**EOSC-Future – First Response**

**to M9 Review Recommendations**

Draft 7 March 2022

This document highlights the main elements of response to the EOSC-Future M9 review recommendations.

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*Please include key elements of response (keeping it brief) to the recommendations regarding your WP with a constructive approach on how the reviewers’ concerns are being/will be addressed directly in this template by Friday 11 March at noon. Also feel free to provide comments/track changes suggestions wherever needed.*

*The input provided will then be informally discussed during the next EC bi-weekly meeting on Monday 14 March and finalised during the next PMB meeting on 15 March, prior to be officially sent to the EC on the same day.*

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| **Nr** | **M9 recommendation** | **Status/Actions needed** |
| Response to Immediate recommendations | | |
|  | **Demonstrations for the Next Review:** Provide a list of EOSC Future technical developments that will be demonstrated in the next (M12) review/checkpoint of the project ahead of the review. The results to be demonstrated must be aligned to the Actionable Roadmap.  ***For info: the M12 review meeting will take place on 2nd June in Brussels*** | TCB – WP3, WP4, WP5, WP7 + WP6  **TO BE COMPLETED (also linked to the Actionable Roadmap + might also be linked to recommendation 13 about use cases)**  **Technical developments that will be demonstrated during the M12 review meeting on 2nd June include:**   * **EOSC Marketplace Search Engine over different resource types and navigation: services, datasets, software, etc.** * **EOSC Marketplace User Dashboard.** * **EOSC Platform as enabler of Resources composition: Data Analysis on Remote Computing Facilities** * **EOSC Platform as enabler of Resources composition: Data Analysis with Notebooks and Binder** |
|  | **Actionable Roadmap:** The roadmap must be enhanced with interim implementation milestones (i.e., in the period M9-M18) such as the delivery of specific modules, the implementation of specific interfaces etc. Moreover, for each action of the roadmap, one or more responsible partners must be provided that will be accountable for the implementation, as well as the estimated effort needed. Finally, measurable indicators of success need to be defined for each of the tasks. Compound tasks (combining more than one feature) should be split, to facilitate tracking of progress. | **Work is being carried out to make the Actionable Roadmap an efficient project management tool following the M9 review recommendations:**   * Improving the wording of the actions to make progress tracking more efficient, * Adding names of people accountable for the implementation of each of the actions (these persons will also be responsible for updating the progress in JIRA) * Assessing the estimated effort needed to complete each of these actions and providing a realistic timetable accordingly, * Including KPIs to be used as indicators of success for these actions whenever possible, * Integrating the project’s milestones and deliverables in the Actionable Roadmap, identifying the intermediary actions feeding into their implementation, * Including the interdependencies between actions.   **This work will be finalised by 18 March, and we will then integrate the whole Actionable Roadmap into JIRA to keep track of the project’s progress in an efficient way.** The updated excel-based Actionable Roadmap will be sent to the EC for information. |
|  | **JIRA Visibility and Reporting:** The project should provide the EC with a reporting mechanism about the implementation task, which will be directly linked to the JIRA of the project. Based on these mechanisms, reports must be provided regularly (e.g., every two months), clearly demonstrating the progress of the implementation work. | As soon as its content is finalised, the Actionable Roadmap for the whole project will be included into JIRA. Reports will be extracted from JIRA and provided to the EC to demonstrate the progress of the implementation of the work. This can be done for instance by including it in the review reports and presenting it during review meetings. |
|  | **KPI Framework:** Along with the visibility in the JIRA, it is advised that the project provides to the EC and the reviewers visibility on its KPIs (e.g., in the form of an on-line spreadsheet or a dashboard). | The project’s KPI framework (GA Annex B – section 2.1.4) will be integrated to the extent possible in the Actionable Roadmap as a means to track actions’ progress. An overview of the KPIs’ progress will be included in the review reports. |
