

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

D7.3 - Zero-SWARM Community

Topic	HORIZON-CL4-2021-TWIN-TRANSITION-01-08
Project Title	ZERO-enabling Smart networked control framework for Agile cyber physical production systems of systems
Project Number	101057083
Project Acronym	Zero-SWARM
Deliverable No/Title	D7.3 - Zero-SWARM Community
Contractual Delivery Date	M03
Actual Delivery Date	M03
Contributing WP	WP7 – Impact Maximization: Exploitation, Communication, Dissemination & Standardization
Project Start Date, Duration	01/06/2022, 30 Months
Dissemination Level	Public
Nature of Deliverable	DEC

Document History			
<i>Date</i>	<i>Version</i>	<i>Author</i>	<i>Description</i>
24-07-2022	0.1	J. García (FBC)	1st draft version of the full deliverable
29-08-2022	0.2	P. Khodashenas (HWE)	Review and updates of the full document
29-08-2022	0.3	A. Ibáñez (FBA)	Review and updates of the full document
30-08-2022	0.4	J. García (FBC)	Review and updates of the full document
30-08-2022	0.5	P. Khodashenas (HWE)	Review and updates of the full document
30-08-2022	0.6	J. García (FBC)	Review and updates of the full document
31-08-2022	1.0	A. Drosou (CERTH)	Submission of the final version

Authors List

Leading Author (Editor)				
	<i>Surname</i>	<i>Initials</i>	<i>Beneficiary Name</i>	<i>Contact email</i>
	<i>García</i>	<i>J</i>	<i>FBC</i>	jorge.garcia@fundingbox.com
Co-authors (in alphabetic order)				
#	<i>Surname</i>	<i>Initials</i>	<i>Beneficiary Name</i>	<i>Contact email</i>
1	<i>Ibáñez</i>	<i>AIB</i>	<i>FBA</i>	arturo.ibanez@fundingbox.com

Contributors (in alphabetic order)				
#	<i>Surname</i>	<i>Initials</i>	<i>Beneficiary Name</i>	<i>Contact email</i>
1	<i>Sayyad Khodashenas</i>	<i>PSK</i>	<i>HWE</i>	pouria.khodashenas@huawei.com

Reviewers List

List of Reviewers (in alphabetic order)				
#	<i>Surname</i>	<i>Initials</i>	<i>Beneficiary Name</i>	<i>Contact email</i>
1	<i>Sayyad Khodashenas</i>	<i>PSK</i>	<i>HWE</i>	pouria.khodashenas@huawei.com
2	<i>Ibáñez</i>	<i>AIB</i>	<i>FBA</i>	arturo.ibanez@fundingbox.com

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Zero-SWARM has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101057083. The content of this deliverable does not reflect the official opinion of the European Union. Responsibility for the information and views expressed in the deliverable lies entirely with the author(s).

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List of Abbreviations

Abbreviation	Description
3GPP	3rd Generation Partnership Project
5GACIA	5G Alliance for Connected Industries and Automation
AAS	Advanced Antenna Systems
ACIA	Alliance for Connected Industries and Automation
AIOTI	Alliance for the Internet of Things Innovation
AMETIC	Asociación de Empresas de Electrónica, Tecnologías de la Información, Telecomunicaciones y Servicios y Contenidos Digitales
ATSSS	Access Traffic Steering, Switching & Splitting
AGV	Automated Guided Vehicles
CPE	Customer Premise Equipment
CPSoS	Cyber-physical Systems of Systems
DIH	Digital Innovation Hub
DLFi	Distributed Learning Framework
EDIH	European Digital Innovation Hub
EFFRA	European Factories of the Future Research Association
Eoi	Expression of Interest
EU	European Union
IMC	Intelligent Mechatronic Component Architecture
I4MS	ICT Innovation for Manufacturing SMEs
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IIoT	5G for Industrial Internet of Things
IP	Intellectual Property
IPR	Intellectual Property Rights
KERs	Key Exploitable Results
NPN	Non-Public Network
PLC	Powerline Communication
RAN	Radio Access Network
SLAs	Service Level Agreements
SME	Small- to Mid-size Enterprise
WP	Work Package

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Executive Summary

Following WP7 (Impact Maximization: Exploitation, Communication, Dissemination & Standardization) of Zero-SWARM, this deliverable describes the role of the Zero-SWARM Community in the project.

