Protecting the EuROpean terrItory from organised enVironmentAl crime through inteLLigent threat detectiON tools

D1.1- Project Management and Quality Assurance Handbook

WP1 – Project Management and Coordination

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PERIVALLON

PERIVALLON aims to provide an improved and comprehensive intelligence picture of organised environmental crime and develop effective and efficient tools and solutions for detecting and preventing such types of criminal activities and for assessing their environmental impact based on geospatial intelligence, remote sensing, scanning, online monitoring, analysis, correlation, risk assessment, and predictive analytics technologies, by leveraging the latest advancements in Artificial Intelligence (AI) in the fields of computer vision and multimodal analytics. As a result, enhanced investigation processes and methodologies will be derived through the capabilities provided by the developed tools and solutions, and the insights obtained though the proposed Environmental Crime Observatory.

The capacity of end users (including Police Authorities and Border Guards) will also be improved and will enable them to tackle such criminal activities in an effective manner based on advanced tools and solutions and also on the innovative training curricula developed using physical and/or digital twins of relevant environmental crime scenarios. Moreover, improved international cooperation will be facilitated through improved data sharing enabled by blockchain technologies, while improved regulation shaping and tuning will be supported through relevant policy recommendations.

PERIVALLON will be validated in field tests and demonstrations in four operational use cases. Extensive training, hands-on experience, joint exercises, and training material will boost the uptake of PERIVALLON tools and technologies. With a Consortium 5 Police and Border Guard Authorities, 3 authorities related to environmental protection, 6 Research/Academic institutions, 8 industry partners (including seven SMEs), one EU Agency, and one Foundation, PERIVALLON delivers a strong representation of the challenges, requirements and tools to meet its objectives.

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Executive summary

The Project Management and Quality Assurance Handbook is a document that establishes the foundation for the project cooperation processes and defines all the aspects that must be considered to assure an efficient and coherent management of activities. This includes: a brief description of the project, its objectives, KPIs and the work plan; information about all partners involved in the project, as well as the external boards; guidelines and recommendations regarding the internal communication in PERIVALLON, guidelines for the documentation, deliverables, reports and presentations produced within the project; the reporting procedures; the PERIVALLON quality management cycle and guidelines; procedures for internal review; and the risk and opportunities management processes and responsibilities.

The Project Management and Quality Assurance Handbook gives guidelines for performing the day-to-day project management actions. This will be complemented by another relevant document, the Dissemination and Communication Plan, reported in D7.1, which focuses on the procedures to achieve a successful dissemination and communication of the project results, partially presented in this document as part of the overall view for successful project management.

Acronyms

Acronym	Full name
AB	Advisory Board
AI	Artificial Intelligence
AUC	Area Under Curve
BIM	Business and Innovation Manager
CA	Consortium Agreement
CP	Consortium Plenary
DAM	Demonstration Activities Manager
DCEM	Dissemination, Communication and Exploitation Manager
DoA	Description of Action
EC	European Commission
EM	Ethics Manager
fps	Frames per second
GA	Grant Agreement
IEB	Independent Ethics Board
IM	Integration Manager
IR	Interim Report
KPI	Key Performance Indicator
KR	Key Result
LEA	Law Enforcement Agency
mAP	Mean Average Precision
PC	Project Coordinator
PM	Project Manager
PMB	Project Management Board
PPR	Project Periodic Report
PSO	Project Security Officer
PUC	Pilot Use Case
QA	Quality Assurance
R&O	Risks and Opportunities
SAB	Security Advisory Board

SAC	Security Assessment Control
SN	Stakeholder Network
SoA	State of the Art
STM	Scientific and Technical Manager
TL	Task Leader
ToC	Table of Contents
UAV	Unmanned Aerial Vehicle
WP	Work Package
WPL	Work Package Leader

1. Introduction

1.1 Purpose of the document

The purpose of this document is to establish the foundation for the project management and quality assurance processes providing a clear route to success. It contains all the relevant information to facilitate the execution and control of the different tasks, deliverables, risks, and opportunities of the project. Furthermore, it describes the main management tools, reporting procedures, internal communication policies, and other essential information needed in order to facilitate the cooperation and exchange of information among partners in an efficient and agile manner. Finally, it also defines a quality management cycle to assure the quality and conformity of the solutions and knowledge generated.

1.2 Scope of the document

This document aims to outline a clear picture of the structure of the project and the overall management approach, ensuring that all the internal procedures are defined to support the consortium partners in their daily tasks, aiming at a smooth project implementation.

The document will serve the team leaders within each organisation, as well as the researchers and administrative personnel responsible to maintain at all times a clear vision of the main tools and internal procedures for the project execution.

As any other document in the project, but in particular with respect to this deliverable (D1.1), it should not contradict the project contract – and, in particular, the provisions made at the Description of Action (DoA) with regards to the project schedule and management procedures are instantiated in this document.

1.3 Structure of the document

The document is organised as follows:

- Section 2 provides a basic summary of the project key facts, objectives, KPIs, and work plan.
- Section 3 includes a description of the consortium, its management structure, the decision-making mechanisms that will be implemented, and the external bodies that will complement the consortium's expertise.
- Section 4 describes the internal communication procedures and the tools to be used for the document repository.
- Section 5 provides the mechanisms to convene, arrange, and carry out the project meetings.
- Section 6 describes the reporting procedures, both for the internal monitoring as well as for the periodic reports to the EC.
- Section 7 includes the quality management cycle implemented in PERIVALLON, as well as the set of guidelines and tools to support the quality assurance of the project results and dissemination activities.

- Section 8 details the internal review procedures to be followed to guarantee that deliverables comply with the work described in the DoA, removing any security concerns through a security assessment, and delivered with high quality standards. Dissemination and communication actions will be also internally reviewed, mainly by the appointed Press Office.
- Section 9 describes the risks and opportunities assessment & management methodology to be performed during the project, enabling early identification of risks and proposals for mitigation measures.
- Section 10 provides the main conclusions and recommendations for future work.

2. Project Summary

2.1 PERIVALLON Key Facts

Topic: HORIZON-CL3-2021-FCT-01-09: Fight against organised environmental crime

Type of Action: Innovation action

Project Start: 1st of December 2022

Duration: 36 months from 01.12.2022 to 30.11.2025

Project Coordinator: ETRA INVESTIGACION Y DESARROLLO SA

Consortium: 24 organisations from 12 EU and non-EU countries

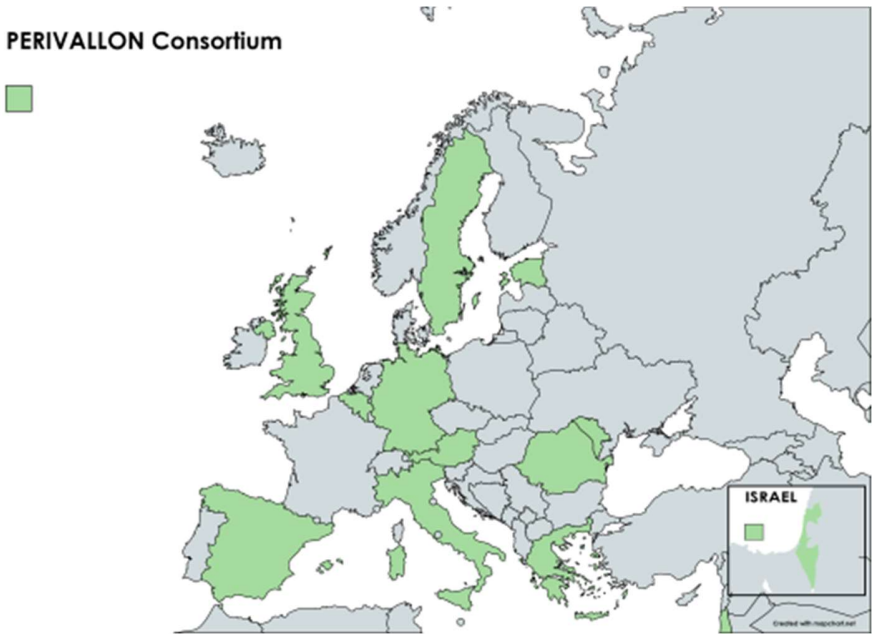

Figure 1: PERIVALLON consortium across the European territory

2.2 PERIVALLON in short

PERIVALLON aims to provide an improved and comprehensive intelligence picture of organised environmental crime and develop effective and efficient tools and solutions for detecting and preventing such types of criminal activities and for assessing their environmental impact based on geospatial intelligence, remote sensing, scanning, online monitoring, analysis, correlation, risk assessment, and predictive analytics technologies, by leveraging the latest advancements in Artificial Intelligence (AI) in the fields of computer vision and multimodal analytics. As a result, enhanced investigation processes and methodologies will be derived through the capabilities provided by the developed tools and solutions, and the insights obtained though the proposed Environmental Crime Observatory.

The capacity of end users (including Police Authorities and Border Guards) will also be improved and will enable them to tackle such criminal activities in an effective manner based on advanced tools and solutions and also on the innovative training curricula developed using physical and/or digital twins of

relevant environmental crime scenarios. Moreover, improved international cooperation will be facilitated through improved data sharing enabled by blockchain technologies, while improved regulation shaping and tuning will be supported through relevant policy recommendations.

PERIVALLON's technological solutions will be validated in field tests and demonstrations in four operational use cases. Extensive training, hands-on experience, joint exercises, and training material will boost the uptake of PERIVALLON tools and technologies. With a Consortium composed by 5 Police and Border Guard Authorities, 3 authorities related to environmental protection, 6 Research/Academic institutions, 8 industry partners (including seven SMEs), one EU Agency, and one Foundation, PERIVALLON delivers a strong representation of the challenges, requirements, and tools to meet its objectives.

2.3 Objectives of the project

PERIVALLON addresses a number of multidisciplinary innovation Objectives, which are outlined below:

- **Objective 1:** Provide a rich suite of advanced AI-based geospatial intelligence and remote sensing solutions to improve the detection and investigation capabilities of European Police, Border Guard, National, and Regional Authorities to tackle organised environmental crime in a more efficient and effective way.
- **Objective 2:** Develop improved AI-based extraction, analysis, and correlation technologies to identify illegal environmental crime activities by detecting irregularities in (online) data generated across the processing, shipment, and trafficking ecosystem for waste management and refrigerant trading.
- **Objective 3:** Develop a trustworthy, transparent, and easy-to-use environmental crime monitoring platform that collects court-proof crime evidence and provides decision support by fusing heterogeneous data for identifying patterns, assessing the likelihood of criminal activities, and forecasting trends.
- **Objective 4:** Enable improved cooperation between European police authorities, border guards and other national authorities and international actors through secure and transparent information exchange.
- **Objective 5:** Promote continuous evaluation, improvement, and training over the developed tools and solutions in order to enhance uptake of new technologies for existing and emerging capability gaps.
- **Objective 6:** Improve the intelligence picture of organised environmental crime across Europe, while also supporting the shaping and tuning of policy regulation.
- **Objective 7:** Exploit PERIVALLON's main results by exploring their wider use, sustainability, and business feasibility, collaborate with relevant projects and initiatives to enforce advanced research and support further results uptake opportunities, and communicate the project results to raise citizen awareness.

