

LD-SAFE

Laser Dismantling Environmental and Safety Assessment

PROJECT HANDBOOK

DELIVERABLE D7.1

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1. SUBJECT OF THE DOCUMENT

This document corresponds to the « Project Handbook » requested on the Work Package n°7 of the LD-SAFE project.

This document represents a guide to summarize the procedures for management, quality insurance, quality control, reporting and cost follow-up.

The objective is to facilitate effective and efficient contribution and reporting complying with the contractual framework and best management practices of the European Commission.

2. REFERENCE DOCUMENTS

N°	Reference	Version	Description
R1	945255	N/A	Grant Agreement – LD-SAFE
R2	N/A	N/A	Consortium Agreement

3. TERMINOLOGY

Acronym	Definition
AB	Advisory Board
CEA	Commissariat à l’Energie Atomique et aux énergies alternatives
EC	European Commission
EDM	Electronic Document Management
EG	Expert Group
EUG	End User Group
IRSN	Institut de Radioprotection et de Sureté Nucléaire
KPI	Key Performance Indicator
L	Leader
LD-SAFE	Laser Dismantling environmental and SAFETy Assessment
MT	Management Team
N/A	Not Applicable
P	Partner
PCO	Project COordinator
PM	Project Manager
SG	Support Group
WP	Work Package

4. ORGANIZATION

4.1 PROJECT ORGANIZATION

The LD-SAFE project organization is presented in the schematic views below:

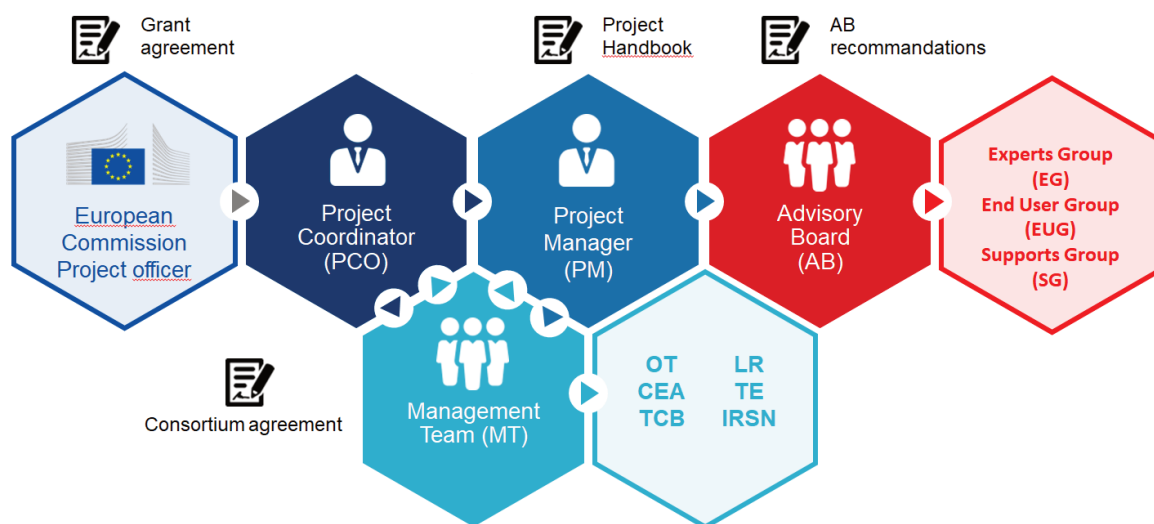


Figure 1: Overall organization

EC: the European Commission is represented by a Project Officer. He monitors deliverables, reports and any changes during the project and provide advice.

PCO: the Project Coordinator is the legal entity acting as the intermediary between the Parties and the Funding Authority. The Coordinator shall, in addition to his responsibilities as a Party, perform the tasks assigned to him as described in the Grant Agreement and the Consortium Agreement.

PM: the Project Manager leads the actual implementation of the high-level strategic decisions of the MT on a day-to-day basis. The PM will make available all the information needed for decisions concerning the implementation of the project.

MT: the Management Team represents the Consortium. This is the decision-making body of the consortium.

AB: the Advisory Board assists the PCO and PM, as well as the MT, in providing inputs for running the project and for assessing the match between the project results and markets and societal and environmental needs. The AB gathers three distinct entities.

- The Expert Group: has the role to monitor, and redirect when needed, the scientific developments, the Project management and the strategy of dissemination of the Results (not withstanding with the above, the MT remains the sole decision maker of the Project),
- The End User Group represents the end users of the Results,
- The Support Group.

The decision process of the LD-SAFE project is summarized in the schematic views below:

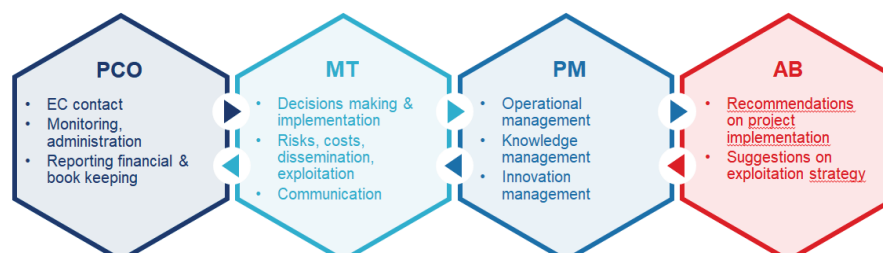


Figure 2: Decision process

4.2 MANAGEMENT TEAM

4.2.1 Consortium body

The Management Team represents the body of the Consortium.

The Consortium is comprised of six beneficiaries (including one Third Party):

Beneficiary	Country
ONET TECHNOLOGIES CN (OT)	France
COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)	France
Third Party of CEA: CENTRE D'ETUDE SUR L'EVALUATION DE LA PROTECTION DANS LE DOMAINE NUCLEAIRE (CEPN)	
TECNUBEL SA (TCB)	Belgium
LLOYD'S REGISTER CONSULTING – ENERGY AB (LR)	Sweden
TECNATOM S.A. (TE)	Spain
INSTITUT DE RADIOPROTECTION ET DE SURETE NUCLEAIRE (IRSN)	France

4.2.2 Contact list

The main project interlocutors are listed in the table below:

Company	Name		Phone Number	E-mail	Function
OT	ROULET	Damien	+33 6 42 30 92 48	rouletd@onet.fr	PCO
	DAGUIN	Pierre	+33 6 49 54 62 12	pdaguin@onet.fr	PM
	GUILLEMIN	Julien	+33 4 91 29 18 47	jguillemin@onet.fr	
CEA	PAILLARD	Séverine	+33 1 69 08 33 33	severine.paillard@cea.fr	Contact point
	DOYEN	Ioana	+33 1 69 08 86 34	ioana.doyen@cea.fr	
	FAVRICHON	Julien	+33 4 66 79 61 70	julien.favrichon@cea.fr	
	CANTREL	Eric	+33 4 66 33 90 66	eric.cantrel@cea.fr	
	GEORGES	Christine	+33 6 03 32 29 61	christine.georges@cea.fr	
IRSN	PORCHERON	Emmanuel	+33 1 69 08 50 72	emmanuel.porcheron@irsn.fr	Contact point
	FRANCOIS	Patrice	+33 1 58 35 90 51	patrice.francois@irsn.fr	
	BOULAND	Antonin	To be defined	To be defined	
	MASSEAU	Xavier	+33 1 58 35 74 09	xavier.masseau@irsn.fr	
TCB	VANDENDRIES	Robby	+32 472 57 17 30	robby.vandendries@transnubel.be	Contact point
	NULENS	Anton	+32 477 59 38 91	anton.nulens@transnubel.be	
LR	CALOGIROS	Antonis	+44 207 076 6473	antonis.calogiros@lr.org	Contact point
	SWIFT	Chris	+44 161 266 2020	chris.swift@lr.org	
TE	RECIO (MIRANDA)	Tomas (Adrian)	+34 916598620	tarecio@tecnatom.es	Contact point
	RUIZ	Jesus	+34 916598306	jruiz@tecnatom.es	
	DIAZ	Asun	+34 916598711	adiaz@tecnatom.es	