The report contains an overview of Task 7.2 (Community building, DIH connection and EU clustering) led by FBC, presenting the setting up of the Zero-SWARM Community platform.

This document briefly describes the online platform set up as M3 and some relevant aspects such as the URL, structure and elements of the Zero-SWARM Community.

The Zero-SWARM Community and its spaces represent one of the channels set to accomplish the project's main objectives and communication strategy. They are part of a vivid ecosystem with the Zero-SWARM website and social media channels and interrelate with the actions described in the D7.5 (Dissemination, communication & standardization activities report).

1. Introduction

1.1 Objective

The Zero-SWARM Community aims to create a rich ecosystem of active members who interact, find synergies, and get value from a community of peers. The Community is the place for stakeholders to be constantly updated about the project's evolution and to interact among themselves to foster cooperation. It will contribute to building an active ecosystem around the project and even beyond it.

The main objective is to create a thriving community in which 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.
4. Network.

Zero-SWARM Community is hosted and customized on the FundingBox platform (as explained below) and is an essential tool to realize the adapted open innovation diffusion practice (outside-in and inside-out) by the project and the sustainability of results beyond the project's lifetime. The key strategic issue is to define a clear-cut purpose for the community, which will be done in two stages:

1. Beginning of the project: during the design phase of the open framework for smart CPSoS, following the outside-in practice, Zero-SWARM will engage relevant stakeholders from the reference initiatives and beyond to express their views and ideas.
2. Once the Key Exploitable Results (KERs) of the project are identified by the exploitation plan, around mid to the end of the project, following the inside-out practice, we will engage early adaptor stakeholders.

This cross-sectional community can play a crucial role in project sustainability, fostering twin transitions in Europe and the world. Supportive partners, which are relevant organizations in the technical areas interested in cooperating with the project in a 'win-win cooperation model', will play a vital role in the projected uptake all around Europe. Thus, the project foresees negotiations during its execution, especially among industrial partners, for sustaining it beyond the project's lifetime.

1.2 Target audiences and approach

The Zero-SWARM Community will focus all its efforts on a wide range of targets:

1. **SMEs:** Zero-SWARM invites SMEs to participate as early adopters through EoI calls and validate their real-life needs.
2. **Large Companies:** Zero-SWARM invites large companies to participate as early adopters through EoI calls to validate their real-life needs.
3. **Research Community and Academia:** Zero-SWARM opens up its results to the EU academic community to foster co-creation, information, and knowledge exchange.

4. **Technology, Solution and Service Providers:** Zero-SWARM is constantly looking for top-quality technology providers to strengthen its offer with the latest technologies on the market.
5. **DIHs:** Zero-SWARM will open its results and best practices towards DIHs and allow them to offer better value to their customers. DIHs can suggest relevant regional SMEs to EoI call for early adopters.
6. **Associations & Reference Initiatives:** Zero-SWARM already has a track record here. We will collaborate with them (e.g., EFFRA, IDSA, AIOTI), share project results, and make them available for all members.
7. **Standardization bodies:** Zero-SWARM partners already contribute to many standardization bodies (e.g., 3GPP, IEC, IEEE). We will continue pushing the project outcomes there. Also, we will continue working with crucial associations (e.g. 5G, ACIA, IDSA), defining scenarios and supporting the industry in their twin transition.
8. **Policymakers:** Engaging with the policy makers through the EDIHs network in the EU. Also, Zero-SWARM partners have an influential role in crucial national (e.g., AMETIC in Spain) and regional (e.g., VANGUARD) platforms.
9. **Other EU initiatives:** Definition of a set of activities aligned with a liaison strategy for synergies and collaboration with existing European projects (in particular Horizon 2020) and broader initiatives (I4MS, DIHNET, EDIH) to be delivered in WP7, which could include events, workshops, joint white papers, webinars, among others.
10. **Citizens:** Zero-SWARM is open to any private person interested in learning more and indirectly benefiting the general well-being of the citizens of the EU and their sustainability goals.

