EOSC-hub

D3.2 Innovation Management Plan

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Deliverable Abstract
The deliverable describes the innovation management plan to be followed within the project. It defines all guidelines and instruments to be used for the regular innovation management of the project. It describes the activities, the procedures and the roles related to innovation management.

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DELIVERY SLIP

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TERMINOLOGY

The EOSC-hub glossary of terms is available at: https://wiki.eosc-hub.eu/display/EOSC/EOSC-hub+Glossary

Contents

Executive summary

This deliverable describes the structures and procedures for the management of innovation-related activities during the EOSC-hub project. In particular, it includes the following objectives for:

- Ensuring access and usage rights for background IP, and any sideground or 3rd party **IP used during the project.**

- Clarifying access and usage rights for background IP, and any sideground or 3rd party IP that might be needed **after the end of the project for the exploitation of the project results** (foreground IP).

- **Capturing and managing project results**, including: clarification of ownership, relative contributions, physical hosting of IP.

- **Assessing exploitation opportunities** for foreground IP, and developing an appropriate **strategy for its protection if the opportunities have commercial potential.**

- **Elaborating and maintaining the dissemination and exploitation plan**, to promote the project results and their use to maximise the expected impacts of the call topic.

- **Managing the communication activities related** to the promotion of the project and of the results.

1 Introduction

EOSC-hub aims to develop a service ecosystem for researchers and innovators to discover, access, use and reuse a broad spectrum of resources for advanced data-driven research. In particular, the project delivers a catalogue of services, software and data from the EGI Federation, EUDAT CDI, INDIGO-DataCloud and major research e-Infrastructures and builds on mature processes, policies and tools from the leading European federated e-Infrastructures to cover the whole life-cycle of services, from planning to delivery.

This document presents the EOSC-hub innovation management processes as a source of information for the EOSC-hub partners and the European Commission.

The concept of innovation management includes the exploitation, dissemination and potential standardisation of EOSC-hub project results within and outside the member organisations. This is an important activity because it ensures that EOSC-hub results are used (exploited), are accessible, and that they achieve the expected impacts (benefits).

Specifically, innovation management is a set of activities aiming to:

- Capture all the EOSC-hub project results
- Support the definition of the best protection approach for the Intellectual Properties (IPs) produced in the project
- Maintain a dissemination and exploitation plan of the project results

By project result we mean any tangible or intangible output of the project, such as data, knowledge or information, that is generated in the project, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights. Results consist of one or more Intellectual Properties generated in the project, and are grouped in the following categories:

- Software and services: improved components for an integrated service hub;

- Technical specifications to improve interoperability of compute, storage, data and software;

- Policies and procedures for service management, FAIR data management and security;

- Documents and reports: scientific publications, technical and service roadmaps, training material;

- Business models: new organisational principles to offer services for research sustainably.

Possible exploitation paths include the use of results:

- In further research activities other than those covered by the action concerned
- In developing/creating/marketing a product/process
- In creating and providing a service
- In standardisation activities

This document provides the structure and procedures for the management of innovation related activities during the project. It is organized as follows:

- Section 2 presents an overview of the Innovation Management governance highlighting how the Innovation Management task interacts with EOSC-hub boards and tasks

- Section 3 describes roles and responsibilities, definitions, processes and procedures for supporting the capturing of project results, and the collection and update of dissemination and exploitation plan.

- Appendixes 1 and 2 provide, respectively, the lists of background IP and expected Project results

- Appendix 3 presents a preliminary list of aggregate results that address the project's expected impacts;

- Finally, Appendixes 4 and 5 provide the templates used for capturing the information on project results, dissemination, exploitation and related risks in the Innovation Management framework used in EOSC-hub.

2 Innovation management governance

This Section describes briefly how innovation management is articulated in this European project and how the relevant EOSC-hub boards and stakeholders interact with the innovation management task.

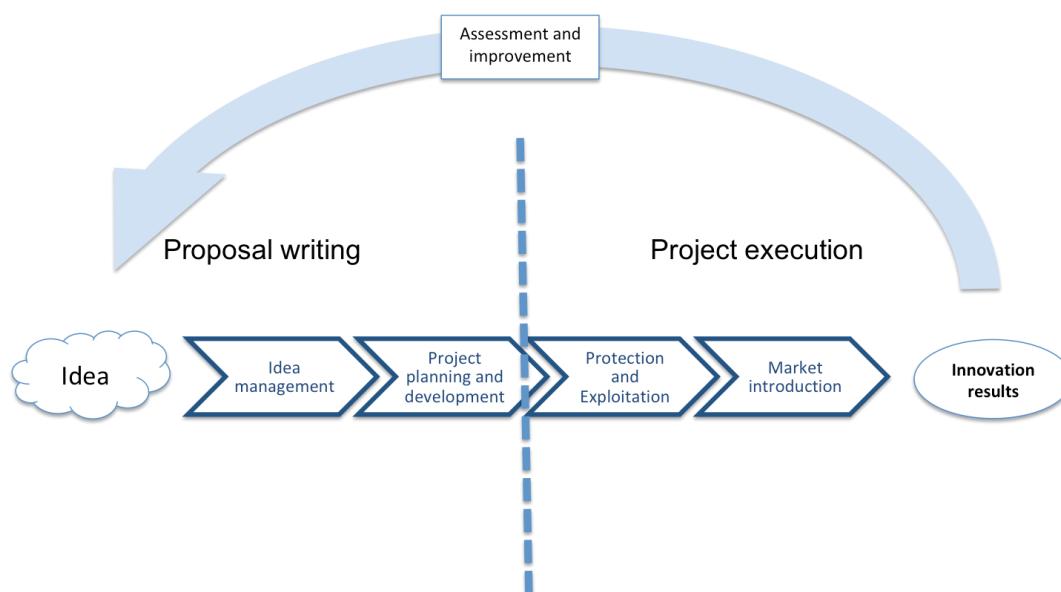## 2.1 Innovation Management in European Projects

Figure 1: Innovation Management flow

Innovation management includes two aspects: *a)* innovation processes management, and *b)* change management. Innovation refers to products and services, business process, and organizational innovation. Innovation management includes a set of tools that allow project consortium partners to cooperate with a common understanding of processes and goals.

Innovation management takes place before the project execution, allowing an organisation/project consortium to leverage external or internal opportunities, and use its creativity to introduce new ideas, as shown in Figure 1.

By collecting in a proper framework all the ideas, the project consortium can trigger and deploy the creative capabilities of the consortium for the development of an impactful project proposal.

During the project execution, the innovation management task defines relevant frameworks to ensure that:

1. The rights to access and use background and sideground IPs are identified;

2. The project results are captured, assessed and protected. Appropriate dissemination, exploitation and communication measures are agreed, and final dissemination and exploitation plans are defined.

In EOSC-hub, the main responsible for the innovation management process is the Innovation Manager, which leads Task 3.2.

The key activities of the innovation management task during the project execution are:

1. Defining (as first activity in the project) a lightweight innovation management plan to ensure that the related processes are properly organised and managed across project activities according to the technical specification CEN/TS 16555 on "Innovation Management"[R9]. The processes are designed to ensure that:
   a. The rights to access and use background and sideground IPs are identified;
   b. The project results are captured, assessed and protected;
   c. Appropriate dissemination, exploitation and communication measures are agreed, and dissemination and exploitation plans are defined. The design of the processes also considers appropriate connections with the continual improvement (T1.3), management of technical evolution (WP10) and management of service evolution (T2.2) as depicted in Figure 2.

2. Liaising and communicating innovation management related issues within Project Management Board (PMB) and the General Assembly (GA) when required (for a detailed description of each board, please refer to EOSC-hub Grant Agreement [R1]) during the project execution.

3. Maintaining a catalogue of project results and validating the information provided by the partners;

4. Organizing workshops and webinars to:
   a. Introduce the innovation management activity to the consortium;
   b. Provide guidance on updating the project results and the related dissemination and exploitation plans;

