



DG DIGIT B3
Reusable Solutions

Free and Open Source Solutions for European Public Services (FOSSEPS)

Project Charter

“Europe-wide solutions for free and open source software use by public services in the EU” financed under budget line PP 01 21 04.

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1 CONSIDERATIONS ON THE BUSINESS CASE

Open Source is a valuable European asset

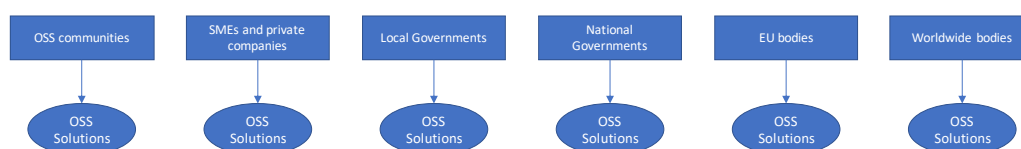
All over the world companies and governments are increasingly using open source software and solutions (see the European Commission's Open Source Observatory (OSOR) and the global open source study conducted by the EU-FOSSA 2 to support the EC's open source strategy¹).

This trend is echoed across European institutions and European public administrations² of all sizes. There is a clear need to manage and *protect open source and treat it as a collective, shared, and valuable European asset*.

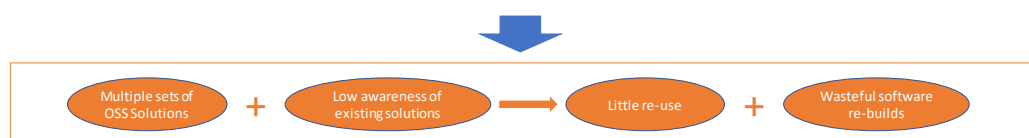
Not only does open source underpin the implementation of European Digital Strategy, it has a pivotal role to play in helping Europe achieve technical and digital sovereignty.

1) An Open Source Applications catalogue for European public services

Open Source software is already widely used, contributed to by public bodies and private organisations all over Europe and the wider world. Increasingly these organisations are maturing from being open source software *users* to open source software *creators*. We now have an extensive pool of applications or business solutions all over Europe and in fact, worldwide.



Unfortunately, there is little re-use, and quite often, *similar* open source or proprietary solutions are built. This is of course expensive and wasteful for stretched public finances. Examples include: Multiple municipalities developing the same system in the same country. Cross border entities not being able to use software due to language and minor functionality/ localisation differences.



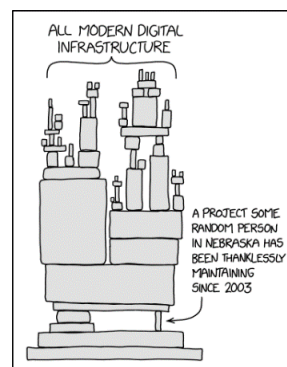
¹ Official reference at the publication office: ISBN 978-92-76-10536-7, DOI 10.2799/755940

² European Public Services and European Public Administrations are used interchangeably within this document and mean "national, regional and local government bodies/administrations within a country". The word loosely also encompasses European organisations such as the European institutions, CERN, etc.

2) Critical open source software

The software that European Public Services use and rely on multiple software components from different sources. Research by Google released under the OpenSSF³ shows the existence of “fragile” software communities, that multiple applications within the organisation rely on. The XKCD comic illustration on the right⁴ presents the situation very well. Software projects become *critical* either when the small team that maintains it cannot afford to hire additional staff; or when the software is deemed stable (or unexciting), and developers do not see it as an attractive project to join.

Critical software projects in use by European Public Services need to be urgently identified and mitigated against, to reduce the risk of disruption to services these public administrations provide.



3) European public services working together on Open Source

From several perspectives, it makes sense for European institutions and European public services to pool their resources and efforts in this regard. This can mean pooling of ideas, financial and other resources, developing and cataloguing business applications, conducting security audits and a whole lot more. Such cooperation could lead to a significant reduction in costs, a stronger and safer European open source ecosystem.