Below is our benchmark and assumption for pathways towards creating the impact. The list will be revised and enhanced during the project lifetime under WP7.

Table 1: Zero-SWARM benchmark and assumption towards the target groups

TG1: SMEs	TG2: Large Companies
Type of stakeholders: Private; Solutions, Products, Community, Expression of Interest (Eol) Key benefits: increased efficiency, lowering costs, reduced waste, increased quality; increased revenue potential Key messages: Zero-SWARM is inviting SMEs to participate as early adopters through Eol call; and validate their real-life needs	Type of stakeholders: Private; Solutions, Products, Community Key benefits: increased efficiency, lowering costs, widening existing product portfolio and introducing new products, indirect increase in profit margins. Key messages: Zero-SWARM is inviting large companies to participate as early adopters through Eol call to validate their real-life needs
TG3: Research Community and Academia	TG4: Technology, Solution and Service Providers
Type of stakeholders: Public; Research results Key benefits: receive deals for industrial partnerships, be engaged with SoA technology development, can enrich their technological product offering and service portfolio; can use the results in teaching work. Key messages: Zero-SWARM opens up its results to EU academic community to foster co-creation and info and knowledge exchange	Type of stakeholders: Private; offering their services and technologies Key benefits: new business opportunities; involvement in the R&D Key messages: Zero-SWARM is constantly looking for top-quality technology providers, to strengthen its offer with the latest technologies on the market
TG5: DIHs	TG6: Associations & Reference Initiatives
Type of stakeholders: Public; Project results (solutions and technologies), Community, best practices (trial results, early adopters approach) with special focus on servicing SMEs Key benefits: enrichment of product portfolio towards their customers, better value proposition and competitiveness on the market Key messages: Zero-SWARM will open its results and best practices towards DIHs and allow them to offer better value to their customers. DIHs can suggest relevant regional SMEs to Eol call for early adopters.	Type of stakeholders: Public-Private; access to project results (solutions and technologies); offering services and network; community, best practices and definitions Key benefits: increase their offering towards their members; widely accepted definitions and best practices, increased revenue potential Key messages: Zero-SWARM has already a track record here. We will collaborate with them (e.g. EFFRA, IDSA, AIOTI), share project results and make them available for all members.
TG7: Standardization bodies	TG8: Policy makers
Type of stakeholders: 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) Key benefits: Contribution based on the Zero-SWARM results for emergence of new standards that benefit larger number of companies. Key messages: Zero-SWARM partners already contributing to many standardization bodies (e.g., 3GPPP, IEC, IEEE), see section 1. We will continue pushing the project outcomes there. Also, we will continue working with key associations (e.g. 5G-ACIA, IDSA) defining scenarios and supporting the industry in their twin transition.	Type of stakeholders: Public; playing a role in the emergence of a strong 5G-enabled manufacturing community, at national and EU level. Key benefits: 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 Key messages: Engaging with the policy makers through EDIHs network in EU. Also, as shown in Section 1, Zero-SWARM partners have influential role in key national (e.g. AMETIC in Spain) and regional (e.g. VANGUARD) platforms
TG9: Other EU initiatives	TG10: Citizens
Type of stakeholders: Public Key benefits: Exchanging findings and enhancing results, finding possibilities of joint activities, maximizing the project outreach Key messages: Definition of a set of activities aligned with a liaison strategy for synergies and collaboration with existing European projects (in particular Horizon 2020) and wider initiatives (I4MS, DIHNET, EDIH) to be delivered in WP7, which could include events, workshops, joint white papers, webinars, among others;	Type of stakeholders: Private Key benefits: indirect benefit by supporting sustainable and environmentally conscious lifestyle; increased quality of consumed products; raising awareness about green and digital transformation, improved work condition for industry workforce, skill development. Key messages: Zero-SWARM is open for any private person interested in learning more and indirectly benefiting for the general well-being of the citizens of the EU and their sustainability goals

1.3 Community engagement strategy

The main focus will be to raise awareness of the Zero-SWARM solutions; the results of the exploitation workshops carried out in Task 7.3, explained below, will be of great value in generating relevant content to engage with the audience of the community.

