RobMoSys

H2020—ICT—732410

RobMoSys

COMPOSABLE MODELS AND SOFTWARE FOR ROBOTICS SYSTEMS

DELIVERABLE D6.7: DISSEMINATION PLAN AND REPORT

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THIS PROJECT HAS RECEIVED FUNDING FROM THE *EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME* UNDER GRANT AGREEMENT NO. 732410

Project acronym: RobMoSys

Project full title: Composable Models and Software for Robotics Systems

Work Package: WP 6

Document number: D6.7

Document title: Dissemination Plan and Report

Version: 1.0

Due date: June 30th, 2019

Delivery date: 30.06.2019

Nature: Report (R)

Dissemination level: Public (PU)

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1 Executive Summary

Whereas in typical research projects, dissemination is focussing at communicating results generated during the runtime of the project, dissemination for RobMoSys aims at securing adoption of the developed concepts in the industrial and software community. To reach this, different levels of communication and interaction are being addressed: awareness, understanding, commitment and action (active participation). In the beginning of the project, dissemination activities were strongly targeted at the systems engineering community which is already familiar with the basic concepts to encourage their active participation in the project, e.g. via the open calls. Moreover, measures to generate a general awareness of the project itself and its concepts. During the runtime of the project, the focus will more and more shift towards a deeper understanding, touting for commitment as well as active participation. Especially for the target group of industrial users, the latter steps require the provision of functional tools and software components that are being developed in the course of the project.

The purpose of this document is to serve both as a progress report and a communication plan structuring and listing all communication and dissemination activities for all work packages throughout the runtime of the project.

Chapter three is outlining the overall communication strategy, describing the different target groups and stakeholders that need to be addressed to achieve successful adoption of the models and tools developed.

Chapter four focuses on the different communication channels that need to be used to reach out to the target groups at the different levels of involvement. This includes regular press releases and newsletters, all planned events (conferences, workshops, etc.), social media and online promotion as well as training activities. A first set of communication channels, like press releases, website, wiki, social media channels (twitter, YouTube, LinkedIn) as well as open community workshops and brokerage days have been established throughout the first year of the project. Additional channels for remote interaction both with the selected Integrated Technical Projects and the interested community in general will be established in the second year. Summer schools, online tutorials, webinars etc. will follow in due course.

Chapter five finally lists all dissemination activities planned in 2019 as well as the already completed activities of the past year. The dissemination plan will be continuously updated throughout the four years of the project, at the beginning of each year, to complete the list of past activities and further plan upcoming activities according to the progress in the project and upcoming milestones.

2 Introduction

Work package 6 "Dissemination and Community Building" has the objective to create visibility, understanding of and commitment to the RobMoSys project in industry, research institutions, higher education and in the general public.

During the runtime of the project, two Open Calls – the second one having two cut-off dates - will be announced in relevant media, the project website, through mailing lists and social media channels to attract the interest of potential applicants for the Open Calls. Community involvement is taken very seriously in the RobMoSys project; therefore, the stakeholders will be addressed via workshops and conferences as well as online webinars and an open source platform hosted by the Eclipse Foundation. The website shall serve as a central access point to the project.

3 Dissemination Strategy

Throughout the entire project, the dissemination strategy will be focusing on creating commitment and attracting potential future supporters of the project and its results at four levels of communication: awareness, understanding, commitment and action (participation).

Figure 1: The four communication levels employed in RobMoSys

Awareness mainly involves delivering the main message of the RobMoSys project in relation to its aim and objectives, while **understanding** requires the providing of detailed information on the project purposes, methods and deliverables. Involvement in both stages will provide the basis for **action**, where the project's products will be delivered for further use.

Since acceptability is at the heart of dissemination activities of RobMoSys, the communication activities of RobMoSys need to be heavily centred around **engagement level 3 (Commitment)**. The most important instrument in this context are the Tier-1 workshops which allow for an intensive dialogue with the full wealth of target groups, moderated by the experts of the Tier 1 group, and the multiplication of their impact by turning participants into followers and ambassadors of the model-driven approach in software architecture.

To get awareness, understanding and commitment from **industry players**, different levels of hierarchy need to be addressed, depending on the position in the value chain (from component manufacturer to end user), the application domain and the company size. Apart from working level

experts, it is essential to get commitment on decision making level. This can be either C-level managers, especially from small sized system integrators, where a technical understanding can be expected on this level, or medium management in larger enterprises and end-user companies.

We will need early involvement of experts in order to define and prepare the open calls. Then we need to reach out to a broader community to get a good selection of qualified applications for the open calls. During project runtime, we must ensure increasing commitment of all parts of the value chain and across the different application domains to get a broad uptake in the industry also beyond project runtime.

Apart from a broad face-to-face spread-out in conferences and trade shows, the outreach will also be guaranteed to collaboration with a range of other EU projects (e.g. COVR, ROSin, HORSE, ESMERA), networks (e.g. RoboTTnet), national associations (like VDMA, HispaRob), regional clusters (FlandersMake, Bayern Innovativ), and expert groups, which can link the project to companies that are not well represented at other events. , or where it would be unfeasible to guarantee sufficient outreach with a reasonable effort, because the markets are too fragmented (smaller end user markets like cleaning). Ambassadors like Innovation Hubs, business incubators, start-up networks and projects involving a set of SMEs through open calls (e.g. Blue Ocean Robotics, RoboTTnet, the I4MS Centres of Competence, ECHORD++ RIFs) are ideal dissemination partners for RobMoSys.

Some application domains have quite a good link to the robotics community, some only to a minor extend, because they do not refer to being a robotics technology. Companies in agriculture, for example, rather call their products as "smart systems" or "intelligent machines" instead of using the term "robot". Approaching them will also require to interact with them at their market focused trade shows rather than at a technology-oriented trade show like automatica.