2.4 Key Performance Indicators (KPIs)

The innovation objectives aforementioned are designed to be specific, measurable, achievable, realistic and timely, in order to achieve the project **Key Results (KR),** which are measured using respective **Key Performance Indicators (KPIs)** when compared against the state-of-the-art (SoA):

Table 1: List of Key Performance Indicators (KPIs)

Objective	KR #	KR Description	KPI Description	KPI threshold
O1	1	Satellite image analysis module (for land)	Detection accuracy	>90%
			Number of waste types identified on land (classes derived from European Waste codes)	>10
			Data items for training land waste detector	>3,000
	2	Satellite image analysis module (for water)	Detection accuracy/precision/intersection over union/false and true positive rate	>2% Increase in all evaluation metrics for oil spill and wastewater detection capacity compared to baseline detection schemes
			# of waste types identified on water surface	>2
	3	Aerial visual detection module	Detection accuracy in mean Intersection over Union (semantic segmentation)	>75% (~2-3% improvement)
			Detection accuracy in mAP terms (bounding box models)	>85% (~2-3% improvement)
			Detection latency	>15 fps
			False positive ratio	<0.3%
			# of waste types identified on water surface	>2
	4	Optimised 3D terrain mapping module	Point cloud density increase compared to SoA for 3D reconstructions from aerial data	>5%
	5	Maximised surveillance swam optimisation module	Coverage accuracy, providing (a) obstacle avoidance, operation within site narrow spaces, (b) optimisation of situation awareness (50% of turn reduction)	>90%
			Flight time for each UAV even for most complex-shared concave environments	<30min
			Transmission of aerial data (images or video)	2s per frame
			High-quality 2D map data fused from different agents	N/A

	6	Optimised X-ray scanner for concealed objection detection module	Detection accuracy in the settings and configurations of the pilot use cases	>75%
O2	7	Online content acquisition module	Relevant links identified	>80%
			URL scoring accuracy	>75%
			Accuracy of relevant page content extracted	>90%
	8	Waste crime data monitoring tool	Data sources indexed	>30
	9	Multilingual text analysis tool	FI-score for all languages	>70%
	10	Multimedia content analysis tool	Object detection accuracy	>70%
			Number of images processed (detected) per second	>30
	11	Data-driven maritime route prediction module	Improvement in accuracy when combined with geospatial intelligence compared to route projection based on maritime traffic data	>30%
O3	12	Risk assessment module	FI-score	>75%
	13	Pattern recognition and trend detection module	AUC	>80%
	14	Predictive analytics module	FI-score/AUC	>80%
	15	Data management and audit trail	Improved retrieval time, end-to-end verifiability of all data provenance	5% improvement
	16	PERIVALLON integrated platform	Code coverage for platform integration services	80%
O4	17	Environmental crime monitoring centre	User satisfaction	≥3.5 (in 5-point Likert scale)
			# of services integrated	>6
	18	Secure information sharing and evidence exchange module	Auditability (mistakes eliminated)	100%
			Compliance (risk mitigated)	>95%
			Data security (data breaches prevented)	100%
O5	19	Pilot use cases and user requirements	# PUCs (DoA, Part B, Section 1.2.1.3)	4
	20	Iterative user evaluations	# pilot tests	≥8

	21	End-user training material	User satisfaction	≥3.5 (in 5-point Likert scale)
O6	22	Environmental Crime Observatory	# case studies	≥2
			# of countries examined	≥3
			Policy recommendations proposed	≥3

2.5 Work plan summary

The project lifetime is 36 months, and the work is structured in 7 work packages, with one additional work package concerning the ethics requirements set out by the European Commission (EC). PERIVALLON will adopt a user driven co-creation approach with the strong involvement of end users and relevant stakeholders in the design and development cycles (WP2-3-4-5), which will be followed by associated evaluation cycles (WP6). The project foresees **three development and evaluation cycles**: in the first cycle, the user requirements are defined, the technical architecture is designed, and the 1st prototype is developed and evaluated by the end users for the PUCs (M24). The outcome of this evaluation is fed to the second cycle to update the user requirements and proceed with the 2nd prototype and evaluation (M29). Finally, the final system is integrated during the third cycle and evaluated for all PUCs (M36).

The technical work packages, under which the PERIVALLON Key Results will be developed, are WP2, WP3, WP4 and WP5; the project solutions will be evaluated in WP6, while WP1 and WP7 are horizontal WPs.

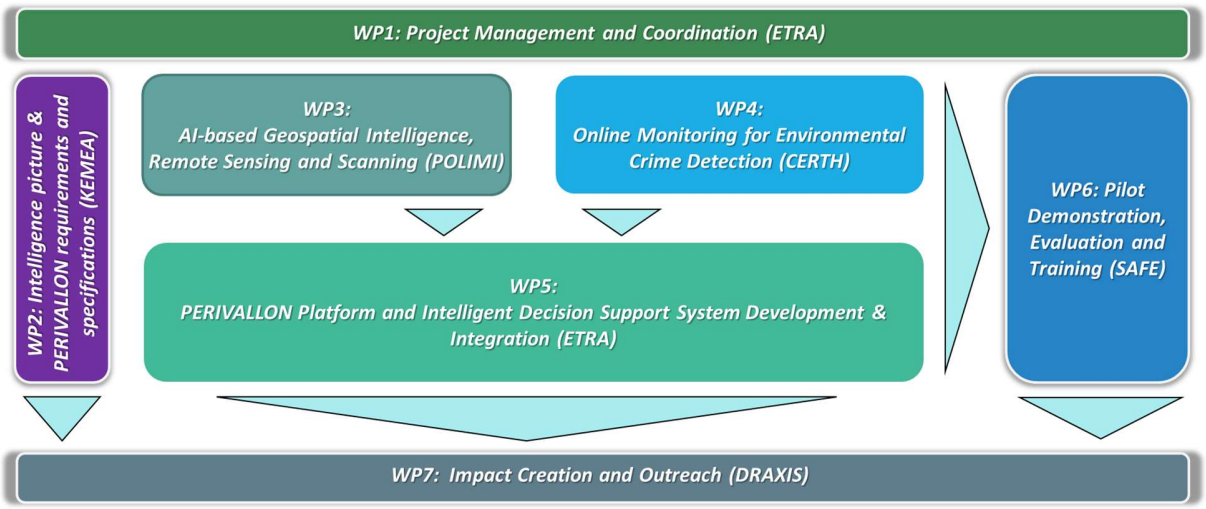

Figure 2: PERIVALLON PERT Diagram

3. PERIVALLON Consortium

Due to the dissemination level of this document, which is flagged as "Public", contact details of the people involved in the project are not provided. Nevertheless, this information can be found in the project repository Alfresco[1] for internal use within the Consortium.

Table 2: Project Beneficiaries

No	Name	Short Name	Country	Main role in PERIVALLON
1	ETRA INVESTIGACION Y DESARROLLO SA	ETRA	ES	Project Coordinator, WP5 leader and Technology provider
2	European Union Satellite Centre	SatCen	ES	EU Agency, end-user
3	Centre for Research & Technology Hellas	CERTH	EL	Scientific and Technical Manager, WP4 leader, Technology provider
4	Politecnico di Milano	POLIMI	IT	WP3 leader, Technology provider
5	Center for Security Studies	KEMEA	EL	WP2 leader, Experts in security research
6	University of Vienna	UNIVIE	AT	Ethics, privacy and legal experts
7	University of Applied Sciences for Public Administration and Legal Affairs in Bavaria - Department of Policing	BayHFOD	DE	LEA Training and policy experts
8	DRAXIS ENVIRONMENTAL SA	DRAXIS	EL	WP7 leader, Technology provider and Exploitation Manager
9	SET MOBILE SRL	SMOB	RO	System integrator, Technology provider
10	DYLOG HITECH	DYLOG	IT	Technology provider
11	MARINTRAFIK OPEREISONS	MT	EL	Technology provider
12	Fondazione SAFE (Security and Freedom for Europe)	SAFE	IT	WP6 leader, Demonstrations Leader
13	Agenzia regionale per la protezione dell'ambiente (ARPA) della Lombardia	ARPA	IT	Regional authority, end-user
14	De Water Groep	DWG	BE	Regional authority, end-user
15	Hellenic Ministry of Environment and Energy	MoEE	EL	National authority, end-user
16	Carabinieri Corps	IT-CC	IT	LEA, end-user
17	Swedish Police Authority	SPA	SE	LEA, end-user
18	General Inspectorate of Romanian Border Police	RBP	RO	Border Guard, end-user
19	Hellenic Police	HP	EL	LEA, Border Guard, end-user
20	General Police Inspectorate of Moldavia	IGP	MD	LEA, end-user

[1] See section 4.1 in this document

21	TAMAR Israeli Advanced Quarrying CO LTD	**TMR**	IL	Technology provider
22	SAHER (EUROPE) OU	**SAH**	EE	Consultancy
23	RadExpert	**RAD**	RO	Consultancy and training experts
24	Centre of Excellence in Terrorism, Resilience, Intelligence and Organised Crime Research – Sheffield Hallam University	**CENTRIC**	UK	Technology provider

3.1 Management structure

PERIVALLON will be implemented by 24 partner organisations. Its nature puts greater emphasis on decision-making mechanisms, hence a shallow management hierarchy with transparency in the information flow must facilitate a team of empowered and motivated individuals to respond to the needs of innovative products development and related demonstrations. The management structure has the following characteristics:

- Goal orientation – the project requires a determined management with a strong desire to "get things done".
- Agility – to allow adaptation to fast-moving technology dynamics and end-user demands.
- Empowerment/productivity – shallow hierarchy, information transparency and well-defined objectives.

The **Project Coordinator (PC)** takes responsibility for overall project management. It includes interactions with the EC on contract-related issues as well as chairing regular management meetings, setting administrative and financial tasks -representing the project in the contract negotiation, and in relation to the Commission's Project Officer, representing the consortium in workshops and official meetings, etc. The PC will count with the support of the **Project Manager (PM)** on the day-to-day management activities of the project, such as the collection of administrative reports from partners, preparing and updating the Consortium Agreement between the participants, administering project resources and project spending, managing the overall ethical and gender issues, among others.

The PC and PM are supported in several management tasks by the **Project Management Board (PMB)**. The PMB, which is referred in the GA and CA as the Executive Board, are the same exact body in terms of responsibilities and obligations. PMB is the management body which oversees the general overview of the project activities and is responsible for the day-to-day project monitoring. The other members of the PMB are:

- the **Scientific and Technical Manager (STM),** who organises and manages scientific and technical meetings and supports the PC in scientific and technical matters, e.g. strategic decisions regarding scientific and research activities, and technical designs and implementations;
- the **Dissemination, Communication and Exploitation Manager (DCEM)** who is responsible for all dissemination and exploitation activities and with direct interaction with end-users and mass media, the definition of the project website structure and functionalities, etc.;

- the **Business and Innovation Manager (BIM)** who is responsible for the business development activities, market analysis and innovation management;
- the **Demonstration Activities Manager (DAM)**, who will coordinate the deployment and demonstration activities arranged in WP8;
- the **Integration Manager (IM)**, who will lead the design, development and technical validation of the integrated PERIVALLON platform.
- the **Ethics Manager (EM),** who will coordinate all the activities related to ethics, legal, privacy and IPR management issues that may arise as part of the project activities and beyond; and
- the **Work Package Leaders (WPLs),** who organise, manage and monitor the completion and quality of the work conducted within the respective work package to meet its objectives.

