

# **D9.1– COMMUNICATION AND DISSEMINATION STRATEGY**

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# **Document History**

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0.96	2017-03-28	Dario Bonino (ISMB)	Integrated ROBOTNIK dissemination plan
0.97	2017-03-29	Omar Morando (DGSKY)	Added list of dissemination actions for DGSKY
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# **Internal Review History**

<b>Review Date</b>	Reviewer	Summary of Comments
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2017-04-03	Bálint József Jánvári (SLAB)	Approved: • Minor issues to fix



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#### **1** Executive summary

This deliverable, namely "D9.1 Communication and Dissemination Strategy", introduces the strategy adopted by CPSwarm to timely communicate and disseminate the project achievements. The overall goal of the dissemination actions described in this deliverable is maximizing the impact of project outcomes, identifying the appropriate messages to convey depending on the targeted audience.

CPSwarm approaches dissemination and communication by defining a core set of information relative to the dissemination targets. Such an information includes hints on **who** are the recipient of a given dissemination action, **what** is the object/tool/knowledge being described, **when** it is likely that the action will be more effective and **how** an action shall be deployed. The overall intent is to optimize the diffusion of useful innovations generated by the project, to support fast transfer of knowledge between the project partners and their network of contacts and, more in general, to successfully convey research results to potential users in the CPS community (e.g., favoring commercial exploitation).

The remainder of the document describes the CPSwarm dissemination and communication plan for the whole project duration exploiting the above defined "who, what, when and how" pillars. In particular, an initial analysis of possible targets for dissemination is presented, together with preferred means of dissemination adopted by the corresponding community. Then, an overview of tools and communication means exploitable by the project is presented with the aim of drafting initial associations between tools, language of communication and dissemination targets. A dissemination calendar is defined and measurable indicators are provided to enable accurate tracking and improvement of project activities in this domain. Finally, for each partner, an individual dissemination plan is provided highlighting on one side the consortium commitment on dissemination and, on the other side, contributing a more effective tailoring of conveyed information based on partner experiences. The overall communication and dissemination strategy is a live entity that will be iteratively refined and updated depending on reached achievements and evidences emerging during the project execution.



#### 2 Introduction

According to the European Commission Decision C (EC, 2016), the activity to disseminate results from research and innovation projects is an important and integral part and strategic matter of Horizon 2020. Such activities are coordinated and monitored by the European Commission with the desire to derive benefit and achieve sizeable economic, social and environmental impacts on society in general. All participants of the CPSwarm project are strongly committed to make the best use of received funding and they are committed to create a multiplying effect, raising awareness of the technologies and possibilities that CPSwarm will open in the CPS domain. In such a context, the consortium has defined a dedicated dissemination and communication strategy and plan, described in this report.

D9.1 – "Communication and Dissemination Strategy" is a public document defining the overall communication and dissemination strategy guiding the CPSwarm consortium during the project lifespan. The document provides a reference guide to coordinate the dissemination initiatives of the project partners towards a unique vision of knowledge transfer and outcome exploitation. It belongs to a series of deliverables documenting activities carried in WP9, which include specific reports on exploitation plans (D9.5 and D9.6), on contribution to interoperability initiatives (D9.4) and on website and advertising materials (D9.2 and D9.3).

ISMB, as project leader, initially drafted the document, which has subsequently been enriched by all partners' contributions. The strategy depicted in the document aims at maximizing the project impact on the CPS design community and on the wider audience of CPS-based engineering. This, in particular, involves a constant engagement with relevant communities and stakeholders, as mandated by the general strategy of the European Commission, and the specific aspects of the ICT-01-2016 call in which the project is framed.

#### 2.1 Scope

This deliverable provides the reference guidelines and the initial schedule of dissemination actions to be undertaken by project consortium members. While identifying the general strategy and defining the core set of guidelines to be followed when disseminating project results, the document must be considered as a living entity continuously edited, tuned and maintained during the whole project duration. To reflect this "living" nature, an on-line version of this document was published on the project wiki, supporting continuous updates and or integrations. The wiki-based copy will be exploited during the project lifetime, to collect dissemination actions carried by partners and corresponding results, thus providing a valuable tool for constantly monitoring key performance indicators associated to dissemination and communication activities.

Referring to the Description of Action (DoA), no further updates of the deliverable are foreseen, however due to the iterative methodology adopted by the project, any major update or amendment will be documented in deliverable D9.3 – "Final Project Website and Advertising Material" and/or in the annual project report.

#### 2.2 Document organization

The remainder of this deliverable is organized as follows: Section 3 describes in detail the CPSwarm dissemination strategy, framing the project contribution within the "who, what, how and when" pillars. A calendar of foreseen dissemination actions and a corresponding set of key performance indicators is then introduced and discussed. Such indicators will allow the consortium to better track the project effectiveness in spreading information from research to domain stakeholders. Section 0 describes the envisioned communication and dissemination actions carried by every project partner. Eventually Section 0 draws conclusions and provides a first feedback on dissemination and communication actions already deployed at the time of writing.



## 2.3 Related documents

ID	Title	Reference	Version	Date
[D9.2]	Initial Project Website and Advertising Materials	D9.2	1.0	31/03/2017
[D1.2]	Online risk log and mitigation actions	D1.2	1.0	31/03/2017
[D1.1]	Project Quality Control and Risk Management Plan	D1.1	1.0	31/01/2017



#### 3 Dissemination and Communication Strategy

According to the project Description of Action (DoA),

CPSwarm aims at maximizing its impact with the following concrete actions:

- a) A general public project website and several advertising materials (leaflets) will be prepared;
- b) Social media, press articles and video productions will be used to communicate results;
- c) The scientific community will be addressed by a number of targeted top conferences and journals with high impact factor;
- d) Exploitation and involvement in standardization bodies will address industry, SMEs and applied research institutions.

The central role of an effective communication and dissemination strategy has been recognized clearly from the very beginning of the proposal. Dissemination, in particular, is one of the main pillars of the CPSwarm project and deserves particular attention due to its fundamental role of conveying research-generated information to relevant stakeholders in the CPS domain. A fundamental enabler to achieve high-performance dissemination is the structure of the CPSwarm consortium, composed by 9 partners from 6 EU countries (Italy, Germany, Austria, Hungary, France and Spain), where each partner is committed to engage stakeholders at different levels, multiplying the dissemination effects in his country/region.

While an initial strategy was already defined in the project DoA, this report must be considered as the primary reference for all dissemination activities carried throughout the project execution. The document is organized along the "who, what, how and when" axes, where recipients of dissemination efforts are identified first, together with the project outcomes that might be of interest to them. For each identified recipient, or community of recipients" preferred languages and means of dissemination are also analyzed, trying to gain a good coverage of the involved persons thanks to a well-matched set of tools and jargon. Finally, a set of dissemination actions is proposed. The latter, is subject to constant updates and amendments and will gain most from the on-line availability of this document.

#### 3.1 Target groups (who and what)

This dissemination plan identifies a set of relevant target groups covering a good initial range of potential users of CPSwarm outcomes, in both industrial and ICT research communities. Such a set encompasses:

- 1) Component and subsystem suppliers,
- 2) System integrators, suppliers and users of CPS,
- 3) Research communities,
- 4) Embedded system design clusters,
- 5) Industrial research communities,
- 6) Certification bodies,
- 7) Policy makers,
- 8) Standardization bodies,
- 9) Public audience.

