



AMASS

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

WP7 - Community Building

1st EAB Workshop
11 September, 2017

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WP7 Leader

 **eclipse**
Eclipse Foundation Europe GmbH

Noteworthy Networking activities

Projects	Networking activities
<u>SafeCOP</u>	SafeCOP (Safe Cooperating Cyber-Physical Systems using Wireless Communication) will establish a safety assurance approach, a platform architecture, and tools for cost-efficient and practical certification of cooperating CPS. Common workshop organized in Stockholm during Addalot Safety conference 2017 in May.
<u>OMG System Assurance Task Force</u>	This task force specific activities include the development of the SACM specification for assurance case modelling. AMASS Partners (UC3, Tecnalía) participate to the Task Force.
<u>CP-SETIS</u>	CP-SETIS (Towards Cyber-Physical Systems Engineering Tools Interoperability Standardization) is a support-action type IA of Horizon 2020 aiming at harmonizing and creating a sustainable infrastructure for maintaining the IOS (Interoperability Specification) set of standards. Connection through the participation of some partners to to both projects (AIT).
<u>ESPRESSO</u>	Swedish project aimed at increasing readiness to comply with ISO-26262. Collaboration of MDH with Scania. Reuse of safety cases.

Industrial Adoption Program – context

- Target Groups
 - Industry
 - Policy makers
 - Research/Scientific/Open Source communities
 - SMEs
- Expectations
 - Compliance with certification process for safety-critical systems
 - AMASS results
 - Open tool platform to manage safety analysis, documentation and certification

