Abstract

This deliverable describes the quality assurance plans and systems that will be used in EASAIER project to ensure the continuous quality of project results. This document complements and defines the practical issues of the EASAIER Contract and the agreements made within the EASAIER Consortium Agreement. It will be updated throughout the course of the project.
1. Executive Summary

Quality assurance plans and quality management systems are common tools in every industrial environment to ensure the continuous quality of products and services. In research and development projects, like EASAIER, changes in the work plan are likely to occur due to new findings during the research. There are various organizations and companies working together to reach a common set of objectives. These facts make it even more important to define and apply mechanisms for the early detection of deviations, otherwise the overall project goals, including time and budget constraints, could be in danger.

In this quality assurance plan the fundamental rules and procedures within the collaboration are defined. It applies to all EASAIER procedures and deliverables. The main goals of the EASAIER quality assurance plan can be summarized as follows:

- to define quality control mechanisms;
- to define project organization and the roles and responsibilities of the different members of the project;
- to discover deviations from plan in an early stage; and,
- to put the management into a position to start remedial actions (if necessary) as soon as possible.
The project management team is responsible for analyzing the consequences of any discovered deviations from the original plans and for selecting the appropriate measures to achieve the overall project objectives. Anyway the early detection of deviations can only be attained in a bottom-up approach, where every partner works in a transparent and self-assessing way. However, quality assurance is not a task of the project management only; it is the joint responsibility of all EASAIER partners until complete discharge of all obligations under the IST project FP6-033902. The project management will serve as the contact point for all project partners on all EASAIER quality matters.

Processes defined in this quality assurance plan will ensure that quality is managed within the veryday EASAIER working activities. This means a top-down dimension regarding the formulation of overall procedures and quality goals is added to the bottom-up approach. Therefore this quality assurance plan consists of planned and systematic activities to determine and ensure achievements of EASAIER quality objectives.

2. Organization

This section describes the management and research personnel structure of EASAIER that influences and controls the quality of deliverables as well as all internal procedures within the EASAIER Consortium. It demonstrates that each individual in this management structure has well defined tasks and responsibilities and highlights in more detail the tasks of the Internal Reviewer.

2.1. Management And Administrative Structure

In order to facilitate completion of the Project, the following structure has been put in place to govern the rights and obligations of the partners amongst themselves.

- **Steering Committee**: is comprised of, collectively, the Representatives and is the ultimate decision-making body of the Consortium.
- **Workpackage Teams**: is comprised of the Representatives of such partners as the Steering Committee shall decide should Coordinate their efforts pursuant to their respective Workpackages. Each such Workpackage Team shall remain committed to the Project objectives.
- **Coordinator**: The Coordinator shall operate as the point of contact with the Commission. The Coordinator shall have no authority to make any commitment by or on behalf of the partners other than to the extent specifically stated in the Consortium Agreement or otherwise agreed among the partners.
- **Project Advisory Boards**: an advisory board or boards may be appointed by the Steering Committee to address a specific area under the Project, for example, in relation to intellectual property issues.
- **Administration Coordinator**: such person or persons is appointed by the Coordinator and shall assist the Coordinator with the administration of all Project related matters.

2.2. Steering Committee

The Steering Committee consists of one representative with right to vote per partner (normally the Team Manager), under the chairmanship of the Project Manager. The SC members will be required to have the authority to take corrective actions within their organizations, if necessary; or to go through the relevant line management to do so.

This management body will meet twice a year in a plenary meeting. Minutes of these meetings will be distributed to all participants no later than two weeks after the meeting by the coordination team, clearly indicating the actions to be done and the decisions made. Within one week after receiving the minutes, each participant will have the opportunity to give feedback. Failing to do so means full approval. The minutes of all meetings will be available in the EASAIER Intranet.

Extraordinary meetings may be convened, with at least 2 weeks’ notice provided to partners. Additionally, regular phone-conferences will be arranged before every project progress report.
D1.1 Quality assurance protocols & policies

Restricted

submission deadline.

The SC's objectives are as follows:

• to ensure that the consortium fulfils its contractual obligations;
• to ensure that there is effective communication between partners in the consortium and between the consortium and the Commission;
• to approve of any proposed changes to the work plan and/or resources allocation;
• to request any actions from work-package leaders to rectify any deviations from work plan and resources allocation.

Decisions in the SC will ideally be made on the basis of consensus. However, if this is not possible, they will be made following the rules agreed on the EASAIER Consortium Agreement.

