



D1.1 Quality Assurance, Risk Management and Innovation Management Plan

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Deliverable Abstract

This document outlines the quality assurance, risk management and innovation plans for the project and set out the relevant procedures to be adopted by the consortium.

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TERMINOLOGY

<https://eosc-portal.eu/glossary>

Terminology/Acronym	Definition
EC	European Commission
EOSC	European Open Science Cloud
IPR	Intellectual property rights
PC	Project Coordinator
PM	Project Manager
PO	Project Office
TB	Technical Board
TM	Technical Manager
MS	Member State
WP	Work Package

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Executive summary

The purpose of EOSC-Pillar's Quality Assurance, Risk Management and Innovation Management Plan is to facilitate co-operation and streamlined collaboration across the consortium through the definition of guidelines and procedures to be followed for project specific documentation and communication as well as for the production of other artefacts (e.g., software development).

This report provides partners with a reference point providing a common understanding of methods and procedures, emphasising contractual obligations towards the European Commission.

It is the project's view that adherence to the guidelines outlined in the document will result in the timely delivery of project results and their maximum exploitation.

All partners, particularly those responsible for deliverables, milestones and key results should be aware of this document, understand and use the processes, suggestions and procedures that are specified.

This plan is relevant across various activities of the project as it defines procedures concerning various managerial and operational aspects of the project. The ultimate objective of this Quality Assurance, Risk Management and Innovation Management Plan is to serve as reference consistently used by the consortium members to ensure concrete and quality results in line with the work plan of EOSC-Pillar.

1 Introduction

EOSC-Pillar will coordinate national Open Science efforts across Austria, Belgium, France, Germany and Italy, and ensure their contribution and readiness for the implementation of the European Open Science Cloud (EOSC).

This document provides a guide to the EOSC-Pillar consortium on all aspects of the project's management and coordination activities. This reference tool highlights all of the procedures and policies that have been agreed upon since the beginning of the project by the consortium.

The Quality Assurance, Risk Management and Innovation Management Plan is organised as follows:

- **Section 1 Introduction** - provides an overview of what this document aims to achieve
- **Section 2 Project Organisation and Management** - presents the overall structure and hierarchy of the project with the various governing and advisory bodies and their responsibilities
- **Section 3 Quality Control Procedures** - outlines the guidelines to be followed by the consortium members in organising meetings, producing outputs and reporting
- **Section 4 Risk Management** - details the approach of the project in managing coordination, implementation, execution and technical risks
- **Section 5 Innovation Management Plan** - provides a blueprint for consortium partners on how the project will ensure maximum exploitation opportunities for the project's results and details the responsibilities of those responsible throughout the innovation management process

2 Project Organisation and Management

The project management structure, as detailed in the Grant Agreement, is central to the daily coordination and functioning of EOSC-Pillar as described in figure 1.

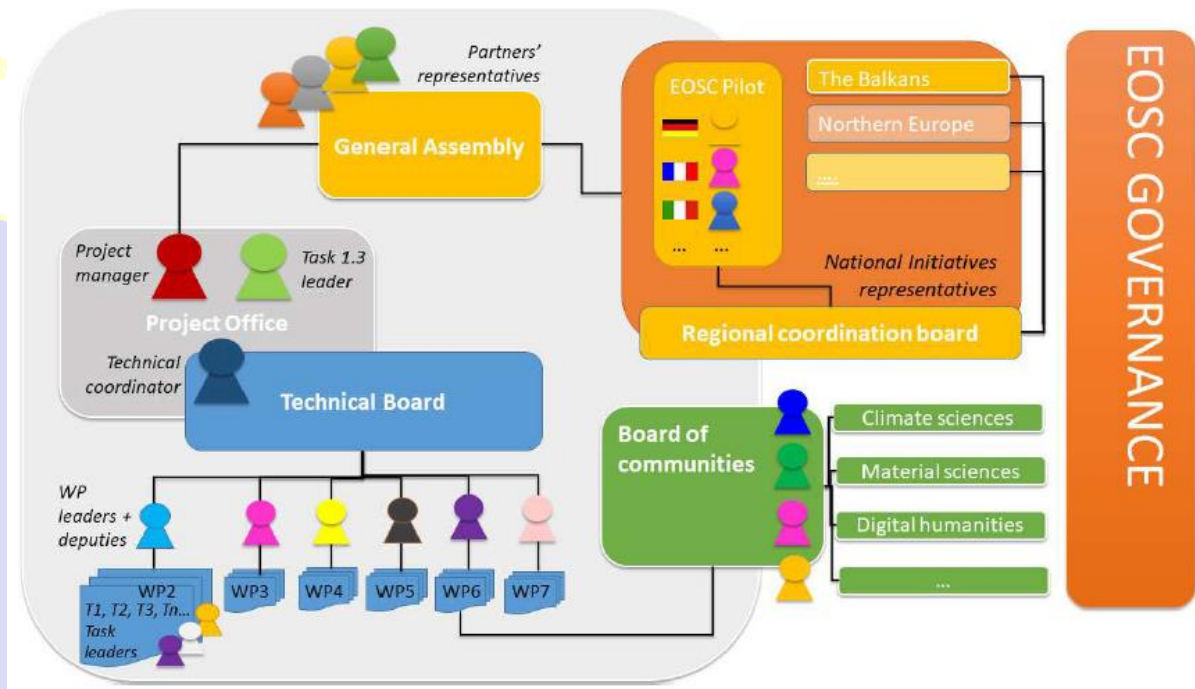


Figure 1-Coordination bodies of the EOSC-Pillar and their external relations

Effective management of EOSC-Pillar will depend primarily on three key aspects:

