

**ECSEL Research and Innovation Actions (RIA)**



**AMASS**

**Architecture-driven, Multi-concern and Seamless Assurance and  
Certification of Cyber-Physical Systems**

**Dissemination and Training Plan  
D8.5**

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# TABLE OF CONTENTS

<b>Abbreviations and Definitions .....</b>	<b>7</b>
<b>Executive Summary.....</b>	<b>8</b>
<b>1. Introduction.....</b>	<b>9</b>
<b>2. Dissemination Plan .....</b>	<b>10</b>
2.1 Dissemination Objectives, Organisation and Rules .....	10
2.2 Target Groups.....	12
2.2.1 Industry .....	12
2.2.2 Policy Makers and Standardisation Groups .....	14
2.2.3 Scientific and Research Communities .....	14
2.2.4 Open Source Communities .....	15
2.3 Dissemination Means and Strategy .....	15
2.3.1 Open Access to Peer-Reviewed Publications.....	17
2.4 Internal Dissemination .....	19
2.4.1 Plan for Internal Dissemination .....	20
2.5 External Dissemination .....	20
2.5.1 Plan for External Dissemination.....	22
2.6 Communication Activities .....	22
2.6.1 Plan for Communication Activities.....	24
2.7 External Dissemination and Communication Plans per Partner.....	24
<b>3. Training Plan.....</b>	<b>31</b>
3.1 Training Objectives, Organisation and Rules .....	31
3.2 Training Means and Strategy .....	32
3.3 Internal Training .....	32
3.3.1 Training on Project Background.....	32
3.3.2 Training on Project Results .....	33
3.3.3 Plan for Internal Training .....	33
3.4 External Training .....	34
3.4.1 Industrial Training .....	34
3.4.2 Research Training.....	35
3.4.3 Plan for External Training.....	36
3.5 Training Plans per Partner.....	36
<b>4. Conclusion .....</b>	<b>41</b>
<b>References.....</b>	<b>42</b>
<b>Appendix A. External Events related to AMASS for Dissemination and Training Purposes .....</b>	<b>43</b>

## List of Figures

<b>Figure 1.</b>	ARTEMIS open innovation model .....	9
<b>Figure 2.</b>	AMASS website .....	19
<b>Figure 3.</b>	AMASS wiki.....	20
<b>Figure 4.</b>	AMASS Twitter account.....	22
<b>Figure 5.</b>	AMASS press release at TEC website .....	23

## List of Tables

<b>Table 1.</b>	Target groups defined for dissemination.....	12
<b>Table 2.</b>	Dissemination tools and channels .....	16
<b>Table 3.</b>	Open access repositories .....	18
<b>Table 4.</b>	Internal dissemination activities .....	20
<b>Table 5.</b>	External dissemination activities .....	22
<b>Table 6.</b>	Communication activities.....	24
<b>Table 7.</b>	Internal training events.....	34
<b>Table 8.</b>	Related ongoing research projects and initiatives.....	35
<b>Table 9.</b>	External training events .....	36
<b>Table 10.</b>	Relevant events for dissemination and training .....	43

## Abbreviations and Definitions

ARTEMIS	ARTEMIS Industry Association is the association for actors in Embedded Intelligent Systems within Europe
AUTOSAR	AUTomotive Open System ARchitecture
CA	Consortium Agreement
CACM	Common Certification and Assurance Metamodel
CPS	Cyber-Physical Systems
EAB	External Advisory Board
EC	European Commission
ECSEL	Electronic Components and Systems for European Leadership
ESA	European Space Agency
GA	Grant Agreement
IMA	Integrated Modular Avionics
JU	Joint Undertaking
OEM	Original Equipment Manufacturer
SME	Small and Medium-sized Enterprise
V&V	Verification and Validation
WG	Working Group
WP	Work Package

## Executive Summary

Dissemination of results and training on them are essential activities for the success of any project. They allow different stakeholders to gain awareness of the achievements of the project and of how to use its results. D8.5 is the AMASS deliverable responsible for identifying needs and presenting a plan regarding activities for the dissemination of project results and training. Both areas have needs that are internal and external to the project, i.e. needs in the AMASS consortium and from third parties, respectively.

Dissemination deals with spreading information about the project, widely, and to different stakeholders. AMASS aims to raise interest among industry stakeholders related to CPS, promote project results and communicate the achievements of the project to external parties, actively participate in and organise events such as workshops and conferences, and foster cooperation and information exchange in Europe on CPS assurance and certification. The project will prepare publications and other types of material for dissemination and communication of its results. Both internal and external dissemination will be addressed.

Training deals with encouraging the adoption of AMASS results in academia and in industry, as well as with stimulating the exchange of knowledge, expertise, and working methods in the AMASS consortium. Via training activities, AMASS aims to provide different industrial and research stakeholders with new knowledge and new, upgraded skills about CPS assurance and certification. The AMASS partners will join forces to overcome the potential gaps between AMASS results and their application in practice, and to define means and guidelines to provide adequate training on AMASS challenges, results, and benefits.

The deliverable also presents envisioned dissemination and training activities for individual partners.

D8.5 relates to the following AMASS deliverables:

- D7.1 (External Advisory Board and Industrial Adoption Program Roadmap) will address aspects related to dissemination and training for practitioners outside the AMASS consortium.
- D8.1 (AMASS Website and Project Collaboration Platform) will provide details about the e-infrastructure of the project for communication and information exchange among AMASS partners, including the internal reporting of dissemination and training actions and results.
- D8.6, D8.7, and D8.8 (Dissemination and Training Progress) will report on the dissemination and training activities performed in the first, second and third project year, respectively.
- D9.1 (Project Management Plan and Handbook) presents guidelines and rules about how to use the project collaboration platform (e.g. file naming conventions and recommendations on the use of the project's mailing lists) and about external communications.



# 1. Introduction

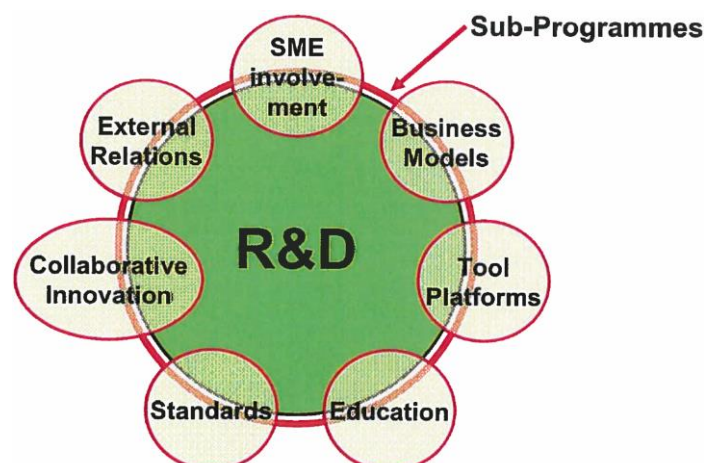
AMASS will create and consolidate a de-facto European-wide assurance and certification open tool platform, ecosystem and self-sustainable community spanning the largest CPS vertical markets. The ultimate aim is to lower certification costs in face of rapidly changing product features and market needs. This will be achieved by establishing a novel holistic and reuse-oriented approach for architecture-driven assurance (fully compatible with standards such as AUTOSAR and IMA), multi-concern assurance (compliance demonstration, impact analyses, and compositional assurance of security and safety aspects), and for seamless interoperability between assurance/certification and engineering activities along with third-party activities (external assessments, supplier assurance).

This document is deliverable D8.5 (Dissemination and Training Plan), released by the AMASS WP8 (Exploitation, Dissemination and Standardization). This deliverable presents the planned activities for dissemination of project results and identifies needs for project internal training as well as for external training related to the concepts and technologies developed in AMASS. D8.5 sets the basis for and contributes to the achievement of WP8 overall purpose regarding spreading a comprehensive awareness about the project goals, the methodology followed to reach the goals, and the results obtained. More concretely, D8.5 presents means, strategies, and plans to:

- Ensure the dissemination of knowledge gained during the project execution.
- Encourage new research and development in European industry, exploiting AMASS results.
- Provide training material and courses on AMASS technology and methods to industrial and other interested users.
- Set up a framework of bidirectional channels for input from and recommendations to multiple industrial domains and wider research communities.

Dissemination and training play a major role in ARTEMIS and ECSEL. In ARTEMIS, the open innovation model (Figure 1; [4]) deals with aspects such as external relations, collaborative innovation, and education. The Strategic Research Agenda 2016 [5] emphasises the need for developing and exchanging best practices for training and education for CPS, and there is an Education & Training WG [6]. Regarding ECSEL, its Multi-Annual Strategic Plans [7] explicitly refer to aspects such as planning and organisation of dissemination events, the provision of education and training, and university education in close collaboration with the industry, as key aspects for delivering the expected programme impact.

The rest of the deliverable is organised as follows. Section 2 describes the dissemination plan, and Section 3 the training plan. Section 4 presents our conclusions. Finally, Appendix A provides a list of events relevant to AMASS for dissemination and training purposes.



**Figure 1.** ARTEMIS open innovation model

## 2. Dissemination Plan

Broadly, dissemination in AMASS deals with spreading information about the project and to different stakeholders. The AMASS consortium will take care of dissemination throughout diverse activities. The partners will use their links to European agencies (regulation and strategy definition, among others), R&D initiatives, large industrial companies, technology suppliers, and research institutions to present the AMASS concept and promote the adoption of the proposed methodologies and technologies. This will allow the project to increase its visibility.

The main activities for dissemination are:

- Definition and implementation of the project e-infrastructure: public web site, mailing lists, social media, etc.
- Planning and publication of press releases and announcements.
- Identification and submission of publications to venues such as journals, conferences, workshops, and exhibitions.
- Synchronization of information exchange between the partners.

The initial work is to plan and create a framework in order to make it possible to define a roadmap for dissemination activities. The framework will evolve throughout the project, and thus will be updated. The actual results will be presented in progress reports. The purpose of the dissemination plan is to clearly state the activities and when they should or could take place, creating a common view within the whole project. The AMASS partners will use various dissemination channels, such as their websites and events that they organize or attend to, on the areas of safety, security, standardization, domain-specific aspects (e.g. automotive, rail, aerospace, industrial automation, etc.), and specific assurance-related topics (system requirements, V&V, methods, tools, etc.).

The subsections below present the dissemination objectives, organisation and rules, the target groups, the dissemination means and strategy, information about internal and external dissemination, communication activities, and the external dissemination plans per partner.