Chairperson of the Steering Committee

The Coordinator’s Representative, currently Dr. Josh Reiss, is deemed to have been appointed Chairperson of the Steering Committee, and shall serve as such for the duration of the Project unless he resigns such position, or the Representatives shall decide at a meeting of the Steering Committee that he should be replaced. In either such event, the Representatives shall appoint a replacement Chairperson. Any such decision made at a meeting of the Steering Committee for either the removal of an existing, or appointment of a replacement, Chairperson shall be unanimous, excepting, in the case of removal of a Chairperson, the vote of the outgoing Chairperson.

Where, in any meeting of the Steering Committee, there shall be an equality of votes, the Chairperson shall have a casting vote.

Where the Chairperson shall not attend a meeting of the Steering Committee, the Representatives in attendance, (whether quorate or otherwise), may appoint, by majority decision, one of their number to stand in as Chairperson for the purposes of that meeting of the Steering Committee only.

Meetings of the Steering Committee

For the purposes of convening the meetings of the Steering Committee, the Coordinator shall provide written notice of the date and venue for such meeting of the Steering Committee together with an agenda or such meeting. Each partner shall ensure the attendance of its Representative at such first meeting of the Steering Committee.

The Steering Committee shall meet no less frequently than twice in every twelve month period, (on such date as the Steering Committee may determine), and otherwise as the Chairperson may determine appropriate, or at least 2 of the partners may request by notice in writing to the Steering Committee.

The Chairperson shall provide each partner with no less than thirty days notice, in writing, of any meeting of the Steering Committee with which notice shall be included an agenda and full details of any resolution which is to be put to a vote at the meeting of the Steering Committee.

Where, between the receipt of notice of a meeting of the Steering Committee and the date for such meeting, any partner wishes to have included as an agenda item any matter for the consideration and vote of the partners, of which proper notice has not been given in the manner aforesaid, such partner shall notify the Coordinator, in writing, to this effect.

Quorum requirement for meetings of the Steering Committee

In order for a meeting of the Steering Committee to be validly convened and for a quorum to be constituted there shall require to be all Representatives (or their properly nominated substitutes) but two present.

Where a meeting of the Steering Committee is not validly convened, the Chairperson shall reconvene the partners at a date no later than three weeks from the date of the original meeting. The Chairperson shall advise the partners accordingly by notice in writing. The partners may validly deliberate at such reconvened meeting even in the absence of a quorum.
Where a partner requests by not less than two business days prior notice in writing to the Coordinator to attend a meeting of the Steering Committee via teleconference or via e-mail the Coordinator shall make arrangements to facilitate the request. A party attending by teleconference or via e-mail shall be considered as being present at the relevant meeting.

**Matters for Steering Committee consideration**

The Steering Committee is the formal decision making body of the Consortium. The Steering Committee shall consider and, where appropriate, vote in relation to the following:

- Political and strategic orientation of the Project
- Supporting the Coordinator in fulfilling the Coordinator’s obligations towards the Commission;
- Supporting the Coordinator in Coordinating and monitoring the progress of the Workpackages, and the Project;
- Advising and directing the partners on the developments necessary for the Project;
- The acceptance of new partners as well as the exclusion and withdrawal of partners;
- The structure and restructuring of the Project;
- Proposing alterations to the Consortium Agreement;
- Making proposals for the premature completion/termination of the Project;
- Deciding upon a change in the list of Affiliates;
- Making proposals regarding issues concerning the Consortium’s Implementation Plan and/or Budget including modifications to the Implementation Plan, major changes to Workpackages, decisions to abandon a Workpackage or amend the budget allocated to it, where such amendment results in an amendment to the budget of more than 10,000 Euros;
- The resolution of disputes between partners where such dispute involves the Coordinator or where the Coordinator considers that such dispute should be referred to the Steering Committee.

A member of the research and commercialisation office of each partner is entitled to be present but not vote at meetings of the Steering Committee where budgetary and Project changes and/or commercialisation and exploitation of the Foreground IPRs of the Project is discussed.

**Voting at meetings of the Steering Committee**

Each Representative is entitled to one vote only in relation to any resolution put to a meeting of the Steering Committee. Any matter put to a vote at a meeting of the Steering Committee shall be properly passed if a *majority* of those Representatives present, entitled to vote, and not abstaining from the vote are in agreement.

Any partner may, by written notice to be provided to the Chairperson no later than 5 days in advance of such meeting of the Steering Committee, provide an absentee vote in relation to any matter which shall be the subject of a vote at such meeting of the Steering Committee provided that at such meeting of the Steering Committee there shall be convened a quorum.

