



D6.1a - Dissemination Plan and Report

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V0.1	FC.ID	Initial draft
V1.0	FC.ID, UvA, TNO	Final version, addressing comments from internal review

GLOSSARY

ADMORPH	Towards Adaptively Morphing Embedded Systems
CPS	Cyber-Physical System
CPS(oS)	Cyber-Physical System (of Systems)
EEAB	External Expert Advisory Board
EU	European Union
KPI	Key Performance Indicators
SW	Software
TRL	Technology Readiness Level
WP	Work Package

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Executive summary

This document defines the dissemination objectives for the ADMORPH project and the main target audiences, along with the main dissemination activities and channels used. It also describes initial activities and materials developed with dissemination purposes. This document will be periodically revised by the WP6 team, at the end of each project year.

In ADMORPH we understand the importance of dissemination activities to raise awareness and interest about the ambitious project goals, the project activities and the resulting achievements. Such awareness is key for maximizing the impact of the developed technologies and solutions and creating exploitation opportunities. Therefore, we define and describe in this document the dissemination plan, which entails the involvement of all stakeholders, including the academic world and industry, policy makers and the general public. Among other, the main measures for disseminating project results will include scientific publications, the maintenance of a public project website, a presence in social media, the preparation of press releases, the organization of workshops and tutorials, and the preparation of education materials.

1 Introduction

This document presents ADMORPH's dissemination plans and initial dissemination activities and materials. The goal of dissemination is to maximise the visibility of the project, raise awareness of project technical achievements and results and maximize their impact. The ADMORPH's dissemination plan provides guidelines for the project activities from the dissemination perspective. The plan is to be carried out throughout the project lifetime. In fact, some dissemination activities considered in the plan have already been done, as this report details. For example, the ADMORPH website has already been developed and is publicly available, LinkedIn and Twitter accounts have been created and are being used, and a press release has also been prepared. Other dissemination activities are currently being developed.

2 Objectives

This task is responsible for the communication of the project and its results, both to the internal audience, the scientific community, affiliated industry partners and the general public. The task will plan and monitor the project's dissemination and communication activities, and will produce specific outreach materials for relevant conferences and forums. The task will set up structures and processes for dissemination activities such as: creation and maintenance of a project visual identity, namely by providing templates for presentations and reports; creation and maintenance of a project website, including project information, news and publications; presentation of the project during conferences or workshops; continuous collection of all dissemination, cooperation and communication activities of the project; preparation of news for social media to raise public awareness of the project and its results.

3 Target audience

The dissemination plan aims to bring awareness of the project activities and results to different audience groups, including project partners, the scientific community, industrial stakeholders, policy makers and the general public. These groups have different interests and knowledge on the problems being addressed and on the technical concepts explored in ADMORPH, which requires different strategies to better achieve the dissemination objectives. The following sections detail the specific plans for the dissemination activities regarding each target audience. In each section we characterize the target audience, we identify the project assets that may be of interest to that specific audience, and we identify the dissemination channels that we consider to be more appropriate in each case and which we plan to use.

3.1 Scientific community

Characterization: The scientific community includes experts in the several topics address in the project, who know the current state of the art, limitations of existing approaches, open

problems and challenges to address them.

Value proposition: The project will provide new methodologies, mechanisms and techniques that exploit coordinated and dynamic adaptivity to increase the robustness of mission and safety-critical CPS(oS) against cyber-attacks. These novel contributions, along with tools for the systematic and verifiable design, analysis, and run-time management of adaptive CPS(oS), may be used by other researchers as the basis for their solutions.

Channels: Peer-reviewed scientific publications in conferences and journals; Workshop and tutorials; External expert advisory board; Website; Social media; Education materials.

3.2 Industrial stakeholders

Characterization: Industrial stakeholders are well aware of the problems being addressed in ADMORPH, can be considered experts and are typically interested in leveraging new ideas and tools developed and made available by the project. Their interest on project results is raised if their impact is quantifiable or if they are shown to create exploitation opportunities.