### 2.1 Dissemination Objectives, Organisation and Rules

Setting up a successful dissemination strategy requires that the goals, as well as the target audiences, are clearly defined. Dissemination of results is further a requirement for all H2020 and ECSEL projects: *“Unless it goes against their legitimate interests, each beneficiary must — as soon as possible — ‘disseminate’ its results by disclosing them to the public by appropriate means (other than those resulting from protecting or exploiting the results), including in scientific publications (in any medium).”*

In AMASS, the **overall objectives** for dissemination are to:

- Raise interest among industry stakeholders related to CPS in safety-critical domains such as avionics, railway or automotive domains.
- Promote project results and communicate the achievements of the project to external parties, especially SMEs, to improve their access to research results.
- Actively participate in exhibitions and organise events such as workshops, conferences, and special issues in journals, to disseminate the project results.
- Foster cooperation and information exchange in Europe in order to create synergies in cross-domain safety assurance (standardization organizations, EC support actions, related workshops, conferences and exhibitions, etc.).
- Reach policy makers responsible for industrial development and for adapting national and regional policies and standards.

- Establish a community to further maintain the AMASS platform via Eclipse (<https://eclipse.org/>) even after the project is over.
- Prepare publications, and other types of materials, for dissemination and communication of AMASS results.

Some of these objectives are also addressed in other AMASS activities, such as networking and standardisation. Dissemination is an initial step towards reaching the objectives of these activities.

The main **responsible partners** for coordinating and monitoring dissemination activities will be Jose Luis de la Vara (UC3; Dissemination task leader) and Antoine Colin (RPT; Exploitation Manager). The Project Manager (Huascar Espinoza; TEC) and the Quality Manager (Cristina Martínez; TEC) will also supervise the dissemination activities. The Innovation Manager (Philippe Krief; ECL) and Exploitation Manager will work together to ensure that dissemination activities are well coordinated.

For publications, AMASS CA, GA, and D9.1 [3] indicate some specific **rules** that must be followed. The main aspects to take into account are as follows:

- As a rule of thumb, any partner that is going to disseminate some AMASS results (e.g., a paper at a conference) must inform the rest of the consortium, providing a copy of the planned publication.
- A partner might pose some objection to a publication if:
  - a) The protection of the objecting partner's results, background, or confidential Information could be adversely affected.
  - b) The objecting partner's legitimate interests in relation to the results or background would be significantly harmed.
- An objection has to include a precise request for necessary modifications.
- A partner shall not include in any dissemination material another partner's results or background without obtaining approval, unless they are already published.
- The partners will cooperate to allow the timely submission, examination, publication, and defence of any publication, dissertation, or thesis.
- Dissemination materials must include:
  - The JU logo.
  - The EU emblem.
  - The following text: *"This project has received funding from the Electronic Component Systems for European Leadership Joint Undertaking under grant agreement No 692474. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and from Spain, Czech Republic, Germany, Sweden, Austria, Italy, United Kingdom, France"*.

The inclusion of this information, or of how it is presented, will be adapted to the specific dissemination material as considered suitable. For example, the information will be included differently in a conference paper and in the presentation of the paper.

- For the acknowledgement:
  - It is recommended to include the project's acronym (AMASS).
  - Electronic Component Systems for European Leadership Joint Undertaking could be substituted for ECSEL JU.
  - The grant agreement No must always be indicated.
  - Further information about national funding sources might have to be included.
- Any dissemination of results must indicate that it reflects only the author's view and that the JU is not responsible for any use that may be made of the information that it contains.

## 2.2 Target Groups

The know-how acquired in AMASS is expected to be strategic for European organisations. The target groups for AMASS are shown in Table 1, and concern those stakeholders who will be directly, or indirectly, positively affected by the AMASS project, its activities, and/or its results.

**Table 1.** Target groups defined for dissemination

Target Group	Examples of stakeholders
Industry: avionics and space, automotive, railway, air traffic management, automation	OEMs, component suppliers, integrators of safety-critical platforms, tool vendors, consulting and service providers, certification organizations, standardization groups, industrial forums
Policy makers	Consultancy providers, assessor companies, standardization and regulation bodies
Research community	Universities, research institutes
Scientific communities	Safety-critical development, reliability , and dependability communities.
Open-source communities	Developers of open-source tools for embedded systems engineering
SMEs	SMEs constitute a special interest group for AMASS, as they generally have very limited access to basic or applied research to develop new products. Yet, the economic viability of many SMEs depends on the cost of certification.

### 2.2.1 Industry

The raise of highly interconnected and complex CPS increase human, environmental and technological risks in different industrial domains, e.g. avionics and space, automotive. A major objective of AMASS is to lower certification costs in face of rapidly changing product features and market needs, which will be achieved by establishing a novel holistic and reuse-oriented approach for architecture-driven assurance, multi-concern assurance, and for seamless interoperability between assurance/certification and engineering activities along with third-party activities.

The industry represents the key target group and its stakeholders are in the main scope of the project's dissemination activities. However, it is important to recognise that the industrial community consists of heterogeneous groups that often operate in relative isolation, and they need to be targeted individually. In particular, different communities of "practices" are likely to be interested in different aspects of AMASS. This depends on their role in the supply chain, activities during assurance and certification of the products on the one hand, and details of the challenges currently faced by individual industrial sectors on the other. These varying interests will influence the dissemination activities in the project, and the consortium will ensure that the content of different dissemination actions is appropriate for the target audience.

Furthermore, scientific researchers could be invited from industrial partners as visiting researchers, which would create industry dissemination opportunities. For example, Scania AB invited Dr. Barbara Gallina (MDH) and AMASS results will be presented and discussed at Scania.

#### 2.2.1.1 Original Equipment Manufacturers (OEMs)

In applications domains such as automotive, OEM refers to the manufacturer of the original equipment, that is, the parts assembled and installed during the construction of a new vehicle. In contrast, aftermarket parts are those made by companies other than the OEM, that might be installed as replacements after the car comes out of the factory. For example, Ford could use Autolite spark plugs and Exide batteries. Furthermore, other-brand parts would be considered aftermarket, such as Champion spark plugs, DieHard batteries, Kinsler fuel injectors, and BMP engine blocks. Many auto parts manufacturers sell parts through multiple channels, for example to car makers for installation during new-vehicle construction, to car

makers for resale as automaker-branded replacement parts, and through general merchandising supply chains, any given brand of part can be OE on some vehicle models and aftermarket on others.

A more recent definition of OEM is a company that buys a product and incorporates or re-brands it into a new product under its own name. If the OEM is the vehicle manufacturer it represents the highest level of integrators, who needs support from their suppliers to comply with the assurance and certification process for safety-critical items within a vehicle.

#### **2.2.1.2 Component Suppliers (Manufacturers)**

Within the supply chain of components, key component suppliers (e.g. Infineon) are responsible for assuring the critical properties of their delivered products. Component suppliers need to support higher level integrators in their certification processes by provision of appropriate evidence and rationale on how the evidence supports the specific claims about the product. Therefore, component manufacturers will be particularly interested in specification of assurance case modules, which can be integrated into the overarching assurance case. They will also be interested in transferring certification artefacts (e.g. assurance case modules) across certification for multi-domains. Finally, component suppliers will have to preserve the integrity of the evidence they provide to platform integrators, and to ensure the integrity of the evidence both up- and down-stream of the supply chain.

For this group of stakeholders, the dissemination activities will comprise presentations at conferences and workshops attended by industry as well as targeted AMASS workshops. Such events are planned to be co-located with major industrial events and congresses, with the invitations issued specifically to key identified stakeholders. The AMASS consortium will utilise its network of contacts to identify opportunities for presenting the work (e.g. at component suppliers conferences and internal training events).

#### **2.2.1.3 Integrators of Safety-critical Platforms**

Within the industrial setting, platform integrators (e.g. Thales Alenia Space) are ultimately responsible for the dependability (e.g. safety) of the products delivered to the end users of the consumer market. These integrators are referred to as OEMs in some domains, e.g. automotive. They typically take primary responsibility for the assurance of the platform (e.g. assessment of safety), integration of the overall assurance case, and certification.

This group of stakeholders will be particularly interested in those AMASS results concerning the composition of the assurance safety case based on individual modules, and that ensure the integrity of the evidence passed through the supply chain. Similarly to the component suppliers, the dissemination activities targeted at integrators will take form of presentations of relevant AMASS work in industrially-focussed international conferences as well as dedicated workshops co-located with such conferences and major events.

#### **2.2.1.4 Consulting and Service Providers**

Consulting and service providers (e.g. Alten) support OEMs, component suppliers, and integrators of safety-critical platforms during the assurance process. They perform safety and security analyses and prepare assessment documents, e.g. safety cases. They also make reviews and perform verification activities, e.g. inspections.

This group of stakeholders will be particularly interested in those AMASS results that ensure the integrity of the evidence passed through the supply chain. Similarly to the component suppliers, the dissemination activities targeted at consulting and service provider will take form of presentations of relevant AMASS work in industrially-focussed international conferences as well as dedicated workshops co-located with such conferences and major events.

### **2.2.1.5 Certification Organizations**

Certification organizations (e.g. RINA) support OEMs, component suppliers, and integrators of safety-critical platforms regarding assessment during the assurance lifecycle. They are also acting as assessor companies to perform independent assessments. They will be mainly interested in the AMASS results concerning cross-domain and multi-concern assurance. The dissemination activities targeted at certification organizations will take form of presentations of relevant AMASS work in industrially-focussed international conferences as well as dedicated workshops co-located with such conferences and major events.

### **2.2.1.6 Tool Vendors**

Tool vendors (e.g. Rapita) support both platform integrators and component suppliers, and they facilitate the exchange of relevant information between all supply chain and certification stakeholders. Consequently, support and buy-in from tool vendors is critical for the medium- to long-term success of the certification framework, as developed in AMASS. Ultimately, the vendors buy-in has two aspects. Firstly, the project must promote the adaptation of the existing tools (e.g. dependability analysis tools, modelling environments, verification tools, etc.) to the AMASS architecture and working philosophy, in order to ensure that certification evidence can be supplemented by all necessary information and that it is presented in the formats appropriate for the framework developed by the project. Secondly, it is necessary to generate sufficient interest in a tool vendor community for supporting the framework and, thus, to promote development of tools that will implement and enhance the AMASS architecture and (prototype) tools. This is particularly important for the results on seamless interoperability.

Whilst tool vendor's buy-in is largely determined by the demand and interest from vendor's clients (i.e. platform integrators and equipment suppliers above), AMASS will facilitate the up-take of the concepts and the framework developed in AMASS by ensuring that all the information relevant for the tool development is available through the project website. This will range from introductory, guidance materials to detailed specifications necessary for development. It needs to be added that vendors are also interested in exploitation of the AMASS methodology and technology to improve certification specification in order to provide a better support to their clients.