**Minutes of Meetings of the Steering Committee**

Within fifteen days after any properly convened meeting of the Steering Committee the Chairperson shall prepare and forward to all of the partners minutes of such meeting of the Steering Committee. Where no partner shall have by notice in writing addressed to the Chairperson within 14 days of receipt of such minutes intimated that such minutes do not properly reflect the discussions and decisions of the relevant meeting of the Steering Committee, such minutes shall be deemed to have been accepted. Where any partner shall have so intimated within the said 14 day period, the Chairperson shall have a further seven days within which to issue amended minutes, or to respond to such partner explaining his/her refusal to do so. In the event of continuing disagreement, the Chairperson’s decision shall be final.

**2.3 Coordination Team**

Queen Mary, University of London is the EASAIER project coordinator.
Role of the Coordinator

The Coordinator is the single point of contact between the partners and the Commission. Any information, report or other correspondence which a partner is required to communicate to the Commission, shall be provided to the Coordinator for onward transmission. The Coordinator shall forward any such correspondence promptly.

The Coordinator shall consider and arrange for the following tasks (among others) to be undertaken:

- The organisation, planning and coordination of the Project;
- Coordinating and monitoring the progress of the Workpackages, Workpackage Teams and the Project;
- Deciding on amendment(s) to the budget allocated to any Workpackage Team where such amendment(s) results in an amendment(s) to the budget which in aggregate do not exceed 9,999 Euros;
- Any issue concerning the proper operation of the Consortium and/or the Project including minor changes to Workpackages;
- Ensuring the timeous compilation and delivery of reports to the Commission;
- Providing a progress report in every six months period to the partners subject to the timeous receipt of progress reports every six months from each Workpackage Team Leader;
- Communicating all information in connection with the Project to the Commission;
- Receiving the entire financial contribution from the Commission. The Coordinator shall manage this contribution by allocating it to the partners pursuant to the Implementation plan and the Contract;
- Seeking to resolve disputes that arise between partners and/or referring disputes to the Steering Committee as the Coordinator, in its discretion, considers appropriate provided that where the dispute involves the Coordinator, the dispute shall be referred to the Steering Committee; and
- Convening meetings.

The Coordinator shall not be entitled to make any representation or commitment on the part of the partners or any of the partners other than to the extent expressly authorised in the Contract or Consortium Agreement.

The Coordination Team is lead by the Project Manager, who is responsible for the overall project. He has assigned an Administrative coordinator and a Research coordinator. The latter two will provide strong support to the Project Manager with any matters related to the administrative tasks and the research tasks in the management of the project.

The Project Manager will assess the achievement of the projects’ objectives throughout the project and the risks taken by the project at all times. He will responsible for the following tasks:

- To ensure efficient management of tasks within the consortium;
- To supervise the project progress according to work plan, time schedule and resources-budget established in the contract;
- To act as the interface to the European Commission (i.e. communicating with the European Commission and transmitting relevant information from the Commission Officers to the other partners, and the other way around);
- To mediate and to manage conflicts between partners;
- To establish efficient communication flows within the consortium;
- To report to the Steering Committee (SC), which is the project’s principal decision-making management body;
D1.1 Quality assurance protocols & policies
Restricted

- To ensure any necessary important deviations from contract and work plan are presented and approved by the SC; he should have the power decision to approve of any minor deviations and should subsequently inform the SC.

The **Administration Coordinator** will take the role of the overall project support and will be the interface with the European Commission regarding project documentation and cost statements. On the other side, he will be responsible for managing all the financial aspects of the project. He will be responsible for:
  - Interfacing with partners for all administrative processes;
  - Keeping an accurate and up-to-date record of costs, resources and time scales for the project;
  - Preparing, coordinating and leading Management Meetings, and generating agreed minutes of each meeting;
  - Controlling that the appropriate resources are invested in order to achieve the goals of the project

The Administration Coordinator shall act in an administrative capacity only and shall have no strategic input to the Project.

The **Research Coordinator** will act as a research coordinator between all the partners of the consortium and will design the overall research directives to align them to the project objectives. On the other hand, he will be the Team Manager of the research activities done by the coordinating contractor. He will be responsible for:
  - Monitoring time and resources deviations from the original plan, and promoting appropriate corrections;
  - Ensuring that the project achieves its technical objectives and maintains its conformity to the project work plan;
  - Facilitating the information flow, collaboration and synergy opportunities between partners;
  - Managing project documentation;
  - Preparing, coordinating and leading Technical Progress Meetings with the Team Managers, and generating agreed minutes of each meeting.

The **Coordinator Links to Work-packages** will act as Coordination Team first contact person for each work-package. S/he will be the responsible for:
  - Monitoring work-package progress from partners;
  - Facilitating collaborations and synergies between partners in the same work-package;
  - Leading work-package work on the Coordination Team.