4.3 ADVISORY BOARD

The Advisory Board represents the Expert Group, the End User Group and the Support Group. The members are presented below:

- Expert Group:

Profile (as expert)	Name	Company
Decommissioning	Gordon TAIT	DSRL
Project	Gérard COGNET	Gérard COGNET
Safety	Przemyslaw IMIELSKI	GRS
Laser safety	José GARCIA	PYLA
Conventional cutting techniques for reactor dismantling	To be defined	To be defined

- End User Group: to be defined,
- Support Group: to be defined.

A non-disclosure agreement is signed between the Coordinator (ONET TECHNOLOGIES) and members of Advisory Board (just Expert Group and End User Group) to manage the confidentiality of the exchanges between the Consortium and the external parties.

4.4 WORK PLAN

The work plan of the LD-SAFE is structured into 8 Work Packages:

- WP1 to WP5: technical activities,
- WP6: dissemination and exploitation activities,
- WP7: project management,
- WP8: ethics requirements.

The list of each Work Package, the tasks and the leaders/partners (L or P) are presented in the table below:

WORK PACKAGE		OT	CEA	TCB	LR	TE	IRSN
WP1	Analysis of reactor dismantling with laser cutting - Leader: TCB						
T1.1	Analysis of the dismantling of reactor components	P	P	L	P	P	P
T1.2	Analysis of the laser cutting system for dismantling of reactor components	P	P	L			
T1.3	Test specification for the laser technology		P	L	P	P	
T1.4	Specification for the Demonstrator	P	P	L			
WP2	Laboratory trials and calculations - Leader: CEA						
T2.1	Laser beam residual power	P	L				
T2.2	Secondary emissions: aerosols		P				L
T2.3	Hydrogen gas generation during underwater emerging laser cutting		L				P
WP3	Protection of the workers and environment - Leader: LR						
T3.1	Technology appraisal	P	P	P	L		
T3.2	Technology Qualification Plan (TQP)				L		
T3.3	Execution of TQP and Certification				L		
T3.4	Guideline				L		
WP4	Safety assessment - Leader: TE						
T4.1	Risk analysis with regards to safety					L	P
T4.2	Compilation of results from WP2 and WP3		P		P	L	P
T4.3	Safety demonstration on a case study	P	P			L	
T4.4	Independent review of the “generic safety case”						L
WP5	Case studies / Demonstrator - Leader: OT						
T5.1	Development of the case study and specification for the demonstrator	L	P	P		P	
T5.2	Design, procurement and installation of the reactor laser cutting system for the demonstrator	L	P	P		P	P
T5.3	Design, manufacture and installation of the reactor environment (representative mock-ups)	P	P	L			
T5.4	Operation of the demonstrator and technical validation of the technology	L	P	P			
WP6	Dissemination and exploitation activities - Leader: OT						
T6.1	Dissemination activities	P	P	P	P	L	P
T6.2	IPR management, exploitation strategy and commercial assessment	L	P	P	P	P	P
T6.3	Stakeholder workshops	L	P	P	P	P	P
T6.4	Education and training programs	P	P	P	P	L	P
WP7	Project management - Leader: OT						
T7.1	Strategic decision making	L	P	P	P	P	P
T7.2	Operational management	L	P	P	P	P	P
WP8	Ethics Requirements - Leader: OT						
T8.1	EPQ - Requirement No. 1	L					

The description of each WP is indicated in the “Description of Action (see annex 1 of the Grant Agreement [R1]).

5. EC PORTAL

All partners involved in the LD-SAFE project will use a specific Internet-based tool designed by European Commission for management of H2020 projects. This tool is available on the EC portal in the link below (Google Chrome navigator is recommended for use this link):

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/myarea/projects>

To login in the portal and to have access to project information, user credentials are required (request access from your coordinator if not allocated).

This portal has EC manuals for the Grant management for these topics:

- Keepings records,
- Amendments,
- Reports & payment requests,
- Deliverables,
- Dissemination & exploitation of results,
- Communicating your project,
- Checks, audits, reviews & investigations.

To access to these information, click on “Online manual” button (represented in orange).

Also, a platform named SIGMA permit to complete information about:

- Summary for publication (for the final period),
- Deliverables (for uploading it),
- Milestones (to validate it),
- Critical risks (risk analysis: to add comments or update the risks list),
- Publications (to submit publications in accordance to the LD-SAFE project),
- Dissemination & communication activities,
- IPR (to register intellectual Property right),
- Open data (to share if necessary),
- Gender (to complete number of female and male people on the LD-SAFE project),

To do this, click on the “action” button and “Manage project”.

To access to all information about these topics, click on “Continuous reporting data” link.

Note: the coordinator is responsible for completing information about these topics.

However, all information is available to all beneficiaries.

6. DOCUMENTS

6.1 REFERENCE

All official project documents we shared between partners have to respect a standard typology reference. To do this, the coordinator uses an EDM to generate these references.

Each partner who needs to use a document reference will request it to the coordinator.

This reference corresponds to:

- LD-SAFE-12584-**XX**-**YYYYYY**-EN.

XX correspond to the document type. For example:

- PRZ: presentation,
- PLG: schedule,
- LIS: documents list,
- MOM: minutes of meeting,
- DEL: project deliverable.

YYYYYY correspond to the number of the document.

6.2 LISTS

Lists of documents are recorded in the document reference CN-LD-SAFE-12584-LD-135551-EN:

- The list of applicable documents and issued documents,
- The list of all project deliverables from EC portal (including the delivery date and the document ownership) for Work Package 1 to 8. Information indicated on this list will be updated if changes occur. An extract of this list is presented in annex (information at this state of the project).

6.3 SIGNING

Each project deliverable is subject to internal approval (electronic signature by redactor, checker and approver) when signing any revision. On the cover page of the deliverable, the revision, the date and the names of the signatories will be indicated.

6.4 DELIVERABLE REVIEW PROCESS AND SUBMISSION

6.4.1 Deliverable type and actors involved

As indicated in the schematic below, the review of project deliverables depends on:

- The deliverable type (document ownership, see chapter 9.1 in annex),
- The actors involved, their role and their responsibility as indicated in the table below.

Actors	Roles	Responsibility
Author	Deliverable Leader (D)	Document redaction and management of the review process. When a deliverable needs co-authors contribution, the main author shall manage the writing deadlines.
Co-author	Contributor to the Deliverable	Document redaction (partial) through contributions which are sent to the Deliverable Leader
Co-Owner	Approver (A)	Review and Approve the document.
Other partners	Commenter (C)	Optional comment on the document.
Experts	Commenter (C)	Provide comments on targeted deliverables.
Coordinator	Submitter (S)	Submission of the deliverable to EC.