Table 1 identifies stakeholders belonging to the above groups (who axis), providing for each of them a short description and a list of CPSwarm outcomes (what axis) that might be of interest for their relative community.



#### Table 1. Target groups for dissemination.

Type <sup>1</sup>	Target Group Name (WHO)	Description	CPSwarm Outcomes (WHAT)
ACA	CPS Research Community	Researchers active in the field of Cyber Physical Systems	<ul> <li>Models of a restricted subset of CPS systems;</li> <li>Models for several sub-modules of a CPS system;</li> <li>Models for effective interaction between users and CPS;</li> <li>Support for Swarm behaviors;</li> <li>Integrated Development Environment for CPS and of swarms of CPS.</li> </ul>
ACA	loT Research Community	Researchers active in the field of the Internet of Things and Distributed Sensing	<ul> <li>IDE for designing and simulating swarms of IoT; devices and /or sensing platforms;</li> <li>Lessons learned on data transfer and collection between swarm individuals and between the swarm and IoT platforms;</li> <li>Distributed sensing and actuation use cases.</li> </ul>
ACA	Swarm Robotics Research Community	Researchers active in the domain of swarm robotics and swarm algorithms	<ul> <li>Lessons learned;</li> <li>Support to evolutionary optimization of swarm behaviors;</li> <li>Abstract modelling of swarm algorithms;</li> <li>Possibility to integrate existing CPSwarm libraries with new approaches;</li> <li>Support to benchmarking and comparison between different techniques / algorithms;</li> <li>Availability of real use cases and corresponding data.</li> </ul>
ACA/IND	Embedded system design clusters	Clusters and associations of professionals and researchers in the domain of the embedded system design	<ul> <li>Use cases;</li> <li>IDE/Workbench for CPS design and for CPS population design;</li> <li>Simulation support;</li> <li>Semi-automatic deployment and monitoring;</li> </ul>
ACA/IND	Industrial Research Communities	Community of researchers in the industrial informatics and electronics domain as well as in other domains related to the CPSwarm use cases.	<ul> <li>Use cases;</li> <li>Possible extension / integration of available CPSwarm libraries;</li> <li>Benchmarking of solutions against "baselines" and "references" part of the CPSwarm Model library;</li> <li>Lessons Learned;</li> </ul>
GEN	General public – students / hobbyists	Students and hobbyists starting to address the Science, Technology, Engineering and	<ul> <li>Complete high-level design environment for single CPS and for swarms of CPS;</li> <li>Visual simulation toolkit able to render (also in 3D) the results of the programmed behaviors;</li> <li>Support to deployment on educational platforms,</li> </ul>

<sup>1</sup> Target Group type (IND = Industrial, ACA = Academic, GEN = General, POL = Policy Makers) Deliverable nr. D9.1

		Math (STEM) domain with special focus on robotics	e.g., the Turtlebot <sup>2</sup> or the Create $2^3$ .	
IND	Component and Subsystem providers	Communities of providers / suppliers of CPS sub-systems. Communities of providers of SW/HW components for CPS.	<ul> <li>Availability of an open-source toolchain that can be integrated into the current business offer;</li> <li>Support to models / subsystems can be added to the CPSwarm Model Library, thus opening new marketing possibilities and/or reaching a wider user base.</li> </ul>	
IND	System Integrators	Consultancy companies and SMEs integrating different CPS and non-CPS to achieve a pre-defined goal	<ul> <li>Complete high-level design environment for single CPS and for swarms of CPS;</li> <li>Visual simulation toolkit able to render (also in 3D) the results of programmed behaviors;</li> <li>Support to deployment over multiple / heterogeneous CPS;</li> <li>Lessons learned;</li> <li>Use cases.</li> </ul>	
IND	Users of CPS systems	Companies and entities adopting CPS to carry out their typical day-to-day business activities	<ul> <li>Use cases;</li> <li>Lessons Learned;</li> <li>Availability of a monitoring platform fully integrated with state-of-the-art middleware and/or IoT platforms;</li> <li>Capability to modify / re-assign goals without reprogramming the swarm individuals;</li> <li>Adaptation of programmed systems to changing environment conditions, with limited human intervention.</li> </ul>	
IND	Suppliers of CPS systems	Companies and entities offering complete CPS systems as part of their core business	<ul> <li>Availability of an open-source toolchain that can be integrated into the current business offer;</li> <li>Availability of a monitoring platform fully integrated with state-of-the-art middleware and/or loT platforms. Such a platform can be integrated into the current business offer;</li> <li>Compatibility with and/or integration in the CPSwarm modelling library will open new market possibilities, possibly reaching a wider audience;</li> <li>Use cases;</li> <li>Lessons Learned.</li> </ul>	
IND	Standardization Bodies	Any related standardization group e.g., the OMG task forces related to UML and the IEEE committees, e.g., related to industrial	<ul> <li>Lessons Learned;</li> <li>Use cases and Architecture;</li> <li>Pre-designed interfaces between tools;</li> <li>Intermediate representations;</li> <li>Model libraries.</li> </ul>	

<sup>2</sup> http://www.turtlebot.com/

<sup>3</sup> http://www.irobot.com/About-iRobot/STEM/Create-2.aspx

Deliverable nr. D9.1

	<u>CPSwarm</u>					
		Ethernet.				
POL	EU and National Authorities	Policy makers in the area of (autonomous) CPS systems, including authorities involved in setting- up the normative for self-driving vehicles and drones	<ul> <li>Long-term impact of project outcomes in terms of sustainability and creation of innovative businesses.</li> </ul>			

#### 3.2 Communication means (how)

Each of these groups deserves a dedicated dissemination infrastructure and communication strategy to better attain interaction with, and integration of, CPSwarm technologies in day-to-day operations. To this purpose, the strategy described in this report also attempts at associating a dedicated set of communication means, and dissemination actions, to the above-identified groups. Table 2 reports the corresponding information.

Table 2. Communication means and languages for disseminating project results towards specific	c user groups.
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Type⁴	Target Group Name (WHO)	Description	Preferred Communication Means	Kind of language
ACA	CPS, loT, Swarm Research Community	Researchers active in the field of Cyber Physical Systems	<ul> <li>Scientific Conferences</li> <li>Scientific Journals</li> <li>Open-source code repositories</li> <li>Wiki</li> </ul>	<ul> <li>Formal, sound and scientifically grounded</li> <li>Strong reference and framing within the current state of the art</li> <li>Detailed and clear documentation</li> <li>Datasets and testbeds</li> </ul>
ACA/IND	Embedded system design clusters	Clusters and associations of professionals and researchers in the domain of the embedded system design	<ul> <li>Magazines</li> <li>Webzines and technical Blogs</li> <li>Symposia and workshop</li> <li>Video presentations / tutorials</li> </ul>	<ul> <li>Broader but technically sound language</li> <li>Oral communication is valuable</li> <li>Visual communication</li> <li>Mild reference to state of the art</li> <li>Strong positioning with respect to existing solutions</li> </ul>
ACA/IND	Industrial Research Communities	Community of researchers in the industrial informatics and electronics domain as well as in other domains related to	<ul> <li>Industrial Conferences</li> <li>Industrial Journals</li> <li>Open-source code repositories</li> <li>Wiki</li> <li>Web site</li> </ul>	<ul> <li>Formal, sound and scientifically grounded</li> <li>Strong reference and framing within the current state of the art</li> <li>Detailed and clear documentation</li> </ul>