### 2.4 Work Package Teams

The partners have approved the structure of the research which comprises the Project, in accordance with the Proposal, and have identified appropriate partners for each Workpackage Team.

**Leader**

Each Work Package will have a **Work Package Leader** that will be responsible for:

- Planning the scientific and technical work of the WP, in coordination with all the involved partners;
- Ensuring that project timetables are maintained, and flagging any discrepancies immediately to the Research Coordinator;
- Initiating corrective action for project deviations, if any;
- Consolidating partner information and preparing the reports for submission to the Research Coordinator;
Ensuring the objectives and milestones of the whole WP, and of the detailed activities within the WP, are achieved;

- Organising work-package meetings if necessary;
- Chairing work-package sessions in meetings.

The partners have agreed on the appointment of a Workpackage Team Leader for each such Workpackage Team. Each Workpackage Team Leader shall occupy such position for the duration of the Project unless he/she resigns such position, or in the event that the partners shall decide in a meeting of the Steering Committee that he/she should be replaced. In either such event, the partners shall appoint a replacement Workpackage Team Leader. Any such decision made in a meeting of the Steering Committee for either the removal of an existing, or appointment of a replacement, Workpackage Team Leader shall be by majority vote of those Representatives present, not abstaining, and entitled to vote.

Each Workpackage Team Leader is primarily responsible for the Coordination of its respective Workpackage Team provided always that such Coordination is consistent with the aims and objectives of the Project.

**Meetings of Workpackage Teams**

The partners which form each Workpackage Team shall meet no less than twice in every twelve month period, (on such specific dates and at such venue as the Workpackage Team Leader may determine), or otherwise as (i) a majority of the member partners which form the Workpackage Team may, by written notice to the appropriate Workpackage Team Leader, request, or (ii) the Coordinator may determine appropriate.

Since meetings of Workpackage Teams may need to be convened at short notice, although the relevant Workpackage Team Leader shall provide each of its members with as much written notice, (including an agenda), as possible of any proposed meeting, the minimum required notice is seven days.

Each member partner shall make every reasonable endeavour to attend scheduled meetings of the relevant Workpackage Team.

Where a member partner wishes for a meeting of the Workpackage Team to be held via teleconference or via email, that member partner shall provide the relevant Workpackage Team Leader with notice in writing to that effect specifying that member partner’s grounds for such request. The Workpackage Team Leader in its sole discretion shall determine whether a meeting shall be convened by teleconference or via email.

The Coordinator may, at its sole discretion, convene and attend at a meeting or meetings of any Workpackage Team or of any members of any Workpackage Team and/or other persons as the Coordinator considers appropriate, to discuss, among other things, project progress, managerial and technical matters where the Coordinator considers that any such meeting or meetings are in the interests of the Project. The Coordinator shall provide notice of any such meeting to the relevant members of the Workpackage Team. Each member partner shall make every reasonable endeavour to attend meetings.

**Matters for the consideration of Workpackage Teams**

The purpose of meetings of the partners within a Workpackage Team are primarily to gather information from those partners regarding their respective Workpackages and to discuss and exchange views on the progress of that Workpackage Team pursuant to the goals of the Project, and to report to the Steering Committee in this regard.

**Reports**

Following any meeting of partners within a Workpackage Team, the relevant Workpackage Team Leader shall circulate a draft report amongst those partners summarising the information exchanged and any recommendations proposed. Each such partner shall provide the Workpackage Team Leader with such feedback as such partner may deem appropriate, whereupon, or in the absence of which, the Workpackage Team Leader shall forward a final
report to the Coordinator, such report to be received by the Coordinator no later than 14 days after the meeting in question (or such other period as the Coordinator may reasonably determine).

2.5. **Deliverable Lead Participant**

Each Deliverable is assigned to one partner as Deliverable Lead Participant. The Lead Participant will be responsible for:

- Planning the scientific and technical work of the deliverable in coordination with all the involved partners;
- Ensuring that project timetables are maintained, and flagging any discrepancies immediately to the Research Coordinator;
- Writing and/or compiling the deliverable outputs;
- Ensuring the deliverable is available on time;
- Ensuring the deliverable meet the expected goals;
- Leading the internal/external reviewing process.

2.6. **Project partners**

Each partner shall take all appropriate measures to properly perform, promptly and in accordance with the expectations set out in the Technical Annex, its obligations, both in relation to the completion of any Workpackage allocated, or which may be allocated to such partner, and in relation to all other undertakings and obligations which are contained in the Consortium Agreement.

Each partner in the performance of its own Workpackage, is solely responsible for its own organisational arrangements and work procedures, provided that its performance of such Workpackage is consistent with such partner’s obligations under the Contract and Consortium Agreement.