5. Monitoring the exploitation and dissemination plans;

6. Supporting the consortium to select the best protection approaches (IPRs) for the project results;

7. Helping the consortium in defining the most relevant contributions of the project to achieve the expected impacts.
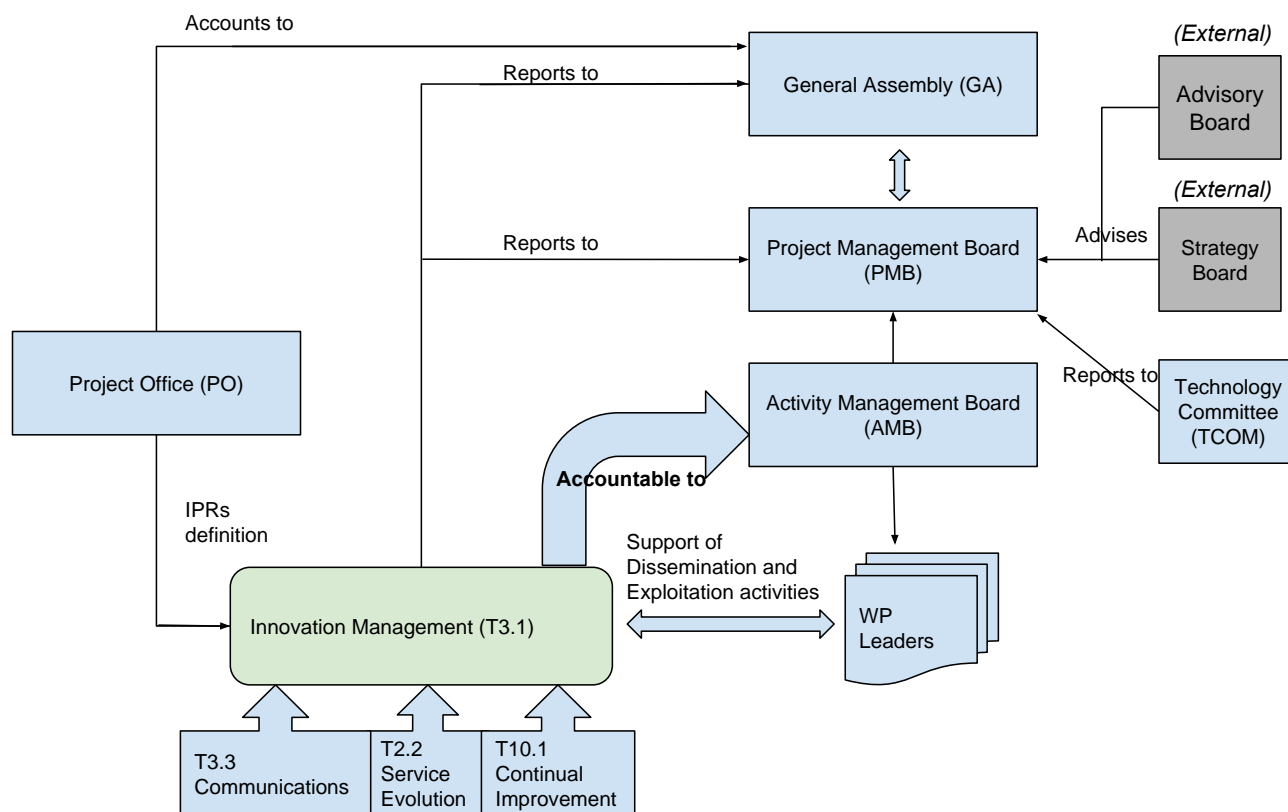
Figure 2: EOSC-hub Management Structure and Innovation Management

2.2 Supporting EOSC-hub project boards and tasks

Innovation Management requires project-wide cooperation, below is a list of how different boards and tasks contribute to this activity:

- The Project and Activity Management Boards (PMB and AMB) are responsible to take appropriate actions according to the rules on innovation management and intellectual property creation as it is stated in the Grant Agreement [R1], Collaboration Agreement [R2], Quality and Risk Management Plan [R3]. AMB approval is required for all disclosure of confidential project results outside the consortium.

- The Strategy Board (SB) gives direction to the PMB by advising on strategy, including exploitation and service deployment plans, which provide input to the innovation management activities in the development of the dissemination and exploitation strategy of project results.

- WP3 provides input to the innovation management activities by defining a clear roadmap for engaging with key stakeholders and target groups [R5].

- The Communications Team (task WP3.3) designs activities to implement the goals of the Dissemination Plan, as well as promoting the project.

- The Work Package Leaders (WPL) are responsible for

  o Collecting and reporting on project results, including information on Intellectual Property Rights (IPR), dissemination activities and exploitation plans

  o Identifying the person responsible (Lead Project Result Author) for developing the exploitation and dissemination plans and to provide input on related IPR

- Consortium partners contribute with expertise on business, technologies, application domain, and research that enable innovation aligned to the business activities of the partners, and thus, provide input to the exploitation plans for the development of a product, a service, or future research.

Legal aspects of innovation, IP background and related intellectual property rights, joint ownership of project results (if applicable), and all related confidentiality issues are clarified in the Consortium Agreement [R1] by the Project Office (PO); all those aspects constitute a primary input to the innovation management activities.

Summary of tasks and Deliverables directly related to support, enable, or drive innovation in EOSC-hub:

Task	Deliverables
T1.3 Risk and Quality Management, Service Management System and Continual Improvement	D1.1/3/5: Quality and Risk Management Plan
T2.1 Strategic Direction **T2.2: Service roadmap, service portfolio and service catalogue**	D2.1 EOSC-Hub Strategy plan D2.2 First Service roadmap, service portfolio and service catalogue D2.3 Sustainability roadmap v.1 D2.4 EOSC-hub Strategy plan v.2 D2.5 Final Service roadmap, service portfolio and service catalogue D2.6 Sustainability roadmap v.2
T3.1 Innovation Management: Dissemination, IPR and Exploitation **T3.2 Stakeholder Engagement Programme: EOSC-hub Community**	D3.1 EOSC-Hub Communication & Stakeholder Engagement Plan D3.2 Innovation Management Plan (IMP) D3.3/ D3.4 Interim/Final report on dissemination and

T3.3 Communications	exploitation of project results
T10.1 Technical Roadmap	D10.1 Technical Roadmap v1 D10.2 Technical Roadmap v2
T12.1 Business Model Analysis	D12.4 Business models and procurement: evaluation and roadmap

3 Innovation Management Roles, Responsibilities, Processes and Procedures

The scope of the Innovation Management Plan is to describe roles, structures, procedures, responsibilities and accountabilities to manage all innovation related activity, including development of the Dissemination and Exploitation plans, the project Communication Plan, and the management of the IPs. The structure of the innovation management plan is depicted in Figure 3.
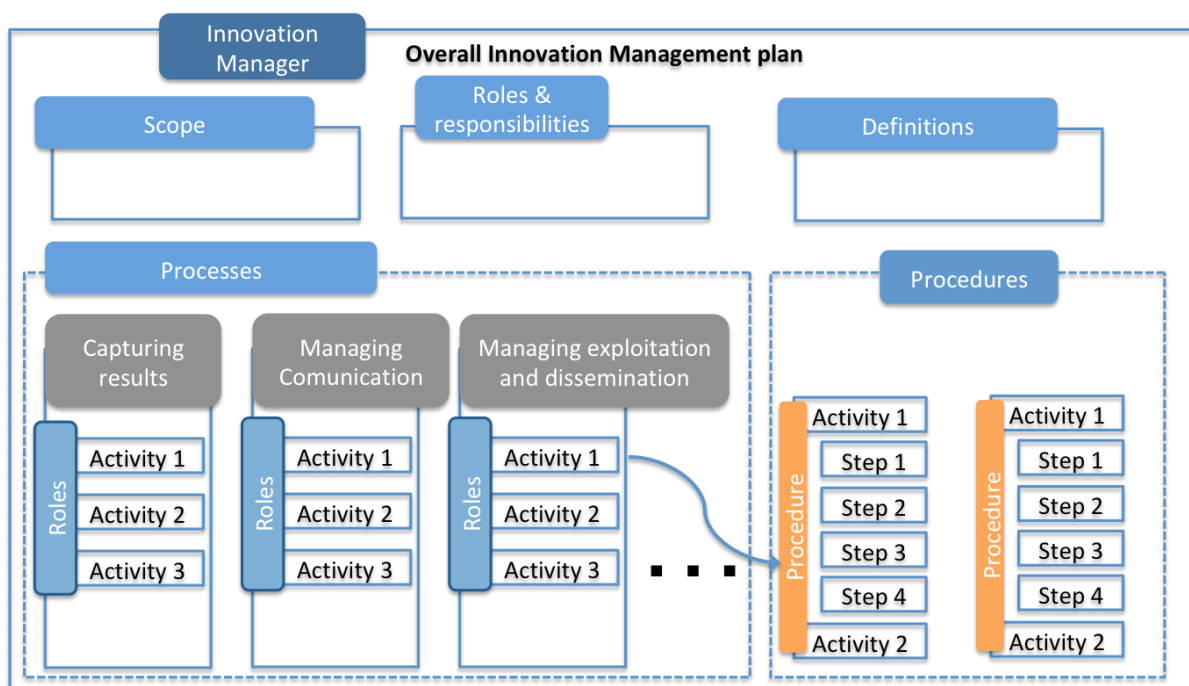
Figure 3: Innovation Management plan

Each process is a structured set of activities, with clearly defined responsibilities. Those activities aim at a specific objective starting from a set of defined inputs.
For each process, it is defined:

- Objective: *scope of the activity*
- Activity Manager: *person/board responsible for managing the activity*
- Accountability: *person/board who oversees the activity*
- Inputs: *inputs to the activity, and the persons/boards who provide them*
- Activities: *description of the activities, and where it is done, work packages and tasks as appropriate*
- Outputs: *description of outputs of this activity, e.g. table of IP, deliverables, as appropriate*

The Innovation management plan foresees the following processes:

- Capturing and handling information related to IP/Project results

- o Identifying and capturing background IPs, sideground and 3rd party IPs used during the project
- o Identifying and capturing background, sideground and 3rd party IP needed for exploitation
- o Capturing and managing foreground IPs (Project results)
- Managing dissemination and exploitation
- Managing communication

A procedure is a specific set of steps or instructions necessary to accomplish one or more activities in a process.