|  | **Architecture with Implementation Detail:** The consortium must produce more detailed architecture views of the EOSC Future platform. Specifically:  • The logical view of the architecture must illustrate all the modules that must be implemented or integrated, including the interactions and interfaces between them. • Process views for some of the main use cases must be provided (e.g., the user journeys listed in D5.2, the back-office functionalities of D4.2, the service provider on-boarding process, AAI interactions), including information flows between the main components, as well as the APIs specifications.  • Implementation and deployment views must be also provided for different parts of the platform (e.g., EOSC Core, EOSC Exchange). | TCB, WP3  **TO BE COMPLETED**  **Activities to produce more detailed architecture views of the EOSC Platform already started with a series of technical meetings covering different architecture areas and processes enabled by the EOSC Platform.**  **The D3.3 is the first outcome of this effort. This document describes a key component of the EOSC Platform, the EOSC-Core Technical Platform and details the architectures of EOSC-Core Operational Services: Resource Catalogue, Helpdesk, Monitoring, Accounting and Order Management. The deliverable also introduces an overall Architecture Framework to describe, maintain and evolve the EOSC-Core Technical Platform and adopted a common terminology that overcame the various terminologies adopted in past EOSC Projects.**  **As output of this effort, architecture diagrams for the main components of the EOSC Platform will be made gradually available in the coming months together with documentation of the processes behind the most relevant use cases as for example:**   * **Inter-Catalogue connections/synchronisation** * **Data Source-related capabilities** * **Integration of the EOSC-Exchange Services with the EOSC-Core Services** * **Identifying Horizontal Services in the EOSC Platform** * **Identifying EC-funded Services and, more in general, Funding Models behind EOSC-Exchange Services in the EOSC Platform** |
|  | **Interoperability Framework:** Define specific capabilities of the Interoperability Framework that can be deployed and operated. Consultations and discussions about this must be time-boxed and they must converge soon, in line with the implementation timeline of the project. | TCB, WP3  **TO BE COMPLETED**  **In parallel to the setup of the EOSC Interoperability Framework Governance, the project is working to identify exemplar use cases that can be supported by the EOSC Interoperability Framework such as:**   * **Identify a data transfer service able to move datasets from a Repository A to a Repository B** * **Identify if a service can be accessed through an AAI proxy belonging to the AAI Federation.** * **Identify which services can be used to execute a notebook.**   **A pilot instance of the EOSC Interoperability Framework registry will be setup to support these use cases by M16.** |
| Response to long-term recommendations | | |
|  | **Reviewers’ Recommendations:** In future reviews, the consortium must provide a brief report on whether and how the recommendations of the reviewers have been addressed. | A brief response by the consortium’s on how the reviewer’s recommendations are being addressed is included in this present document and will be included in the next review report. |
|  | **Risk Management:** The risk registry should be updated with the technical implementation and integration risks., such as delays in the delivery of specific components, lacking interoperability of components and services, and milestones. | An update of the risk registry with technical implementation and integration risks is being discussed. Details will be provided in the next review report. |
|  | **Management and reporting:** The periodic report should contain justifications for the reported achievements when such are not documented in deliverables. For example, for every agreement made or a policy developed, a date and the title should be specified. When meetings are mentioned, date and place should be specified. When an update of a deliverable is mentioned, the updated version must be provided. When a web interface or a repository is mentioned, a URL must be provided. | Justifications for the reported achievement will be integrated in the next review report wherever possible, as suggested in the review recommendation. |
|  | **Training and Skills:** As recommended following the first review, EOSC Future must develop integrated courses based on the learning paths for specific EOSC skills profiles. The project must avoid fragmentation and overlaps to individual courses and training activities already undertaken in previous or on-going EOSC projects (e.g., introductory courses to EOSC and Open Science). During the next review it is advised that the project presents the curricula that it will develop, along with relevant training materials (e.g., presentations, video, exercises) and their release timeline. The training plan should specify in detail the content to be produced, in addition to the methodologies and artifacts that have been already provided. | Work has been completed in the analysis of the training needs of the relevant actor groups (i.e., the specific EOSC skills profiles). There are five actor groups: EOSC consumers, providers, intermediaries, trainers, and within the EOSC Future project and each one is being addressed individually through specific task forces.  The next phase, which we are currently in, is the design of the curricula and which is due to be completed at the end of M12, with content creation immediately thereafter and delivery to be started by M14. Curricula will focus on aspects of EOSC and will require participants to have a basic level of understanding in Open Science, RDM and FAIR principles.  We are employing a modular approach which will allow content to be freely reused by each actor group where required and which will be reusable externally too (for example, coordination with other EOSC projects is being maintained to ensure that materials can be reused by those too). This modular approach will also enable the construction of learning paths. The initial curricula will be presented at the next review as well as a timeline of delivery, while content will soon thereafter be onboarded to the Knowledge Hub. |