Each project partner undertakes to use all reasonable endeavours:

- To perform his work defined in the Description of Work on time;
- To participate actively in project decisions;
- To deliver two-monthly activity report information to the Coordination Team;
- To inform the Coordination Team on any kind of problems immediately.

Each project partner will identify a Team Manager and an Administrative Contact Person as contact points for research and administration, respectively. If there is any change during the duration of the project, it will be notified to the Coordination Team. These two persons will be responsible for sending all required information to the Coordination Team: periodical project reports, other informal reports, deliverables, cost claims, invoices, etc.

A list of **Project Participants** (researchers) is maintained by the Coordination Team.

2.7. **Internal Reviewers**

The EASAIER project operates a multilevel review policy. Reviewing is first done at the Work Package level, either internally or externally to that Work Package. Then a second review is done when the document is sent to the Coordinator. At this level, an Internal Reviewer will be nominated for each deliverable. He will be a person that has not been directly involved in the elaboration of the deliverable. The internal reviewers are especially responsible for:

- Proofreading, grammar checking and editorial comments;
- checking the deliverable against the objectives set in the Deliverable Description document;
- checking completeness and if the deliverable may be understood by persons not directly involved in the project;
- recommending solutions for problems/discrepancies if necessary;
- document the review result in writing (internal review report).
2.8. Project Advisory Boards

A Project Advisory Board may be appointed by the Coordinator to address any specific matter which shall arise in relation to implementation of the Project. For example, it may be considered appropriate by the Coordinator that a Project Advisory Board should investigate and advise the Coordinator in respect of a specific intellectual property issue.

The Coordinator shall determine as it sees fit who shall be members of any specific Project Advisory Board. Such members may be, but need not be, representatives of the partners. The Coordinator shall, in its appointment of a Project Advisory Board, provide such Project Advisory Board with a specific remit, and such Project Advisory Board shall exist solely for the purpose of that specific remit.

Any Project Advisory Board will have an advisory role only and, unless otherwise stated, shall report to the Coordinator. Once the Project Advisory Board shall have provided a report in terms satisfactory to the Coordinator, it shall be discontinued.

An exception to this is the Expert User Advisory Board, which as mentioned in the Technical Annex, report to the leaders of WP7.

The partners shall fully co-operate with any Project Advisory Board and shall provide all such information as may be properly requested by the Project Advisory Board pursuant to its remit. A partner may, in the event that any disclosure of information to a Project Advisory Board would constitute a disclosure of Confidential Information, either refuse to disclose such information where that partner reasonably believes that disclosure would be materially detrimental to that partner’s interests, or require that each member of the Project Advisory Board acknowledge the nature of such information and agree, in writing, to maintain confidentiality in relation thereto.

When required, and by request of the Steering Committee, publicly available documents and runnable prototypes will be assessed by external reviewers. These external reviewers will be selected by the SC with the recommendation of the Deliverable Lead Participant. External reviewing process will be similar to the internal reviewing process. When required, and by request of the Steering Committee, publicly available runnable prototypes will be assessed by a massive group of beta-users.

3. Project Documentation

Documentation is an important part of every quality management system. This section defines the procedures used within EASAIER documentation management.

3.1. Document Processing Tools

At the kick-off meeting, the EASAIER Consortium agreed to work with Microsoft Office for the production of documents, presentations and spreadsheets. Publication of those documents will be done in MS Word format and PDF.

The agreement specified the following points:

- The format for public final documents will be PDF
- The format for working documents (i.e. documents that have to be written in collaboration between partners) will be MS Word formats, unless the writers agree on using another one for convenience (e.g., Open Office).
- The preferred format for final, internal documents will be MS Word formats, in order to allow for any additional edition in the forthcoming future.
- Use of plain ascii text and html format is encouraged whenever no formatting or deep commenting of text is involved, especially in email messages.

3.2. Intranet and Document repository

All relevant documents and deliverables are stored and archived at a central document repository. The Coordination Team is responsible to maintain this document repository and to keep it up to date.

The document repository is implemented as a portion of the EASAIER website, which is only
D1.1 Quality assurance protocols & policies
Restricted

accessible to members of the project consortium. It is accessible through the EASAIER intranet, or member area of EASAIER web page. All the information stored will be considered as confidential unless specified.

Each Project Participant has an account to access this platform.
Beside deliverables the following types of documents are kept in the document store:

- contract related documentation
- minutes of meetings
- important correspondence within the consortium (including faxes, letters and e-mails)
- detailed design and implementation issues
- reviewed documents and review records
- work plans
- financial related documentation
- standards used within the project
- scientific and other kinds of disseminated papers

3.3. Document templates
In order to have a unique and homogeneous image, templates for documents and presentation have been defined. They are available in the EASAIER Document Repository.