Value proposition: ADMORPH will increase the robustness of mission and safety-critical CPS(oS) against cyber-attacks, in comparison to existing approaches. New holistic approach for the design, development and verification of adaptively morphing applications, which will reduce development time and provide guaranteed quality of service.

Channels: Presentations and demonstrations in selected conferences with strong industrial participation; Workshop and tutorials; External expert advisory board; Website; Social media; Press releases.

3.3 Policy makers

Characterization: Policy makers are non-experts, whose interest is in new technological developments with high positive impact on the society and economy.

Value proposition: ADMORPH will provide key enabling technologies for initiatives in the area of Cyber-Physical Systems. These technologies will empower European companies developing mission- and safety-critical applications to deliver improved products. In general, society will benefit from more robust and safer systems like autonomous vehicles or supervision and control systems.

Channels: Presentations and demonstrations in selected conferences and in events organized by the EU; Workshop; External expert advisory board; Website; Social media; Press releases.

3.4 Students

Characterization: Students are potential experts in the problem areas addressed in ADMORPH. They are interested in learning more and in becoming aware of the state of the art in their areas of interest.

Value proposition: With ADMORPH students can learn how to better design and develop CPS(oS) that are robust against cyber attacks. They will acquire a holistic view on what is necessary to develop these systems, from their design to their real-time management.

Channels: Peer-reviewed scientific publications in conferences and journals; Workshop and tutorials; Website; Social media; Education materials and graduation projects.

3.5 General public

Characterization: The general public includes non-experts, ranging from young students to technology enthusiasts and the press. They are interested in learning what the project will deliver, in terms and with examples with which they are familiar.

Value proposition: ADMORPH will provide means to make systems and applications more secure and robust against hackers and hence safer for all. Autonomous vehicles is one example application area.

Channels: Website; Social media; Press releases; Education materials (for non-experts).

4 Image and branding

A common graphic identity in all dissemination activities and materials allows better visibility and identification of the project, contributing for its branding. All dissemination materials will be consistent with respect to a set of aspects, like colours, composition and logo. Furthermore, whenever possible, they will use the name, website, logo, and disclaimer of the ADMORPH project. The brand materials, like the project logo (in two versions), presentation templates and deliverable templates, have been made available to all partners to ensure coherence and consistency. The WP leader will ensure that this brand is applied correctly.

4.1 Logo

The project logo provides a visual identification of the project. It conveys the idea of morphing, as explored in ADMORPH, through the image of a chameleon. The design explores geometrical shapes to achieve a simple and stylized result, yet visually distinct. The logo includes the project acronym, to easy identification. Two different versions of the main logo have been produced, as shown in figures 1 and 2.



Figure 1: ADMORPH standard logo.



Figure 2: ADMORPH green logo.

This main project logo, approved by all ADMORPH partners, should be included in all documentation related to the project. In particular cases, the alternative green version can also be used. Both versions of the logo are available for download on the “Dissemination Materials” page of the ADMORPH website (admorph.eu/?page_id=1560).

An image of the ADMORPH chameleon, without the project acronym, is also available to be used as background illustration in ADMORPH materials. This image, shown in Figure 3 is being used, for instance, on the website and on the presentation template.

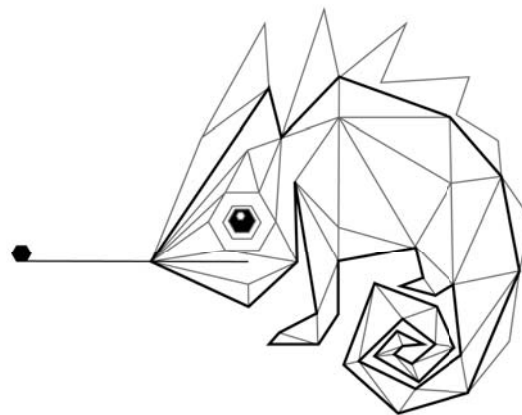


Figure 3: ADMORPH chameleon.

