



CHOREOS

Large Scale Choreographies
for the Future Internet

ICT IP Project

Deliverable D9.7.1

Plan of Open Source Community Building

<http://www.choreos.eu>

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Abstract

This report is an update on the actions taken to develop an open source community around the CHOReOS project during its first year. It covers the following parts; Open Source Licensing, website development and curation, social network activity, collateral development, academic and industry event and the development of the CHOReOS OW2 Initiative. For each part, the report provides an overview of the actions undertaken during the first year of the project and drafts and outlook of the action for the second year.

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Glossary, acronyms & abbreviations

Item	Description
AGPL	GNU AFFERO General Public License
CA	Consortium Agreement
COSW	China Open Source Week
DL	Deliverable Leader
DOW	Description of Work
EPL	Eclipse Public License
EU	European Union
FISL	Foro Internacional do Software Livre
IAC	Industrial Advisory Committee
IDRE	Integrated Development and Run-time Environment
IP	Intellectual Property
LGPL	GNU Lesser General Public License
MST	Management Support Team
OCSi	OW2 Open Source Software initiative
OSS	Open Source Software
PL	Project Leader
PMC	Project Management Committee
PO	Project Officer
PTC	Project Technical Committee
SEO	Search Engine Optimization
SL	Scientific Leader
SQuAT	Software Quality Assurance and Trustworthiness
WP	Work Package
WPL	Work Package Leader

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1. Introduction

This report introduces the CHOReOS Open Source Community Building Plan. It includes the general principles driving the CHOReOS project open source community development effort and an update on the actions taken during the first year of the project to develop its open source community around its technology during its first year.

1.1. The goal of community building

The goal of the “Open Source Community Building Plan” in the CHOReOS project is to develop the conditions that will enable the pursuit of the development activity beyond the official duration and the budget scope of the project.

More specifically, the aim of the community building plan is to provide and start operating the business ecosystem platform to help develop an active community of developers and stakeholders and support it beyond the official duration of the project.

A business ecosystem platform provides three key services: it is “first a technical (infrastructure) delivering collaborative services to project teams, second, it is a catalyst for social and business interaction, and third (it) provides communication and branding services for developing projects' visibility and market awareness¹.”

1.2. CHOReOS project three-stage process of community building

Community building within the CHOReOS project will be developed along three key stages of increasing complexity.

- **Technical stage:** The first stage is to prepare and ear-mark the project code for community sharing, it includes selecting the appropriate license, such license being an open source license because it is exactly what they have been designed for.
- **Open source stage:** The second stage is to develop the project as a recognized open source endeavour compliant with established open source ethos and governance so as to facilitate its acceptance in the open source world.
- **Ecosystem stage:** The third stage is to leverage the project's open source recognition into a dynamic business ecosystem attracting stakeholders, such as consultants and integrators beyond the circle of the project's developers.

In our view, there is a correlation between these three stages and the development of the community platform as illustrated below with few examples. This structure will guide the implementation of the CHOReOS Community Building plan.

	Community Building Plan stages		
Platform Services	Technical stage	Open source stage	Ecosystem stage
<i>Infrastructure services</i>	Eg.: Identify modules, Set up website, etc.	Eg.: Project on Forge, Developer tools	
<i>Governance services</i>		Eg.: Join OSS org., Launch OSS project	
<i>Marketing services</i>			Eg.: Link other projects; Grow market awareness

Table 1: Technical1 stage progress report

¹ Source: http://www.ow2.org/xwiki/bin/download/About/OW2_Consortium/CedricThomasPlatformStrategy0903.pdf

1.3. Report outline

This report reflects the structure of the community building plan in the following manner:

- The context: the advantage of an open source strategy (Section 2): this section explains why the open source strategic option is right for the purpose of community building in the CHOReOS projectors
- Technical stage: Open Sourcing the IDRE (section 3): this section provides an overview of the legal technicalities enabling cooperation and decisions in progress
- Open Source stage: CHOReOS as an OW2 project (Section 4): this section describes why and how the community building plan leverages the OW2 open source community
- Ecosystem stage: The CHOReOS-led initiative (Section 5): this section outlines the last stage of the plan to develop market outreach for the project

1.4. An on-going process

The CHOReOS Open Source Community Building Plan is an on-going process. Its three stages will mature sequentially. The development of the CHOReOS community will truly start from the moment the CHOReOS project delivers usable software. This evolution will enable us to mature all sections of the report toward the end of the project.

For each stage we provide an exhibit highlighting achievement for year one and the outlook for years two and three.

2. Context: the advantage of an open source strategy

The positive externalities granted by an open source strategy makes it the most adequate to develop a community around the CHOReOS project.