Industrial Adoption Program – Roadmap

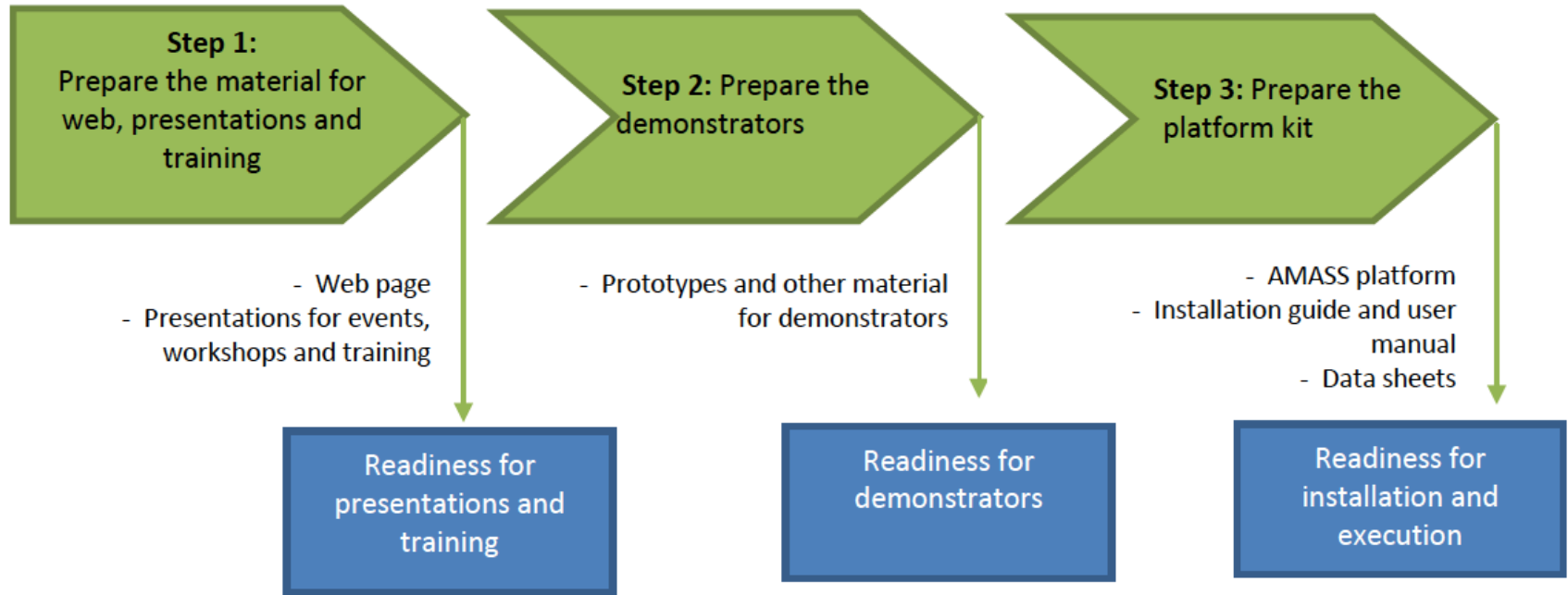


Figure 2. Workflow for the Industry user group

Industrial Adoption Program – Roadmap

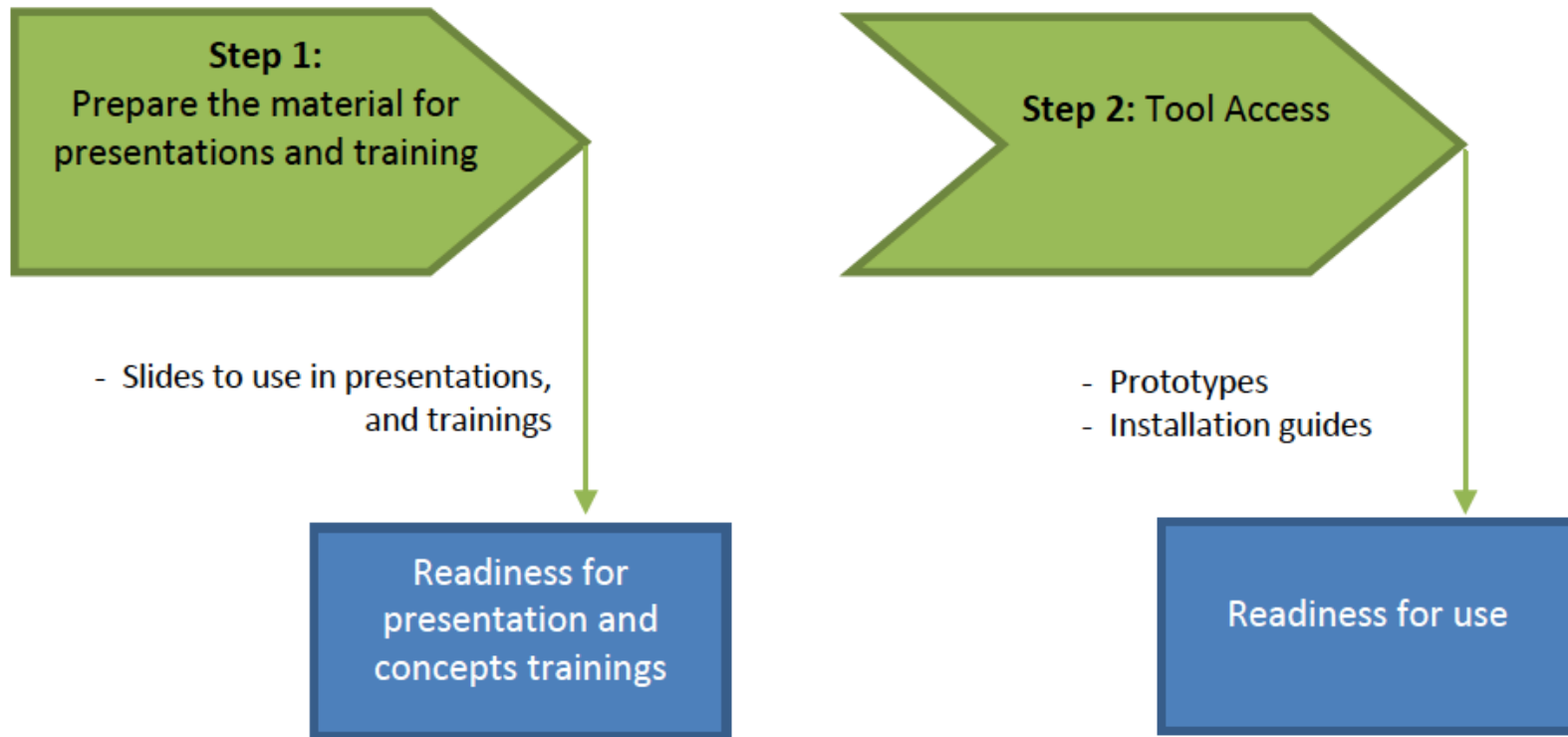


Figure 3. Workflow for the Research and Scientific user group

Industrial Adoption Program – Roadmap

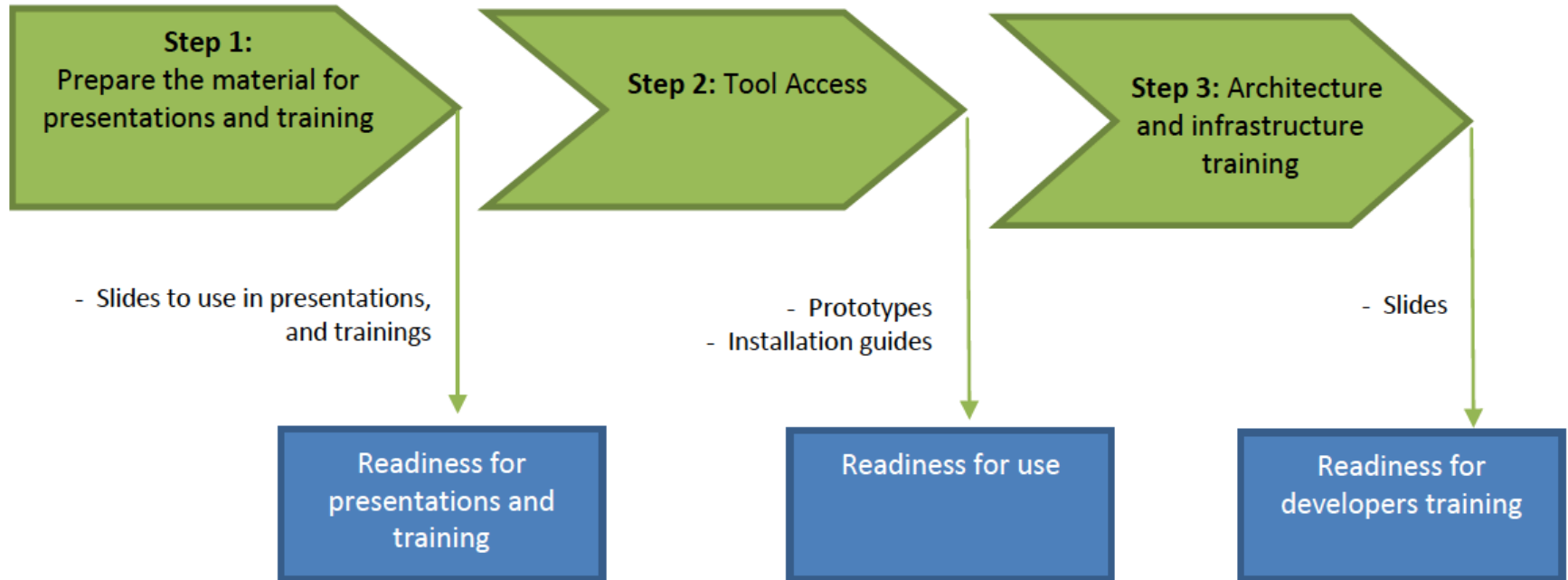


Figure 4. Workflow for the Open Source Community user group

Leverage Open Source to create an industrial community

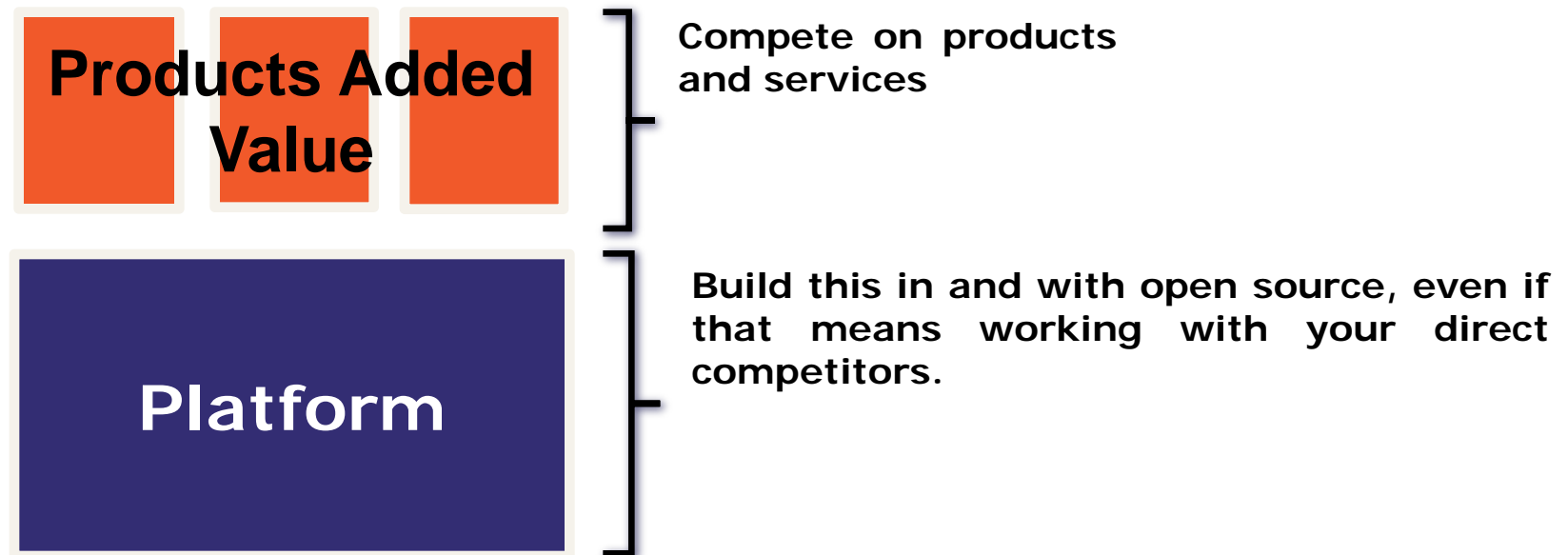


From the AMASS proposal

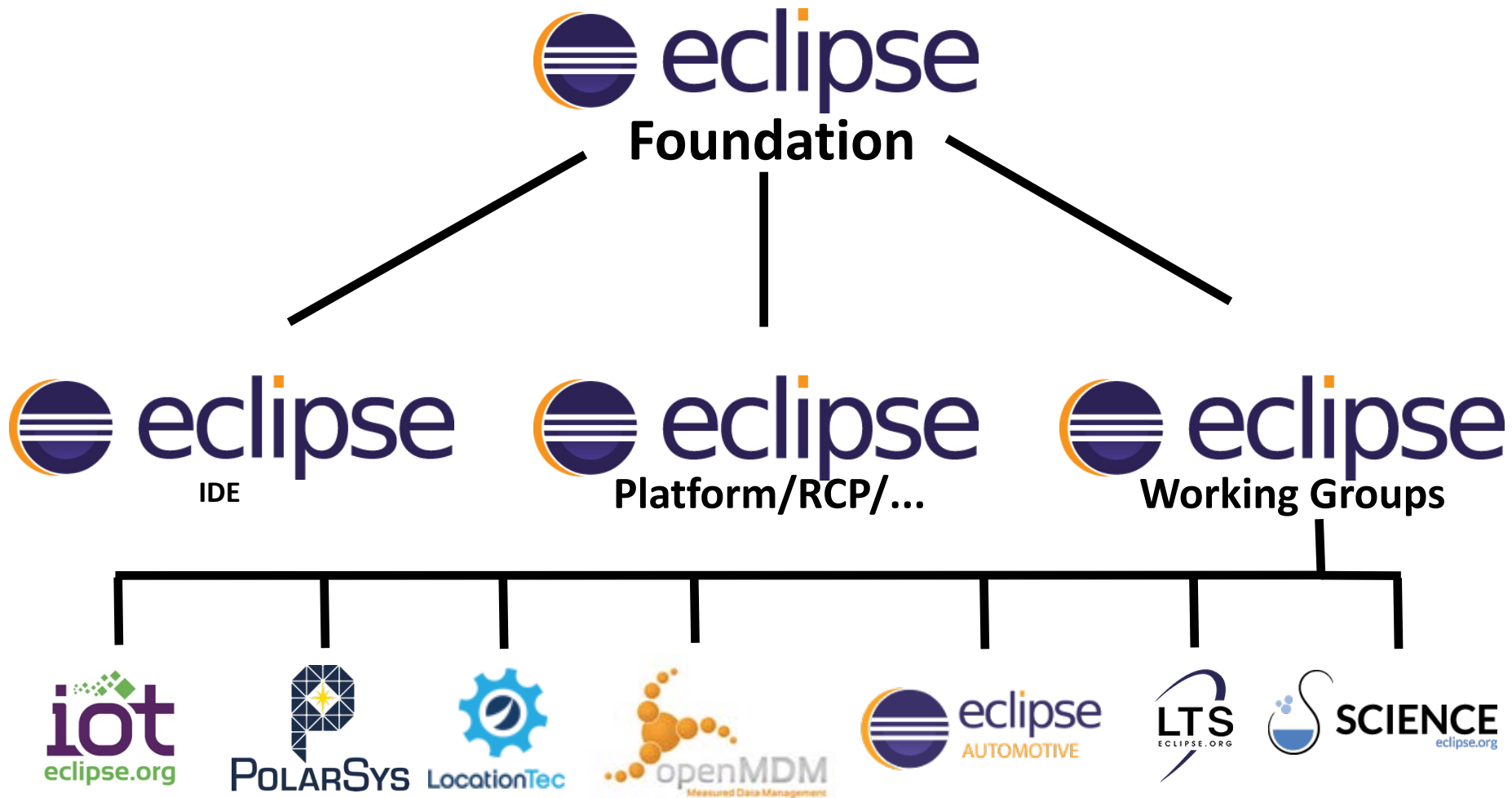
- ... the release of the AMASS tool platform as open source in Eclipse and PolarSys will help establish a industrial community around the project by bringing more worldwide visibility through all PolarSys members, and through all PolarSys marketing activities.
- An important goal of AMASS is to establish **a community for the AMASS platform** under the Eclipse ecosystem and here especially contributing to the Polarsys platform, targeting tools for embedded system development. ...

Eclipse Foundation supports “business friendly open source ecosystems” based on extensible platforms

- Identify precisely what your competitive differentiators are for your customers
- Focus all possible energies there, and acquire everything else from OSS, or help build it in OSS
- Open source platform to foster interoperability



Working Groups add a new dimension



Transparency



Andrew Magill – flickr.com



Openness



Chris J. Fry – flickr.com

Meritocracy



PolarSys Working Group

- PolarSys is the Eclipse Working Group dedicated to Open Source tools for **systems and software engineering**.
- Domains: **aerospace, defense and security, energy, health care, telecommunications, transportation**.
- Some projects:
 - Capella, Papyrus, Papyrus RT, B612, OpenCert, Chess, ...