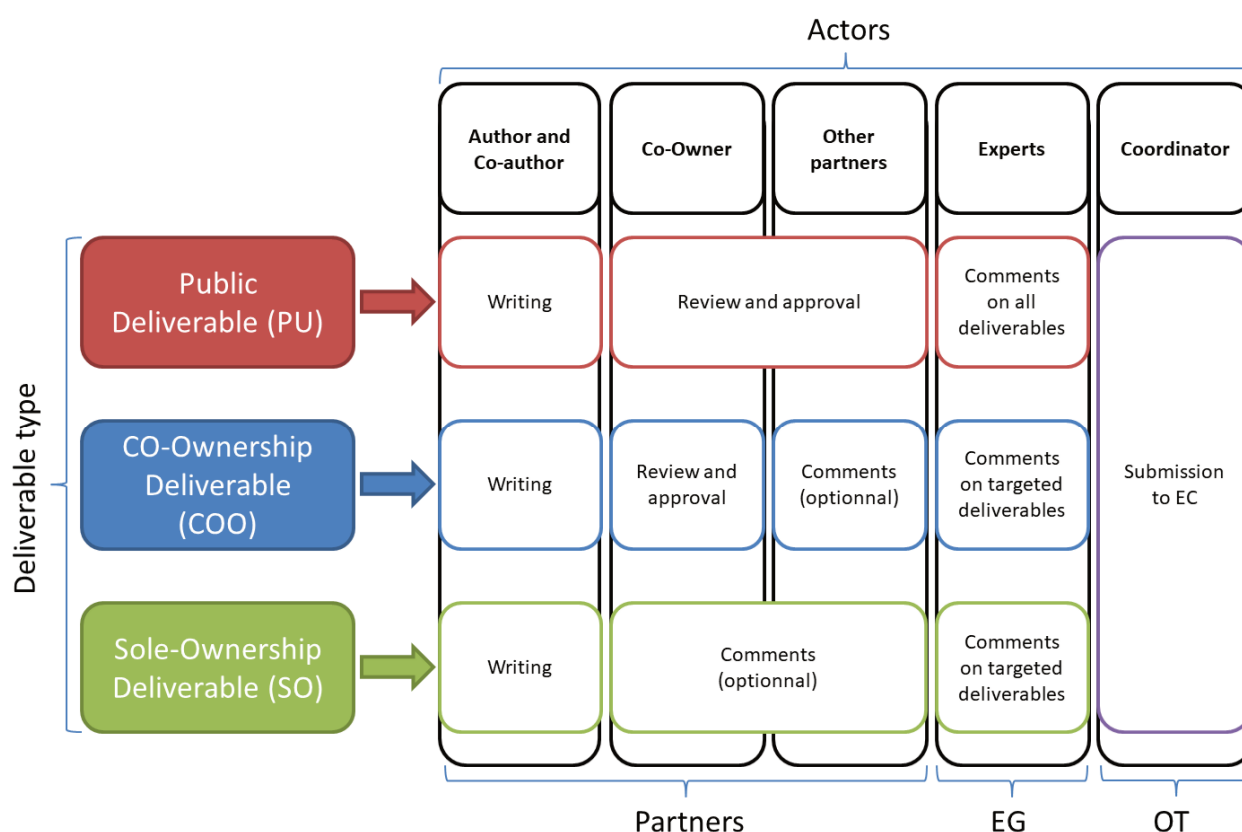


Figure 3: Deliverable type and actors

Public deliverable (PU): all partners are involved with the review and the approval of the document,

CO-Ownership deliverable (COO): partners identified as co-owners are concerned by the review and approval of the document. Optional: other partners can provide comments,

Sole Ownership deliverable (SO): internal review and approval is performed by the company of the Deliverable Leader. Optional: other partners can provide comments.

Note: experts only provide comments (on targeted deliverables). The deliverables will be provided to experts by email.

6.4.2 Review process

The process for conducting a review, an approval and a submission of a deliverable is presented below:

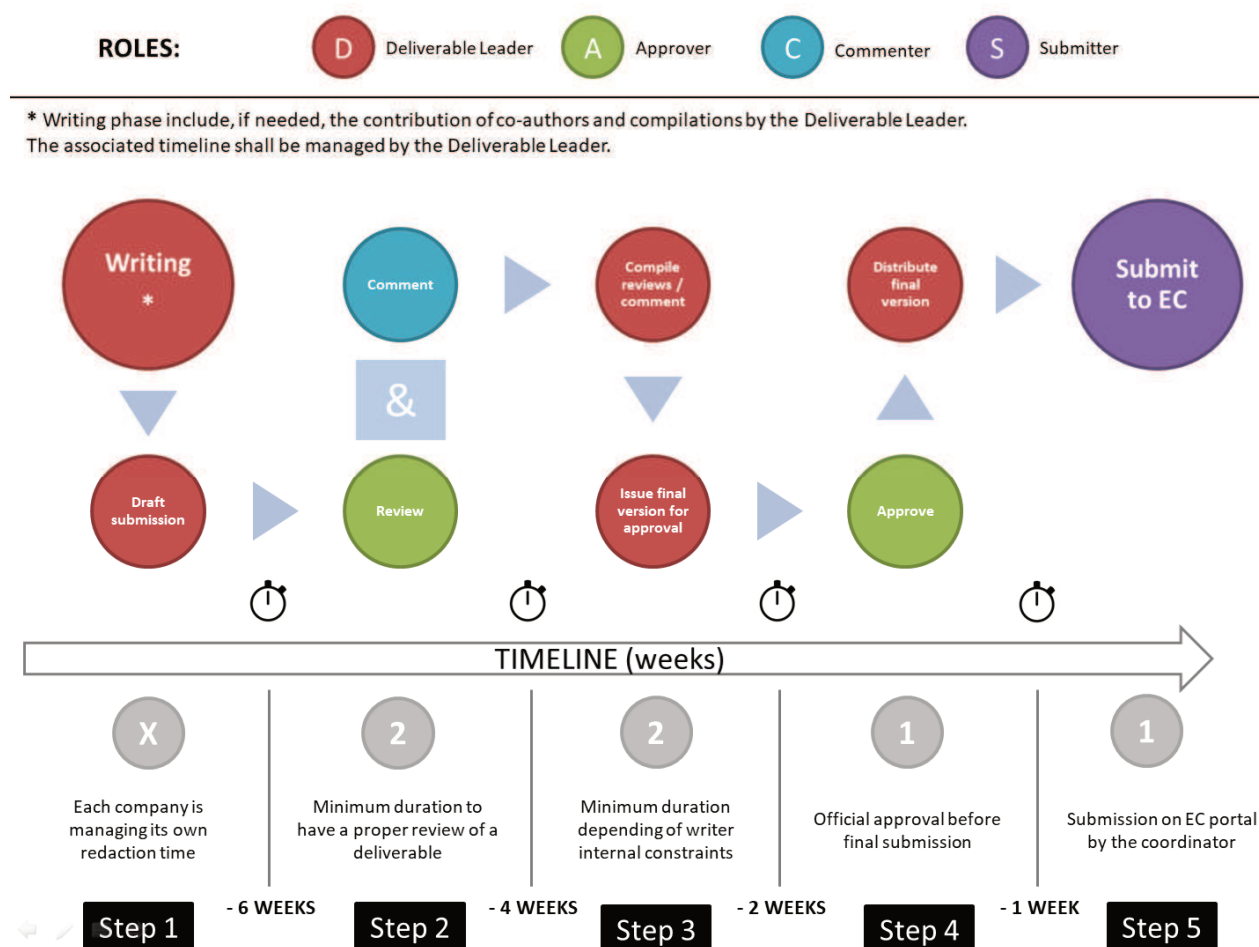
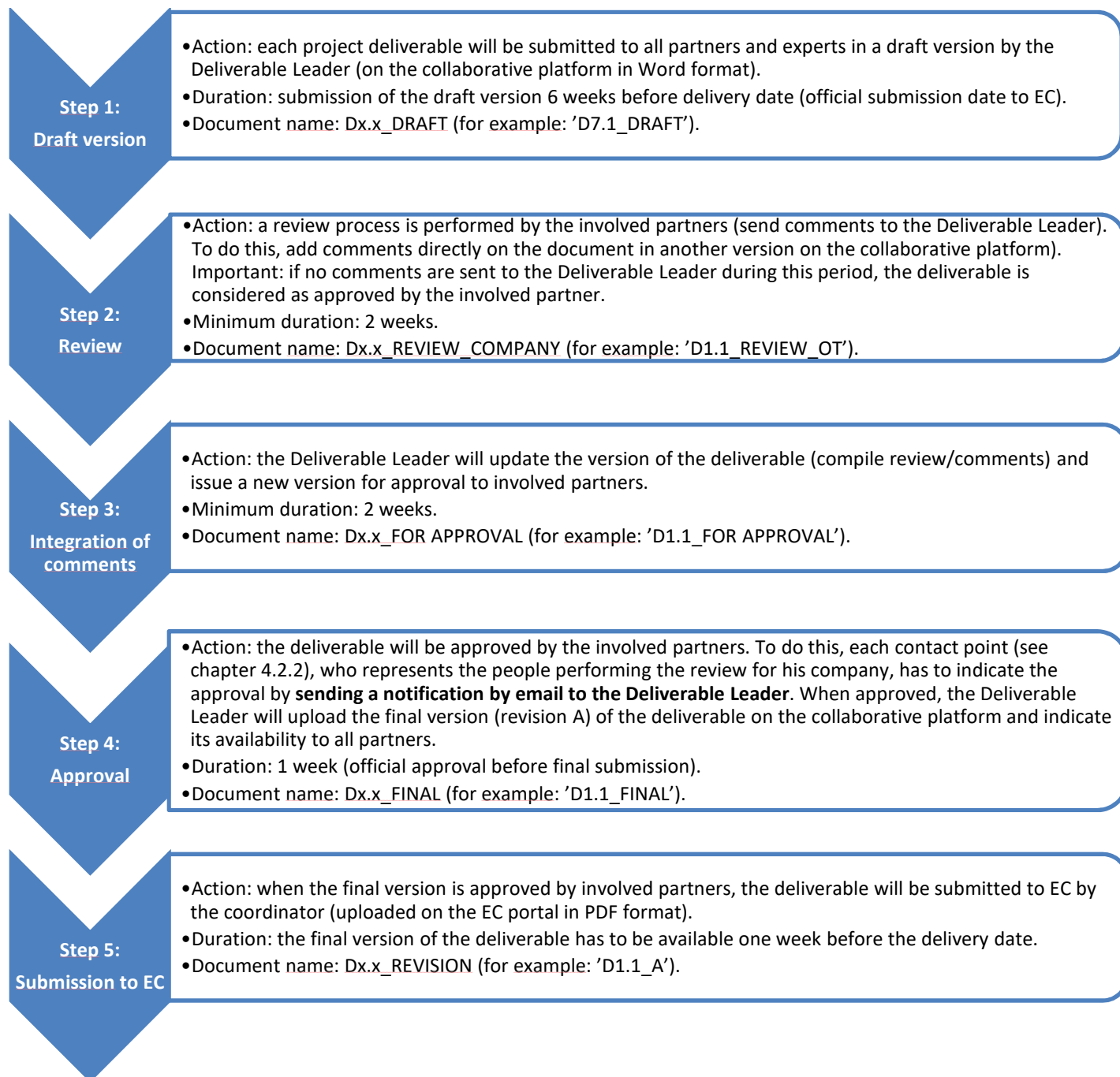


Figure 4: Deliverable review process and submission

Note: for the first three project deliverables (D1.1, D7.1 and D8.1), these durations will be shorter to take into account the short delivery times.

6.4.3 Description of each step of the process



6.5 COLLABORATIVE PLATFORM

A secured collaborative platform is implemented on the project. The document management tool defined is Microsoft TEAMS.

The objective of this tool is to distribute easily a large number of project documents to all partners. The types of documents (public and confidential) shared (internal exchanges) between partners are:

- Project management:
 - Presentations,
 - Agenda,
 - Meeting reports,
 - Schedule.
- Technical:
 - Project deliverables submitted to EC (related to all WP),
 - Inputs for helping partners to their action (library).

Note:

- Microsoft TEAMS is maintained and administrated by ONET TECHNOLOGIES. The licence is ONET's property. The partners will use the tool with nominative access (users are defined 'external user' for ONET group).
- Expert group will not access to the collaborative platform (distribution of targeted documents by email).

6.6 TEMPLATES

To perform presentations, agenda, meeting reports, project deliverables, the templates are managed by the coordinator. They are available on the collaborative platform. The project deliverables and public documents (for example: presentation for workshops) must be used for all project deliverables we share/submit.

Note: the templates can be updated (due to the project visual identity defined in the WP6).

7. PROJECT MANAGEMENT

7.1 COORDINATION

The project coordination is ensured by ONET TECHNOLOGIES. This coordination is carried out as follows:

- Periodic meetings are scheduled by the coordinator with all partners to exchange about the project. During these meetings, the coordinator :
 - Monitors progress of the project tasks. To do this, the Management Team indicates its progress on Work Packages/tasks/deliverables and the inputs it needs. The compliance with the deadlines imposed by EC is discussed.
 - Provide organization, administrative and finance information,
 - Update the internal and external risk register (if necessary),
 - Sets priorities and schedule the next actions to do,
 - Takes strategic decisions.
- A specific meeting can be scheduled by the coordinator (session dedicated to a Work Package/task or any other subject according to the LD-SAFE project) if requested by the Management Team.
- All the actions of the LD-SAFE project are recorded in a file shared with all partners (updated periodically and available on the collaborative platform).
- The coordinator monitors the respect of delivery dates with a schedule (shared with partners).
- The coordinator retrieves information from partners to complete and submit the Periodic and last Reports.

Note:

- The Grant Agreement **[R1]** sets out the rights and obligations and the terms and conditions applicable to the grant awarded to the beneficiaries for implementing their action.
- The Consortium Agreement **[R2]** specifies the relationship among the Parties, in particular concerning the organization of the work between the Parties, the management of the Project and the rights and obligations of the Parties concerning inter alia liability, Access Rights and dispute resolution.

7.2 MEETINGS

7.2.1 Formats

Periodic meetings are scheduled by the coordinator during the LD-SAFE project. Essentially, two formats of meetings are defined:

- General Assembly: Face to face meeting scheduled at least once a year (recommended: twice a year). This kind of meeting will be hosted by different partners.
- Monthly Meeting: performed each month by videoconference with Microsoft TEAMS.