<sup>&</sup>lt;sup>4</sup> Target Group type (IND = Industrial, ACA = Academic, GEN = General, POL = Policy Makers) Deliverable nr. D9.1

		the CPSwarm use cases.		<ul> <li>Datasets and testbeds</li> <li>Use cases shall be clearly referred and described</li> </ul>	
GEN	General public – students / hobbyists	Students and hobbyists starting to address the Science, Technology, Engineering and Math (STEM) domain with special focus on robotics	<ul> <li>Web site</li> <li>Wiki</li> <li>Tutorials</li> <li>Video tutorials</li> <li>Video presentation</li> <li>Open source code repositories</li> </ul>	<ul> <li>Technically sound but easy to understand</li> <li>Avoid jargon or buzzwords and deliver focused, but simple messages</li> <li>Examples and use cases are crucial</li> <li>Engagement shall be targeted, also including DIY tutorials / invitations to self- explore functions / characteristics</li> </ul>	
IND	Component and Subsystem providers	Communities of providers / suppliers of CPS sub-systems. Communities of providers of SW/HW components for CPS.	<ul> <li>Magazines</li> <li>Webzines and technical Blogs</li> <li>Advertisement materials / leaflets</li> <li>Web site</li> <li>Video presentation</li> <li>Open source code repositories</li> <li>Tutorials</li> </ul>	<ul> <li>Mix of commercial / advertising language and technically sound descriptions</li> <li>Major focus on advantages and relevant features of the CPSwarm tool chain and solutions</li> <li>Support to more technical questions / information needs through dedicated materials</li> </ul>	
IND	System Integrators	Consultancy companies and SMEs integrating different CPS and non-CPS to achieve a pre-defined goal	<ul> <li>Magazines</li> <li>Webzines and technical Blogs</li> <li>Advertisement materials / leaflets</li> <li>Web site</li> <li>Video presentation</li> <li>Open source code repositories</li> <li>Tutorials</li> <li>Wiki</li> </ul>	<ul> <li>Mix of commercial / advertising language and technically sound descriptions</li> <li>Major focus on advantages and relevant features of the CPSwarm tool chain and solutions</li> <li>Support to more technical questions / information needs through dedicated materials</li> <li>Examples and use cases are crucial</li> </ul>	
IND	Users of CPS systems	Companies and entities adopting CPS to carry out their typical day-to- day business activities	<ul> <li>Magazines</li> <li>Webzines and technical Blogs</li> <li>Advertisement materials / leaflets</li> <li>Web site</li> <li>Video presentation</li> </ul>	<ul> <li>Mix of commercial / advertising language and technically sound descriptions</li> <li>Major focus on advantages and relevant features of the CPSwarm tool chain and solutions</li> </ul>	

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IND	Suppliers of CPS systems	Companies and entities offering complete CPS systems as part of their core business	<ul> <li>Magazines</li> <li>Webzines and technical Blogs</li> <li>Advertisement materials / leaflets</li> <li>Web site</li> <li>Video presentation</li> <li>Open source code repositories</li> <li>Tutorials</li> </ul>	<ul> <li>Mix of commercial / advertising language and technically sound descriptions</li> <li>Major focus on advantages and relevant features of the CPSwarm tool chain and solutions</li> <li>Support to more technical questions / information needs through dedicated materials</li> </ul>
IND	Standardization Bodies	Any related standardization group e.g., the OMG task forces related to UML and the IEEE committees, e.g., related to industrial Ethernet.	<ul> <li>Deliverables</li> <li>Scientific and Industrial Papers</li> <li>Interfaces and relative documentation (technical reports)</li> </ul>	<ul> <li>Formal, sound and scientifically grounded</li> <li>Strong reference and framing within the current state of the art</li> <li>Detailed and clear documentation</li> <li>Datasets and testbeds</li> <li>Use cases shall be clearly referred and described</li> </ul>
POL	EU and National Authorities	Policy makers in the area of (autonomous) CPS systems, including authorities involved in setting-up the normative for self- driving vehicles and drones	<ul> <li>Face-to-face interaction</li> <li>Workshop and/or symposia</li> <li>Web site</li> </ul>	<ul> <li>Higher-level description of "relevant" issues and features</li> <li>Careful framing in the current normative landscape</li> <li>Careful identification of "uncovered" need and relative stakeholders / communities</li> <li>Solution suggestions shall be clear and easy to understand for non-technical people</li> </ul>

All consortium partners contribute to better define and complement the above guidelines with insights and experiences gained in their day-to-day activities. Be they research institutes, SMEs or large enterprises, the consortium individuals have, in fact, strong connections with their own peers in specific domains and shall exploit these relations to increase the effectiveness of delivered messages. Such a tuning activity shall last for the whole project duration and will be supported by the on-line version of this document, together with tools for constantly tracking dissemination initiatives, success rates and corresponding feedbacks received.

Dissemination carried by project partners will be complemented by a strict collaboration with a so-called "External Stakeholder Group" (ESG). The ESG will be constructed properly representing all domains relevant for the CPSwarm initiative. ESG experts will be recruited by a public "call for participation" on the project website, to be published by M9, and will be selected and officially appointed by the Project Board. To collect ESG recommendations and advises, a minimum of two on-line webinars and two physical meetings will be organized throughout the duration of the project. The first meetings will focus on requirements engineering, while latter meetings will be exploited to collect feedback about proposed concepts and generated results.



#### 3.3 Dissemination and communication calendar (when)

Once identified the dissemination targets and the appropriate communication means for gaining access to the relative stakeholders and communities, it is crucial to plan the right point in time in which a certain group shall be approached. Additionally, suitable follow-up and engagement techniques shall be devised to capitalize the initial contacts and set-up a solid communication channel between the project and its reference communities.

To this purpose, the CPSwarm consortium has defined a preliminary calendar of dissemination actions that will be carried during the upcoming 3 years of funding. These actions are largely dependent on the state of advancement of the project activities and on the achieved results, and/or encountered issues (this dependence is also duly accounted on the project risk log, D1.2). As such, the calendar defined in this report must be considered tentative and its actual implementation might sensibly vary depending on the course of project activities.

The dissemination calendar presented in the following (see Table 3) is a snapshot of a corresponding on-line calendar available on the project wiki, which is constantly updated by all project partners, in a collaborative way. Such a calendar is accompanied by a parallel calendar of "general" communication initiatives (see

Table 4) planned by the project to approach and engage target user groups, also including communities not currently envisioned in this report. Finally, the consortium agreed on complementing both calendars with up-to-date information on programmed events, conferences and symposia, which might be relevant with respect to the identified target groups. For this last purpose, a dedicated page has been created on the project wiki.