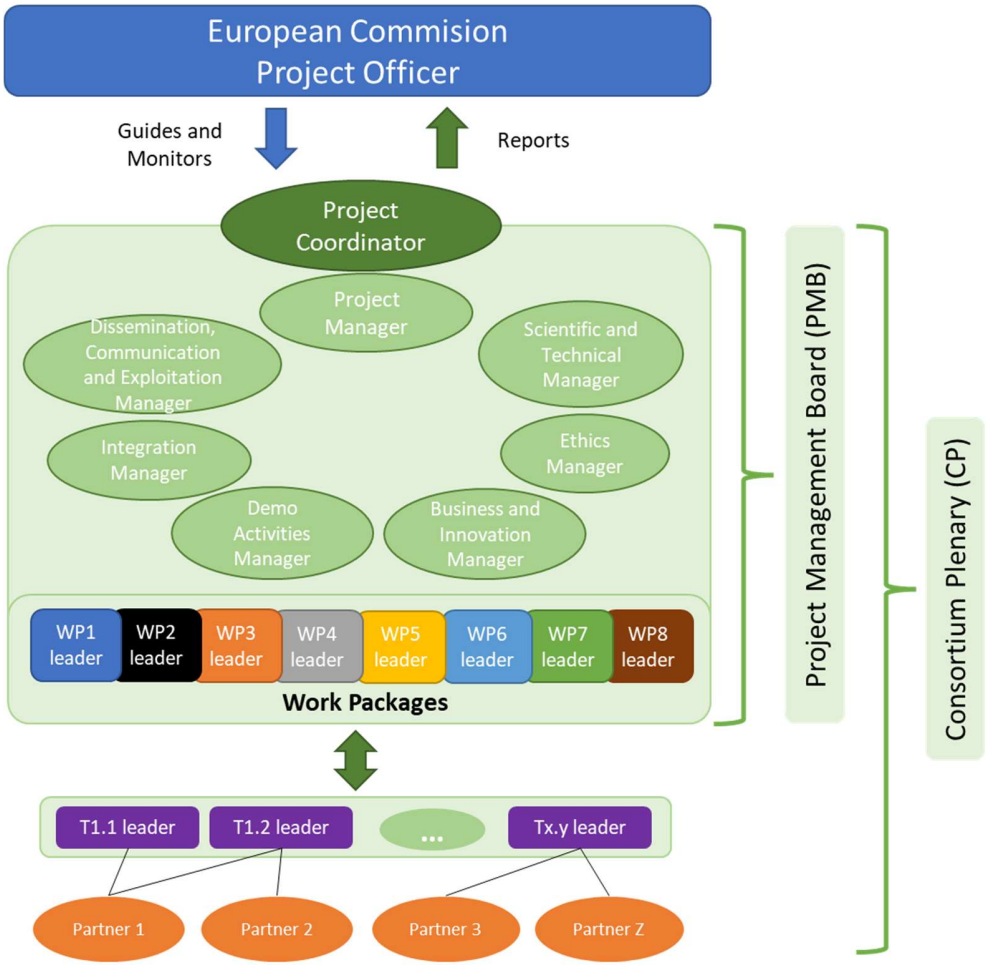

Figure 3: PERIVALLON Management Structure

The PMB is formed by the following members:

Table 3: Project Management Board

Position	Name	Position	Name
Project Coordinator	Antonio Marqués (ETRA)	**WP1 Leader**	Eduardo Villamor (ETRA)
Project Manager	Eduardo Villamor (ETRA)	**WP2 Leader**	Efstathios Skarlatos (KEMEA)
Scientific and Technical Manager	Stefanos Vrochidis, Theodora Tsikrika (CERTH)	**WP3 Leader**	Piero Fraternali (POLIMI)
Dissemination, Communication and Exploitation Manager	Dafni Delioglani (DRAXIS)	**WP4 Leader**	Theodora Tsikrika (CERTH)
Demonstration Activities Manager	Federico Benolli (SAFE)	**WP5 Leader**	Juan José Hernández (ETRA)
Integration Manager	Luigi Caldararu (SMOB)	**WP6 Leader**	Federico Benolli (SAFE)
Business and Innovation Manager	Juan Escobar (ETRA)	**WP7 Leader**	Christina Dolianidi (DRAXIS)
Ethics Manager	Mariana Rissetto (UNIVIE)	**WP8 Leader**	Eduardo Villamor (ETRA)

The PMB, chaired by the PC, will meet at least monthly or at a request of the PC/STM to discuss the progress of the individual WPs, and assess and discuss with more detail the project progress. Reasons for any deviations from the project plan will be identified and the necessary corrective actions will be proposed and decided by the PMB.

Within each work package, the **Task leaders (TLs)** will be the direct responsible for the day-to-day work needed to carry out the tasks related to their specific activity. Their coordination work is not subject to any additional administrative or reporting burden; instead, they will act as team leaders of all the individuals from the different partners involved in a specific task.

All the partners in PERIVALLON are represented in the **Consortium Plenary (CP)**, chaired by the PC. The CP, which is referred in the CA as the General Assembly, are the same exact body in terms of responsibilities and obligations. The CP is the key liaison between the project and partner organisations. In the CP meetings, the PC will present the project's status and plans for the next period. Representatives of the partner organisations will be able to voice their opinions and ask for more elaborated information on the project progress and plans. The CP meetings (plenary meetings) shall take place at least twice a year and, when possible, in conjunction with the scientific and technical dissemination activities of the project and PMB meetings. When/if unable to meet in person, the meetings will be held remotely. Major changes in the project plan, such as reallocation of resources or workloads, may be performed within the limits of agreements, by the decision of the CP.

Finally, the **Pilot Use Cases (PUCs)** play a key role in the management structure and are organised in 4 thematic areas relevant to organised environmental crime:

- PUC1: Illegal waste disposal detection.
- PUC2: Intentional dumping of polluting substances in land and water.
- PUC3: Transnational illegal trafficking of waste electronic and electrical equipment.
- PUC4: Illegal trade in ozone-depleting substance & HFCs.

Each PUC will have a **Lead Partner**, in charge of representing the demonstrations in case of specific

requirements coming from WPs or to coordinate certain activities within the different pilot sites in the main demonstrations performed at the PUC. Technical partners will support the activities at each pilot site to ensure a successful demonstration of the technologies developed. Figure 4 presents the main supporting partners defined in the early stages of the project, which is subject to be revised based on the PUC definition in T2.2 and pilot planning and preparation in T6.1. All end-users will participate in at least one demonstration for each PUC. All PUC Lead Partners will be coordinated by the **Demonstration Activities Manager** (SAFE), who takes part and will interact closely with the PMB in order to ensure a smooth monitoring of the PUC activities, as shown in Figure 4.

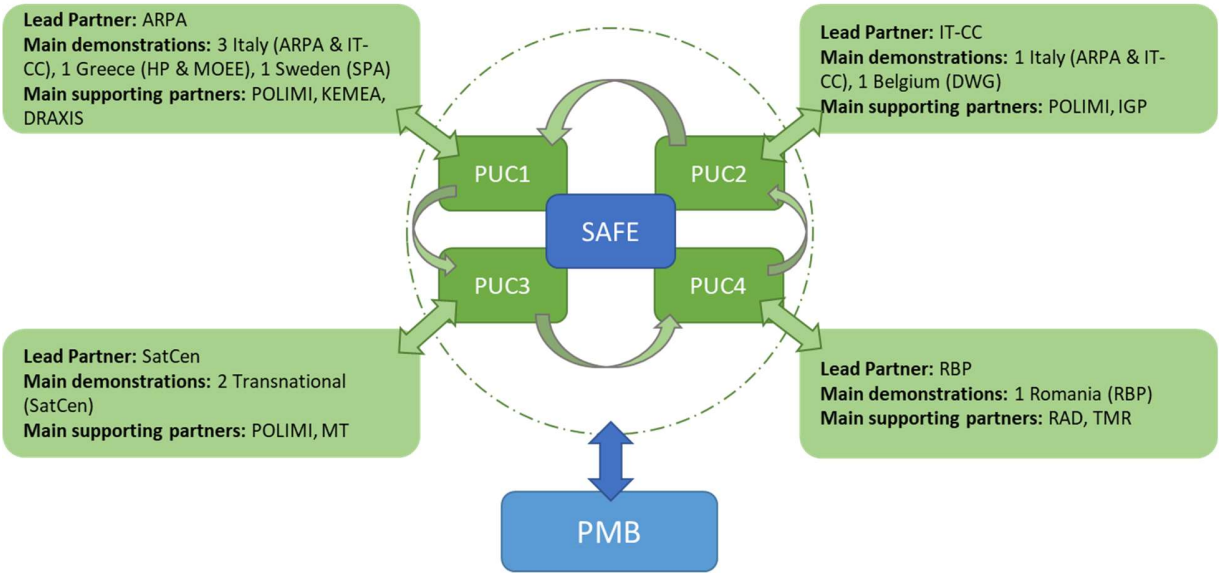

Figure 4: PUCs Management structure

3.2 Decision Making and Conflict Resolution

All partners of the PERIVALLON Consortium share the vision that to ensure smooth project implementation, formal and pragmatic decision-making mechanisms must be in place to resolve potential disputes. Decision making and conflict resolution processes have the objective to set the procedures, flows and rules based on these main principles:

(i) All partners have the same voting rights independently of their economic and technical contribution.

(ii) Decisions to be taken in the PMB (min. quorum 2/3 of the members) will be taken upon 2/3 of the votes.

(iii) Decisions to be taken in the CP (min. quorum 2/3 of the members) will be taken upon 2/3 of the votes.

Decision making and conflict resolution will be managed, if possible, amicably and at the lowest possible level; in case of need, issues will be escalated to the relevant project bodies (to Task Level, WP Level, PMB, or ultimately CP); consensus to solve the problem will be sought at each level.

Some specific examples of the decision procedures are detailed as follows:

- Decisions regarding important issues (the typology of these issues are listed in the Consortium Agreement (CA)) will be made by the PMB (if the issue is technical, at the proposal of the Scientific and Technical Manager; if non-technical, at the proposal of the Project Coordinator).
- Decision making on strategic issues or relevant contract related matters within the frame of the Grant Agreement (GA) and the Consortium Agreement, especially when such decisions may affect the agreements reached within these two documents, will be presented by the Project Coordinator and voted in the CP.
- Individual financial issues are primarily the responsibility of each partner, as specified in the Grant Agreement.

3.3 Extended consortium

3.3.1 Stakeholder Network (SN)

The Stakeholder Network (SN) consist of external experts to the consortium, like relevant Authorities, industry, research, and policymakers who are interested in the PERIVALLON project.

Its goal is to build a strong network to leverage and enlarge the project's output, by identifying several possible collaborations with other entities. Invitation letters and letters of support will be sent to relevant community members in order to establish a core and solid connection.

3.3.2 Advisory Board (AB)

The Advisory Board (AB) is composed of international key experts in environmental crime, who will participate actively in the project discussions, supporting the consortium with their knowledge and experiences in their areas of expertise in several workshops along the project and periodic revision of the preliminary results. Ms. Evelien Van de Vyver, Project Coordinator at the Environmental Agency of the Flemish Government (Belgium) has been confirmed as member of the Advisory Board. PERIVALLON AB membership will be expanded in the upcoming months up to at least 3 members in order to have the best combination of internal and external expertise.

3.3.3 Independent Ethics Board (IEB)

The Independent Ethics Board (IEB) will be composed by independent members with relevant experience in the field. It will aim at monitoring ethics issues in the project and how they are handled. More details about the Ethics Board membership will be reported in deliverable D8.3 – OEI – Requirement No.3.

3.3.4 Security Advisory Board (SAB)

The project has set up a **Security Advisory Board (SAB)** to address security matters. The main functions of the SAB will be two-fold, as described in DoA, Part B, Annex 5:

- To monitor the dissemination of the results to avoid any potential dual use of the PERIVALLON research results and to examine the methodology for research to ensure that any possible risks are mitigated.

- To assess the sensitivity of all project deliverables, filtering out potentially sensitive information, and assessing the sensitivity of the information handled by the project (e.g., the inputs to the research work). All project deliverables will be reviewed prior to their publication, assess whether they include any security sensitive information and propose timely measures for preventing the misuse of such information.

Regarding the aforementioned, particular attention will be given to the research related to the pilot implementation and evaluation. The SAB is chaired by the **Project Security Officer (PSO),** who is one member from CERTH. One member from CENTRIC, one member from KEMEA and one member from RAD join the board, together with three additional police officers and border guards from PERIVALLON end-users: one from RBP border police, one from IT-CC, and one from SPA. The SAB reviewing process is outlined in section 8.2, and will consider the official Guidelines for Classification of information in Horizon Europe projects [1].