3.4. Source Code repository – CVS
All source code and binaries will be stored and archived in a version control repository. SILOGIC, as leader of WorkPackage 6, is responsible to maintain this repository and to keep it up to date. The CVS platform has been setup as source code repository. Further details concerning the structure, implementation and quality assurance protocols for this repository will be made available in future versions of this document (by month 12 or earlier).

4. Communication procedures

4.1. EASAIER mailing lists
The EASAIER mailing lists are used for the electronic distribution of information to all partners in the project. There are administrative and technical mailing lists. Further mailing lists will be established if needed. The lists are operated and administered by the Coordination Team.

It was decided to start with the following three mailing lists:

- help@easaier.org : used for general information exchange within both the technical and user groups. All Project Participants will be included on the list.
- developer@easaier.org : used for everyone involved either in technical research or in the management of research. All Team Managers and Research Personnel will be included on the list.
- coordinator@easaier.org : used for any direct correspondence with the project coordinator. This includes Dr. Josh Reiss, coordinator of the EASAIER project, and the administrative manager (copied in for administrative purposes).

In addition to those, each partner may have mailing lists for internal partner discussions, e.g. QMUL may use qmul@easaier.org for this purpose.

The Coordination Team will add or change the members of the lists by request from the partners.

Each message sent through these mailing lists is automatically archived and may be accessed using a Web interface. This interface is also integrated into the EASAIER document repository.

4.2. Phone-conferences
Regular phone-conferences will be held before submitting two-monthly progress reports and to discuss on other topics.
4.3. **Publications**

All partners are encouraged to publish information concerning Knowledge which such partner shall have generated under the Project, subject to the provisions of the Contract. Publications will carry notices of acknowledgement for the EASAIER project and its funding sources, and examples of such notices are available from the project intranet.

5. **Deliverables: Review and Approval Mechanisms**

The review and approval mechanism will vary according to the type of the deliverable.

5.1. **Deliverable definition and Quality Criteria**

Each Deliverable is assigned to one partner as Deliverable Lead Participant.

In order to assure required quality is met, each deliverable will be defined in a Deliverable Definition Document. A template of this document has been created and it is available in the EASAIER Document Repository. This document is generated by the Coordination Team and agreed by Work Package Leader and Deliverable Lead Participant.

The Technical Annex and all the information available from User Groups and User requirements will be used as reference to determine Quality Criteria and Quality Methods of the Deliverable.

The Deliverable Definition Document will be available in the deliverable folder at the EASAIER Intranet.

5.2. **Development and Submission of Deliverables**

The Deliverable Lead Participant assures that the content of a deliverable is in tune with the team working on the deliverable and that the overall goals of the project can be met. Any issues endangering the success of the work-package or the project have to be reported immediately to the Steering Committee.

If a deliverable is delayed because one Deliverable Lead Participant does not fulfil its obligation, the Steering Committee may transfer the task to another partner.

The submission procedure for deliverables ensures that the formal output of the project has high quality and fulfils the requirements of EC standards.

Each deliverable will be assigned to an internal reviewer who checks that the Quality Criteria of the respective deliverable, defined in the Deliverable Definition Document, is met, and gives recommendations on improvements, if necessary. The actual assignment of deliverables to internal reviewers will be kept up-to-date in a document on the EASAIER document repository.

Deliverables have to be submitted in standard form and layout (templates are available at the document repository).

5.3. **Internal Review of Deliverables**

Deliverables must be sent at the latest two weeks prior to the due date to the internal reviewer and also to the Coordination Team.

At the same time, the Deliverable Lead Participant makes the deliverable available to all project partners for review and collects remarks and suggestions. The feedback period for project partners lasts at least 5 working days. Feedback is sent directly to the Deliverable Lead Participant who acknowledges the feedback.

The internal reviewer will contact both, the Deliverable Lead Participant and the Coordination Team on eventual necessary changes. A feedback cycle between authors and reviewer will be established in order to optimise the deliverable.

Parallel to the internal review process, the Coordination Team reviews the formal criteria of the deliverable and checks the contents against the content described in the project programme and suggests appropriate changes to the Deliverable Lead Participant.

The Coordination Team prepares the deliverable for submission to the EC.

5.4. **Internal Review of Software and Systems**

EASAIER's main task is the development of prototypes which provide various components of
an access system for sound archives. The following special procedures apply for the review of these software components.

Each software component consists of two parts:

- a documentation of the software
- a set of software modules, either in executable or library form.

