



DELIVERABLE

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Project Handbook

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EXECUTIVE SUMMARY

The purpose of this deliverable is to establish the procedures and methodologies to be adopted during the Q-SORT project lifetime. The objective is to guarantee the successful running and achievement of the project goals while ensuring consensus on activities between project members through the provision of a reference point that establishes the standards and rules to be adopted.

In particular, this deliverable defines a set of rules for the organisation of day-to-day cooperative work within the project, including the procedures to be used, the reporting mechanisms, the organisation of meetings, the control of information flow, the reliability of the output, and the preparation of documentation for submission to the EC.

This deliverable complies with the Q-SORT description of work outlined in Work Package 1, Project management, and it particularly satisfies the specifications outlined in T1.2, regarding the quality assurance.

It is intended to benefit the work of the following interrelated tasks: T1.1 General project management; T1.2 Quality Assurance & RRI Compliance; T1.3 Innovation Management; T6.2 Dissemination and Engagement planning and execution & T3.5 Interdisciplinary Training Webinars and with view to T6.5 IPR management and Exploitation Plan.

The current document is comprised of four main Chapters, an Executive Summary and Conclusions.

The first two Chapters describe the Project management structure and bodies, their responsibilities, and the tools and procedures established for the day-to-day management of the project. Chapter 3 presents the methodologies that have been put in place to monitor Project progress and resource usage against what has been agreed upon in the contract. Chapter 4 outlines the quality assurance process that has been set up to ensure a timely and high-quality delivery of all the Project's results and deliverables.

The project handbook might be updated whenever necessary. Grant Agreement and Consortium Agreement take precedence over this document.

1 PROJECT MANAGEMENT STRUCTURE

To ensure a smooth and efficient coordination and integration of the different activities and of existing or emerging scientific capabilities, the project is organised around 6 Work Packages (WPs) with a clear management structure. Here below follows a brief description of the project management bodies and of their main responsibilities with respect to project monitoring and quality control. For more detailed information, please refer to the DoW.

1.1 OVERALL MANAGEMENT STRUCTURE

The overall management scheme is composed of the Project Management Team, the project Management Board, the Innovation Management and the WP Leaders. Moreover an additional body, the Advisory Board, has been planned to involve those external partners /experts which are willing to cooperate with the project by means of a Cooperation Agreement.

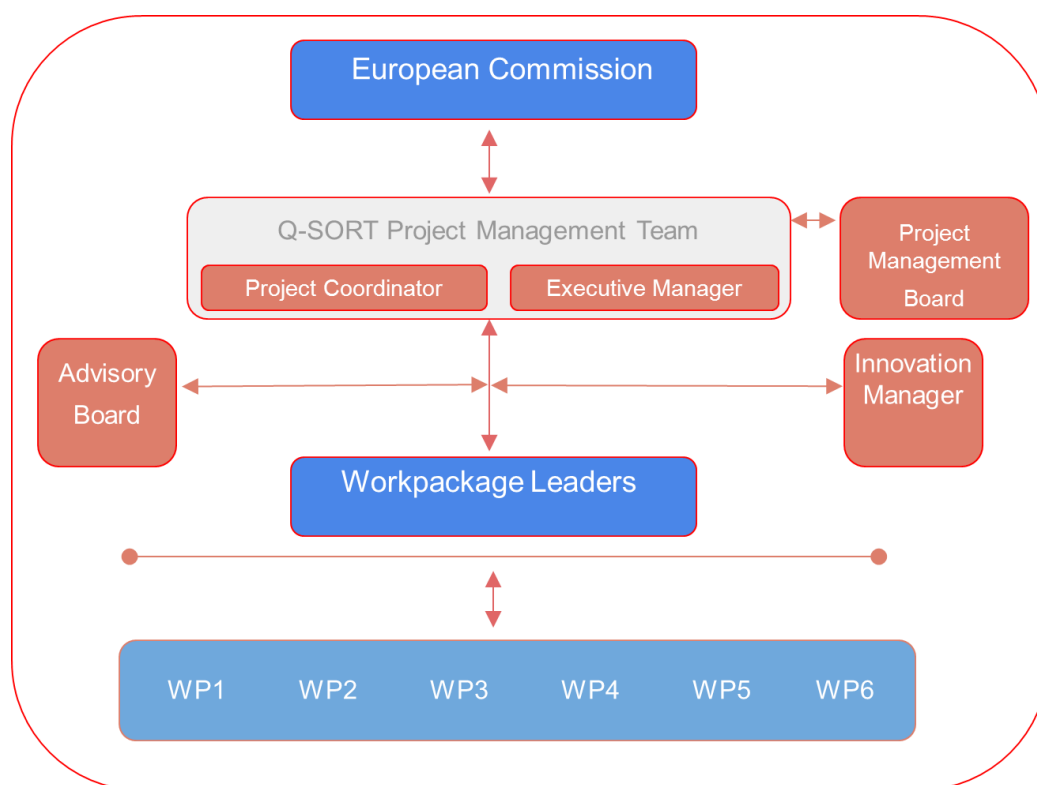


Figure 1. Project management structure

The principles of project management structures, roles, change management, decision-making and conflict resolution rules will be further detailed and formally adopted in the **Consortium Agreement** which is currently being prepared.

1.1.1 Project Management Board

The Project Management Board (PMB) is the strategic decision-making body of the project in charge of all strategic and policy decisions to be made during the project lifetime. It includes one senior member from each partner and it will meet periodically during the project at the plenary project meetings.