4. Internal Communication Guidelines

4.1 Document repository

A document repository has been set up in order to facilitate the exchange of information. The tool selected is Alfresco [2]. Alfresco is a flexible project management web application, which is open-source and released under the terms of the General Public License (GNU). PERIVALLON will use the Alfresco tool as a document repository in order to maintain current and historical versions of files, such as datasets, and documentation.

The PERIVALLON Alfresco repositories can be accessed through its URL, which is provided to the consortium. The consortium members have been granted with the necessary credentials to access and modify the repository. The PERIVALLON site in Alfresco allows its members to use the following tools:

- Document Library, in which the documents that are produced in the project are uploaded and stored. The main purpose of this tool is to act as the project repository rather than being a platform for editing documents in a collaborative manner (although basic view and editing facilities are provided).
- Calendar: the PMB meetings, Consortium Plenary meetings and other events of interest must be added to the calendar, so all the partners can have visibility of this information.
- Links: this menu shows the links that give access to some other important documents in the project which are shared among the consortium members for collaboration purposes. For example, if collaborative calendars are created to organize the dates of the demonstrations.

In the Document library, the current structure includes five main folders:

1) Relevant documents prepared during the proposal phase;
2) Contractual documents such as the GA, CA and amendments;
3) Files and documents related to coordination and management;
4) Documents concerning main project meetings, such as the Plenary Meetings and the PMB meetings; and
5) Information related to the work developed at each work package.

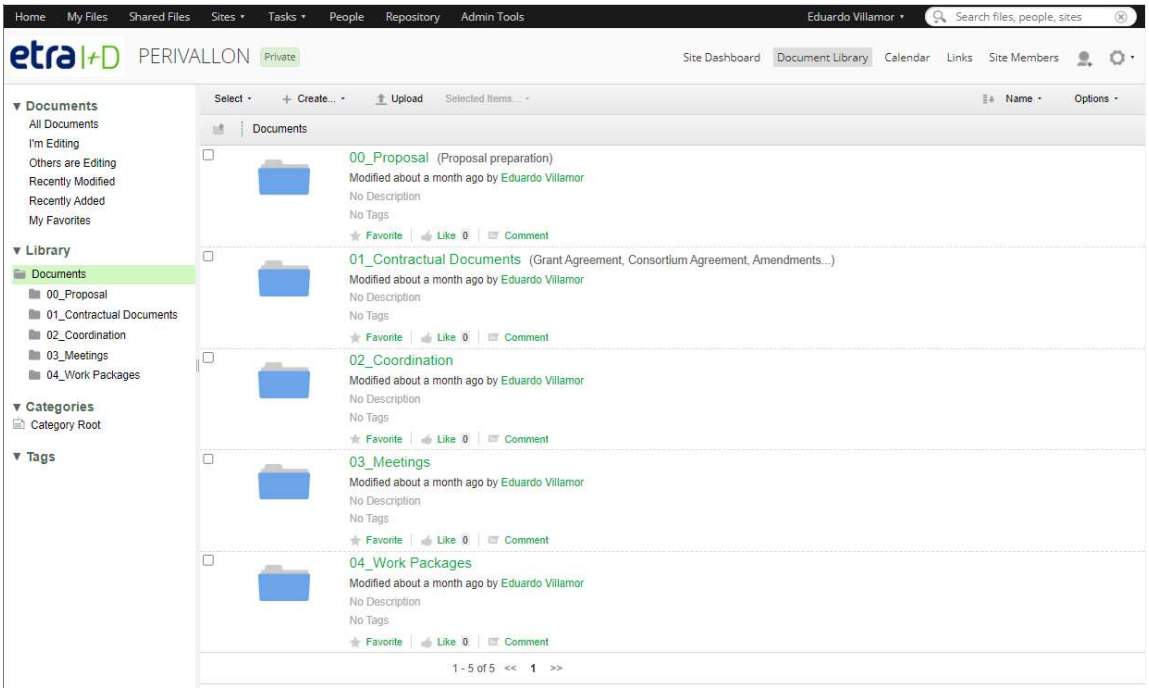

Figure 5: PERIVALLON Alfresco Repository

All the information produced by the consortium or relevant to the project can be uploaded to these folders. The structure can and will be updated as the project evolves in order to organise the information in the most efficient way for the partners. All the partners can create new directories in the same logical way, whenever it is needed.

For editing documents in Alfresco, the partners should download the document to their own device and work offline. The new document should be renamed with the organization acronym (e.g., "PERIVALLON_Meeting-Minutes_v01**_CERTH**"). Once the edition is finalised, the partners should upload the new document to the same folder and notify the responsible partner.

4.2 Electronic communication

Electronic mail will be used extensively by the partners to communicate with each other. PERIVALLON will use mailing lists whenever possible, with the objective to facilitate a smooth and fluent internal communication. Each Work Package Leader (WPL) is responsible for the management and stimulation of its WP. All partners should avoid email exchanges involving just part of the WP members, so that all partners can keep integrated records of the activity in each WP and the whole project. For communications involving all partners in the work package and all partners within a specific task, the WP mailing list should be used for increased visibility.

The mailing lists have been created with the contacts involved in the specific WPs (as indicated by the partners) but can be updated as needed at any time. The following mailing groups are available:

Table 4: PERIVALLON mailing lists

Mailing group	Purpose
info@mailinglist.perivallon-he.eu	Topics of common interest, general purpose
pmb@mailinglist.perivallon-he.eu	Topics concerning the Project Management Board duties
tech@mailinglist.perivallon-he.eu	Topics concerning only all technical partners
security@mailinglist.perivallon-he.eu	Topics concerning the PSO and SAB duties
press@mailinglist.perivallon-he.eu	Press Office activities
wp1@mailinglist.perivallon-he.eu	WP1 related activities and administrative issues
wp2@mailinglist.perivallon-he.eu	WP2 related activities
wp3@mailinglist.perivallon-he.eu	WP3 related activities
wp4@mailinglist.perivallon-he.eu	WP4 related activities
wp5@mailinglist.perivallon-he.eu	WP5 related activities
wp6@mailinglist.perivallon-he.eu	WP6 related activities
wp7@mailinglist.perivallon-he.eu	WP7 related activities

The list of e-mail addresses and mailing groups can be reviewed within the "Coordination" folder in Alfresco (see Section 4.1). The partners can check at any moment in which mailing group(s) they are included, and update the list. The Dissemination, Communication, and Exploitation Manager (DCEM) is in charge of maintaining the mailing groups and to periodically update them according to the lists. Whenever an update is made, it is a good practice to notify the DCEM to ensure that the change is reflected in the actual mailing list.

For efficient use of electronic communication in the project:

- Ensure that all partners get the information they need in a timely manner.
- Avoid e-mail spamming and information overload.
- Specify deadlines with exact dates to obtain the needed information in time.

Therefore, some **basic rules must be followed**:

- To include the tag PERIVALLON (or [PERIVALLON]) always in the Subject of the e-mails.
- Not to use the entire @perivallon group in case the topic is related to a certain WP discussion.
- Only relevant information (strictly related to the PERIVALLON project) is sent to the appropriate project participants, using the relevant mailing list.
- Each e-mail should contain one topic only. The topic must be clearly expressed in the subject field.
    - If it is not practical to separate multiple topics, then the different topics in the e-mail must be separated through a clear heading. In this case, if the mail is long (more than can be seen on a screen) then it should start with a list of contained topics at the beginning.
- Communication of relevance to a particular group (such as comments and votes) will be given as group replies so as to give all group members the opportunity to receive a clear view of every partner's opinion, in an effort to speed up and harmonise the agreement process.
- Documents of project-wide relevance are stored in the project repository. They are not generally and necessarily distributed by e-mail to the whole project membership. Project participants are

notified by e-mail, including the link to the Alfresco directory, and invited to consult the documents.

- When editing a document downloaded from Alfresco, the project participants should upload the new document to the same folder and notify the responsible partner via email, attaching the link to the edited document.

4.3 Document numbering and naming convention

The deliverables are categorised according to the following **types**:

- **R:** Document, Report
- **DMP:** Data Management Plan
- **DEM:** Demonstrator, pilot, prototype
- **ETHICS:** Ethics requirement
- **OTHER**

With respect to the dissemination level of deliverables and other documents, including presentations, the following levels of dissemination are considered in PERIVALLON:

- **PU:** Public, fully open, e.g., web (Deliverables flagged as public will be automatically published in CORDIS project's page)
- **SEN:** Sensitive (limited under the conditions of the Grant Agreement)

The documents will be **named and numbered** according to the following rules, in order to facilitate the quick identification and indexing:

PERIVALLON_<dtype>_<dnum>_<sec>_v<ver>.pdf

All the documents' names start with the word "PERIVALLON" in order to facilitate the identification, and to raise the awareness about the project within a number of people that will download the documents from the public website. The fields <dtype> is the deliverable type as described above (e.g. R = Report, DMP = Data Management Plan, DEM = Demonstrator, etc…), <dnum> represents the code of the deliverable, <sec> is filled with the acronyms related to dissemination level (e.g. PU = public, SEN = sensitive, etc) and <ver> the version of the document.

Versions 0.X will indicate that the document is still a draft not approved by the internal reviewers. The official document to be sent to the EC will be numbered as v1.0. Further revisions or new issues of a deliverable will make use of the following format: v1.X, vY.X.

For example, the version submitted for deliverable D1.1 Project Management and Quality Assurance Handbook, being the dissemination level public usage, would be named in the following way:

PERIVALLON_R_D1.1_PU_v1.0.pdf

In order to facilitate the work and localisation of the documents, all the documents will be posted in the repository as soon as possible.

4.4 Document exchange format

All the text documents exchanged within the project must observe the following rules:

- The documents will use the *.docx format (Word or equivalent).
- When a document is in draft mode, different versions will be produced with the **track of changes activated**, until the final version is to be submitted.
- After the final document has passed the peer review, the project coordinator submitting the document to the EC will generate the PDF file.
- It is recommended not to send attachments by e-mail but rather place them on the Alfresco project repository. Then, the person who has uploaded the document will send a notification within the appropriate WP mailing list, announcing the location (directory) where the document can be retrieved with a link.
- The presentations will use the *.pptx format (or equivalent) according to the template available at the repository.
- All the documents to be forwarded outside the Consortium, including the presentations and the final deliverables, will use ONLY PDF format.
- The interim reports (see section 6.1) have specific templates for both the financial and technical content.
- The deliverables (being public or sensitive) and rest of documents must follow the format and styles indicated in the templates available in the corresponding section of PERIVALLON repository.
- All the templates can evolve according to the project needs and are appropriately versioned in the PERIVALLON repository so that the most current version can easily be determined.

4.5 Notification procedure

As a general procedure, any **notification to the Project Coordinator** regarding changes in the contractual terms (e.g., modification in partner legal status, partner termination, modifications in contractual obligations, etc…) should be sent in two signed copies according to the following procedure:

- The person signing the document should be accordingly empowered to do it.
- Always sign the document by the authorised person: people in Forms A, administrative and/or technical representative, according to the nature of the notification.
- In case he/she is not available, find an alternate authorised person empowered to sign the document. In that case, additionally send to the Project Coordinator two copies of a letter explaining that the person is authorised and the empowerment by which he/she is authorised.
- Send a scanned copy in advance by e-mail.

- Paper copies should follow by express courier and a notification by e-mail to the project coordinator the day it was sent.
- In case any problem arises, the Project Coordinator should be contacted to solve the eventual situation.

4.6 Bank account: notification of changes

In the event of a partner's bank account changes, the Project Coordinator should be **notified within 2 weeks in advance of any payment**. The EC banking details template is available at the Alfresco repository.

The bank stamp and the signature of the bank representative are generally required. However, with an attached copy of the RECENT bank statement from the last 6-12months, the stamp of the bank and the signature of the bank's representative are not required. The signature of the account-holder and the date are ALWAYS mandatory.