Upon request of a partner, a specific meeting can be scheduled (for example to exchange about a particular subject).

7.2.2 Preparation

To best prepare these meetings, the coordinator will provide to all partners (see contact list in chapter 4.2.2):

- The date and meeting place (link to the videoconference system for Monthly Meetings).
This information is sent to all partners by email or indicated in the Outlook invitation.
As a reminder, the Consortium Agreement **[R2]** contains a provisional schedule for the first 12 months of the project. During each meeting, the Management Team can review, confirm, or modify the dates of the forthcoming meetings.
- An official agenda,
- The updated project schedule.

7.2.3 General Assembly rules

- Notice of a meeting and place: the coordinator shall give notice in writing of a meeting to each members 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
30 calendar days	15 calendar days, which may be reduced to 7 calendar days for urgent matters

- Sending the agenda: the coordinator shall prepare and send each Member of that Consortium Body a written (original) agenda no later than the minimum number of days preceding the meeting as indicated below:

Ordinary meeting	Extraordinary meeting
14 calendar days	7 calendar days for an extraordinary meeting, which may be reduced to 4 calendar days for urgent matters

- 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:

Ordinary meeting	Extraordinary meeting
14 calendar days	7 calendar days for an extraordinary meeting, which may be reduced to 4 calendar days for urgent matters

7.2.4 Monthly Meeting rules

- Notice of a meeting and place: the Management Team shall confirm the date and place of the next 2 meetings during the previous meeting.
- Sending the agenda: the coordinator shall prepare and send each Member of that Consortium Body a written agenda (approximately one week before the meeting). Any agenda item requiring a decision by the Members of a Consortium Body must be identified as such on the agenda.

7.2.5 Representatives

During each meeting, all partners should be present or represented. A partner may appoint a substitute to attend and vote at any meeting.

7.2.6 Votes

All official strategic decisions are taken by votes (during the General Assembly meetings). As indicated in the Consortium Agreement **[R2]**:

- Each Consortium Body shall not deliberate and decide validly unless two-thirds (2/3) of its Members are present or represented.
- Decisions shall be taken by a majority of two-thirds (2/3) of the votes cast.

Particular case: if strategic decisions have to be made during Monthly Meetings, they will be specified in the agenda (in advance). In this case, the voting rules of General Assembly meetings will be applied.

The results of votes will be sent to European Commission.

7.2.7 Minutes of Meeting

After each meeting, the coordinator will produce minutes of the meeting (see chapter 6.2.5 of the Consortium Agreement **[R2]**), acting as the formal record of all decisions taken. It must contain:

- Participants list,
- Preliminaries information,
- Progress on Work Packages, tasks and deliverables,
- Organization information (for example about Advisory Board),
- Administrative and Finance information,
- Strategic decisions (and the decision taken; if a vote is required, the results are mentioned),
- An extract of actions follow-up (see chapter 7.4).

In some cases, the meeting report can indicate:

- Compliance of achievements with the KPI (indicated in the proposal),
- Evolution of the internal and external risks (see chapter 7.7),
- Exploitation prospective as well as the dissemination and communication activities so far and the efforts and budget consumption.

Note:

- During these meetings, strategic decisions can be carried out by vote (for example: validation profiles of members for Advisory Board). In this case, the results will be recorded in the meeting report.
- Each meeting report is sent to all partners within 10 calendar days of the meeting.
- The meeting report is considered as accepted if, within 15 calendar days from sending, no partner has sent an objection in writing to the coordinator. Otherwise, the coordinator takes into account comments of the partners and sends a new version of the meeting report.
- Each version of meeting report is approved (signature) by the coordinator.

7.3 SCHEDULE

The coordinator is responsible of the project schedule (created and updated with Microsoft Project) which contains:

- The project deliverables (including all delivery dates),
- The milestones,
- All tasks for each Work Package,
- The sub-tasks.

At the beginning of a Work Package, the task leader will detail sub-task level for the next two years. This information will be provided to the coordinator (to update this schedule).

The schedule is updated according to the partners' feedback (discussed during Monthly Meeting with all partners).

If a delay is identified on a project deliverable, the Deliverable Leader will notice the coordinator as soon as possible. After discussion and decision taken with the Management Team, the coordinator will forward the information to EC (new delivery date for validation).

The last version of the schedule is sent to all partners before a Monthly Meeting.

If the schedule is updated during the Monthly Meeting, it will be sent after the meeting (at the same time of the meeting report).

7.4 ACTION FOLLOW-UP

An action follow-up file is created at the beginning of the project. Its objective is to identify all the actions defined during the project (particularly during the meetings).

This file indicates precisely:

- Date of creation of the action and its number,
- The description of the action,
- Identification of the partners involved by the action,
- The name of the action leader,
- The deadline,
- Progress (percent complete),
- Comments.

The last version of this file is available on the collaborative platform and sent to all partners after each Monthly Meeting (at the same time as the Meeting report).

7.5 MILESTONE ACHIEVEMENTS

Six milestones are identified for the LD-SAFE project (presented in the Grant Agreement **[R1]** and in the EC portal). The important steps represent the respect of European Commission objectives. The means of verification are:

- An approval of important deliverables,
- The achievements of the KPIs,
- The participation to Workshop.

The list of milestones and the means of verification are presented in the table below:

Milestone number	Milestone title	WP number	Lead beneficiary	Due Date (in Months)	Means of verification
MS1	Specifications for the dismantling of reactor components agreed.	WP1	TCB	5	Means of verification: Partner's collective approval of "D1.1: Analysis of the different reactor components in combination with the selection of conventional cutting techniques" at M3.
MS2	Qualification activities in the Technology Qualification Plan are completed	WP3	LR	14	Means of verification: "D3.1: Technology Appraisal Report" at M8. "D3.2: Technology Qualification Plan" at M11. "D3.3: Statement of Endorsement" at M12.
MS3	Technical countermeasures defined at laboratory scale.	WP2	CEA	20	Means of verification: Scientific data in respect of laser residual power absorption and secondary emissions (gases and aerosols) management shows that KPIs can be reached: "D2.1: Tests reports on laser beam residual power" at M18 (First version) "D2.2: Tests reports on Secondary emissions" (aerosols) at M12 (First version) "D2.3: Tests and calculation reports for Hydrogen generation" at M20 (First version)
MS4	Generic safety assessment reviewed complete.	WP4	TE	30	Means of verification: "D4.3: Generic safety assessment" at M24 (First version) "D4.4: Review of the generic safety assessment" at M30 (First version).
MS5	Demonstrator ready for technical validation.	WP5	OT	41	Means of verification: "D5.2: Design, procurement, installation and preparatory testing dossiers for the laser system" at M41. "D5.3: Design, manufacturing and installation dossiers for the Mock-ups" at M41. Demonstrator safety report prepared by OT informally approved by TE and IRSN at M41. Comment: CEA will approve the safety report before installing the mock-ups on these installations.
MS6	Stakeholders commitment to participate to the second stakeholders workshop organized at M45.	WP6	OT	43	Means of verification: Participation of at least 50 stakeholders (research institutes, industrials, agencies).

When a milestone is achieved, the coordinator must indicate it on the EC portal.

As a reminder: the milestones are monitored on the schedule.