In a nutshell, the high-level Zero-SWARM community engagement strategy consists of three phases:

1. **Acquisition:** this action will be focused on bringing members to the Community including activities such as community mapping, emailing, branded content, social media campaigns, ads, events.
2. **Retention:** this strategy will be oriented to ensure that the members stay and participate in the Community. It encompasses content production, communication structure (when, what and how to share), onboarding of new members, and surveys to keep the members engaged.
3. **Referral:** this action will have the objective to encourage Zero-SWARM Community members to invite new ones.

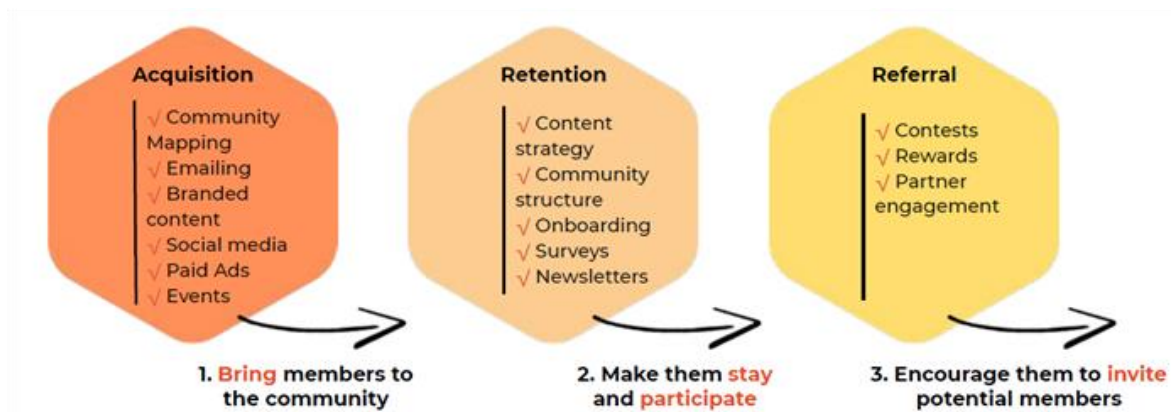


Figure 1: high level Zero-SWARM community engagement strategy

The engagement strategy will focus on a single overarching initiative segmented into multiple tactical content initiatives; we will pivot messages and reinforce the content initiatives that perform best. The process will be updated as soon as the outcomes of the actions in Task 7.3 are available.

The engagement strategy will be based on three verticals:

- Zero-SWARM solutions.
- Zero-SWARM project and solutions and their cultural impact at the European level.
- Technical & pilots stories: such as Zero-SWARM stories as industry change-makers and Zero-SWARM leading the cultural conversation.

In particular, this task will be focused on five categories of dissemination activities (all these activities will be scheduled in a calendar for all partners to share their activities):

- Workshops.
- Conferences.
- Webinars/podcasts.
- Community building activities.
- Publications.

The engagement with the Zero-SWARM audience will rely on the three-legged digital approach based on the Zero-SWARM web page, the Zero-SWARM Community, our social media channels, and other tools such as a newsletter. All these tools will be interrelated to reach the target audience and achieve a successful engagement.

1.4 Dissemination assessment of the Zero-SWARM project

A catalogue of the actions planned to boost the Community is listed below.

How: Publications in a specialized industrial press.

What: Publication to industrial journals and magazines.

How: Presentations at industrial conferences.

What: Attendance & speaking slots.

How: Publication of technical and scientific papers and journals.

What: Publication in scientific conferences and prestigious journals.

How: Website.

What: 100% updated Search Engine Optimization.

How: Social media.

What: Sharing content and Linkbuilding strategy.

How: E-newsletters.

What: Regular e-newsletter.

How: Materials to be distributed at Zero-SWARM project presentations or events.

How: Zero-SWARM Community.