Positive externalities occur when an agent's production or consumption activity has an influence upon another agent's welfare without the intermediation of any economic transaction. The open source software development process and legal framework generate positive externalities whether economic, technologic, strategic or social. From the standpoint of research and development endeavours and more specifically the CHOReOS project, open source externalities result in lowering the barriers to access to new technologies and facilitating the development of complex technologies.

2.1. Lower barriers to new technology

First of all, the open sharing mechanism and common ownership resulting from the open source licensing system significantly lowers both legal and economic barriers to access to new technologies. Legal barriers are considerably lowered by fundamental open source licensing principles allowing users to deploy and modify the code without restriction nor commitment. Economic, or budgetary, barriers are reduced by the absence of nominal cost to access software. This facilitates the discovery of new software and the dissemination of new technologies.

2.2. Easier cooperation

Second, open source facilitates deployment of complex technologies. The open sharing mechanisms implemented by the open source licensing system enable integrators and developers to seamlessly combine multiple technologies and know-how from independent providers. Open source in general makes multi-tier cooperation easier by enhancing trust and reducing coordination costs.

Complex projects are known for generating high overhead and coordination workloads – what economists call “transaction costs”. Open source helps lower these costs. To quote the OW2 newsletter (May 2011): “What makes open source different is that it provides a generic environment for doing business together (...) the fabric for uncomplicated, multi-player collaboration.”

3. Technical stage: Open Sourcing the IDRE

This section covers the technical stage of the CHOREOS Community Building Plan.

Open source is defined by access and usage freedom of software source code. The open source status of a software is determined by the way the code is made available to the public and by the licence that is attached to the code.

The CHOReOS community building plan is based on open sourcing the key software deliverable of the project. This key deliverable is the CHOReOS Integrated Development and Run-Time Environment (IDRE).

In our plan, open sourcing the IDRE starts with establishing a suitable structure for the code. The structure of the deliverable has to be modular in order to facilitate third party contributions and the format of the packages made available has to be adapted to the collective work of open source communities.

The partners are working toward a clear definition of the IDRE development modules on one hand and the IDRE run-time modules on the other.

3.1. Code Structure

The open source software activities are usually organized in projects. An open source project regroups development actions corresponding to one or more technical software components, or the integration of different technical components in order to build a platform. The CHOReOS deliverable will be integrated by a partner (see WP5: task 5.4) into a format adapted to the collective work of open source communities.

All partners have agreed that the CHOReOS Integrated Development and Run-time Environment (IDRE) be delivered as open source packages. More particularly, WP3 will deliver and WP5 will integrate an open source middleware solution with the clear objective of creating an open, collaborative community around service-oriented middleware for the Future Internet.

3.2. Open source licenses for the project deliverable

The selection of licenses for the modules is the second stage in setting-up the CHOReOS community building plan. There are dozens of open source licenses to choose from and each one has characteristics that serve a specific purpose. Given the number of partners and the complexity of the code to be open sourced, the CHOReOS code will be covered by more than just one open source license. However, it is important to select licenses that are not incompatible and the IP strategy must take into account the experience of the partners and the licenses of the open source software they bring into the project.

The licenses currently envisioned are:

- IDRE development modules:
 - EPL (Eclipse Public License: <http://www.eclipse.org/org/documents/epl-v10.php>)
 - AGPL (GNU AFFERO General Public License: <http://www.gnu.org/licenses/agpl.html>)
- IDRE runtime modules:
 - LGPL (GNU Lesser General Public License: <http://www.opensource.org/licenses/lgpl-2.1.php>)

3.3. Creative Commons licenses for the project documentation

The Creative Commons licenses were created to provide a legal framework to give everyone from individual creators to large companies and institutions a simple, standardized way to

keep their copyright while allowing certain uses of their work. To consult the full list of open source licenses: <http://creativecommons.org/licenses/>.

As the project matures, it will be discussed with the CHOReOS partners that the dissemination of all educational material produced by the consortium should be done under a Creative Commons License:

- Tutorial on service-oriented middleware for the Future Internet to be submitted to and given at a major event in the area of middleware/Future Internet, during the project's final year.
- Tutorial on development process and supporting toolset for ultra-large-scale service-oriented systems of the Future Internet to be submitted and given at industry and scientific events in the area of service/software engineering.

3.4. Technical stage progress report

The exhibit below highlights achievements and outlooks for the technical stage of the Technical stage of the community building plan.

