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D1.2 Quality assurance and review plan

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Abstract

For a multidisciplinary and multicultural collaborative project like 2-IMMERSE, quality assurance of its deliverables and publications is very important. This deliverable describes the high-level quality assurance measures that the 2-IMMERSE project intends to apply. The details of the quality measures of the technical components and the 2-IMMERSE software are outside the scope of this deliverable and described in the particular technical deliverables.

Besides 2-IMMERSE internal quality assurance mechanisms there are regular and irregular reviews and audits performed by the European Commission. These are planned and controlled by the Commission, and are not the main subject of this deliverable. However, Annex B gives an overview of the Commission performed reviews and audits.

Target audience

2-IMMERSE team members, the Project Officer from the European Commission, 2-IMMERSE reviewers and auditors

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Executive Summary

For a multidisciplinary and multicultural collaborative project like 2-IMMERSE, quality assurance of its deliverables and publications is very important. This deliverable describes the quality assurance measures taken by the 2-IMMERSE project.

In addition to the quality assurance measures performed by the 2-IMMERSE project, there are regular and irregular reviews and audits performed by the European Commission. The regular ones occur once a year after the required periodic reporting, and are planned and controlled by the Commission. They are not the main subject of this deliverable, but Annex B gives an overview of the Commission performed scheduled reviews and audits.

The details of the quality measures of the technical components and the 2-IMMERSE software are outside the scope of this deliverable. This includes also quality assurances through control of changes made to hardware, software, firmware, documentation, test, test fixtures, and test documentation. Those quality measures are part of the "technical" documentation, and described in the related technical deliverables.

- Chapter 1 reflects why collaborative EU projects are reviewed and audited, and why the quality of the results needs to be assessed.
- Chapter 2 describes the individual quality assurance measures taken by the 2-IMMERSE project for its deliverables and publications.
- Chapter 3 describes the detailed procedures and responsibilities for the different quality assurance measures.
- Chapter 4 shows the responsible partners and proposed reviewers for deliverable reviews.
- The annexes contain an example of a self-assessment template and provide an overview of the audits and reviews required and performed by the Commission.

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1. The need for quality assurance, reviews and audits

The main reasons for auditing and reviewing the results of collaborative EU projects are the following:

- For the success of the project it is important to:
 - ensure and maintain maximum efficiency of the project,
 - keep the project focussed on the relevant objectives,
 - ensure and maintain maximum quality of the deliverables,
 - ensure that the deliverables are tailored to the targeted readers,
 - ensure good readability of the deliverables and documents.
- It is a contractual requirement to:
 - ensure proper work execution according to the terms of the Grant and Consortium Agreements,
 - protect the Community's financial interests,
 - reinforce public accountability.
- The deliverable review process ensures a certain quality of the deliverables. High quality is particularly important for public deliverables. This also helps promoting dissemination and exploitation of the results. Based on high quality deliverables and conference papers effective interactions between potential customers / users of results and the consortium are possible.
- The deliverable review process also helps to focus on the targeted readers, and hence better understand the problems the targeted customers might have to use the results in a useful and effective manner.
- Within the project team it adds to a common understanding of the available results and their potential use.
- Learn for the future of the project, and for related future activities
 - how they can be performed even more efficiently,
 - how results can be made even more useful and exploitable for the potential users of the results.

Regarding quality assurance in the technical development process:

Besides the issues above on the general project quality assurance and on its publications there is of course a need for quality assurance in the technical development process as such. This includes quality measures of the 2-IMMERSE technical components (including software) and their functional and physical attributes, as well as assurances through control of changes made to hardware, software, firmware, documentation, test, test fixtures, and test documentation. From the beginning of the project, the 2-IMMERSE technical team uses a wiki and Github to document key aspects of the 2-IMMERSE platform design, including the APIs that define communication between all 2-IMMERSE software components. The software which comprises the 2-IMMERSE platform is held under version control within a Subversion repository, which has made it possible to work with multiple versions of the platform – both for ongoing development and production use in tests and trials. Further details of quality measures in these areas are outside the scope of this deliverable, but are included within the project's technical documentation and described in the related technical deliverables.

2. 2-IMMERSE overall quality assurance measures

2-IMMERSE has built in three project-inherent, self-regulating overall measures to encourage inherent quality of the project results:

- 2-IMMERSE encourages its results to be published in peer reviewed journals or conference proceedings as soon as is practical.
- 2-IMMERSE encourages results to be presented and demonstrated at recognised international conferences and other events.

This gets closely tracked using the project tool here:

<https://bscw.2IMMERSE.eu/sec/bscw.cgi/d9852/PublicationTracker.xlsx> , which provides an easy way of tracing all our dissemination activities and results, and facilitates the process of agreeing on dissemination deliverables and other documents.

Besides these project-inherent measures there are reviews and audits performed by the European Commission (see Annex B), deliverable reviews organised by the project itself and self-assessments.

Of primary interest to this document are the following project-organised quality assurance measures.

