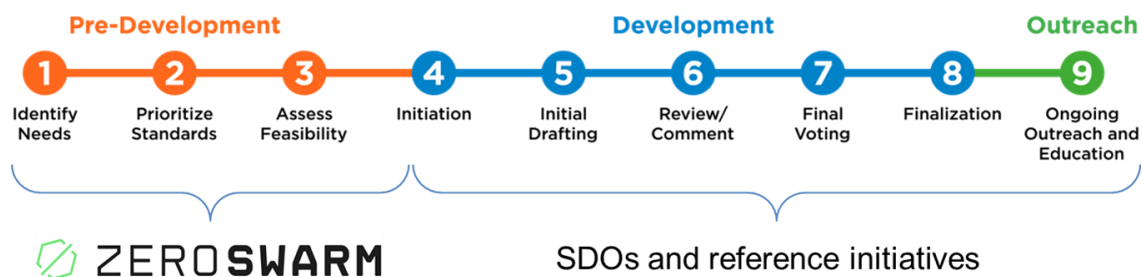


Figure 4: Standardization lifespan and Zero-SWARM

4.2.1 Standardization Planning Tool

The project uses a tool, as shown below, to achieve the following goals:

- 1 Identify the items / ideas with potential for incorporation into the future standards
- 2 Match making between the identified items and the relevant SDOs/pre-SDOs/reference initiatives
- 3 Boost synergy, co-creation and cooperation among partners in the project to work technically together on the identified items as well as politically supporting it - to create a better chance for pushing them into the SDOs, pre-SDOs, and reference initiatives
- 4 Progress monitoring, risk assessment and mitigation

Table 17: Standardization planning tool

Standardization Planning Tool					
#	Item / idea	Relevant SDOs / reference initiative	Partners involved	Status	Remarks

4.2 Main bodies related to standardization and their engagement

During the project progress, while following different SDOs, pre-SDOs, and reference initiatives, we will priorities and push Zero-SWARM contributions into them, thanks to our well-established partners in the targeted SDOs, pre-SDOs, and reference initiatives. By the end of the project the result of successful cases will be reported. However, to present a short sketch of SP and the interaction way with standardisation and pre-standardization bodies through partner with established relationships and established membership some selected cases are highlighted below:

- **5G-ACIA:** within the working groups of 5G-ACIA, members can introduce or join, so called “work items” and contribute to the related studies since this is a contribution-driven organisation. For the sake of confidentiality we cannot present a list of ongoing work items but there are already some related studies and it is possible to introduce new ones in the future to provide contributions based on Zero-SWARM results and observations. Work items will be presented among members and in a collaborative and consensus-based way they will be prepared. The result of these “work items” will be used for several purposes including influencing SDOs like 3GPP, IEC/ISO, ETSI, etc.
- **3GPP:** Zero-SWARM timeline overlaps with the 3GPP standardisation schedule of releases 18, 19 and 20. 3GPP is organized in 3 main Technical Specification Groups (TSGs), each with several Working Groups (WG), focusing on different aspects of mobile communications. The way to do a new release of standard is to have a period (normally 1.5 year) for study where “study items” are introduced in WGs. After the study period and achieving consensus, 3GPP goes to the specification writing mode (normally 1.5 year) of the normative phase where they produce the new release text called by technical specifications (approved by all). Release 18 is under discussion now and many new study items are introduced. Topics of Obj. 3 are good points for contribution into study and work items or have new ones which will be pushed for 3GPP standards, thanks to our active members with experience of being raptor.
- **OPC-UA:** OPC Foundation core working group (OPCF) is responsible for the development of specifications and open standards for connectivity in industrial automation that are adopted by the OPC community to deliver real world products and services. OPCF is divided in several subgroups including Security, Pub Sub, TSN, Semantic validation. Besides, OPCF supports joint working groups (JWG) to develop companion standards for specific application domains. In order to address a smooth integration of OPC-UA (FX - field exchange RC2) applications with 5G, OPCF and 5G-ACIA have signed a memorandum (April 2021) for collaboration, and are participating in several joint working groups. As an example the WI 051 "Integration of OPC UA with the 5G system" carried out in 5G-ACIA WG and led by HWE.

- **IDS:** The IDS Reference Architecture Model v3 (IDS-RAM) was released in April 2019, while the standard for the IDS connector (which is the core component of the IDS-RAM) was published in February 2021. Currently the International Data Spaces Association (IDSA, member of Zero-SWARM) and their members (some of which are also members of the consortium) is working on concretizing the technical specifications for all the components of the IDS-RAM, with the ambition of publishing new specification for each of them.
- **GAIA-X:** Gaia-X's first Architecture Model, released in June 2021, describes the concept to establish the Gaia-X Data and Infrastructure Ecosystem. The model is subject to continuous updates by the Technical Committee and its 5 Working Groups in order to reflect the evolution of business requirements, relevant changes in regulatory frameworks and advancements in the technological state of the art. Some Zero-SWARM partners are very active in these WGs.
- **IEC TC65/WG15:** is continuously collected feedback for improving and extending the IEC 61499 standard parts. For that WG members can directly submit change proposals to the working group. Change proposals consists of a rationale and required changes to one or more parts of IEC 61499. In regular meetings the WG is reviewing the change proposals. It provides feedback and request for extensions if needed or adds them to the list of changes for the upcoming revisions of the standards. Revisions are performed according to the rules of ISO/IEC. New items can be also introduced. LTU is a member of WG.