What: Setting up the community site, sharing updates about Zero-SWARM platform development, essential milestones, creating discussion among interested parties.

How: Webinars and Q&A sessions.

How: Connection with DIHs.

What: Mapping and contacting essential DIHs related to the Zero-SWARM topic.

How: Stakeholders.

What: Mapping and aggregating the stakeholders into a database for the e-newsletter.

How: Supporting partners.

What: A set of partners spreading the Word about Zero-SWARM in their specialized networks working with us in a win-win cooperation mode: Zero-SWARM promotes their logo and services on the website, and in return, the supporting partners will disseminate the Zero-SWARM results.

How: EU Networks.

What: Dissemination through other relevant industry and EU clusters.

How: Workshops.

What: Zero-SWARM hosted dissemination workshops.

2. Structure of the Zero-SWARM Community

2.1 Zero-SWARM Community location

The platform hosting Zero-SWARM Community is FundingBox Spaces, and it has been launched under the following URL: [https://spaces.fundingbox.com/c/i4ms/categories/5G-\(ZeroSWARM\)](https://spaces.fundingbox.com/c/i4ms/categories/5G-(ZeroSWARM))

Regarding the advantages of the FundingBox platform, below are listed a set of essential benefits that Zero-SWARM will leverage thanks to the adoption of this tool:

- **Mobile apps:** Mobile access is crucial to building communities. It gives a lot of immediacy to users to post and hold conversations. For this reason, FundingBox has developed mobile apps available in the App Store and Google Play Store.
- **A community of makers, entrepreneurs, startups and tech SMEs:** FundingBox Community already has more than 40,000 registered members. Areas of interest of these members are related to robotics, artificial intelligence, smart mobility, startups acceleration, decentralized technologies, digital innovation hubs, among others. These areas are connected to manufacturing, which will be of value to targeting a relevant base of members for Zero-SWARM.
- **Community of communities:** Within the Zero-SWARM Community, we can give space and capacity to other players to build their communities and connect them.

Spaces are communities that offer information (trends, news, events, technology news, funding opportunities), inspiration (exclusive content curated by experts and interlocutors: live chats, Q&As), support (experts' advice, members can create synergies and build partnerships, helpdesk) and connections (by networking with people interested in related sectors/technologies) to entrepreneurs and innovators.

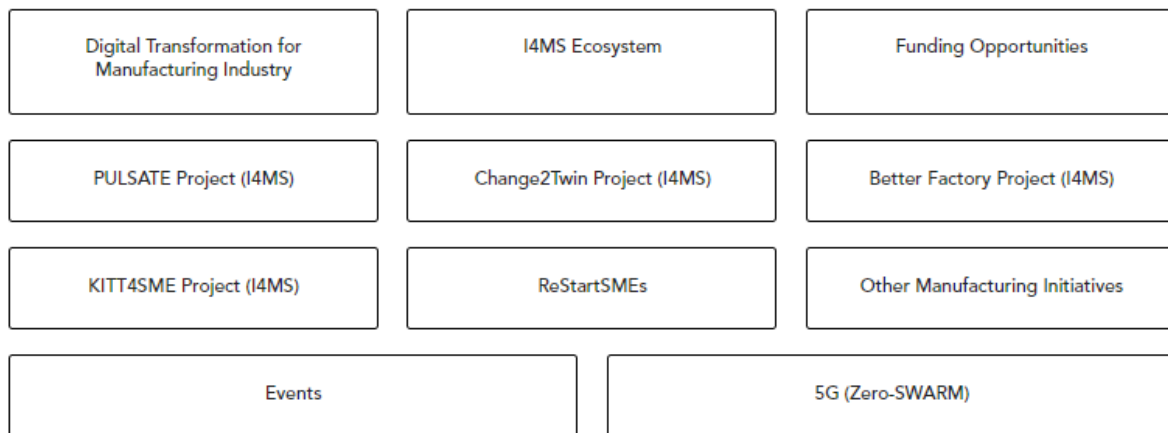
The Zero-SWARM project has created a community integrated into the I4MS Community to take advantage of the synergies and strength of collaboration among the online European community initiatives aiming to digitalize the manufacturing industry.