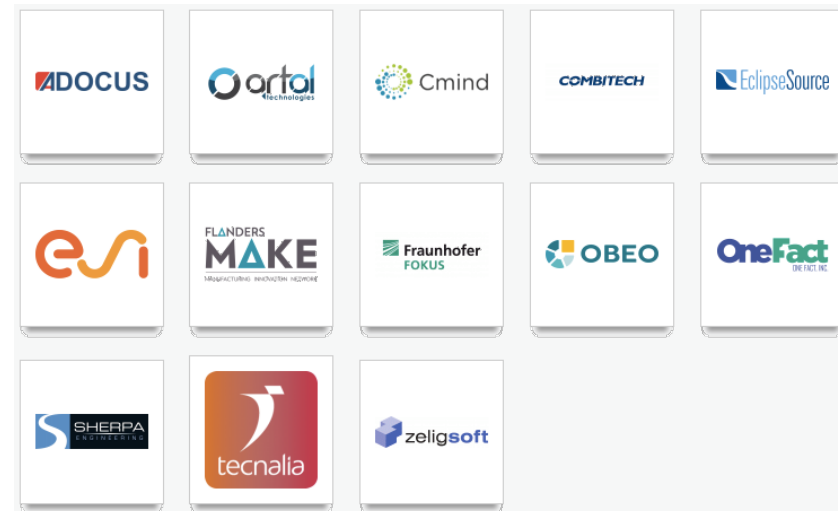
Guest & Academic Member



Steering Committee Member

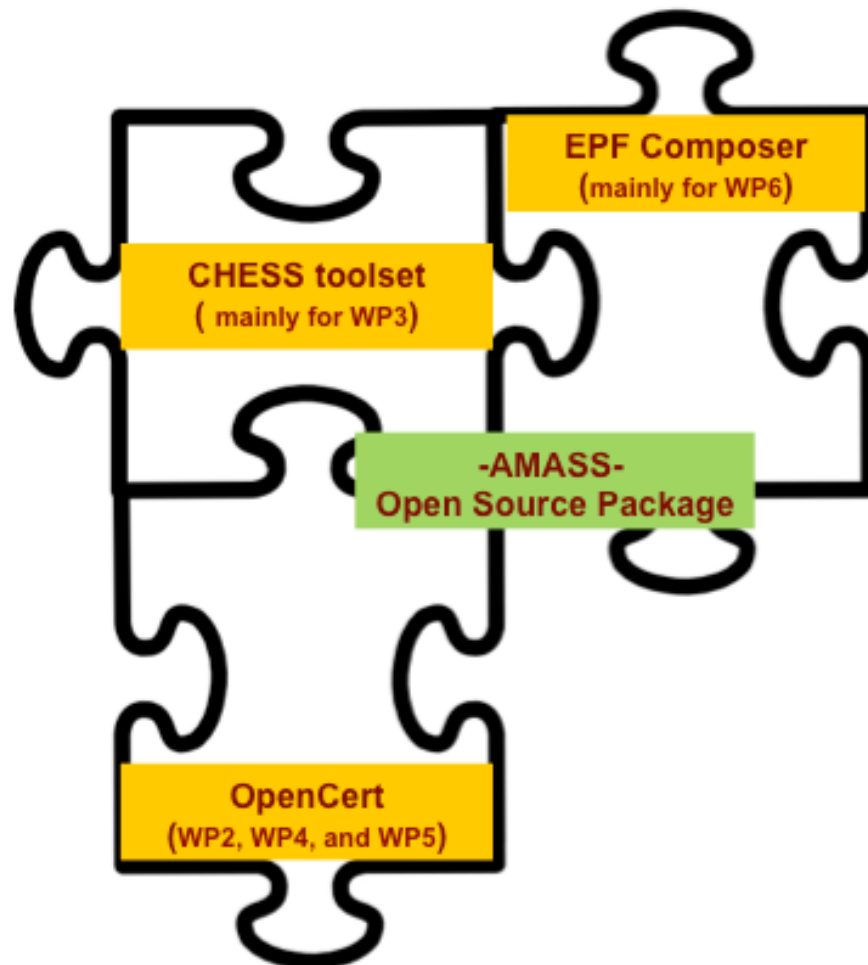


Participating Member



The AMASS Open Source Platform

- The AMASS Open Platform as a new platform for new safety and process assurance approaches.



Example of the OpenCert project



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OpenCert

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OpenCert is a customizable safety assurance and certification tool environment integrated into existing manufacturers' development and safety assurance processes and tooling. The OpenCert tools support the following activities of safety-critical product development:

- Standards & Regulations Information Management:** This activity group supports knowledge management about standards (e.g. DO178C, ISO26262, EN 50128/50126/50129, etc.), regulations and interpretations, in a form that can be stored, retrieved, categorized, associated, searched and browsed.
- Assurance "Project" Management:** This is the core set of functionalities concerned with the development of assurance cases, evidence management, assurance process management, and global monitoring of the compliance with standards and regulations. The most relevant services of the OpenCert tools are to provide functionality that supports guidance and re-use of assurance artefacts. In addition, these services offer an evolutionary and transparent product and process assurance and certification with the ability to automate the most labour-intensive activities (e.g., traceability, compliance checking, assurance process planning, and metrics management, among others), as well as providing facilities to integrate the engineering activities with the certification activities from early stages.
- Compliance Management:** The OpenCert tools help "engineers" to assess where they are with respect to their duties to conform to safety practices and standards, and still to motivate them to see the effective progress of the work and level of compliance.
- Modular and Incremental Certification:** OpenCert supports a modular safety assurance and certification approach to enable cost-effective reuse of pre-qualified building blocks in different contexts (e.g., systems, configurations, upgrades).

Licenses:
Eclipse Public License 1.0



RELATED PROJECTS

Project Hierarchy:

- » PolarSys
- » OpenCert

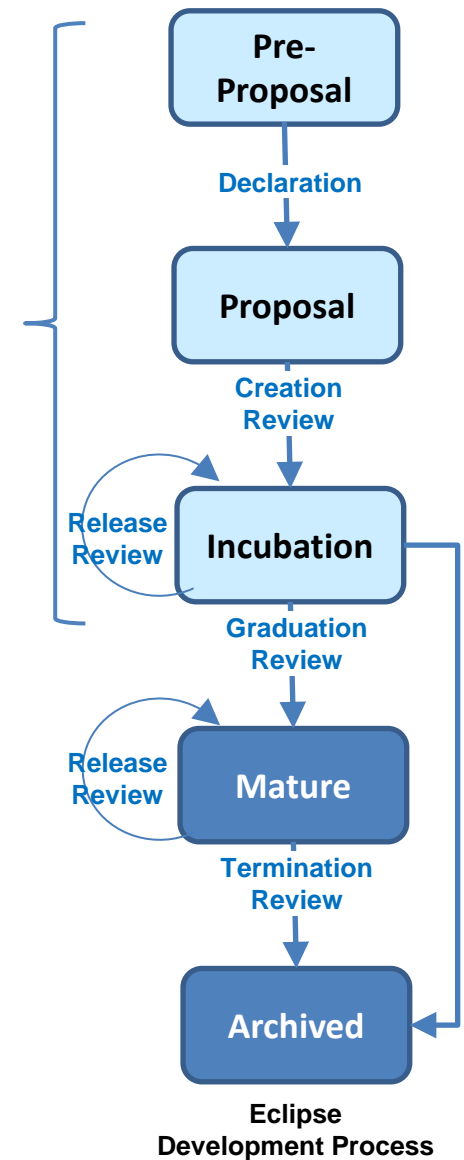
TAGS

Technology Types

PolarSys forge Research Projects

ABOUT POLARSYS

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Promoting OpenCert and the AMASS open platform



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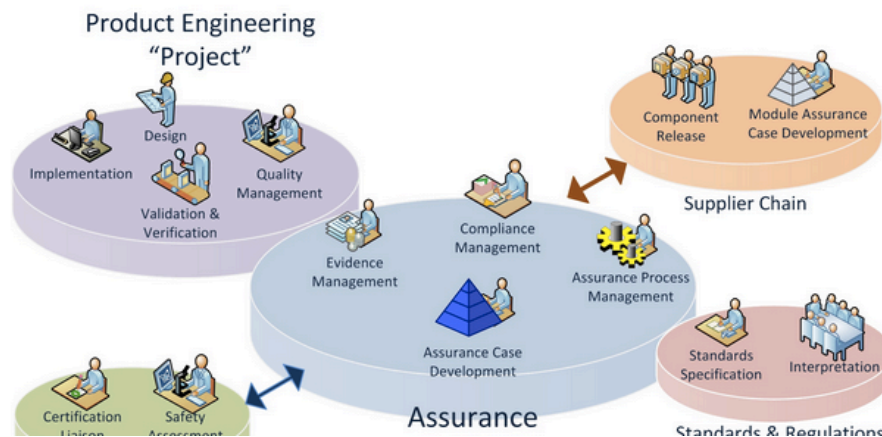
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OpenCERT

OpenCert is an integrated and holistic solution for **assurance and certification** management of **Cyber-Physical Systems (CPS)** spanning the largest safety and security-critical industrial markets, such as aerospace, space, railway, manufacturing, energy and health. The ultimate aim is to lower certification costs in face of rapidly changing product features and market needs.



News

Wed, Jun 7, 2017

Building the website

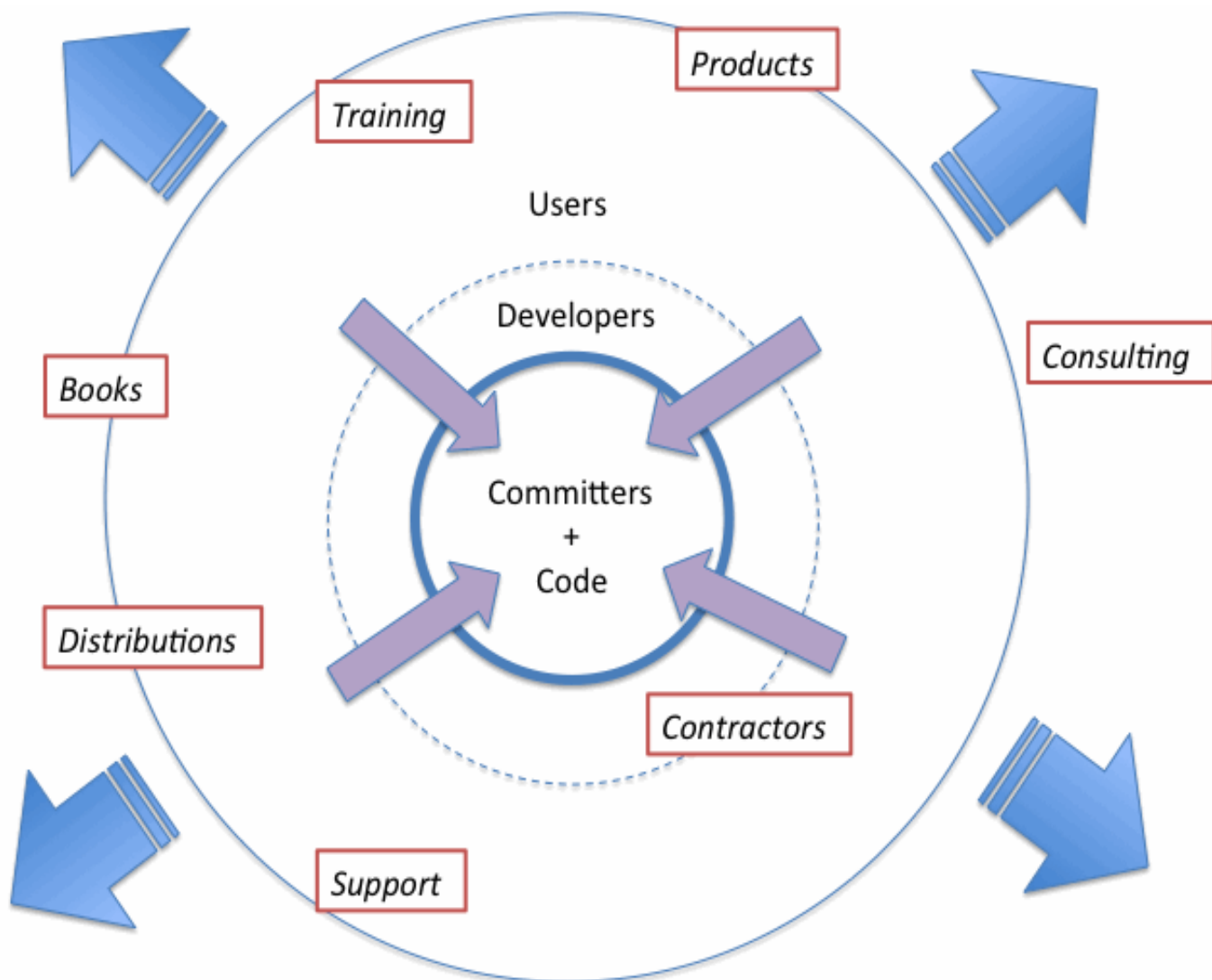
Article by **Antoine THOMAS**, Eclipse Foundation