7.6 DISSEMINATION / ACCESS RIGHTS

The dissemination (including publications) and access rights to the results are defined in the Consortium Agreement [R2] and will be detailed on the deliverable D6.9 “Data Management Plan”.

7.7 RISK ANALYSIS

At the beginning of the LD-SAFE project, an internal and external risk analysis is defined in the proposal and indicated on the EC portal. The risk analysis is as follow:

Risk	WP	Probability	Impact	Risk-mitigation measures
Difficulty to obtain input from the End User Group considering the confidentiality of projects.	WP1	Medium	Medium	Organisation of specific workshops for the End User Group. Level on access of the End Users to the projects results.
Aerosol instrumentation breakdown	WP2	Medium	Low	Replacement instrumentation is available at IRSN
Lack of representativeness or relevance of the demonstrator. As a consequence, the technical validation is not fully achieved.	WP5	Medium	High	<ul style="list-style-type: none"> - Presentation of the specifications of the reactor components dismantling (D1.1) to the stakeholders at the beginning of the Stakeholders workshops (T6.3) and integration of the comments of the stakeholders in the specification for the demonstrator (D1.5). - Presentation of the case study for the demonstrator at the Advisory Board.
Delay in components and mock-up delivery	WP5	Low	High	The scheduled time plan has been conceived so as to have flexible time windows through which delays can be accounted and properly managed. Suitable activities rearrangement can be considered if any delay will occur.
Problem with the site selected for the demonstrations	WP5	Low	High	The demonstrator and the mock-up will be installed close to the OT headquarter in Marseille (France). The backup option is to install the demonstrator in CEA facilities in Marcoule (France).
For the underwater prototype, a leakage at the connection between the underwater umbilical and laser head may damage the laser fiber and the cutting tool	WP5	Low	High	A special protocol has been established and will be followed to reduce this risk: <ul style="list-style-type: none"> - Once the underwater head and umbilical are connected and ready to operate, they will be pressure tested to confirm that there is no leakage. - The head and umbilical will be over pressured during the head immersion and during the trials. - The humidity inside the head can also be monitored during the immersion and during the trials thanks to a humidity sensor.
Insufficient number of attendees to the Stakeholders Workshop 2 organized in M42	WP6	Low	High	<ul style="list-style-type: none"> - LD-SAFE partners are involved in EU projects and international networks. - A first workshop will be organized at M6 to present the objective of the LD-SAFE project and obtain research and industrial direct feedbacks. - TE will be in charge to define the dissemination strategy and to design dissemination materials (Website, flyer, etc.).
Conflicts within the consortium	WP7	Low	Medium	If a major conflict was to happen, rules defined in the Consortium Agreement would be applied to eliminate the conflict while still ensuring project viability.

This risk analysis will be checked and updated (add risks and/or parades) with the Management Team two times per year (during General Assembly Meetings or Monthly Meetings if necessary). This action will be specified in the agenda.

During each update, the coordinator will inform EC. To do this, the coordinator will update the risk analysis directly on the EC portal as follow:

- Add a risk: the coordinator will describe the new risk and propose risk-Mitigation measures. If necessary, a link can be created with between the new risk added and a current risk.
- Current risks: if one of them is proven, the coordinator will specify:
 - o Reference Reporting Period (1, 2 or 3),
 - o The application of risk-mitigation measures (yes or no),
 - o The materialization of the risk (yes or no),
 - o Comments about risks.

Note: the project handbook will not be updated if there are changes in the risk analysis during the project on the EC portal.

8. REPORTING AND FINANCE

8.1 REPORTING PERIODS

As indicated in the Grant Agreement [R1], the coordinator is responsible for issuing the periodic reports and the final report to European Commission.

During the LD-SAFE project, reporting is requested after three periods (M18, M36 and M48).

The principle is indicated in the schematic below:

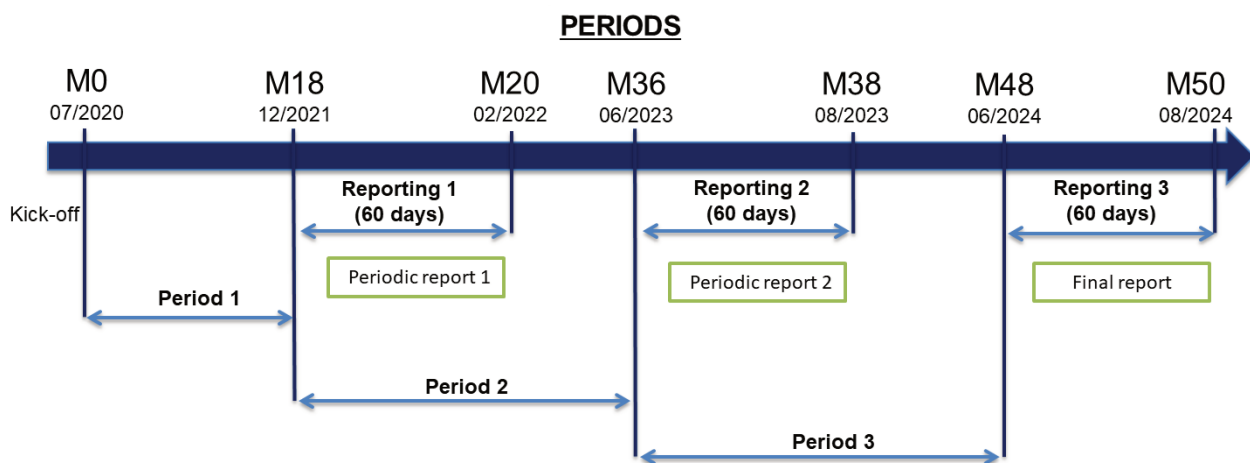


Figure 5: Reporting periods

After each period (1, 2 or 3), the coordinator will submit a report within 60 days to EC. Three reports will be compiled:

- The first two reports represent **Periodic report**. These periodic reports are requested for interim payments (interim payment 1 and 2).
- The third represent **Final report**. This is the last report requested for payment of the balance.

Each report contains a technical report and a financial report.

8.1.1 Periodic reports content

Each periodic report includes:

- A periodic **technical** report containing:
 - o An explanation of the work carried out (linked to annex 1 of the Grant Agreement **[R1]**),
 - o A summary (for publication by the European Commission),
 - o 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 KPI and the Horizon 2020 monitoring requirements).
- A periodic **financial** report containing:
 - o An individual financial statement for each beneficiary and for each third party (see annex 4 of the Grant Agreement **[R1]** for the template),
 - o An explanation of use resources,
 - o A periodic summary financial statement (created automatically by the electronic exchange system from EC).

8.1.2 Final report content

This final report includes:

- A final **technical** report with a summary for publication containing:
 - o An overview of the results and their exploitation and dissemination,
 - o The conclusions on the action,
 - o The socio-economic impact of the action.
 - ⇒ This summary will be written on the EC portal.
- A final **financial** report containing:
 - o A final summary financial statement (created automatically by the electronic exchange system from EC).
 - o A certificate on the financial statement for each beneficiary and for each third party (see annex 5 of the Grant Agreement **[R1]** for the template).