- **Technical coordination:** ensuring the coordination of a diverse scientific consortium.
- **Internal coordination:** oversight of all activities related to the execution of the project itself including coordination, communication and results dissemination, timely delivery of dependable results, compliance with the Grant Agreement and Consortium Agreement.
- **External coordination:** synchronisation with relevant external projects or bodies including INFRAEOSC-5 Call projects, and the EOSC Governance.

2.1 The Project Office

The Project Office (PO), comprised of the PM, T1.3 Lead, and the Technical Manager, ensures daily monitoring and support of the logistics of the project and supports the project coordinator and the project boards (Technical Board, Regional Coordination Board, Board of Communities and General Assembly) in their tasks.

Daily communication between all participants will be via e-mail or phone/video conferencing, and appropriate collaboration and project management tools, in order to keep travels and the relative expenses to a minimum.

The PO will also assist in setting common styles for deliverables, web pages and presentations. The project office persons will be responsible for the organisation of the European Commission (EC) external reviews.

2.2 General Assembly

2.2.1 Description, scope and responsibilities

The General Assembly (GA) is the decision-making body of the consortium and specifically addresses the content, finances and intellectual property rights, consortium evolution and developments, and appointments concerning the project.

The GA is formally empowered by the Consortium Agreement to take decisions affecting the budget and the objectives of the project, contractual changes and exploitation agreements.

The GA will take remedial actions based on advice from the Technical Board in the event of milestones being missed or deliverables not being released on time.

2.2.2 Composition

General Assembly Chair: elected by the GA among its members and appointed for a mandate of 18 months. The PM is ex-officio part of the GA.

General Assembly Members: composed of one management representative from each partner, who has voting rights.

The GA will normally conduct its business by e-mail. For this purpose, the email mailing list - ga@eosc-pillar.eu, has been created and its members will be kept up to date by the PO.

2.2.3 Procedures

Face-to-face meetings are foreseen at least twice a year, usually in occasion of other project events (workshops, related activities, etc.). Exceptional meetings can be called by the GA chairperson upon request of at least three of the partners.

Partners are entitled to one vote each through their General Assembly Representative or, in their absence, their deputy.

The GA retains the authority and the responsibility for conflict resolution, these will be resolved by voting on a 2/3 majority.

Specific provisions for conflict resolution, rights and obligations of all participants, also concerning IPR on the results of the project, are covered by the Consortium Agreement.

2.2.4 Meeting Agenda and Minutes

Prior to a General Assembly Meeting, the PO will circulate the agenda no less than two weeks before the date of the meeting (one week for extraordinary meetings) to allow all partners to prepare.

The General Assembly Chair will be responsible for taking the meeting minutes and circulating it to the General Assembly no more than five days after the meeting is held.