The tasks of the PMB include the following responsibilities:

- Strategic orientation of the project;
- Approval of any modifications/deviations to the project workplan, including redefinition of roles;

- Follow-up and validation of the budget (including financial allocation of the EC contribution), and, if necessary, its redefinition;
- Inclusion or exclusion of participants (due to new insight, no functioning, withdrawals, etc.);
- In case of default by a participant, to review participants roles and budget as well as any new entity to replace the defaulting participants;
- To monitor any significant difference between planned and actual advancement of participants' work, particularly with respect of project results and deliverables;
- In case of a deadlock situation within a work package, arbitration on basis of the information provided by the WP Leaders (see Change and risk management below);
- Maintenance of the Background list¹;
- Identification of the Foreground² that could be the subject matter of protection and consequential decisions on dissemination and exploitation activities;
- Allocation of the co-ownership shares over Foreground obtained by several participants;
- Acquisition of rights from third parties and other issues related to the rights of third parties.

Q-SORT Project Management Board	
Partner	Representative
CNR	Vincenzo Grillo
FZJ	Rafal Dunin Borkowski
FEI	Frank De Jong
MPI	Gerd Leuchs
UG	Miles Padgett
QED	Luca M.C. Giberti
UMR	Stefano Frabboni
MU	Peter Peters

1.1.2 Management Team

The Management Team consists of:

- the Project Coordinator, Vincenzo Grillo
- the Executive Manager, Raffaella Santucci

The Project Coordinator is responsible for overall management of the project and has the following responsibilities:

- Administrative Management, which consists of the following main tasks:
 - Liaise between the consortium and the European Commission.
 - Coordinate the finalisation of the Consortium Agreement.
 - Assure that the PMB is set up and made fully operative and receive full administrative support.
 - Be responsible for communicating management, administrative, and contractual issues to all the participants.

¹ Information, knowledge, software tools held by the participants prior to their accession to the Grant Agreement and made available to the project.

² Tangible and intangible results generated during the project, including information, materials, knowledge, prototypes, etc.

- Ensure the signature, by all the contractors, of the Grant Agreement.
- Receive the entire financial contribution from the Commission and manage this contribution by allocating it to the participants according to the Grant Agreement and the Consortium Agreement.
- Financial management, which consists of:
 - Carrying out the overall administrative and financial execution.
 - Preparing annual accounts so that it is possible, at any time, if requested by the Commission or by the participants, to inform them of the distribution of funds among the participants, specifically the amounts allocated and the dates of payment to each contractor.
 - Ensuring that individual financial statements are in line with project activities.
 - Ensuring that, if applicable, certifying institutions will be contacted in reasonable time to carry out the required certificate on financial statements.
- Scientific Coordination, i.e. to ensure hierarchical coordination and management and monitoring of the scientific work of partners and WP leaders, the supervision of the project global critical path as well as the scientific review of the work performed by the partners including scientific deliverables. For the technical administration of the Project, the Coordinator relies upon the Executive Manager.

The Executive Manager will respond to the Project Coordinator and assist him in the management of the technical activities in order to ensure their coherent progress. The Executive Manager will take care of the following tasks:

- Executive Management, i.e. to ensure that the project will deliver the expected outcomes by:
 - Organising technical meeting and phone conferences, providing the means for technical partner communication and sharing.
 - Mediating between technical and other partners and ensuring and modulating the flow of information to make sure project implementation respects the scheduled plans.
 - Supervising the evolution of technical activities: typically, design and implementation activities may imply changes impacting on other implementation activities. Corrective actions must be taken to overcome the obstacles and still achieve the expected results.
 - Collecting and transmitting the project deliverables to the Commission.
- Project Monitoring, i.e. to organise and schedule the activities, meetings, inputs and outputs of the overall project by:
 - Organising and timetabling the project meetings.
 - Preparing and distributing agenda and minutes for project meetings.
 - Requesting regular reporting from all partners to verify tasks, WP, monitor delays, and obtain precise corrective actions.
 - Monitoring resources usage to assure that this fits both the activity plan and the results provided by the partner and to verify that the actual costs relate correctly to the expected costs.
 - Collecting and reviewing the scientific and financial reports, to verify their consistency with the project tasks and to finally submit them to the Commission.
 - Preparing a self-assessment RRI survey based on RRI Toolkit's Self-Reflection Tool.

In addition, because of the importance of innovation in the project activities, Q-SORT appointed a dedicated **Innovation Manager (IM)**: Frank de Jong (FEI) will be in charge of the IM. The IM will support innovation in peer review process and dissemination of research results is key aim of the project. IM's main responsibilities will be to ensure that each individual partner, but also the project as whole, unfolds the innovation potential that lies in the planned project activities. The IM will in particular make sure that the results of the project meet real requirements coming from the targeted communities and support the process of turning the outcomes into successful solutions and products.

1.1.3 Work Package and Task Leaders

The Work Package Leaders (WPL) are responsible for coordinating the work and the WP tasks, managing the dependencies across the work packages and resolving all issues at the operational level. They report to the Project Coordinator. The WPL monitor that the task leaders respect the rules of the Project Handbook, and report on results achieved and resources spent. The WPL meet physically during project meetings and virtually on a monthly/bimonthly basis and communicate electronically to conduct the day-to-day running of the Consortium. Ad-hoc meetings will be held if needed at a more operational level to coordinate progress on specific work packages or issues. The need for such meetings is determined by the Project Coordinator and the Executive Manager in consultation with the WP leaders.

The WPL (one responsible for each WP) guarantee the scientific compliance of the activities. The WPLs are appointed on the basis of their experience and know-how about the corresponding WP topic. The WPLs monitor the progress being made within each WP and are responsible for identifying risks and contingency steps to circumvent any delays. The WPLs follow the day-to-day planning, progress, control and successful completion of their work packages and the optimal interaction within the project of their research team.

The WPLs are in charge of:

- Coordinating activities within the WP.
- Continuously monitoring the progress of the WP participants.
- Ensuring that milestones and deliverables of the WP are fulfilled and provided in due time.
- Elaborating progress reports on the state of advancement of the WP.
- Arranging, if needed, special meetings to determine suitable measures to be taken.
- Organising audio conferences, if considered necessary for the work progress.