The fact that Zero-SWARM Community is included within the I4MS Community implies a significant advantage regarding member acquisition:

1. Some Communities will share the same collections, which means that Zero-SWARM events, news, and pilots will be displayed on the same collection pages as I4MS.
2. Zero-SWARM will have a dedicated space within the I4MS Community homepage. Members who sign up to be part of the I4MS Community can access the Zero-SWARM area.
3. Zero-SWARM content can be included in I4MS' newsletter reaching over 1,000 subscribers.



Browse by category



Community Spaces



Figure 2: I4MS Community

2.2 Community structure

As part of a three-legged communication ecosystem (Community, website and social media), the Community is the channel that offers the most significant possibility for user interaction and dynamic content publishing. In this regard, the Community is a dynamic platform that is created to be able to be adapted as the project progresses.

Zero-SWARM Community is divided into three different categories:

1. **Advisory Board:** a private space where a group of external experts will be invited to join and discuss the Zero-SWARM solutions. The Advisory Board is expected to represent the first iteration with potential customers; their feedback will be incorporated into the project design.

The Reference link for the Advisory board private Space is the following: <https://spaces.fundingbox.com/spaces/ZeroSWARM-advisory-board>

2. **News & events:** a space to find all the latest news and events about the Zero-SWARM project. It is the public virtual space of the project, whose purpose is to be fed with valuable, curated content (articles, news, announcements, helpful information in the form of social posts, etc.) related to the promotion of the project's milestones, advances, outcomes, as well as any other valuable content for Zero-SWARM stakeholders.

The reference link is the following: <https://spaces.fundingbox.com/spaces/ZeroSWARM-news-events>

3. **Zero-SWARM general chat:** an open space for Zero-SWARM stakeholders to interact and network.

The reference link is the following: <https://spaces.fundingbox.com/spaces/ZeroSWARM-general-chat>

Furthermore, the Community will hold two special features, collections and tags, as follows:

The **Collections** represent features that empower crowd knowledge creation and user interaction within a space. The different elements can be activated or hidden according to the needs of each community and may include:

- **Announcements, questions and events:** members of the community can post information, questions and events. It increases the interactions among community members, creates connections and enhances their relations.
- **Articles:** each community can publish articles related to their interests. It can be blog posts, articles related to the topic of interest, etc.
- **FAQs:** there is a section of FAQs about specific subtopics within the community where any community member can post questions.
- **Ideas:** members can post thoughts on different topics related to the community and get feedback from other members, including experts.

As regards the **Tags**, the content is the key added value of this community. Therefore, we will create tags on Spaces to help us arrange and make all the content easier to find. This leading hook will keep a member interested in logging in to the community again to make him return to become an active user.



5G (Zero-SWARM)

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

Advisory Board

Backstage of the project - Space for Consortium members and Communication Managers

News & Events

Discover our latest news and events!

Zero-SWARM General Chat

An open space for Zero-SWARM stakeholders to interact and network.

Collections

All

Insights

Posts

Helpdesk

Announcements

Events

Figure 3: Zero-SWARM Community

3. Exploitation strategy

One of the essential elements involved in the Zero-SWARM Community activity is the project's KERs. For this purpose, we present a strategic plan to exploit the project results. It consists of the following steps:

- **Defining KERs:** Table 1 already presents a non-exhaustive list of project results. During the project execution, it will be carefully monitored, extended and prioritized by the Innovation and Exploitation Manager (NXW), Technical Manager (HWE), Coordinator (CERTH) and Impact Maximization Manager (FBA).
- **Value proposition canvas, buyer persona and business model canvas:** through a series of workshops held with all consortium members (especially SMEs and start-up partners), the value propositions (product/market fit) towards customers will be further defined, together with the profiling of the potential customers and consecutively extending these learnings into a business model canvas (based on the Steve Blank's lean method) that is a more elaborated presentation of the business aspects of the Zero-SWARM Exploitation.
- **Market analysis:** In parallel to the activities above, a market analysis will be performed that goes into more depth regarding the market outlook: total available market, served general market and target market.
- **IP monitoring:** To ensure the success of the project, all project partners must agree on explicit rules concerning IP ownership, access rights to Background and previous results and protection of IPRs and confidential information before the project starts. This issue has been captured explicitly in the consortium agreement.
- **Eol call for early adopters:** we will launch Eol call and select six early adopters for the project results. The Eol allows us to test some of the most crucial questions and discover weak spots of the developed technologies by allowing access at a very early stage to external and unbiased early adopters. This feedback loop eliminates the need for unnecessary development of products with no real and validated customer need; therefore, the innovation process becomes more customer-driven and efficient, and the overall success rate of technology adoption increases consecutively.