## **2.2.2 Policy Makers and Standardisation Groups**

The policy makers (e.g. the European Union Agency for Railways) represent stakeholders for standardisation and regulatory bodies. The development, analysis, and assurance of critical platforms is highly regulated and standardised in most domains. Standardisation and regulatory bodies are key stakeholders in the assurance and certification process and, consequently, they represent a key audience that must be targeted by AMASS dissemination activities. However, effective dissemination to those bodies on one hand focuses on dissemination actions targeted specifically at standardisation groups, actions which are detailed in Task 8.4 (Standardization) and will be documented in deliverable D8.10 (Standardization plan). Task 8.2 (Dissemination), on the other hand, will seek to maximise the outreach of other dissemination activities to include, as far as practicable, raising awareness among the relevant regulators.

## **2.2.3 Scientific and Research Communities**

AMASS regards the dissemination of project results to the scientific and research communities as one of the key aspects of the overall dissemination activities. This will contribute to the peer-review of the project outcomes and will provide early feedback to the project (enabling the project to make necessary adjustments to its work in a timely fashion). In addition, it will also allow to extend the outreach of the project by galvanising research community and, potentially, reaching out the industrial contacts of other research organisations that are not currently covered by AMASS partners' contact networks.



The dissemination activities will be centred on publications at reputable peer-reviewed conferences and journals in AMASS-related disciplines. The impact factors and rankings will be used to select dissemination opportunities that are likely to reach widest possible audiences. In the later stages of the project, the AMASS consortium will seek out opportunities for organising a small number of dedicated satellite workshops at key relevant conferences (e.g. Embedded Real Time Software and Systems Congress, IET Systems Safety Conferences, and INCOSE conferences). These events will be advertised through the partners' contact networks and social media accounts and through the project's website and social media accounts, as well as through conference organisers and various international mailing lists and notice boards.

### **2.2.4 Open Source Communities**

AMASS aims to create and consolidate a de-facto European-wide assurance and certification open tool platform, ecosystem and self-sustainable community spanning the largest CPS vertical markets. The project is aiming to support the open source philosophy, which promotes free redistribution and access to an end product's design and implementation details. Opening the source code enables a self-enhancing diversity of production models, communication paths, and interactive communities. The open-source software movement has created a new environment for which new copyright, licensing, domain, and consumer issues were created.

The open-source model includes the concept of concurrent and different agendas and various approaches in production, in contrast with the closed source and centralized models of development such as those typically used in commercial software companies. A main principle and practice of open-source software development is peer production by collaboration, with the end product, source-material, "blueprints", and documentation available at no cost to the public. The open source communities form a very generic group of participants, from companies such as IBM to university-based contributors. It is rather seen as an exploitation strategy than a stakeholder representative. For AMASS a specific number of open source communities is relevant and can be seen as special stakeholders: Eclipse, Polarsys, and Open Service for Lifecycle Collaboration (OSLC).

## **2.3 Dissemination Means and Strategy**

Table 2 outlines the main means for dissemination in AMASS. These and other means are described in the next sections, including:

- Project logo
- Project leaflet
- Project roll-up poster
- Project periodic newsletters
- Project final report
- Press releases
- Project standard presentations (short and long)
- Twitter account
- Linkedin group

Indicators have been specified to measure the impact and success of the dissemination activities, as well as the minimum objectives to be achieved. In case an objective is not fulfilled, a contingency plan is considered.

At the current initial stage of the project, dissemination activities are being planned and envisioned activities are being discussed. The corresponding plan (i.e. this deliverable) will contain a schedule of the dissemination activities, will outline procedures that should be followed by the consortium members while carrying out these tasks, and will be updated during the project lifetime. The plan will be:

**Table 2.** Dissemination tools and channels

Dissemination tool/channel	How to measure	Objective	Contingency plan
Website	Number of monthly visits	100	Promoting the website in social networks, e.g. LinkedIn, and distributing the project newsletters to target groups.
	Duration of visits	2 min average	Re-organize the website to make more easily find relevant items. Upload more attractive content .
	Number of downloads per month	35 for posters, flyers and newsletters; 50 for public reports	Foster downloads by partners and partners in the Industrial Advisory Board.
	Number of references from external web pages	15 (excluding partners)	Contact more stakeholders and initiatives to agree on the promotion of the site
Publications	Number of scientific papers at workshops	8	Encourage partners to publish papers. Find appropriate events.
	Number of scientific papers at conferences	8	Encourage partners to publish papers. Find appropriate events.
	Number of scientific articles	8	Contact publishers of peer-reviewed and indexed journals.
	Number of articles in industry magazines or stakeholder journals	8	Search for additional channels in cooperation with the Industrial Advisory Board.
Attendance to events	Number of posters presented at conferences	10	Find alternative events, contact organizers.
	Number of oral communications at conferences / events	20	Find alternative events, contact organizers.
	Number of flyers distributed	400	Ask for permission to distribute leaflets during additional events
	Number of attended fairs	4	Identify further industrial fairs of interest to the project.
Organization of events	Number of workshops organized	3	Responsibilities and budget have been assigned. Supervise training team.
	Number of registered people at workshops	>30	Responsibilities and budget have been assigned. Invite partner teams to assist.
	Number of organized conferences	2	Responsibilities and budget have been assigned.
	Number of registered people at the conferences	100-150 pax	Invite European Commission to publish the conference programs.
	Number of flyers distributed	450	Re-edit flyer to explain the achievements of the project.



- The base for a yearly report of the dissemination activities.
- The support for the revision of the targets and activities throughout the entire course of the project.
- The instrument for taking into account relevant dissemination opportunities identified by the project partners and other stakeholders.

The execution of the plan consists of three phases: launching phase, execution phase, and final phase. Each phase will have its own targets and objectives.

At the launching phase, the objective is to publicize the start of the project and the envisioned objectives by means of the project website, visual identity and dissemination materials. Furthermore, related events (e.g. the start of other projects) should be identified and contacts and potential collaboration initiated.

At the execution phase, when the research has advanced but is not finished, the project will be presented to and discussed with the specialized audience from the scientific community, as well as industrial stakeholders and policy makers with the objective of determining the stakeholders' needs and expectations. The main instruments for communicating with the general public and companies participating in fairs will be newsletters, flyers and brochures. Dissemination with the scientific community will mainly rely on publications and on contributions to conferences and workshops. The following journals and events are especially relevant for the scientific dissemination of the project:

- Selected scientific Journals, e.g.:
  - SOSYM, Safety Science, and IEEE Software.
  - For the interested public and stakeholder groups: press releases, ERCIM News, ARTEMIS magazine, etc.
- Relevant conferences and events (see Appendix A), e.g.:
  - SAFECOMP, ISSRE, DATE, ICSR, ERTS2, SSS, CAiSE, CBSE, ECRTS, SASSUR, DECSoS, Euromicro, IDIMT, Microelectronics Symposium, AMAA, ICCVE, SSI, HASE, Embedded Systems Week, ISSC, Ada Europe, DeCPS, ISSA, ReSA4CI, ASSURE, QUATIC, CARS, etc.
  - ICT-conference (EC), ARTEMIS/ITEA Co-Summit, exhibitions.

During the final phase, the results of the project will be presented in different forums by instruments such as seminars, workshops, training activities, and a showroom.

### 2.3.1 Open Access to Peer-Reviewed Publications

The AMASS project will provide open-access to peer-reviewed scientific publications which might result from the project, following a green open access model, as a default option. Therefore, each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results.

All scientific publications of the AMASS project will be available through open repositories that are compatible with **OpenAIRE** (<https://www.openaire.eu/>). Some of the AMASS partners have their own open repositories (see Table 3) indexed by OpenAIRE, so these will be the preferred option to ensure open access to the project scientific publications. In case that none of the authors of a publication dispose of an open repository, the **Zenodo** (<https://zenodo.org/>) repository will be the default option.

The AMASS partners will make a digital version of the final version of the content that has been accepted for publication (peer-reviewed) and deposit it in an open repository. This will be done as soon as possible, but no later than six months after the official date of publication ('Green' open access mode). Access should be immediate if the editor allows ('Gold' open access mode).

The potential delayed access ('embargo periods') required by specific publishers and magazines in the Green access mode will be negotiated in a case-by-case basis. Links to the publisher's website and references will be provided if required.

For the most relevant journal publications, the possibility of ‘Gold’ open access will be assessed. Budget has been explicitly allocated for this type of open access, and the scientific publishers will provide the articles in open access mode.

**Table 3.** Open access repositories

Repository	Partner(s)	Description
TECNALIA Publications <a href="http://dsp.tecnalia.com/">http://dsp.tecnalia.com/</a>	TEC	TEC Institutional Repository. Its main objective is to collect, preserve and disseminate the intellectual production resulting from TEC research activity to generate transferable knowledge and contribute thereby to development and social progress.
e-Archivo <a href="http://e-archivo.uc3m.es/">http://e-archivo.uc3m.es/</a>	UC3	The aim of the UC3 Institutional Repository, e-Archivo, is to file and preserve the intellectual production resulting from its academic and research activity, and to offer open access to such documents. The collection includes PhD theses, articles, books and chapters, reports, conference proceedings, datasets, preprints, working papers, etc.
Zenodo <a href="https://zenodo.org/">https://zenodo.org/</a>	Suggested default option for the rest of partners	Zenodo builds and operates a simple and innovative service that enables researchers, scientists, EU projects and institutions to share, preserve and showcase multidisciplinary research results (data and publications) that are not part of the existing institutional or subject-based repositories of the research communities.

### 2.3.1.1 Open access repositories

TECNALIA (AMASS Project Coordinator) has a repository, ‘**TECNALIA Publications**’, that is operative following **RECOLECTA**<sup>1</sup> directions and facilities in order to fulfil international interoperability standards and protocols and gain long-term sustainability. RECOLECTA is a platform that gathers all the Spanish scientific repositories together in one place and provides services to repository managers, researchers and decision-makers. The RECOLECTA project follows the ‘green’ open access model. TECNALIA publications are harvested by FECYT’s RECOLECTA, by the EC service **OpenAIRE**, and are visible for Google Searches.

UC3 uses **e-Archivo**, which is an institutional repository and the Open Access Initiative at UC3. The repository aims to: (1) integrate and safely keep UC3 intellectual production; (2) increase UC3, authors’, and publication visibility; (3) increase scientific production impact; and, (4) provide free access to this information. e-Archivo documents can also be found via:

- madri+d (<http://www.madrimasd.org/?lan=en>)
- OALster (<http://oaister.worldcat.org/>)
- OpenDOAR (<http://www.opendoar.org/>)
- RECOLECTA (<http://recolecta.fecyt.es/>)
- BASE (<https://www.base-search.net/>)
- OpenAIRE (<https://www.openaire.eu/>)

<sup>1</sup> RECOLECTA (Open Science Harvester) is the result of the collaboration between the Spanish Foundation for Science and Technology (FECYT) and the Network of Spanish University Libraries (REBIUN) run by the Conference of Vice-Chancellors of Spanish Universities (CRUE). Their work is aimed at creating a nationwide infrastructure of Open Access scientific repositories (<http://buscador.recolecta.fecyt.es/>).