In 2017 spring, we are starting to build a website for the Eclipse OpenCERT project.

[View all news](#)

Tweets by [@EclipseFdn](#)

Developing the open source ecosystem



Source: Patterns and practices for open source software success
<https://opensource.com/business/13/8/oss-patterns-and-practices>

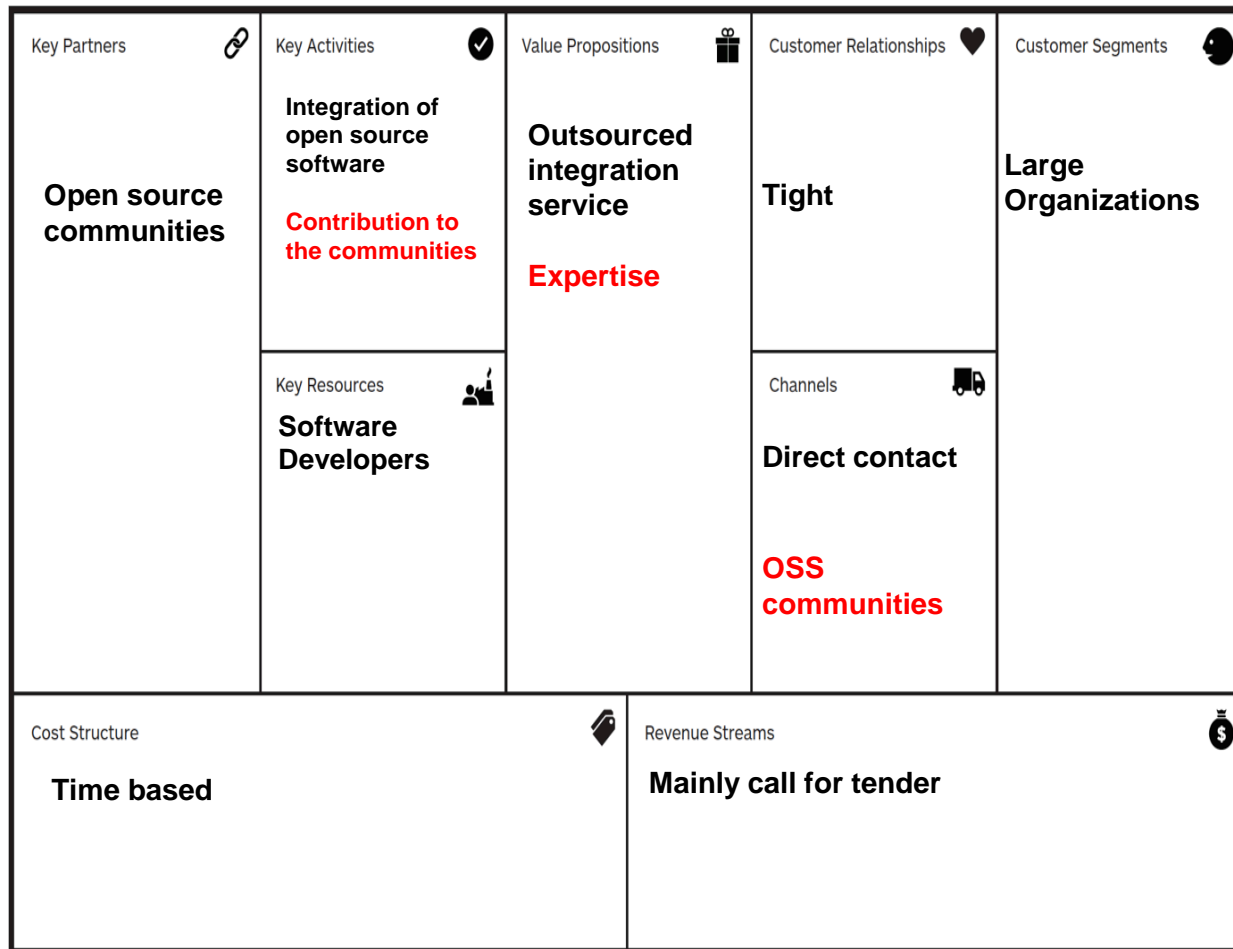
More about open source – Project sustainability