4.2.1 Main standardization-related bodies and their engagement

- **5G-ACIA:** 5G-ACIA is the central global forum for shaping 5G in the industrial domain
- **6G-IA:** It is the successor of 5G Infrastructure Association (5G-IA) playing the role of the voice of European industry for the development and evolution of 5G and 6G.
- **GAIA-X:** GAIA-X is a European initiative that both connects existing cloud services and sparks innovative new modes of connectivity to create a federated digital infrastructure for Europe
- **Plattform Industrie4.0:** A reference initiative for the advancement of the digital transformation of manufacturing. It is behind concepts like AAS
- **Industry IoT Consortium (IIC):** It enables and accelerates adoption of the Industrial Internet which is essential to growth and competitiveness in key industries
- **OPC foundation:** An industry consortium that creates and maintains standards for open connectivity of industrial automation devices and systems
- **I4MS (new I4MST4s):** I4MS Tools and Technologies for Transformation (I4MS4Ts) is managed by FBA, contributing to I4MS ecosystem, and collaborates with Innovation Actions (IAs), DIHs and other related networks (SAE, EFFRA, EIT Manufacturing, etc.)
- **iDTA:** Industrial Digital Twin Association is the central point of contact for all topics related to the Digital Twin and AAS- an alliance of active creators who together make the Digital Twin practically usable for the industry by means of open technologies
- **EIT Manufacturing:** EIT Manufacturing is an Innovation Community connecting the leading manufacturing actors in Europe.
- **ISO/IEC:** Key international standard for the development of real-time distributed automation, the IEC-61499 is one of the founding pillars of the project
- **3GPP:** An umbrella term for a number of standards organizations which develop protocols for mobile telecommunications
- **Open Industry 4.0 Alliance:** It aims to enable the digital transformation required to advance the principles of I4.0

- **EFFRA:** It is a non-for-profit, industry-driven association promoting the development of new and innovative production technologies
- **ECISO:** The European Cybersecurity Ecosystem to support the protection of the European Digital Single Market, ultimately to contribute to the advancement of European digital sovereignty and strategic autonomy
- **One6G:** It targets to address technologies such as AI, IoT, symbiotic share of resources by mobile/wireless/satellite, cloud computing, time sensitive networking etc., which will play key roles in future innovation for developing the fundamentals of 6G.
- **NetworldEurope ETP:** NetworldEurope is the new incorporation of the European Technology Platform (ETP) for communications networks and services, the follow-up of NetWorld2020 to follow the European changing policies as stated in Horizon Europe.
- **Artificial Intelligence, Data and Robotics:** The Vision of the Partnership is to boost European competitiveness, societal well-being and environmental aspects to lead the world in researching, developing and deploying value-driven trustworthy AI, Data and Robotics based on fundamental European rights, principles and values.
- **Made in Europe:** it is the manufacturing partnership with the European Commission under the Framework Programme 'Horizon Europe' (2021_2027) aiming for “twin-transition”, meaning both the green and the digital transition, in the industry and manufacturing sector.

5. Key performance indicators

5.1 Key performance Indicators and monitoring

During the dissemination and communication activities, benefits resulting from the project's definition, development, and execution will be disseminated, including trials to showcase. To ensure the success of all the activities undertaken within the campaign, it is necessary to identify the key performance indicators.

Furthermore, selected KPIs will be continuously monitored and periodically reported as part of our internal project monitoring as well. Partners will report on activities done, and the WP7 Working Group will monitor the execution tempo and timeline to ensure alignment with KPIs. A comprehensive compilation of all dissemination and communication-related data will be delivered as deliverable 7.5 at the end of each year of the project.

The KPIs are set accordingly to each dissemination and communication channel:

Table 18: Indicators for monitoring and KPIs

Type of chanel	Indicators for monitoring	KPI
Website	- Number of (unique) visitors per day, per month and per year - Growth of (unique) visitors over time - Bounce rate - Most visited pages - Number of blog posts	- Min. 20 unique visitors a month in first year - Min. 40 unique visitors a month in second year - Min 1 blog post a month
Social media	- Number of followers on Twitter and LinkedIn - Twitter: number of tweets, impressions, Twitter profile visits, mentions - LinkedIn: number of posts, number of profile visits, reach of the posts (in average)	- Min 10 new followers each month - Min 5 tweets a month - Min 1 LinkedIn post a month
Newsletter	- Number of project newsletters published - Number of subscribers to the newsletters - Clicks on newsletters' articles - Number of views from the newsletters	Min 3 newsletters in total
Podcast	- Number of episodes - Number of listeners	Min 5 episodes in total
Glossary	- Number of published terms - Number of users	Min 50 terms in total