### 2.3.1.2 Procedure to publish in open access

The procedure to ensure open access to scientific publications involves the following steps that are collected in the GA.

Each beneficiary must ensure open access (free of charge online access for any user) to all peer-reviewed scientific publications relating to its results. In particular, it must:

- As soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.
- Ensure open access to the deposited publication -via the repository- at the latest:
  - On publication, if an electronic version is available for free via the publisher, or
  - Within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.
- Ensure open access -via the repository- to the bibliographic metadata that identify the deposited publication.

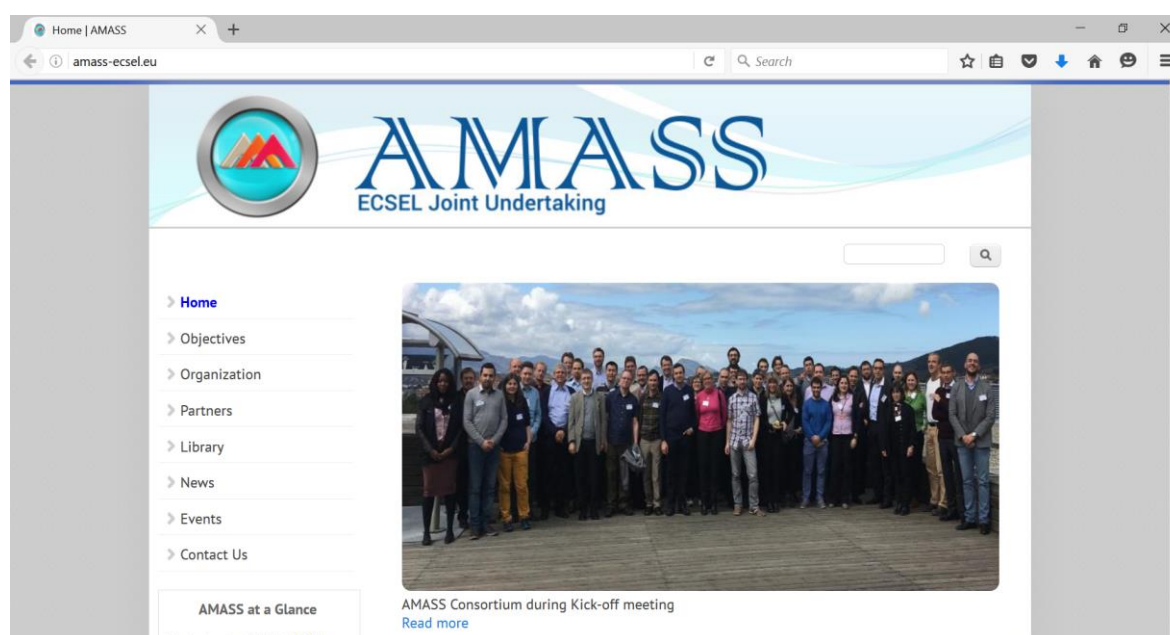
The bibliographic metadata must be in a standard format and must include all of the following:

- The terms “ECSEL”, “European Union (EU)” and “Horizon 2020”.
- The name of the action, acronym and grant number.
- The publication date, and length of embargo period if applicable.
- A persistent identifier.

## 2.4 Internal Dissemination

AMASS will use different means to share information among the project’s partners, in order to effectively collaborate and reach the AMASS goals. The main means are:

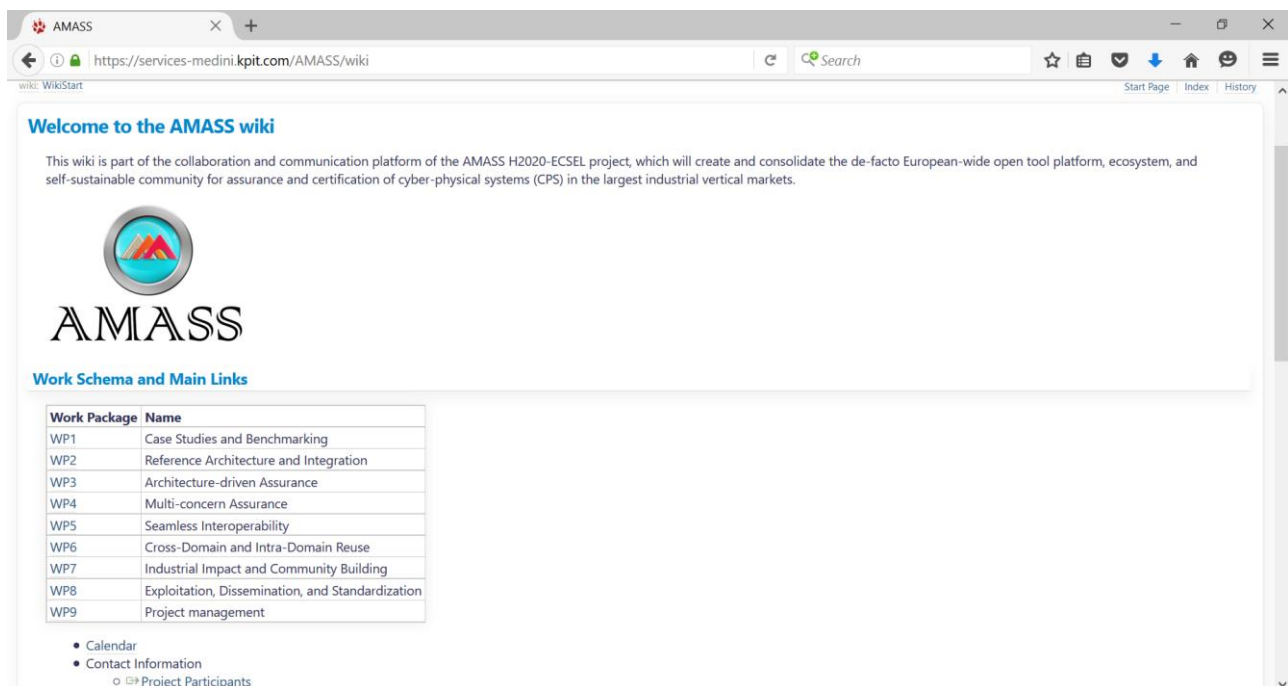
- AMASS website (<http://amass-ecsel.eu/>; see Figure 2)
- Wiki (see Figure 3)
- SVN repository
- Mailing lists



**Figure 2.** AMASS website

D8.1 (AMASS Website and Project Collaboration Platform; [2]) provides further details about the above means.

In addition, AMASS partners are expected to share data in the scope of the project's case studies: assurance and certification data, product design data, business data, etc. Before sharing such data, the associated documents will have to be analysed by the providers and might have to be sanitised to avoid the release of sensitive information. AMASS partners will identify the types of data to be shared and produced, and examine the legal and ethical issues associated that may arise with the execution of the case studies. These activities will be performed in the scope of WP1 (Case Studies and Benchmarking).



**Figure 3.** AMASS wiki

## 2.4.1 Plan for Internal Dissemination

The activities for internal dissemination currently envisioned in AMASS and with a defined date are shown in Table 4.

**Table 4.** Internal dissemination activities

Activity	Date	Resp.	Description
Website	Apr 2016	TEC	Dissemination means for news and publications
SVN repository	Apr 2016	KMT	Dissemination means for file sharing
Mailing lists	Apr 2016	KMT	Dissemination means for email communications
Wiki	May 2016	KMT & UC3	Dissemination means for information sharing
D1.2	Mar 2017	TAS	Case study data collection

## 2.5 External Dissemination

External dissemination will target parties that are not involved in AMASS. The activities will promote the AMASS platform to its different target groups so that they are aware of the project results and can leverage the maximum benefit from the AMASS approaches.

The main work areas for external dissemination are as follows.

- **AMASS website and logo.** During the initial dissemination phase, the project website (<http://amass-ecsel.eu>) will be set up. It will contain project presentations, public downloadable documents (project reports and dissemination papers), links to related projects, demonstration material, news sections, etc. The website will have tools for dissemination purposes, training material, discussion forums, blogs, and posts. The AMASS logo and website graphics will promote the project in a unified graphical layout.
- **AMASS brochure and poster.** The brochure and poster will be used at events and conferences. They will be produced at the initial phase of the project, in collaboration with ECSEL, and updated at regular intervals as necessary. At the time of writing, the first version of the brochure and the poster have not been finished yet, but ECSEL will do it in the near future. In addition, each partner will add information about AMASS membership on their company website. Simultaneously to this brochure we will create data sheets that describe how the framework supports development of certified systems. This information will be distributed among partners' customers and during trade shows and seminars.
- **Project presentations.** Slides for two different project presentations, one short (5-10 min.) and another long (20-30 min.), will be prepared. Their preparation will be coordinated by the responsible partners for coordinating and monitoring dissemination activities (see Section 2.1)
- **AMASS news channels.** An electronic newsletter, published twice a year on the website, will present updated information about project progress, as well as news about the latest results and enhancements achieved in the project. The newsletter will be complemented with a blog, which will publish pieces of news on AMASS biweekly. In addition, we will use popular channels such as Twitter (see Figure 4) and LinkedIn in order to inform interested subscribers more rapidly and directly.
- **Scientific papers and publications.** The academic partners of the project will, individually and in collaboration, publish and present scientific advances at relevant conferences and workshops, as well as in journals and magazines. We plan to have at least 25 publications at the end of the project. The conferences include International Conference on Systems Engineering (INCOSE), International Conference on Computer Safety, Reliability and Security (SAFECOMP), European Safety and Reliability Conference (ESREL), High Assurance Systems Engineering (HASE), Dependable Systems and Networks (DSN) and Embedded Real Time Software and System (ERTS).
- **Promotion through industry events.** Project presentations will be made at exhibitions, conferences, and seminars targeting relevant industry stakeholders and decision makers.
- **Organisation of international AMASS workshops.** The goal of these workshops will be to disseminate both the techniques developed during the project and the preliminary results of the project to the targeted beneficiaries of the AMASS project, occasionally co-located or co-organized with some conference (satellite events).
- **Industry partner community.** Each project partner will aim to disseminate the AMASS results and goals through its network (e.g. enterprise events, expert community forum, and supplier's network).





**Figure 4.** AMASS Twitter account

### 2.5.1 Plan for External Dissemination

The activities for external dissemination currently envisioned in AMASS and with a defined date are shown in Table 5.