8.1.3 Submission of report

Technical content: to compile all technical information of the project in each report (periodic report 1, 2 and final report), each Work Package Leader (identified in the table in the chapter 4.4) will provides **technical** information to the coordinator (at the end of each period: M18, M36 and M48). Each Work Package leader is responsible for information collected from its participants (Tasks Leader). The principle is indicated in the schematic below:

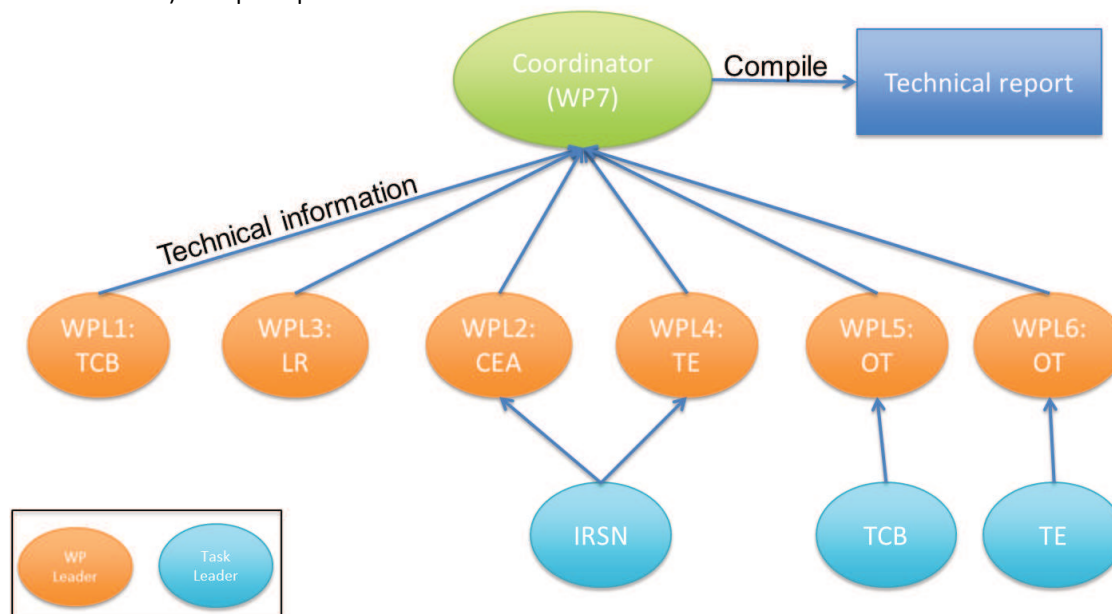


Figure 6: Technical information - Flows

Financial content: To compile all financial information of the project in each report (periodic report 1, 2 and final report), each beneficiaries (indicated in the chapter 4.2.1; including third parties) will provide **financial** information to the coordinator (at the end of each period: M18, M36 and M48). The principle is indicated in the schematic below:

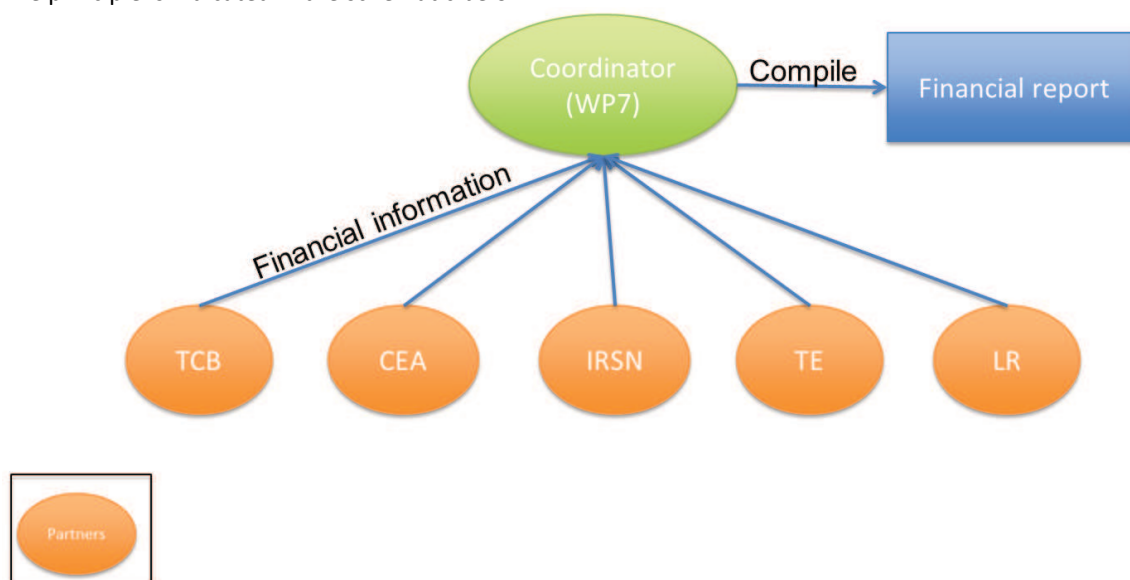


Figure 7: Financial information - Flows

Submission:

At the end of each period (M18, M36 and M48), each partner will send technical and financial information to the coordinator. The coordinator will compile, check and complete the report (periodic or final) concerned and will send a draft version to all partners (within 2 weeks).

Then, a review process will be performed by all partners (same process for a **Public Deliverable**, see chapter 6.4; 6 weeks maximum).

After the approval of the report (by all partners), it will be submitted to EC by the coordinator (uploaded on the EC portal).

The specific contents, forms and templates for reporting (periodic and final), eligible/ineligible costs are indicated in the Grant Agreement **[R1]** (see article 20).

Note:

- The beneficiaries must (for a period of five years after the payment of the balance) keep records and other supporting documentation (original documents) in order to prove the proper implementation of the action and the costs they declare as eligible (see article 18 of Grant Agreement **[R1]**).
- Good practices about costs (how to avoid the most common errors):
 - See the online manuals in EC portal,
 - See presentations provided by EC,
 - See the Grant Agreement **[R1]**,
 - Training can be performed with the European Commission in Brussels (Coordinator's day).

8.2 GRANT MANAGEMENT

The coordinator manages the funds received from EC and distributes it to partners. The plan for the distribution of payments is indicated in the chapter 7.3.2 of the Consortium Agreement **[R2]**.

After each payment, the coordinator will give specific information about the transfer to all partners (transfer date, account number, etc., see chapter 9.2 **Erreur ! Source du renvoi introuvable.** in annex).