FOSSEPS Pilot Project

Building on the success of multiple earlier open source initiatives such as EU-FOSSA, the European Parliament has commissioned the European Commission to execute the FOSSEPS Pilot Project, to deal with the aforementioned three aspects.

FOSSEPS stands for Free and Open Source Solutions for European public services, which refers to the 2021 European Parliament initiative entitled “Europe-wide solutions for free and open source software use by public services in the EU” financed under budget line PP 01 21 04.

Definitions

We distinguish between the open source “software inventory” and the open source “applications catalogue”.

By Software Inventory: we mean core open source software, frameworks & tools, e.g. Linux, PHP, Eclipse Framework, KeePass, and Firefox. The European Commission created an Open Source Software Inventory, to help it could identify the critical software it needs to sustain, protect and secure.

By Applications Catalogue: we mean a catalogue of business applications built using open source software e.g. HR, traffic management, or taxation applications or systems which are distributed under an open source license. Many EU countries have created their own Open Source Applications Catalogue, which lists and describes software applications that anyone can use.

³ https://github.com/ossf/criticality_score

⁴ Image taken from <https://xkcd.com/2347/>

1.1 Project unknowns

The project team is aware of several aspects of the project, which whilst they cannot be predicted, will shape the direction of the project. For example, some of these are:

- The degree of participation by public services – national, regional, local governments and municipalities;
- The completeness of content submitted by public administrations for the critical software inventory;
- Cooperation and adhesion of the community to the European public services Open Source User Group (EPS-OS-UG)

On the other hand, it is also worth noting, that this project benefits from the experience of the EU-FOSSA 2 project which faced similar uncertainties, and so the project team is familiar with most of the aspects of the process.

2 PROJECT DESCRIPTION

Our overarching desire is to have the European Union’s Public Services collectively treat *open source as a shared and valuable European asset*. This can mean pooling of ideas, resources, business applications and a whole lot more. Such cooperation could lead to a significant reduction in costs, a stronger European open source ecosystem and potentially, technical sovereignty. Specific objectives for this Pilot project are create/foster:

2.1 Scope

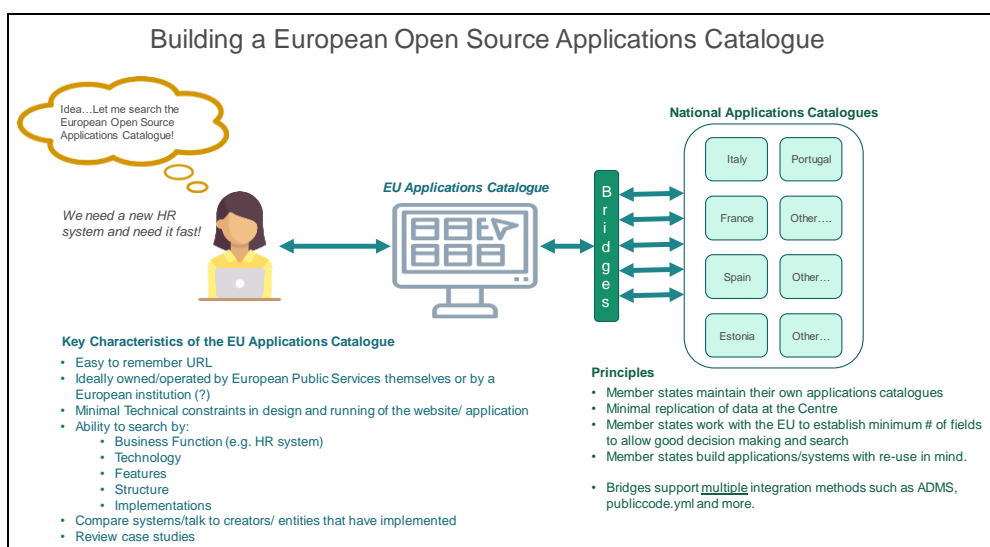
Outlined below is a statement of what is in and what out of scope.