We foresee three main exploitation categories of the project results:

- **Commercial exploitation:** The commercial deployment of Zero-SWARM results or the development of advanced services and products upon their availability in the mass market. It can be done by a project partner (discussed during the project among the industrial partners) or 3rd parties (early adapters).
- **Scientific exploitation** stems from the research carried out during the project's lifetime.

- **Technology exploitation:** this implies the re-utilization of the technological know-how acquired for developing innovative solutions and products and the provision of advanced services built on top of them.

The described methodological approach to exploitation helps significantly shorten project results' time to market and accelerate the innovation process, reducing the overall cost of bringing the effects to the market.

Table 2: Zero-SWARM project potential results

Ref.	Tangible Results	Start TRL	End TRL	Remarks
R1	Open framework for CPSoS	5	7	Soft results / knowledge. Architecture. Developed in WP2/Obj.2. Owner: Zero-SWARM
R2	Multi-vendor cloud-based management for 5G NPN, powered by AI/ML and advanced slicing techniques	5	7	Software (SW). Developed in WP3/Obj.3 & demoed in WP6. Owners: NEU, i2CAT
R3	5G+WiFi CPE with ATSSS support. Capability to aggregate 5G & WiFi	4	7	SW & HW. Developed in WP4-5/Obj.4-5 & demoed in WP6. Owners: i2CAT, NEU
R4	Open toolchain for modelling and deploying AAS	4	7	Software. Qualified 3-rd party open tools for editing AAS information models plus. Developed in WP4/Obj.4 & demoed in WP6. Owner: AIM
R5	New digital business models for industry and new industry focused Service Level Agreements (SLAs)	5	7	Soft results / knowledge. New viable business models to enable monetization of digital services in an interdisciplinary manufacturing ecosystem addressed in WP2 as well as WP7. Owner: Zero-SWARM
R6	Open source 5G network AAS and 5G UE AAS	5	7	Software. Extension and 1st open source realization of 5G AAS defined by 5GACIA. Developed in WP3 & demoed in WP6. Owner: Zero-SWARM
R7	Zero-SWARM Cloud-edge platform	5	7	Software. Cloud-edge platform to support CPSoS AIC. Developed in WP4/Obj.4 & demoed in WP6. Owner: Zero-SWARM
R8	Distributed Learning Framework (DLFi)	4	7	AI-as-a-Service platform to run on enterprise edge cloud for the realization of AIC in factory.

				Developed in WP4-5/Obj.4-5 & demoed in WP6. Owner: FhG.
R9	Fidelity enhancement techniques for remote visualization and control of mobile AGV	4	6	Software, AI based methods as techniques to enhance the fidelity of mobile AGV robot remote visualization. Owner: AALTO
R10	Distributed automation architecture enabling the AIC	4	6	Soft results / knowledge. Based on the use of IEC 61499, the intelligent mechatronic component architecture (IMC), enabled with 5G, mobility and autonomy, time-sensitive networks, block chain and Digital Twins. Owner: AALTO, ABB
R11	5G Edge Computing Device	5	7	Hardware with Zero-SWARM optimized operating system, edge computing device with major interfaces and SW-protocols. Owner: SICK
R12	Zero-SWARM enabled/enhanced micro services for industrial automation	4	7	Software for realization of 5G-enhanced automation functions. Extended LIDAR localisation with 5G-enabled map update, enhanced object detection. Owner: SICK
R13	Wireless PLC for distributed control on a factory floor	4	6	Use of IEC 61499 for distributed control on a factory floor. Measure KPI's for 20+ IEC 61499 enabled wireless PLC's used in the distributed control application. Developed in WP3/Obj.3 & demoed in WP6. Owner: LTU, AALTO
R14	Zero-SWARM enabled Industrial Food Packaging Line	4	7	Hardware & Software based on IEC 61499 for Stand-Alone TraySealer Packaging integrated with Tray Denesting and Loading Unit, Automatic Product Handling 3D Vision Systems, AGV for Food-Product reloading. Advanced AR Solutions for Remote Maintenance over ReeNEXT Platform. Owner: REPK
R15	Unified cloud-edge data collection, exchange and exposure platform for efficient storage & elaboration of	4	7	Software. Developed in WP4/Obj.4 & demoed in WP6. Owners: NXW