The Task Leaders are responsible for coordination and for carrying out the activities of a Work Package task, as described in the Description of Work (DoW). He/she establishes the detailed schedule of the task activities, leads the task team, submits task deliverables for project internal peer review and formalizes reaching task milestones.

1.1.4 Advisory Board

An Advisory Board has been set-up, whose members are nominated by the external partners which have signed/will sign a Cooperation Agreement to allow them to actively participate to the activities of the project.

The Advisory Board will report provide feedback to help the Management Team and the PMB to shape the activities of the project in the right direction, thus maximising the impact of the project and contributing to the enlargement of the Q-SORT network. The members of the Advisory Board will also contribute to the peer review of the deliverables, participate to the networking and dissemination activities, participate to the testing and validation phase, etc.

Q-SORT Advisory Board	
Organisation	Representative
University of Ottawa, Canada	Ebrahim Karimi (Chairperson)
Medical University of Innsbruck, Austria	Monika Ritsch-Marte
Technion, Israel	Mordechai Segev

1.2 CHANGE AND RISK MANAGEMENT

Change and risk management is under the responsibility of the PMB. During the Project life, critical events can generate difficulties and require modifications in the research plan, leading to re-scheduling and re-planning of certain actions and activities.

The procedure to be followed for the necessary changes including the resolution of risky critical conditions consists of the following steps:

1. The participant that encounters the critical event within the activity she/he is carrying out in a specific Work Package (WP), informs the WPL of the difficulty by means of the convened internal communication flow channels.
2. The WP Leader exchanges the information with the Management Team.
3. The WP leader submits a description of the issue and a proposal for further action. The Management Team evaluates the proposal and sends feedback to the WPL. He/she goes ahead executing the plan, if not pressing, in seven business days.
4. The Management Team coordinates the impact on other WPs and intervenes if changes to the proposal should be required and, if necessary, elaborates a Risk Management Activity Plan in order to resolve the critical situation. Such plan may include relevant decisions concerning reallocation of resources, a partial re-scheduling or re-planning of the Project activities and the involvement of other WPs.
5. The Management Team submits the Risk Management Activity Plan for approval to the PMB, who approves or rejects the plan.
6. The PMB finally formalizes the approval of the Risk Management Activity Plan and ensures that all partners and team members are informed.

1.3 PROBLEM SOLVING

All problems and issues arising shall be reported, together with a proposal for follow-up action, to the Management Team, who will decide the steps to be taken, according to the DOW, GA, CA, and general EU project management guidelines.

General questions regarding the whole project:

- DoW
- Reporting
- Administrative questions

and more in general any kind of question that a partner may have and does not know how to handle, will be addressed by the Management Team (in particular as Executive Manager collaboration with the Project Coordinator).

Partners may freely contact the Management Team at any time in whatever form they prefer (email, skype, phone) and will receive either direct answers or will be forwarded to the partner who has the competence to answer them.

1.4 QUALITY ASSURANCE

The project will use quality assurance procedures based on the ISO9000 series of standards. For the project this means that:

- deliverables will be reviewed by partners not involved in their creation
- versioning and configuration management will be used for all software, documents, and other outputs (e.g. training materials)
- technical and administrative information will be collected periodically from the partners to monitor delays and resources usage

During the Q-SORT Kick-off Meeting the partners who will be responsible for reviewing each of the project deliverables have been identified, together with the deadlines set for the deliverables to be submitted for

review, the time allowed for review and the time allowed for changes to the deliverables in response to review comments, inputs and suggestions.

Templates and standards for deliverables are available on the private area of the project website. All deliverables will be created using these templates, and will not be accepted for review otherwise.

Software development will take into account integration/interoperability.

At six-monthly intervals, technical and administrative information will be collected from the partners, who will be required to deliver to the Executive Manager a detailed report containing information related to the activities that have been performed and to the actual use of resources.

For more details on the monitoring of activities and resources usage please refer to **Chapter 3**. For more details on the quality check process for deliverables please refer to **Chapter 4**.

Regarding **Responsible Research and Innovation (RRI)**, a self-assessment survey will be prepared based on RRI Toolkit's Self-Reflection Tool. Each partner will fill in the survey, which will include spaces for suggestions and questions on the nature and meaningfulness of RRI. At every reporting period (M12, M30, M42) the results from the survey will be summarised in the periodic reports (part of D1.5, D1.6, D1.7 - Review Meeting Documents).

2 PROJECT MANAGEMENT TOOLS

A continuous process of integration and information exchange between all consortium members is deemed essential for the success of the project. Collaborative tools and information flow procedures are activated for this purpose.

2.1 INTERNAL COMMUNICATION

2.1.1 Mailing lists

The consortium makes use of several general mailing lists for the purpose of day to day communication, enquiries, discussion of topics, ideas, actions and workflow.

- qsort@nano.cnr.it
A general all inclusive mailing list for discussion involving all partners
- qsort-admin@nano.cnr.it
A mailing list for administrative discussions

2.1.2 Project meetings

The main instruments for internal communications are Face-to-Face and Virtual Meetings: Plenary Meetings, Work Package Leaders Meetings, Work Package Specific Meetings.