Time	Activity	Target Groups	Coverage	Description
by M6	Spread of project objectives awareness	Consortium     partners	European	Fixing and tuning of project ideas raised at proposal level. Set-up of the on-line dissemination and communication plan
Periodical (M12, M18, M30)	ESG meeting	<ul> <li>Consortium partners + Extended Stakeholders Group</li> </ul>	European	To spread CPSwarm vision and results in the ESG group, also involving them in a co-design and early validation of the CPSwarm building blocks.
From M6 on	Mobilization with partners' associations and networking with other Associations	<ul> <li>Embedded system design clusters</li> <li>Component and Subsystem providers</li> <li>System Integrators</li> <li>Users of CPS systems</li> <li>Suppliers of CPS systems</li> </ul>	European National	Professional associations provide direct dissemination channels into the markets. Partners will directly mobilize their contacts at associations. Additional EU and national/local associations will be contacted. At least 20 associations engaged. As an example, the SIG DesignCPS working group was already listed in the possible candidates for the ESG group
From M6 on	Dissemination material	<ul> <li>Embedded system design clusters</li> <li>Component and Subsystem</li> </ul>	Local	Tools and contents to present the project and its results (flyers, presentations, fact sheets). Electronic tools will be preferred to printed

#### Table 3. Calendar of dissemination activities.

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		providers • System Integrators • Users of CPS systems • Suppliers of CPS systems • Industrial Research Communities		materials. The latter will be kept to a minimum (500 brochures printed and distributed at events).
Periodical (M6, M12, M18, M24, M30, M36)	eNewsletters	<ul> <li>General public</li> <li>Students / hobbyists</li> <li>EU and National Authorities</li> </ul>	European National	eNewsletters provide regular updates to the CPSwarm community, particularly on progress. Distribution via email to registered users, the website, the partners' networks to a community of min. 200 people.
Periodical M24, M36	Workshops and seminars (or webinars) for presentation of prototypes / Business cases / Demonstrators	<ul> <li>Embedded system design clusters</li> <li>Users of CPS systems</li> <li>System Integrators</li> <li>Component and Subsystem providers</li> </ul>	Local	The workshops will target a selected audience of stakeholders, including the ESG, highly interested in taking up the solutions developed by CPSwarm. Expected attendees per workshop: min. 20, per webinar: min 10.
Before demonstrati on activities	Training for professionals	<ul> <li>General public</li> <li>Students/hobbyists</li> <li>Embedded system design clusters</li> <li>System Integrators</li> </ul>	European	Training material and an educational kit will be produced and distributed. Attendees at training sessions: at least 20 each session.
After M12, when concrete results are available	Participation in external Events	<ul> <li>General public</li> <li>Industrial Research Communities</li> <li>CPS Research Community</li> <li>CPS Research Community</li> <li>Swarm Robotics Research Community</li> </ul>	European National	Partners' participation in conferences and fairs to represent the project and network with key players and adopters. At least 5 major events to be attended.
After M12, when concrete results are available	Publications in technical literature and journals	<ul> <li>Industrial Research Communities</li> <li>CPS Research Community</li> <li>CPS Research Community</li> <li>Swarm Robotics Research Community</li> </ul>	Local	3 publications in conference proceedings and 3 article publications/papers targeting open access sustainable journal publications.
In the last period of the project	Organization of a CPSwarm workshop	<ul> <li>Students/hobbyists</li> <li>Industrial Research</li> <li>Communities</li> </ul>	European National	The event will target a larger audience made possible by stakeholders, including the ESG. Expected attendees

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		<ul> <li>CPS Research</li> <li>Community</li> <li>CPS Research</li> <li>Community</li> <li>Swarm Robotics</li> <li>Research Community</li> </ul>		per workshop: min. 50.
Throughout the project	Clustering activities	•Embedded system design clusters •CPS cluster	Local	CPSwarm will link to other EU projects/initiatives for joint activities. Target: 2 joint events.

#### Table 4. Planned communication activities.

Period	Activity	Target Group Types	Coverage	Objective and target
From M3 on	Social Media	IND, ACA, GEN	Global European	CPSwarm presence on LinkedIn Groups and Twitter.
From M6 on	CPSwarm Website launch and periodic update	IND, ACA, GEN	Global European	Major D&C channel, reinforced by pointers in social media and cross-linking with the partners' webpages (with an established visibility towards thousands of users).
From M12 on	Journalistic Articles, press releases and interviews	IND, ACA, GEN	Global European Local	Journalistic articles/interviews, press and news releases, to be distributed to major information multipliers, syndicated online press, and shared through social media.
M36	Short action video	IND, ACA, GEN	Global European Local	Short project video to be published on the website and used in workshops, events and training sessions.
From M3 on	CPSwarm partners' Networks	IND, ACA, GEN	Global European Local	Partners' existing communication channels and networks (such as newsletters, legacy websites and social media accounts) to disseminate CPSwarm results.

#### 3.4 Key Performance Indicators

Although some of the activities identified in this dissemination and communication strategy document have not yet been completely defined and scheduled, setting-up an objective evaluation framework for dissemination and communication results is crucial for the project success in this domain. According to the state of the art in several related domains, the consortium partners agreed to measure and evaluate dissemination and communication achievements by defining a set of Key Performance Indicators (KPIs), which are constantly monitored throughout the project lifespan and compared to target figures set-up in this document. More specifically, identified KPIs and target figures are listed in Table 5.

КРІ	Target Values
Number of industrial publications	7
Number of journal/conference papers and presentations	10
Number of relevant events attended	16
Number of contributions to pre-normative work	5
Number surveys/interviews with end-user communities	5
Number of project outcomes available as Open Source	7
Number of IPR claims for the project outcomes	2

# Table 5. Communication and Dissemination KPIs.

A corresponding page (see Figure 1) on the on-line wiki has been prepared which allows collecting dissemination and communication actions carried by the partners, thus providing a valuable tool for quickly evaluating the current outcomes in terms of the above-defined KPIs.

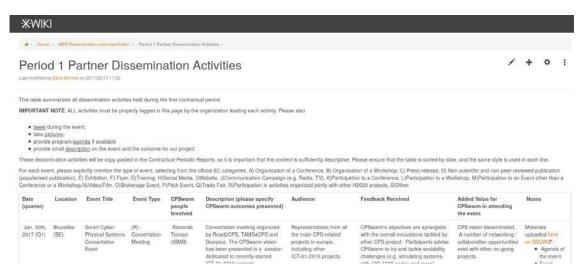


Figure 1. The Wiki page collecting dissemination and communication activities carried by the CPSwarm partners.



#### 4 Dissemination and Communication Tools

CPSwarm plans to exploit several communication means to actually implement the dissemination and communication strategy depicted in Section 3. They are briefly summarized in the following subsections.

#### 4.1 Printed Marketing Material

At the beginning of the project, CPSwarm will generate a project Fact Sheet, a general presentation flyer and a project poster (Figure 2), that will be updated yearly to keep up with the advances of the project and better present achieved results. All printed material will be also available online on the project website<sup>5</sup> (see Figure 3 for a snapshot). Since electronic tools will be preferred over printed materials, the latter will be kept a minimum (e.g., around 500 brochures printed and distributed at events).

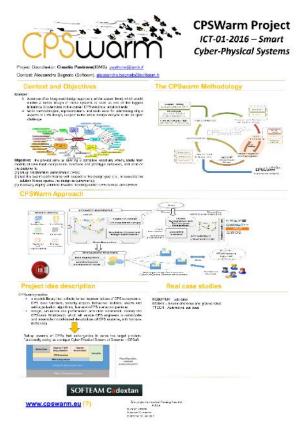


Figure 2. Initial draft of the CPSwarm project poster presented at the HiPEAC2017 conference.

 <sup>5</sup> Better described in deliverable D9.2 - Initial Project Web Site and Advertising Materials

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 D9.1

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Figure 3. The CPSwarm web site<sup>6</sup>.

#### 4.2 Online Activities

Web-based media will be used to the furthest extent possible. A project website has already been published at the beginning of the project, which will host all the project's videos, public deliverables, online demonstrators and general material for download. A strong representation on relevant social media will be constantly sought. As an example, at the time of writing, CPSwarm has an active Twitter account (@CPSwarm\_EU) with around 28 Tweets, 35 followers and 28 likes.