|  | **User Friendliness**: As discussed during the file/data transfer demo during the review, the consortium must put emphasis on the user experience i.e., cloud functionalities across communities and providers must be seamless and transparent to end users. Likewise, the personalisation aspects specified in WP5/D5.2 must be developed and provided as a part of the EOSC Future implementation. | TCB – WP3, WP4, WP5, WP7  **TO BE COMPLETED**  **The user friendliness in the EOSC Platform is being gradually improved with the completion of the integration activities. Demonstrations that will be presented at the next review will already show an enhanced user experience with respect the previous ones.**   * **WP5: Focus group workshops starting this week on 6 themes: recommender system, training catalogue, user dashboard, data inclusion, enhanced discoverability, regional/cluster/thematic clusters inclusion in the portal in order to gather feedback form real users. Requirements will be handled as mentioned below in item 15.** * **Separate UX EOSC Portal revamp work going on. Interviews with users held and requirements gathered.** |
|  | **Accountability:** Since EOSC Future is a part of a larger ecosystem and integrates results of several external projects, it is important to clearly present and separate contributions coming from different sources. | Extra care will be taken to make sure that the contributions coming from external projects are presented as such in the review reports and in the project’s deliverables. However, the work that is required to ensure a smooth and efficient integration of external projects’ results in some instances should not be underestimated. |
|  | **End-to-end use case validation**: To guide and prioritise the development, integration, deployment and operation of different components and capabilities of the EOSC MVE, as well as to show that the project brings EOSC MVE into production, the project should validate end-to-end use cases that showcase the integration of a set of EOSC MVE capabilities and are relevant for the involved science communities. | TCB – WP3, WP4, WP5, WP7 + WP6  **TO BE COMPLETED:** short list of use cases already identified and process in place to identify new ones?  Two of the demonstrations planned for the upcoming review will present end-to-end use cases that will show how a set of EOSC MVE services can be jointly used to support real researchers’ use cases.   * The Core Participation Agreement and the requirements imposed by the Service Management System for production MVE components? * Integration of an onboarded Exchange service to the EOSC Helpdesk as an example of integration with the Core |
|  | **Technical coordination**: The project should establish a stronger technical coordination to ensure coherence of the development and integration efforts and to furthermore facilitate prioritisation. | The governance structure and roles within the project have been clarified in a short paper, with the Technical Coordination Board is solely focusing on ensuring the coherence of the development and integration efforts, with the right prioritisation measures. The TCB currently meets every week for 2 hours to discuss the technical implementation of the project and resolve any pending issues. While the TCB takes decisions by consensus, the two TCB chairs have the role to steer the discussion and enable the efficient resolution of any arising issues. |
|  | **Requirements handling**: For each requirement, feature or enhancement request, provide a reference number and prioritisation, such that the implementation of those can be monitored and reported, similarly to the tasks in JIRA. A possibility for the reviewers to access JIRA in order to check the status would be very useful. | TCB – WP3, WP4, WP5, WP7  **TO BE COMPLETED for requirements handling**  Reports will be extracted from the project requirement DB and JIRA and provided to the EC to demonstrate the progress of the implementation of the work. This can be done for instance by including it in the review reports and presenting it during review meetings. |
|  | **Onboarding of Data and Services from the Science Clusters**: It is crucial that EOSC Future leverages the collaboration with the science clusters by demonstrating usability and readiness of the developed infrastructure capabilities through real-life usage. The datasets generated by the science clusters should be made available via EOSC Future and their data services should be seamlessly integrated. EOSC Future needs to both prepare the technical and procedural aspects as well as to proceed with the actual onboarding. In order to facilitate progress tracking it is recommended to add additional milestones to the project marking, e.g. one milestone marking the end of the preparation phase and start of onboarding. A second milestone would be reached once the clusters’ datasets and data generated via experiments is on-boarded and available via EOSC. | Two new milestones have been included in the recent amendment request:   * MS39 - The technical and procedural aspects of onboarding data and services from the Science Clusters to EOSC Portal are ready (M18) * MS40 - The data and services from the Science Clusters have been onboarded and are available on the EOSC Portal (M28) |