2.3 Technical Board

2.3.1 Description, scope and responsibilities

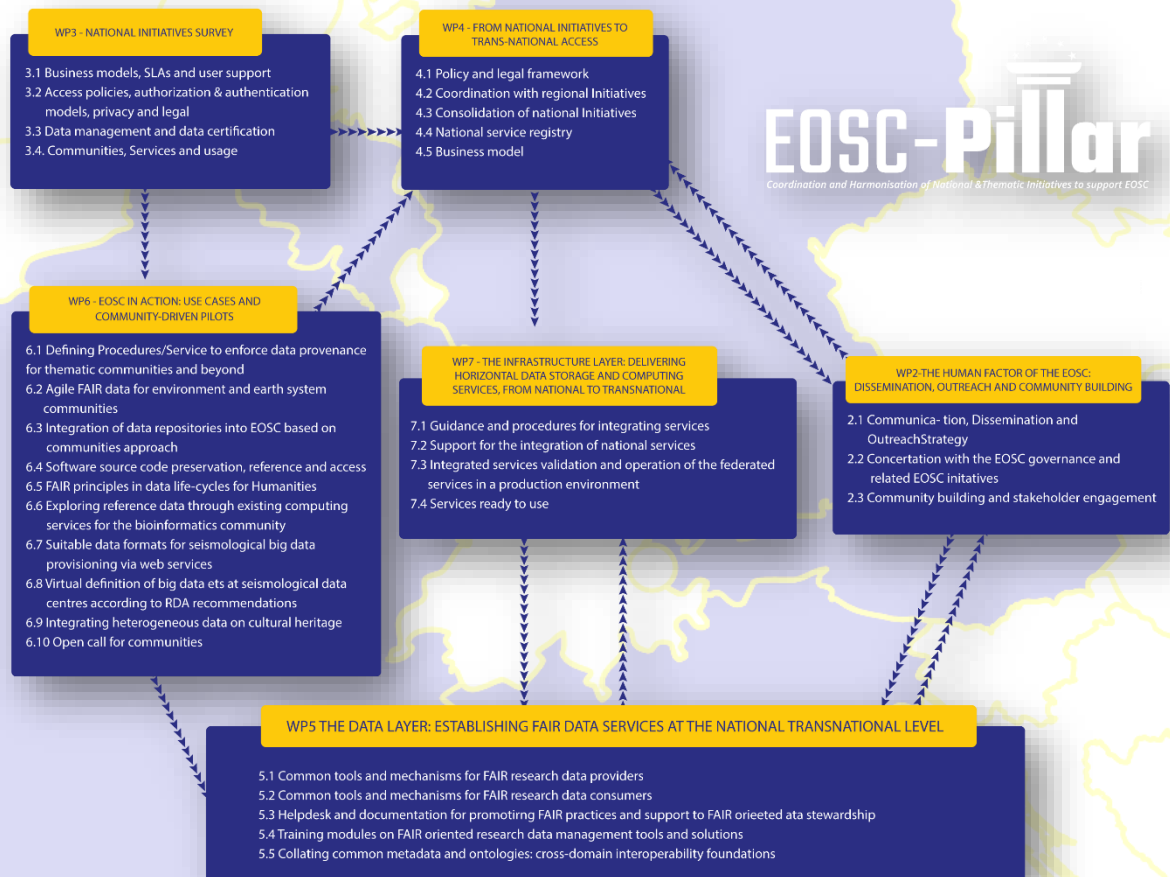


Figure 2-Work Package Interdependencies

The Technical Board is responsible for the day-to-day technical decisions, with the participation of experts when necessary, and will report to the GA.

Under the direction of the TM, the Technical Board will be responsible for the overall technical management and execution of the project such as implementing the work plan strategy, making the choice of alternative techniques, supervising the monitoring of the results.

It will propose to the GA corrective actions in the event that partners fail to meet their commitments.

2.3.2 Composition

Technical Manager (TM): To be appointed by the responsible partner CINES. Responsible for chairing the TB and deal with the day-to-day technical discussions ensuring the coherence of all the technical actions in line with the project's objectives.

Technical Board (TB) Members: made up by the managers of all the work-packages.



Figure 3-Technical Board Members¹

2.3.3 Procedures

The Technical Board will be meeting virtually primarily through conference calls. Frequency is to be decided by the Technical Manager upon his or her appointment.

Members may communicate with the entire board through the email mailing list – tb@eosc-pillar.eu.

Technical Board meetings will be chaired by the Technical Manager who will be responsible for reporting to the PM and the GA.

2.3.4 Meeting Agenda and Minutes

Prior to a Technical Board Meeting, the TM will circulate the agenda, no less than 2 days before the date of the meeting to allow all Technical Board Members to prepare.

The Technical Manager, or their deputy, will be responsible for taking the meeting minutes and circulating it to the General Assembly no more than two days after the meeting is held.

2.4 Board of Communities

2.4.1 Description, scope and responsibilities

The Board of Communities is a structure envisaged in the EOSC-Pillar's Description of Activity. We briefly outline here the concept of such structure, whose concrete implementation and final shape will happen later on, possibly with the contribution of other projects/activities (like the other INFRAEOSC-05b ones).

The Board of Communities will enhance coordination and exchange of ideas among the different communities, facilitating cross-fertilisation and helping to avoid the risk that the use cases piloted in WP6, and the validation activities progress as silos.

¹ As of submission of this deliverable.

During the course of the project, representatives in the board, selected among the research communities within the project, will voice the users' and data providers' point of view and will work in close contact with the PM, the TM and the TB.

Later on, Members of the Board of Communities will act as liaisons towards their respective communities, facilitating the exchange of information, conveying the community's desiderata and helping the EOSC to reach out to and engage the research communities.

2.5 Coordination Board

Alongside the EOSC-Pillar management structure, the project will establish the Coordination Board where sister regional projects will be represented. Like for the previous case, the Coordination Board is currently being defined together by the seven INFRAEOSC-05 projects: here we briefly outline the concept of such structure.

This board will have an advisory capacity to the EOSC-Pillar project and its input will ensure the synchronisation of the EOSC-Pillar technical activities with the rest of the EOSC ecosystem of projects and governance entities.

The coordination board is the first step towards establishing a body including representatives appointed by all MS initiatives, whose purpose would be to keep aligned the policies and strategies of National Initiatives and exchange best practices and experiences.

While the EOSC Governance Board provides high-level ministerial input from the MS to the development of the EOSC, the Coordination Board is foreseen to comprise of sister regional projects, initially, and to evolve into a body comprising representatives appointed by MS initiatives: this structure will serve the needs to keep National Initiatives policies and strategies aligned, as well as sharing experiences and best practices. In the longer term, with the consolidation of the initiatives, such body could assume more responsibilities in the interaction with the EOSC.

2.6 Work Packages

The EOSC-Pillar project's technical outputs are produced by the project's seven work packages (WP) as stipulated in the Grant Agreement. Each WP is led by a consortium partner who appoints a Work Package Manager.

2.6.1 Procedures

Work Package Managers may convene WP meetings as deemed appropriate. Each WP has its own mailing list (wp#@eosc-pillar.eu) that is maintained by the PO.