- General Assembly
 - Attendance: All Consortium Partners
 - Time planning: Once per year. For budgetary reasons plenary project meetings will where possible be organised in conjunction with other project events, such as the International Conferences and Workshops.
 - Objectives: checking the status of the work for each Work Package: steps taken, problems, solutions, steps forward, success indicators, deliverables, etc.; planning the next steps; strategic and policy decision making; ensuring that the project delivers the results within time and budget constraints.
- Work-Package Leaders Meetings
 - Attendance: Task Leaders of those tasks that are being carried out, WP Leaders, Project Coordinator, Executive Manager
 - Time planning: monthly/bimonthly with timing closely related to overall planning of milestones, deliverables and EC reviews

- Objectives: update on the project ongoing status; coordinating work in progress across work packages and tasks; establishing progress at Task and WP Level; formulating corrective measures if the project gets off track; reviewing project planning at Task and WP Level for the next three to six months, including dependencies and risks; identifying opportunities for dissemination of the project.
- Work-Package Specific Meetings
 - Attendance: WP Leader, Task Leader(s), other Experts specific to the WP, Project Coordinator or Executive Manager (if appropriate)
 - Time Planning: ad hoc, no fixed time planning. During the plenary meetings, separate sessions can be also organised to discuss specific topics (e.g. ingestion, Working Groups, requirements & validation, etc.)
 - Objective: within the framework of the DoW: operational coordination and alignment of tasks at the level of the WP

2.2 KNOWLEDGE BASE AND COLLABORATIVE TOOLS

A number of collaborative tools have been implemented and is accessible through the reserved area of the project website. Access to this area is regulated by a username-password authentication. For more details on the collaborative tools currently installed on the project website please refer to **Task 6.3 Website design and execution**.

2.2.1 Project repository

The aim of the Project repository is to archive all the documents that are useful for the project, as a way to preserve them and to share them among the partners. It contains all day-to-day information of project activities, including information on project meetings and phone conferences (agendas and minutes), schedules of project activities, working documents, confidential deliverables, official documents (e.g. Grant Agreement, DoW, Consortium Agreement), templates for deliverables and presentations, materials for the reviewers and the PO and other useful documents.

The repository contains one folder for each Work Package. Each WP Leader will have the right to create new files and subfolders.

2.2.2 Shared calendar

A common Q-SORT Calendar was set up and should be kept up to date with all deadlines, events and meetings by all WP leaders who have been given access to modify the calendar. All partners can ask for dates to be set there by the coordinator.

This is a Google Calendar where it is possible to view all the events and appointments that are scheduled from any device. Its main purpose is to have a general overview of the planned meetings/skype calls/etc. and to plan the Project's activities without overlapping.

2.3 EXTERNAL COMMUNICATION

The dissemination and promotion of a project like Q-SORT calls for a high degree of cooperation and coordination throughout the consortium members. Consistency in the dissemination activities requires that the partners share the same guidelines and planning strategy.

The methodology and planning of the dissemination activities will be outlined in **T6.2 Dissemination and Engagement planning and execution**.

**Q-SORT Dissemination & Networking Events
 Report Form**

General information		
Event Title		
Date		
Country		
Venue		
Organiser		
Event website (if any)		
Please attach the full program of the event		
Q-SORT Participants in relevant workshop/session (if applicable)		
Workshop/session title		
Brief description of workshop program/session		
Number of attendees to overall event		
Audience demographics (i.e., how many librarians, professors, etc.)		
Cooperation with other projects/initiatives (if applicable)		
Were other projects/initiatives invited to the relevant workshop/session? If yes, please, indicate the names of attending representatives		
Brief description of contacts made and potential collaborations discussed		
Q-SORT presence and dissemination		
Objectives of Q-SORT participation		
Impact		
Nature of Q-SORT's contribution to the event	<input type="checkbox"/> Presentation <input type="checkbox"/> Poster session <input type="checkbox"/> Workshop <input type="checkbox"/> Dissemination material <input type="checkbox"/> Networking Other	
Please list Q-SORT promotional materials distributed at the event		

Figure 2. Event reporting form

A reporting form template has been prepared by the dissemination team in order to keep track of every formal or informal occasion of dissemination that each Q-SORT partner will have and to have it shared with the rest of the consortium. The Event Reports will be collected and stored in the reserved area of the project's website.

3 PROJECT MONITORING

It is the responsibility of the Project Coordinator and the Executive Manager to check that the WP leaders are monitoring progress to a satisfactory level of detail and accuracy. WP status will be discussed by WP leaders on a monthly/bimonthly basis using phone (Skype) calls coordinated by the Executive Manager and the Project Coordinator. This allows to ascertain the level of progress and to determine any supportive or remedial action which may be necessary. The Executive Manager and Project Coordinator work in close collaboration, ensuring a joint monitoring of the project. Each partner will also submit a six-monthly table effort to the Executive Manager. This will be matched against the original table of expected effort in the DoW to identify any discrepancies and eventually investigate whether these constitute a problem for the project or not.

3.1 PERIODIC REPORTING

Progress reporting will have two different levels of activity:

- Annual reports to the Commission
- Intermediate six-monthly reports for internal use

The official annual reports are planned at month 12, 30 and 42. The report's format will follow the outline of the EC template for annual reports – including a publishable summary and information on the progress of work and the resources employed – and its preparation is under the responsibility of the Project Coordinator and Executive Manager, with the contribution of the WP leaders.

Furthermore, each partner will provide every six months an update on the progress for each WP in which the partner is active, including a summary of the activities carried out in the period and of the main results achieved, problems and actions undertaken, any eventual change from the planned activities and the reasons for this, etc. The report will also provide a list of dissemination and training activities organised or participated in by the partner (seminars, workshops, etc.), including any possible publication (articles, books, notes..).

Finally, a separate Excel sheet will provide a summary of the costs incurred by the partner in the period, divided by category of cost: personnel costs, subcontracting costs and other direct costs.

A template for this report is available for download by all the partners in the Project repository.

The Executive Manager is in charge of reminding the partners of each deadline and of collecting and checking the reports. A named person within each partner organisation will be responsible for any question related to the report. Thanks to this frequent reporting requests, the Management Team is enabled to track overall progress; such detailed information will indeed make the preparation of review reports much easier.