5. Meetings Organisation

In order to coordinate the various activities of the PERIVALLON project, a 2-days meeting will be held at a regular time basis, at least 2 times/year. This meeting will allocate time for both the Consortium Plenary and PMB meetings. The PC together with the STM will be in charge of setting up and updating (each year) a calendar of meetings that may include dedicated workshops. Further project meetings may be planned whenever urgent issues need to be resolved.

The project intends to run virtual electronic meetings whenever feasible and appropriate using information and communication technologies available as described in Section 4.2. The following subsections clarify who will make invitations, how meeting decisions are to be taken, and how meetings are to be recorded. When specific decisions must be taken in the short term, extraordinary meetings may be held by audio-conferencing, including management aspects that may have as consequence the request of an amendment to the Grant Agreement; in this case, the voting shall be held via e-mail.

In terms of attendance, and for all PERIVALLON PMB meetings, the presence of the Project Coordinator (PC), Scientific and Technical Manager (STM), Dissemination, Communication, and Exploitation Manager (DCEM), Integration Manager (IM), Demonstration Activities Manager (DAM), Ethics Manager (EM), Business and Innovation Manager (BIM) and all WP Leaders (or any representatives of their respective companies), is required.

In relation to the CP meetings, all partners must attend.

5.1 Meeting requests

Meeting invitations will be sent by the corresponding chair: the WP leader for a WP workshop or meeting (and even Task leader if required), and the PC for a PMB meeting and a CP meeting.

For face-to-face meetings, the host of the meeting will provide logistics and accommodation information to the participants. In the case of meetings in a dedicated location in Brussels, the PC will be in charge of organising the meeting. The following tables summarise the main rules about preparation and organisation of meetings:

Table 5: Convening Meetings

	Ordinary meeting	Extraordinary meeting
Consortium Plenary	At least twice a year	At any time upon written request of the PMB or 1/3 of the Members of the CP.
Project Management Board	At least twice a year in the same dates of the CP. Monthly remote meetings to follow project progress	At any time upon written request of any Member of the PMB
Other meetings		At any time upon written request of partner who chair the meeting

Table 6: Notice of a meeting

	Ordinary meeting	Extraordinary meeting
Consortium Plenary	45 calendar days	15 calendar days (10 calendar days in case of meetings by teleconference or another telecommunication means)

Project Management Board	14 calendar days	7 calendar days
Other meetings	14 calendar days	7 calendar days. In case that all called partners to the meeting agree, the meeting could be noticed in a shorter time.

Table 7: Agenda definition

	Ordinary meeting	Extraordinary meeting
Consortium Plenary	21 calendar days. Partners may add items to the agenda until 14 calendar days before the meeting .	10 calendar days for an extraordinary meeting. Partners may add items to the agenda until 7 calendar days before the meeting
Project Management Board	7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting.	7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting.
Other meetings	7 calendar days. Partners may add items to the agenda until 2 calendar days before the meeting.	7 calendar days or at the same time of the meeting notice. Partners may add items to the agenda until 2 calendar days before the meeting.

5.2 Virtual Meetings

The virtual meetings will be used for the monitoring of the project progress – i.e. monthly PMB meetings – or specific work sessions – i.e. webinars. Some basic recommendations to be followed when organising/participating at the virtual meeting can be found hereafter:

a. Virtual meetings will be limited in duration. It is recommended to avoid long meetings – no longer than 1 hour unless required.

b. All partners are requested to connect to the virtual meeting service 5 minutes in advance, to solve any potential technical problems.

c. All microphones must be muted when the partner is not actively participating in the discussion.

d. Any partner joining or leaving the meeting is requested to announce it, preferably through the chat tool.

Even if the service enables the sharing of a screen, it is recommended to circulate in advance – i.e. upload to the project repository – all the material to be used during the meeting. The partner organising the virtual meeting will provide the videoconference tool. Microsoft Teams will be used as the preferred tool for virtual meetings, while other tools may be agreed if necessary (e.g. Webex).

5.3 Meeting minutes

The reporting of meetings is mandatory to guarantee that the decisions taken are known and accepted by all the people working in the project.

The partner hosting the meeting will be responsible for producing the minutes following the template available at the Alfresco project repository (PERIVALLON/02_Coordination/Project Templates) in no more than 15 days.

The following rules will apply to minutes:

- **Recording:** Minutes must be recorded in written form for every official project meeting. A rapporteur is appointed at the start of the meeting. Meeting minutes will be taken in turn in the following manner:
    - CP and PMB meeting minutes are recorded by the chairperson of the meeting.
    - Other meeting minutes are recorded by the member organisation hosting the meeting.

  A copy of the minutes will be archived in the project repository.
- **Consolidation / Approval:** As a general procedure, the draft meeting minutes will be circulated to all Members by the chairperson within 15 calendar days of the meeting. The minutes shall be considered as accepted if, within 15 calendar days from sending, no Member has sent an objection in writing to the chairperson.
- **Circulation / Distribution:** The chairperson will inform about the final version of the minutes which will be available in the Alfresco repository.
- **Content:** The minutes must, at least, contain:
    - The meeting attendance list;
    - The approved meeting agenda, including date and venue;
    - Decisions taken, including motivations as far as possible;
    - An action list containing for each action a short description, a responsible partner and a time schedule (if an action was given to a person not attending the meeting, a person for contacting that person needs to be given);
    - A list of agreed upcoming events;
    - If appropriate, a list of related documents (appendixes).

6. Reporting procedure

6.1 Interim report (IR)

As part of the internal monitoring activities, on a periodic basis, the Project Coordinator will ask the partners to provide an estimation of the resources consumed in each task, as well as any foreseen deviation of the budget forecast for the next monthly interval.

The intervals are as follows:

Table 8: Interim reports

Period	Start IR period	End IR period
S1: M1-M6	01/12/2022	31/05/2023
S2: M7-M12	01/06/2023	30/11/2023
S3: M13-M18 (end of 1st RP)	01/12/2023	31/05/2024
S4: M19-M24	01/06/2024	30/11/2024
S5: M25-M30	01/12/2024	31/05/2025
S6: M31-M36 (end of project)	01/06/2025	30/11/2025

All the project partners will have to complete two documents to gather the (possibly estimated) basic information on the resources spent per partner and the work performed. The templates for both documents area available in the corresponding Alfresco repository (PERIVALLON/02_Coordination/Project Templates).

- **Technical Report:** the following table will be filled.

Table 9: Interim technical report table

Main activities (related to tasks)	Description (include contribution to deliverables)	Progress (Ongoing/Finished)

- **Financial report:** the following information will be filled.

Table 10: Interim financial report tables

Personnel cost report		
WP	S1 Dec 2022-May 2023	
	PM	Cost (€)
WP1		
WP2		
WP3		
WP4		
WP5		
WP6		
WP7		
Total	0.00	0.00

Other costs	
WP	S1 Dec 2022-May 2023
	Cost (€)
WP1	
WP2	
WP3	
WP4	
WP5	
WP6	
WP7	
Total	0.00 €

The templates *PERIVALLON_R_Interim-Report_SEN-template.xlsx* and *PERIVALLON_R_Interim-Report_SEN-template.docx* are available in the project document library.

The interim report shall be submitted to the Project Coordinator **no later than 3 weeks after the end of the period**. The Project Coordinator will analyse the reports, taking the requested actions in case of need.

6.2 Project Periodic Report

Two reporting periods are defined in the PERIVALLON work plan:

Table 11: PERIVALLON reporting periods

	Project Timing	Month / Year
RP1	M1 - M18	Dec 2022 – May 2024
RP2	M19 – M36	June 2024 – Nov 2025

In order to provide timely project reporting to the EC, as well as efficient and accurate financial data, the cost statements will be aggregated by each partner in the **Project Periodic Report (PPR),** which will be completed within the next 60 days form the end of period.

The Project Periodic Report (PPR) will follow the template provided by the EC for the Horizon Europe Programme. It contains the periodic technical and financial reports.

The periodic technical report consists of two parts:

- **Part A** of the periodic technical report contains the cover page, a publishable summary and the answers to the questionnaire covering issues related to the project implementation and the economic and social impact, notably in the context of the Horizon Europe key performance indicators and the Horizon Europe monitoring requirements. Part A is generated by the IT system.

- **Part B** of the periodic technical report is the narrative part that includes explanations of the work carried out by the beneficiaries during the reporting period. Part B needs to be uploaded as a PDF document and will contain the following sections:
    - Progress towards the achievement of the project objectives
    - Explanation of the work carried out by the beneficiaries and Overview of the progress
    - Progress towards delivering scientific, economic, societal or industrial production impact
    - Update of the plan for exploitation and dissemination of result (if applicable)
    - Update of the data management plan (if applicable)
    - Follow-up of recommendations and comments from previous review(s) (if applicable)
    - Deviations from Annex 1 and Annex 2 -DoA (if applicable)

The PPR financial report consists of:

- Individual financial statements (Annex 4 to the GA) for each beneficiary;
- Explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary for the reporting period concerned;
- A periodic summary financial statement including the request for interim payment.

The Project Periodic Report must be consistent with the interim reports (see Section 6.1) provided both at technical and financial levels.

ETRA as Project Coordinator will check the data of the PPR and the data from the interim report. If any difference arises, the partner should correct them **within two weeks from notification.**

ETRA will submit the Project Periodic Report to the EC.

7. Quality Management Cycle

Since PERIVALLON objectives are ambitious, the project cannot be exactly planned beforehand for its whole life span. This makes continuous planning and refinement of the project plan necessary. It is expected that a full cycle: planning -> execution -> analysis -> revision -> planning, etc. should take 3 months. The Project Coordinator, ETRA, is certified with the standards ISO 9001:2015 [3], which specifies requirements for an effective quality management system at the scale that the PERIVALLON project requires. Therefore, the management of the project will be based on the standard in order to assure the quality and conformity of the solutions and knowledge generated.

The PERIVALLON Project Management Board has agreed on a monthly based system, where the frequency can be increased upon request, for follow-up and analysis of the tasks performed according to the project work plan. Therefore, online PMB meetings are arranged every month where WP leaders present the work in progress and discuss about blocking issues or interdependencies between tasks. This is a very efficient tool to perform the quality management cycle as described above, since it allows to revise the status of the work and adopt the corrective measures in case they are needed, while ensuring that barriers are detected and even anticipated.

7.1 Action Point List

The Action Point List provides an up-to-date tracking and evaluation tool allowing partners to follow-up on a regular basis critical milestones and actions. The aim is to have a reliable working document helping project partners to easily identify the progress status and avoid any major deliverables gap and/or delay. The Action Point List is reviewed and updated on each PMB meeting.

PERIVALLON Action Points of the PMB (Project Management Board)

Status: 26-01-2023

Number	Description	Responsible Person(S)	Deadline	Status	Priority	Remarks
2. PMB Meeting: 12.01.2023						
PMB02_01	Organisation of a workshop to present to the consortium what came from the WP2 interviews on the PUCs	KEMEA	31/01/2023	open	high	
PMB02_02	Launch of social media accounts (LinkedIn, Twitter, ...)	DRAXIS	11/01/2023	done	high	12012023. DRAXIS will publish a post regarding the KOM. The social media accounts are already in place and will be shared with the consortium 26.01.2023. Will do the post by 01/02/2023.
PMB02_03	Contact Advisory Board, confirm the members participation through NDA	ETRA	20/02/2023	on-going	medium	12012023. AB contacted, waiting for informal confirmation 26.01.2023. 2 members confirmed, 1 didn't. Backup contact will be approached before the end of this week
PMB02_04	Establish strategy for collaboration with EMERITUS sister project	PMB	28/02/2023	open	medium	
PMB02_05	To agree on the agenda for the PERIVALLON visit to Verona (16/17-03)	ETRA/SAFE	20/01/2023	on-going	medium	12012023. FB will send the draft agenda for review 26.01.2023. A tentative agenda for the PERIVALLON members meeting will be drafter and shared during the next PMB meeting
PMB02_06	To invite SMOB to participate in the interviews with the technical partners performed by KEMEA in January	KEMEA	13/01/2023	done	high	

Figure 6: PERIVALLON Action Point List

7.2 Project schedule

The project schedule includes a comprehensive timeline with the completion status at task level. WP leaders are requested to provide the level of completion of the tasks at their respective work package on a monthly basis.