The innovation management plan incorporates two key procedures created for:

- Updating information on project results and related exploitation and dissemination plans
- Reviewing project results and aggregate project results in the catalogues

EOSC-hub has deployed a Confluence-based system [R7] to capture project results, to identify background, sideground and third-party IPs used during the project, and the IPs that might be required after the end of project for the exploitation of the project results.

Dedicated templates (see Appendix 4 and 5) are available and will be used by the consortium for the update and review of the project results and related intellectual property rights, dissemination and exploitation plans in Project Result pages in the Confluence system.

Also, a set of initial definitions and guidelines to complete the templates has been provided (see Section 1.1). The preliminary list of project results and aggregate project results is available in Appendix 2 and 3 respectively.

3.1 Definitions

This table defines the terminology and concepts used by the consortium in the exploitation and dissemination plans of the project.

(Project) Result	Any tangible or intangible output of the project, such as data, knowledge or information, that is generated in the project, whatever its form or nature, whether or not it can be protected by related intellectual property rights [R6].
Aggregate project result	An aggregation of several results that are targeted at the same audience and participate in providing the expected benefits (project expected impacts). An aggregate result can be Key or Supporting, according to its priority with respect to the project expected impact.

Key Exploitable result	(KER) The most relevant results of the project A subset of the aggregate project results selected considering specific criteria depicted in the Aggregate Project Result template
Type of result	• Software and services: improved components for integrated service hub; • Technical specifications to improve interoperability of compute, storage, data and software; • Policies and procedures for service management, FAIR data management and security; • Documents and reports: scientific publications, technical and service roadmaps, training material; • Business models: new organisational principles to offer services for research sustainably; • Other, not listed above
Exploitation	The use of results [R6] in: • Further research activities other than those covered by the action concerned • Developing/creating/marketing a product/process • Creating and providing a service • Standardisation activities
Deliverable	Distinct output of the project, meaningful in terms of the project's overall objectives and constituted by a report, a document, a technical diagram, a software etc.
Dissemination	The public disclosure of the results by any appropriate means, including by scientific publications in any medium [R6].
Innovation	A new (or improved) entity (or creation), which when used can produce tangible benefits, satisfying users needs and wants [R6]. Types of Innovation: • Business • Marketing • Strategy • Organisational • Product • Service

	• Process • Technology
Impact	The benefits derived from the innovation: the greater the benefit, the greater the impact
Intellectual Property (IP)	An IP is a product of the mind generated for example from research and experimentation, or creativity. An intellectual property can be traded, sold, bought, leased, used as collateral, or given away. Examples: software, designs, databases, reports, roadmaps
Intellectual Property Right (IPR)	Legal "rights" to protect your Intellectual Property • Patents (technical inventions) • Copyright (e.g., software, written works, engineering drawings) • Design rights (appearance) • Database rights (creation and arrangement of data) • Trade marks • Utility Models/petty patents • Non-disclosure agreements
Milestone	Control point in the project that help to chart progress. Milestones may correspond to the completion of a key deliverable, allowing the next phase of the work to begin. They may also be needed at intermediary points so that, if problems have arisen, corrective measures can be taken. A milestone may be a critical decision point in the project where, for example, the consortium must decide which of several technologies to adopt for further development
IP Background	IP asset owned by the partners brought into the project
Third party IPs	IP assets owned by the organizations not directly involved in the project
IP Sideground	IP asset that is relevant to a collaborative venture or open innovation project, but produced outside the project by any of the partners during the project's tenure
IP Foreground	All IP assets created during the project
Target audience	Who will use the result
Early adopters	Who will start using the result as soon as it is available

Catalogue of Project Results	List of all collected EOSC-hub project results and related information.
Catalogue of Aggregate Results	List of all collected EOSC-hub aggregate project results and related information.
Process	A process is a structured set of activities, with clearly defined responsibilities, that bring about a specific objective or set of results from a set of defined inputs.
Procedure	Specified set of steps or instructions to be carried out by an individual or group to perform one or more activities of a process.

3.2 Roles

The table below outlines the key roles in the innovation management of the EOSC-hub project.

Role	Responsibilities
WP leaders	• Register project results in the catalogues • Ensure that the information is complete and updated • Ensure that dissemination and exploitation plans are defined (by result main responsible)
Main Responsible of Project Results	Register information on project result in the catalogue, including exploitation and dissemination plans
Innovation Manager	• Validates the list of key results • Advises on the best approach to protect Intellectual Properties (IPs) produced during the project • Validates a dissemination and exploitation plan • Ensures that the EOSC-hub service catalogue is updated in case of results intended to be adopted as new services • Interface with management of service evolution (T2.2), continual improvement (T1.3) activities and Management of technical evolution (WP10)
WP3 team	Contributes to validate dissemination and exploitation plans for results
Risk Manager	Reviews exploitation risks and updates the project's risk table

AMB	Reviews periodically the list of aggregated results, validates the key exploitable results, and reviews the dissemination and exploitation plan execution
AMB co-chairs	Interface with Innovation Manager, plan review meetings and handle escalations from Innovation Manager in case of insufficient information provided or lack of collaboration
Authors of deliverables or milestones	Define a dissemination and exploitation plan for every project result in scope

3.3 Processes

3.3.1 Capturing and handling IP/Project Results

The information gathered about background, sideground, third-party IPs and project results, will be used as key input into the Dissemination and Exploitation Plan, particularly the strategy for knowledge management and protection.

3.3.1.1 *Identifying and capturing background IPs, sideground and 3rd party IPs used during the project*

This process has the objective to secure to the consortium the necessary usage rights for the IPs required to operate during the project:

Activity Manager	Project Office
Accountable to	General Assembly
Inputs	Background IP defined by partners in Consortium Agreement.
Activities	Access and usage rights during project agreed in Consortium Agreement.
Outputs	• Consortium Agreement • Table of IP (see Appendix 1)

3.3.1.2 *Identifying and capturing background, sideground and 3rd party IP needed for exploitation*

This process has the objective to clarify which are the IPs and usage rights required for the exploitation of the project results after the end of the project:

Activity Manager	WP Leaders, Result Authors
Accountable to	Innovation Manager

Inputs	Information of relevant IPs filled in the related result template page (see Appendix 4) from WP leaders and Result Authors
Activities	WP leaders register sideground IPs needed for the exploitation of project results in the catalogues and ensure that the information in the catalogue is complete and up to date and that dissemination and exploitation plans are defined according to procedure in Section 3.4.1
Outputs	Table of Project results (see template in Appendix 4)

3.3.1.3   Capturing and managing foreground IPs (Project results)

This process has the objective to capture and manage the foreground IPs (project results), including: clarification of ownership, relative contributions, and physical management of IPs.

Activity Manager	Innovation Manager
Accountable to	AMB
Inputs	Description of foreground IPs from Result Author and Work Package leader filled in result template page (see Appendix 4)
Activities	- Results are captured and updated in the Catalogue of Results according to procedure defined in Section 3.4.1 - Results will be discussed and aggregated to identify the key contributions to the project's expected impacts with regular review meetings. Aggregated results will be documented in the related template page (see Appendix 5) - Results will be documented in Deliverables: - D3.3/D3.4 Interim/Final report on dissemination and exploitation of project results
Outputs	- Table of Project results (see Appendix 2) - Table of Aggregated Project Results (see Appendix 3) - D3.3/D3.4 Interim/Final report on dissemination and exploitation of project results

3.3.2 Exploitation Management

The exploitation management process has the objective to:

- Assess exploitation opportunities for foreground IP, and developing an appropriate strategy for its exploitation and protection if the opportunities have commercial potential.
- Maintain and elaborating the dissemination and exploitation strategy plan, to promote the project results and their use to maximise the expected impacts of the call topic.
- Develop and updating a business plan(s) as appropriate.

Activity Manager	Innovation Manager
Accountable to	AMB
Inputs	Exploitation Plans from Result Authors and WP leaders filled in related Project Result template page (see Appendix 4)
Activities	- WP leaders appoint Result lead Authors from Consortium to define exploitation and dissemination plans for each result in the related result template page (see Appendix 4) - Exploitation of project results will be a topic on the agenda of AMB consortium meetings in order to support exploitation of results on consortium level. - Those discussions will take part as Project review meetings regularly each 6 months. - The procedure for preparing for the review is outlined in Section 3.4.2
Outputs	- Business Plan - Dissemination and Exploitation Strategy and Plan (for results), provided in - D3.3 Interim report on dissemination and exploitation of project results (PU) - D3.4 Final report on dissemination and exploitation of project results (PU)

3.3.3 Communications Management

The communications management has the objective to:

- Coordinate and monitor the communication activities to promote both the project and the results during the period of the project.
- Implement the dissemination aspects of the Dissemination and Exploitation Plan, as well as promoting the project.