4.2 Colours and fonts

The ADMORPH logos use combinations of 4 solid colors: black, white, grey (#666666) and light green (#29CEAE). This color palette is intended to ensure a good contrast between the elements and with either white or black backgrounds.

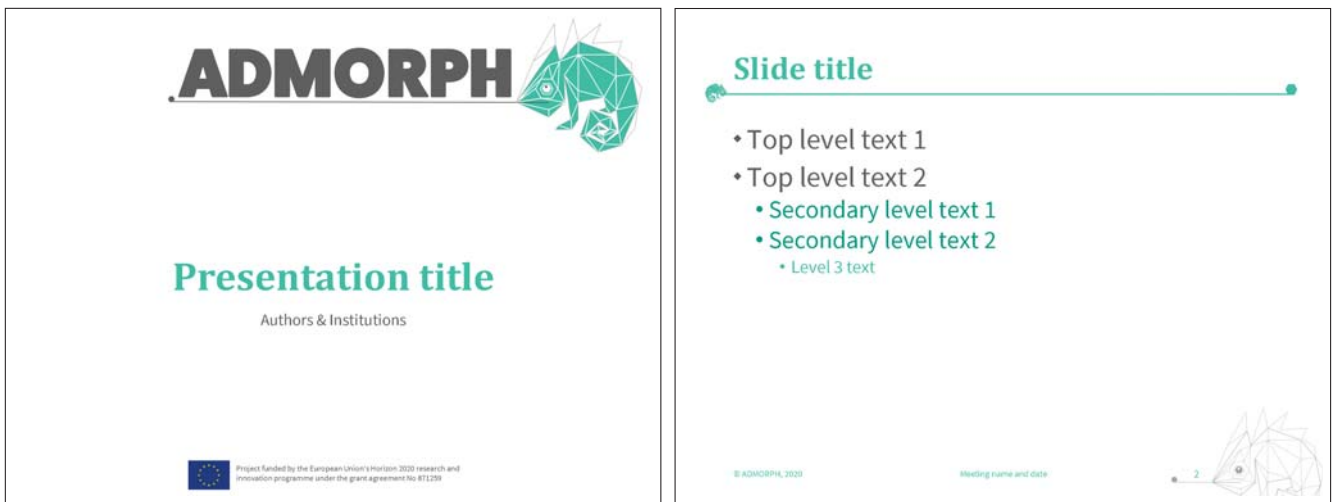
The project website is typeset using the Source Sans Regular font, which is one of the recommended fonts for ADMORPH dissemination material. The Source Serif Roman font is from the same family and is adequate to typeset documents, whenever possible. The Times New Roman font is an adequate replacement for the latter, and is adequate when editing documents using LaTeX.

4.3 Templates

With the objective of ensuring a uniform presentation of ADMORPH materials, templates for presentations and deliverables have been prepared and made available to all project partners through the shared document repository on git.lasige.di.fc.ul.pt.

4.3.1 Presentations

The presentation template, shown in Figures 4a and 4b, includes the ADMORPH logo in the title page and an image of the ADMORPH chameleon as a water-mark in each slide. The template uses the adopted green color for the presentation title and for headings in each slide. The EU logo is also included in the title page.




(a) Title page.

(b) Contents page.

Figure 4: ADMORPH presentations template.

4.3.2 Deliverables

ADMORPH will adopt LaTeX to produce deliverables, as this is an open solution supported on all platforms, and produces documents with professional quality. Figure 5 illustrates the front page of the template.




ADMORPH

DX.Y Title Deliverable

Project acronym: ADMORPH
Project full title: Towards Adaptively Morphing Embedded Systems
Grant agreement no.: 871259

Due Date:	Month X
Delivery:	Month X
Lead Partner:	XXX
Editor:	Name, Institute/Company
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Status:	XXX
Approved:	
Version:	X.Y



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Figure 5: ADMORPH deliverables template.