The final goal is to prepare the sustainability of the RobMoSys framework beyond the runtime of the project. Existing foundations in the area of Cyber Physical Systems can be considered as potential cooperation partners to guarantee the sustainability of the RobMoSys framework beyond the project's runtime grounding an eco-system for software architecture. One of the major open source foundations (ECLIPSE) and one industrial association (EUnited, closely linked with VDMA) are part of the core consortium.

As RobMoSys claims to initiate nothing less than a paradigm shift in software architecture – from ad-hoc robotics system development towards fully model-driven methods and tools – the communication activities need to focus on the tight collaboration with, high involvement and acceptance of the approach by key representatives of the target groups relevant for RobMoSys. Therefore, communication instruments – particularly at the beginning of the project – will be heavily focused on face-to-face communication and an intensive dialogue with the relevant community to shape the software architecture in a joint and consolidated effort. Workshops with representatives of relevant stakeholders (Tier-1 group) are the prime medium of communication particularly during the initial phases of the project. Involved in the project from the very beginning, the project plans to gain them as ambassadors of the RobMoSys framework throughout their industrial domains and communities.

The market penetration of the common conceptual framework for software development developed under the umbrella of RobMoSys will heavily depend on the acceptance of a variety of different stakeholders with different information needs, different communication cultures and the preference of different media to gain information:

3.1 Target Groups

3.1.1 Outreach to Software developers

RobMoSys needs to generate the acceptance of software developers of different application domains (automotive, aerospace, etc.) within and outside of industrial companies: Within the consortium, this target group is represented by the ECLIPSE foundation. ECLIPSE is highly familiar with the information requirements of this target group and is able to identify and produce the online media to which this target group is very responsive, in particular:

- Users of existing digital platforms, i.e. communities with specialised customer groups interested in a specific technology or domain (e.g. the DDS middleware community.
- Users of robotics middleware, robot simulators and representatives of educations robotics (high-profile representatives are members of the Tier-1 group), the ROS community
- Developer Communities, like the global Eclipse open source community that involves thousands of developers worldwide, where software developers can discover and adopt RobMoSys tools and methods both for robotics activities and for the development of cyber-physical systems.

3.1.2 Outreach to industrial players

EUnited will pave the way for RobMoSys to reach decision-makers in industry, raise their awareness and encourage their participation. The following groups need to be addressed depending on the size of the company (large industry, mid-caps, SMEs):

- Representatives of highly influential industrial domains like automotive, aerospace, cleaning (again: powerful representatives are part of the Tier-1 groups) – they can be key enablers for the uptake of the platforms for digitalization of robotic systems
- The target groups addressed by the Open Calls (mainly also SMEs): tool makers, system integrators, modelers, component suppliers
- Representatives of the entire value chain.
- EUnited is closely linked with the VDMA in Germany which is a powerful industrial platform with more than 3000 member companies from almost 40 different sectors of the mechanical engineering industry. The robotics and automation sector of VDMA has over 300 members.

It is important to note that industry's commitment to adopting new models or tools is highly dependent on their proven benefits. Therefore, encouraging industry decision-makers to take action requires presenting them with a functional model.

3.1.3 Outreach to academia and research

It will be decisive that the RobMoSys' outcomes are considered and perceived as community effort based on broadest possible involvement of expertise from academia and research. Based on this, it will also be decisive that very early renowned institutions in academia and research deploy the RobMoSys outcomes in their environments. KUL, TUM and HSU with their tight networks and strong links into different Topic Groups including exploitation of the Tier-1 group will put strong

effort into making all institutions offering RobMoSys in teaching and research visible as a strong and growing "places-to-be":

- Colleagues in robotics (teaching as well as research) that advise their researchers and PhD students to base their work on RobMoSys outcomes;
- Wider outreach by approaching colleagues in all related domains, such as software engineering etc., to form a growing number of multipliers and to attract the best brains to grow the RobMoSys ecosystem (including lab courses, summer / winter schools);
- Including the methodology developed in RobMoSys in the curricula will enable industry to hire well trained, easing the uptake of RobMoSys outcome in their research and development activities.

3.2 Cooperation with the H2020 ROSin project

The European Commission decided to double the funding for innovation actions on "system development tools" in the call "H2020 ICT-26: System abilities, development and pilot installations". With the resulting high expectation towards the success of these two closely related projects, the EC voiced the need for closer collaboration between these projects. In a first joint RobMoSys-ROSin project meeting (initiated by the EC in February 2017), the slogan "EU Digital Industrial Platform for Robotics" was developed as a joint header for both projects. The slogan is used to market this approach. The concept is being pursued during the runtime of the project.

Our first joint action was a press release announcing "RobMoSys & ROSin: towards an EU Digital Industrial Platform for Robotics" on March 20th. We have invited the ROSin project to participate in our ERF workshops 2017, 2018 and 2019 outlining the compatibility of the two projects, we have also invited ROSin to introduce the project at our Brokerage Day in Munich and Demo Day in Barcelona.

In exchange, the ROSin project invited RobMoSys to speak at the ROS Industrial Conference in Stuttgart 2017 and 2018. Dennis Stampfer from HSU held the talk, encouraging ROS users to apply for the RobMoSys open call.

On February 21, 2018, a joint workshop was held at the European Commission premises in Luxembourg with participation of the new H2020 project Eurobench. The EU-funded projects shared and exchanged best practises, developped joint concepts and shared thoughts about possible future collaboration and mutual benefits.

4 Communication Channels

Different communication channels need to be addressed in order to reach out to all target groups. Some of them have been important from the first day of the project, others are getting more important over time. Social media and online promotion are an ongoing process and need to be updated continuously, while scientific publications and participation in different kinds of events require having a more detailed input which had to first be developed.

4.1 Social Media and online promotion

Social Media accounts have been set up to foster a more familiar and real-time communication. The icons are visible on the website, for the audience to be aware of the availability for "conversation" of the project.