<sup>6</sup> http://www.cpswarm.euDeliverable nr.D9.1Deliverable TitleCommunication and Dissemination StrategyVersion1.0 - 30/03/2017



Figure 4. The CPSwarm Twitter account<sup>7</sup>.

To boost the dialogue and sharing of knowledge and best practice with stakeholders, several webinars will be conducted and duly advertised through the project web site, the social networks of the project, etc.

#### 4.3 Newsletters

Four electronic newsletters will be prepared from partner input, and distributed to relevant audiences by the individual partners as well as on the project's website. The newsletter will describe results and planned activities.

#### 4.4 Press Releases

Press releases will be issued ad-hoc in relevant languages to inform selected media about project news.

#### 4.5 Publication on Scientific Journals

Scientific results emerging from the project will be published in leading industrial and technical journals. The scientific results will be disseminated to the industrial and academic communities through peer-reviewed publications. An initial inventory of relevant journals has been compiled and it encompasses:

- ACM Transactions on Cyber-Physical Systems (TCPS)
- ACM Transactions on Autonomous and Adaptive Systems (TAAS)
- IEEE Transactions on Evolutionary Computation (TEC)
- SPRINGER Complex Adaptive Systems Modeling (CAS)

Further publications may be added by partners by editing the corresponding page (Figure 5) on the project wiki.

<sup>7</sup> https://twitter.com/cpswarm\_eu

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n Initial Inventory of relevant journals has been compiled and is reported in the table below. Please update	/ amend it with entries you deem as relevant for the project.		Help on the XWM Syntax
Journal Title	Deadline for submission		
ACM Transactions on Cyber-Physical Systems (TCPS)	5		
ACM Transactions on Autonomous and Adaptive Systems (TAAS)	20		
IEEE Transactions on Evolutionary Computation (TEC)			
Springer Complex Adaptive Systems Modeling (CAS)			
	0		

Figure 5. The Target Scientific Journals page on the project wiki.

#### 4.6 Participation to Scientific Conferences and Symposia

The results of the research work carried in CPSwarm will also be submitted for publication to international, peer-reviewed conferences. They include, for example:

- IEEE International Conference on Cyber-Physical Systems (ICCPS)
- IEEE conference on Self-adaptive and Self-organizing Systems (SASO)
- ACM Genetic and Evolutionary Computing Conference (GECCO)
- IEEE Real-Time and Embedded Technology and Application Symposium (RTAS)
- IEEE Vehicular Technology Conference (VTC)
- Workshop on Micro Aerial Vehicle Networks, Systems, and Applications for Civilian Use (DroNet)
- ACM/IEEE Intern. Conf. on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM)
- IEEE/RSJ Intern. Conf. on Intelligent Robots and Systems (IROS)
- IEEE INFOCOM Workshop on Machine-to-Machine Communication Network.
- International Workshop on Wireless Networking and Control for Unmanned Autonomous Vehicles (Wi-UAV)
- International Conference on Model Driven Engineering Languages and Systems (MODELS)
- European Conference on Modelling Foundations and Applications (ECMFA)
- International Conference on Software Engineering (ICSE), Workshop on Modelling in Software Engineering

Additional conferences might be considered by the consortium depending on the project outcomes and innovations. A dedicated page on the project wiki (Figure 6) hosts the up-to-date list of target conferences.

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Conference	Deadline 2017	Comments   Altachments	
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EEE conference on Self-adaptive and Self-organizing Systems (SASO)	May 1, 2017		
ACM Genetic and Evolutionary Computing Conference (GECCO)	Expired - Late Abstract April 3, 2017		
IEEE Real-Time and Embedded Technology and Application Symposium (RTAS)	Expired - October 13, 2016	WP9 Dissemination and exploitation Target Scientific Journals Agenda	
IEEE Vehicular Technology Conference (VTC)	Expired - February 28, 2017		
Workshop on Micro Aerial Vehicle Networks, Systems, and Applications for Civilian Use (DroNet)	April 02, 2017	My Recent Modifications	
ACM/IEEE Intern. Conf. on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM)	May 20. 2017	Target Scientific Conferences	
EEE/RSJ Intern. Conf. on Intelligent Robots and Systems (IROS)	Expired - March 1, 2017	Profile of Dario Bonino	
EEE INFOCOM Workshop on Machine-to-Machine Communication Network.	July 29, 2016	WP9 Dissemination and exploitation Target Scientific Journals	
international Workshop on Wireless Networking and Control for Unmanned Autonomous Vehicles (WI-UAV)	April 1, 2017	cpowatro-wp9@tsmb.fl	
International Conterence on Model Driven Engineering Languages and Systems (MODELS)	April 14, 2017		
European Conference on Modelling Foundations and Applications (ECMFA)	Expired - March 5, 2017		
International Conference on Software Engineering (ICSE)	Expired - October 26, 2016		
ACM Computing Frontiers	Expired - February 5, 2017		
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Figure 6. The Target Scientific Conferences page on the project wiki.

#### 4.7 Workshops and Seminars

CPSwarm will organise a European Workshop on next generation CPS systems. There will be a special focus on disseminating the project results to development fora and exchanging knowledge and experience with other ICT projects identified as being synergistic with CPSwarm. The members of the consortium will also organize public sessions to present CPSwarm results at renowned conferences and events such as HIPEAC, IoT Week and CPSWeek.

#### 4.8 **Public Demonstrations**

Experience and best practice will be disseminated in the form of demonstrations to the development community and academic practitioners through membership networks, in accordance with the applications demonstrated in WP8. The aim of the demonstrations is to engage with the European CPS community as well as ICT world at large operating in this area.

#### 4.9 Clustering and Symbiosis

Initiatives such as ECSEL Joint Undertaking, Artemis-IA, EPoSS and Factory of the Future research organization (EFFRA) are of major interest for the CPSwarm project, which is why partners of the CPSwarm consortium involved in these activities will ensure constant alignment and interaction with these communities. Clustering outside the CPS world will be pursued by individual partners representing the project.

#### 4.10 Contribution to standardization activities

As a measure to maximize impacts of results, the project will contribute to interoperability and standardization activities, e.g., to repositories of models, interface specifications or reference architectures/platforms/patterns. The objective of the standardization work in CPSwarm is to liaise with the appropriate standardization bodies and initiatives and ensure that the project is building upon available and emerging standards and industry specifications to ensure interoperability and enable quick market take-up. CPSwarm will seek influence, where possible, and contribute, where feasible, to their extension. In particular, the following actions will be taken.

As a member of the OMG ADTF (Analysis & Design Task Force), a member of UML RTF (Revision Task Force) and UML FTF (Finalization Task Force), SOFTEAM continues to influence the UML standard and related



technologies. In particular, SOFTEAM directed the introduction of the following technological advances: (a) UML profiles, based on its R&D work and its precursor tools; (b) flow diagrams (information flow) and protocol state machines within UML 2.0; (c) definition of the SPEM (Software Process Engineering Metamodel) standard. Among others, SOFTEAM participated in elaboration of U2TP (UML2 Test Profile), MARTE (Modeling and Analysis of Real Time and Embedded Systems) and SysML, the System Modelling Language Specification. Additionally it was also involved in SoaML, the SOA modelling language specification, and IFML for interface model driven development. SOFTEAM will promote the CPSwarm environment and its approaches within those standardization platforms and OMG technical meetings.