2.6.2 Meeting Agenda and Minutes

Prior to a WP Meeting, the WP Manager or their deputy, will circulate the agenda.

WP managers may use rolling or "live" minutes that are updated regularly, however, the WP manager must be ready to provide sufficient updates to the TB, GA, or PO on the activities within their WP up to the task level, when needed.

2.6.3 Composition

Work Package Manager: appointed by the partner responsible for their respective WP. They organise the suitable contacts between the concerned partners and are in charge of producing the deliverables. Work-package managers and project administration will generate quarterly progress reports. These reports will indicate the progress made in each task and the resources consumed. Work Package Managers will be part of the TB, manage the activities of their WP and coordinate their respective Task Leaders.

Deputy Work Package Manager: Drawn from consortium partners most involved in the WP activities, WP Managers will appoint their respective Deputy WP Manager. The deputy should preferably be from a different organisation than the WP Manager and will help WP managers in their duties and contribute to the decision-making. In the WP manager's temporary absence, they will take on the responsibilities of the WP manager. In the event of the WP-leading organisation leaving the consortium, the Deputy WP manager automatically becomes the WP Manager. This will also take place in the event of severe underperformance by the WP manager (upon the deliberation of the Technical Board and confirmation by the General Assembly).

Task Leaders: For each activity/task a responsible person will be designated by the partner who leads that activity, in agreement with the WP manager concerned, and the TM.

3 Quality Control Procedures

3.1 Deliverable reports and software

The status of deliverables is to be monitored regularly at TB meetings. As a general guideline, deliverables that are to be delivered within the next two months from a TB meeting should be included in the meeting agenda with the TM following up on its status. In parallel, communication by email should also take place regularly to ensure timely submission of quality reports. Versions of deliverables will be stored on a dedicated repository (to be set-up along with the 2nd release of the website in October 2019) by WP leaders. All partners are required to upload their deliverables in these folders before sending them for internal review.

3.1.1 Delivery Slip

The template which is currently being used for the submission of deliverables to the EC includes a delivery slip (generally found on page 2). Respective fields in the delivery slip should be filled by the deliverable author, reviewers, and approved by the TM.

3.1.2 File Formatting

The procedure for naming deliverables and project level documents is - EOSC-Pillar <Deliverable Number> <Deliverable-Name <v.#> <YYYYMMDD> e.g. “EOSC-Pillar D1.1 Quality Assurance, Risk Management and Innovation Management Plan v1 20190828.doc”. Subsequent versions will be named v2, v3 etc., until the last and final version, as submitted to the EC, is named “Final”.

All final documents will be stored on the project repository in the original (Word, Excel, PPT) & PDF format. The repository will be provided as part of MS2.2 2nd release of the EOSC-Pillar web presence online.

3.1.3 Deliverable Status

Deliverables for EOSC-Pillar are either for public (PU) or confidential (CO) circulation. The circulation status of the deliverables was pre-determined during the project negotiation stages and is stated in the Description of Work's List of Deliverables Table 3.1c. Each deliverable is written using the EOSC-Pillar Deliverable template that is part of the templates and branding pack provided by WP2.

3.1.4 Reviewing Deliverables

Lead partners for deliverables should request for two volunteer reviewers for their deliverables at least 1 month in advance from the TB. This can be done via email or at TB meetings. If a week passes from the request without any volunteers, the TM may assign internal reviewers. Reviewers should come from different organisations that contributed to the deliverable. In the absence of available WP managers to review, task managers may be called upon as internal reviewers by the TM.

3.1.4.1 Internal Review

The Task Leaders are responsible for the quality of their deliverables. Furthermore, an internal peer review procedure is planned to ensure that each deliverable is validated by two members of the TB that simultaneously review the first draft of the document. Reviewers have five working days to make

track-changed comments or suggested edits to the document before returning the deliverable to the author. Comments are considered by the author and relevant changes made within five working days. These are recorded in the document log table, including the name and organisation of both the reviewer and the person who implemented the changes (author).

3.1.4.1 Final review

Once the author has made the relevant changes, he/she then sends the deliverable to all partners (partners@eosc-pillar.eu) for final comments with a message clearly stating: which two TB reviewers have already reviewed the document; the name and number of the deliverable; the final review deadlines.

Any comments from the partners will be addressed by the author. If there are no further comments by the deadline, the coordinator will submit the deliverable.

Once a final version of the document (v.Final) is ready the author should submit it to the Coordinator. The coordinator then transmits it by electronic means to the EC.

3.1.5 Software

A full procedure for the delivery of software will be established by the project by M9 of the project, as a related activity to MS31 (guidelines for the technical integration/federation of resources with the EOSC). This will be defined in full by the TM and partners contributing to software activities and will be an update to quality management activities.

The following items may be considered for inclusion:

- **Architecture:** An overview of the software components and their dependencies to help better understand its structural, logical and technical setup
 - **High-Level Architecture:** Description of how the software is built. If technical documentation is available online, provide the link. In this section, the authors must describe the architecture or updates to it as introduced by this release.
 - **Integration and dependencies:** Description, with text or figures/diagrams, of how each component fits within the architecture of the software and their relationship to the other components.
- **Release notes:** List the requirements that have been implemented with this release
- **Testing notes:** Indicate the testing procedures, acceptance criteria, outcomes of the review and who were involved in the testing.