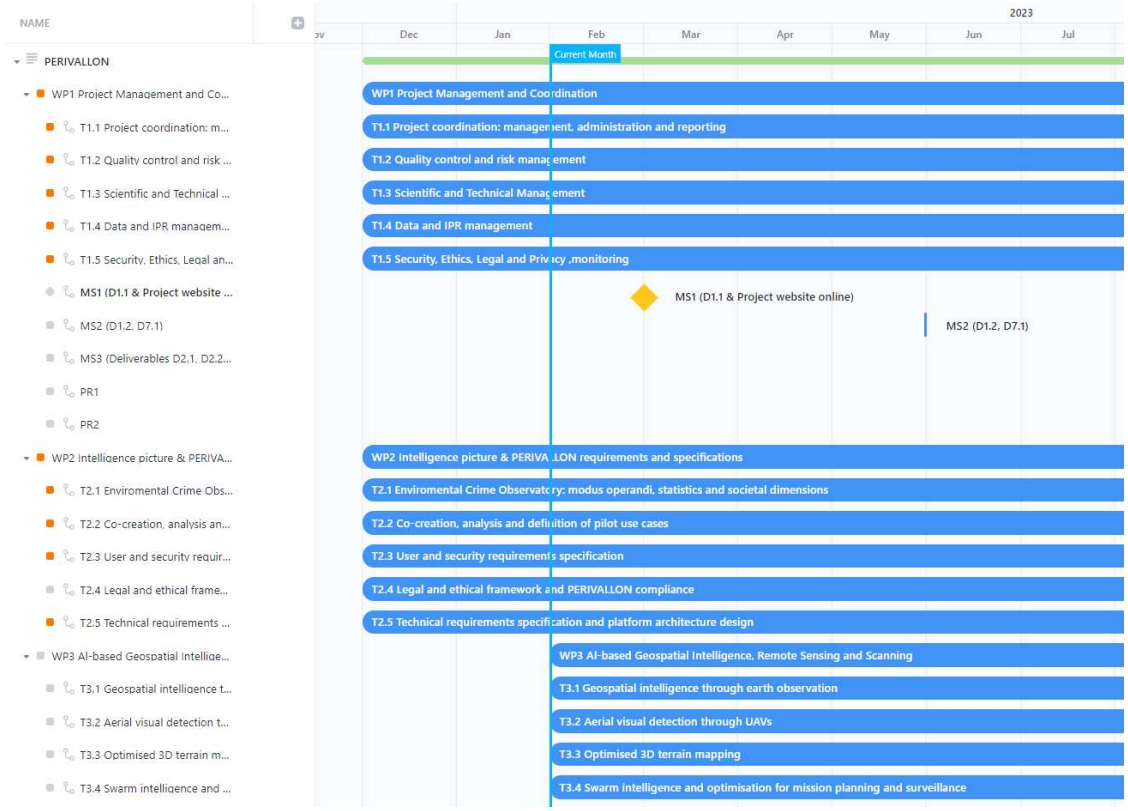

Figure 7: PERIVALLON Project Schedule

7.3 Work Package Management Dashboard

A Work Package Management Dashboard template was produced to facilitate the Work Package leadership and organisation of the work across tasks within the same work package. The Dashboard covers the upcoming, ongoing and completed actions within each task, the relevant contributors and the status.

Task	Action	ID	Lead	Description / Details of action	Contributors & nature of contribution	Related deliverable(s)	Status	Deadline	Comments
T.3.1- Geospatial intelligence through earth observation (L: POLIMI, M1-M33)	Identify internal/proprietary data sets	31.1	POLIMI	Review public available data set, and organize meeting with SatCen	CERTH, ARPA, SatCen	D3.1	DONE	15/1/2023	Ask SatCen for requesting hi-res s
	Identify external data	31.2	POLIMI	External data are e.g., public data sets		D3.1	ON-GOING	31/1/2023	
	Provide input to T6.2 to specify the available data sets	31.3		Fill WP2 questionnaires		D3.1	NOT STARTED	depends on WP2	This corresponds to filling in WP2
	Decide if a scientific data set survey publication is possible	31.4	POLIMI	Check SOTA about waste data sets, verify if there is room for a publication, if YES decide journal, open overleaf, write, submit	CERTH	D3.1	NOT STARTED	31/1/2023	
	Identify end-users of the task	31.5	POLIMI	List end users owning the geospatial intelligence processes	ARPA, IT-CC, MT(?)	D2.1,D2.2	DONE	15/1/2023	End users of the task include ARP
	Identify the use cases and processes	31.6	POLIMI	List the processes of the end susers	CERTH, ARPA, IT-CC, MT?	D2.1,D2.2	NOT STARTED	28/2/2023	Put here the link to the process d
	Specify the use cases and processes	31.7	POLIMI	31.7.1 Specify the manual activities; 31.7.2 Specify the IT-supported/PERIVALLON activities: input, output, processing (services and algorithms), interfaces (mockups, IFML diagrams, etc); 31.7.3 Specify the IT-supported/OTHERAPPS activities: app definition, input, output, how to integrate	CERTH, ARPA, IT-CC, MT?	D2.1,D2.2	NOT STARTED	28/2/2023	Use a notation such as BPMN or U
	Identify scientific tasks and algorithms needed for satisfying the requirements	31.8	POLIMI	See sub-actions		D3.1	ON-GOING		
	Analize state of the art	31.8.1	POLIMI		CERTH	D3.1	ON-GOING	28/2/2023	
	Write SOTA synthesis document	31.8.2	POLIMI		CERTH	D3.1	ON-GOING	31/3/2023	Start from POLIMI papers. https:/
	Define data-driven tasks that match the requirements	31.8.3	POLIMI		CERTH, ARPA, IT-CC, MT?	D3.1	ON-GOING	28/2/2023	Examples can be (image binary/m
	Define algorithms to test for each task	31.8.4	POLIMI		CERTH	D3.1	ON-GOING	31/3/2023	Examples are FP-CNN. One month
POLIMI:18PMs, P: ETRA:1PM; SatCen:1PM; CERTH:8PMs; SMOB:1PM; MT:1PM; ARPA:1PM; MoEE:1PM; IT-CC:1PM; SPA:2PMs; IGP:1PM	Plan a publication on SOTA of algorithms	31.8.5	POLIMI	Identify Journal, create overleaf, define TOC and writing responsibilities, write and submit	CERTH	D3.1	NOT STARTED	31/1/2023	After round 1 of PUC validation. D
	Identify data collection gaps	31.9	POLIMI	Identify data collection gaps wrt requirements and plan collection activity together with WP6	CERTH, ARPA, IT-CC, MT?, SatCen		NOT STARTED	31/1/2023	Provide requirements to SAFE for
	Cooperate to data collection within WP6	31.1	POLIMI		CERTH, ARPA, IT-CC, MT?, SatCen		NOT STARTED	30/4/2023	All the data and annotations for t
	Implement/train/validate the predictors	31.11	POLIMI		CERTH		NOT STARTED	31/1/2024	Two months for integration into R
	Integrate the components in the PERIVALLON platform release 1	31.12	POLIMI		CERTH, SMOB	D5.1	NOT STARTED	31/3/2024	R1 of the platform: the first proto
	Apply the components to PUC1	31.13	POLIMI	Cooperation with WP6, 1st round	CERTH, ARPA, IT-CC, MT?, SatCen	D6.1	NOT STARTED	30/5/2024	Two months of application in PUC
	Validate the components in PUC1	31.14	POLIMI	Cooperation with WP6, 1st round	CERTH, ARPA, IT-CC, MT?, SatCen	D6.1	NOT STARTED	30/6/2024	D61 is due on M21 Aug 2024; at l

Figure 8: Work Package Management Dashboard example

7.4 Deliverables and documents

Deliverables will normally fall within the work to be done in the Work Packages, and as such, each WP leader will be responsible for the quality of the results described in deliverables. These will be subject to a peer review by at least two experts, according to the procedure described in Section 8. The Consortium has elaborated a table to allocate the responsibilities for the peer-to-peer review of each deliverable, trying to ensure that all partners participate in this process in a balanced way and also to prioritise that at least one of the partners is from a different WP, when possible.

The templates for the deliverables are available at the project repository. The document shall contain all the logos and it will be formatted according to the document numbering and naming convention as defined in Section 4.3.

Once the Project Coordinator has submitted the deliverable to the EC, the final documents will be also uploaded (both DOC and PDF version) in the Alfresco document library. When the document is approved by the EC, in the case of a public deliverable, the document will be made available in the PERIVALLON public web site.

At least the Project Coordinator will keep an additional copy for backup and security reasons.

7.5 Dissemination and Communication QA Guidelines

The dissemination and communication management during the life of the project will be described in D7.1: Plan for dissemination and exploitation, including communication activities, and project website. In the present deliverable, the basic QA guidelines are provided, while the publication procedure is described in detail under Section 8.3. The details about the dissemination and communication plan, target groups, and means of communication will be provided in the D7.1.

7.5.1 PERIVALLON Press Office

The **Press Office** is the board responsible for the planning and execution of the communication and dissemination activities within PERIVALLON, where the Press Officer will be responsible for the revision of the main communication and dissemination elements to ensure the general guidelines are properly followed. The list of members of the board is presented in the following table:

Table 12: Press Office Members

Name	Entity	Role in the Press Office
Dafni Delioglani	DRAXIS	Chair and Press Office Responsible, Dissemination and Communication Manager
Eduardo Villamor	ETRA	Project Coordinator
Theodora Tsikrika	CERTH	Scientific and Technical Manager
Mariana Rissetto	UNIVIE	Ethics Manager
Efstathios Skarlatos	KEMEA	Security Monitoring Responsible
Christina Dolianidi	DRAXIS	Website/social networks admin

The Press Office is reachable though the associated mailing list (see Section 4.2). The same team should also be contacted in cases of **crisis communication**. In case a project member is approached by press or a third-party with potential criticism, the following set of actions is most appropriate:

- Let the party know that their request is taken seriously.
- Ask them for contact details and the specific questions they would like to be answered.
- Emphasise that the project will get back promptly.
- Contact the Press Office explaining the situation at hand.

7.5.2 Publication procedure

In order to coordinate the participation of partners in dissemination activities and conferences (both in Europe and outside Europe) and properly notify the EC of any event, PERIVALLON will define the communication management procedure in D7.1. This procedure will consist of the following steps: (1) Initialisation, (2) Execution, (3) Monitoring & Reviewing, (4) Reporting and (5) Closing. A loop will be organised between step 2 and step 4.

The **publication procedure** encompasses the cycle between step 2 and step 4:

- STEP 2: Execution

The execution will follow the plan:

1. Prepare communication content;
2. Prepare communication support;
3. **Validate through the Press Office (described in Section 7.5.1);**
4. Diffuse the communication and, if possible, obtain feedback.

After the communication action, archive the communication for traceability and potential reuse.

- STEP 3: Monitoring & reviewing

This step includes monitoring and analysing the communication activities performed during specified periods in order to ensure that the PERIVALLON partners will reach their communication goals at the end of the project. The different indicators will be computed and analysed regarding the targets of the communication activities within the specified period, to be defined in D7.1.

- STEP 4: Reporting

In this step, a report shall be created with all the information from the previous monitoring phases. This reporting has two targets: the consortium itself and the European Commission. It is expected that the provided reviews regarding the PERIVALLON dissemination and communication strategy and process will be used to revise the strategy for the next reporting period.