To reach all stakeholders we are using social media and online promotion on an ongoing basis. Each

social media channel needs to be treated diffrently. The same content can be spread on diffrent channels but needs to be prepared with more or less effort. LinkedIn for example tends to have a more business-focused audience looking for in-depth, educational and technical content, compared to Twitter which is very fast-paced and only allows very superficial messages up to 280 characters. The Twitter account is ideal to announce events and updates, changes on short-notice (e.g. extension of deadline), linking to the website or discourse forum, or to retweet interesting news.

The number of followers of the RobMoSys **twitter** account (#robmosys) has rapidly grown to 482 followers in the past months.

The number of members of the **LinkedIn group** has now reached 80 members. Ten videos have been uploaded to the RobMoSys **You Tube** Channel, which also links to other RobMoSys related videos, such as the 5-minute presentation of Sara Tucci within the EC H2020 workshop at ERF, an interview with Christian Schlegel by euRobotics during ERF, an interview with Ansgar Rademacher at EclipseCon, two videos produced by the RoQME ITP and a video by EU Science and Innovation explaining the EU Research and Innovation programme – Horizon 2020.

Online tutorials and webinars are planned to build up the "RobMoSys Academy" in due course.

As the content of the **website** *robmosys.eu* has increased over time, a new structure was created to offer a more user-centric approach. The starting page now offers four different entry points:

- *What is in it for me?* – management/ industry view
- *Hands-on!* - Software developer's view
- Funding Opportunities - Individuals / organisations seeking funding
- Academy (to be added at a later stage)

News, events, Downloads, FAQs and the WIKI are being updated constantly. In order to encourage the ITPs to communicate among each other and keep the conversations open to the public, as well as to the core consortium, we have introduced a quicklink button to the **Discourse Forum** on the starting page.

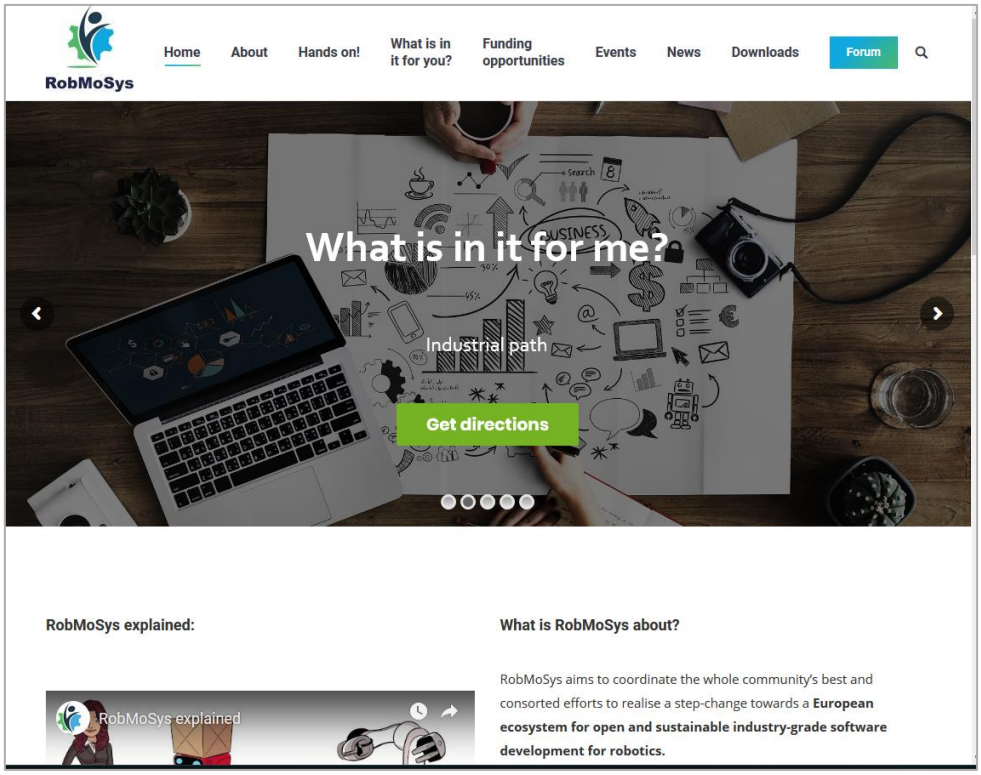

Figure 2: *Screenshot of the website (June, 2019)*

Testimonials have been collected from supporters of the RobMoSys approach and added to the "About" section. These statements from externals help to build up more credibility and trust.

Over the past 12 months (June 2018-May 2019) **robmosys.eu** received 24.522 views, with most views (4.400 views) in April during the second Open Call.

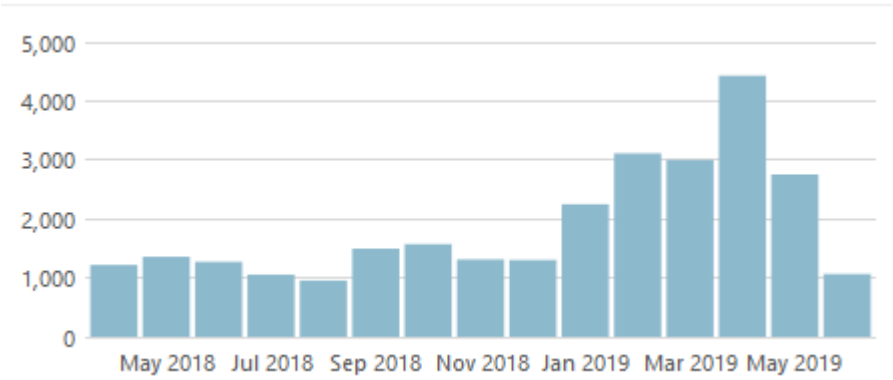

Figure 3: *Views of website in the past 12 months, with 4.400 views in April*

4.2 Participation in workshops, conferences and events

Participation of the project to up to 30 relevant European or international events (workshops, conferences and exhibitions) taking place within the European Union mainly (but not limited) to gain followers and supporters of the RobMoSys framework vertically and horizontally. This exercise is facilitated by the tight involvement of high-level experts in the Tier-1 group and the fact that members of the consortium are well-linked with the target groups which are key to achieve market penetration.