3.2 Surveys

The aim of the National Initiatives Survey of EOSC-Pillar is to landscape national initiatives on open research data and services as well as their maturity level. As of writing this deliverable, the surveys and quality control measures for them were being developed in parallel.

In order to achieve representative results for the questionnaire, EOSC-Pillar followed a scientific approach in survey methodology and the planned statistical analysis.

The survey design was created in close cooperation with experts in survey methodology, as well as thematic experts regarding open science, open research data and research infrastructures on a national and international level. These experts from the University of Vienna, the Karlsruhe Institute of

Technology, the French National Centre for Scientific Research, Ghent University and the Consortium GARR have created a cross-cultural survey design with special considerations on the respective national landscapes.

The aim of the design is to get representative results for each target group as well as enable comparability of data across national borders. In order to receive valid and comparable answers from the respondents, surveys are created specifically for each target group. In order to build on the findings of past projects in the EOSC and open science context, the project, specifically WP3, used the definitions of previous surveys and reports (e.g. from EOSC Pilot) - which is another measure to achieve comparability with available data.

The consortium's feedback was also incorporated into the design. The overall survey design was then presented at a seminar specifically designed for survey creation at GESIS - Leibniz Institute for the Social Sciences in Cologne, and again, feedback of experts in survey methodology was gathered and incorporated.

Then, experts created the questionnaire and thereby took previous projects and questionnaires with similar research questions into account. The individual questions were reviewed internally according to the survey design guidelines of Dillman, Smyth and Christian. An international high-level group of stakeholders reviewed the questionnaire in a second feedback loop. In addition, WP3 will pre-test the survey before the launch regarding technical issues and clarity of the questions.

In order to reduce response error, a few measures were established to achieve a high response rate. The survey will be accompanied by support letters of high-level representatives (from the ministry, a university or a research institution) from all participating countries. There will be a pre-notice letter in advance, as well as stakeholder engagement activities addressing the survey target groups (e.g. high-level policy meetings, network meetings, public presentations etc.). The aim of these activities is to inform the target groups about the upcoming survey and to increase motivation for participation.

To ensure a sound technical implementation, the expertise of survey programmers with experience in the software solution used for the survey (LimeSurvey) will be incorporated into the project.

Consultations with a legal advisor with special focus on data protection, copyright, online and contract law throughout the project duration ensures compliance with data protection and copyright law. The legal consultation concerns both the implementation of the survey and the analysis of the data.

3.3 Project Reporting

3.3.1 Activity and Financial Reporting

The Project Office will oversee the project's progress from both the technical and the financial sides. Technical monitoring has already been discussed, and the presence of the TM in the PO ensures close communication with the PM.

For the financial monitoring, the GA representative of each partner is required to produce quarterly financial statements. These reports will contain:

- the list of people exposing worked-hours during the period. For each person, the name surname sex and hourly cost should be indicated

- for each person, and for each task, the number of hours worked during the period and a one-line description of the main task(s) performed
- any other incurred cost: e.g., travels, organization of meetings,...

These quarterly financial statements will be consolidated (by the PO) in a single project-wide financial statement, which will be made public to the GA members. The overall financial statement will include tools to project partners' expenditure rates to the future (next internal reporting period, and project closure). This, together with feedback from the TM on the technical implementation progress, will allow the PM and the GA to monitor the project as a whole.

In the Consortium Agreement, partners have also included a provision for distribution to partners of the pre-financing received from the Commission. According to this provision, only 80% of the pre-financing amount received will be initially distributed: the remaining 20% will be distributed at project month 24 upon evidence (through the internal financial quarterly reports) that the partner has claimed person-power costs in excess of 50% of the amount anticipated in the Description of Activity. This mechanism is extremely simple, robust, not detrimental to any of the actors (neither to partners nor to the Coordinator) and implements a protection mechanism in case the effort distribution needs to be reallocated (for example, in case one partner is under-performing). Should, for instance, the GA approve a redistribution of effort from partner A to partner B, the Coordinator would have some funds available to try and match the new budget figures.

3.3.1.1 Work Package Leaders Responsibilities

Every WP Manager should:

- Provide a summary of progress towards objectives and details for each task;
- Highlight clearly significant results;
- If applicable, explain the reasons for deviations from their description of work and their impact on other tasks as well as on available resources and planning;
- If applicable, explain the reasons for failing to achieve critical objectives and/or not being on schedule and explain the impact on other tasks as well as on available resources and planning (the explanations should be coherent with the declaration by the project coordinator);
- A statement on the use of resources, in particular highlighting and explaining deviations between actual and planned person-months per work package and per beneficiary;
- If applicable, propose corrective actions.

The WP contributions as described above will comprise the “Work progress and achievements during the period” of the periodic report.

WP Leaders must also inform the WP1 (GARR) and TM of Milestones: Achievement date and comments, such as means of measurement/verification.

