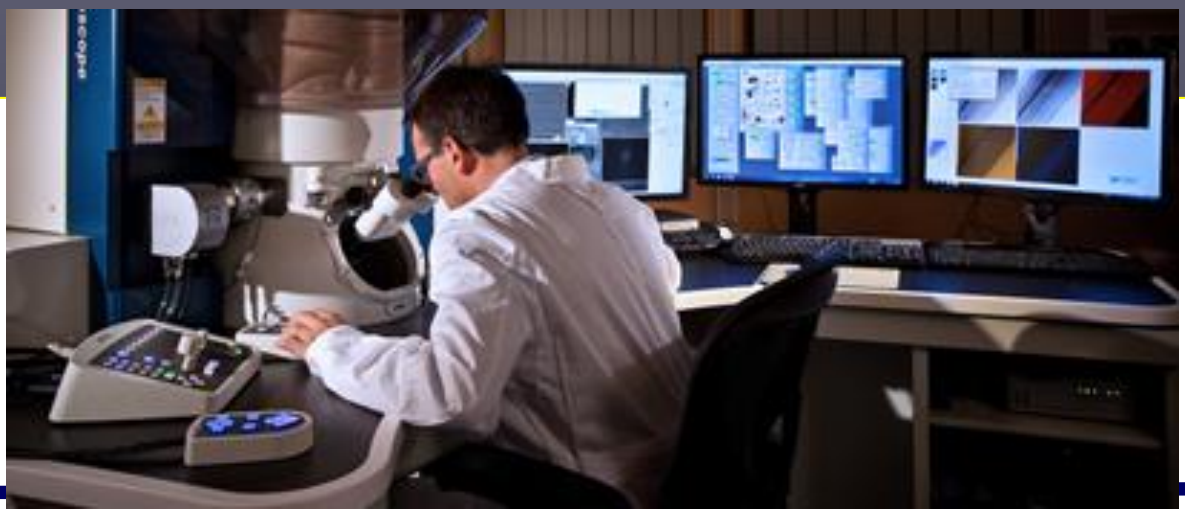
esteem3

Enabling Science through European Electron Microscopy

Quality Assurance Plan and Project Handbook

Deliverable D13.1

Estimated delivery date:	30 April 2019
Actual delivery date:	30 April 2019
Lead beneficiary:	EURONOVIA
Person responsible:	Paul BERSANS
Deliverable type:	☒ R ☐ DEM ☐ DEC ☐ OTHER ☐ ETHICS ☐ ORDP
Dissemination level:	☒ PU ☐ CO ☐ EU-RES ☐ EU-CON ☐ EU-SEC



THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT NO **823717**

Grant Agreement No:	823802
Funding Instrument:	Research and Innovation Actions (RIA)
Funded under:	H2020-INFRAIA-2018-1: Integrating Activities for Advanced Communities
Starting date:	01.01.2019
Duration:	48 months

Table of contents

Revision history log

Version number	Date of release	Author	Summary of changes
V0.1	11/04/2019	Paul Bersans (Euronovia)	First draft
V0.2	26/04/2019	Miran Ceh (JSI)	Revision
V0.3	29/04/2019	Paul Bersans (Euronovia)	Second draft
1.1	30/04/2019	Peter van Aken (MPG - Coordinator)	Proofreading and submission of the document

1. General purpose of the document

The purpose of this document is to define a consistent set of working procedures, processes and best practice guidelines in order to ensure quality standards of the project outcomes. Its main aims are:

- To manage the interaction between the beneficiaries during the work execution;
- To check progress of work on a regular basis;
- To detail how and when documents have to be circulated among beneficiaries and with the European Commission (EC);

In addition to the present handbook, the Project is guided by major reference documents which define the objectives, the work programme and the operational procedures of the ESTEEM3 project:

- The rules for participation and dissemination in H2020
- The Grant Agreement (GA) including its Annex I (Description of Action or DoA) and Annex II (estimated budget),
- The Consortium Agreement (CA) signed by all beneficiaries,
- Guidance documents provided by the European Commission,
- These documents are available on the management section of the ESTEEM3 intranet.