**Table 5.** External dissemination activities

Activity	Date	Resp.	Description
Website	Apr 2016	TEC	Launch of the public website
DeCPS workshop	Jun 2016	INT	3rd International Workshop on Challenges and new Approaches for Dependable and Cyber-Physical Systems Engineering, in conjunction with Ada-Europe 2016, targeting industrial practitioners and researchers concerned with dependable and Cyber-Physical Systems engineering.
SASSUR workshop	Sep 2016	TEC & UC3	5th International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems, collocated with SAFECOMP
2nd edition of the ARTEMIS Technology Conference	Oct 2016	RPT	Event focused on deep technological presentations, both about project achievements and about state-of-the-art technology, consisting of four thematic one-day workshops: Smart Cities, Smart Energy, Interoperability in CPS and IoT, and Future CPS industrial research challenges.

## 2.6 Communication Activities

The purpose of AMASS communication activities will be to inform general audiences (e.g. overall groups of practitioners and general population) of the project and its results. The ultimate goal will be to promote the project. All AMASS partners commit themselves to making every effort to communicate information concerning the project and its progress to an as wide audience as possible.

According to the indications on communication activities in the GA, AMASS partners must promote the project and its results by providing targeted information to multiple audiences (including the media and the public) in a strategic and effective manner. Communication activities related to the action must

indicate that they reflect only the author's view and that the JU is not responsible for any use that may be made of the information it contains. Any communication activity must:

- Display the JU logo;
- Display the EU emblem and
- Include the following text: "This project has received funding from the ECSEL Joint Undertaking under grant agreement No 692474. This Joint Undertaking receives support from the European Union's Horizon 2020 research and innovation programme and Spain, Czech Republic, Germany, Sweden, Austria, Italy, United Kingdom, France". As indicated above for dissemination activities in general, this text can be adapted.

The AMASS target audience for communication and the main means to use are as follows:

- **AMASS news channels.** An electronic newsletter, published twice a year on the website, will present updated information about project progress, as well as news about the latest results and enhancements achieved in the project. The newsletter will be complemented with a blog, which will publish pieces of news on AMASS biweekly. In addition, we will use popular channels such as Twitter in order to inform interested subscribers more rapidly and directly.
- **Partners' websites** (e.g. <http://www.uc3m.es/Home>). These websites will advertise AMASS.
- **Media/general public.** To reach out to European society at large, local and mass media coverage are relevant direct channels. This can be achieved through press releases (see e.g. Figure 5), interviews and demonstrations, and news articles for the interested public and stakeholders (e.g. ERCIM News).
- **Industry partner community.** Each project partner can communicate the AMASS results and goals through its network (e.g., enterprise events, expert community forum, and supplier's network).

As it can be observed, several means will be used both for external dissemination and for communication activities. The material to disseminate will nonetheless vary. It will be adjusted to the target audience.



Figure 5. AMASS press release at TEC website

## 2.6.1 Plan for Communication Activities

The communication activities currently envisioned in AMASS and with a defined date are shown in Table 6.

**Table 6.** Communication activities

Event	Date	Resp.	Description
Press release	Apr 2016	UC3	Press release to advertise the beginning of the project (e.g. <a href="http://www.tecnalia.com/en/ict-european-software-institute/news/the-work-on-the-european-wide-open-platform-and-community-for-assurance-and-certification-of-cyber-physical-systems-has-started.htm">http://www.tecnalia.com/en/ict-european-software-institute/news/the-work-on-the-european-wide-open-platform-and-community-for-assurance-and-certification-of-cyber-physical-systems-has-started.htm</a> )
Press release	Jun 2016	MDH	Press release to advertise the project in Sweden, <a href="http://www.mdh.se/nyheter/nyhetsarkiv/eu-s-mal-halvera-kostnaden-for-certifiering-av-inbyggda-system-1.89571">http://www.mdh.se/nyheter/nyhetsarkiv/eu-s-mal-halvera-kostnaden-for-certifiering-av-inbyggda-system-1.89571</a>
Press release	Jun 2016	UC3	Video and adapted press release in Spanish, English, and Chinese ( <a href="http://www.uc3m.es/ss/Satellite/UC3MInstitucional/en/Detalle/Comunicacion_C/1371221005543/1371215537949/Researching_how_to_improve_certification_of_intelligent_devices">http://www.uc3m.es/ss/Satellite/UC3MInstitucional/en/Detalle/Comunicacion_C/1371221005543/1371215537949/Researching_how_to_improve_certification_of_intelligent_devices</a> ), and also published in newspapers ( <a href="http://www.lavanguardia.com/local/madrid/20160618/402597458780/investigadores-de-la-carlos-iii-trabajan-en-itv-de-dispositivos-inteligentes.html">http://www.lavanguardia.com/local/madrid/20160618/402597458780/investigadores-de-la-carlos-iii-trabajan-en-itv-de-dispositivos-inteligentes.html</a> )
EWICS meeting	Sep 2016	MDH	Presentation of AMASS during the EWICS meeting
First newsletter	Oct 2016	UC3	Vision and main achievements of the project in m01-m06, and upcoming work
Second newsletter	Apr 2017	UC3	Vision and main achievements of the project in m07-m12, and upcoming work
Third newsletter	Oct 2017	UC3	Vision and main achievements of the project in m13-m18, and upcoming work
Fourth newsletter	Apr 2018	UC3	Vision and main achievements of the project in m19-m24, and upcoming work
Fifth newsletter	Oct 2018	UC3	Vision and main achievements of the project in m25-m30, and upcoming work
Sixth newsletter	Mar 2019	UC3	Main achievements of the project in m31-m36 and main conclusions from the project

## 2.7 External Dissemination and Communication Plans per Partner

The current AMASS partners' individual plans for external dissemination and communication are as follows. As it can be observed, most partners already have actions planned. Most of the activities are not included in Table 5 and Table 6 because they do not have a defined date yet.



<b>TEC</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Organization's website (<a href="http://www.tecnalia.com/">http://www.tecnalia.com/</a>)</li> <li>• Tecnalia Publications Repository (<a href="http://dsp.tecnalia.com/">http://dsp.tecnalia.com/</a>)</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of 2-3 conference and workshop paper to events such as SafeComp, ISSRE and SASSUR, and of 1-2 articles to journals such as Journal of Systems and Software, Reliability Engineering &amp; System Safety per year</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• SASSUR &amp; SAFECOMP</li> <li>• ISSRE</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• SASSUR: International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• AMASS Website management</li> <li>• Networking with related projects</li> </ul>

<b>HON</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Honeywell internal presentations - Engineers Week, Conferences, Advanced Technology presentations, presentation to US</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Crystal Final Dissemination Event</li> <li>• Conferences in AMASS domain, formal methods</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects – for example Crystal or SAVI</li> </ul>

<b>MDH</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• MDH website: <a href="http://www.es.mdh.se/projects/434-AMASS">http://www.es.mdh.se/projects/434-AMASS</a></li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of 2-3 conference and workshop paper to events such as SafeComp, SafeComp Workshops, IWSPETP, ISSA, De-CPS and of 1-2 articles to journals such as Journal of Systems and Software, Reliability Engineering &amp; System Safety, per year</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• SafeComp</li> <li>• SafeComp Workshops</li> <li>• RSSR</li> <li>• QUATIC</li> <li>• DASC</li> <li>• IWSPETP</li> <li>• Scandinavian Conference on SYSTEM &amp; SOFTWARE SAFETY</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• SafeComp 2018</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related groups of interest e.g., SPICE User Group</li> <li>• Networking with related projects</li> <li>• Dissemination during PROMPT-related workshops; dissemination during MDH-courses</li> </ul>

<b>IFX</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Internal presentations</li> <li>• Field Application Engineer training</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Attendance to relevant ECSEL/H2020 events</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with other projects within ECSEL, H2020, Penta, ITAE3</li> </ul>

<b>AIT</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Standardization groups (mainly IEC TC65 in general, as well as AHG1 and AHG2, and WG20)</li> <li>• DECSoS workshop at SAFECOMP 2016 lead by AIT</li> <li>• Presentation of AMASS at ARTEMIS/ECSEL technology conferences</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• 2-3 publications at international conferences related to safety and security of CPS, e.g. SAFECOMP, INDIN, Euromicro</li> <li>• Submit a paper on security assurance to ACM Transactions on Cyber-Physical Systems (TCPS)</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Scientific conferences like SAFECOMP, INDIN, Euromicro</li> <li>• Attending events/workshops organized by related projects</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• DECSoS workshop at SAFECOMP</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Distribution of AMASS project flyers at conferences and trade fairs</li> <li>• Networking and possibly liaison with related projects</li> </ul>

<b>FBK</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• FBK website: <a href="https://es.fbk.eu/projects/">https://es.fbk.eu/projects/</a></li> <li>• FBK internal presentations</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of 2-3 conference and workshop paper to events such as SAFECOMP and SAFECOMP Workshops</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• SAFECOMP</li> <li>• SAFECOMP Workshops</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• SAFECOMP 2017</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related H2020 projects</li> <li>• Networking with related ESA projects</li> </ul>

<b>INT</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Intecs website: <a href="https://www.intecs.it/">https://www.intecs.it/</a></li> <li>• Intecs internal presentations</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of 1-2 conference or workshop papers to events such as the Ada Europe and the DeCPS Workshop</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Ada Europe</li> <li>• DeCPS</li> <li>• SAFECOMP</li> <li>• SAFECOMP Workshops</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• DeCPS: Challenges and new Approaches for Dependable and Cyber-Physical Systems Engineering International Workshop</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related H2020 projects</li> <li>• Networking with related ESA projects</li> </ul>

<b>GMV</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• GMV's website (<a href="http://www.gmv.com">http://www.gmv.com</a>)</li> <li>• Publications in GMV's newsletter (<a href="http://www.gmv.com/en/Company/Publications/GMVNews/">http://www.gmv.com/en/Company/Publications/GMVNews/</a>)</li> <li>• Internal dissemination and exploitation of AMASS results</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of conference papers in the scope of the Space Domain, such as DASIA, or in the scope of Safety/Modelling (e.g., SAFECOMP or EclipseCon)</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• DASIA</li> <li>• Conferences dedicated to model-based and component-based engineering, focusing on safety aspects</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects of the European Commission</li> <li>• Networking with related ESA projects</li> </ul>

<b>RIN</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• RINA Group website <a href="http://www.rina.org">http://www.rina.org</a></li> <li>• RINA internal presentations</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Attendance to conferences, meetings and events in the railway sector with RINA's roles of Nobo, ISA, Asbo and Railway Certification Laboratory</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with other projects promoted by European Commission</li> </ul>