5 Channels

5.1 Website

The project website (<http://admorph.eu>) plays a central role in the dissemination strategy, providing a single point of information, where we will collect all relevant information such as publications, white papers, (public) deliverables, but also news items, and, where applicable, links to the software repositories. The website will provide information to all targeted audiences. To this end, we will provide a project description and explanation in layman's terms for the general public and media, and tutorials and online course material for students and system developers. Links to related projects and initiatives will set the project into the relevant context.

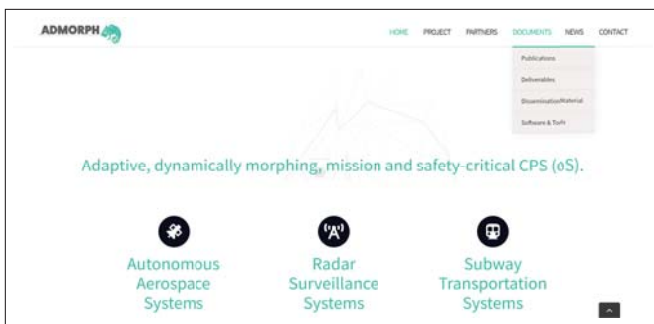
The WP6 leader, in collaboration with the project coordinator, is the primary person responsible for editing the website content, website deliverables, feedback and statistics. However, each project member will be allowed to directly add contents to the website (e.g., publications, news),

through a personal account.

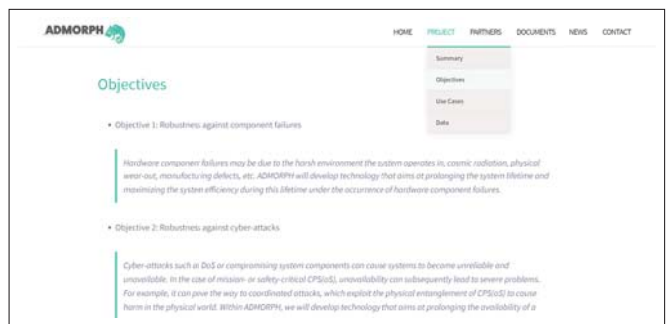
The website is designed with the content management system Wordpress. This system is managed by a webmaster located in the Systems Administration team of the Department of Informatics of the University of Lisbon (FCUL). The domain for the website has been acquired by FC.ID.

With the objective of obtaining information concerning the number and profile of the website visitors, and obtain more information about the atarget audience, the website implements a visitor statistics monitoring system from Google Analytics. These statistics started to be collected on March 15, 2020. The results will be included in deliverables D6.1b/c/d, reporting on dissemination activities by the end of each project year. Furthermore, these statistics will be carefully monitored by the WP6 leader.

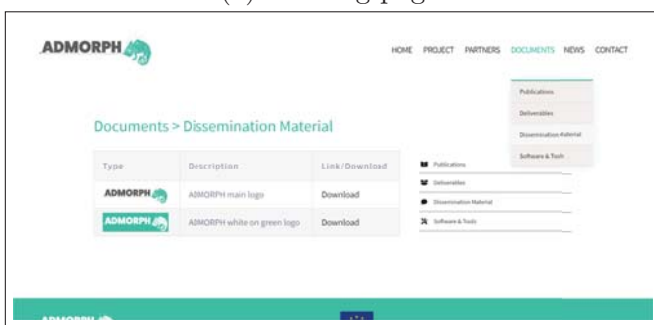
The website was initially launched in February 2020, and has been improving with contents and new sections until the date of preparation of this deliverable. Small updates to improve visual aspects or to adapt the structure to the project dissemination needs will be done over time. Figure 6 illustrates 4 pages of the website, namely the landing page, the objectives page, the dissemination materials page and the news page.