Examples for workshops, conferences and events:

- General robotics related conferences and forums: ICRA – IEEE International Conference on Robotics and Automation; CASE – IEEE International Conference on Automation Science and Engineering, and IROS – IEEE/RSJ International Conference on Intelligent Robots and Systems; ERF – European Robotics Forum;
- More specialised conferences for the software community: ARTEMIS Spring Event; SIMPAR International Conference on Simulation, Modeling and Programming for Autonomous Robots, ROSCon developers conference, EclipseCon conference
- Technology-oriented trade fairs: automatica, Innorobo
- Application-oriented trade fairs: AGRITECHNICA, Logimat, CeMAT, Medica
- Others: European Robotics Week, Schunk Expert Days on Service Robotics, Ulmer Robotertage, etc.

Activities, projects and networks to reach out to in order to gain broader acceptance in industry through their multiplier effect:

- I4MS projects: Fortissimo, BeInCPPS, Euroc, HORSE and ReconCell;

- Regional clusters and platforms: Flandersmake, Factory Lab, regular contact to Dutch NWO-funded project FAST and FlexCraft the High Tech Systems
- Regional Innovation Hubs, Business Incubators and start-up initiatives
- National associations, like VDMA, DIRA, SIRI, SYMOP, SWIRA, HispaRob

Our goal of participating at conferences is not only to speak publicly and inform the community about the project, but also to involve them into participating in the RobMoSys project. Before kicking off with an open workshop at ERF, and defining the second open call, we organised a dedicated expert workshop. The experts from industry and academia were provided first-hand information on the project and gave us their feedback and commitment to use them as multipliers in the market.

RobMoSys has been a regular guest at the European Robotics Forum. Kicking off the project at ERF 2017 in Edinburgh with an interactive workshop and world-cafe, we organized another workshop and world-café at ERF 2018 in Tampere and ERF 2019 in Bucharest. As the ERF 2019 took place during the RobMoSys Open Call, we additionally set up a booth informing about the funding opportunities. The booth was very well frequented at all times. All consortium partners, attending ERF were wearing a RobMoSys pin on their Jacket, to show their affiliation with RobMoSys - also when talking to people outside the booth and at any other time of the event. In all three ERF workshops we offered a speaking slot to ROSin to present their project.

In exchange, the ROSin project invited us to speak at the ROS Industrial Conference in Stuttgart in December 2017 and 2018.

Apart from our booth at ERF, we have been present with flyers and posters at other international trade shows, while taking advantage of our consortium partners having a booth there. At automatica RobMoSys was even present at various booths of the consortium partners and we also used two speaking opportunities at the automatica forum and the IT2 Industry forum. The fair offers a broad participation of system integrators as well as industrial users of robotics from different domains.

Give aways

To catch the attention of visitors at trade shows and events we do not only use Roll ups, flyers and RobMoSys business cards but we decided to produce RobMoSys branded promotional gifts which we can give away without spending too much money. We have determined RobMoSys-stickers and post-its as a popular and inexpensive give-away for conferences. For our booth ERF we additionally produced modular /sliding tile puzzles puzzles with the RobMoSys Logo, which turned out to be a very popular gift.

Figure 4: *RobMoSys Give-aways*

4.3 Press releases and Newsletters

In order to inform the broader public about events, open calls and other milestones throughout the runtime of the project, the media will be informed via press releases to benefit from their multiplier effect. The following 36 press clippings have had a media outreach of approx. 900.000.

Medium	*Type*	*Date*	*Topic*	*Country*
in.tum.quarterly	TUM in house newsletter	01.02.2017	new project	Germany
computer-automation.de	special interest press	17.03.2017	launch of project	Germany
factorynet.at	special interest press	20.03.2017	launch of project	Austria
hanser-konstruktion.de	special interest press	21.03.2017	launch of project	Germany
controldesign.com	special interest press	20.03.2017	RobMoSys & ROSIN	
Südwest Presse	local newspaper	21.03.2017	launch of project	Germany
Kooperation International	Website of German Ministry of Education and research	22.03.2017	RobMoSys & ROSin	Germany
HS-Ulm.de	Website of Hoschschule Ulm	06.04.2017	First GA RobMoSys	Germany
Robohub.org	Robotics website	18.04.2017	RobMoSys & ROSin	UK
Robotics News	Robotics website	18.04.2017	RobMoSys & ROSin	UK
Robohub.org	Robotics website	21.04.2017	ERF workshop	UK
AUTOMA	Automation	01.06.2017	Launch of project	CZ
Innorobo.com	Innorobo website	02.06.2017	RobMoSys' goal : to boost software development for robotics	F/ International
Cordis Europa	EU News feed	23.06.2017		
Produktion	Special Interest print & online	12.07.2017	Modellbasierte Softwareentwicklung. Roboter programmieren : So einfach wie Lego bauen Lego bauen	Germany
Ildenaro.it	Financial/ economic press	03.10.2017	Open Call	Italy

automatica-munich.com	Press release	22.11.2017	RobMoSys at automatica	Germany/ International
Roboticstomorrow.com	Robotics website	22.11.2017	automatica	UK
Infoplc.net	Special Interest	23.11.2017	automatica	Spain
Ke-next.de	Special Interest	27.11.2017	automatica	Germany
Bitmat.it	Special Interest	05.01.2018	automatica	Italy
Packagingspace	Special Interest	05.01.2018	automatica	Italy
Produktion	Special Interest	24.01.2018	automatica	Germany
Machining News	Special Interest	25.01.2018	Automatica	International
Factorynet.at	special interest	18.03.2018	Service Robotics/ Automatica	Austria
Medium.com	social journal / blog	23.04.2018	RoQME	International
Irish Tech News	Special Interest	12.06.2018	automatica	Ireland
Automatica e instrumentalizacion	Special Interest	18.06.2018	Automatica	Spain
Elektronik Praxis	Special Interest	29.08.18	Modular Software for Robotics	Germany
Cordis Europa	EU news feed	22.01.2019	FSTP/ Brokerage Day	Europe
Maschinen Markt	Special Interest	14.02.2019	ROS-I Conference	Germany
URJC.es	Website of URJC	15.02.2019	Robotics at URJC	Spain
The Robot Report	Special Interest/ Blog	22.02.2019	ROS-I Conference	US
Cordis Europa	EU news feed	06.04.2019	FSTP/ Demo and Info Day	Europe
Cordis Europa	EU news feed	27.04.2019	Deadline extension	Europe
Industria Embedida hoy	Special Interest	28.06.2019	Modular Software	Spain