For the documentation the same procedures as described above are applied. However, there are some extensions for the handling of the software.

While the traditional process is to deliver each new developed component to the testing department, EASAIER will adopt a more agile strategy. If the defect density can be reduced enough, then the quality assurance can shift from a reactive work to a proactive work. As a result of that, shippable software will be available very often, therefore reducing the user-feedback cycle.

Test Driven Development (TDD) technique will be used. It consists of small tests written by the same developer who writes any new functionality. For each addition of code with a concrete (or unitary) functionality, a new unitary test is added. This allows the developer to focus on the interface (when writing the test) and focus on the actual code that passes the test, in two different phases. Of course these phases only takes a matter of few minutes or seconds.

Benefits of using this technique include: a very good test coverage of all written code, a decoupled design --since thinking in unit tests forces so--, and a constant development pace --avoiding getting stuck in difficult problems.

TDD advocates claims that even though the amount of test code equals the amount of actual code, the development speed is higher for two reasons: the resulting code is smaller, and specially, the debug-sessions are avoided.

Regression tests will be automatically executed. Since in software any small modification --even bug-fixes-- can produce new bugs to appear, what we need is to execute all the unit tests in a regular basis --the more often the better--, thereof all unit tests must be a) launched in a single run and b) be automatic, so that no human intervention is needed to decide if a test passed or not.

Good practice is to execute all tests periodically in several platforms. Although is difficult to have many machines with different platforms, the few most representative will do. These will define the EASAIER recommended platforms.

Working with unit-tests involves giving top-priority to the fact that all tests are passing. When a test is broken fixing it --maybe fixing the test code--is the first thing to do.

A set of Testable use-cases using acceptance tests will be defined. While regression tests ensures that no existing functionality is broken, the aim of acceptance tests is to ensure that the produced software behaves the way it was thought during the requirements phase. All use-case -or user story--must include a set of acceptance tests that should be written before the implementation of the use-case.

The basic difference with unit tests is that the formers follows the black-box approach, so relaying only in a high-level interface. Often, acceptance tests, aren't written in the same language as the production code --unlike unit tests that uses the same--but use scripts language to interact with command line programs, web interfaces, GUI, etc.

Software defects or bugs are managed in a Bug-tracking tool allowing to follow its life-cycle. Such cycle typically ends with "fixed", "won't fix" --if is not a relevant defect--or with "not a bug". A helping technique for ensuring the quality of bug-fixes is to associate a unit-test to each acknowledged bug, so that we ensures that a fixed bug won't appear (silently) again.

After tests the second, and very important, quality assessment is the user feedback before the final deliver. Commonly known as Beta-testing. We have two kind of beta-testers:

- Internals: that is, people working in the same building as the development team and;
- Externals: with whom communication is harder but, on the other hand, are more
D1.1 Quality assurance protocols & policies

Representative of the final users needs. Here we count, not only functionality needs but non-functional needs, specially we want to test our software in the maximum number of platforms.

Because of its nature, internal beta-testers are asked for their collaboration much more often that external ones. Weekly additions to a software package can be tested by internal beta-testers while only important milestones are delivered to external beta-testers.

5.5. General Approval Mechanisms

All information and documentation that is made accessible to 3rd parties (organisations and persons not part of the EASAIER consortium) has to undergo approval mechanisms before. This ensures that information is always distributed consistently and that no secrets or insights are released too early.

These processes are already specified in the EASAIER contract and Consortium Agreement.

5.6. Project Issues and Corrective Actions

The Steering Committee is responsible to monitor the overall progress of the project. Corrective actions should be taken in a bottom-up approach and should primarily adopted within the respective work package itself. Only problems, which affect the interdependence of other work packages or which could affect the overall success of the project should be dealt by the Steering Committee.

The main concern of corrective actions on Steering Committee level is the quality and timeliness of milestones and project deliverables. The Coordination 13/15 Team will document deviations from plan of formal project output. Based on each monitoring report the Steering Committee will decide whether an issue can be settled within a work-package or whether interdependencies with other work-packages are concerned.

If only one work package is concerned the Work Package Leader will supply an updated work plan for the work package that will substitute the original plan.

If the work of other work packages or the success of the whole project is endangered because of late or poor performance of a work package, the Work Package Leader will inform immediately the Steering Committee. The Steering Committee will elaborate an updated project plan.

If a partner fails to fulfil its obligations, the Steering Committee may transfer the task to another partner after clearly calling in open contributions. Such an action should be taken to prevent the overall project from unnecessary delays. If possible the according transfer of efforts shall be done informally, taking into account possible exchange of tasks later on. If no mutual agreement can be reached, an amendment to the IST-contract including all changes will be prepared.