SIX-MONTHLY ACTIVITY REPORT

Reporting period:	From:	To:
Date of delivery of the report:		
Partner name:		
Author name:		
E-mail of the Author:		

Activities

WP1	Management (CNR)	T resp	Corresp.
Task 1.1	General project management	CNR	
Task 1.2	Quality Assurance & RRI Compliance	CNR	
Task 1.3	Innovation Management	FEI	QED

Milestones and significant results achieved:

Deliverables produced:

Possible deviations / objectives failed (including impact on the project):

WP2	Design and implementation of prototype holographic & electro-magnetostatic OAM Sorter (CNR)	T resp	Corresp.
Task 2.1	Implementation of qualitative whole-column ray-tracing simulator (including the new holograms)	FEI	CNR
Task 2.2	Fabrication and testing of standard holographic OAM sorting configuration (sample in sample position)	UMR	FZJ
Task 2.3	Theoretical study of the field sources distributions required to produce OAM sorting elements (FZJ person + Prof. Pozzi)	CNR	FZJ
Task 2.4	Fabrication and interferometric testing of new e.-m. phase elements	CNR	FZJ
Task 2.5	Testing and implementation of the new phase elements in the TEM	FZJ	CNR

Milestones and significant results achieved:

Deliverables produced:

Possible deviations / objectives failed (including impact on the project):

Figure 3. Activity report template

Personnel Costs						
Number of productive hours in one month according to the beneficiary's normal practices (EC average = 140)						140
WP	Name and Surname	Staff position	Worked hours	Hourly cost of Personnel	Personnel total cost	Worked time in person-months
WP1					0,00	0,00
					0,00	0,00
Total WP1					0,00	0,00
WP2					0,00	0,00
					0,00	0,00
Total WP2					0,00	0,00
WP3					0,00	0,00
					0,00	0,00
Total WP3					0,00	0,00
WP4					0,00	0,00
					0,00	0,00
Total WP4					0,00	0,00
WP5					0,00	0,00
					0,00	0,00
Total WP5					0,00	0,00
WP6					0,00	0,00
					0,00	0,00
Total WP6					0,00	0,00
Total					0,00	0,00

Subcontracting Costs		
Beneficiary	Description of contract	Amount (Euro)
Total		-

Travel & Accomodation Costs			
Name and Surname	Date and Destination	Purpose of travel	Amount (Euro)
Total			-

Dissemination & Networking Costs (materials, dispatching, publications, conferences, workshops)	
Description	Amount (Euro)
Total	-

Figure 4. Resources usage report template

The working time of each employee of each participant spent on the project shall be recorded and certified at least once a month throughout the duration of the project.

The time records should be certified/signed by the person(s) designated by that participant to direct their work on the project. If this is not possible then the time records are to be certified/signed in accordance with the normal practice of the participant. This could be by the person's immediate superior or by another hierarchical or administrative overseer from the participant.

Such employees must be directly hired by the participant in accordance with her/his national legislation, be under the sole supervision of the latter and the results of their work must belong to the participant.

A simple and user-friendly model for a monthly timesheet, which meets minimum requirements, is provided with these notes in Excel format.

It is important to note that the use of this model timesheet is not obligatory. Whatever time recording system is used, it should record hours worked on the Q-SORT project and should also enable reconciliation of total hours in cases where personnel work on several projects during the same period.

It is important also to remember that an effective time-recording system (a system which certifies the reality of the hours worked) is a requisite for the eligibility of the costs. A simple estimation of hours worked is not sufficient.

Timesheet																																		
																														Organisation:				
																														Person:				
																														Number of hours envisaged i.e. according to the employment contract:				
Month - Year																																		
Indicate the time in hours Only the yellow cells are writeable																																		
Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	Notes	
Day of the week																																		
Public holiday																																		
EAGLE																																		
WP 1																																	0	
WP 2																																	0	
WP 3																																	0	
WP 4																																	0	
WP 5																																	0	
WP 6																																	0	
Total productive hours: Q-SORT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Other Work:																																		
Other EU Project 1																																	0	
Other EU Project 2																																	0	
Other EU Project 3																																	0	
Productive work different from EU-Projects																																	0	
Total productive hours: Other Work	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total productive hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Absences and activities not to be part of productive hours																																		
Annual Leave																																	0	
Special Leave																																	0	
Illness																																	0	
Training / internal meetings																																	0	
Total Absences and activities not to be part of productive hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total hours	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

Total productive hours: Q-SORT	0
Total productive hours: Other Work	0
Total productive hours	0
Total Absences and activities not to be part of productive hours	0
Total hours	0
Days (here 8 hours are one day)	0.0

Figure 5. Timesheet model

3.2 PERFORMANCE MONITORING, MILESTONES AND INDICATORS

Performance monitoring is carried out on the basis of performance measurement throughout and after the funding phase. Performance monitoring is carried out on the basis of success indicators and performance measurement throughout and after the funding phase. The results of performance measurement and evaluation (indicators and their values) will be part of the progress reporting to the European Commission.

The following table provides a summarised view of the quantitative indicators adopted and a very rough quantification of targets, against which the state of achievement of the results can be measured over the over consecutive periods.