Figure 5: *Press clippings*

Another way of providing relevant information about the project directly to the target audience and to maintain a strong relationship, is sending out newsletters. Starting with a small database of Tier 1 experts and addresses which we collected at the ERF, we have reached a subscriber database of 263 addresses by June of this year.

Newsletters were distributed in a regular interval of 4-6 weeks, depending on the news value, announcing upcoming events and opportunities to meet with core consortium, technical advances reached, updates in the Wiki and new releases of tools which can also be seen in videos on our YouTube channel. Every newsletter dedicated one section to the ITPs – all six ITPs have been featured once. Additionally, we have used the newsletter channels of EUnited Robotics (~180

subscribers), VDMA R+A (~1200 subscribers) and the Eclipse Foundation (~130.000 subscribers, mainly software developers), via the euRobotics Topic Group "Software Engineering, Sytems Integration and Systems Engineering", as well as the quasi-public robotics mailing lists in Europe and worldwide to announce open calls and other big milestones of the project.

The dissemination team has noticed difficulties in attracting industrial, non-scientific partners to the project and to make the management level understand the RobMoSys approach. We are currently planning a workshop, held by an external, independent person with a marketing-driven approach (but scientific experience) to help us identify the right message for this target group.

Scientific publications

At the early stage of the project, RobMoSys has set a focus on building up the approach and explaining and communicating this to the interested community via a wiki (part of the RobMosys website at http://robmosys.eu/wiki/). This is to be seen as the most substantial scientific documentation of the project so far. The wiki consists of a private part which is only accessible to the core consortium, and a public side that contains the most relevant information the technical team of the consortium already agreed upon. The wiki is also the scientific basis for the ITPs. Although not being peer-reviewed, we would call it our most relevant scientific publication so far.

Furthermore, we have publications resulting from presentations held at conferences and public workshops. And we can proudly announce the completion of two doctoral thesis' in the context of RobMoSys.

List of scientific publications:

- "Development and Adoption of Model-Based Tools in Robotics", C. Schlegel et. al. in "Computer-Assisted Engineering for Robotics and Autonomous Systems (Dagstuhl Seminar 17071)", Dagstuhl Reports, Volume 7, Issue 2, pp. 48-63
- "RobMoSys: Towards Composable Models and Software for Robotics Systems", Selma Kchir et al. in "Computer Safety, Reliability, and Security: SAFECOMP 2017 Workshops" (ISBN 978-3-319-66284-8)
- Alex Lotz, "Managing Non-Functional Communication Aspects in the Entire Life-Cycle of a Component-Based Robotic Software System", Dissertation, Technische Universität München, München, Germany, 2018.
- Dennis Stampfer. "Contributions to System Composition using a System Design Process driven by Service Definitions for Service Robotics". Dissertation, Technische Universität München, München, Germany, 2018.
- "", Workshop Roboterkontrollarchitekturen, Schloss Dagstuhl, Germany, 2018 (to appear)
- Matthias Lutz, Juan F. Inglés-Romero, Dennis Stampfer, Alex Lotz, Cristina Vicente-Chicote, Christian Schlegel, "Managing Variability as a Means to Promote Composability: A Robotics Perspective". In: New Perspectives on Information Systems Modeling and Design, IGI Global, November 2018.

4.4 Training Activities

For a successful uptake of the RobMoSys concept, it is crucial to both integrate the model-driven software development (MDSD) approach in the curricula of the universities, so that the next generation of students graduating is already familiar with MDSD, and to develop appropriate tools for professional training of software programmers and engineers to enable the uptake of the technologies developed by RobMoSys.

HSU is strongly active in education, with a master's degree in the area of computer science (covering

model-driven software development, robotics) and a joint PhD program with University of Ulm ("Cognitive Computing in Socio-Technical Systems", again with robotics and model-driven software development being key topics). HSU also includes the approach in their lecture on "Autonomous mobile systems" for the bachelor programme at HSU.

Also KUL has already started to include MDSD in their lectures with a focus on graduate and PhD students.

TUM will be offering a Lab course "Tools and Model-Driven approach for Perception Software Development »» for Master students in September 2019

With regard to professional training, it is important to achieve a high impact by choosing the appropriate training methods. This includes, as far as possible, a train-the-trainer model, which enables experienced personnel to show a less-experienced instructor how to deliver courses, workshops and seminars. While part of the delivery of the training programme will be carried out by traditional approaches (such as "class-based" courses, seminars, and workshops), it is important to develop and establish new ways of teaching, as time constraints are becoming more and more severe for industry professionals. We are also counting on the participants of Instrument #3 "Innovation Expert Intake" to help us push and communicate the RobMoSys approach to their channels and contribute to the RobMoSys community building.

Time saving online tutorials with coding examples and examples of using RobMoSys methods and tools in real robotic environments will play an important role. For a broader audience, online webinars (inviting participants all over the world) will be used for presenting RobMoSys features, usage and use cases. Tools and software components resulting from the ITPs of the first open call make it possible to promote training courses, tutorials, webinars and online courses. The RobMoSys Academy will be available on the RobMoSys website by the end of this year, offering tutorial videos and trainings for self-learning. In addition, the Eclipse Foundation will compile and deliver the appropriate training material for RobMoSys users.