6. Periodic Reports and Project Meetings

6.1. Reports

The Coordination Team is responsible of producing the following Reports in the English language on behalf of the Consortium, and to forward them to the EC Project Officer according to the coverage and conditions detailed in the EASAIER Contract:

- Two-monthly status reports
- 6-monthly activity reports
- 12-monthly periodic reports (including Financial Statement)
- Annual public reports
- Final activity report

In order to prepare them, each partner will deliver a two-monthly project status report to the Coordinator Team. All two-monthly status report information will be compiled by the Coordination Team and, if necessary, discussed and agreed by the Steering Committee. The information of these two-monthly reports will be used to generate the 6-monthly reports, that will also be agreed by the Steering Committee.
12-monthly periodic reports, annual public reports and final activity report are to be compiled by the Coordination Team, who may request detailed reports on each work package to the Work Package Leaders.

6.2. **Financial reporting**

**Financial Statements**

Annual Financial Statement are to be submitted within 1 month to the Coordination Team following Form C document of the EASAIER Contract and must be accompanied with an audit certificate. For internal use of the consortium, a detailed cost claim has to be submitted to the Coordination Team. A detailed Cost Claim template is available on the EASAIER Intranet.

**Cost Reporting**

In accordance with the provisions of the Contract, the Project has been divided into specific reporting periods, during and following completion, (or termination, if earlier), of the Project. It is a requirement of the Contract that reports are submitted to the Commission within 45 days of end of each such reporting period. It is the responsibility of the Coordinator to ingather and forward all such reports to the Commission.

In order that the Coordinator shall be able to collate and to forward all such reports to the Commission in a timely manner, each partner shall forward all required reports to the Coordinator within 30 days of the end of the relevant reporting period except that a partner will have 40 days from the end of the final reporting period. Such reports shall be initially sent to the Coordinator by email, (to the electronic address provided in Appendix IV, or to such other electronic address as the Coordinator may advise from time to time), and shall be followed by the originals, sent by registered mail or local equivalent. Both copies must reach the Coordinator within the specified period.

Any report provided by a partner shall include;

- an overview of the activities carried out by such partner during the immediately preceding reporting period;
- a description of Project deliverables and/or milestones achieved, or progress towards the same;
- detail of any problems or other issues relating to that partner’s progress to date or which is anticipated;
- a justification of management activities undertaken by such partner, and the cost thereof;
- an update Plan for Use and Dissemination of Knowledge; and
- a completed Form C, in the format set out in the Contract.

Where a partner shall fail to submit all relevant information to the Coordinator within the specified period, the Coordinator shall not be required to wait for any report from any such partner but may collate and prepare an appropriate report to be submitted to the Commission.

Any consequent failure to justify a partner’s Eligible Costs and therefore recover Commission Contribution shall not be the responsibility of the Coordinator and any such partner shall have no right of action against the Coordinator to recover such Eligible Costs.

Each partner undertakes to supply promptly to the Coordinator all such additional information or materials which the Coordinator shall reasonably request pursuant to the obligations of the partners under the Contract.

Each partner shall use all reasonable endeavours to ensure that all information or materials provided hereunder to the Coordinator for the purposes aforesaid shall be accurate and complete, and shall not contain any errors or misleading information. Where a partner shall be advised that any such information or materials is incorrect or contains any error or is misleading in any way, such partner shall use all reasonable endeavours promptly to rectify the same.

**Audit Requirements**
Each partner shall be obliged to provide an audit certificate in the manner detailed in the Contract within 45 days of the end of each reporting period. Each partner shall, accordingly, have in place an appropriate procedure to enable any such audit certificate(s) to be prepared and made available to the Coordinator for onward transmission to the Commission in accordance with the requirements detailed in the Contract, for which purposes the provisions shall apply to the delivery of such audit certificates in like manner to the delivery of periodic reports. Notwithstanding that the cost of obtaining any such audit certificate shall be an Eligible Cost, each partner shall use all reasonable endeavours to minimise the same.

The requirements to provide audit certificates are without prejudice to the right of the Commission to audit any partner, on its own account but in accordance with the provisions of the Contract, at any time during the period of 5 years after the end of the Project.

6.3. **Meetings**

Project partners will ensure adequate representation at the following Meetings:

- Phone conferences
- Technical meetings
- Progress meetings
- Review meetings with EC
- Concertation meetings organized by the EC

Presentations on these meetings will be done using the EASAIER presentation template that is available in EASAIER Intranet.

Regular phone-conferences will be held before submitting two-monthly progress reports and to discuss on other topics.

All these meetings will be documented and minutes will be made available by the Coordination Team.