Events	• Number of organized events (of all kinds) • Number of visitors of each organized event • Number of attended events	• Min 2 organized events per year • Min 2 organized trainings/workshops • Min 4 participation in international activities and events in total • Min 2 participation in exhibitions in total
Visual and printed material	• Number of banners • Number of roll-ups • Number of booklets/flyers	• Min 3 banners in total • Min 2 roll-ups in total • Min 8 booklets/flyers in total
Video materials	• Number of recorded videos • Number of views	• Min 5 videos in total • Min 200 views of each video
Scientific publications	• Number of articles • Number of white papers • Number of conferences participation	• Min 10 publications in Journals / Magazines / conferences in total • Min 1 white paper in total

Each project partner is responsible for monitoring its progress in terms of events, articles, etc., in order to assess the relevancy of the indicators listed in the table above. A yearly review of the present strategy will be possible by gathering this information and monitoring our partners' activities properly and regularly. We use a monitoring approach to obtain timely and regular information about each activity: we ask each project partner to report on their progress at least once a month, and more frequently in the case of special events or occasions. Among the information which will be requested by the project partners are: the activity type; target audience, based on the stakeholder categories listed in the deliverable; date of the activity; if applicable, further description of the activity; annex (photos, videos, etc.).

5.2 Planning of the first year of activities

Following is a high-level overview of the project's first year of activities, as outlined in the operational plan above. Planned activities will be updated bimonthly by implementing bimonthly working plans

Table 19: Planning of the first year of activities

Channel	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
Website	Launch and establishment of the basic structure			Enrichment and development of the website content								
Social media	Launch		Engagement with the community				Promotion of the trials		Promotion of the trials and Eco designed architecture, specifications & benchmarking			
Newsletter	Exploitation of the partners newsletters											Launch of the newsletter
External events				Participation in events								
Blogposts				First blog post	Second blog post	Third blog post	Fourth blog post	Fifth blog post	Sixth blog post	Seventh blog post	Eighth blog post	Ninth blog post
Glossary	Launch				Regular update of the glossary by adding the new items							
Podcast					First episode				Second episode			
Video materials								First video			Second video	
Visual and printed materials				Production of visual and printed materials								
Scientific articles								First article				
Alliances				Establishment of alliances								

5.3 Risk Management Plan

Setting success measurements requires taking into account the possibility of the occurrence of various factors that may negatively impact the project's flow. Identifying risks and challenges ahead of time, assessing their likelihood, and foreseeing measures to mitigate their impact were some of the goals we tried to achieve. We will update the list of risks regularly and will share later lessons learned and best practices based on the lessons we've learned.

- Despite several campaigns, the project is not managing to reach social media critical mass. The number of social media followers remains low. In spite of its medium likelihood, this could have quite a significant impact. If it does occur, we can increase the number of posts, hashtags, and questions on social media, leverage the partners' social media sources, and emphasize promotion of the social media channels.
- The content of blogs, podcasts, and videos is not well read, listened to, or viewed by the community. The impact of the weak performance of the present tools will not affect the success of the project significantly. However, these channels require a lot of effort and the collaboration of many people, which will force us to promote posts, episodes, and videos more actively on social media in attempt to maximize the results. Anyhow - the first step would be to reassess the content, analyse the stakeholders map and its compatibility with the provided activities, and get feedback from the community.
- A lack of interest in the conducted trials due to insufficient dissemination. During the launch of the trials and their outcome, we will intensify the amount of effort and number of actions taken as part of communication and dissemination activities. After each trial, we will once again identify the most effective channels which will be leveraged even further in the future.
- Low participation in Zero-SWARM events, and low interest in the project during fairs, exhibitions, and partners' events. Making efforts to overcome this challenge would require analysing the real causes of the problem. When it's an offline event, we may not be promoted sufficiently, our booth/roll-up is not visible, the printed materials are not abundant, and we do not network sufficiently. An online event may lack interactivity, lack visual materials, be long, and the topic may not be appropriate for the audience. We can take the appropriate measures based on the analysis results. The knowledge from lessons learnt and best practices should be applied after every event, regardless of its significance.

6. Conclusion

In this deliverable, the consortium has defined the activities that will be undertaken by all partners as part of the communication, dissemination, and standardization plan. As the project progresses (and the development steps for each communication and dissemination channel are completed), the document will be updated accordingly. Upon adoption of this dissemination and communication strategy, the project's priority will be to establish all tools described in the report. Therefore, we must emphasize the pivotal role of target communities, as by reaching out to them and effective dissemination we achieve the common aim of all the activities to maximize the project impact and ensure its future existence. The purpose of this document is to outline the plans. The future deliverables will provide an update on actual dissemination, communication, and standardization progress. Planned dissemination of results will also evolve, whenever needed, throughout the course of technical work presented in this document.

The next steps should be the following:

- Disseminate and promote communication materials (digital and printed)
- Establish website, social media channels (LinkedIn and Twitter)
- Begin with events, workshops to build a community of interest by following list of stakeholders
- Identify the new stakeholders, with whom to establish contacts and alliances and develop the strategy for their engagement
- Update our dissemination plan as we learn from our communication and outreach efforts
- Start drafting the Dissemination, Communication & Standardization Report (M15).