3.3.1.2 Beneficiaries and Third Parties Responsibilities

Every partner and third parties will be required to provide a thorough “Explanation of the use of the resources”, including an explanation of personnel costs, subcontracting and any major costs incurred by the partner, such as the purchase of important equipment, travel costs, large consumable items, etc. This will be provided in the Quarterly Progress Reports.

3.4 Review and Review Recommendations

From the EOSC-Pillar perspective, Project Reviews are meant to present the achievements of the project and the procedures implemented for their accomplishment to the reviewer committee identified by the European Commission. Considering its level of importance, the participation of one representative of each partner is recommended.

3.4.1 Review Preparation

By default, the preparation and presentation of the work achieved during the period at review meetings are the responsibility of the WP managers, the TM and the PM.

To prepare for review meetings, a rehearsal will be organized by the PO in advance: attendance to the rehearsal is open to all project participants. Before the review rehearsal, speakers will be required by the PO to make their presentation available in advance, to enable all participants to review each one in order to ensure correctness, completeness and consistency of information. The rehearsal will aim at refining and approving all presentations prepared for the review meeting.

Final version of presentations will be then made available for the reviewer committee in a dedicated folder on the project repository server, at least one week before the review.

3.4.2 Review Recommendations

Recommendations from the reviewer committee, after the review, will be sent to the consortium as soon as the PO receives them. An ad hoc TB meeting may be organised to analyse the recommendations and decide how to implement the changes or corrective actions to address the reviewer committee's recommendations.

4 Risk Management

EOSC-Pillar will be looking at four particular risk categories during the project lifetime:

- Coordination Risks
- Implementation Risks
- Execution Risks
- Technology Risks

4.1 Identification, Analysis and Evaluation Ranking

All consortium members have a responsibility in risk management including the first three phases of risk management including identification, analysis and evaluation ranking of risks.

Any WP manager, task leader or key resource persons may raise possible risks at the task, WP, TB, or GA level. All WP-level risks and above shall be communicated to the T1.3 Quality Assurance, Risk Management and Innovation management Lead.

A live sheet or tracker will be created by the T1.3 Quality Assurance, Risk Management and Innovation management Lead called the Risk Report and Contingency tracker sheet which will contain all the initial risks identified in the Grant Agreement as well as new risks that emerge during the project lifespan.

A quick review of this sheet will be a permanent fixture in the TB meeting agenda.

Description of risk	Involved WPs	Proposed risk-mitigation measures	Likelihood and impact
Disputes between partners	WP1	The Consortium Agreement and D1.1 will contain necessary conflict resolution procedures.	Likelihood: Low Impact: Medium
Failure to commit to the project workplan, resulting in execution delays	All	The WP Leaders and the Project Coordinator will impose specific corrective actions throughout the project lifecycle to provide the necessary flexibility ensured by a carefully designed workplan. Multiple consortium members are focussed on each given task such that an underperforming partner can be replaced by additional resources from another.	Likelihood: Low Impact: Medium
Failure of WP leaders to perform adequately or unavailability of the leader	WP1	Regular meetings will address this in good time. A deputy WP Leader has been appointed prior to the start of the project and will step-in in case of underperformance/ failure of the WP coordinator, or of (temporary) unavailability.	Likelihood: Low Impact: High
Communication and outreach failures	WP2, WP3	WP2 leader has multiple years of experience in the field and a positive track-record in similar initiatives. As a contingency measure, the continuous communication, synchronisation, and engagement monitoring activities will ensure prompt corrections.	Likelihood: Low Impact: Medium

Lack of engagement in the consultation platform or surveys	WP2, WP3 WP4, WP5 and WP7	The partners will leverage their vast network of national, European and trans-national contacts, utilised in several cutting-edge initiatives in research infrastructures, and will exploit their current advantageous position gained in the field thanks to their central role in critical initiatives, already identified and preliminary engaged.	Likelihood: Medium Impact: High
Lack of participation to hackathons	WP6	The project will piggyback existing events that are appealing for the target community (GridKA, ESOF2020, ESFRI clusters' meetings). The format of the events will be designed to be an appealing training opportunity for young researchers that will be recruited thanks to the partner's liaisons with relevant master/specialization courses. Travel coverage for a part of the participants is also considered.	Likelihood: Low Impact: Medium
Lack of interest from the research communities in contributing in, validating and using the developed solutions	WP5, WP6, WP7	Communities are involved in the very design of this project. The use cases addressed belong to large cross-border thematic communities, and can build upon a strong user base and the appropriate channels to ensure the uptake of the new services are already in place. As a contingency plan, the national initiatives can tap into their participants in case there's a need to involve more users.	Likelihood: Low Impact: High
Lack of participation to workshops	WP2	Develop a clear concept for the workshop that emphasises clear benefits of attending. Co-location with other EOSC events or events where the target attendees are present should also be explored as well as the possibility of remote participation. Additionally, WP2 will enlist the support of partners that have a strong network within the country where the workshop is being organised.	Likelihood: Low Impact: Medium
Failure or major difficulties in deploying the services	WP5, WP7	The partners responsible for the services' integration and deployment are very experienced and have a positive track in delivering services and are involved in a number of related projects. Monitoring activities will ensure prompt corrections.	Likelihood: Low Impact: High