TTTECH is an active member in IEEE standardization, in particular the 802.1 Ethernet committee. Hence, TTTECH will include relevant outcomes of CPSwarm, especially dynamic scheduling and deterministic networking over open networks (real-time IoT), in the panel meetings. Furthermore, TTTECH will ensure that the developments in CPSwarm are, as far as relevant, in line with current standardization activities such as IEEE 802.1 AVB (Audio/Video Bridging) and TSN (Time-Sensitive Networks).



#### 5 Individual Dissemination Actions / Tools

Each partner has prepared in detail a plan on the effort they will allocate to the dissemination of the project vision and results. The distribution has been agreed among all as well as the objective to achieve optimal use of resources and maximise the effect on all stakeholders.

#### 5.1 ISMB

As the business strategy of ISMB is mostly focused on applied R&D and transfer of innovations to market, its dissemination strategy mostly targets industrial users at local, national and EU-wide level. Secondarily, ISMB can leverage its strong connections with the local social "tissue" of the Piedmont region for selected dissemination actions targeting the public.

The main drive of ISMB for dissemination, beyond its general interest in being perceived as a proactive and successful project coordinator for innovative, high-impact initiatives, is the attraction of new business opportunities, specifically industrially funded collaborations and new publicly funded projects. Therefore, ISMB will use the following channels and tools to disseminate the project results and contribute to high visibility and impact.

#### 5.1.1 ISMB website

ISMB will promote the project through its company website<sup>8</sup>, initially by a project description (Figure 7) and by news updates during the project lifecycle (e.g., as in Figure 8).



Figure 7. The ISMB website describing the CPSwarm project.

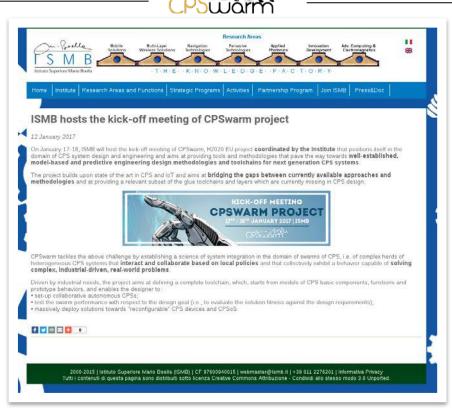


Figure 8. The ISMB website advertising the CPSwarm project kick-off.

#### 5.1.2 Trade fairs and conferences

ISMB plans to disseminate results at relevant trade fairs and conferences such as M2M week, IoT week, etc. ISMB will contribute to the distribution of brochures and/or flyers among various events, e.g. trade fairs.

#### 5.1.3 Scientific publications

Scientific publications at relevant conferences and in journals are envisaged to strengthen the role as leading research group with focus on IoT and Pervasive Technologies in the domain of CPS and swarms of CPS. Furthermore, ISMB will support open access to project results, also through open-source release of project outcomes.

#### 5.1.4 Press releases and other publications

ISMB maintains a distribution list including representatives of all the main local and national newspapers, TVs and internet news sites. The list will be used to disseminate project results in form of official press releases. Publication of news in ISMB list is often the first step to be contacted by media (e.g. local and national News, TV shows focused on dissemination of research).

#### 5.1.5 EU-wide initiatives on IoT

ISMB is strongly active in EU-wide initiatives in the area of IoT (Internet of Things), such as AIOTI – Alliance for Internet of Things Innovation (http://www.aioti.org/). ISMB plans to disseminate key results from CPSwarm to related working groups and members.

#### 5.1.6 Training activities

ISMB will include CPSwarm outcomes as part of its offer of training and higher education events. In case any of ISMB's education customers will be interested in CPS offer, such events will be structured to maximize the dissemination benefits for the project.



### 5.1.7 Social media

The following social media channels will be used to disseminate the project:

- https://twitter.com/lsmbOnweb
- https://twitter.com/cpswarm\_eu
- http://www.ismb.it/
- https://www.facebook.com/ISMBofficial/?fref=ts
- https://vimeo.com/ismbonweb

#### 5.2 FRAUNHOFER

FRAUNHOFER clearly focuses on applied research throughout its academic and industrial cooperation, thus transferring findings to relevant applications as well as to other domains. Therefore, FRAUNHOFER's dissemination strategy includes scientific publications on the one hand, but also participation in networking and representative events. For the latter, participates, presents, demonstrates current findings and discusses current issues on trade fairs, local, national and international information events for research and industry. Due to its large network and long experience of international research projects, collaborations between academic institutions and partners from industry allow quickly establishing contact and discussion on challenges that are faced on both sides.

FRAUNHOFER makes use of the following methods for providing information about ongoing research and development.

#### 5.2.1 FRAUNHOFER FIT website

FRAUNHOFER promotes its competence fields and working groups via its website<sup>9</sup>. Grouped by topics, all projects are listed and each one is presented in detail on a separate page describing the overall topic, Fraunhofer's activities, contact and partner details as well as a link to the project's website.

#### 5.2.2 Trade fairs and conferences

FRAUNHOFER will strongly collaborate with ISMB for disseminating the project on Cebit Hannover, M2M and IoT Week, etc. The Embedded World in Nuremberg is another interesting alternative. During these events, FRAUNHOFER will show demonstrators and provide brochures or flyers depending on the event's format.

#### 5.2.3 Scientific publications

FRAUNHOFER FIT regularly submits its ongoing research activities to suited conferences and journal to strengthen the scientific impact of the project and support young research fellows working in the projects. In this way, dissemination can be possible through additional activities with respect to master thesis and dissertations. Via the Fraunhofer Publica portal, publications can be searched and tracked with a central system<sup>10</sup>.

#### 5.2.4 Press releases and annual report

FRAUNHOFER reports regularly about project activities in the press and on its website such that important events, like participation in events, reviews as well and achievements are directly promoted. In addition, project outcomes are reported in the FRAUNHOFER FIT Annual Report.

#### 5.2.5 Innovation Days Forum

In collaboration with ISMB, FRAUNHOFER plans to organize annual research networking events with strong connections to current research topics. An example is given by the "Fraunhofer Energy Efficiency Days", held in November 2013, an event with more than 90 participants from European research institutions and industry<sup>11</sup>.

<sup>&</sup>lt;sup>9</sup> http://fit.fraunhofer.de

<sup>&</sup>lt;sup>10</sup> http://publica.fraunhofer.de

<sup>&</sup>lt;sup>11</sup> The agenda and event format is described at: http://www.fit.fraunhofer.de/en/events/ee-days.html Deliverable nr. D9.1



For 2017, the next event is scheduled for 22 and 23 May named "Fraunhofer IoT Innovation Days". Slots and discussion rounds for CPSwarm – related topics are reserved.

#### 5.2.6 Social media

The following social media channels will be used to disseminate the project:

- http://www.fit.fraunhfoer.de
- https://de-de.facebook.com/fraunhofer.fit
- https://twitter.com/fraunhofer\_fit

#### 5.2.7 Information Leaflets

Besides the Leaflet and Flyer that is especially created from within the CPSwarm project, FRAUNHOFER creates custom flyers in its own CI, which is similar to the project description on the FRAUNHOFER website. Project partners and contact details of assigned FRAUNHOFER employees are listed as well. The leaflets are provided during fairs and events, electronic forms of the leaflets are directly sent to interested contacts and are available for download.