<b>UC3</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• UC3 website (<a href="http://www.uc3m.es">http://www.uc3m.es</a>)</li> <li>• Knowledge Reuse Research Group's website (<a href="http://knowledgereuse.eu/">http://knowledgereuse.eu/</a>)</li> <li>• Institutional Publication Repository (<a href="http://e-archivo.uc3m.es/">http://e-archivo.uc3m.es/</a>)</li> <li>• UC3 newsletter (<a href="http://newsletter.uc3m.es/">http://newsletter.uc3m.es/</a>)</li> <li>• UC3 Twitter accounts</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of 2-3 conference and workshop paper to events such as INCOSE International Symposium, RE, REFSQ, and SASSUR, and of 1-2 articles to journals such as Information and Software Technology, Journal of Systems and Software, Reliability Engineering &amp; System Safety, per year</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• SASSUR</li> <li>• INCOSE International Symposium</li> <li>• Conferences on requirements engineering (RE, REFSQ,...)</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• SASSUR: International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems</li> <li>• SKY: International Workshop on Software Knowledge</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Distribution of AMASS newsletter to UC3 industry network</li> <li>• Introduction of AMASS to practitioners of UC3 industry network and research organizations</li> <li>• AMASS blog management</li> </ul>

<b>TRC</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Company's website and Twitter account</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of papers to INCOSE International Symposium</li> <li>• Submission of papers to International Requirements Engineering Events such as REConf and RE</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• INCOSE International Symposium</li> <li>• CSD&amp;M</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• Organization of an even together with AEIS (the Spanish Chapter of INCOSE) regarding: Assurance and Certification of Cyber-Physical Systems</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects (e.g. REVaMP2) and with external companies (Airbus, Alstom, Renault...)</li> </ul>

<b>OHB</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• OHB Sweden's website (<a href="http://www.ohb-sweden.se">http://www.ohb-sweden.se</a>)</li> <li>• Internal dissemination and exploitation of AMASS results</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of conference paper(s) in the scope of the Space Domain (e.g. DASIA)</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• DASIA</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects of the European Commission</li> <li>• Networking with related ESA projects</li> </ul>

<b>VIF</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• VIF internal presentations of AMASS methods and tools</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• 2 publications at international conferences related to safety and security of CPS, e.g. SASSUR, SAFECOMP, Euromicro</li> <li>• 1 article to journals such as Journal of Systems and Software, Reliability Engineering &amp; System Safety</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Scientific conferences like SAFECOMP, INDIN, Euromicro</li> <li>• Attending events/workshops organized by related projects</li> </ul>
Organization of events	<ul style="list-style-type: none"> <li>• Regular organisation of Functional Safety Community (FuSaCom) meetings</li> <li>• Annual organisation of GSVF – Graz Symposium Virtual Vehicle</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects – e.g. EMC2, ENABLE-S3, 3CCAR</li> </ul>

<b>A4T</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• All4tec will contribute to exploitation, dissemination and training activities respectively in the context of its business activities which consist in providing Model Based studies and tools, attending conferences and workshops, training its clients</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Papers proposed to dedicated conferences such as CSDM, LambdaMu, ERTS, and EclipseCon</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Conferences and workshops dedicated to model based safety and security analysis</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects</li> </ul>

<b>CEA</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• CEA LIST website (<a href="http://www-list.cea.fr/">http://www-list.cea.fr/</a>)</li> <li>• CEA Publication Repository, non-open access</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• 2-3 paper submissions to conference and related workshops on safety, security and model-based engineering such as SAFECOMP, ISSRE, DSN, APSEC, MODELS, MODELWARDS, ERTS, etc.</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Conferences dedicated to model-based, safety, security, engineering</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Presentation of AMASS challenges and results during internal CEA LIST events and in annual CEA activity reports</li> <li>• Introduction of AMASS to CEA industry and scientific partners</li> </ul>

<b>SPS</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• SP website (<a href="http://www.sp.se">http://www.sp.se</a>)</li> <li>• SP publication database (<a href="http://www.sp.se/en/publications">http://www.sp.se/en/publications</a>)</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of at least 2 conference/workshop/journal papers to relevant events/publications such as SafeComp, ISSRE, EDCC, SASSUR</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Conferences in the areas of dependability and security</li> <li>• SASSUR &amp; SafeComp 2016</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Introduction of AMASS to industry and scientific partners</li> </ul>

<b>TLV</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• TLV website (<a href="http://www2.schneider-electric.com/sites/corporate/en/products-services/energy-distribution/r-d-projects/r-d-projects.page">http://www2.schneider-electric.com/sites/corporate/en/products-services/energy-distribution/r-d-projects/r-d-projects.page</a>)</li> <li>• TLV internal social network: SPICE portal</li> <li>• TLV internal presentations</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Attendance to conferences and events in the industrial automation sector</li> <li>• Attendance to relevant ECSEL/H2020 events</li> <li>• Conferences and workshops in AMASS domain</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Introduction of AMASS to industry</li> <li>• Networking with related projects</li> </ul>

<b>B&amp;M</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Company's website</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Submission of conference/workshop/journal papers to relevant events/publications such as SafeComp, ISSRE, EDCC, SASSUR</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Attendance to relevant ECSEL/H2020 events</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with other projects within ECSEL, H2020, Penta, ITEA3</li> </ul>

<b>UOM</b>	
Own means for dissemination	<ul style="list-style-type: none"> <li>• Internal presentations</li> </ul>
Publications	<ul style="list-style-type: none"> <li>• Publications at international conferences related to software verification and validation (e.g. CAV, ATVA)</li> <li>• Publications at international conferences related to requirements engineering (e.g. RE)</li> </ul>
Attendance to events	<ul style="list-style-type: none"> <li>• Conferences dedicated to software verification and validation and requirements engineering</li> </ul>
Other actions	<ul style="list-style-type: none"> <li>• Networking with related projects – for example CRYSTAL</li> </ul>

### 3. Training Plan

As dissemination, training will be an essential activity in AMASS so that the project reaches its expected impact. It is necessary not only that different stakeholders are aware of the project results, but they also need to know why and how to use the results. Transfer of knowledge and skills will certainly help AMASS results to be adopted and extended in the future. Training should not only be limited to presenting what the project has done or is doing, but also what could be done from the project results.

The training activities will encourage the adoption of AMASS results in academia (researchers, students, etc.) and in industry (standardization and certification bodies, CPS developers, tool vendors, etc.). The activities will also stimulate the exchange of knowledge, expertise, and working methods in the AMASS consortium.

The subsections below present the training objectives, organisation and rules, the training means and strategy, information about internal and external training, and the training plans per partner.

#### 3.1 Training Objectives, Organisation and Rules

In line with ARTEMIS strategic plans (e.g. [5]), AMASS aims to provide effective training to maximise project impact and facilitate the adoption of its results. Education and skill building will be a key pillar to have a relevant role, and so a relevant economic impact, in CPS assurance and certification. Education and skill building are also essential to maintain competitive leadership. AMASS will strive to meet the EC expectation of “Making ‘education’ a specific deliverable for all EU Projects”.

The main training **objectives** of AMASS are:

- To provide different industrial and research stakeholders with new knowledge and new, upgraded skills about CPS assurance and certification
- To join forces, both within the AMASS consortium and with external parties, to overcome the potential gaps between theory and practice of CPS assurance and certification in general and between AMASS results and their application in particular
- To define means and guidelines to provide adequate training on AMASS challenges, results, and benefits

The main **responsible** partners for coordinating and monitoring training activities will be Jose Fuentes (TRC; Training task leader) and Antoine Colin (RPT; Exploitation Manager). The Project Manager (Huascar Espinoza; TEC) and the Quality Manager (Cristina Martínez; TEC) will also supervise the training activities.

All AMASS partners are encouraged to identify needs for training and to propose training activities, when they anticipate or perceive the need for it. The steps to follow for training are:

1. All: Identification of the needs on a particular topic
2. All/Training task leader: Appointment of a session responsible for the training session
3. Session responsible: definition of the details for the session; length, exact description of the content, format (webinar, others...)
4. Session responsible/Training task leader: definition of a Doodle poll to define the session date
5. All: provision of the suitable dates
6. Session responsible/Training task leader: selection of the exact date/time for the session
7. Session responsible: performing and recording of the session
8. Training task leader: sharing of the recorded session in the AMASS repository
9. Training task leader: collect training feedback and improvement opportunities

All training material created for AMASS will follow the guidelines and requirements regarding the preparation and publication of dissemination material, such as acknowledging the funding received (see Section 2.1). The partners must pay special attention to adapting the materials to the objectives and

audience of a training session. For example, the content of a session will vary when the attendees are practitioners and when the attendees are university students.

## 3.2 Training Means and Strategy

The training means and strategy for each different sort of training will be analysed case by case according to the topic, the target audience, etc. Nonetheless, generic presentations about AMASS and its results will be prepared for training purposes. The partners will then decide upon how to adjust the presentations according to the training action (e.g. based on the target audience).

Clearly the strategy must start with developing a highly skilled working force among the AMASS partners, having a consistent knowledge about AMASS-related topics. Therefore, the first envisaged actions to perform are to provide a common point of view on previous research projects, tools and techniques covered in AMASS.

Because of the large number of topics and participants, this sort of training actions will be mostly performed through web conferencing systems (Webex, GoToMeeting, Lync, or others). Furthermore, because of the difficulties in agreeing for a specific agenda, the sessions will be recorded and shared in the AMASS SVN repository.

By the end of the project, AMASS aims to:

- Have held at least six internal training events.
- Have held at least five external training events, three of them to practitioners.
- Provide training-related material for each case study, including some video.

## 3.3 Internal Training

Internal training activities address two different areas. The first area has to do with project training on background results. This is necessary to overcome the gaps in terminology and competences that is inherent in such a multidisciplinary consortium as AMASS. It will be accomplished by early focused, intensive training on key concepts relating to the project's main topics, such as multi-view modelling, tool integration technologies, architecture design, embedded systems platforms, and compositional safety assurance. The second area deals with training related to concepts and technologies developed within the project. This training is necessary so that the partners can apply AMASS results in e.g. the industrial case studies.

The main activities for internal training are:

- To organize early internal training courses
- To organize training courses regarding project developed results

### 3.3.1 Training on Project Background

AMASS background correspond to technologies that the partners might need to know to effectively cooperate and develop the project results. Such technologies can correspond to knowledge and conceptual assets (e.g. the metamodels created in the OPENCROSS project) and to software assets (e.g. the tool interoperability mechanisms implemented in the CRYSTAL project). The premise is that the partners need to acquire knowledge about the technologies and expertise in how to use them so that the technologies can be successfully applied or extended in the AMASS project.

Training on necessary background will be performed in relation to:

- Results from related projects, most notably OPENCROSS and SafeCer as they can be regarded as the main base projects from which AMASS results will be developed. Nonetheless, training on the results from further projects (e.g. CRYSTAL, EMC2, and MERGE) will also be necessary.