2. Management bodies and organization

The general management scheme is also presented in the Annex 1, part B, of the Description of Action.

2.1. Levels of management:

The management structure of ESTEEM3 is composed of several boards and levels of management as illustrated in the Figure 1below.

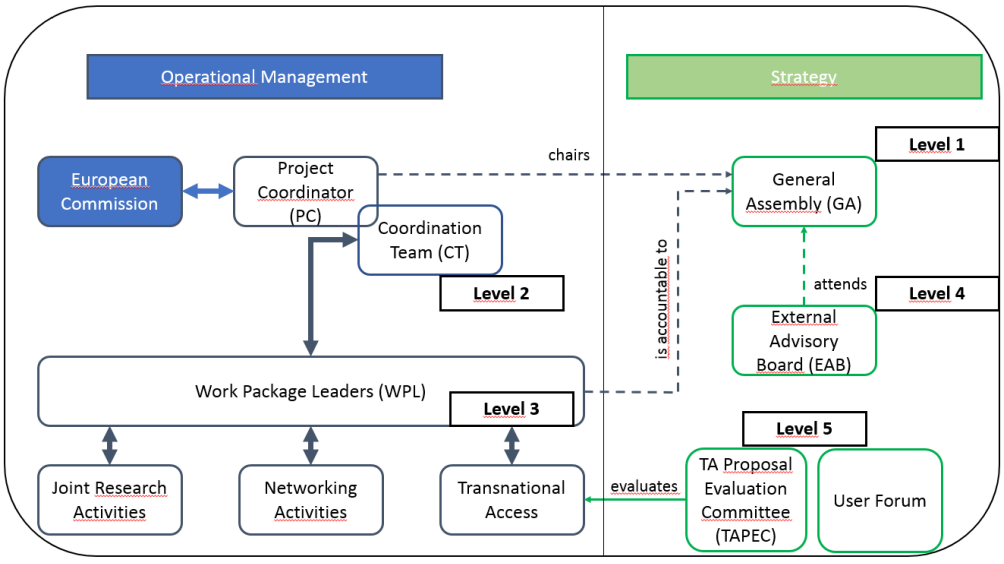


Figure 1 [MČ1]***: ESTEEM3 management structure***

Level 1: Decision making:

The General Assembly (GA) (all partners) acts as the ultimate decision-making body of the consortium. The GA is composed of one representative per partner organisation, each one having one vote. The External Advisory Board (EAB) will be invited to the GA meetings in M12 and M36 without voting rights.

Level 2: Operational Management

Operational Management is supervised by the Coordination Team (CT) composed of Peter van Aken, the Project Coordinator (PC), Angus Kirkland (UOXF) and Miran Ceh (JSI), the deputy coordinators, and Paul Bersans (EURONOVIA), the project manager. The CT is responsible for executing the decisions of the GA and the day-to-day management of the project. It also assists and facilitate the work of the External Advisory Board.

Level 3: Implementation

Implementation of the project is the responsibility of the Work-Package Leaders (WPL). All partners are either a leader or a co-leader of at least one WP or task. This allows for a fair distribution of the management workload and ensures the active involvement of all partners in the project. The WPL liaises with the CT and is accountable to the GA.

Level 4: Strategic Advice:

At the beginning of the project, the GA will appoint an External Advisory Board (EAB). The EAB will choose a chair from its members. This board, composed of senior scientists and industrial representatives, will be instrumental in providing advice to the consortium in their fields of competence.

The detailed tasks and responsibilities of the above-mentioned project bodies have been laid down in the CA which has been agreed by the GA before the start of the project and prior to the signature of the grant agreement.

Level 5: Transnational Access:

In addition, an independent international Transnational Access Proposal Evaluation Committee (TAPEC) composed of renowned scientists in microscopy and materials science was appointed at the beginning of the project by the GA. The panel members is responsible for independent evaluation of the user projects submitted through the TA activity.

In addition, a TA user forum, representing current and potential TA users from academia and industry, will meet in M24 and M48 immediately before GA meetings, chaired by a member of the TAPEC, to discuss current and future research services and support required from the ESTEEM3 partners. The chair of the TA user forum will report on the outcomes of the discussions at the GA meetings.