The **indications described below must be followed** when disseminating and communicating about the project results:

- Unless the Commission requests otherwise, any notice or publication by the partners about the project, including at a conference or seminar, must specify that the project has received research co-funding from the EC Horizon Europe Programme and display the EU emblem; when displayed

in association with another logo, the EU emblem should be given appropriate prominence. From Article 17.2 of the GA, the **EU emblem** stating the **"Co-funded by the European Union"** must be used.

- For publications in journals and articles in the press, the Horizon Europe logo as well as the emblem of the EU will not be included. However, the reference of the co-funding received from the European Union will be integrated in the acknowledgement.
- Any notice or publication by the partners, in whatever form and on or by whatever medium, must specify that "The contents of this document and the view expressed in the publication are the sole responsibility of the author and under no circumstances can be regarded as reflecting the position of the European Union".

In general, the dissemination activities, including but not restricted to publications and presentations shall be governed by Article 17 of the Grant Agreement. The CA defines also the dissemination rules in section 8.4. Specifically, partners will be responsible for including the EU emblem, acknowledgement of EU co-funding (funding statement), and disclaimers. The following **disclaimer should be used in any communication or dissemination activity** related to the project:

"Co-Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them."

7.5.3 PERIVALLON logo and acronym usage

A specific project logo has been developed for the project identity. The logo will be included in all project promotional material including the factsheet, website, etc.

Table 13: PERIVALLON Logo, Acronym and full name

PERIVALLON Logo	PERIVALLON Acronym and full name
PERIVALLON	**PERIVALLON** Protecting the EuROpean terrItory from organised enVironmentAl crime through inteLLigent threat detectiON tools

Recommendations for reproduction quality and visibility:

- To use only the logos that can be downloaded from the document repository Alfresco (PERIVALLON/02_Coordination/Project Templates/PERIVALLON logo) and do not copy them from any other place. Reproduction quality needs to be ensured.
- In order to ensure the logo's visibility, the minimum logo size for print is 5 cm in length. Online, the logo must not be smaller than 36 pixels at 72 ppi.

It is advised that the PERIVALLON logo appears in all PERIVALLON related documents. Any material co-funded with the project budget needs to make explicit reference to it and if possible, make use of the PERIVALLON logo.

The Acronym of the project – i.e., PERIVALLON – is the main representative mark and must be written always in the same way. When possible, it has to be used with the above-mentioned logo, respecting the font and colors.

7.5.4 Image rights and quality

Notes on image quality and image rights needs to be paid attention at all publication activities. The general recommendation for the image quality is shown in the following table. In the case of picture rights, the origin of the picture as well as the creator must be mentioned. During the project, the author is always responsible for obtaining appropriate image rights, whether for printing publications or web-based publications. The general recommendations are:

Table 14: Image rights and quality

Quality	Images for publications, 300 dpi (Size 100 x 150mm) Images for web, 160 dpi (Size 60 x 60mm)
Rights	© Institution/Company or author, origin

7.5.5 Presentation, poster and graphical material

Any presentation related to the project work in progress or results will be created from the project presentation template available at the Alfresco repository (PERIVALLON/02_Coordination/Project Templates).

In addition to the available template, the consortium will have a number of alternative materials to help disseminate and present the project results in a coherent and effective way.

- A general presentation to provide a quick look at the project objectives and contents. This set of slides will be updated periodically with the new results as the project advances.
- A brochure to promote and enhance the visibility of the project.
- A roll-up to present the project at conferences and poster sessions.

The first version of this material will be reported as part of D7.1.

8. Review Procedure

8.1 Deliverable reviewing procedure

The internal reviewing procedure is one of the main tools to guarantee the high quality of the results, together with the tools described in Section 7.

Each deliverable leader will be responsible of the quality of their own deliverables, which will be subject to peer review by at least two experts. The peer review team must check their quality before the final submission to the EC. Furthermore, experts have been appointed in order to ensure quality process enforcement and reduce risks during project implementation. The following table has been prepared to ensure a balanced workload for the partners in the consortium, also considering their role and resources in the project, and it is available at the Alfresco site (PERIVALLON/02_Coordination).

Table 15: Peer Review Responsible Partners and Backup leader

D#	D. Title	WP#	Leader	Due Date	Reviewed by		Backup
1.1	Project Management and quality assurance handbook	WP1	ETRA	M3	SAFE	POLIMI	CERTH
1.2	Initial Data Management Plan	WP1	UNIVIE	M6	CENTRIC	SMOB	SAFE
1.3	Security, Ethics, Legal and Privacy monitoring, Final Data Management Plan & IPR management	WP1	UNIVIE	M36	DRAXIS	BAYHFOD	ETRA
1.4	Public Activity Report	WP1	ETRA	M36	HP	UNIVIE	DRAXIS
2.1	Co-creation of use case scenarios, specification of user and security requirements	WP2	KEMEA	M9	POLIMI	UNIVIE	SAFE
2.2	Platform architecture and technical requirements	WP2	SMOB	M12	SAFE	BAYHFOD	UNIVIE
2.3	Environmental crime observatory	WP2	BAYHFOD	M32	ETRA	UNIVIE	SPA
2.4	Report on the legal and ethical framework of PERIVALLON	WP2	UNIVIE	M35	BAYHFOD	ETRA	SMOB
3.1	Initial version of AI-Based geospatial intelligence, remote sensing and scanning tools	WP3	POLIMI	M16	SMOB	KEMEA	ETRA
3.2	Final version of AI-Based geospatial intelligence, remote sensing and scanning tools	WP3	POLIMI	M33	CENTRIC	DRAXIS	SMOB
4.1	Initial version of online monitoring and analysis tools	WP4	CERTH	M17	SMOB	ETRA	POLIMI
4.2	Final version of online monitoring and analysis tools	WP4	CERTH	M33	POLIMI	DYLOG	ETRA

5.1	First version of PERIVALLON platform, secure data management and decision support system	WP5	SMOB	M18	CERTH	DRAXIS	POLIMI
5.2	Second version of PERIVALLON platform, secure data management and decision support system	WP5	ETRA	M26	MT	CERTH	SMOB
5.3	Final version of PERIVALLON platform, secure data management and decision support system	WP5	SMOB	M34	SAFE	ARPA	POLIMI
6.1	Initial version of pilot implementation and evaluation	WP6	SAFE	M21	ETRA	CERTH	MT
6.2	Initial version of end-user training and innovative curricula	WP6	BAYHFOD	M21	KEMEA	SPA	CENTRIC
6.3	Final version of pilot implementation and evaluation	WP6	SAFE	M36	ETRA	CERTH	MT
6.4	Final version of end-user training and innovative curricula	WP6	BAYHFOD	M36	KEMEA	SATCEN	CENTRIC
7.1	Plan for dissemination and exploitation including communication activities, and project website	WP7	DRAXIS	M6	UNIVIE	BAYHFOD	CERTH
7.2	Initial report on dissemination, communication, collaboration, market analysis, exploitation, impact pathways assessment, and policy recommendations	WP7	ETRA	M24	SMOB	CERTH	SPA
7.3	Final report on dissemination, communication, collaboration, market analysis, exploitation, impact pathways assessment, and policy recommendations	WP7	ETRA	M36	SPA	DYLOG	SMOB
8.1	H - Requirement No.1	WP8	ETRA	M9	CENTRIC	POLIMI	CERTH
8.2	POPD - Requirement No.2	WP8	ETRA	M9	CERTH	SAFE	CENTRIC
8.3	OEI - Requirement No.3	WP8	ETRA	M12	CERTH	POLIMI	SAFE

The deliverable production and review procedure consists of the following steps:

- The deliverable lead beneficiary will provide the Table of Contents (ToC) and upload it to the project repository **at least 90 days** before the submission date. The deliverable lead beneficiary will inform the Project Coordinator (PC), the Scientific and Technical Manager (STM), and all contributing partners. Comments should be provided **within 10 days**.
- A preliminary full version of the deliverable will be sent to the WP leader as well as to the peer reviewers allocated in Table 15 at least **four weeks in advance** of the due date. The Project Coordinator and the Scientific and Technical Manager will be also informed. It needs to be noted that early draft versions of the deliverable should be periodically circulated in order to confirm that the work progresses as expected, and progress update will be reported during the regular PMB meetings.
- The peer reviewers will review the document and send comments **within 10 days** using the track changes mode in the draft version of the document. In case they encounter that the document does not fulfil the requirements for such document, they will notify accordingly the deliverable responsible partners within **one week** after the request.
- The new version of the document will be again available for the deliverable responsible partner who will modify the document accordingly. Upon confirming with the peer reviewers that their comments have been effectively addressed, the final version will be sent to the Project Coordinator **at least 10 days** before the delivery date.

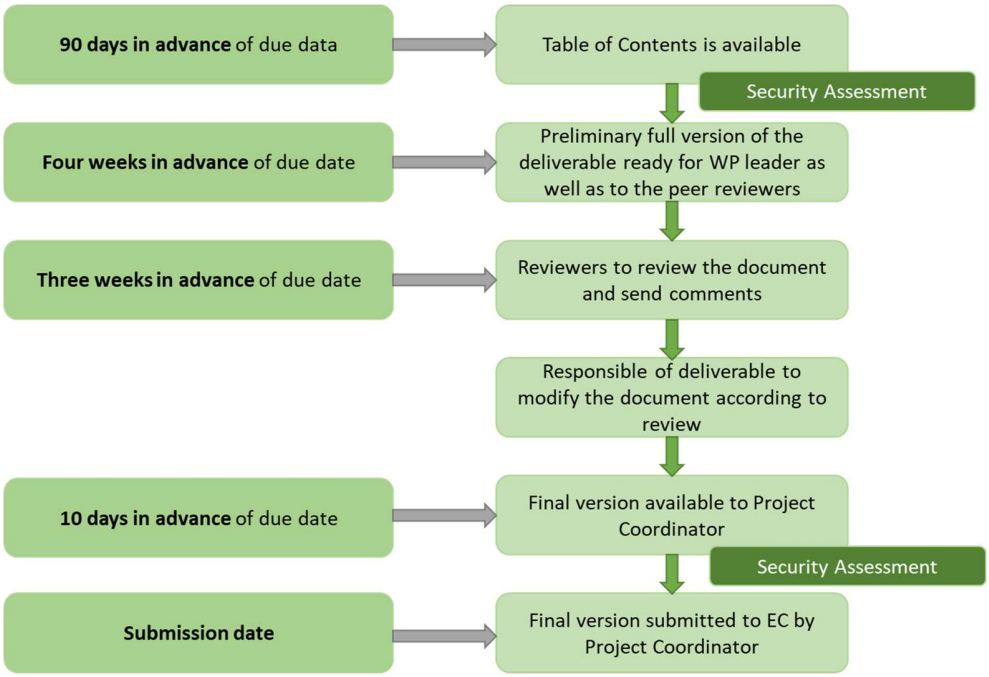

Figure 9: Internal review procedure

8.2 Security Assessment Control (SAC) procedure

KEMEA, who is also part of the SAB, has been designated as the responsible partner to monitor the security aspects of PERIVALLON (as described in DoA, Part B, T1.5), supported by the PSO and the SAB.

Within the security assessment of all project deliverables, as described in DoA, Part B, Annex 5, the following procedure will be followed:

- Once the ToC is available (after the first step in Section 8.1 is completed), the PC will forward it to KEMEA. KEMEA will examine whether the prepared ToC is in line with the deliverable dissemination level as documented in the GA. In case there are any security concerns, KEMEA will liaise with the SAB to evaluate whether the ToC should be amended and inform the PC accordingly. The process should take **no longer than 10 working days.**
- Once the internal review procedure is finalised, the PC will forward the deliverable to KEMEA, who will coordinate the review of the document from the security perspective, which should be completed **within 7 days** in parallel to the deliverable peer review. Comments and changes will be added to the draft version of the document using tracked changes. The security assessment control effort of deliverables has been distributed among SAB members according to Table 16.
- After receiving the security assessment from KEMEA, the PC will forward the results to the deliverable lead beneficiary in order to prepare the final version of the document. This will take into account the considerations provided by the SAB.
- The lead beneficiary delivers the final document to the PC for submission.