- Software tools developed by the partners, as they provide functionality that AMASS could reuse (e.g. from OPENCROSS tools), that could be served as a reference (e.g. tool interoperability mechanisms), or that could be extended in the scope of the AMASS to contribute to make CPS assurance and certification more cost-effective (e.g. TRC Requirements Quality Suite). Some tools might be used as components for the AMASS platform (e.g. Papyrus), and others might be regarded as external tools (e.g. KMT medini analyze).

This training will be essential so that the different technologies can be combined and extended in order to allow AMASS reach its objectives.

### 3.3.2 Training on Project Results

The training on project results will start in AMASS as soon as (1) project results are available and (2) some partner needs to acquire knowledge on the usage of such results. The typical scenario in which training of project results will be performed corresponds to the application and validation of AMASS results on its case studies:

- Industrial and Automation Control Systems (TLV; industrial automation)
- Advanced driver assistance function with electric vehicle sub-system (IFX; automotive)
- Collaborative automated fleet of vehicles (B&M; automotive)
- Design and safety assessment of on-board software applications (GMV; space)
- Platform screen-doors controller (CLS; railway)
- Safety Assessment of Multi-Modal Interactions in Cockpits (HON; avionics)
- Telematics Function (SPS; automotive)
- Safety-Critical SW Lifecycle of a Monitoring System for NavAid (THI; air traffic management)
- Certification basis to boost the usage of MPSoC architectures (TAS; space)
- Design and efficiency assessment of model based Attitude and Orbit Control software development (OHB; space)

All the partners that participate in each case study will need to have sufficient knowledge and skills about AMASS results to successfully perform the case study. In many cases, the partners will need to use results to which they have not contributed.

AMASS will follow an incremental approach for result development and validation. Three versions of the AMASS platform will be released during the project, thus at least three internal training events will be necessary for application of project results. The training activities will deal with both the implemented software tool support and the underlying conceptual framework (e.g., the CACM). Ad-hoc meetings for training, or for reduced groups of partners, might also be arranged.

### 3.3.3 Plan for Internal Training

The events for internal training currently envisioned in AMASS and with a defined date are shown in Table 7.

**Table 7.** Internal training events

Event	Date	Resp.	Description
Baseline Solutions Seminar	May 2016	TRC	Training on baseline and background aspects for creation of AMASS results, from related projects and initiatives: OPENCROSS, SafeCer, CRYSTAL, MERGE, Papyrus, Arrowhead, EMC2, CHESS, CONCERTO. Several partners contributed to preparing the training sessions: A4T, CEA, FBK, INT, MDH, TEC, TRC, UC3...
AMASS Partner Tools Demo	Jun 2016	KMT	Training on AMASS partner tools with respect to seamless interoperability. Several partners contributed to preparing the training sessions: B&M, CEA, FBK, KMT, TRC, RPT, INT...
First Training for AMASS Demonstrators	Feb 2016	TRC	Training on AMASS first prototypes, around two months before their release
Second Training for AMASS Demonstrators	Jan 2017	TRC	Training on AMASS second prototypes, around two months before their release
Third Training for AMASS Demonstrators	Nov 2018	TRC	Training on AMASS final prototypes, around two months before their release

## 3.4 External Training

The external training activities target two main groups: practitioners and researchers. Training requires the innovative packaging of knowledge including examples, exercises, support material, and knowledge appraisal to be delivered through Internet-based training and face to face where possible. The training curricula will include the following.

- Industrial Training, in which skills and knowledge will be gained through structured demonstrations and exercises around the AMASS technologies.
- Research Training, whose main purpose will be to enhance understanding of core technologies, of their possible industrial use, and of research challenges.

We plan to make each of these external training programmes available through the AMASS website.

### 3.4.1 Industrial Training

Industrial training will focus on knowledge transfer to practitioners that might be interested in AMASS results. The main industry stakeholders have been introduced in Section 2.2, and include OEMs, component suppliers, integrators of safety-critical platforms, tool vendors, consulting and service providers, certification organizations, and standardization groups.

AMASS aims to make these stakeholders gain knowledge and skills related to the project results, for their usage and further development. Meetings with interested stakeholders will be arranged, and material in the form of presentations, videos, and exercises will be prepared. Industrial training will pay special attention to knowledge transfer via demonstrations, and more concretely via demonstrations of AMASS results usage and benefits through the industrial case studies (see e.g. Section 3.3.2).

Another major source for industrial training will be the activities with the EAB. The EAB main function and task is to provide advice and guidance on the AMASS results in order to leverage the results toward the community. The EAB may also facilitate networking with standardization committees and industry communities, and provide opportunities for research collaborations. To these ends, the project progress, results, and achievements will be presented to the EAB. The EAB might be interested in using AMASS

results, or in letting other parties know about the project. Such parties would also be candidate for industrial training. D7.1 [1] will provide more information about the role and responsibility of the EAB.

### 3.4.2 Research Training

Research training will have two main facets: training at academic institutions and training for related projects and initiatives. The next paragraphs describe examples of the kind of activities to perform for research training.

MDH, under the responsibility of Dr. B. Gallina, is offering a course on Safety Critical Systems Engineering ([http://www.mdh.se/utbildning/kurser/kursplaner-1.35552?l=en\\_UK&kursplan=27287](http://www.mdh.se/utbildning/kurser/kursplaner-1.35552?l=en_UK&kursplan=27287), course code DVA437), and within this course the findings of AMASS will be disseminated. During the edition 2016/2017 of DVA437, students will be challenged with a project inspired from one of the AMASS automotive use cases. The intention is to let students indirectly participate in the scientific challenges of the AMASS project. Based on the findings, the intention is to write a paper regarding the students' learning experience and benefits related to being aligned with relevant EU research projects. The intention is also to repeat this activity in the following edition by considering a space domain-related use case. Finally, guest lecturers coming from different domains are invited to this course. Boel Stefansson from LFV (<http://www.lfv.se/en>) is one of the guest lecturers. AMASS results will be disseminated to her and consequently within LFV.

In addition, a new course is about to be developed (<http://www.promptedu.se/certification-of-safety-critical-software-and-systems-7-5-credits/>) in the context of the educational initiative via the PROMPT project (<http://www.es.mdh.se/projects/415-PROMPT>). Contents related to AMASS will also be used in this course. Finally, MDH will supervise BSc, MSc, and PhD theses on topics related to AMASS.

UC3 participants teach several courses on areas related to AMASS, such as Software Engineering ([http://www3.uc3m.es/reina/Fichas/Idioma\\_2/218.15974.html](http://www3.uc3m.es/reina/Fichas/Idioma_2/218.15974.html)) and Software Project Management ([http://www3.uc3m.es/reina/Fichas/Idioma\\_2/218.13892.html](http://www3.uc3m.es/reina/Fichas/Idioma_2/218.13892.html)). Aspects related to AMASS will be presented in these courses, including the challenges tackled in the project and project results. It is also planned that the students attending these courses perform tasks in which they have to use AMASS technologies. In addition, UC3 participants will supervise BSc, MSc, and PhD theses on topics related to AMASS, e.g. safety evidence management and tool interoperability.

Finally, Table 8 lists projects and initiatives that can be subject to research training. The table also shows the partner that will be responsible for the link with each project or initiative.

**Table 8.** Related ongoing research projects and initiatives

Project	Resp.
EMC2: Embedded Multi-Core systems for Mixed Criticality applications in dynamic and changeable real-time environments ( <a href="http://www.artemis-emc2.eu/">http://www.artemis-emc2.eu/</a> )	AIT
SSF-SM140013-Gen&ReuseSafetyCases	MDH
SafeCOP: Safe Cooperating Cyber-Physical Systems using Wireless Communications ( <a href="http://safecop.deib.polimi.it">http://safecop.deib.polimi.it</a> )	ALT
Software Verification and Validation Lab ( <a href="http://svv.lu/">http://svv.lu/</a> )	UC3
Simulation pour la sécurité du véhicule autonome ( <a href="http://www.irt-systemx.fr/project/sva/">http://www.irt-systemx.fr/project/sva/</a> )	CEA
REVaMP2: Round-trip Engineering and Variability Management Platform and Process ( <a href="https://itea3.org/project/revamp2.html">https://itea3.org/project/revamp2.html</a> )	TRC
Arrowhead ( <a href="http://www.arrowhead.eu/">http://www.arrowhead.eu/</a> )	AIT
ENABLE-S3: European Initiative to Enable Validation for Highly Automated Safe and Secure Systems ( <a href="http://www.ecsel-austria.net/files/ECSEL/newsletter/Veranstaltungen/14_00-ENABLE-S3-2016-04-07.pdf">http://www.ecsel-austria.net/files/ECSEL/newsletter/Veranstaltungen/14_00-ENABLE-S3-2016-04-07.pdf</a> )	AIT
CATSY: ESA project on Catalogue of System and Software properties	FBK
CITADEL: H2020-DS project on Critical Infrastructure Protection using Adaptive MILS	FBK

### 3.4.3 Plan for External Training

The events for external training currently envisioned in AMASS and with a defined date are shown in Table 9.

**Table 9.** External training events

Event	Date	Resp.	Description
Training for formalization of requirements	2016	HON	Presentation of requirement formalization – comparison of state of the art approaches
Software project management course	May 2017	UC3	Presentation of AMASS challenges and results at a course on software project management of UC3, which includes system quality assurance aspects
Training for Polarsys members	2017	TEC	Presentation of first AMASS prototype

### 3.5 Training Plans per Partner

The current AMASS partners' individual plans for training are as follows. As it can be observed, most AMASS partners already have plans for training. Most of the activities are not included in Table 7 and Table 9 because they do not have a defined date yet.