Activity Manager	Communication Manager, activity T3.3
Accountable to	WP3 Leader
Inputs	The Dissemination and Exploitation Plans that are part of the deliverables. (Note: The Dissemination and Exploitation Plans must identify: • Who are the targets of the project result • Key messages to each target • Channels used to deliver the key messages
Process	Trigger: receives a Dissemination and Exploitation Plan The Communications Manager analyses the plan and defines (with the Team) the communications activities required to bring the messages to the targets. The type of activity (e.g. publications, videos, booth at exhibition, case study) will vary case by case. 1. The Communications Manager discusses the proposed activity with the owners of the result and the Innovation Manager and integrates their feedback into the idea. 2. The Communications Team implements the planned activities, using the project's communication channels, or other channels as appropriate 3. The implemented activities are added to the Dissemination Activities table [R8] with an estimation of reach
Outputs	Dissemination Materials

3.4 Procedures

This paragraph describes the key procedures defined in the innovation management plan. Each procedure is defined the follows:

- Entities involved in the procedures and roles
- Steps: list of actions to follow in the procedure and main responsible
- Triggers that initiate the procedure

3.4.1 Capturing project results

This procedure describes how information about project results is gathered.

Trigger: preparation of a deliverable

Steps

Step#		Responsible	Action	Prerequisites, if any
1		Author of deliverables or milestones	Creates/Updates entries in Catalogue of Project Results [R10] and Catalogue of Aggregate Project Results [R11] defining the dissemination and exploitation plans for each project result in scope in the deliverable/milestone. If support or clarification are needed, she/he can contact the Innovation Manager via email: (roberta.piscitelli@egi.eu)	
2		Author of deliverables or milestones	In the related Deliverables [R12] (or Milestones [R13]) Confluence page, inserts the links to the updated or created confluence pages of the project results and aggregated project results.	Entries in the Catalogues pages have been created/updated
3		Author of deliverables or milestones	Contact Risk manager (malgorzata.krakowian@egi.eu) reviews the information provided in the exploitation Risk assessment table of aggregate results	Risk entries in aggregate results have been filled
4		Author of deliverables or milestones	Contacts Innovation Manager (roberta.piscitelli@egi.eu) that entries have been filled in and can be reviewed.	
5		Innovation Manager and	Reviews the information provided in the catalogues and approves the entries, notifying	Authors of deliverables and milestones have

		WP3 members	this in the related Deliverable (or Milestone) confluence page.	completed the entries in the related Deliverable (or Milestone) page
6		Innovation Manager and Author of deliverables	In case the information provided in the entries is not sufficient, the Innovation Manager will request further updates to the authors of the deliverables (or milestones) before approval. Author of deliverables (or milestones) will be notified also via email by Innovation Manager.	Incomplete/Insufficient information provided in Catalogues of results pages and Catalogues of Aggregate results pages

3.4.2 Review of Project results and Aggregate Project results in the Catalogues

Trigger: AMB results review meeting

Steps

Step#		Responsible	Action	Prerequisites, if any
1		WP leader	Prior the AMB results review meeting, WP leaders review project results and aggregate project results. If support or clarification are needed, the WP leader can contact the Innovation Manager via email: (roberta.piscitelli@egi.eu)	
2		AMB and Innovation Manager	Discuss the entries in Catalogue of Project Results [R10] and Catalogue of Aggregate Project Results [R11]: - Discuss on relevant issues on IPRs, exploitation and dissemination plans - New aggregate results are reviewed - Aggregate results are prioritized, defining Key and Supporting results - Input for the discussion is also provided by members of : - Management of service evolution (Task 2.2 from WP2) - Continual improvement (Task 1.3 from WP1) - Management of technical evolution (WP10)	Entries in the Catalogues pages have been updated/created

4 Conclusions and next steps

This deliverable presented and elaborated the innovation management plan of the EOSC-hub project. The presented processes and procedures are already in place and are being implemented by the project consortium.

Periodic review meetings will take place to help the consortium in refining the key results and assessing the best exploitation and dissemination strategies. In addition, the information gathered during the project execution will be systematically collected and assessed for the development of new ideas/proposals about new services and products.

5 References

No	Description/Link
R1	EOSC-hub Grant Agreement
R2	EOSC-hub Collaboration Agreement
R3	D1.1 Quality and Risk Management Plan
R4	D1.2 Data Management Plan
R5	D3.1 Communications and Stakeholder Engagement Plan
R6	The Plan for the Exploitation and Dissemination of Results in Horizon 2020 https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/FS-Plan-for-the-exploitation-and-dissemination-of-results_1.pdf
R7	Confluence Innovation Management related pages https://confluence.egi.eu/display/EOSC/Project+Results
R8	https://confluence.egi.eu/display/EOSC/Dissemination+Activities
R9	The European Innovation Management Standard CEN/TS 16555 https://standards.cen.eu/dyn/www/f?p=204:110:0::::FSP_PROJECT,FSP_ORG_ID:35932,671850&cs=13A816A57184977C465944D2F2E2C5645
R10	Catalogue of Project Results https://wiki.eosc-hub.eu/display/EOSC/Catalogue+of+Project+Results
R11	Catalogue of Aggregate Project Results https://wiki.eosc-hub.eu/display/EOSC/Catalogue+of+Aggregate+Project+Results
R12	EOSC-hub Deliverables Page https://confluence.egi.eu/display/EOSC/Deliverables
R13	EOSC-hub Milestones Page https://confluence.egi.eu/display/EOSC/Milestones

Appendix I.   Summary table: Background IPs

The following background is hereby identified and agreed upon for the Project. Specific limitations and/or conditions shall be as mentioned hereunder this represents the status at the time of signature of the Consortium Agreement.

PARTY 2 CSC

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Software: Chipster (http://chipster.csc.fi/)	The software is available for use in the project under GPL v3 or higher open source licence.	Whatever changes made to the software within the project the IPR remains with CSC.
Software: REMS (https://confluence.csc.fi/display/REMS/Home)	The software is available for use in the project under LGPL v3 or higher open source licence.	Whatever changes made to the software within the project the IPR remains with CSC.
Software: ELMER (https://www.csc.fi/web/elmer)	The software is available for use in the project under LGPL v3 or higher (ELMERSolver) and GPL v3 or higher (ELMER) open source licence.	Whatever changes made to the software within the project the IPR remains with CSC.

PARTY 10 CCFE (UKAEA)

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
IMAS is the ITER Integrated Modelling and Analysis System. The ITER Organisation (IO) is an international organization compromising of representatives from China, the EU, India, Japan, Korea, Russia and the United States.	IO hold the IPR on IMAS and it is released to the fusion community for testing and enhancement, however it is not completely open source. Within the project, the fusion competency centre will make use of the latest version of IMAS available to the fusion community at the start of the project.	Where IMAS code is modified to integrate with EOSC services, such code will be annotated (commented) to reference the funding source (the agreement between EOSC-Hub consortium and the Commission) but will remain the IP of IO

PARTY 11 CEA

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
WEST experimental and simulation data: a dedicated dataset extracted from these will be used for EOSC-hub participation, in order to test various EOSC technologies	Access limited to the participants of the task 8.2 Fusion Competence Centre	Access limited to the WEST partners* (including the EUROfusion consortium). This dataset is not needed for the exploitation of the EOSC-hub Grant results
ITER Integrated Modelling and Analysis Suite (owned by ITER Organization)	Access limited to individuals authorized by ITER Organization	Access limited to individuals authorized by ITER Organization. This suite is not needed for the exploitation of EOSC-hub Grant results

*WEST partner = entity having concluded a collaboration agreement with the CEA to implement the WEST Program.

PARTY 13 CESNET

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Perun, a User and Resource Management System, which covers the management of the whole ecosystem of the user identities, groups, resources and services.	There are no specific limitations. The work is available under the free *Apache Software License 2.0*.	There are no specific limitations. The work is available under the free *Apache Software License 2.0*.

The Perun system is a joint development effort of both MU and CESNET.

PARTY 18 CloudFerro

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
EO IPT and/or DIAS Infrastructure (Cloud processing, storage and networking)	Usage for free limited to the agreed capacity.	Usage for free limited to the duration of the Agreement. Further access subject to access fees.
EO IPT and/or DIAS Platform (Know-how, Portal, Algorithms, Services, Support)	Usage for free limited to the agreed services.	Usage for free limited to the duration of the Agreement. Further access subject to processing fees.
Copernicus Data	Unlimited, insofar as the "Legal notice on the use of Copernicus Sentinel Data and Service Information" is respected.	Unlimited, insofar as the "Legal notice on the use of Copernicus Sentinel Data and Service Information" is respected.

PARTY 19 CMCC

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Fondazione CMCC shall include in its obligation to grant Access Rights to the Background which is Needed for the implementation of the project and which is generated by Fondazione CMCC scientists involved in the EOSC-hub Project as detailed and mentioned in the Description of the Action and in accordance with the provisions set out in Section 9. Specifically relevant to EOSC-hub, CMCC Foundation background includes the Ophidia big data analytics framework (http://ophidia.cmcc.it/) (https://github.com/OphidiaBigData), core component of the ECAS Thematic Service.	Fondazione CMCC Background includes only software and data that are wholly Fondazione CMCC property. It does not include software and data owned wholly or in part by third parties and used by Fondazione CMCC under license or permission. The Access rights are granted for the purpose of the EOSC-hub Project only and may be restricted if this results in the infringement of third party rights. Fondazione CMCC excludes from its obligation to grant Access Rights to any Background Knowledge that has been generated under contracts with commercial third parties unless specific authorization is requested and granted in accordance with Section 9. Regarding Ophidia, it is available under GPLv3 License.	Fondazione CMCC Background includes only software and data that are wholly Fondazione CMCC property. It does not include software and data owned wholly or in part by third parties and used by Fondazione CMCC under license or permission. The Access rights are granted for the purpose of the EOSC-hub Project only and may be restricted if this results in the infringement of third party rights. Fondazione CMCC excludes from its obligation to grant Access Rights to any Background Knowledge that has been generated under contracts with commercial third parties unless specific authorization is requested and granted in accordance with Section 9. Regarding Ophidia, it is available under GPLv3 License..