WP	Metric	Value/Result attended	Date
WP 1	Number of successful project reviews	1/2/3	M12/M30/M42
WP 2	Number of fabricated test holograms	4	M8
WP 2	Number of characterizations of e.m. elements	2	M16
WP 3	Number of detailed projects for possible e.m. programmable phase plate.	2	M8
WP 3	Number of simulated electrode/current simulations for generalized sorter	3	M8
WP 3	Number of optical Test of possible generalized sorter	2	M18
WP 3	Total number of webinars	3/7/9	M12/M30/M42
WP 3	Number of e.m. sources that can be programmably addressed in the new programmable phase plate.	7	M18
WP 4	Theory or simulations ideas for plasmonic dichroism.	2	M13
WP 4	Number of fabricated plasmonic structures.	2	M18
WP 5	Number of tests of instrumentation for Cryomicroscopy setup in Juelich.	2	M8
WP 5	Number of attempted cryomicroscopy experiment.	2	M16
WP 5	Number of attempted cryomicroscopy experiment.	4	M29
WP 6	Total number of followers on social networks	500/1000/1500	M12/M30/M42

WP 6	Maximum post reach on social networks	5000	M42
WP 6	Number of countries reached through social networks and website	5/10/12	M12/M30/M42
WP 6	Number of visitors on project website	100/200/300	M12/M30/M42
WP 6	Number of views for project video	1000/2000	M30/M42
WP 6	Total number of brochures/flyers distributed	4000/8000/12000	M12/M30/M42
WP 6	Number of conferences attended by Q-SORT staff	12/30/42	M12/M30/M42
WP 6	Number of papers published	4/6	M30/M42

A number of milestones have been identified, which are summarised in the following table (taken from the DoW). These milestones will help to monitor and periodically assess the progress towards the achievement of the project's objectives at given stages in the project lifetime.

Milestone number	Milestone name	Related WPs	Estimated date	Means of verification
Mi1	Project Logo Website publication	WP6	M2	D6.1 [Logo used in deliverables and project documents]
Mi2	Calculation of ray-tracing configurations for Sorter	WP3	M6	D2.1 [Start of T2.2 (and of 3.3)]
Mi3	First Q-SORT International Conference	WP6	M11	D1.2 Proceedings
Mi4	Specification of requirements of the protein-specific Sorter	WP5	M12	D3.1 first release [Start in T3.3, T3.4]
Mi5	Integration of cryo elements in the main TEM machine	WP5	M16	D5.1 second release [Start of activity in T5.2]
Mi6	First realisation of electro-magnetostatic phase elements	WP2	M21	Submission of D2.5, Start of experiments in T4.3, T4.4, T5.3
Mi7	Second Q-SORT International Conference	WP6	M26	D1.2 Proceedings
Mi8	Protein-specific sorter ready	WP3	M30	D3.3 [Start of activities in T5.4]
Mi9	Confirmation of plasmonic dichroism	WP4	M36	D4.3 [Configuration used in T5.4 is employed in T5.3]

Mi10	Third Q-SORT International Conference	WP6	M41	D1.2 Proceedings
Mi11	Submission of paper on magnetic circular dichroism measurement	WP4	M42	D4.4 and receipt of submission

4 QUALITY CHECK OF DELIVERABLES

The objective of this section is to formalise a set of rules for the production, formatting, presentation and quality control of each deliverable that will be submitted by the Project.

Deliverables are generally technical documents and have an essential role for the Commission's appraisal on how the project is evolving, since they are written reports in which the information and results obtained along the project development are collected and analysed. The deliverables will contain thorough documentation about the activity carried out during the relevant Work Package and the results achieved, and could be accompanied by additional information or bibliographical references in an Annex.

4.1 DELIVERABLE PRODUCTION

Each deliverable is associated to a specific Task and Work Package and has a partner (the WP or Task Leader) who is responsible for the production of the document and for co-ordinating the work of the partners involved (see Table in section 4.3). Before the implementation of the deliverable, the responsible for the deliverable will define the document structure and the contributions expected from each partner and will propose a plan for the delivery of the document. Objective of this plan is to clarify the main objectives of the deliverable and to charge the different contributors with specific tasks in the report. It should contain a clear indication of:

- Table of Contents
- Person responsible for the deliverable
- Persons in charge of each chapter/section
- A timetable for the deliverable development, setting deadlines for the submission of contributions and for the production of the first draft and of the following versions

The responsible for the deliverable should take into account realistic timings for the submission of inputs, and therefore propose the above plan enough in advance, in order to meet the established date for its submission to the European Commission, as per the DoW.

Upon receiving the inputs from the different contributors, he/she will merge them into a single document. This first draft will then be circulated among the partners involved and asked for comments: each partner will check its consistency with the plans and give their feedback and approval. This iterative procedure will be repeated as necessary, until approval is given by all involved partners. A final draft will then be prepared by the responsible of the deliverable and submitted to the peer review (see Chapter 4.3).

4.2 STRUCTURE OF THE DELIVERABLE

A deliverable should comprise five parts as follows:

Part I (Cover Page)

Projects are requested to fill in the front page according to the template provided by the European Commission and ensuring that all the information is correctly provided, particularly those appearing in the contract.

Part II (Table of contents)

An index of the deliverable contents should be provided.

Part III (Executive Summary)

One or two pages executive summary of the deliverable should be provided. Reading this should prepare the reader for the rest of the document. This, plus the conclusion, can act as a sort of summary.

This section should also describe:

- The Role of this Deliverable in the Project
 - What element or aspect of the project does this deliverable represent?
 - How does the work reported herein contribute to the overall progress of the project?

- Which are the inputs and dependencies for the work described in deliverable?
- In which manner this deliverable feeds into further work in this and other work-packages?
- The Structure of the document
 - Brief description of the chapters which compose the document

Part IV (Full description of the deliverable content)

The deliverable body or substance should include a description of the methodology used, the work done to achieve the relevant tasks and the detailed results.

Part V (Conclusions)

This should include a brief summary description of the results of the work carried out and how these results contribute to the progress of the project. Take-home messages, suggestions and recommendations will be also provided, focusing on the next steps.

If there is a broader (beyond project) impact, this should be mentioned here too.

Part VI (Bibliography and References)

Here should be provided the following:

- a list of the documents and other key references relevant to the deliverable;
- annexes containing the documents that have been used or produced.

A deliverable template has been produced and it is available on the Project's repository.