2.2. Management bodies

The Project Coordinator (PC)

Peter van Aken is the ESTEEM3 project coordinator. He supervises the overall coordination and representation of the project. He is the intermediary between the consortium and the EC and performs all tasks assigned to him according to the Grant Agreement. Peter van Aken is the head of the Stuttgart Center for Electron Microscopy (StEM) at the Max Planck Institute for Solid State Research in Stuttgart, Germany, Professor at the Department of Materials and Geosciences of the Technische Universität Darmstadt, Darmstadt, Germany, and Honorary Professor at the Nelson Mandela University, Port Elizabeth, South Africa. In detail the tasks of the PC includes the following:

- Interface between the consortium and the EC
- External representation of the project
- Transfer of EC payments to the project partners in accordance with the rules of the grant agreement and the consortium agreement to be concluded
- Collection, review and submission of reports and deliverables to the EC (with the support of EURONOVIA)
- Chairing of meetings, and monitoring of the implementation of decisions taken
- Transmission of documents and information connected with the project to the partners concerned

The PC is also responsible for the global scientific/technical management of the project. This role guarantees the success of the project in terms of its innovative and scientific objectives (monitoring of scientific and industrial engagement, monitoring of research activities, gathering the contributions from the WPL, gathering the reports, evaluating the content of deliverables, ensuring the attainment of milestones, establishing relations with related projects). He is assisted in these tasks by Angus Kirkland (responsible for Joint Research Activities - JRA) and Miran Ceh (responsible for Networking Activities - NA), the deputy coordinators. The PC is responsible for the management of all Transnational Access (TA) activities. The PC is also supported by the Max Planck Gesellschaft local financial administrative department, which have a wide experience in project management, financial reporting, conflict resolution and all aspects of legal, contractual and IP issues in European collaborative projects.

The Coordination Team (CT)

The Coordination Team is composed of the PC, the deputy coordinators, and the Project Manager (Paul Bersans - EURONOVIA). The CT establishes a sound legal, administrative, financial and communication basis that enables the partners to work efficiently, in accordance with general formal requirements set by the EC. The main tasks of the CT are the following:

- Support the day-to-day project management
- Monitor all NA, JRA, TA activities
- Serve as a helpdesk for the partners concerning all administrative, financial and EC regulatory questions
- Collect documentation to enable the monitoring of the activities within the individual work packages and the preparation of the internal and official reports.
- Coordinate the preparation of all reports including controlling the financial reports from the individual partners and obtaining audit certificates from each participant when required.
- Collect deliverables for submission to the EC.
- Prepare a detailed list of deliverables, partner contact information, project calendar, and mailing lists.

The Work Package Leaders (WPL)

Each WPL is responsible for the scientific coordination of their respective WP and their subtasks, including the coordination of workflow between their WP and the other WP. They arrange for the timely execution and submission of deliverables to ensure the achievement of the goals of each task, and keep the CT informed of the development and progress status on a regular basis. Thus, the WPL are the interface between the partners in their respective WP and the CT. This means that the scientific work is organised in a decentralised way in order to implement the project efficiently. Regular teleconference meetings of the CT and the WPL are the main forum for progress monitoring.

The General Assembly (GA)

The GA is the ultimate decision-making body of the project. It is composed of one representative per partner, who are responsible for the use of the beneficiary's resources and for the attainment of the assigned objectives. Each representative has named a deputy, who has the necessary knowledge and authorisations to represent his/her institution in the framework of the ESTEEM3 project. The GA is chaired by the PC and serves as the forum for making decisions concerning any vital issues of the project, such as:

- Changes in the overall project plan including the re-allocation of tasks and budget, technical objectives and project management
- Assessment of the technical progress and the results achieved
- Resolving conflicts which could not be settled in a WP meeting
- Actions with regard to a defaulting party

The Scientific Assembly (SA)

The SA will meet every two years and will be the forum by which results arising from NA and JRA activities within the consortium will be presented and discussed. The members of the EAB will be invited to the SA.