	heterogeneous data on the shop floors			
R16	Zero-touch management for 5G NPN automated operation and slicing	4	7	Software. Developed in WP3/Obj.3 & demoed in WP6. Owners: NXW
R17	Penetration and Hypothesis Testing Modules	5	7	Software/ knowledge. Developed in WP5/Obj.5 & demoed in WP6. Owner: CETH
R18	Anomaly Detection and Countermeasure Selection modules	5	7	Software. Developed in WP5/Obj.5 & demoed in WP6. Owner: CETH
R19	Data infrastructure for trustable data exchange	5	7	Software. Developed in WP4/Obj.4 & demoed in WP6. Owner: UBI
R20	Architecture for Federated Data Infrastructure	5	7	Soft results / knowledge architectural design. Developed in WP2/Obj.2. Owner: UBI
R21	AIC enabling awareness in Industrial CPSoS	5	7	Soft results / knowledge. Enabled with 5G communication, mobility and autonomy, time-sensitive networks, block chain and Digital Twins. Owner: AALTO
R22	Digital twin enabled smart manufacturing of cabinet build AC drives	4	6	Software for automatic generation of digital twins based on EPLAN and Creo engineering data. Developed in WP4/Obj.4 & demoed in WP6. Owner: ABB
R23	5GNPN on plant level: Design Points like NSA/SA, RAN-Sharing, Network slicing to improve connectivity to edge-cloud and data services	4	6	Software. Developed in WP3/Obj.3 & demoed in WP6. Owners: SMS
R24	Open and programmable SDN controllers for reliable and scalable local IIoT.	4	7	Software. Developed in WP3/Obj.3 & demoed in WP6. Owners: UMH, INNO
R25	Data-based and AI-driven zero-touch 5G mgmt. for proactively adapting 5G NPN configuration and operation for I4.0	4	7	Software. Developed in WP3/Obj.3 & demoed in WP6. Owners: UMH, NEU, i2CAT

The table 1 already presents a non-exhaustive list of project results. Based on the actions of the Task 7.3, a set of workshops will be organized involving the project's partners in order to prioritise the KERs and define the Zero-SWARM exploitation strategy. The results of these workshops will help to define the engagement strategy and produce relevant content. The outcomes of these actions will be

disseminated in order to interact and receive feedback from potential Zero-SWARM solutions' adopters.

Four main actions with the project's partners are foreseen to define the exploitation strategy jointly:

- 1º Immersive workshop to revise, prioritize and clarify the interrelation of the KERs.
- 2º Definition of the value proposition of the KERs workshop.
- 3º Buyer persona and mapping the customer behavior workshop.
- 4º Business model canvas workshop.

4. Conclusions

The Zero-SWARM Community is strategically positioned under the broader I4MS ecosystem. It will act as a central information point for stakeholders, developing a more cohesive community with more members interacting and periodically fed with relevant and valuable content.

The Zero-SWARM Community will contribute to building an active ecosystem around 5G solutions for the manufacturing sector that is expected to last beyond the project's duration. The Community engagement strategy will be constantly updated and reviewed to achieve the main objective of this task, which is to receive relevant market feedback from contributing to the development of the Zero-SWARM solutions.