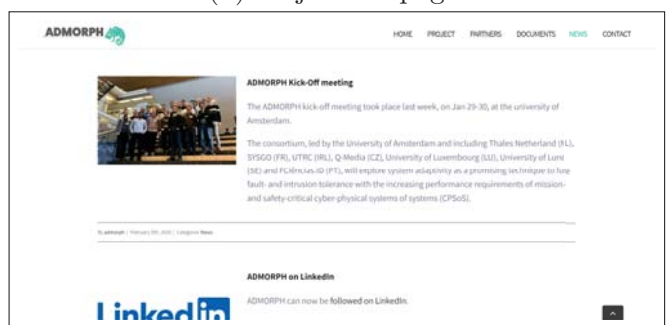
(a) Landing page.



(b) Objectives page.



(c) Dissemination materials page.



(d) News page.

Figure 6: ADMORPH website.

5.2 Social media

Social media provides a way to quickly bring awareness of ADMORPH news and information to a wide range of stakeholders and enlarge the audience. It is thus an important dissemination

channel.

ADMORPH has already a presence in two of the most prominent social networks existing to date: LinkedIn and Twitter. LinkedIn, being the largest professional network, is an excellent channel to connect both to researchers in the academia and industry, and also to the general public. Twitter complements LinkedIn and extends the reach of ADMORPH-related news, in particular to the general public.

Figures 7a and 7b illustrate the LinkedIn and Twitter ADMORPH pages.