The External Advisory Board (EAB)

An external advisory board, consisting of three industrial representatives from both end-users and instrument manufacturers, two coordinators from related EC infrastructure projects, and two senior scientists working in the field of TEM will be set up. The EAB will meet every two years to review the management, impact and outputs of ESTEEM3.

3. Management procedures

3.1 General Assembly representatives

Table 1: Initial list of General Assembly representatives

MPG	Peter Van AKEN	p.vanaken@fkf.mpg.de

JUELICH	Rafal DUNIN-BORKOWSKI	r.dunin-borkowski@fz-juelich.de
CNRS	Etienne SNOECK	etienne.snoeck@cemes.fr
UANTWERP	Jo VERBEECK	jo.verbeeck@uantwerp.be
UOXF	Angus KIRKLAND	angus.kirkland@materials.ox.ac.uk
UCAM	Paul MIDGLEY	pam33@cam.ac.uk
JSI	Miran CEH	miran.ceh@ijs.si
TUGRAZ	Gerald KOTHLEITNER	gerald.kothleitner@felmi-zfe.at
UNIZAR	Ricardo IBARRA	ibarra@unizar.es
UCA	Susana TRASOBARES	susana.trasobares@uca.es
AGH-UST	Adam KRUK	kruczek@agh.edu.pl
CHALMERS	Eva OLSSON	eva.olsson@chalmers.se
NTNU	Randi HOLMESTAD	randi.holmestad@ntnu.no
CAT	Giuseppe NICOTRA	giuseppe.nicotra@cnr.it
ATTO	Samuel SONDEREGGER	sonderegger@attolight.com
CEOS	Max HAIDER	haider@ceos-gmbh.de
DENS	Mauro Porcu	Mauro.porcu@denssolutions.com
NM	Stavros NICOLOPOULOS	info@nanomegas.com
QD	Liam O'RYAN	liam@quantumdetectors.com
EURONOVIA	Virginie ROBIN	v.robin@euronovia-conseil.eu

Table 2: List of Coordination Team members

MPG	Peter Van AKEN	p.vanaken@fkf.mpg.de
UOXF	Angus KIRKLAND	angus.kirkland@materials.ox.ac.uk
JSI	Miran CEH	miran.ceh@ijs.si
EURONOVIA	Paul BERSANS	p.bersans@euronovia-conseil.eu

3.2. Meetings

Meetings of the consortium are crucial for the success of ESTEEM3. They are necessary to maintain relations, to promote information exchange, find agreements and to make major decisions. All beneficiaries have to participate in the General Assembly (GA) meetings every 6 months.

Table 3: List of ESTEEM3 General Assembly Meetings

Month	Name of event	Organiser	Location
1	Kick-Off Meeting	MPG	Stuttgart
6	General Assembly Meeting	UOXF	Oxford
12	General Assembly Meeting with External Advisory Board	CNRS CEMES	Toulouse
18	General Assembly Meeting	JSI	Ljubljana
21	Review with the EC	MPG and EURONOVIA	Brussels
24	General Assembly Meeting with Scientific Meeting and User Meeting	UANTWERP	Antwerp
30	General Assembly Meeting	CAT	Catania
36	General Assembly Meeting with External Advisory Board	AGH-UST	Krakow
42	General Assembly Meeting	NTNU	Trondheim

48	General Assembly Meeting with Scientific Meeting and User Meeting	CNRS LPS	Orsay

In addition to GA meetings, several WP meetings are regularly held to facilitate progress in the different WPs

Table 4: List of ESTEEM3 specific meetings

Month	Name of event	Organiser	Location
3	JRA meeting (WP4, 9, 10, and 11)	JUELICH	Düsseldorf
3	JRA meeting (WP5, 6, 7, and 8)	CNRS LPS	Orsay

Representation in meetings

Any Party which is a member of a Consortium Body (hereinafter referred to as "Member"):

- should be present or represented at any meeting;
- may appoint a substitute or a proxy to attend and vote at any meeting;
- and shall participate in a cooperative manner in the meetings.