9. ANNEX

9.1 LIST OF DELIVERABLES

Number	Relative Number in WP	Deliverable Title	WP	Lead beneficiary	Dissemination Level	Partial delivery month		Delivery Month (EC information)		IP Matrix (beneficiaries)					
								(initial)	(updated)	OT	CEA	TCB	LR	TE	IRSN
D1	D8.1	EPQ - Requirement No. 1	WP8	OT	Confidential	N/A	N/A	M2 31/08/2020	M2 31/08/2020	SO	AR	AR	AR	AR	AR
D2	D1.1	Analysis of the different reactor components in combination with the selection of conventional cutting techniques	WP1	TCB	Public	N/A	N/A	M3 30/09/2020	M5 30/11/2020	PU	PU	PU	PU	PU	PU
D3	D1.2	Specifications for the laser cutting system	WP1	TCB	Confidential	N/A	N/A	M5 30/11/2020	M7 31/01/2021	COO	COO	COO	AR	AR	AR
D4	D1.3	Specifications for the safety tests of WP2	WP1	TCB	Confidential	N/A	N/A	M5 30/11/2020	M7 31/01/2021	AR	COO	COO	AR	COO	AR
D5	D1.4	Specifications for the demonstrator, including a conventional technique for comparison	WP1	TCB	Confidential	N/A	N/A	M5 30/11/2020	M7 31/01/2021	COO	COO	COO	AR	AR	AR
D6	D2.1	Tests reports on laser beam residual power	WP2	CEA	Confidential	M20 28/02/2022	N/A	M38 31/08/2023	M38 31/08/2023	L	SO	AR	AR	AR	AR
D7	D2.2	Tests reports on Secondary emissions (aerosols)	WP2	IRSN	Confidential	M12 30/06/2021	N/A	M24 30/06/2022	M24 30/06/2022	L	COO	AR	AR	AR	COO
D8	D2.3	Tests and calculation reports for Hydrogen generation	WP2	CEA	Confidential	M20 28/02/2022	N/A	M38 31/08/2023	M38 31/08/2023	L	SO	AR	AR	AR	AR
D9	D2.4	Sheet to calculate quantity of Hydrogen generated	WP2	CEA	Confidential	N/A	N/A	M38 31/08/2023	M38 31/08/2023	L	SO	AR	AR	AR	AR
D10	D3.1	Technology Appraisal Report	WP3	LR	Confidential	N/A	N/A	M8 28/02/2021	M10 30/04/2021	COO	COO	COO	COO	AR	AR
D11	D3.2	Technology Qualification Plan	WP3	LR	Confidential	N/A	N/A	M11 31/05/2021	M13 31/07/2021	AR	AR	AR	SO	AR	AR
D12	D3.3	Statement of Endorsement	WP3	LR	Confidential	N/A	N/A	M12 30/06/2021	M14 31/08/2021	AR	AR	AR	SO	AR	AR
D13	D3.4	Technology Qualification Certificate	WP3	LR	Confidential	N/A	N/A	M40 31/10/2023	M40 31/10/2023	L	L	AR	SO	AR	AR
D14	D3.5	Guideline – use of laser cutting in reactor dismantling environment	WP3	LR	Public	N/A	N/A	M42 31/12/2023	M42 31/12/2023	PU	PU	PU	PU	PU	PU
D15	D4.1	Risk analysis	WP4	TE	Confidential	N/A	N/A	M5 30/11/2020	M7 31/01/2021	COO	COO	COO	COO	COO	COO
D16	D4.2	Summary of risks identified during WP2 and WP3	WP4	TE	Confidential	N/A	N/A	M21 31/03/2022	M23 31/05/2022	COO	COO	COO	COO	COO	COO
D17	D4.3	Generic safety assessment	WP4	TE	Public	M24 30/06/2022	N/A	M38 31/08/2023	M38 31/08/2023	PU	PU	PU	PU	PU	PU
D18	D4.4	Independent review of the “generic safety assessment”	WP4	IRSN	Confidential	M30 31/12/2022	N/A	M38 31/08/2023	M38 31/08/2023	COO	COO	COO	COO	COO	COO
D19	D5.1	Case study for the demonstrators	WP5	OT	Confidential	N/A	N/A	M27 30/09/2022	M27 30/09/2022	COO	COO	COO	AR	COO	AR
D20-A	D5.2	Design, procurement and preparatory testing dossiers for the laser system	WP5	OT	Confidential	N/A	N/A	M41 30/11/2023	M41 30/11/2023	SO	AR	AR	AR	AR	AR
D20-B	D5.2	Integration and installation of the laser system	WP5	OT	Confidential	N/A	N/A	M41 30/11/2023	M41 30/11/2023	COO	COO	AR	AR	AR	AR
D21	D5.3	Design, manufacturing and installation dossiers for the Mock-ups	WP5	TCB	Confidential	N/A	N/A	M41 30/11/2023	M41 30/11/2023	COO	AR	COO	AR	AR	AR
D22	D5.4	Demonstrator including operation report	WP5	OT	Confidential	N/A	N/A	M48 30/06/2024	M48 30/06/2024	COO	COO	AR	AR	AR	AR
D23	D5.5	Technical validation report	WP5	OT	Public	N/A	N/A	M48 30/06/2024	M48 30/06/2024	PU	PU	PU	PU	PU	PU

D24	D6.1	Project website and social network account	WP6	TE	Public	N/A	N/A	M5 30/11/2020	M5 30/11/2020	PU	PU	PU	PU	PU	PU
D25	D6.2	Plans for dissemination of the results	WP6	TE	Public	M12 30/06/2021	M24 30/06/2022	M36 30/06/2023	M36 30/06/2023	PU	PU	PU	PU	PU	PU
D26	D6.9	Data Management Plan	WP6	OT	Confidential	M6 31/12/2020	M12 + M24 + M36 + M48	M6 31/12/2020	M6 31/12/2020	COO	COO	COO	COO	COO	COO
D27	D6.3	Plans for exploitation of the results	WP6	OT	Confidential	M12 30/06/2021	M24 30/06/2022	M36 30/06/2023	M36 30/06/2023	COO	COO	COO	COO	COO	COO
D28	D6.4	Stakeholders workshop report	WP6	OT	Public	M5 30/11/2020	N/A	M47 31/05/2024	M47 31/05/2024	PU	PU	PU	PU	PU	PU
D29	D6.5	Education and training report	WP6	TE	Public	N/A	N/A	M48 30/06/2024	M48 30/06/2024	PU	PU	PU	PU	PU	PU
D30	D6.6	Final dissemination plan	WP6	TE	Public	N/A	N/A	M48 30/06/2024	M48 30/06/2024	PU	PU	PU	PU	PU	PU
D31	D6.7	Final exploitation plan and commercial roadmap	WP6	OT	Confidential	N/A	N/A	M48 30/06/2024	M48 30/06/2024	COO	COO	COO	COO	COO	COO
D32	D6.8	Online course on cutting technologies	WP6	TE	Public	N/A	N/A	M48 30/06/2024	M48 30/06/2024	PU	PU	PU	PU	PU	PU
D33	D7.1	Project handbook	WP7	OT	Public	N/A	N/A	M3 30/09/2020	M3 30/09/2020	PU	PU	PU	PU	PU	PU

9.2 TRANSFER INFORMATION

H2020 Projet	Grant Agreement	From		To	
LD-SAFE Laser Dismantling Environmental and Safety Assessment	Number 945255	ONET TECHNOLOGIES 36 boulevard de l'océan 13273 Marseille France		Name of the beneficiary Address	Logo
Grant description	Maximum grant	Transfer Notification			
Payments	Value	Reference	Date	Wording	Amount
Garantee fund	Value indicated in the CA	This fund is retained by the EC and will be paid at the end of the project			
Pre-financing payment (without guarantee fund)	Value indicated in the CA				
Interim payment 1					
Interim payment 2					
Interim payment 3					
Payment of the balance					
TOTAL	0,00 €			TOTAL received	0
				TOTAL remaining	0,00 €

Payments information:
-The coordinator (ONET TECHNOLOGIES) receives all payments from EC and distribute it to parties.

Pre-financing payment:
-Made before starting date of the LD-SAFE project.
-5% of the pre-financing payment is transfered into the 'Guarantee Fund'.

Interim payments:
-Made after the reporting periods.
-The coordinator limits the cumulative payment (Pre-financing payment plus Interim payments) to each Party to 85% of its share of the maximum grant (to take into account the 15% retention).

Payment of the balance:
-Made after the approbation of the Final Report by EC.
-The payment corresponds to the release of the 15% retention.