PARTY 22 CSIC

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
- UMD Verification tools (https://github.com/egi-qc)	Background available under V.2 Apache License	Background available under V.2 Apache License
UMD Verification Puppet modules (https://github.com/egi-qc)	Background available under V.2 Apache License	Background available under V.2 Apache License
- cASO (OpenStack Accounting extractor)	Background available under V.2 Apache License	Background available under V.2 Apache License
- ooi (OpenStack OCCI Interface)	Background available under V.2 Apache License	Background available under V.2 Apache License
- Keystone-VOMS	Background available under V.2 Apache License	Background available under V.2 Apache License
- cloud-info-provider	Background available under V.2 Apache License	Background available under V.2 Apache License
- OPIE	Background available under V.2 Apache License	Background available under V.2 Apache License

PARTY 22.1 CESGA

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Accounting Portal (https://accounting.egi.eu)	Background available under V.2 Apache License	Background available under V.2 Apache License

PARTY 22.2 UPV

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
(Third-Party UPV) CLUster Energy Saving system (CLUES)	Background available under V.2 Apache License	Background available under V.2 Apache License
(Third-party UPV) R-17353-2015 Infrastructure manager (IM)	Background available under V.2 Apache License	Background available under V.2 Apache License
(Third-party UPV) R-17368-2015) Elastic Cloud Computing Cluster (EC3)	Background available under V.2 Apache License	Background available under V.2 Apache License
(Third-party UPV) R-17370-2015 Virtual Machine Image Repository & Catalog (VMRC)	Background available under V.2 Apache License	Background available under V.2 Apache License

PARTY 31 EPCC (UEDIN)

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
IMAS is the ITER Integrated Modelling and Analysis System. The ITER Organisation (IO) is an international organization compromising of representatives from China, the EU, India, Japan, Korea, Russia and the United States.	IO hold the IPR on IMAS and it is released to the fusion community for testing and enhancement, however it is not completely open source. Within the project, the fusion competency centre will make use of the latest version of IMAS available to the <u>fusion</u> community at the start of the project.	Where IMAS code is modified to integrate with EOSC services, such code will be annotated (commented) to reference the funding source (the agreement between EOSC-Hub consortium and the Commission) but will remain the IP of IO

PARTY 33 F6S

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
F6S user and/or program data	Can be used with publicly listed information and with default F6S features available to general public.	No F6S user and/or program data can be used for project exploitation without prior written F6S and give user/program agreement.
EOSC Profile page and related data on F6S	EOSC Profile page on F6S and any users that have voluntarily or by invitation engaged with the profile can be fully-utilized for any project related action. All data and users interactions made on the profile belongs to F6S.	EOSC Profile page on F6S and any user data collected throughout duration of the project can be used for project exploitation. Even after such data being used for exploitation it still belongs to F6S.
Reports, deliverables and other information	All information that F6S staff has developed for the project can be used for implementation, unless the document type identifies information as Confidential.	Any information that F6S staff has developed for the project can be used for exploitation, unless the document states its usage rights that are different from this agreement.

PARTY 35 GFZ

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Data and Metadata services (e.g. FDSN-WS, WFCatalog, EIDA Auth Service)	No limitations	No limitations
B2SAFE installation including archive replica at KIT and ~25 Millions of ePIC PIDs created, hosted and assigned	No limitations	No limitations
Experience with B2ACCESS	No limitations	No limitations

PARTY 36 GRNET

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
ARGO Monitoring is a flexible and scalable service for monitoring status, availability and reliability of services provided by infrastructures with medium to high complexity. It can generate multiple reports using customer defined profiles (e.g. for SLA management, operations etc) and has built-in multi-tenant support in the core framework. *	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.

The ARGO Messaging service enables reliable asynchronous messaging that allows you to send and receive messages between independent applications.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.
The Service Portfolio Management Tool (SPMT) is a tool aimed at facilitating service management in IT service provision, including federated scenarios	The Service Portfolio Management Tool service and all related components have a production release. The work is available under the free Apache Software License 2.0.	The Service Portfolio Management Tool service and all related components have a production release. The work is available under the free Apache Software License 2.0
Check-in provides a reliable and interoperable authentication and authorisation solution for the federation of EGI service providers and other external service providers. It enables single sign-on to services through eduGAIN identity providers and other institutional or social media credentials	Check-in and all related components have a production release. The work is available under the Apache Software License 2.0.	Check-in and all related components have a production release. The work is available under the Apache Software License 2.0.

* ARGO is a service co-developed and operated by GRNET, SRCE & CNRS

PARTY 39 IASA

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
- EGI Applications Database (https://appdb.egi.eu) The EGI Applications Database (AppDB) provides information about software solutions in the form of native software products and virtual appliances. Through dedicated dashboards, It enables the VO Managers to manage the VM images and users to deploy and manage Virtual Machines to the EGI Cloud infrastructure. The service also consists the following sub-services: - AppDB: Dashboard (https://dashboard.appdb.egi.eu) - AppDB: VMCaster (https://vmcaster.appdb.egi.eu) - AppDB: Information System (http://is.marie.hellasgrid.gr/)	Background available under V.2 Apache License	Background available under V.2 Apache License
EGI Software Repositories (http://repository.egi.eu) The EGI Software Repository service provides a collection of	Background available under V.2 Apache License	Background available under V.2 Apache License

repositories for binary software artifacts, as well as the necessary mechanisms for supporting the release and publishing processes. The Unified Middleware Distribution (UMD), the Cloud Middleware Distribution (CMD), and the collection of Community software are managed and populated by this service.		

PARTY 40 IDEGO

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Background data will include: - former data analyses and bot detection techniques - bot mitigation techniques - know how - idea of a product, which can detect, block and protect websites against malicious traffic - experience gathered during past deployments of web applications for external clients - experience on creating/building and deploying of web-based applications and products	IDEGO herby excludes: 1. Background and/or Material deriving from personnel and/or departments of IDEGO not directly involved in the Project. 2. Background and/or Material derived from other projects that, due to third party rights, IDEGO is not able to grant access rights to. 3. Background and/or material that has been created or obtained by personnel of IDEGO directly involved in the Project but which is unrelated to the work plan, aims and objectives of the Project. 4. All Background and/or material not explicitly listed here.	IDEGO herby excludes: 1. Background and/or Material deriving from personnel and/or departments of IDEGO not directly involved in the Project. 2. Background and/or Material derived from other projects that, due to third party rights, IDEGO is not able to grant access rights to. 3. Background and/or material that has been created or obtained by personnel of IDEGO directly involved in the Project but which is unrelated to the work plan, aims and objectives of the Project. 4. All Background and/or material not explicitly listed here.

	5. Nevertheless, access may be possible through specific agreements signed by the concerned Parties.	5. Nevertheless, access may be possible through specific agreements signed by the concerned Parties.

PARTY 43 INGV

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
On-line seismological primary data holdings – 90TB continuous waveform data	No limitations	No limitations
Data and metadata services (e.g.: FDSN, WF Catalog)	No limitations	No limitations
Seismological products and dissemination tools (e.g: RRSM, StationBook, Data Portal)	No limitations	No limitations
B2SAFE installation including	No limitations	No limitations

archive replica and millions of PIDs assigned to waveform datasets using B2HANDLE; B2STAGE-HTTP-API endpoint to achieve data and metadata		

PARTY 45 JUELICH

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
B2Access Tool based on the Open Source Software Unity (https://b2access.eudat.eu/) (http://unity-idm.eu/)	Conditions of BSD license	Conditions of BSD license
B2DROP Tool based on the Open Source Software NextCloud (https://b2drop.eudat.eu/) (https://nextcloud.com/)	Conditions of AGPL license	Conditions of AGPL license
Know How in the field of operations of federations services	Access rights as foreseen in the CA	Access rights as foreseen in the CA; eventually connected with a separate license agreement

PARTY 46 KIT

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
https://ggus.eu/ GGUS (Global Grid User Support) is a software technology and portal developed and operated by KIT since more than a decade. GGUS is the central helpdesk and ticketing system in large IT-federations like EGI (European Grid Initiative) and WLCG (Worldwide LHC Computing Grid). GGUS is foreseen to be the helpdesk and ticketing system for the EOSC-hub project and infrastructure.	Whatever changes made to GGUS within the project the IPR remains with KIT	Whatever changes made to GGUS within the project the IPR remains with KIT

PARTY 64 SRCE

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
ARGO Monitoring is a flexible and scalable service for monitoring status, availability and reliability of services provided by infrastructures with medium to high complexity. It can generate multiple reports using customer defined profiles (e.g. for SLA management, operations etc) and has built-in multi-tenant support in the core framework. *	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.
The ARGO Messaging service enables reliable asynchronous messaging that allows you to send and receive messages between independent applications.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.	ARGO Monitoring service and all related components have a production release. The work is available under the free Apache Software License 2.0.