Convening meetings

The chairperson of a Consortium Body shall convene meetings of that Consortium Body.

	Ordinary meeting	Extraordinary meeting
General Assembly	At least once a year	At any time upon written request of the Coordination Team or 1/3 of the Members of the General Assembly
Coordination Team	At least quarterly	At any time upon written request of any Member of the Coordination Team

Notice of a meeting

The chairperson of a Consortium Body shall give notice in writing of a meeting to each Member of that Consortium Body as soon as possible and no later than the minimum number of days preceding the meeting as indicated below.

	Ordinary meeting	Extraordinary meeting
General Assembly	45 calendar days	15 calendar days
Coordination Team	14 calendar days	7 calendar days

Sending the agenda

The chairperson of a Consortium Body shall prepare and send each Member of that Consortium Body, the administrative contact and the scientific contact as per the details set out in Attachment 5

a written (original) agenda no later than the minimum number of days preceding the meeting as indicated below.

General Assembly	21 calendar days, 10 calendar days for an extraordinary meeting
Coordination Team	7 calendar days

Adding agenda items:

Any agenda item requiring a decision by the Members of a Consortium Body must be identified as such on the agenda.
Any Member of a Consortium Body may add an item to the original agenda by written notification to all of the other Members of that Consortium Body up to the minimum number of days preceding the meeting as indicated below.

General Assembly	14 calendar days, 7 calendar days for an extraordinary meeting
Coordination Team	2 calendar days

During a meeting the Members of a Consortium Body present or represented can unanimously agree to add a new item to the original agenda.

Meetings of each Consortium Body may also be held by teleconference or other telecommunication means.

4. Decision making process

Decisions are generally made during meetings.

Any decision may also be taken without a meeting if the Coordinator circulates to all Members of the Consortium Body a written document, which is then agreed by the defined majority of all Members of the Consortium Body. Such document shall include the deadline for responses.

Decisions taken without a meeting shall be considered as accepted if no Member has sent an objection in writing to the Coordinator within 15 calendar days.

Decisions are only binding once the relevant part of the Minutes has been accepted according to Section 6.2.5 of the Consortium Agreement.

4.1 Voting rules and quorum

Each Consortium Body shall not deliberate and decide validly unless two-thirds (2/3) of its Members are present or represented (quorum). If the quorum is not reached, the chairperson of the Consortium Body shall convene another ordinary meeting within 15 calendar days. If in this meeting the quorum is not reached once more, the chairperson shall convene an extraordinary meeting which shall be entitled to decide even if less than the quorum of Members is present or represented.

Each Member of a Consortium Body present or represented in the meeting shall have one vote.

A Party which the General Assembly has declared to be a Defaulting Party may not vote.

Decisions shall be taken by a majority of two-thirds (2/3) of the votes cast.

4.2 Veto rights

A Member that can show that its own work, time for performance, costs, liabilities, intellectual property rights or other legitimate interests would be severely affected by a decision of a Consortium Body may exercise a veto with respect to the corresponding decision or relevant part of the decision.

When a decision has been taken on a new item added to the agenda before or during the meeting, a Member may veto such decision during the meeting and within 15 calendar days after the draft minutes of the meeting are sent. A Party that is not a Member of a particular Consortium Body may veto a decision within the same number of calendar days after the draft minutes of the meeting are sent.

When a decision has been taken without a meeting a Member may veto such decision within 15 calendar days after written notification by the Coordinator of the outcome of the vote.

In case of exercise of veto, the Members of the related Consortium Body shall make every effort to resolve the matter which occasioned the veto to the general satisfaction of all its Members.

A Party may neither veto decisions relating to its identification to be in breach of its obligations nor to its identification as a Defaulting Party. The Defaulting Party may not veto decisions relating to its participation and termination in the consortium or the consequences of them.

A Party requesting to leave the consortium may not veto decisions relating thereto.

4.3 Minutes of meetings

The chairperson of a Consortium Body shall produce written minutes of each meeting which shall be the formal record of all decisions taken. He/she shall send the draft minutes to all Members, the administrative contacts and the scientific contacts as per the details set out in Attachment 5 within 14 calendar days of the meeting.