TEC	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• OPENCROSS general overview</li> <li>• OPENCROSS compliance management</li> <li>• OPENCROSS argumentation management</li> <li>• OPENCROSS cross-domain reuse</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Link between assurance and system models</li> <li>• Seamless interoperability mechanisms</li> <li>• Safety and Security co-assessment</li> <li>• Cross-domain reuse</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Presentation of AMASS results to Polarsys/Eclipse community</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Tutorial(s) at scientific conferences</li> </ul>

HON	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Requirements Formalization overview</li> <li>• Formal verification and validation of requirements and system design</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Training on safety assessment</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Presentation of AMASS approach for Crystal partners</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Presentation of requirement formalization – comparison of state of the art approaches</li> </ul>

KMT	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• KMT tools interoperability mechanisms</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Seamless interoperability mechanisms</li> </ul>

<b>MDH</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• SafeCer: Process lines, assurance case lines, generation &amp; reuse</li> <li>• SafeCer: Enabling Generation and Reuse of Safety Argument-Fragments via Weak and Strong Contracts</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Training on OSLC-based domain extensions in compliance with standards</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Tutorial(s) at companies, e.g., Scania AB + Tutorial(s) within the upcoming PROMPT-course for industrial partners</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Tutorial(s) at scientific conferences</li> </ul>

<b>IFX</b>	
Internal training on project results	<ul style="list-style-type: none"> <li>• Training on background and results will be combined into an event</li> </ul>

<b>AIT</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Participation in AMASS training sessions: <ul style="list-style-type: none"> <li>◦ Compliance, argumentation management (DCASE Editor &amp; WEFACT) training session</li> </ul> </li> <li>• Training on safety &amp; security co-engineering (from Arrowhead and EMC2)</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Safety &amp; security co-engineering concepts, methods, and application to use cases</li> <li>• Application of MoMuT for security testing</li> <li>• Application of WEFACT for the assurance case</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Tutorial at industry events or Artemis/ECSEL Austria conferences</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Use AMASS technology in university lectures held by AIT project team</li> <li>• Tutorial at research conference</li> </ul>

<b>FBK</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Training on contract-based design</li> <li>• Training on model-based safety analysis</li> <li>• Training on formal methods for requirements analysis</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Presentation of the extension of SafeCer results</li> <li>• Presentation of results of related ongoing projects</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Training to partners of other projects</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Tutorial at research conference</li> </ul>

<b>INT</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Training on model based, component based design using CHES</li> <li>• Training on contract-based design using CHES</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Link between assurance and system models</li> <li>• Seamless interoperability mechanisms</li> <li>• Safety and Security co-assessment</li> <li>• Cross-domain reuse</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Presentation of AMASS results to Polarsys/Eclipse community</li> <li>• Presentation of AMASS results to selected Intecs customers</li> </ul>

<b>B&amp;M</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• B&amp;M tools integration mechanisms</li> </ul>

<b>GMV</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Participation in (attendee) training courses related to AMASS baseline solutions and candidate tools to be used in the space demonstrator.</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Participation in (attendee) the internal training events.</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• GMV internal training of AMASS tools using the Space Demonstrator as baseline.</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Demonstration of AMASS methodology, technologies and tools internally at GMV to assess their application in space operational projects</li> </ul>

<b>RIN</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Internal training given by AMASS participants</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• RINA internal presentations on AMASS results</li> </ul>

<b>UC3</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• OPENCOS evidence management</li> <li>• OSLC &amp; CRYSTAL</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Link between assurance and system models</li> <li>• Seamless interoperability mechanisms</li> <li>• Ontology-based assurance reuse</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Presentation of AMASS results to UC3 industry network</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Presentation of AMASS challenges and results at university courses and to related research projects and initiatives</li> <li>• BSc, MSC, and PhD theses on topics related to AMASS</li> <li>• Tutorial(s) at scientific conferences</li> </ul>

<b>RPT</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• RPT tools integration mechanisms</li> </ul>

<b>TRC</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• CRYSTAL: Requirements-based systems engineering</li> <li>• Requirements Quality Suite: training on this suite of tools that could be either used as background for the research topics of AMASS but also to be used internally to check quality criteria for the requirements written for the AMASS project itself</li> <li>• TRC tools interoperability mechanisms</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Link of assurance and system models</li> <li>• Seamless interoperability</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Networking with companies, e.g. Airbus, Alstom, and Renault</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Networking with related projects and other research institutions</li> </ul>

<b>OHB</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Participation in training courses related to AMASS platform and candidate tools to be used in OHB case study</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Demonstration of AMASS methodology, technologies and tools internally at OHB Sweden to assess their application in future development activities</li> </ul>

<b>VIF</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Model-based test case generation with specific tool solution (STATION)</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• SafeCer results on reuse of process elements by Process-Line Engineering</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Workshop on model-based safety-critical engineering</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Workshop on model-based safety- and security critical engineering methods (e.g. TARA)</li> </ul>

<b>A4T</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• System modelling with A4T tools</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• MERgE project: Main results</li> </ul>

<b>CEA</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Papyrus/Sophia framework for safety and security analysis</li> <li>• Papyrus system development tool suite for MDE with a focus on interoperability</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• System modelling with CEA results</li> <li>• Component specification with CEA results</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• Presentation of AMASS challenges and results to related research projects</li> </ul>

<b>SPS</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• OPENCROSS (attendee)</li> <li>• SAE J3061 and HEAVENS security model</li> </ul>
External industrial training	<ul style="list-style-type: none"> <li>• Presentation of AMASS results and OpenCert to industry partners</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• AMASS introduction for other projects where relevant</li> </ul>
<b>UOM</b>	
Internal training on necessary background	<ul style="list-style-type: none"> <li>• Formal verification and validation of requirements and system design</li> </ul>
Internal training on project results	<ul style="list-style-type: none"> <li>• Presentation of CRYSTAL results</li> </ul>
External research training	<ul style="list-style-type: none"> <li>• BSc, MSc, and PhD theses on topics related to AMASS</li> </ul>



## 4. Conclusion

This deliverable has presented the envisioned objectives, means, and activities for dissemination of and training on AMASS results. Both dissemination and training will be essential to ensure AMASS impact, and the whole consortium will engage in collaborative and coordinated actions in order to make third parties aware of AMASS results and know how to use them.

Dissemination activities will aim to promote project results, communicate its achievements, and raise interest in the solutions developed. The activities will target different stakeholders, mostly from industry but also some from academia, and will take advantage of different means and strategies to reach their objectives: AMASS website, brochure and presentations, publications, attendance to and organization of events, etc.

For training, AMASS partners will provide different industrial and research stakeholders with new knowledge and new, upgraded skills about CPS assurance and certification, and will collaborate to overcome the potential gaps between AMASS results and their application. Once training needs are identified, training sessions will be organised. The structure, content, and duration of the sessions will be tailored to the training objectives and the target audience.

AMASS will address both internal and external aspects for dissemination and for training. Internal aspects are essential to ensure a common, shared understanding of CPS assurance and certification, of how to tackle these activities, and of how to improve them within the AMASS consortium. External aspects are essential so that different third parties are aware of the project and its results. These parties also need to learn how they can use and benefit from AMASS results.

Subsequent WP8 deliverables (see Executive Summary) will report on the progress made on dissemination and training activities, as well as possible adjustments to the current plan.

## References

- [1] AMASS project: Deliverable D7.1 - External Advisory Board and Industrial Adoption Program Roadmap. 2017 (to be prepared)
- [2] AMASS project: Deliverable D8.1 - AMASS Website and Project Collaboration Platform. 2016
- [3] AMASS project: Deliverable D9.1 - Project Management Plan and Handbook. 2016
- [4] ARTEMIS: DECISION OF THE GOVERNING BOARD OF THE ARTEMIS JOINT UNDERTAKING APPROVING THE MULTIANNUAL STRATEGIC PLAN AND RESEARCH AGENDA FOR 2012. [https://ec.europa.eu/research/participants/portal/doc/call/fp7/artemis-2012-1/32195-artemis-gb-2011-d.33\\_signed\\_en.pdf](https://ec.europa.eu/research/participants/portal/doc/call/fp7/artemis-2012-1/32195-artemis-gb-2011-d.33_signed_en.pdf)
- [5] ARTEMIS: Strategic Research Agenda 2016. <https://artemis-ia.eu/publication/download/sra2016.pdf>
- [6] ARTEMIS: WG Education & Training. <https://artemis-ia.eu/working-groups/wg-education-training.html>
- [7] ECSEL: MASP and Work Plans. <http://ecsel.eu/web/documents/MASP%20and%20WP.php>

## Appendix A. External Events related to AMASS for Dissemination and Training Purposes

Table 10 lists external events that can be relevant to AMASS for dissemination and training purposes. A bold name means that some AMASS partner contributes to the organisation of the event. Further events have been listed in the individual dissemination and training plans in Sections 2.7 and 3.5, respectively.

**Table 10.** Relevant events for dissemination and training

Name	Type	Website
Ada Europe International Conference on Reliable Software Technologies	Academic	<a href="http://www.cister.isep.ipp.pt/ae2016/">http://www.cister.isep.ipp.pt/ae2016/</a> (for 2016 edition)
ARTEMIS Technology Conferences	Industrial	<a href="https://artemis-ia.eu/technologyconference2015/technology-conference-2015.html">https://artemis-ia.eu/technologyconference2015/technology-conference-2015.html</a> (for 2015 edition)
CSD&M - International Conference Complex Systems Design & Management	Academic & Industrial	<a href="http://www.2016.csdm.fr/">http://www.2016.csdm.fr/</a> (for 2016 edition)
DeCPS - Challenges and new Approaches for Dependable and Cyber-Physical Systems Engineering International Workshop	Academic & Industrial	<a href="http://www.cister.isep.ipp.pt/ae2016/workshops">http://www.cister.isep.ipp.pt/ae2016/workshops</a> (for 2016 edition)
<b>EC co-summits</b> (e.g., ARTEMIS and ITEA, and ARTEMIS)	Industrial	<a href="https://itea3.org/co-summit-2015/index.html">https://itea3.org/co-summit-2015/index.html</a> (for 2015 edition)
INCOSE International Symposium	Academic & Industrial	<a href="http://www.incose.org/symp2016/home">http://www.incose.org/symp2016/home</a> (for 2016 edition)
ISSRE - International Symposium on Software Reliability Engineering	Academic	<a href="http://issre.net/">http://issre.net/</a>
MODELS - ACM/IEEE International Conference on Model Driven Engineering Languages and Systems	Academic	<a href="http://www.modelsconference.org/">http://www.modelsconference.org/</a>
PROFES - International Conference on Product-Focused Software Process Improvement	Academic	<a href="http://www.profes-conferences.org/">http://www.profes-conferences.org/</a>
SAFECOMP - International Conference on Computer Safety, Reliability and Security	Academic	<a href="https://sites.google.com/site/safecompconferences/">https://sites.google.com/site/safecompconferences/</a>
<b>SASSUR - International Workshop on Next Generation of System Assurance Approaches for Safety-Critical Systems</b>	Academic	<a href="http://www.ntnu.edu/web/safecomp2016/sassur-2016">www.ntnu.edu/web/safecomp2016/sassur-2016</a> (for 2016 edition)
<b>SKY - International Workshop on Software Knowledge</b>	Academic	<a href="http://www.softwareknowledge.org/">http://www.softwareknowledge.org/</a>
RE - International Requirements Engineering Conference	Academic	<a href="http://requirements-engineering.org/">http://requirements-engineering.org/</a>
REFSQ - International Working Conference on Requirements Engineering: Foundation for Software Quality	Academic	<a href="http://www.refsq.org/">http://www.refsq.org/</a>
RELAW - International Workshop on Requirements Engineering and Law	Academic	<a href="http://gaius.isri.cmu.edu/relaw/">http://gaius.isri.cmu.edu/relaw/</a>
WOSOCER - International Workshop on Software Certification	Academic	<a href="http://www.mobilab.unina.it/wosocer2016/">http://www.mobilab.unina.it/wosocer2016/</a> (for 2016 edition)