* ARGO is a service co-developed and operated by GRNET, SRCE & CNRS

GRPARTY 52 MEEO

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Multi-sensor Evolution Analysis (MEA)	User registration is needed.	Service costs are applied if user quota is exceeded.

Earth Observation and geospatial data analysis tool		
Data Access System (DAS) Software component that enables standard discovery and access interfaces	Data availability for EOSC-hub is limited to full, open and free data.	

PARTY 53 Moxoff

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Know how, algorithms, methods and software concerning video-processing	The Access rights are granted for the purpose of the EOSC-hub Project only and need a specific agreement.	The Access rights are granted for the purpose of the EOSC-hub Project only and need a specific agreement.
Know how, algorithms, methods and software concerning data mining to extract KPIs for sport	The Access rights are granted for the purpose of the EOSC-hub Project only and need a specific agreement.	The Access rights are granted for the purpose of the EOSC-hub Project only and need a specific agreement.

PARTY 54 MPG

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
The Data Project Management Tool (DPMT), https://dp.eudat.eu, is an integrated business and operations support tool developed and currently hosted by MPCDF, co-funded by the EUDAT2020 project (2015-2017). The DPMT is an adaptation and specific setup	Access to the software (content types, CMS plugins) is provided to the partners in the Project, through the online available repository https://github.com/EUDAT-DPMT. The configuration of the specific DPMT web portal is	The exploitation of the DPMT for commercial purposes by any other beneficiary than MPG is not allowed. MPG grant to the extent legally possible solely for the term and purposes of the project non-exclusive, non-sublicensable, non-

| of a Plone CMS instance (www.plone.org) according to a specific data model that is also described in the D6.1 and D6.2 deliverables of the EUDAT2020 project. The tool holds and manages information about customers, projects (use cases), service providers, pledges, services and service components. It consumes and provides information from a service catalogue, integrates usage accounting information (obtained from accounting.eudat.eu), and it assigns UUIDs and optional Handle PIDs to any configuration item. The DPMT supports the realization / enabling process of data management plans (projects). The DPMT can serve as an infrastructure configuration management data base and it is used as such by the EUDAT CDI. | separately managed (MPG internal gitlab repository) and the machinery remains property of MPG.

Any Background Intellectual Property shall remain the property of MPG | transferable, no-charge rights of use to their Background Intellectual Property.

Operation of a cloned DPMT web portal is not allowed unless a specific agreement and licensing are established.

In case the DPMT is required for the commercial exploitation of the results of other beneficiaries, a commercial DPMT licence will have to be acquired by the legal entities involved (the beneficiaries and/or the legal entity exploiting the results, to be determined at that stage). |
|---|---|---|

PARTY 55 MTA-SZTAKI

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
WS-PGRADE/gUSE grid and cloud science gateway framework (https://sourceforge.net/projects/guse)	There are no specific limitations. The work is available under the free	There are no specific limitations. The work is available under the free

	Apache Software License 2.0.	Apache Software License 2.0.
Occopus cloud orchestrator tool to deploy complex infrastructures in clouds (http://occopus.lpds.sztaki.hu)	There are no specific limitations. The work is available under the free Apache Software License 2.0.	There are no specific limitations. The work is available under the free Apache Software License 2.0.
Flowbster Cloud-Oriented Workflow System based on data pipelines (https://github.com/occopus/flowbster, https://github.com/occopus/flowbster-editor, https://github.com/flowbster)	There are no specific limitations. The work is available under the free Apache Software License 2.0.	There are no specific limitations. The work is available under the free Apache Software License 2.0.
Data Avenue remote storage management system (http://data-avenue.eu)	Access to the software is provided to the partners in the Project, through the online available Data Avenue portal. The software remains property of MTA SZTAKI.	Direct exploitation of Data Avenue for commercial purposes by any other beneficiary than MTA SZTAKI is not allowed. Operation of a cloned Data Avenue portal is not allowed unless a specific agreement and licensing are established. In case Data Avenue is required for the commercial exploitation of the results of other beneficiaries, a commercial Data Avenue licence will have to be acquired by the legal entities involved.

PARTY 56 MU

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Perun, a User and Resource Management System, which covers the management of the whole ecosystem of the user identities, groups, resources and services.	There are no specific limitations. The work is available under the free *Apache Software License 2.0*.	There are no specific limitations. The work is available under the free *Apache Software License 2.0*.

The Perun system is a joint development effort of both MU and CESNET.

PARTY 58 PSNC

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Open Mobile Toolkit	Open source software package worked out at the INDIGO DC project; no specific limitations	No specific limitations, see licence conditions
INDIGO Kepler Modules	Open source software package worked out at the INDIGO DC project; no specific limitations	No specific limitations, see licence conditions

PARTY 61A UIO

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
TSD whitepaper and relevant documentation	Access can be granted upon authorization of TSD admins personnel	No limitation to user documentation

TSD admin interface (p01)	No access – Access is subjected to legal restrictions and granted to local personnel only	No access – Access is subjected to legal restrictions and granted to local personnel only
TSD project VMs (p11 or any pXX, with XX>11)	Access can be granted upon authorization of project admins	Access can be granted upon authorization of project admins
Admin access to TSD projects VMs (p11 or any pXX, with XX>11)	Access can be granted upon authorization of project admins and signature of a Non Disclosure Agreement	No access

PARTY 62 SINERGISE

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Sentinel Hub	Unrestricted use of web based services within the scope of the project. All IP related to this application remains with Sinergise.	Unrestricted use of web based services within the scope of the project. Agreement with Sinergise is required prior commercial exploitation of the application.

PARTY 66 SUITE5

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
S5 Enterprise Analytics Suite-Social, to which the DataFurn platform (for Pilot 6) will be based.	Closed source with exposed API. No access to source code is granted.	Proprietary. Closed Source. Subjected to license.

PARTY 67.1 UU

Background IP	Specific limitations and/or conditions for implementation (Article 25.2 Grant Agreement)	Specific limitations and/or conditions for Exploitation (Article 25.3 Grant Agreement)
Universiteit Utrecht brings their HADDOCK software and web portal machinery as background into the Project. HADDOCK is an information-driven flexible docking approach for the modeling of biomolecular complexes, which has been developed in the group of prof. Alexandre Bonvin at Utrecht University	Access to the software is provided to the partners in the Project, through the online available HADDOCK portal. The web portal machinery remains property of Universiteit Utrecht	Direct exploitation of HADDOCK for commercial purposes by any other beneficiary than Utrecht University is not allowed. Operation of a cloned web portal is not allowed unless a specific agreement and licensing are established. In case HADDOCK is required for the commercial exploitation of the results of other beneficiaries, a commercial HADDOCK licence will have to be acquired by the legal entities involved (the beneficiaries and/or the legal entity exploiting the results, to be determined at that stage).
Universiteit Utrecht brings their DISVIS and POWERFIT web servers as background into the Project. The software itself is freely available through respective GitHub repositories	The web portal machinery remains property of Universiteit Utrecht	Operation of a cloned web portal is not allowed unless a specific agreement and licensing are established.
Universiteit Utrecht brings the other web servers made available under haddock.science.uu.nl and their machinery as background into the Project	The web portals and their machinery remain property of Universiteit Utrecht	Operation of a cloned web portal is not allowed unless a specific agreement and licensing are established.

Appendix II. Project results

The Table below provides the current state of EOSC-hub expected project results.

Title	Main Responsible	WP(s)	Type
PR: Data transfer across EGI, EUDAT and INDIGO	Claudio Cacciari	WP6 (+WP5, WP10)	Software and Services [Common Services]
PR: EOSC-hub strategy plan	Tiina Kupila-Rantala	WP2	Publications
PR: EOSC-hub Website and Knowledge Hub	Rob Carrillo	WP3	Web platform
PR: EOSC-hub SMS	Małgorzata Krakowian	WP1	Software and Services [Others]
PR: EOSC-hub Digital Innovation Hub	Sy Holsinger	WP9	Software and Services [Business Pilots]
PR: Online services and tools for supporting training	Giuseppe La Rocca	WP11	Software & Services
PR: [T7.9] improved LifeWatch service suite	Antonio Torralba, Juan Miguel Gonzalez Aranda	WP7	Software and Services [Thematic Services]
PR: [T7.8] Improved DARIAH science gateway integrated with EGI/INDGO/EUDAT, with new digital-humanities services and improved Open Data Respository and CDSTAR services	Karolj Skala, Davor Davidovic	WP7	Software and Services [Thematic Services]
PR: [T7.7] Improved portals for EO: Geohazards TEP, Sentinel PlayGroud, rasdaman EO DataCube, EPOSAR with EGI/EUDAT	Christian Briese, Christoph Reimer	WP7	Software and Services [Thematic Services]
PR: [T7.6] Improved WeNMR portals,	Alexandre Bonvin,	WP7	Software and

integrated with EGI/EUDAT	Antonio Rosato, Marco Verlato		Services [Thematic Services]
PR: Bot Mitigation Engine	Adam Majewski, Krzysztof Gibas	WP9	Software and Services [Business Pilots]
PR: Sports Smart Video Analysis	Matteo Longoni	WP9	Software and Services [Business Pilots]
PR: [T7.2] Improved Dynamic On Demand Analysis Service (DODAS) with EUDAT/EGI	Daniele Spiga, Doina Cristina Duma	WP7	Software and Services [Thematic Services]
PR: [T7.1] CLARIN Framework	Dieter Van Uytvanck, Willem Elbers	WP7	Software and Services [Thematic Services]
PR: [T7.3] Improved ECAS portal integrated with EGI/EUDAT	Tobias Weigel, Sandro Fiore	WP7	Software and Services [Thematic Services]
PR: [T7.4] Integrated GEOSS Portal and GEO-DAB framework with EUDAT/EGI	Stefano Nativi, Paolo Mazzetti	WP7	Software and Services [Thematic Services],
PR: [T7.5] Improved on-demand forecast OPENCoastS portal integrated with EUDAT/EGI	Anabela Oliveira, Alberto Azevedo, João Rogeiro	WP7	Software and Services [Thematic Services]
PR: Furniture Enterprise Analytics - DataFurn platform	Dimitris Panopoulos	WP9	Software and Services [Business Pilots]
PR: Cybe **rHAB (Water body management framework)**	Agustín Monteoliva Herreras	WP9	Software and Services [Business Pilots]
PR: ACTION Seaport	Rodrigo Fernandes	WP9	Software and