| Response to WP-related recommendations | | |
| **WP1** | | |
|  | The Data Protection Officer is reported as being appointed, though no detail has been provided as to when and who that was. | The project Deliverable D11.1 provided the following details on this: “*Deliverable D11.1 corresponds to H2020 Ethics Requirement No. 1 on Protection of Personal Data (PODP). A key requirement is to provide contact details of the formally assigned Data Protection Officer (DPO) and share it with all data subjects involved in the research activities within EOSC Future. The beneficiary responsible for the fulfilment of this requirement is the Project Coordinator Athena Research Center (ARC), and accountable is the Project Leader Technopolis Group Brussels (TGB) with a mandate for operational activities. The Data Protection Officer (DPO), in EOSC Future renamed to Data Protection Coordinator (DPC), is Dr. Fleur Lebhardt, consultant at TGB”.* More details can be found in D11.1, which was submitted to EC on 22/12/2021. |
|  | Deliverable D1.6 is reported as being revised, although no new version has been made available. | To be completed |
|  | Need for flexible technical management processes that could boost agile and pragmatic management of the software development and integration processes. Setting up the JIRA system is a positive step in this direction, yet more effort is required given that this comes after the first nine months of the project’s lifetime. Furthermore, an overall technical coordination that would allow for prioritization and ensure the coherence of the technical work seems to be lacking. | ***See response to Recommendation 14:***  The governance structure and roles within the project have been clarified in a short paper, with the Technical Coordination Board is solely focusing on ensuring the coherence of the development and integration efforts, with the right prioritisation measures. The TCB currently meets every week for 2 hours to discuss the technical implementation of the project and resolve any pending issues. While the TCB takes decisions by consensus, the two TCB chairs have the role to steer the discussion and enable the efficient resolution of any arising issues. |
|  | An updated risk management methodology and plan has been presented. It is improved, yet it does not seem to put adequate emphasis on implementation risks (e.g., how to recover implementation/integration delays). There is a need for increased emphasis on implementation risks and related mitigation actions. Specifically, risks related to challenges with taking over, integrating and enhancing the legacy software and services, are poorly represented, and appear to be hidden inside higher-level ones. This creates a risk of those being underestimated and overlooked. Important to address risks related to software development and integration, which are currently overlooked, as those can put the success of the whole project at serious risk. | ***See response to Recommendation 8:***  An update of the risk registry with technical implementation and integration risks is being discussed. Details will be provided in the next review report. |
| **WP2** | | |
|  | The work package thus set the scene for the project work by identifying intended functionalities and capabilities, although prioritisation of those is lacking. | This refers to D2.9 where we identified functions for the EOSC-Core, EOSC-Exchange, EOSC Interoperability Framework, and EOSC Support Services that could be procured in the EC procurement call for EOSC in Q3 of 2022. We intentionally did not prioritise the functions. For WP2 this activity is concluded as D2.9 has been submitted.The Pillar 2 Actionable Roadmap has defined priorities to implement the functions identified in D2.9. These priorities may change during the project lifetime according to the requirements collected from the research communities. |
| **WP3** | | |
|  | In terms of the interoperability framework, there is a need for proceeding with a more practical approach that will lead to implementation. | To be completed |
|  | In terms of architecture development, specifications that go closer to the implementation details are needed. During the review the consortium presented high level logical architectural diagrams. The latter are very good for understanding the overall functionalities of EOSC Future, yet they are not adequate to drive the implementation activities. | To be completed |
|  | A collaboration with EOSC Enhance to migrate results has been reported, though it is unclear whether any development beyond what was delivered by EOSC Enhance took place so far. | To be completed |
| **WP4** | | |
|  | The reported work on the requirements elicitation (Deliverable D4.2) focused more on the methodology of this process rather than the actual requirements. Moreover, it is important to assess implementation of which requirements are feasible within the scope of the project – both in terms of time and available resources. Ranking of the requirements, following for example the MoSCoW approach, is advised. It is unclear how many or which of those requirements are feasible to implement by M18. | To be completed |