#### 5.2.8 Establishing contact to CPS Cluster

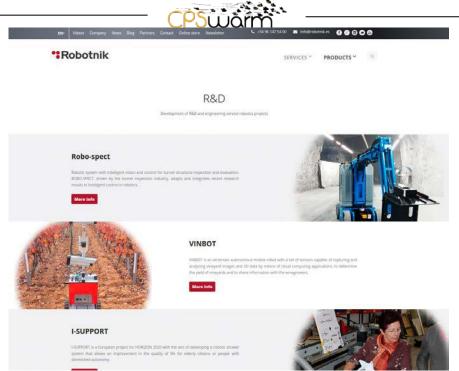
From the beginning of the project, CPSwarm made a connection to the CSA Platforms4CPS such that a network of projects and researchers from the same field could be established. Platforms4CPS also helps to disseminate findings via their information channels and newsletters. This way, events like the Innovation Days can quickly be promoted to a large network.

#### 5.3 ROBOTNIK

ROBOTNIK as a European service-robotics company is very interested in the exploitation and dissemination of the CPSwarm outcomes, since they will be used to improve and enhance the capabilities of its applications in service mobile robotics, directly applying them into a new market niche as the logistic robotics. The new capabilities offered by the CPSwarm project will improve the global market visibility of ROBOTNIK and provide to the company a great industrial relevance on the field of swarming robotics.

#### 5.3.1 ROBOTNIK website

ROBOTNIK has an active website, which is updated on a daily basis. We have a dedicated site for all the R&D activities of the company, and all CPSwarm events and information will be uploaded on a dedicated webpage:



Robotnik R&D activities dedicated webpage

#### 5.3.2 Trade fairs and conferences

ROBOTNIK will strongly disseminate the CPSwarm project at the trade fairs and conferences that the company usually assist, both as visitor and as exhibitor. We can highlight the next main events IEEE-IROS (Intelligent Robots and Systems), IEEE-ICRA (Int. Conf. On Robotics and Automation), Automatica, European Robotics Week, Innorobo, European Robotics Forum and ROSCon.

#### 5.3.3 Social media

The following social media channels will be used to disseminate the project:

- http://www.robotnik.eu/
- https://twitter.com/robotnikrobots
- www.facebook.com/Robotnik.Automation/
- https://www.youtube.com/user/RobotnikRobots

#### 5.4 TTTECH

TTTECH actively participates in numerous trade shows, conferences and exhibitions per year. In such events, the company will present the opportunities, results and potential use of the CPSWARM achievements. It will also promote the CPSWARM project and its results on its corporate website<sup>12</sup>, its social media channels, e.g., LinkedIn<sup>13</sup>, and will release press releases and TTT newsletters related to CPSWARM.

TTTECH is committed to ensure the appropriate dissemination of project research results in relevant scientific conferences and workshops and thus involves the dedicated TTTech Labs department in this task. TTTECH participates in different activities within the ECSEL Joint Undertaking (http://www.ecsel-ju.eu/) and plans to strongly promote CPSwarm results in this community.

#### 5.5 UNI-KLU

#### 5.5.1 **Project website and research blogs**

UNI-KLU will promote the project via blog posts on

• the CPSwam project website<sup>14</sup>

<sup>14</sup> http://www.cpswarm.eu

<sup>&</sup>lt;sup>12</sup> https://www.tttech.com/company/research-projects/

<sup>&</sup>lt;sup>13</sup> https://www.linkedin.com/company/tttech-computertechnik-ag

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- in the research blog on Self-Organizing Systems<sup>15</sup>
- on the Institute's website<sup>16</sup>
- on the research news of the Alpen-Adria-University Klagenfurt<sup>17</sup>

#### 5.5.2 Social media

Project results will be disseminated via project Twitter (@CPSwarm\_EU) and the personal researcher twitter accounts (@elmenreich). Summaries of blog posts and short news will be further posted on Facebook and LinkedIn.

#### 5.5.3 Local print media

UNI-KLU will aim at disseminating the project via interviews with local print media in order to address the general public in Austria.

#### 5.5.4 Folder for events, conferences, and fairs

UNI-KLU will elaborate a folder brochure with the main points of CPSwarm to be distributed at conferences, fairs and events such as the Research Days Workshop, which is organized from LAKE and takes place from July 10<sup>th</sup> to July 12<sup>th</sup> 2017.

#### 5.5.5 Scientific publications

The scientific results of the project will be disseminated via scientific publications and talks at workshops and conferences in order to address the scientific community. Furthermore, journal publications with a substantial impact factor will be addressed by UNI-KLU.

#### 5.6 LAKE

#### 5.6.1 **Project website and research blogs**

LAKE will promote the project through, its company website<sup>18</sup>, the personal website of Christian Bettstetter<sup>19</sup> and the personal website of Melanie Schranz<sup>20</sup>.

#### 5.6.2 Social media

Project results will be disseminated via project Twitter (@CPSwarm\_EU) and the Lakeside Labs' twitter accounts<sup>21</sup>. Summaries of blog posts and short news will be further posted on Facebook and LinkedIn.

#### 5.6.1 Local print media

LAKE will aim at disseminating the project via interviews and news articles with local print media in order to address the general public in Austria.

#### 5.6.2 Workshop

The Lakeside Labs will organize a three-day workshop called Research Days from July 10<sup>th</sup> to July 12<sup>th</sup> 2017. This year's topic is on "Self-Organization and Swarm Intelligence in Cyber Physical Systems".

<sup>&</sup>lt;sup>15</sup> http://demesos.blogspot.com

<sup>&</sup>lt;sup>16</sup> http://nes.aau.at

<sup>17</sup> http://www.aau.at

<sup>&</sup>lt;sup>18</sup> https://www.lakeside-labs.com/

<sup>&</sup>lt;sup>19</sup> https://bettstetter.com/lakeside-labs-2016/

<sup>&</sup>lt;sup>20</sup> http://melanieschranz.com/lorem/

<sup>&</sup>lt;sup>21</sup> https://twitter.com/lakeside\_labs?lang=de

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# Figure 9. The "Self Organization and Swarm Intelligence in Cyber Physical System" workshop being organized by LAKE.

The event will feature several prestigious keynote speakers and demonstrations from the area of swarm robotics. The goal is to inform the scientific community about our work in the CPSwarm project, to engage in discussions, and to create new ideas regarding topics related to self-organizing systems. Further, the event greatly supports scientific exchange, networking, establishment of international collaborations, and joint research projects. Further information can be found on the web page: https://researchdays.lakeside-labs.com/.

#### 5.6.1 Scientific publications

The scientific results of the project will be disseminated via scientific publications and talks at conferences and journals in order to address the scientific community of cyber physical systems, swarm intelligence and self-organization.

#### 5.7 SLAB

#### 5.7.1 Website

SLAB will include the logo and the short description of the project on its website, on a page dedicated to research projects:

• http://www.search-lab.hu/about-us/r-d-project-involvement

#### 5.7.2 Partners

SLAB has several partners in the IoT business, and as such, the results of the project will be disseminated at corporate events and as part of the consulting services that SLAB provides.



#### 5.8 DGSKY

DigiSky aims to strengthen its role in the exploitation and dissemination of the CPSwarm outcomes in order to increase the project visibility and relevance. Actually, DigiSky plans to provide all its marketing support to the project since it believes that an appropriate communication strategy will help DigiSky to attract interest in its products and services will enhance its reputation at local, national and international levels in the field of swarming robotics. For this purpose, DigiSky has identified and selected all the specific communication tools that it believes are appropriate, effective, targetable, economical and measurable.