			Services [Business Pilots]
PR: Space Weather Data Services for the future DRACO Observatory	Jose Collazo	WP9	Software and Services [Business Pilots]
PR: EOSC-hub Brand	Rob Carrillo	WP3	Other
PR: Rules of engagement	Mark van de Sanden	WP10	Publications
PR: Requirements and gap analysis	Diego Scardaci	WP10	Publications
PR: Technical architecture and standards roadmap	Giacinto Donvito	WP10	Publications
PR: Technical roadmap	Giacinto Donvito	WP10	Publications
PR: Training programme for first project year	Giuseppe La Rocca	WP11	Others
PR: PROC07 Allocating financial support for trainers to attend f2f events	Giuseppe La Rocca	WP11	Policies and Procedures
PR: AAI	Nicolas Liampotis	WP5	Software and Services [Federation Services]
PR: EOSC-hub Governance and Sustainability Implementation Roadmap	Magchiel Bijsterbosch	WP2	Publications
PR: Data Policy Recommendations	Rob Baxter	WP2	Policies and Procedures, Publications (To refine later)
PR: EOSC-hub Service Catalogue and Portfolio	Sergio Andreozzi	WP2	Publications
PR: EOSC-hub Service Roadmap	Sergio Andreozzi	WP2	Publications
PR: Procurement requirements, demand assessment and business models	TBD	WP12	Publications Business models
PR: Procurement Toolkit	TBD	WP12	Policies and

			Procedures
PR: Collaborative services	Marios Chatziangelou	WP5	Software and Services [Federation Services]
PR: Helpdesk	David Vicente	WP5	Software and Services
PR: Monitoring	Kostas Koumantaros	WP5	Software and Services [Others]
PR: Ops Support	Pavel Weber	WP5	Software and Services [Others]
PR: Marketplace	Roksana Różańska	WP5	Software and Services [Common Services]
PR: Example 1: HADDOCK	TBD	WP7	Software and Services [Thematic Services]

Appendix III. Preliminary list of aggregate results

The EOSC-hub consortium has started identifying the key results of EOSC-hub. Each key result is an aggregation of the foreseen project results, with a clear focus on the benefits it addresses. The list of aggregate (key) results is used by the consortium to determine the most relevant contributions to the project expected impacts.

The expected impacts from EOSC-hub project are:

- Impact I1: The operation of a federated European data and distributed computing infrastructure for research and education communities will optimise the access to IT equipment and services and will put all European researchers and educators in equal footing to access essential resources to express their talent and creativity
- Impact I2: Establishing partnerships with industrial and private partners
- Impact I3: Train people in research and academic organisations preventing lack of skilled and specialized infrastructure operators
- Impact I4: Avoid the locking-in to particular hardware or software platforms that would jeopardise the long-term planning for capacity upgrades
- Impact I5: More scientific communities will use storage and computing infrastructures with state-of-the-art services for their research and education activities; the open nature of the infrastructure will allow scientists, educators and students to improve the service quality by interacting with data, software and computing resources
- Impact I6: Increase the incentives for scientific discovery and collaboration across disciplinary and geographical boundaries, putting Europe in the driving seat at global level
- Impact I7: Further develop the European economic innovation capacity and provide stability to the e-Infrastructure

The Table below provides the list of identified aggregated results during the Innovation Management workshop held in June 2018 in Catania for the EOSC-hub project. For each aggregated result, the person responsible (Lead Author) for developing the plan was identified, as well as the project results and background, sideground IPs needed.

Starting with the above-mentioned impacts, the consortium identified which results need to be aggregated to address those impacts; of course, the full collection of aggregate results will not be ready till the end of the project.

For each of those aggregated results, dedicated workshops will be held with the Innovation Manager to jointly define the best exploitation and dissemination strategies.

#	Title	Main Responsible	Description	Impact
1	EOSC Hub	Roberta Piscitelli	A platform with: • Federation and collaboration service and tools • Processes and policies • Business models and procurement experience • Strategy and roadmap • Technical Service Roadmap • Professional services • Sustainability model for the hub	I1 I4 I7
2	A set of services integrated and accessible via the EOSC Hub	Sergio Andreozzi	• Common services (from WP6) • Thematic services (from WP7) • New Services entering in the EOSC-hub • Trainings on how to use the services • Business models identified for the individual services (to be defined by the service providers) (WP12) • Technical Service Roadmap • Rules for participation (ensure that services meet a certain quality)	I5 I6
3	EOSC Digital Industry Hub (DIH)	Sy Holsinger	Business pilots success stories	I2
4	Trainings and training material	Giuseppe La Rocca	Best practices on Open Science, Innovation Management training	I3
5	Success Stories from Competence Centers	Gergely Sipos	Reports on usage experience	I5, I6

Appendix IV. Project result template

The Tables below present the template used in the Confluence system to capture the information related to project results and exploitation and dissemination plans.

Author	(Lead author and main person responsible for the result)
WP(s)	(Work Packages involved)
Document status	DRAFT
Change Log	(Track/describe all major changes made to the document)

Name	(Specify Result name)
Description	(Briefly describe the result that will be produced)
Type	(Choose a type of result, you can add a new type if not covered) Software and Services [Federation Services], Software and Services [Common Services], Software and Services [Thematic Services], Software and Services [Business Pilots], Software and Services [Competence Centres], Software and Services [Others], Technical Specifications, Policies and Procedures, Publications, Business Models
URL	(Insert relevant URL of result)
Advance of state of the art	(What is new or improved?
Innovation	(How can this result be used to deliver benefits (e.g. as a product, service, education tool, for policy

	support, etc)
Impact	(How does the result contribute to the impacts of the call?)

Expected Impact	List related contributions where applicable
The operation of a federated European data and distributed computing infrastructure for research and education communities will optimise the access to IT equipment and services and will put all European researchers and educators in equal footing to access essential resources to express their talent and creativity	
Establishing partnerships with industrial and private partners	
Train people in research and academic organizations preventing lack of skilled and specialized infrastructure operators	
Avoid the locking-in to particular hardware or software platforms that would jeopardise the long-term planning for capacity upgrades	
More scientific communities will use storage and computing infrastructures with state-of-the-art services for their research and education activities	
The open nature of the infrastructure will allow scientists, educators and students to improve the service quality by interacting with data, software and computing resources	
Increase the incentives for scientific discovery and collaboration across disciplinary and geographical boundaries, putting Europe in the driving seat at global level	
Further develop the European economic innovation capacity and provide stability to the e-infrastructure	

IP and related IPR	
IP Background	Please list all IP components **related to the result** brought by the partners into the project. This might be reports, software code, etc. There may be several IP components for each result. Don't forget know-how – which may be delivered as training or consultancy to support use.

Name	Short	IP	Type of protection	Protection or licensing	Under what terms is the

	description	Owner	or licensing action used	actions used	IP needed for the exploitation?

Third party IPs	Please list all IP third-party components which IP is owned by organizations outside the project				
	Name	**Short description**	**IP Owner**	**Type of protection or licensing action used**	**Protection or licensing actions used**

IP Sideground	Please list all IP components which are relevant to the project but produced outside the project by any of the partners during the project's tenure (providing a summary of the components of this aggregate result)				
	Name	**Short description**	**IP Owner**	**Type of protection or licensing action used**	**Protection or licensing actions used**

IP Foreground	Please list all IP created during the project. Include all the IPs related to components of this result.							
	Name	**Short description**	**Owner & Beneficiaries**	**Contributions**	**IP managers**	**Confidential [YES/NO]**	**Foreseen embargo date dd/mm/yyyy**	**Protection and licensing**	**Revenues and costs sharing**
		(Please provide a short description of IP asset)	(List all the partners involved and the IP owner during the project)	(List all the contributions to the IP of each partner to the result)	(List all the partners involved and the IP owner after the end of the project)	(Indicate whether the result is confidential)	(Indicate foreseen embargo date in case of confidential results)	Provide details on the protection used	

Workplan	When do you expect the result will be available to early adopters?	(Insert expect date)
	When do you expect the result will be available to final users / go in production phase?	(Insert expect date)

Exploitation	

Target audience	(Briefly describe who will use the result and for what. For each target group – what is the exploitation/use objective for them? (eg use for further research, use for policy support, etc)? What are the main messages you want to deliver? What are best channels to deliver messages? VERY IMPORTANT – How will the target group (when they hear your message and want to use the result(s)) access and use the results, and under what terms (i.e. who do they approach, where is the result located, etc).