|  | The current development status is only briefly outlined. The work package clearly inherited software from EOSC Enhance and other projects, but it is not clear what is the readiness level of this software, and what extra effort is needed in order to make it meeting the requirements. | To be completed |
| **WP5** | | |
|  | EOSC Front Office Requirements and specifications (D5.2a): It is however unclear how much of this analysis was inherited from previous projects, or what was added by EOSC Enhance.  In Task 5.4, extensive effort towards developing ‘EOSC Portal User Experience enhanced by AI’ is reported, however, the code repository and the JIRA systems appear to be inaccessible (at least for the reviewers). Moreover, it is not clear how much of this work was inherited from EOSC Enhance. | Re D5.2a - TBC  Re T5.4 Only the experience of developing and operating a Recommender System has been inherited from EOSC Enhance. The design, implementation (and proposed evaluation and adaptation methodology) are all new.  Accessibility of related JIRA projects  Accessibility of related code repositories |
|  | The report focused on the procedures for the requirement elicitation. The analysis of the requirements in terms of priorities and feasibility should be performed as well. | The requirements methodology described in D5.2a includes assessment of value, feasibility and priority. The next step in the process is a series of meetings with subsets of the User Groups. |
| **WP6** | | |
|  | The work has focused on producing the workflows for enhancing EOSC based on other services and communities. Emphasis has been put on the specification of the on-boarding procedure, but no efforts have been documented towards an assessment of the readiness of the various services for realising the workflows. | In D6.2 a process for development of Service Integration workflows is documented. Within this process documentation it mentions about assessment of services readiness: “Firstly, the foundations of Service Integration, including the different types of possible integrations, are described. Following which, further details are provided about the EOSC-Core Services as well as the Research Services, including their current status regarding integration readiness.” It is further described that “from M12-M14 service integration requirements will be further iterated in a series of meetings with the Science Clusters. During these meetings, the service integration needs and integration readiness of the EOSC-Core and Research Services will be reviewed to produce a prioritised list of integrations per Science Cluster. |
|  | Many meetings are reported (47). Three milestones are reported as achieved, though no means of verification have been provided. | Nearly all WP6 associated milestones are defined quantifiable. To provide further means of verification we could break down numbers (e.g. number of onboarded resources) into a list of records. |
| **WP7** | | |
|  | An important achievement of delivering the Security Baseline requirements is reported, though the said requirements have not been made available for the review. | To be completed |
| **WP8** | | |
|  | Deliverable D8.2, which was delayed from the last period, has been produced. While containing a usage analysis for cloud services in Europe, its relevance to EOSC is unclear. It would be more important to properly assess the actual demand for the commercial services of the EOSC users demand for the commercial services of the EOSC users and ensure best value-for-money results. | WP8 is discussing with WP3 and WP6 the role and relevance of WP8 in demonstrating the distribution of horizontal services that are commercially underpinned as core EOSC services. This work will inform the way forward with the procurements of services in the actual demand. |
| **WP9** | | |
|  | No concrete curricula are yet available, and no actual training events are reported. The fact that both the software integration and deployment milestones, as well as the training milestones, are planned for M18 creates a significant risk. | A training roadmap, being maintained as a living document, has been delivered and WP9’s initial analysis of training needs for the five different actor groups has been completed. WP9 is now designing the curricula for each actor group and will create content in M13/14 and deliver the first round of events in M14.  Initial release of Knowledge Hub will be deployed in M15, with further releases with added functionality to be rolled out through remainder of project. |
| **WP10** | | |
|  | During the reporting period, WP10 has worked towards stakeholders’ engagement based on the kick-off of the EOSC Future User Group, the publication of RDA Calls and the implementation of various dissemination activities, such as the EOSC Future Open Days. The latter was focused on public engagement. | To be completed |
| **WP11** | | |
|  | Ensures ethics compliance. Not assessed during the reporting period (M7-M12). | An update on ethics compliance will be added to the next review report. |