The minutes shall be considered as accepted if, within 15 calendar days from sending, no Member has sent an objection in writing to the chairperson with respect to the accuracy of the draft of the minutes.

The chairperson shall send the accepted minutes to all the Members of the Consortium Body and to the Coordinator, who shall safeguard them. If requested the Coordinator shall provide authenticated duplicates to Parties.

5. Conflict resolution

In the event that a dispute arises which cannot be solved amicably between the partners concerned, the following procedures shall be followed:

1. Each partner is required to report immediately to the PC any risk situations that may conflict with the successful completion of the ESTEEM3 objectives. This report will be in writing. At the same time, the arising conflict should be notified directly to the next higher level (WP members, WPL, GA), who will then decide on remedial actions to be taken.

2. The CT together with the WPL concerned will assess the impact that the conflict might have on the progress of the work in different work packages.
3. In the first instance, the WPL shall try to resolve amicably the conflict with the help of the partners involved in the WP concerned. In the event that no consensus can be found at this level, the dispute shall be referred to the PC, who will mediate between the respective partners.
4. Should the conflict not be solved, the PC will put the issue for discussion to the GA. Any disputes, which could not be resolved after the procedures as described above, will be managed through mediation in Brussels. Eventually, the final settlement of disputes will be resolved by the courts of Brussels. It should be clear however, that the conflict resolution scheme as agreed in the consortium agreement with a final settlement in Brussels will only deal with disputes that are beyond the ordinary decisions of the consortium. Ordinary, is defined here as “differences of opinions”. For ordinary disputes, an amicable solution should be found between the partners, if not, the subject of dispute will be voted by a simple majority vote at the GA meeting.

6.Dissemination, Exploitation of Results, and Communication

6.1. Obligation to disseminate results

During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 29.1 of the Grant Agreement subject to the following provisions.

Prior notice of any planned publication shall be given to the other Parties at least 45 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the Party or Parties proposing the dissemination within 30 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

An objection is justified if:

- (a) the protection of the objecting Party's Results or Background would be adversely affected,
- (b) the objecting Party's legitimate interests in relation to the Results or Background would be significantly harmed.

The objection has to include a precise request for necessary modifications.

If an objection has been raised the involved Parties shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting Party shall not unreasonably continue the opposition if appropriate measures are taken following the discussion.

The objecting Party can request a publication delay of not more than 90 calendar days from the time it raises such an objection. After 90 calendar days the publication is permitted.

A Party shall not include in any dissemination activity another Party's Results or Background without obtaining the owning Party's prior written approval, unless they are already published.

6.2. Information on EU funding

Unless the Commission requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must display the EU emblem and include the following text: ***"This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 823717 – ESTEEM3"***

When displayed together with another logo, the EU emblem must have appropriate prominence. For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Commission. This does not however give them the right to exclusive use. Moreover, they may not appropriate the EU emblem or any similar trademark or logo, either by registration or by any other means.

7. Reporting

7.1 Deliverables and Milestones

The list of deliverables and milestones is indicated in the Grant Agreement.

The ESTEEM3 work plan is broken down into a number of WP and tasks. The WPL monitor the status of deliverables, milestones and budgets of their respective WP and inform the CT regularly and on the occasion of the GA meetings.

Each partner has the obligation to notify any deviations and/or unexpected events immediately to the WPL. Every deviation will be discussed internally between the WPL and the CT. If required, adjustments will be made in terms of scheduling of deliverables or distribution of the remaining tasks to other partners.

Further to this internal monitoring process, official reports will be submitted to the EC according to the schedule set out in the grant agreement. The WPL report on their WP and transmit them to the CT who is responsible for the assessment and submission of the interim and final reports. The CT makes sure that partners are informed of the reporting requirements of the EC. In addition, EURONOVIA provides the necessary communication infrastructure as well as templates, and serve as a helpdesk.

The milestones listed in the Annex 1 Part A will be used to chart project progress particularly at critical decision points.

Deliverables

Three months before the deadline for submission, and until the deliverable is submitted, partners in charge of the deliverable will receive a monthly notice sent by the Project Manager to prepare the deliverable.