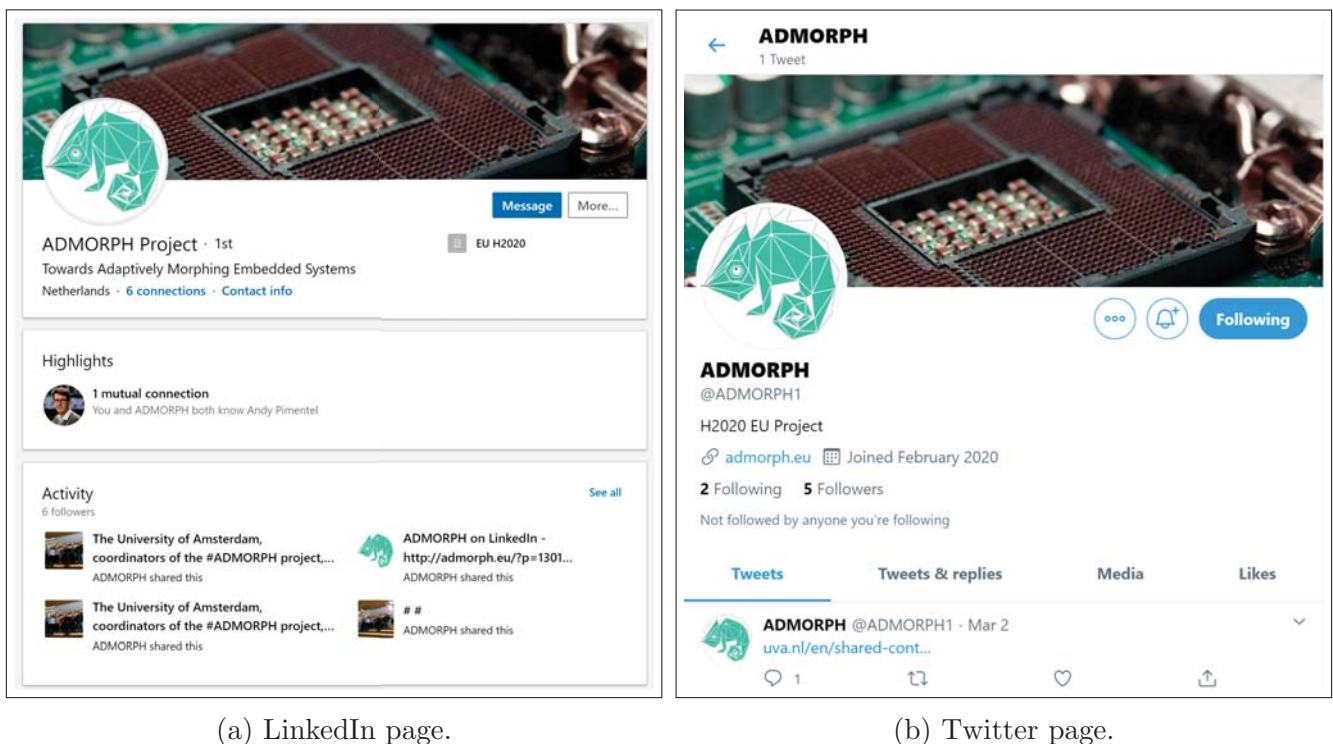


Figure 7: ADMORPH pages in social networks.

5.3 Conferences and other events

We will foremost take the traditional way to disseminate scientific results, namely peer-reviewed scientific publications, both conferences and journals. When available, we will opt for using a gold or green open access model. The main target audience of such publications is of course the academic world, but also relevant industries can be reached by selecting venues also intended for an industrial audience, such as DATE, DAC or HiPEAC. Many of these conferences include a University Booth to show posters/demos, where the ADMORPH research results could be presented also by means of tutorials. Depending on the topic of the publication, we will select firstly from the following list of scientific conferences and journals.

- Conferences: CODES+ISSS: IEEE/ACM International Conference on Hardware/Software Codesign and System Synthesis; DATE: Conference on Design, Automation, and Test in Europe; DAC: Design Automation Conference; DSN: IEEE/IFIP International Conference on Dependable Systems and Networks; ECRTS: Euromicro Conference on Real-Time Systems; EMSOFT: IEEE/ACM International Conference on Embedded Software; HiPEAC: High-Performance Embedded Architectures and Compilation Conference; HLPP: International Symposium on High-Level Parallel Programming and Applications; ICCPS: International Conference on Cyber-Physical Systems; ICSE: International Conference on Software Engineering; IPDPS: IEEE International Parallel and Distributed Processing Symposium; NASA/ESA Conference on Adaptive Hardware and Systems; OSDI: USENIX Symposium on Operating Systems Design and Implementation; PACT: International Conference on Parallel Architectures, Compilers and Tools; PLDI: ACM Conference on Programming Language; RTAS: IEEE Real-Time and Embedded Technology and Applications Symposium; RTSS: IEEE Real-Time Systems Symposium; WCET: International Workshop on Worst-Case Execution Time Analysis; SOSP: ACM Symposium on Operating Systems Principles
- Journals: LITES: Leibniz Transactions on Embedded Systems; TECS: ACM Transactions on Embedded Computing Systems; TOPC: ACM Transactions on Parallel Computing; TOPLAS: ACM Transactions on Programming Languages and Systems; TPDS: IEEE Transactions on Parallel and Distributed Systems; TCADIC: IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems; TOCS: ACM Transactions on Computing; TCPS: ACM Transactions on Cyber-Physical Systems.

5.4 Press releases

Press releases are considered by ADMORPH as an instrument to better reach the general public through printed media. Press releases will be written using non-experts terminology, providing easy to understand examples and highlighting key aspects of the project or of its results. The goal is to get the attention of media such as newspapers, specialized magazines or television channels, through which ADMORPH messages can reach a very large audience.


The first press release of ADMORPH, entitled “4.5 million euros to make complex computer-controlled systems more robust” has already been prepared and published by the project coordinator, on the University of Amsterdam (UvA) website, on February 28, 2020 (Figure 8). Then it was further disseminated through ADMORPH’s LinkedIn and Twitter accounts, and also made available on the project website in the Dissemination Materials page.

ADMORPH will prepare new press releases whenever an important result or milestone is achieved.

4.5 million euros to make complex computer-controlled systems more robust

28 February 2020

The aim of the international project, ADMORPH, is to make various types of complex systems that are controlled by computers more resistant to defects and more secure. The new consortium has received a grant of 4.5 million euros from the EU Horizon2020 programme. ADMORPH is an international European project led by the University of Amsterdam.