Community Building Plan: Technical Stage			
Platform Services	Achieved Year 1	Year 2 Outlook	Year 3 Outlook
Infrastructure services	Launched public web site Launched social networks Set-up developers sand box Set-up Slideshare for project presentation publishing	Extend website content Improve website SEO Grow social network usage in consortium Sections: blog, events Grow twitter, LinkedIn	
Governance services	Drafted IDRE structure Identified most probable licenses	Confirm IDRE structure Confirm licenses	
Marketing services	Started interviews Open source events: OW2con, Solution Linux, Created new logo	Develop event plan Link website with other projects	

Table 2: Technical stage progress report and outlook

Open Source stage key milestones include:

- Q4-2010: CHOReOS public website at www.choreos.eu, published first interview, CHOReOS presentation at OW2con, licenses identification
- Q1-2011: set-up LinkedIn group, Twitter account
- Q2-2011: CHOReOS presentation at Solution Linux
- Q3-2011: CHOReOS sandbox open on the OW2 infrastructure
- Q4-2011: new logo, slideshare embedded in website
- Q4-2011: IDRE structure and components definition, CHOReOS presentation at OW2con
- Q1-2012: Confirm IDRE structure and licenses, Draft event plan,

4. Open Source stage: CHOReOS as an OW2 project

This section covers the Open Source stage of the CHOREOS Community Building Plan. It highlights the three key principles of the CHOReOS community building plan:

- Joining an established open source community
- Ramping up the open source community
- Managing CHOReOS as an open source project

4.1. Joining an established open source community

For developing its community, the CHOReOS consortium decided right from the onset to rely on the resources and know how of OW2. Founded in 2007, and counting today 70 institutional members (including private companies, universities and research organizations), 120 hosted projects, OW2 is a well recognized open source community.

4.2. Independent

OW2 is an independent open source organization, one of the top four in the world, comparing only to Apache, Linux and Eclipse foundations. All other communities are controlled by private companies: OpenOffice, Mozilla, Ubuntu, OpenStack, etc. They are dependent on their parent companies' strategic decisions which can be fatal for the communities. For example, Nokia killed the Symbian community the day it decided to reproprietaryize its open source operating systems for mobiles. Similarly, the OpenOffice community got so shaken after Oracle acquired Sun, OpenOffice parent company, that it eventually disaggregated and is trying a rebirth through the LibreOffice fork.

4.3. European and global

From the EU point of view, it is worth stressing that OW2 was originated in Europe, under European leadership, and is highly driven by European interests while the other three independent OSS communities are essentially driven by North-American interests. A great majority of its members are European companies.

However OW2 sphere of influence is global. OW2 is regularly invited to present at conference in the US, Brazil and China. It spearheads the organization of the China Open Source Week (COSW) in October 2011. The recent membership of a global market leader such as SugarCRM is a testimonial to this influence.

4.4. Open source

OW2 is an organization with a real open source governance. As defined in its bylaws, its governance complies with five principles – Openness, Fairness, Transparency, Independence and Trust – and defines activities and decision mechanisms that reflect and implement the open source ethos derived from the free software movement. This is important as it make OW2, along with the Apache, Linux and Eclipse foundations, stand apart concerns such as SourceForge, Codeplex, Java.net, Trustie, etc. that are only code repositories with no true open source governance.

OW2's strategy is defined by its Board of Directors. Day-to-day operations are carried out by the Management Office. The Technology Council defines the architecture vision and is responsible for providing technology validation, for making Project life-cycle decisions and for monitoring production and overall Projects consistency.

4.5. Ramping up the open source community

4.5.1. Within CHOReOS partners

The first stage of the CHOReOS community building efforts is to develop the community within the CHOReOS consortium itself. The many individuals from fourteen partners that are currently participating in the CHOReOS project already constitute a community. This community develops within the framework of the projects meeting and is supported by its technical infrastructure (website and mailing lists).

4.5.2. Within the OW2 community

However the CHOReOS project community is by nature limited in scope and time i.e. limited to the project's consortium and to the duration of the project.

The plan is to leverage the OW2 Consortium in order to develop the CHOReOS community beyond these limitations. The core community is constituted by current OW2 Members within CHOReOS: INRIA, PetalsLink, and University of Sao Paulo. It is possible that this group grow since several CHOReOS partners are currently evaluating joining OW2.

4.6. Managing CHOReOS as an open source project

4.6.1. Fast track to maturity

Developing a community within OW2 starts by submitting software to the open source code base. The IDRE, or its modules, will be submitted as a new project in the OW2. By submitting its code to OW2, the CHOReOS project will adopt the OW2 open source governance system; by being accepted by OW2 Technology Council it will be granted open source legitimacy. As a result, the CHOReOS IDRE will be a recognized an open source project offering adequate technical and governance services to facilitate the open cooperation that enable the development of communities.

OW2 project follows a three-stage lifecycle: first upon submission, a project is accepted in incubation, next as the project becomes more substantial it is upgraded to mature, and finally if the technology becomes obsolete the project may be placed in archive.