Failure to coordinate effectively with EOSC and EOSC-related initiatives	WP2, WP5, WP7	Many of the consortium key partners have a direct involvement in the EOSC-hub and OpenAIRE-Advance, EOSCpilot, EOSCsecretariat projects as well as in thematic clusters. Through them, any lack of coordination can be promptly addressed.	Likelihood: Low Impact: High
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Table 1 - Initial list of project risks

4.2 Mitigation

The four above-mentioned risks are minimised through the following:

- Communication and collaboration tools such as specific mailing lists covering the entire project hierarchy, sufficient conference calls at the GA, TB and WP levels
- The consortium was built from partners with relevant experience, strong complementarity, and pre-existing collaboration links – all contributing to the successful performance of their current project responsibilities
- A risk monitoring report and contingency tracker that is frequently reviewed at the TB and WP meetings. This includes a first set of risks identified and listed in the Grant Agreement (Table 3.2b: Critical risks for implementation)
- Existing relationships within the EOSC-Pillar consortium
- Strong complementary bonds between the involved domain knowledge experts

Additionally, due to the specific nature of the project, risks may also stem from external factors due to its need to be synchronised with the EOSC governance entities and the other EOSC regional projects and thematic initiatives. To address these, the following mitigation actions have been planned:

- Establishment and operation of the Coordination Board
- Outward-facing tasks designed within the WPs such as:
 - T2.2 Concertation with the EOSC Governance and related EOSC initiatives
 - T4.2 Coordination with regional initiatives
- Active participation in 80+ relevant third-party events (WP2) which provides a two-way information loop (EOSC-Pillar disseminating its achievements and communicating activities and the EOSC-Pillar representatives gathering and reporting information from the events that are relevant to the project development)

4.3 Conflict Resolution

To ensure a maximum degree of seamless cooperation within the consortium, the project's management will approach conflict resolution through consensus building, and promoting mediation over voting in order.

As a reminder, the GA is composed by one representative of each participating partner.

When a conflict arises between partners, the following escalation process will be followed:

1. One of the disputing parties sends an email explaining the situation to the relevant WP manager with the disputing party copied (allowing the other party to reply if so desired).

Action and outcome:

- (+) WP manager successfully resolves conflict, in coordination with the TM.
 - (-) If no resolution achieved, go to step 2.
2. The TM and the WP manager will assess whether there are any direct legal or financial impacts to the partners

Action and outcome:

- (+) If the conflict does not have a direct legal or financial impact on one of the partners, move to Step 3
 - (-) If the conflict has a direct legal or financial impact on one of the partners, the PO must first formulate an action plan for resolution to be presented to the GA and then proceeds to Step 3.
3. The TM and WP first discuss the issue and a proposal for a solution via email, then a GA meeting through teleconference is convened to discuss the issue.

Action and outcome:

- (+) A consensus is achieved on the action plan proposed by the TM and WP and the disputing parties accept the proposal for resolution
 - (-) A consensus is not achieved. The GA will then put forward the proposal to a vote. Move to Step 4
4. A vote is initiated by the GA.

Action and outcome:

- (+) A 2/3 majority is achieved and the proposal must be accepted by the disputing parties.
- (-) An unsuccessful vote will require the TM, WP manager (and PO, if needed) to revise the proposal based on the input from the GA. Return to Step 3.

All voting procedures for conflict resolution must take place according to the EOSC-Pillar Consortium Agreement.

5 Innovation Management Plan

EOSC-Pillar's Innovation management process is outlined in this innovation management plan. This section details the process it takes for capturing result to disseminating and exploiting results.

5.1 Roles and Responsibilities

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

Role	Responsibilities
Key Result Proponent	Register information on each project result in the results catalogue, including exploitation and dissemination activities
Technical Manager	<ul style="list-style-type: none">• Validation of the information in the catalogue• Provide recommendations to result proponents on Intellectual Properties (IPs) protection best practices• Validation of individual result's dissemination and exploitation activities• Handle escalations from T1.3 Quality Assurance Risk Management and Innovation Management Task Leader in case of insufficient information provided by WP leaders or key result proponents or lack of collaboration
T1.3 Quality Assurance Risk Management and Innovation Management Task Leader	<ul style="list-style-type: none">• Delivery of the Innovation Management Plan (D1.1)• Set-up and maintenance of the EOSC-Pillar Results Catalogue• Preparation and sending of the Result Identification template• Liaising with WP managers to update their respective results• Escalate and raise issues to the TM and TB
WP managers	<ul style="list-style-type: none">• Insert and update project results in the EOSC-Pillar Results Catalogue (or the delegation of this task to Key Result Proponents or Task Leaders in their WP)• Ensure complete and updated information in the catalogue• Ensure that Key Result Proponents have defined the dissemination and exploitation plans
WP2 team	Provide support in validating result dissemination and exploitation activities results

Table 2 Innovation management roles and responsibilities

5.2 Processes

This section provides a procedural guide on implementing the Innovation Management Plan.

5.2.1 Capturing and handling Project Results

The first step in the EOSC-Pillar Results Catalogue is for the technical manager to list all potential project results, and their key proponent in the catalogue.