Early adopters	(Briefly describe who are the early adopters)

Actions	(Briefly describe how the result will be exploited and who are the early adopters (e.g. 3 resource providers will adopt the created service to deliver services for free supported by virtual access mechanism for research; they will offer a paid service for commercial use))

Dissemination	

Channels	(What channels will you use to deliver the messages to the target? (e.g. Scientific publications, XX web site, newsletter, participation in conferences or trade fairs))

Appendix V. Aggregate project results template

The Tables below present the template used in the Confluence system to capture the information related to aggregate project results and exploitation and dissemination plans.

Author	(Lead author and main person responsible for the Aggregate Project Result)
WP(s)	(Work Packages involved)
Task(s)	(Insert Task number involved)
Document status	DRAFT/FINAL
Change Log	(Track/describe all major changes made to the document)

Result Name	(Specify Aggregate Project Result name)
Result Description	(Briefly describe the Aggregate Project result that will be produced)
Result Type	(Choose a type of result, you can add a new type if not covered) Software and Services [Federation Services], Software and Services [Common Services], Software and Services [Thematic Services], Software and Services [Business Pilots], Software and Services [Competence Centres], Software and Services [Others], Technical Specifications, Policies and Procedures, Publications, Business Models
URL	(Insert relevant URL of result)
Advance of the state of the art	(What is new or improved?) (Add some technical information if it helps to support your statements)

Innovation	(How can this result be used to deliver benefits (e.g. as a product, service, education tool, for policy support, etc)
Components	(List all project results related to this Aggregate Project result) 	#	Project Result Name	Short description
---	---	---
1	(add link to the Confluence page describing the Project Result)	(Please provide a short description of the component and how it contributes to the Aggregate result)
2		
3			
IP and related IPR	
IP Background	Please list all IP components related **to the result** brought by the partners into the project. This might be reports, software code, etc. There may be several IP components for each result. Don't forget know-how – which may be delivered as training or consultancy to support use. | Name	Short description	IP Owner	Protection or licensing actions used	Under what terms is the IP needed for the exploitation?
---	---	---	---	---
Third party IPs	Please list all IP third-party components which IP is owned by organizations outside the project 	Name	Short description	IP Owner	Protection or licensing actions used
---	---	---	---
IP Sideground	Please list all IP components which are relevant to the project but produced outside the project by any of

the partners during the project's tenure (providing a summary of the components of this aggregate result)

Name	Short description	IP Owner	Protection or licensing actions used

IP Foreground

Please list all IP created during the project. Include all the IPs related to components of this aggregate result.

Name	Short description	Owner & Beneficiaries	Contributions	IP managers	Confidential [YES/NO]	Foreseen embargo date dd/mm/yyyy	Protection and licensing	Revenues and costs sharing
	(Please provide a short description of IP asset)	(List all the partners involved and the IP owner during the project)	(List all the contributions to the IP of each partner to the result)	(List all the partners involved and the IP owner after the end of the project)	(Indicate whether the result is confidential)	(Indicate foreseen embargo date in case of confidential results)	Provide details on the protection used	

Workplan

When do you expect the result will be available to early adopters?	(Insert expect date)
When do you expect the result will be available to final users / go in production phase?	(Insert expect date)

Exploitation

Please refer to [Results Definitions and Info Page](#) for definitions and information

Type of exploitation	(Choose from the following list:
	further research activities other than those covered by the action concerned

	developing/creating/marketing a product/process creating and providing a service standardisation activities		
Description of exploitation	(Briefly describe how the aggregate project result will be exploited)		
Actions for exploitation	(Please list concrete set of actions that need to be accomplished to ensure that the result would be exploited. Actions related to dissemination have to be inserted in the 'Dissemination' section)		
	#	**Action description**	**Expected date**
	1	(e.g. service is accessible through Z website)	Insert expected date here
	2	(e.g. result is integrated in service Y)	Insert expected date here
	3	(e.g. improvement to source code of an open source software community are contributed in the main repository)	Insert expected date here
Use cases	(Concrete examples of adoption of the aggregate project result) (Current And/or Planned)		
Market Analysis			
Target audience	(Briefly describe who will use the result and for what)		
Early adopters	(Briefly describe who are the early adopters (e.g. 3 resource providers will adopt the created service to deliver services for free supported by virtual access mechanism for research; they will offer a paid service for commercial use))		
Market Trends/Publi	(What are users' needs and interests? What is needed to make them interested in using the result?)		

c Acceptance	
Product/Service Market Size	(How many users will use the result?)
Product/Service Positioning	(Describe the segment of users in which your result can compete)
Competitors/Incumbents	(Please provide an overview of possible competitors or incumbents to your result)
Risks analysis	

	(List all the related risks and mitigation actions)					
	Type of Risk	**Description**	**Risk level**	**Mitigation Actions**	**Feasibility/Success of Intervention**	**Priority level**
Risks	(Select from the following: Partnership Risk Factors Techological Risk Factors IPR/legal Risk Factors Financial Risks Factor Other (please specify))	(Provide a small description of the risk. Examples: -Disagreement on further investments: some partners may leave. -Industrialization at risk: no manufacturer for the exploitable result. -Industrialization at risk: an business partner leaves the market. Industrialization at risk: a partner declares bankruptcy. -Disagreement on ownership rules -Worthless result: ill-timed disclosure. -Worthless result: earlier patent exists. -Worthless result: better technology/methodology exists. Significant dependency on other technologies. -The life cycle of the new technology is too short. Result	(Product of Importance and probability of risk happening)	(Please provide scope and type of potential intervention)	(Feasibility/Success of Intervention Please rate from 1 to 10) (1 low- 10 high)	(Product of Risk level and Feasibility/Success of Intervention)

	aiming at replacing existing and well entrenched technologies -Exploitation disagreement: partners on the same market. -Exploitation disagreement: partners with divergent interests. -Worthless result: performance lower than market needs. -Legal problems: proceeding against us. -Legal problems: we are sued for patent infringement. -Know- how risks: it is easy to counterfeit the patent. -Know- how risks: a counterfeit cannot be proved. -Know- how risks: the patent application is rejected)				

Success Criteria section:

How do you measure the successful exploitation of this result? Please provide 1-2 criteria in the following table:

Success criteria	Indicator	Baseline	Target (ideal and stretch)	
(What is your strategic objective with regards to the exploitation of the result?) (e.g. increase the user base, achieve sustainable funding)	(Could you please give us an indicator to measure how you are succeeding in exploiting the result?)	(What is the value of the measure at the at the beginning of the project?)	(What is the ideal value you want to reach by the end of the project?)	What is the stretch value you want to reach by the end of the project?

Dissemination plan

(Please note that the performed dissemination actions will be reported in the page Dissemination Activities)

Key messages	(What messages will you tell to the target groups when informing about the results?)		
Channels	(What channels will you use to deliver the messages to the target? (e.g. Scientific publications, XX web site, newsletter, participation in conferences or trade fairs))		
Actions for dissemination	(Describe the concrete set of actions that will be put in place to disseminate this aggregate project result. So when this result is ready, how will you reach to target group to ensure uptake of the result (e.g. - Attend workshops organized by potential users - Promote the solution during the XX conferences - Writing abstracts, papers and articles for conferences, journal and newsletters.)		
	#	**Action description**	**Expected date**
	1	(e.g. Attend workshops organized by potential users)	Insert date here
	2	(e.g. Promote the solution during the XX conferences)	Insert date here
Cost	(What is the expected cost of dissemination actions?)		
Evaluation	(How will you evaluate the impact of the dissemination actions?)		

Impact

EOSC-hub expected impact	Contribution of result
The operation of a federated European data and distributed computing infrastructure for research and education communities will optimise the access to IT equipment and services and will put all European researchers and educators in equal footing to access essential resources to express their talent and creativity	List contributions of the result to this impact (if applicable)

Establishing partnerships with industrial and private partners	List contributions of the result to this impact (if applicable)
Train people in research and academic organizations preventing lack of skilled and specialized infrastructure operators	List contributions of the result to this impact (if applicable)
Avoid the locking-in to particular hardware or software platforms that would jeopardise the long-term planning for capacity upgrades	List contributions of the result to this impact (if applicable)
More scientific communities will use storage and computing infrastructures with state-of-the-art services for their research and education activities	List contributions of the result to this impact (if applicable)
The open nature of the infrastructure will allow scientists, educators and students to improve the service quality by interacting with data, software and computing resources	List contributions of the result to this impact (if applicable)
Increase the incentives for scientific discovery and collaboration across disciplinary and geographical boundaries, putting Europe in the driving seat at global level	List contributions of the result to this impact (if applicable)
Further develop the European economic innovation capacity and provide stability to the e-infrastructure	List contributions of the result to this impact (if applicable)