The community building plan aims at enhancing the CHOReOS' project profile within OW2. When a software is submitted to the OW2 code base, it is initially accepted in incubation stage however the main part of OW2's communication efforts are on the "Mature" projects. The plan is to fast-track the project life cycle to "Mature" status.

4.6.2. Tactics

In order to enhance the visibility of the CHOReOS project within OW2, all software packages available for download from the OW2 forge should be "branded" with the CHOReOS identity.

In a typical open source way, generating interest will derive from maintaining a high frequency of code releases and regularly publishing news.

Beside the code, the awareness strategy calls for the development of marketing collateral and taking advantage of open source events in which OW2 participate. Marketing collateral include presentations, webinars, case studies, interviews. Open source events include, for instance, OW2con, Solution Linux and FISL.

4.7. Open source stage progress report

The exhibit below highlights achievements and outlooks for the technical stage of the Open Source stage of the community building plan.

Community Building Plan: Open Source Stage			
Platform Services	Achieved Year 1	Year 2 Outlook	Year 3 Outlook
Infrastructure services	Code structure defined	Set-up IDRE project on OW2 forge IDRE project dashboard	
Governance services	CHOReOS consortium open source evangelization	Open source guidance session for partners Submit IDRE to OW2 code base IDRE SQuAT compliance testing	IDRE available for download Fast track project to "Mature" status
Marketing services		Promote IDRE in events (exhibitions, conferences)	Promote IDRE in events (exhibitions, conferences)

Table 3: Open source stage progress report and outlook

Open Source stage key milestones include:

- Q4-2011: drafted IDRE structure and components definition
- Q1-2012: Open source guidance session for partners, Submit IDRE to OW2 code base
- Q3-2012: IDRE SQuAT compliance testing
- Q4-2012: IDRE available for download, Fast track project to "Mature" status

5. Ecosystem stage: The CHOReOS-led initiative

This section presents the plan to develop a CHOReOS-led initiative in the framework of the OW2 Consortium. At this point, several names are in discussion including “Future Internet initiative.”

5.1. Initiative definition

Within OW2, an "Initiative" is a collaborative project of the OW2 community characterized by a) the joint effort by OW2 members to combine projects in order to deliver a market-oriented sub-system and b) the opening of this joint effort to non-OW2 members so as to foster contribution by third parties. The OW2 forge provides the technical infrastructure enabling third-party developers to both download the technology and contribute to it.

This initiative is the mechanism which will support our community building efforts. It is worth mentioning here that an OW2 Initiative does not only deliver code but also marketing collateral (i.e. presentations, tutorials, press releases, etc.) that contribute to community building through the promotion of the technology.

5.2. Draft Charter

An OW2 initiative is driven by its charter, it will be drafted by the initiative lead and the OW2 Management Office.

An OW2 initiative is launched and lead by an OW2 Strategic Member. Within the CHOReOS consortium, INRIA is the OW2 Strategic Member designated to lead the initiative.

The CHOReOS-led Initiative will start by integrating deliverable D3.2.1 and D4.2.1 as OW2 projects within the OW2 Community before opening up to third- party stakeholders:

- D3.2.1: CHOReOS middleware first implementation
- D4.2.1: V&V tools and infrastructure – strategies, architecture and first implementation

5.3. Ecosystem stage progress report

The exhibit below highlights achievements and outlooks for the technical stage of the Open Source stage of the community building plan.

	Community Building Plan: Ecosystem Stage		
Platform Services	Achieved Year 1	Year 2 Outlook	Year 3 Outlook
Infrastructure services			
Governance services	OW2 board agreed principle of CHOReOS-led initiative	Launch CHOReOS-led initiative	Develop CHOReOS-led Initiative participants
Marketing services		Promote initiative along with IDRE OW2 Project	Develop initiative white paper

Table 4: Ecosystem stage progress report and outlook

The deliverables D3.2.1 and D4.2.1 are due on M18. The integration in OW2 will thus start second half of year two.

Ecosystem stage key milestones include:

- Q4-2011: Choreography Initiative lead preparation
- Q4-2011: CHOReOS workshop at OW2con

- Q4-2011: CHOReOS-led Initiative e charter draft and OW2 board submission
- Q1-2012: CHOReOS project submission to the OW2 code base
- Q1-2012: CHOReOS-led Initiative e OW2 Board approval
- Q2-2012: CHOReOS-led Initiative launch
- Q4-2012: The first integrated version of the IDRE is available for download

6. Conclusion

This report documents the open source engagement of the CHOReOS project. It presents the situation after one year into the project. During this period, we have learned two key lessons. The first one is that open source engagement in a collaborative project starts by developing open source awareness, culture and coordination among the project participants. The second is that open source is not an intuitive business model, for many business or technology practitioners it is the result of a learning process. We will gradually adapt the plan accordingly to make progress in these directions.