#### 5.8.1 Website

DigiSky has just released a brand new version of its website, which is one of the main sources of information about the project available to most stakeholders. DigiSky website is divided in several sections, one of which is related to past and ongoing R&D projects. In this section specifically, DigiSky is in the process of developing a new landing page exclusively dedicated to CPSwarm project. DigiSky website can be accessed at the following address: www.digisky.it. The CPSwarm page in DigiSky website will continuously be updated with all the upcoming information related to the research outcomes, partners, events and press releases in order to be informative and to ensure wide communication with all the diverse categories of external audience.

#### 5.8.2 Social

Online social media is another potentially useful dissemination tool and channel. DigiSky believes this is a good way to reach stakeholders and public in general. We will focus our efforts on what we believe are the most popular and useful social networks and, specifically, we will disseminate content about CPSwarm on LinkedIn, Twitter and Facebook.

DigiSky already owns a company page on LinkedIn and Facebook, which are both continuously updated and managed. It is our goal to increase communications on these social network with information related to the CPSwarm Project and outcomes. Twitter is a particularly useful way at engaging participants at events and in increasing the impact and visibility of such events. DigiSky participation to related events will have their own twitter hashtags.

#### 5.8.3 Media Communication and Press Release

As part of its dissemination strategy, DigiSky will prepare a project narrative and issue media communications and press releases. These aim to elicit participation and generate interest in CPSwarm and related events, draw attention to published reports or drive interested parties to sources such as the project website and make them a useful tool in support of other engagement and dissemination strategies.

DigiSky will prepare press releases in both English and Italian for distribution to the media and other stakeholders on completion of specific project milestones.

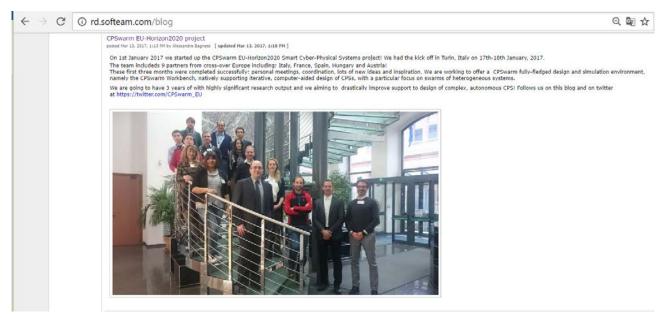
#### 5.8.4 Presentation at External events and conference

Conferences are a mean of developing national and international connections with stakeholder and opinion leaders, and engaging in a direct, face-to-face communications with interested parts. Therefore, DigiSky will evaluate its participation to conference in the related field in order to enhance CPSwarm visibility and awareness.



## 5.9 SOFTEAM

SOFTEAM will promote the project through its company SOFTEAM R&D Blog<sup>22</sup> and through the Modelio web sites<sup>23</sup>, initially by providing a project description (Figure 9) and subsequently by publishing news and updates during the project lifecycle.



#### Figure 10 Softeam R&D Web Site Blog

#### 5.9.1 Trade fairs and conferences

SOFTEAM presented CPSwarm at the 12th HiPEAC conference that took place in Stockholm, Sweden from Monday, January 23 to Wednesday, January 25, 2017. The CPSwarm poster was presented to the large poster session and industrial exhibition during a three-day event<sup>24</sup> that attracted about 600 delegates.

SOFTEAM plans to attend also HiPEAC 2018 to present the CPSwarm advances and the Trade fair for embedded technologies, Embedded World (https://www.embedded-world.de/en)

SOFTEAM will also attend OMG Technical meetings held in Europe to promote CPSwarm standard advances and to create awareness of CPSwarm. The OMG hosts four Technical Meetings approximately every ten to twelve weeks per year in various locations around the world. Typically, three are located in the US and one is held at an international venue. At these meetings, technical experts from member companies and organizations meet to discuss OMG technologies and work on new specifications<sup>25</sup>. OMG Technical Meetings attract up to 500 technology representatives and industry leaders from member organizations. The next OMG meeting will be held in Brussels from June 5<sup>th</sup> till June 9th 2017.

#### 5.9.2 EU-wide initiatives on CPS

SOFTEAM and the CPSwarm team participated in the CPS Cluster Kick-off on 15 February 2017 and will follow the cluster activities to disseminate CPSwarm achievements and events. CPS Cluster is being animated by the CSA Platforms4CPS (<u>https://www.platforms4cps.eu/</u>)

#### 5.9.3 Social media

The following social media channels will be used to disseminate the project:

<sup>&</sup>lt;sup>22</sup> http://rd.softeam.com/

<sup>&</sup>lt;sup>23</sup> http://www.modelio.org

<sup>&</sup>lt;sup>24</sup> <u>https://www.hipeac.net/2017/stockholm/</u>

<sup>&</sup>lt;sup>25</sup> http://www.omg.org/news/meetings/tc/brussels-17/info.htm Deliverable nr. D9.1

Deliverable Title **Communication and Dissemination Strategy** Version 1.0 - 30/03/2017



- https://twitter.com/modelio\_org
- https://twitter.com/modeliosoft
- <u>https://twitter.com/SofteamGroup</u>
- Modelio Linkedin: https://www.linkedin.com/company/modelio
- ModelioSoft LinkedIn: <u>https://www.linkedin.com/company/modeliosoft</u>
- Modelio.org open source community: http://www.modelio.org

#### 5.9.4 Scientific publications

Scientific publications at relevant conferences and in journals are envisaged to strengthen the role of SOFTEAM as provider of leading modelling solutions. SOFTEAM and ISMB lead the first joint paper publication preparation at Computing Frontiers 2017 conference, Collaborative Project Special Session (Figure 10). The invited paper is titled "Designing Swarms of Cyber-Physical Systems: the H2020 CPSwarm Project".

#### ACM International Conference on Computing Frontiers 2017



# Figure 11 The ACM International Conference on Computing Frontiers at which the first CPSwarm paper was submitted.

#### 5.9.5 Training activities

SOFTEAM will include CPSwarm outcomes as part of its offer of training.



#### 6 Conclusions

At the time of writing, some of the initiatives described in previous sections have already been started and they lead to deployment of some concrete dissemination actions that. In particular, the CPSwarm consortium:

- Participated to the concertation meeting organized by Road2CPS, TAMS4CPS and Scorpius. In such a meeting, the CPSwarm vision was presented in a session dedicated to recently-started ICT-01-2016 projects;
- 2. Participated to the CPS Cluster Kick-off meeting held by the European Commission in Brussels;
- 3. Submitted an invited paper ate the 2017 ACM Computing Frontiers conference;
- 4. Published the project web site and created a project Twitter account;
- 5. Published 28 Tweets regarding project activities.

These achievements provide an initial confirmation of the actual commitment of the whole project consortium to effectively spread the project vision and outcomes. While in the very first months of the project such an amount of achievements may be considered sufficient, CPSwarm strives to achieve excellence in dissemination and communication activities. Under such a standpoint, the presented report and particularly its on-line version, is a valuable tool to boost the project ability to disseminate, aiding project partners to focus on the right message to deliver to selected target groups, at the right time.



# Acronyms

Acronym	Explanation
DoA	Description of Action
KPI	Key Performance Indicators

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