The ADMORPH team.

The world around us is increasingly monitored and controlled by computers. Smart algorithms control all sorts of factory processes and entire distribution chains, vehicles like cars and airplanes can now drive or fly without a human driver, and with the most modern surveillance systems it is no longer necessary that a person in a box keeps an eye on the monitors all night.

Safety

In technical terms this phenomenon in which physical systems in daily life are controlled via computer technologies are called Cyber Physical Systems (CPS). For CPS systems to function properly, it is very important that they are resistant to hardware defects and are safe; and the more complex the system, the greater the challenge. Many CPS systems have

Figure 8: Press release announcing ADMORPH start.

5.5 Education materials

To establish the concept of adaptivity for robustness, we will develop and provide educational materials, such as slides, exercises and demonstrators. These materials can be used for self-learners and within university courses, and will be made available on the project website.

5.6 Workshop and tutorials

Towards the end of the project, we will organize a workshop at a relevant conference, for instance DATE, DAC or HiPEAC, for an academic and industrial audience, in which we will showcase the engineering techniques for adaptivity. This workshop will feature invited guests from relevant industries and policy makers, but will be open for the public and target particularly PhD students and next generation system developers. Moreover, the academic ADMORPH partners intend to engage in delivering tutorials about system adaptivity techniques at relevant scientific conferences.

5.7 External expert advisory board

An external expert advisory board (EEAB) has been established, comprising three highly recognized experts from industry and academia. The three members of the EEAB are:

- Prof.dr. Marisol García Valls, Professor in the Department of Communications, Universitat Politècnica de València, Spain;
- Dr. Dirk Ziegenbein, Chief Expert Engineering Open-Context Systems & SW Systems Engineering, Robert Bosch GmbH, Germany;
- Prof.dr. Leandro Soares Indrusiak, Reader in Real-time Systems, Dept. of Computer Science, University of York, United Kingdom.

In fact, Dr. Dirk Ziegenbein and Prof.dr Leandro Soares Indrusiak already attended the ADMORPH kick-off meeting that took place by the end of January in Amsterdam.

Concerning dissemination activities, it is expected that the EEAB will assist in extending the project results to different user communities and application fields.

6 Key performance indicators

We intend to measure the success of our dissemination efforts by using “Social” related indexes (i.e., number of views on the webpage, number of followers on social networks, etc.) as well as “Dissemination” indexes (i.e., number of accepted publications, number of projects related citations, number of presentations in public industrial events/fairs, etc.). Table 1 provides the key performance indicators for dissemination activities, to be evaluated by M18 and at the end of the project.

Channels	Indicator	Expected progress	
		After M18	After M36
Scientific publications/presentations	Number of publications, talks, presentations in conferences and workshops	20	50
Website	Unique monthly visitors (best three-month average)	300	600
Press	Number of mentions in paper press, online media, TV/Radio	6	30
Social Media	Number of followers/friends on social media networks (across all platforms)	100	500

Table 1: Key performance indicators for the dissemination actions.

These performance indicators cover the principal vectors through which dissemination will be done. Scientific publications constitute the main vehicle for the dissemination of research results.

We forecast a large number of publications, but we consider in this number all sort of publications, including in journals, conferences, workshops and technical reports. The number of monthly visitors to the website reflects project's overall visibility and is a good indicator of the short-term dissemination activities. The number of mentions in paper press, on-line media and TV/Radio is a good indicator of the project reach to the general public. Finally, we will also consider the number of followers on social media networks as an indicator of the extent to which project news can be spread to the multiple groups of users.

7 Conclusions

This deliverable presented the ADMORPH's dissemination plan and the dissemination activities that have already been done or are being prepared.

Dissemination activities are recognised as key enablers for the success of ADMORPH. Hence all beneficiaries of ADMORPH are aware of and committed to the dissemination of project results.