Private on–site trainings are also possible on invitation.

5 Summary of activities in chronological order (2017)

TIME	EVENT	REALISATION		TARGET GROUP
2016-12-08	Workshop	Eunited Robotics to inform its industry members about the RobMoSys project (during Eunited Robotics Annual General Assemby)	✓	Industry
2017-01-01	Website robmosys.eu	Content will be updated continuously	✓	All
2017-02-03	Newsletter	Informing about the project, what has happened until now and what is planned. -> Sent to tier one experts and topic group "system integration"	✓	Tier 1 Experts, Topic Group "System Integration"
2017-02-08	Social media	Twitter account was set up – Tweets to be sent out as an ongoing activity	✓	All
2017-02-07	Expert Workshop	1 day meeting in Frankfurt, 4 experts from industry and academia & technical consortium partners met to discuss the state of the art and challenges to address the RobMoSys open calls	✓	Tier 1 Experts
2017-02-12 – 2017-02-17	Seminar	HSU participated at "Computer Assisted Engineering for Robotics and Autonomous Systems" (on-invitation-only seminar), presented concepts of model-driven software development and system composition for robotics, presented the RobMoSys project and the open call format.	✓	Participants from three communities: robotics, model-driven software engineering and formal methods
2017-02-22	Exhibition	10.Ulmer Robotertag – Introduction of RobMoSys	✓	
2017-03-22	Trade Show	10th Ulmer Robotertage, HSU presenting RobMoSys to regional robotics and automation community in southern Germany	✓	Automation Industry (regional)
2017-03 14 – 2017-03-16	Trade Show	LogiMAT logistics fair in Stuttgart, Germany. HSU running a booth – RobMoSys was presented as one of the current activities	✓	Special Interest Press
March 2017	Communication material	Posters and Handouts (Mini-poster) for ERF + Rollup	✓	
2017-03-15	Press release	Project Launch & ERF announcement: "*EU's innovative new funding project RobMoSys kicked off*"	✓	Industry, Research & Academia, Software

		Information on the EU project RobMoSys, their goals and open call opportunities and announcing the workshop at ERF		Developers, General Public
2017-03-20 – 2017-03-24	Trade Show	CeBit Hannover: HSU as partner of the BW-i/BW-CAR booth to inform about HSU involvement in the RobMoSys project (among other current activities)	✓	Industry, Software developers
2017-03-20	Press release Joint with ROSIN	Joint press release announcing both EU H2020 projects: "*RobMoSys & ROSIN: towards an EU Digital Industrial Platform for Robotics*"	✓	Special Interest Press
2017-03-22	Presentation of RobMoSys @ ERF	Presentation of the RobMoSys project within the EC H2020 workshop "New Horizon 2020 robotics projects in the SPARC strategy" incl. poster	✓	Industry, Academia, Roboticists in general
2017-03-22	ERF open workshop	"***RobMoSys****: the next level of a Model Driven Robotic Software Ecosystem* " presenting the scope and aim of RobMoSys, introduction of the ROSIN project and followed by world cafe discussions, gathering input and feedback from the community	✓	Industry, Academia, Roboticists in general Software developers & Management
2017-03-31	Newsletter	Eunited Robotics Newsletter informs members and interested parties about the start of the RobMoSys project (~180 recipients)	✓	Industry, politics
2017-04	Newsletter	Announcing results of ERF workshop	✓	Tier 1 experts & subscribers
2017-04-11	Training	System integration: individual consultation with Universal Ro bots (KUL)	✓	Experts from Universal Robots
2017-04-4th and 6th	Conference	Advanced Factories Expo & Congress, Barcelona PAL Robotics as exhibitor informing about the RobMoSys project	✓	Industry
	Communication Material	500 Flyers produced and 250 inlays with information on Open Call1	✓	
2017-05	Press release	Announcement of Open Call	✓	Special Interest Press
2017-04-24 to 28	Trade Show	Hannover Messe, Flyers at E++ booth	✓	Industry, Research & Academia,

				General Public
2017-05-15 to 17	Exhibition	Exhibitor at Innorobo, Paris	✓	Robotics, Research & Academia
2017-05-19	Website	Open Calls section on website created	✓	All
2017-06-13	Newsletter	Announcing Open Call via RobMoSys newsletter (97 subscribers)	✓	Industry, Research & Academia, Software Developers
	Newsletter	Announcing Open Call through Eclipse Platform Newsletter	✓	Software developers
	Newsletters	Re-distribution of RobMoSys Newsletter through euRobotics-mailing list; and the email list of robotics researchers worldwide	✓	Robotics Researchers (Industry and Academia)
2017-06	Newsletter	Eunited Robotics & VDMA R+A Newsletter to inform about open call	✓	Industry
2017-06-22	Press release	Announcing Opening of Call1	✓	Special Interest press
2017-06-21 & 22	Conference & Exhibition	eclipsecon, Eclipse Conference, Toulouse Exhibit – RobMoSys presentation for the Eclipse community of users and developers	✓	Software developers
	Conference	ICRA, Singapore . RobMOSys Flyers at the PAL booth	✓	Robotics Researchers (Industry and Academia)
2017-07-14	Newsletter	Announcing Call has been Opened and Brokerage Day in Leuven coming up (129 subscribers)	✓	Industry, Research & Academia, Software Developers
2017-07-05	Workshop	Brokerage day for the Open Call at KULeuven (12 participants)	✓	Industry, Research & Academia, Software Developers
2017-08-04	Newsletter	Summary of interview w Christian Schlegel in German Magazine Produktion and reminder Brokerage Day in Frankfurt (130 subscribers)	✓	Industry, Research & Academia, Software Developers