A Result Identification template will be provided by the T1.3 Quality Assurance Risk Management and Innovation Management Task Leader to all WP managers. WP managers will then fill or assign their key result proponent to fill the template and submit to the T1.3 Task Leader and the TM and link to the EOSC-Pillar Results Catalogue.

Upon linking in the catalogue, the TM will then verify that the project results have been described and analysed satisfactorily. Any requests for edits or changes can be reverted by the TM back to the key result proponent.

Result Name	
Author	
WP	
Description	
Type	
URL	
Innovation	(In what way can this result be used to deliver benefits)
Impact	
INTELLECTUAL PROPERTY	
IP Background	(List all IP components sourced from partners that were used to produce the result i.e. software code, reports, know-how) <ul style="list-style-type: none"> • [Component name] (IP Owner): [Description] - [Protection or licensing action used and type]
Third party IPs	(List all IP components that are owned by organisations outside the project) <ul style="list-style-type: none"> • [Component name] (IP Owner): [Description] - [Protection or licensing action used and type]
IP Foreground	(List all the IP created during the project including those related to the components of this result) <ul style="list-style-type: none"> • [Name]: [Description, owner during the project, owner after the end of the project, confidentiality level] - [Protection or licensing action used and type]
EXPLOITATION & DISSEMINATION	
Target Beneficiary	(Describe who will benefit or use this result)
Main Benefits	(Describe how each target beneficiary will use or benefit from this result)
Exploitation Action	(Recommend how best to exploit the result for target beneficiaries)
Channels	(Identify the best channels that can be used to ensure the messages reach the right target beneficiaries)

Table 3 - Result Identification template

5.2.2 Exploitation Management

Exploitation management is covered in the EOSC-Pillar Results Catalogue within each Result Identification template and allows the consortium to

- Identify each result's exploitation opportunities for foreground IP, and developing an appropriate strategy for its exploitation and protection

- Maintain and elaborate the dissemination and exploitation strategy plan, to promote the project results and their use to maximise the expected impacts

5.2.3 Dissemination

As part of each Result Identification template, dissemination actions will be proposed by either the proponent or the concerned WP manager. This allows the consortium, especially WP2, to

- Coordinate and monitor dissemination activities for each result
- Ensure that all results achieve the necessary visibility and ensure the best chances for exploitation.

5.3 Definitions

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

Project Result	Includes a tangible or intangible project output (i.e. data, knowledge or information) generated through activities of the project, in whatever form or nature
Exploitable Result	These are the most relevant results of the project. Can also be a group of project results
Type of result	<ul style="list-style-type: none"> • Software and services • Technical specifications • Policies and procedures • Documents and reports • Business models • Other, not listed above
Exploitation	Utilisation of results in: <ul style="list-style-type: none"> • Creating and providing a service • Further research activities • Input to policy actions • Standardisation activities
Dissemination	Public disclosure of the results by any appropriate means
Innovation	A new (or improved) entity (or creation), which when used can produce tangible benefits, satisfying user needs and wants. Types of Innovation: <ul style="list-style-type: none"> • Business • Marketing • Strategy • Organisational • Product • Service • Process • Technology
Impact	Benefits derived from the innovation

Intellectual Property (IP)	<p>A product of the mind generated through activities such as research and experimentation, or creativity. An intellectual property can be traded, sold, bought, leased, used as collateral, or given away.</p> <p>Examples: software, designs, databases, reports, roadmaps</p>
Intellectual Property Right (IPR)	<p>Legal “rights” to protect your Intellectual Property</p> <ul style="list-style-type: none"> • Patents (technical inventions) • Copyright (e.g., software, written works, engineering drawings) • Database rights (creation and arrangement of data) • Trade marks • Non-disclosure agreements
IP Background	IP asset owned by the consortium partners brought into the project
Third party IPs	IP assets owned by the organizations not directly involved in the project
IP Foreground	All IP assets created during the project duration
Target audience	Main users of the result
Potential Early adopters	Who will start using the result as soon as it is available
EOSC-Pillar Catalogue of Results	List of all collected EOSC-Pillar project results and related information.

Table 4 Definitions for dissemination and exploitation

6 Conclusions and next steps

As the first deliverable of the project, this document provides a timely guide for the entire consortium into the processes necessary for measuring and ensuring the project's success.

The provisions found here are either in the process of implementation or have already been implemented by the project consortium.

However, it should be noted that although this report provides a foundation for the entire project's operation, these processes must not be inflexible. Updates or changes to the procedures found in this deliverable may be implemented by the T1.3 Quality Assurance Risk Management and Innovation Management Task Leader in agreement with the TM or the PM.

The next steps would be the following

- A TM to be officially appointed
- Software quality assurance process fully defined by M9
- The full set of collaborative tools to be delivered by WP2 (Milestone 2.2 Second release of the EOSC-Pillar web presence online, due M4-October 2019). These collaborative tools will be used to develop the EOSC-Pillar Results Catalogue and Risk Report and Contingency tracker sheet
- The T1.3 Quality Assurance Risk Management and Innovation Management Task Leader to provide a structure to start populating the EOSC-Pillar Results Catalogue
- The T1.3 Quality Assurance Risk Management and Innovation Management Task Leader to provide a structure to start populating the Risk Report and Contingency tracker sheet