Measure	Performed by	Main objectives	Conditions for performing the measure
Deliverable and results review	Project internal reviewers (see section 4)	To review the technical content, the focus, the usefulness and the customer friendliness of a deliverable, or of a major result.	2-IMMERSE deliverables and other relevant major results are reviewed by one or more internal reviewer(s), i.e. by project colleagues who are not primarily involved in writing this deliverable.
Final editorial deliverable review	Coordinator and/or Project Manager	To check whether a deliverable adheres to the editorial form we had agreed for 2-IMMERSE deliverables, and contains all requested parts.	Before a deliverable is submitted to the Commission or published we perform a final editorial check whether the deliverable contains all requested parts, adheres to the agreed formats and is free of severe editorial mistakes.
Issues tracking	Project Management Team Technical teams	To record and learn from the problematic issues encountered during the project.	When a partner sees a problem coming up it will be reported in the Project Reporter at the quarterly reporting. The project Reporter has a “traffic light” (green/amber/red) function to indicate any issues and a comment field to comment on these issues. All issues will be handled at the regular PMC management meetings/audios.
Self assessments	Project Management Team supported by PMC	To force the project to re-think their work and results and whether they are on the right track. A Self-assessment could also be used as an input to the reviews by the Commission (normally annually).	Self-assessment reports (see template in annex A) can be provided on a case-by-case basis any time necessary.

Table 1. The different types of additional quality assurance measures foreseen in the 2-IMMERSE project

3. Detailed procedures for the different quality assurance measures

Deliverable Reviews:

2-IMMERSE deliverables are reviewed by one or more internal reviewer(s). Internal reviewers should be project participants who are not primarily involved in this deliverable, but have enough knowledge of the related subject. In ideal case they can check the deliverable from an additional point of view (e.g. a technical deliverable is checked from a user point of view's understanding).

If a draft deliverable becomes available, it is sent by the author/responsible editor to the dedicated reviewer(s) as indicated in chapter 4. The reviewer(s) check the deliverable and provide their comments directly to the author/editor of the deliverable who will take them into account.

This process is not formal; no template and no monitoring mechanism are foreseen.

In praxis there is often a lack of time before a deliverable is due and has to be submitted. To save time the deliverable review will normally be based on a final draft and go in parallel to finalisation of the deliverable by the author(s).

The table in chapter 4 shows the allocation of the internal reviewers to the different deliverables. This table is being updated regularly at PMC meetings.

Issues, Problems, Errors, Bugs, Lessons Learned Tracking

Issues, problems, errors, bugs, lessons learned, etc. are being traced as far as possible. The goal is to discuss the gained experience and to establish "best practice" for avoiding and solving problems.

Admin and management issues:

Continuous input by all partners is given through the quarterly online work reporting with the BBC Qtrly Report Spreadsheet. As a continuous action Quarterly Management Reports are discussed in the PMC meetings, where additional input from the WP Leaders is sought.

Self-Assessment

To ensure that the project reflects upon results and progress, self-assessment can take place. Self-assessments could also be used as an input to the reviews performed by the Commission. Those reviews take place annually, within 60 days of the annual reports being sent to the Commission. Additional "interim" reviews might be requested by the Commission. The consortium together with the Commission Project Officer will decide on a case-by-case basis when self-assessments will be issued to the Commission.

This process is controlled by the technical Project Manager. A possible template for self-assessments is given in Annex A. This template should be seen as an example; depending on the occasion of the self-assessment, not all fields in the template will be filled in, or other fields might be added. Ann

Annex A. Example for a Template for a Self-Assessment

Self assessment period	Date

PART 1 Technical progress

1.1 Results due during the assessment period (deliverables, finalised tasks, finalised subtasks, etc)

1.2 Results delivered during the assessment period

1.3 Variations (with reasons)

PART 2 Dissemination and exploitation of results

2.1 Contributions made to standards bodies

2.2 Papers to conferences, magazines, etc.

2.3 Other dissemination and exploitation activities

PART 3 Important project management issues handled during this assessment period

3.1 Resources and reporting

3.2 Changes in Project Planning

3.3 IPR issues

3.4 Others (e.g. changes in project team , changes of responsibilities, etc.)

PART 4 PMC assessment of the quality of the results

4.1 PMC perceived quality of the results produced this assessment period? (tick one)

excellent	
good	
acceptable	
should be better	
not sufficient	

Specific comments about the quality (e.g. excellent quality results, bad quality, etc.)?

4.2 Efficiency of work done in this assessment period (tick one)

excellent	
good	
acceptable	
should be better	
not sufficient	

Specific comments about efficiency of work (e.g. excellent performance, performance below expectations, etc.)?

PART 5 Success Stories

(e.g. award for a paper presented at a conference, contribution to a standards body accepted, very successful demonstration, etc.)

PART 6 Critical issues and proposals for improvements

Annex B. Overview of the Commission reviews and audits

When	What
Within 2 months after first period if claims are over 375 k€ (probably no partner will exceed the limit) i.e. before end of July 2017	Financial audit of cost periodical claims (all relevant individual partners by individual auditors)
May 2017	Formal periodical review with external reviewers from the Commission and the Project Officer.
Within 2 months after second period if cumulated claims are over 375 k€ (GOLD and CWI for years 1-2) i.e. end of January / early February 2019	Financial audit of periodical cost claims (all relevant individual partners by individual auditors)
February 2019	Formal periodical review with external reviewers from the Commission and the Project Officer.

Note: Additional reviews and audits required by the Commission might occur any time.