This project is funded by the European Union

DELIVERABLE

Project Acronym: Q-SORT
 Grant Agreement number: 766970
 Project Title: Q-SORT. The Quantum Sorter: A New Measurement Paradigm in Electron Microscopy

<DELIVERABLE TITLE>
 <Deliverable reference number>
 version: N^o

Revision: [draft, 1, 2, ...]

Authors:
 Name (Organisation)
 Name (Organisation)

Contributors:
 Name (Organisation)
 Name (Organisation)

Reviewers:
 Name (Organisation)
 Name (Organisation)

Project funded by the European Union within the H2020 FET Open Programme	
Dissemination Level	
P	Public
C	Confidential, only for members of the consortium and the Commission Services

Revision History

Revision	Date	Author	Organisation	Description

Statement of originality:
 This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

Disclaimer
 The sole responsibility for the content of this deliverable lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the REA nor the European Commission are responsible for any use that may be made of the information contained therein.

Figure 6. Deliverable template

4.3 REVIEW AND ACCEPTANCE

In general, the partner responsible for the deliverable is responsible for the quality of the document. He/she will check the deliverable under the following points of view:

- the deliverable covers the objectives stated in the DoW;

- the quality of the work described in the document is good and is in accordance with what is expected;
- the quality of the document is good (errors, organisation of topics, readability, illustrations);
- the deliverable is complete (there are no missing parts, non-existing references, topics not covered, arguments not properly explained);
- the deliverable is clear and suitable to its potential readers (it is possible to find in it complete and clear answers to the questions raised by the stated objectives, in a form that can be useful for the Users of the work and/or for the continuation of the work).

The internal peer review is a final quality control before submitting deliverables to the European Commission. Each deliverable will be reviewed internally by at least one or two partners not directly involved in its creation in order to check the content and provide feedback for improvements.

The peer review process has been defined as follows:

1. the responsible for the deliverable submits the deliverable to the partners responsible for peer review 2-3 weeks before the official due date, with copy to the Executive Manager and Project Coordinator;
2. the peer reviewers have 1 week to carry out the review and return the reviewed copy of the deliverable returned to the author, with copy to the Executive Manager and Project Coordinator;
3. the responsible for the deliverable has 1 week to change it in response to the review and to deliver the updated version to the Executive Manager and Project Coordinator;
4. the Executive Manager carries out a final formal check, to ensure all templates are complied with, submits the deliverable to European Commission Services and publishes it on the project website (public or reserved area depending on the dissemination level of the deliverable);
5. the submitted version of the deliverable is retained on the website until the end of project.

The following should be noted:

- The content of the deliverables is the most important material to review. Peer reviewers will have expertise in the general topic of the deliverable and be able to assess its quality. They will also be familiar with the overall project, and so able to judge the deliverable's contribution to the project.
- The Executive Manager will carry out occasional spot-checks, to ensure that quality check procedures are being adhered to. While the review of a third party deliverable is not usually the most exciting aspect of a project, its importance for the overall value of the project cannot be underestimated.
- The Executive Manager will monitor the progress of the peer review process. In order to allow time for review and for enhancements, the preceding stages must be completed on time. The Executive Manager will be alerted to any possible late deliverables and late reviews and he/she must inform the Project Coordinator. However, if a delay is detected and cannot be avoided, the Executive Manager and the Project Coordinator will seek the permission of the EC project officer to submit a late, but high-quality, deliverable rather than submitting a weak deliverable on time.

Below follows the list of the peer reviewers as agreed during the kick-off meeting.

DE Number	Title	Lead Participant	Month	Reviewers
D1.1	Project Handbook	CNR	1	Dieter Weber, Frank De Jong
D1.2	International Conference Proceedings (release 1)	CNR	12	Call for Paper with Peer Review
D1.3	International Conference Proceedings (release 2)	CNR	27	Call for Paper with Peer Review

D1.4	International Conference Proceedings (release 3)	CNR	42	Call for Paper with Peer Review
D1.5	Review meeting 1 documents	CNR	14	All partners
D1.6	Review meeting 2 documents	CNR	32	All partners
D1.7	Review meeting 3 documents	CNR	42	All partners
D1.8	Innovation Report (release 1)	FEI	21	Luca Giberti, Dieter Weber
D1.9	Innovation Report (release 2)	FEI	42	Luca Giberti, Dieter Weber
D2.1	Report about ray tracing software	FEI	6	Roberto Balboni, Dieter Weber
D2.2	Report about working holographic sorter configuration	UMR	11	Miles Padgett, Ebrahim Karimi
D2.3	Manuscript for paper and/or patent documentation on calculation of e.-m. design sources distributions required to produce OAM sorting	CNR	4	Vittorio Morandi, Stefano Frabboni
D2.4	Short report on characterisation of fabricated e.-m. sorter (release 1)	CNR	12	Peter Tiemeijer, Alberto Roncaglia
D2.5	Short report on characterisation of fabricated e.-m. sorter (release 2)	CNR	19	Peter Tiemeijer, Ebrahim Karimi
D2.6	Manuscript for paper on implementation of new phase elements in TEM	FZJ	21	Alberto Roncaglia, Vittorio Morandi
D3.1	Manuscript for paper or report on theory advances/test on diagonalisation of operator through coordinate transformation (release 1)	MPI	12	Giulio Pozzi, Mordechai Segev
D3.2	Manuscript for paper or report on theory advances/test on diagonalisation of operator through coordinate transformation (release 2)	MPI	24	Giulio Pozzi, Vittorio Morandi
D3.3	Short report on new hologram on protein-specific sorter	FZJ	28	Raimond Ravelli, Giulio Pozzi
D3.4	Report or Manuscript on new e.-m. devices for protein-specific sorter	CNR	30	Giancarlo Gazzadi Stefano Frabboni
D3.5	Interdisciplinary Training Webinar (release 1)	QED	6	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.6	Interdisciplinary Training Webinar (release 2)	QED	11	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.7	Interdisciplinary Training Webinar (release 3)	QED	12	Active Vincenzo Grillo, Rafal Dunin - Borkowski
D3.8	Interdisciplinary Training Webinar (release 4)	QED	18	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.9	Interdisciplinary Training Webinar (release 5)	QED	24	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.10	Interdisciplinary Training Webinar (release 6)	QED	26	Vincenzo Grillo, Rafal Dunin - Borkowski