2.1.1 Includes ("IN" Scope)

The project will for open source across European public services work in three areas – Sustainability, Security and Pooling:

2.1.1.1 Applications Catalogue⁵

- Study the existing Applications Catalogue landscape in at least 5 EU countries (which must include Italy, France and Germany) who have a significant pool of open source applications, define Benchmarks and a data model based on identified best practices, and examine the potential of using Joinup as a platform for the catalogue.
- Create a first version of the catalogue (e.g. a working prototype or an MVP) and release on the web for public search and use.



⁵ As this entire project relates to open source software, to improve readability, we have avoided repeatedly using the words Open Source. Therefore "Applications Catalogue" really means "Open Source Applications Catalogue", and "Software Inventory" mean "Open Source Software Inventory". Additionally, when we refer to the word European, we really mean the European Union, specifically the EU27 member states.

2.1.1.2 Critical Software Inventory

Previous software inventories were created with the primary objective being to identify the most critical⁶ open source software that the European institutions use. There is a need to identify such critical software on a European level for all public administrations.

- Create an inventory of the *most critical software* (not all software) that European Public Services use and rely on.

Note: learning from a previous exercise in collecting complete inventory data from European Public Services, this objective will be fulfilled by directly asking for only critical software data.

2.1.1.3 Cooperation on Open Source

Sharing initiatives, applications, knowledge and experiences on open source at a European level would significantly enhance the benefits for all European Public Services. This Pilot should host a workshop and conduct related activities to bring together open source representatives from European Public Services to, amongst others to discuss:

- How the Applications Catalogue can be kept up-to-date
- How the inventory of critical open source software can be kept up-to-date
- How can common open source issues faced by European Public Services be collectively dealt with
- How public administrations can better attend to these issues if they acted together, as a European *Public Services Open Source User Group* for example, and how this cooperation could be achieved by members.

2.2 Success Criteria

The success of the FOSSEPS project can be judged by the following measurable criteria within the key areas of focus for the project:

Area	Successful
1. Applications Catalogue	
Study existing national software applications catalogues and establish a benchmark for a European Catalogue	The study covers at least 5 national catalogues and consolidates information from at least 3 working catalogues, covering data, usage, lessons learned and best practices for maintenance.
Build a web based European open source applications catalogue	By Q1 2023 we should have a Minimum Viable Product (MVP) web-application which lists open source software applications from at least 3 national catalogues.
2. Critical Software Inventory	
Collect information and build a European open source inventory of critical software	We receive participation and open source data from at least 30 European public administrations and the inventory contains at least 30 pieces of software.
3. European Cooperation on Open Source	
Engage with European public services to form (potentially) a European Public Services Open Source User Group (EPS-OS-UG) for the purposes of pooling ideas and resources to collectively manage open source at a European level.	A workshop is organised with participants from at least 15 European public services (of which at least 5 are local municipalities) to discuss open source issues, where at least 3 opportunities for pooling resources are identified.

⁶ It is worth clarifying what we mean by the word *critical*. The EU-FOSSA project was tasked to identify and secure the critical open source software that the European Commission used. A critical open source software here would mean software that the European Commission significantly used/relied on, and whose existence was *threatened* due to continuity challenges of software community, which is often a single person.

2.3 User Needs

The table below shows the needs being addressed by the FOSSEPS project:

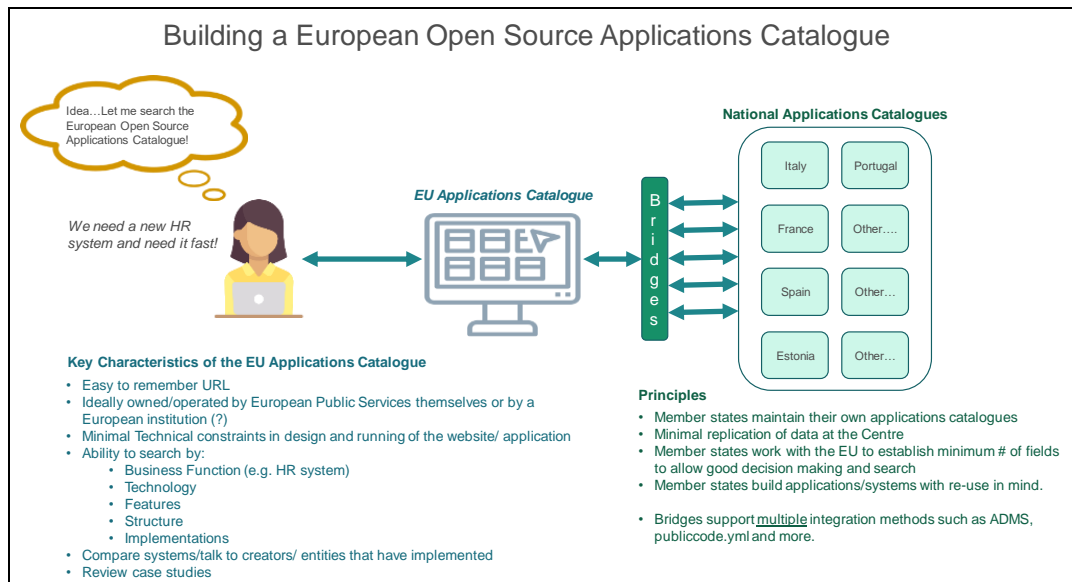
ID	Need Description	Priority
1. Applications Catalogue		
N1	A recognised central location/hub/website catalogue for all currently developed open source applications developed and/or used by European Public Services	High
N2	Ability for non-technical users in public services to easily find existing open source software applications for further evaluation for reuse/repurposing.	High
N3	Ability to compare features (business and technical) of software in the catalogue	Low
2. Critical Software		
N4	Knowledge of the most critical open source software in use at European Public Services	High
N5	Know that such critical software is being attended to and mitigated against	Medium
N6	Understanding of the issues, and best practices, relating to sustaining critical open source software using financial and non-financial mechanisms	Medium
3. European Cooperation on Open Source		
N7	Bring together open source representatives from European Public Services to, amongst others, share initiatives, applications, knowledge and experiences on open source at a European level	High
N8	Explore the potential formulation of framework/mechanism such as to engage with European public administrations across sizes and geographies on all issues related to open source software and applications used by European public services	Medium

2.4 Work Packages and Deliverables

The following work-packages form the main activities of the FOSSEPS project:

2.4.1 WP 1 – Define a European Applications Catalogue benchmark

This work package (already underway – funded by ISA²) will answer the questions and carry out the following activities.



- Examine the national Applications Catalogue landscape in at least 5 EU countries
 - What exists, who uses it, is it useful?
 - How are applications grouped?
 - How mature are these catalogues?
 - Do they contain software that is easy to reuse? E.g. do the applications within those catalogues have language parameterisation, a modular structure?
 - Technology/platforms, assess data extraction/connectivity possibilities.
 - Have these catalogues led to a modification on procurement practices? E.g. mandate examining existing applications before authorising new builds.
- Assess and propose technical solutions to connect to existing national systems, providing a central European view. Avoid duplicating national data centrally. Consider leveraging existing technology developed by the European Commission or by European Public Services.
- Propose procedures and responsibilities to ensure that the Applications Catalogue remains current and updated.
- Define common attributes for entry into the European Applications Catalogue, to guide future uploads and allow ease of searching from a prospective customer of the catalogue. This involves searching for software by functions, features, types, technology amongst other variables and arriving at a Data Model.
- Propose how such a catalogue could be created and maintained, what would it cost, and who would pay for it?
- Study the challenges and propose solutions to modifying existing software or creating new software which is fit for Europe wide use (e.g. language parameterisation, licencing, functionality blocks.)

- Summarise relevant chapters to produce a benchmark, for the creation, use and maintenance of the EU Applications Catalogue.

2.4.2 WP 2 – Create the first EU Open Source Applications Catalogue

Create a Minimum Viable Product (MVP) that will integrate with at least 3 national applications catalogues (using at least 2 different data representation/exchange formats e.g. publiccode.yml⁷ and ADMS⁸) to showcase an EU Applications Catalogue.