Migration of EPF Composer

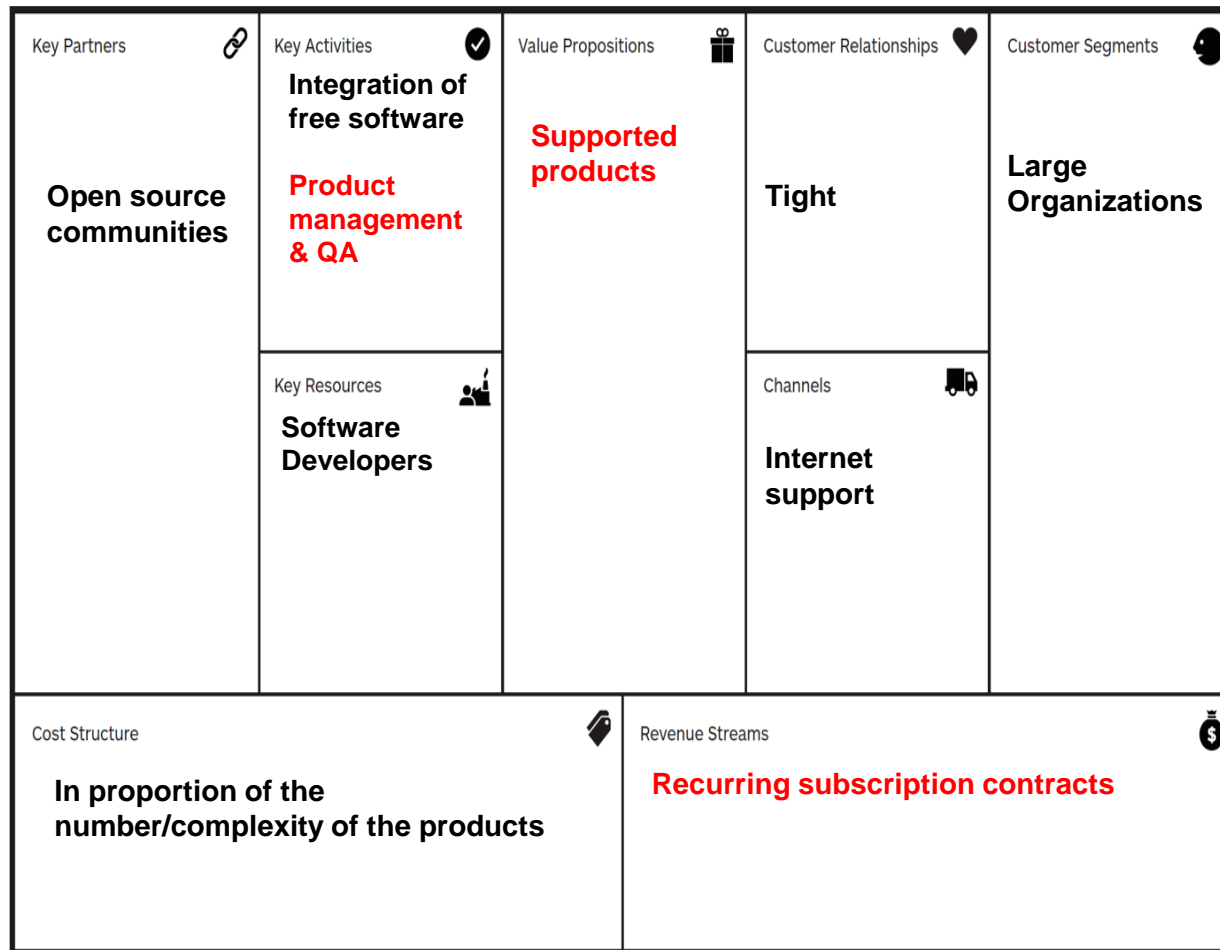
- EPF Composer had not been upgraded for the past eight years. The development environment was based on previous versions of the Eclipse platform
- The migration of EPF composer was critical for allowing the integration in the AMASS Open Platform
- This was done in four successive steps over a period of 2 months. The progress was tracked on a public bug tracker:
https://bugs.eclipse.org/bugs/show_bug.cgi?id=516608
- Muhammad Atif Javed proved that he is a good contributor to the EPF project and that he deserves to be elected as a, EPF committer
- The EPF project gets a new boost in interest



More about open source – Pure Service Business model



More about open source – Leveraged Service Business model



Open Source is not a



Open Source is an enabler

- A way to promote or establish standards
- A powerful marketing channel
- An ticket to collaboration



Next steps

- Connect with developers at conferences like EclipseCon



LUDWIGSBURG, GERMANY · **OCTOBER 24 - 26, 2017**

 **REGISTER NOW**

- Publish more content on PolarSys
 - Promote OpenCert
 - Promote the AMASS Open Platform built with OpenCert, CHESS and Eclipse Process Framework

Thank you for your attention!