D3.11	Interdisciplinary Training Webinar (release 7)	QED	30	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.12	Interdisciplinary Training Webinar (release 8)	QED	36	Vincenzo Grillo, Rafal Dunin - Borkowski
D3.13	Interdisciplinary Training Webinar (release 9)	QED	41	Vincenzo Grillo, Rafal Dunin - Borkowski
D4.1	Report or Manuscript for paper on first test of plasmonic OAM spectrum	FEI	21	Elisa Molinari, Ebrahim Karimi
D4.2	Report on magnetic circular dichroism measurement	FZJ	30	Roberto Balboni, Elisa Molinari
D4.3	Manuscript for paper on OAM Sorter characterisation of plasmons	CNR	36	Elisa Molinari, Ebrahim Karimi
D4.4	Manuscript for paper on magnetic circular dichroism measurement	FZJ	42	Roberto Balboni, Giulio Pozzi
D5.1	Report on integration of cryo-blades and cryo-imaging into the Titan-Holo microscope at FZJ (release 1)	FZJ	11	Vincenzo Grillo, Giancarlo Gazzadi
D5.2	Report on integration of cryo-blades and cryo-imaging into the Titan-Holo microscope at FZJ (release 2)	FZJ	16	Cryo-microscopy experts from the Advisory Board to be identified, Stefano Frabboni
D5.3	Manuscript for paper on imaging with SPP	CNR	21	Monika Ritsch-Marte, Ebrahim Karimi
D5.4	Manuscript for paper on the solution of one instance of the protein orientation problem	MU	30	Cryo-microscopy experts from the Advisory Board to be identified, Roberto Balboni
D5.5	Manuscript for paper on lowest-dose wave recognition of proteins	MU	42	Cryo- microscopy experts from the Advisory Board to be identified, Monika Ritsch-Marte
D6.1	Project website and logo (release 1)	QED	2	Frank De Jong, Ebrahim Karimi
D6.5	Project website and logo (release 2)	QED	8	Frank De Jong, Elisa Molinari
D6.6	Printed materials (release 1)	QED	12	Frank De Jong, Elisa Molinari
D6.7	Printed materials (release 2)	QED	30	Frank De Jong, Elisa Molinari
D6.8	Printed materials (release 3)	QED	42	Frank De Jong, Ebrahim Karimi
D6.9	Project video (release 1)	QED	18	Vincenzo Grillo, Rafal Dunin-Burkowski
D6.10	Project Video (release 2)	QED	36	Vincenzo Grillo, Rafal Dunin-Burkowski
D6.2	Dissemination and Public Engagement Plan including graphic design guidelines (release 1)	QED	5	Vincenzo Grillo, Stefano Frabboni
D6.3	Dissemination and Public Engagement Plan including graphic design guidelines (release 2)	QED	12	Vincenzo Grillo, Stefano Frabboni

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D6.4	Dissemination and Public Engagement Plan including graphic design guidelines (release 3)	QED	24	Vincenzo Grillo, Stefano Frabboni
D6.11	Dissemination and Public Engagement Report	QED	42	Vincenzo Grillo, Elisa Molinari
D6.12	Exploitation and IPR Plan (release 1)	FEI	30	Dieter Weber, Alberto Roncaglia
D6.13	Exploitation and IPR Plan (release 2)	FEI	42	Dieter Weber, Alberto Roncaglia
D1.10	Open data management plan	CNR	6	Vittore Casarosa, Paolo Manghi
D1.11	Open data management update 1	CNR	15	Vittore Casarosa, Paolo Manghi
D1.12	Open data management update 2	CNR	38	Vittore Casarosa, Paolo Manghi

5 CONCLUSION

The Q-SORT consortium consists of many partners, from all over Europe and with different levels of expertise, therefore it is necessary to set up suitable rules, methodologies and procedures that properly guide all the partners towards the achievement of the objectives of the project in the most efficient, timely and successful way. The Project Coordinator and the Executive Manager are always available to assist the partners for any need they might have.

The progress of Q-SORT's work will be monitored against the milestones defined in the DoW. Each phase of the actual work during the project's lifetime will be carried out with proper attention to a qualitative approach. The Quality Plan will be the reference document for the procedures adopted by the project and is the instrument that the Management Team will use to assure adherence to these procedures.

The Project Handbook is to be considered an open document informed by a general and shared approach, it can be enriched during the project's lifetime as new procedures and templates are established.

SHORT NAME OF PARTICIPANTS

Partner	Country	Short Name
National Research Council (Project scientific coordinator)	Italy	CNR
Forschungszentrum Jülich, Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons	Germany	FZJ
FEI - Thermo Fisher Scientific	The Netherlands	FEI
The Max Planck Institute for the Science of Light	Germany	MPI
University of Glasgow, Department of Physics and Astronomy	United Kingdom	UG
QED Film & Stage Productions Ltd. - UK	United Kingdom	QED
University of Modena and Reggio Emilia, Department of Physics, Informatics, and Mathematics - IT	Italy	UMR
Maastricht University, Maastricht MultiModal Molecular Imaging Institute	The Netherlands	MU

LIST OF ABBREVIATIONS

Consortium Agreement	CA
Description of Action	DoA
Description of Work	DoW
European Commission	EC
Grant Agreement	GA
Kick-off Meeting	KoM
Project Management Board	PMB
Work Package	WP
Work Package Leader	WPL