2017-08-16	Newsletter	Reminder Open Call and Brokerage Day in Frankfurt (130 subscribers)	✓	Industry, Research & Academia, Software Developers
2017-08-24	Workshop	Brokerage day for the Open Call in Leuven, Belgium (24 participants)	✓	Industry, Research & Academia, Software Developers
2017-09-15 to 23	Competitions	European Robotics League competition in Piombino, Italy (through PAL Robotics)	✓	Robotics Researchers (Industry and Academia)
2017-09-15	Workshop	RobMoSys Info Day (Brokerage day 3) in Paris	✓	French SMEs, Research, Industry
2017-08-30 2017-09-01	Conference	Euromicro Conference on Digital System Design, Vienna. RobMoSys project presentation for the Digital System Design community (CEA, PAL)	✓	Software developers/ all
2017-09	Newsletter/ Website	Open Calls closed – number of proposals, evaluation begins	✓	Industry, Research & Academia, Software Developers
2017-10-23	Conference	"RobMoSys and SmartSoft: Structures, tools and building blocks for robotics software development", Unconference Agora Meeting at EclipseCon Europe, Ludwigsburg (HSU)	✓	Software developers, software architects, Research & Academia
2017-09-12	Conference	SafeComp Conference in Trento, Italy International workshop on the Timing Performance in Safety Engineering ; Presentation of RobMoSys project with a focus on "Safety by Design" user story (CEA)	✓	Software developers, Industry
2017-09-22	Newsletter	Countdown to closing of the Call & useful last information (130 subscribers)	✓	Industry, Research & Academia, Software Developers
2017-10-18	Newsletter	The Call has been closed, next steps (179 subscribers)	✓	Industry, Research & Academia, Software

				Developers
2017-11	Public	Promotion of RobMoSys during the European Robotics Week (PAL Robotics in Barcelona)	✓	General public
2017-11-22	Newsletter	European Robotics Week and other opportunities (180 subscribers)	✓	Industry, Research & Academia, Software Developers
2017-11-22	Press Release	RobMoSys project mentioned in "automatica Service Robotics" press release	✓	Special Interest press
2017-11-23	Other	Annual Members' Assembly EUnited Robotics	✓	Industry, C-Level representatives
2017-12-12	Conference	Talk at ROS Industrial Conference "RobMoSys: Composable Models and Software for Robotics Systems" in Stuttgart (Dennis Stampfer, HSUlm)	✓	Robotics Automation
2017-12-20	Newsletter	Christmas wishes, looking back 1 year of RobMosys and outlook 2018 (180 subscribers)	✓	Industry, Research & Academia, Software Developers
2018-01-31 to 02-02	ERTS – Embedded Realtime Systems	Eclipse booth, Poster, Flyers, Video	✓	Software Developers,
2018-02-08	Newsletter	One year of RobMoSys, Announcing ITPs, Luxembourg workshop, ERTS	✓	Industry, Research & Academia, Software Developers
2018-03-05 & 06	ITP workshop & Kick-off event Barcelona	Kick off meeting , Meet the coaches, start projects	✓	ITP (Integrated Technical Projects) of Call 1 & C Consortium
2018-03.02	Newsletter	Meet our ITPs at ERF	✓	Industry, Research & Academia, Software Developers
2018-03-14	ERF Tampere, FI	Workshop "Systems engineering" RobMoSys: Better Models. Better Tools. Better Systems, Roll-Up	✓	Robotics, Industry, Research & Academia

2018-04-26	Newsletter	RoQME and the SmartMDSD Toolchain & featuring RoQME ITP	✓	Industry, Research & Academia, Software Developers
2018-05-21 to 25	ICRA 2018 Brisbane, Australia	PAL booth with RobMoSys Flyers	✓	Roboticists, Industry, Research & Academia
2018-05-25	Newsletter	One more GDPR Email	✓	Industry, R&A, Software Developers
2018-05-03	Website	RobMoSys open Community Forum "Discourse"	✓	Public, subscribers, Software developers, Roboticists
2018-06-12	Newsletter	Where to find RobMoSys at automatica & featuring CARVE ITP	✓	Industry, R&A, Software Developers
2018-06-13 & 14	EclipseCon France 2018, Toulouse	Booth at Conference (announce Call2)	✓	Software Developers, Industry, Academia
2018-06-19 to 22	automatica , Munich	Present at several booths, Flyers, Business Cards, Post-its, Stickers	✓	Robotics & Automation Industry
2018-07-30	Newsletter	Workshops in September and Wiki updates & featuring eITUS ITP	✓	Industry, R&A, Software Developers
2018-08-30	Newsletter	Register for our Community Workshop in Leuven (210 subscribers)	✓	Industry, R&A, Software Developers
2018-09-12	Public Workshop, Leuven	ITPs and open to public workshop	✓	ITPs of Call 1 & Core Cosnortium
2018-09-12	ITP Workshop, Leuven	Second ITP workshop	✓	ITPs of Call 1 & Core Cosnortium
2018-10-01 to 05	IROS 2018, Madrid	PAL booth with RobMoSys Flyers	✓	Roboticists, Research & Academia
2018-10-14 to 19	ACM/IEEE. Int.Conference on Model Driven Engineering Languages and	Half-day tutorial by HSU and KUL on October 16th	✓	MDE community (tool developers)