2.4.3 WP 3 – Create inventory of critical open source

At a high level, this work package concerns the creation of an inventory of Europe’s most critical open source software, used by European Public Services. This work package will:

- Define the words “Critical Software”
- Make list of already known critical software, by speaking with open source experts, groups and other sources from whom we can obtain information about critical open source software
- Gather data using surveys, questionnaires and calls to European Public Services
- Analyse received information and identify the top 30 critical open source software in European Public Services.
- Contact each of the 30 software projects and confirm the level of criticality by understanding their issues, problems, concerns and needs.
- Propose solutions to mitigate the difficulties that the identified critical software is facing

2.4.4 WP 4 – European Cooperation on Open Source

Host a workshop and conduct related activities to bring together open source representatives from European Public Services to discuss how public administrations can pool together to collectively manage the issues they face regarding open source. This workshop should also explore various frameworks for such cooperation, including the setting up of a *European Public Services Open Source User Group*. The group can also discuss issues arising out of the FOSSEPS project such as:

- How the Applications Catalogue can be kept up-to-date
- How the inventory of critical open source software can be kept up-to-date

2.4.5 Work Package 5 – Outreach Programme

Create, manage, and run an information campaign which alerts European Public Services about the project and one which assures greater participation in the software inventory and the Applications Catalogue.

2.4.6 Work Package 6 – Lessons Learned

Gather and document lessons learned from this project.

⁷ See <https://github.com/publiccodeyaml/publiccode.yml>

⁸ See <https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/adms>

2.5 Risks

This table identifies the key risks facing the FOSSEPS project.

ID	Risk Description & Details	Status	Likelihood ⁹	Impact ¹⁰	Risk Level ¹¹	Risk Owner	Risk Response Strategy ¹²	Action Details
Relating to the WP2: Create an inventory of critical software in use at European public services								
1	Not enough public institutions participate (in WP2 Inventory) leading to a lost opportunity for improving EU Security	Detected	H	H	H	PM / PO	Reduce	1) We are starting from a known list of critical software, which will be expanded. 2) We will use our contacts within the OSPO and collaborate with ISA2 to reach a wider list of European Public Services. 3) Communication for requesting information will go out from the European Commission not via the contractors.
2	European Public Services do not furnish the required information (WP2 inventory) in adequate detail	Detected	H	H	H	PM / PO	Reduce	The process of providing critical software has been simplified. Public administrations need not provide software inventories but can fill in a simple questionnaire. Further, external contractors will help to follow up.
Relating to the WP4: European Cooperation on Open Source								
3	There is no interest within European public services to cooperate on open source issues and less than 15 European Public Services attend the proposed workshop on the subject	Detected	M	L	L	PM / PO	Reduce	The FOSSEPS team will personally (not via suppliers) reach out to European Public Services to assess interest and discuss the benefits of such cooperation.
Relating to the WP5: Communication and outreach								
4	The communication campaign proves ineffective in drawing in responses from European public services.	Detected	M	M	M	PM / PO	Reduce	The communication will be targeted to European public services via multiple channels, and be managed by the Commission itself.

Likelihood: (H) High probability; (M) Medium probability; (L) Low probability.

Impact: (H) High impact; (M) Medium impact; (L) Low impact.

Risk level: (H) High; (M) Medium; (L) Low.

⁹ A numeric value denoting the relative probability that the risk should occur.

¹⁰ A numeric value denoting the relative severity of the impact of the risk if it should occur.

¹¹ The risk level is the product of the likelihood and impact (RL=L*I).

¹² The possible risk response strategies are: Avoid/ Transfer or Share/ Reduce / Accept.

3 COSTS, TIMING AND RESOURCES

3.1 Cost

Commitment appropriations for this preparatory action (Budget line PP 01 21 04) were approved under the 2021 Budget.