Before submission, deliverables must be validated by the WP leader and the Project Coordinator. After validation, the Project Manager reviews the deliverable format and submits the document on the Portal.

Milestones

The Project Manager sends a message to the Project Coordinator and to the WP leaders in order to check that the milestone has been met.

If not, the Project Coordinator and the WP leaders can suggest amendments to the planning of the project.

7.2 Periodic and Final Reports

Periodic Reports

The coordinator must submit a periodic report within 60 days following the end of each reporting period. The periodic report must include the following:

(a) a 'Periodic technical report' containing:

- an explanation of the work carried out by the beneficiaries;
- an overview of the progress towards the objectives of the action, including milestones and deliverables. This report must include explanations justifying the differences between work expected to be carried out and that was actually carried out. The report must also detail the exploitation and dissemination of the results and an updated 'plan for the exploitation and dissemination of the results';
- a summary for publication by the Commission;
- the answers to the 'questionnaire', covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements;

(b) a 'Periodic financial report' containing:

- an 'individual financial statement' from each beneficiary and from each linked third party, for the reporting period concerned. The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs) for each budget category. The beneficiaries and linked third parties must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget. Amounts which are not declared in the individual financial statement will not be taken into account by the Commission.

If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.
The individual financial statements of the last reporting period must also detail the receipts of the action.

Each beneficiary and each linked third party must certify that:

- the information provided is full, reliable and true;
- the costs declared are eligible;
- the costs can be substantiated by adequate records and supporting documentation that will be produced upon request or in the context of checks, reviews, audits and investigations, and
- for the last reporting period: that all the receipts have been declared;

- an explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary and from each linked third party, for the reporting period concerned;
- a 'periodic summary financial statement', created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and including — except for the last reporting period — the request for interim payment.

Final report

In addition to the periodic report for the last reporting period, the coordinator must submit the final report within 60 days following the end of the last reporting period.
The final report must include the following:
(a) a 'final technical report' with a summary for publication containing:

- an overview of the results and their exploitation and dissemination;
- the conclusions on the action, and
- the socio-economic impact of the action;

(b) a 'final financial report' containing:

- a 'final summary financial statement', created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the request for payment of the balance, and
- a 'certificate on the financial statements' for each beneficiary and for each linked third party, if it requests a total contribution of EUR 325,000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices.

7.3 Internal reports

One month before each GA meeting, all partners are required to fill-out a short internal report in order to monitor:

- movement of scientific and administrative staff (recruitments, new staff involved in the project, departures)
- involvement of the partners in the project (in terms of Person Months)
- level of expenditure per partner
- planned and past publications
- planned and achieved communication actions

8. Management of risks and contingency plans

The Coordination Team will make all possible efforts to avoid any critical risks that could have a negative impact on the ESTEEM3 project and, as part of its duty, will do anything possible to reduce the chances to encounter a risk. Each WP leader must report to the CT any risk situation that may affect the accomplishment of the objectives properly and in time. For minor risks, the CT will first try to find the most appropriate mitigation measure to reduce the impact of the risk on the project. In cases of major risks, the General Assembly will be consulted to come up with consortium decisions to solve the risk. At this moment, several risks may be listed and mitigation actions can be anticipated. They are listed as follows.