	Systems (MODELS)			
2018-10-22	Eclipse Conference Europe, Stuttgart	Booth (& workshop) Main goal: to inform about 2nd open call	✓	Software Developers, Industry, Academia
2018-10-26	Newsletter	What do we mean by model-driven & featuring EG-IPC ITP	✓	Industry, R&A, Software Developers
2018-11-22	Member Assembly EUnited Robotics	RobMoSys approach, Open Call funding opportunities coming up in call 2	✓	Industry, C-Level representatives
2018-12-04	ICT Vienna	PAL Robotics participating in Panel discussion	✓	Industry, Research & Academia, SMEs
2018-12-18	Brokerage event, Brussels	Robotics in upcoming H2020 calls – CEA announcing RobMoSys Open Call	✓	Industry, Research and Academia
2018-12-10	ROS Industrial Conference	Workshop presenting ITPs of Call2 & results	✓	Robotics, Research 6 Academia, Software developers
2018-12-17	Newsletter	Happy New Funding Opportunities & featuring Mood2Be ITP	✓	Industry, R&A, Software Developers
2019 -01-10	H2020 COVR et RobMoSys Information Day	Organized by CEA in Paris - Saclay	✓	Industry, Research & Academia
2019-01-25	Newsletter	Open Call Sneak Preview & featuring Plug&Bench ITP	✓	Industry, R&A, Software Developers
2019-02-13	Brokerage Day	Information and Brokerage Day in Munich announcing Call 2	✓	Potential applicants for Call2
2019-02-06	Newsletter	The RobMoSys Call is now open	✓	Industry, R&A, Software Developers
2019-02-27 to 28	Schunk Expert Days, Odense	PAL robotics was there. Flyers & Give aways, announcing open call	✓	Roboticists, Industry, Research & Academia
2019-03-20 to 22	ERF 2019, Bucharest	Booth & speaking opportunity	✓	Roboticists, Industry, Research &

				Academia
2019-03-20 to 22	ERF Workshop Bucharest	Workshop and booth. Announcing second Open Call	✓	researchers, academics, engineers and industrial professionals
2019-03-23	Newsletter	Meet us in Barcelona	✓	Industry, R&A, Software Developers
2019-04-09-11	Advanced Factories, Barcelona	PAL robotics had a booth at the expo. Flyers, give-aways and invitation to visit the RobMoSys Demo and Info Days.	✓	Industry, Automation, Software
2019-04-11	Demo Day, Barcelona	In Barcelona parallel to Advanced Factories exhibition	✓	Industry, Visitors of Advance Factories exhibition
2019-04-12	Information and Brokerage Day, Barcelona	Information and Brokerage Day in Barcelona announcing Call 2	✓	Potential applicants for Call2 in Southern Europe
2019-04-23	Newsletter	Deadline extended for Call 2	✓	Industry, R&A, Software Developers
2019-04-25	ZAFH Intralogistics Forum Ulm	Transport and Logistics event for Ulm region	✓	Regional industry
2019-05-20 to 24	ICRA	Montreal, PAL Robotics booth displaying RobMoSys Flyers	✓	Roboticists, Research & Academia
2019-05-23 and 24	JV Innovation Days 2019	Presenting RobMoSys at Jules Verne IRT	✓	Industry,Academia, Roboticists
2019-05-29	12. Ulmer Robotertage	Information Day on Robotics at Hochschule Ulm	✓	Research and Industry
2019-06-06	FSTP event by EMC2	10 minute talk on RobMoSys and announcing 2nd cut off date -> instrument# 1 Event dedicated to raise SMEs awareness on the FSTP projects from SAE, I4MS and other	✓	SMEs from France region
2019-06	Website	New structure of website/ relaunch, integrated Discourse Forum through quicklink, added testimonials,	✓	Public, subscribers. Software developers, roboticists, industry

... to be continued ...

6 Dissemination plan 2019/2

Trade shows,Exhibitions, Conferences

When	Where	How	Target group
2019-09-19 to 20	ICT Helsinki, Finland Digital Excellence Forum	PAL booth with Flyers, Video , Factsheet announcing Call2 #1 and #3	Industry, Research & Academia
2019-10	Not defined yet	Kick-off event for selected proposals	Selected proposals from Call 2
2019-10-07 to 09	MOTEK, Stuttgart International Trade Fair	PAL booth with RobMoSys Flyers, Factsheet announcing Call2 #1 and #3	Industry, Automation
2019-10-21 to 24	EclipseCon Europe in Ludwigsburg	Shared booth with eclipse (announce Call2) and talk (pending)	Software Developers, System Integrators
2019-10-29 t031	IoT Solutions World Congress, Barcelona	PAL booth with RobMoSys Flyers, factsheet (might be too late for that)	Industry, IoT, Robotics
2019-10-29 to 31	INDUSTRY, Barcelona	PAL booth with RobMoSys Flyers, factsheet (might be too late for that)	Industry, Robotics & Automation, Production
2019-11-4 to 8	IROS 2019, Macao	Tutorial on RobMoSys by HSU	Research & Academia, Industry, Roboticists
2019-15 to 20	MODELS Conference 2019, Munich	Tutorial by HSU and KUL	Software Developers Modelling community
2019-12-10 to 12	ROS Industrial Conference , Stuttgart	talk at ROS Industrial Conference (t.b.c.)	Software Developers, Research & Academia
2020-03-03 t005	ERF 2020, Malaga	Booth showing results and workshop (t.b.c.)	Industry, Academia, Roboticists in general Software developers & Management

Press releases/ news on website & social media

This is an ongoing section

When	What	Description
Once they are known	Announcing ITPs of call 2	Creating a new section "ITPs "on website, with short description of each ITP and list of partners

August 2019	Announcing 2nd cut off dates in October	
ongoing	Events	All events with RobMoSys participation will be announced on the Events section of the website.
Ongoing	FAQs	Constantly updating FAQ section on website
ongoing	WIKI	Constantly updating WIKI on website
ongoing	News	Constantly updating on social media

Newsletters

Will be sent out to the subscribers (226 as of today) every 4-6 weeks.

When	**Topic**
06/2019	Panel Meeting deciding on proposals, Website relaunch
07/2019	Next cut-off date October 31st coming up, News, meet us at..
08/2019	Announcing selected ITPs , News, New cut-off dates, meet us at..
09/2019	Call Open : Apply for Instruments #1 and #3, Models conference & featuring 1 ITP, news, meet us at..
010/2019	Cut-off date October 31st approaching, launch of RobMoSys Academy, featuring one ITP, about MODELS conference
11/2019	News & Events coming up, featuring one ITP, News, meet us at…
12/2019	Happy Holidays, review of 2019, looking at 2020, featuring one of the ITPs
01/2020	Announcing ERF in Malaga, final sprint – last year of RobMoSys – featuring one ITP, if already known: announce selection of Instrument # 1 & #3