Work packages	Proposed Activity	Proposed Budget
WP0: Project Charter	Create the project charter	-
WP1: Benchmarking study	Study national catalogues and create a benchmark for a European Applications Catalogue	Funded by the ISA ² project
WP2: Critical software inventory	Create an inventory of critical software in use at European public services	€119k
WP3: Applications Catalogue	Build a web based European open source applications catalogue	€200k*
WP4: EPS FOSS Cooperation	European Cooperation on Open Source	Internally managed
WP5: Communication	Communication activities	€22k
WP6: Lessons Learned	Summarise the lessons learned from the project	Internally managed
WP7: Project Management	Manage the project, external contractors, etc.	€159k
	Total	€500k

*=Final amount to be confirmed in March 2022

3.2 Timing and Milestones

Planned timescales

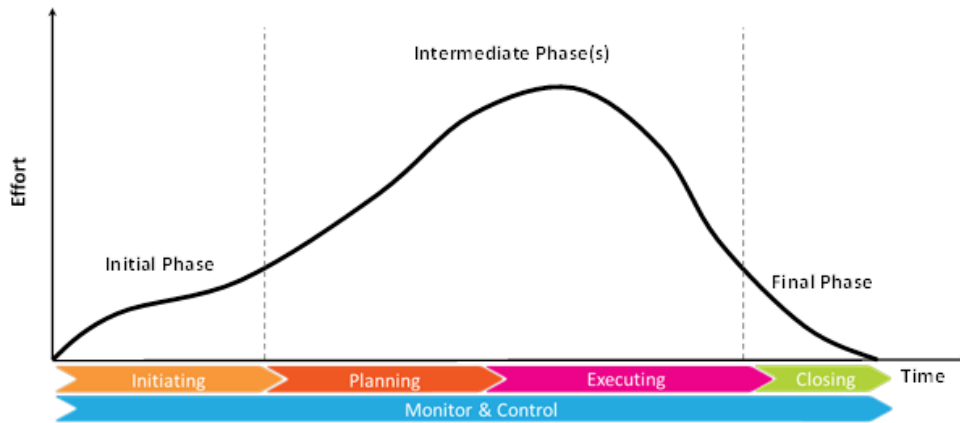
The table below shows the planned time scales for the work packages.

	2021		2022												2023		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Months since start	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
WP0: Project Charter																	
WP1: Benchmarking study																	
WP2: Applications Catalogue																	
WP3: Critical software inventory																	
WP4: European Cooperation																	
WP5: Communication																	
WP6: Lessons Learned																	

4 APPROACH

4.1 Methodology

For the project's management monitoring, the PM2 methodology will be used. The PM2 project lifecycle is presented below:



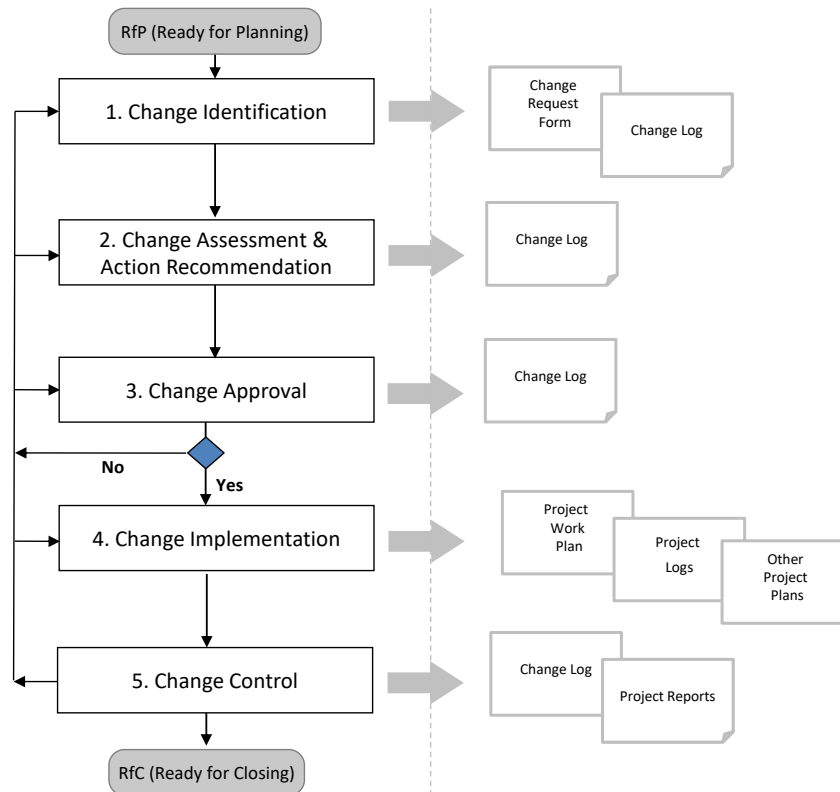
The PM² project lifecycle has four main phases:

Project Phases	Description
1. Initiating	Define the desired outcomes, create a Business Case, define the project scope, and get the project off to a good start.
2. Planning	Assign the Project Core Team, elaborate the project scope and plan the work.
3. Executing	Coordinate the execution of the project plans and create the project's deliverables.
4. Closing	Formal project acceptance, report on the project's performance and administratively close the project.
<p>Monitor & Control: Monitor and control (throughout the project) all project work and project management activities. Monitor project variables, measure progress, manage changes, address risks and issues and identify corrective actions as per the project's needs.</p>	

4.2 Change Management

Project change management defines the activities related to identifying, documenting, assessing, prioritising, approving, planning and controlling project changes, as well as communicating them to all relevant stakeholders. Changes can be requested (or identified and raised) throughout the project lifecycle by any project stakeholder.

The change management process consists of the following main five steps:



4.2.1 Project Change

A change request can be formally submitted via a Change Request Form, or can be identified and raised during meetings as a result of decisions, issues or risks, and should be documented in the Change Log.

The Change Log is a register of project changes used for recording, assessing, monitoring, controlling and tracking change requests and respective decisions. It also serves as a way of communicating changes to the *Project Owner (PO)* and/or *Project Steering Committee (PSC)*.

The latest versions of the Change Request Form (PM2 methodology artefact) and the Change Log Form (PM2 methodology artefact) reside under

<https://webgate.ec.europa.eu/fpfis/wikis/display/PM2/Templates>

5 GOVERNANCE AND STAKEHOLDERS

5.1 Structure

Project Owner	Thomas GAGEIK (DIGIT.B)
Business Manager	Chrysanthi GIORTSOU (DIGIT.B3)
Solution Provider	Evangelos TSAVALOPOULOS (DIGIT.B.3)
Project Manager	Miguel DIEZ BLANCO (DIGIT.B.3)
Project Steering Committee	<ul style="list-style-type: none"> • Project Owner • Business Manager • Solution Provider • Project Manager • Representatives from the Core Team • Representatives from Key Stakeholders
Core Team – Senior Consultant	Saranjit ARORA (DIGIT.B.3)
Core Team – Communication	Ana RAMOS (DIGIT.B.3)

5.2 Roles and Responsibilities

5.2.1 Project Steering Committee (PSC)

The Project Steering Committee (PSC) consists of at least four actors/roles (Project Owner, Business Manager, Solution Provider and Project Manager) providing a balanced mix of requestor- and provider-side representatives. Other roles can also participate as per the project's needs.

The Project Steering Committee (PSC) is chaired by the Project Owner (PO) and is the key decision-making and issue-resolution body for the project. Any significant decisions that may affect the project or the team's ability to deliver on the objectives will be escalated to the Project Steering Committee (PSC). Approval of key documents, resolution of important project issues or significant change requests will also be discussed and decided at the level of the PSC.

5.2.1.1 Responsibilities

- Champions the project, raising awareness at senior level.
- Guides and promotes the successful execution of the project at a strategic level.
- Provides high level monitor and control of the project.
- Authorises plan deviations, scope changes with high project impact and decides on recommendations.
- Arbitrates on conflicts and negotiates solutions to important problems.
- Drives and manages change in the organisation.
- Ensures adherence to organisation policies and directions.

5.2.2 Project Owner (PO)

The Project Owner (PO) is the client of the project, and as such sets the business objectives and ensures that project outcomes are in line with business objectives and priorities. As the key Directing Layer role from the requestor side, the Project Owner (PO) is accountable for the overall project's success, and later becomes the owner of the project's outputs (product or service).