Description of risk (level of likelihood: Low/Medium/High)	Work package(s) involved	Proposed risk-mitigation measures
Loss of a partner (LOW)	ALL	The PC will look for another partner or enquire if an alternative partner is willing to take over the responsibilities of the partner leaving.
Failure of one partner to meet its commitments (MEDIUM)	ALL	Tasks will be redistributed among partners by the GA. If not possible, alternative partners will be invited to join the consortium.
Severe schedule delays (MEDIUM)	ALL	Three-monthly progress monitoring will anticipate any severe delays and find options to mitigate these. If needed, the project plan will be revised, with transfer of responsibility and budget to other partner/s.
Underperformance of any partner (LOW)	ALL	Internal communication and control will ensure that partners execute their tasks.
Staff changes within institutions (MEDIUM)	ALL	WP leaders and co-leaders from different institutions have been designated with deputies for each institution.
Limited interst of the stakeholders in the project (MEDIUM)	ALL	The dissemination plan and constant updates will provide a control using key performance indicators to monitor the sensitivity of the target audiences and consequently update the communication activities.
Limited interest in the TA scheme (LOW)	3, 12	An inclusive communication plan has been set up to engage with all prospective users of the project, including surveys and meetings. Previous users' meetings within ESTEEM2 have demonstrated the interest of the scientific community.
Failure to deliver on time research targets and deliverable items (LOW)	4-11	Leader and co-leader responsibilities have been assigned for all JRA. Regular review of progress will be done prior to and at governance meetings
Failure to recruit skilled staff for JRA (MEDIUM)	4-11	Partners will be pro-active in recruiting new staff. These staff will be mentored by experienced team members to ensure knowledge transfer. Internal re-arrangement of responsibilities and possible secondments between organisations would also be considered.

Failure of key installations for TA and JRA (LOW)	4-12	Redundancy of some installations allows us to redistribute and optimise the access of TA users.
Failures in project management (LOW)	13	The periodic management report will enable an early detection of any management issues. The quality assurance plan will help to identify any risks and propose solutions to mitigate them.
Limited financial resources for one partner (LOW)	13	An agreed budget forms part of ESTEEM3 to enable the proper execution of the activities per partner. In the event of such a risk, a potential amendment will be requested to restructure activities to transfer budget items from one partner to another if this does not have additional consequences on the activity of the partner transferring the money.
Communication failure between activities or partners (LOW)	13	Intervention of PC or CT, if necessary.

9. Quality Plan

The quality management of the project is led by the Coordination Team, which is responsible for the review and assessment of the project progress according to:

- correspondence of the solutions to the objectives;
- accuracy and quality of the deliverables, and
- adherence to time and cost constraints planned for the project.

The Quality Plan will be updated every twelve months, if necessary. The Project Handbook is a Quality Plan itself.

The principal objective of the plan is to ensure quality across the different activities of the project, including the responsibilities within the consortium to achieve and maintain quality, the monitoring and control procedures, the reporting procedures and the document procedures standards and control.

The CT provides overall monitoring and coordination of each activity and milestone from a time perspective, paying special attention to the impact of changes in the schedule on other related items. In parallel, the CT checks that all possible mechanisms to increase the impact of the project are taken, and informs partners of potential impacts identified during the project lifetime.
Finally, two deliverable reviewers are identified for each deliverable (the WP leader and the Project Coordinator), which are subject to an internal approval procedure prior to release (and public dissemination). Quality control metrics are defined to measure the progress of the work being achieved. Each Work-Package Leader is responsible for ensuring the quality of their deliverables and for adopting the most appropriate quality-assurance measures to contribute to the fulfilment of the WP targets.

9.1 Financial Monitoring

Financial monitoring is a critical element in the implementation of research and innovation actions requiring the employment of significant budgets. Implementation has to be perfectly aligned to financial planning, to ensure that project partners have the necessary resources to implement the activities in a timely fashion. There is also a need for a continuous control on the level of spending of the partners to be sure that this is in line with the expected results and outputs. The PC will intervene should any deviations be detected. The required monitoring will be carried out every 6 months. EURONOVIA, together with the financial department of MPG, will make sure that there are no inconsistencies between financial declarations from the partners and the work carried out.

9.2 Internal and external communication

Transparent and continuous communication will ensure that partners are kept fully informed of developments during the project. Day-to-day communication is maintained by e-mails and secure file sharing. This communication strategy is aided by a project website and a secure intranet platform. The ESTEEM3 website, divided into a public and a restricted area serves as the primary contact point to communicate information about the different partner institutions, contact details, project details, publications, conferences and project highlights. The website is also used to provide a structured document repository with open access for the public, and information on dissemination activities will be constantly updated.

The CT will structure a coordinated approach for all partners involved in the promotion of the results outside the consortium. All external communication activities will be monitored to ensure that they comply with the regulations of the project before any publication.