5.2.2.1 Responsibilities

- Acts as the project champion, promoting the project's success.
- Chairs the Project Steering Committee (PSC).
- Provides leadership and strategic direction to the Business Manager (BM) and Project Manager (PM).
- Sets the business objectives and accepts the Business Case for the project.
- Owns the business risks and ensures that project outcomes are in line with business objectives and priorities.
- Mobilises the resources necessary for the project, in accordance with the agreed budget. Regularly monitors project progress.
- Coordinates the resolution of escalated issues and conflicts.
- Drives organisational change and monitors proper evolution and change implementation.
- Approves and signs-off on key management milestone artefacts (Business Case, Project Charter, Project Handbook, Project Management Plans, Business Implementation Plan, etc.).

5.2.3 Solution Provider (SP)

The Solution Provider (SP) assumes overall accountability for project deliverables and represents the interests of those who design, manage and implement (or outsource) the project's deliverables.

As the key Directing Layer role from the provider side, the Solution Provider (SP) usually has a management position in the functional hierarchy of the organisation undertaking the project, and therefore often works with the Project Owner (PO) in defining the project's business objectives.

5.2.3.1 Responsibilities

- Assumes overall accountability for the project deliverables and services requested by the Project Owner (PO).
- Mobilises the required resources from the provider side and appoints the Project Manager (PM).
- Approves the objectives of any outsourced activities and deliverables and becomes accountable for the contractor's performance.

5.2.4 Business Manager (BM)

The Business Manager (BM) represents the Project Owner (PO) on a daily basis within the project and helps in defining the project's business objectives via the Project Initiation Request, Business Case and Business Implementation Plan. The Business Manager (BM) collaborates closely with the Project Manager (PM) and coordinates client-side activities and roles (e.g. user and business representatives), ensuring that the project's deliverables fulfil the business and user needs.

5.2.4.1 Responsibilities

- Guarantees cooperation and an efficient communication channel with the Project Manager (PM).
- Coordinates the Business Implementation Group (BIG) and acts as a liaison between the User Representatives (URs) and the provider organisation.
- Ensures that the products delivered by the project fulfil the user's needs.
- Manages the activities on the business side of the project and ensures that the required business resources are made available.
- Decides on the best way to introduce business change or re-engineering actions, when needed.
- Ensures that the business organisation is ready to accommodate the project's deliverables when they are made available by the Solution Provider (SP).
- Leads the implementation of the business changes within the user community.
- Coordinates the schedule and delivery of any user training (and production of related material).

5.2.5 Project Manager (PM)

The Project Manager (PM) oversees the project on a daily basis and is responsible for delivering high quality results within the identified objectives and constraints, ensuring the effective use of the allocated resources. More widely, the Project Manager's (PM) responsibility also includes risk and issue management, project communication and stakeholder management.

5.2.5.1 Responsibilities

- Executes the project plans as approved by the Project Steering Committee (PSC).
- Coordinates the Project Core Team (PCT), ensuring the effective use of the allocated resources.
- Ensures that project objectives are achieved within the identified constraints, taking preventive or corrective measures where necessary.
- Manages stakeholder expectations.
- Oversees the creation of all management artefacts (except the Project Initiation Request, Business Case and Business Implementation Plan) and secures approval from the Project Owner (PO) or the Project Steering Committee (PSC).
- Ensures the controlled evolution, of products delivered, through proper change management.
- Performs risk management activities for project-related risks.
- Monitors project status and reports to the Project Steering Committee (PSC) on project progress at regular predefined intervals.
- Escalates unresolvable project issues to the Project Steering Committee (PSC).
- Liaises between the Directing and Performing Layers of the project.

5.3 Key Stakeholders

The FOSSEPS project has the following key stakeholders, who will also be part of the project steering committee:

Name	Area
Marcel Kolaja, MEP	European Parliament
Mario Campolargo, Director General, DIGIT	DIGIT, European Commission
Monika Sowinska, DIGIT.D,2 Interoperability	Interoperable Europe, European Commission
Gijs Hillenius, DIGIT.B.3	European Commission Open Source Programme Office (EC OSPO)
Representatives from other EC Services (i.e. DG CNECT, etc.)	TBD