Table 16: Security Assessment Control Responsible partners

D#	D. Title	WP#	Leader	Due Date	SAC
1.1	Project Management and quality assurance handbook	WP1	ETRA	M3	KEMEA
1.2	Initial Data Management Plan	WP1	UNIVIE	M6	KEMEA
1.3	Security, Ethics, Legal and Privacy monitoring, Final Data Management Plan & IPR management	WP1	UNIVIE	M36	SPA
1.4	Public Activity Report	WP1	ETRA	M36	KEMEA
2.1	Co-creation of use case scenarios, specification of user and security requirements	WP2	KEMEA	M9	CERTH
2.2	Platform architecture and technical requirements	WP2	SMOB	M12	KEMEA
2.3	Environmental crime observatory	WP2	BAYHFOD	M32	CERTH
2.4	Report on the legal and ethical framework of PERIVALLON	WP2	UNIVIE	M35	SPA
3.1	Initial version of AI-Based geospatial intelligence, remote sensing and scanning tools	WP3	POLIMI	M16	CERTH
3.2	Final version of AI-Based geospatial intelligence, remote sensing and scanning tools	WP3	POLIMI	M33	CENTRIC
4.1	Initial version of online monitoring and analysis tools	WP4	CERTH	M17	IT-CC
4.2	Final version of online monitoring and analysis tools	WP4	CERTH	M33	RAD
5.1	First version of PERIVALLON platform, secure data management and decision support system	WP5	SMOB	M18	CERTH
5.2	Second version of PERIVALLON platform, secure data management and decision support system	WP5	ETRA	M26	CENTRIC
5.3	Final version of PERIVALLON platform, secure data management and decision support system	WP5	SMOB	M34	RBP

6.1	Initial version of pilot implementation and evaluation	WP6	SAFE	M21	KEMEA
6.2	Initial version of end-user training and innovative curricula	WP6	BAYHFOD	M21	IT-CC
6.3	Final version of pilot implementation and evaluation	WP6	SAFE	M36	KEMEA
6.4	Final version of end-user training and innovative curricula	WP6	BAYHFOD	M36	RAD
7.1	Plan for dissemination and exploitation including communication activities, and project website	WP7	DRAXIS	M6	KEMEA
7.2	Initial report on dissemination, communication, collaboration, market analysis, exploitation, impact pathways assessment, and policy recommendations	WP7	ETRA	M24	KEMEA
7.3	Final report on dissemination, communication, collaboration, market analysis, exploitation, impact pathways assessment, and policy recommendations	WP7	ETRA	M36	KEMEA
8.1	H - Requirement No.1	WP8	ETRA	M9	RAD
8.2	POPD - Requirement No.2	WP8	ETRA	M9	RBP
8.3	OEI - Requirement No.3	WP8	ETRA	M12	CENTRIC

8.3 Dissemination and Communication Review procedure

For better clarity, the review procedure is distinguished per type of dissemination and communication action: 1) Scientific publications; 2) Press releases, newsletters, etc.; 3) Communication on Social Media:

- Dissemination in the form of **scientific publications**: Prior notice of any planned publication shall be given to the other partners (using the Press Office and WP7 mailing list) **at least 45 days before the final/official publication**. Any objection to the planned publication shall be made in written notice to the Project Coordinator and to the partner/s proposing the dissemination within **30 days after receipt of the notice**. If no objection is made within the time limit stated above, the publication is permitted. If an objection has been raised, the involved partners shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting partners shall not unreasonably continue the opposition if appropriate measures are taken following the discussion. The objecting partner can request a **publication delay of not more than 90 days** from the time it raises such an objection. After 90 calendar days the publication is permitted, provided that the objections of the objecting partner have been addressed.
- Communication in the form of **press releases, newsletters, etc**.: Partners should send the proposed content to the **Press Office and WP7 mailing list allowing 1 week for reaction**. If there is no objection after 1 week, partners may proceed to the publication.
- Communication on **Social Media**:
    - In case that a partner's post is time-relevant, they should comply with the following indications before proceeding with its publication: 1) It does not contain any actual content that could raise criticism, 2) It does not include personal data and especially personal data from LEA officers (e.g. faces and names that can be tracked to the specific location and time of the event (unless the event was already closed)). Example: *I am ready*

to present #PERIVALLON project at the #CERIS conference. Stay tuned! #HEurope #EnvironmentalCrime

- In case that the partner's post contains actual content, it should be sent first to the **Press Officer's approval mailing list** for possible objection or moderation. The partner should allow at least **24 hours for any reaction** before posting it. Example: *#PERIVALLON is about "XYZ" and uses "the X type of technology" to prevent and detection organised environmental crime in Europe.* #HEurope. Since this example contains actual content/information about the approach or purpose of PERIVALLON, it is recommended to first ask for the post to be approved. It is also recommended to send a draft of such posts to the Press Office before the event, considering the procedure described, so that the post can be published during the event.
- For events organised by the project, the Press Officer will liaise with the rest of the Press Office members to provide pre-defined post structures that can be used by all partners to disseminate the event.

KEMEA, as Security Monitoring Responsible of the Press Office, will liaise with the SAB and PSO should the need arise to further evaluate the sensitiveness of scientific publications, press releases and newsletters. In general, the dissemination and communication activities should avoid targeting people, sites and personal mails within the consortium.

9. Risks and Opportunities Management Plan

The project management approach used in PERIVALLON provides mechanisms to identify and resolve various potential project **risks**, which can be can be driven by internal or external factors, ensuring efficient implementation of the required contingency plans. Moreover, the identification of **opportunities** during the project implementation, with the support of all the actors in the research, development and innovation areas of PERIVALLON, will ensure that the project management will be able to take fast actions and wise decisions to address them.

The general PERIVALLON philosophy is based on the following pillars:

- **Effective project management:** The management structures and procedures ensure that project management can closely supervise the delivery of the expected results.
- **Contingency planning:** The work plan has been designed to allow for effective contingency planning in case of major risks. For each risk, a strategy will be developed considering the possibility to avoid or mitigate it, the plan for reducing its probability of occurrence and, in the case of materialisation of the risk, the plan for minimizing the impact on the project overall objectives and agreements.
- **Multiple loosely coupled objectives:** Finally, even when the goal of the project is to present a fully operative PERIVALLON platform, some of its extensions and components can be decoupled and exploited independently.

This strategy is aligned with the following ten golden rules of the risk and opportunities management.

1. Make the R&O management part of the project.
2. Identify R&O early in the project.
3. Communicate about R&O.
5. Consider both risks and opportunities.
6. Clarify ownership issues.
7. Prioritise R&O.
8. Analyse R&O.
9. Plan and implement risk responses and opportunities realisation.
10. Register project R&O.
11. Track R&O and associated tasks.

9.1 Risk Management Approach

The risk management in PERIVALLON is based on the FERMA standard [4].

The consortium's experience in managing complex international projects in conjunction with its technological competence on communication and networking permits to identify the following main areas of possible risks:

1. **Technical:** lack of competence to overcome unexpected difficulties.
2. **Financial:** deterioration of the economic situation of a partner, which imposes a stop or an unacceptable reduction of all its activities.
3. **Schedule:** delay in completing main project milestones or deliverables by the due date.

Various combinations of these three main negative factors could also happen with the effect of increasing their impact.

The level of technical risk is intrinsically reduced by the composition of the PERIVALLON Consortium, thanks to the participation of a well-assorted set of primary Industrial Organisations and Research Centres, with a demonstrable consolidated experience as leaders in the technological areas in which each of them contributes to the project.

In case of financial problems or lack of resources availability, the corrective measures will include distributing to the remaining partners the activity not fulfilled or to subcontract them to a third party, or a combination of the two. The corrective measures will be chosen after an evaluation of their impact and relevance on the project.

9.2 Risk Management Framework Definitions

Risk

In the context of the project management, a risk is a measure of the inability to achieve overall project objectives within defined costs, schedule, and technical (performance and quality) constraints. The risk has two components:

1. The **likelihood** of failing to achieve a particular outcome and,
2. the **consequences** (impact) of failing to achieve that outcome.

For PERIVALLON project, the risk is therefore a measure of the difference between the actual performance of a process and the known best practice for performing that process.

Risk Event

Risk events are those events within PERIVALLON that, if they go wrong, could result in problems in the development of the expected research results, production and assessment of the prototypes, and dissemination of the results. Risk events should be defined to a level such that the risk and causes are understandable and can be accurately assessed in terms of likelihood and consequence to establish the level of risk.

Type of Risk

A **Technical Risk** is the risk associated with the evolution of the research results and the prototypes development of PERIVALLON affecting the level of performance necessary to meet the requirements of the DoA.

A **Financial Risk** is associated with the ability of the project to achieve its cost objectives as determined in the DoA. Two risk areas bearing on costs are:

1. the risk that the cost estimates and objectives are not accurate and reasonable; and
2. the risk that project execution will not meet the cost objectives as a result of a failure to mitigate technical risks.

Schedule Risks are those associated with the adequacy of the time estimated and allocated for the development, production, and fielding of the system. Two risk areas bearing on schedule risk are:

1. the risk that the schedule estimates and objectives are not realistic and reasonable; and
2. the risk that program execution will fall short of the schedule objectives as a result of failure to mitigate technical risks.

Risk Ratings

This is the value that is given to a risk event (or the overall project) based on the analysis of the likelihood and impact of the event. For PERIVALLON, risk ratings of Low, Moderate, or High are assigned based on the following criteria:

- **Low Risk:** Has little or no potential for increase in cost, disruption of schedule, or degradation of performance. Actions within the scope of the planned project and normal management attention should result in controlling acceptable risk.
- **Moderate Risk:** May cause some increase in cost, disruption of schedule, or degradation of performance and/or quality. Special action and management attention may be required to control acceptable risk.
- **High Risk:** Likely to cause significant increase in cost, disruption of schedule, or degradation of performance and/or quality. Significant additional action and high priority management attention will be required to control acceptable risk. This type of risk may be subject to a report to the Commission.

Contingency Plan

Once identified and assessed, it is essential to trace risks both in their status (Risk Monitoring) and with respect to necessary activities. A contingency plan should cover the registration and reaction to the change of environmental conditions to avoid risk events.

9.3 Risk Management Organisation and Responsibilities

The **Project Coordinator (PC)** is the overall risk manager and responsible for:

- Briefing the consortium on the status of PERIVALLON risks during CP meetings.
- Tracking efforts to reduce high risk to acceptable levels.
- Facilitating consortium-level risk assessments during PMB meetings.
- Combining risk briefings, reports, and documents as delivered by the WP leaders and required for project reviews by the Commission.

The **PMB** assists the PC with:

- Maintaining and supporting the Risk Management Plan.
- Updating and monitoring the risks, relevant to the responsibilities assigned to each member, in the Risk Management Table.

Specifically, the **Work Package Leaders** are responsible for the risk assessment within their WPs:

- Risk identification.
- Risk analysis.
- Risk handling.
- Risk information to the PC (in case of moderate or high risk).
- Risk monitoring.
- Briefing the respective Work Package members on the status of risks.
- Tracking efforts to reduce low and moderate risk to acceptable levels.
- Preparing risk briefings, reports, and documents required for project reviews during PMB meetings.

9.4 Risk Management Process

A risk management process will be implemented during the project duration. Different stages must be part of this iterative process, as shown in Figure 10. Each risk assessment is a combination of risks identified/analysed in the previous iteration and the identification/analysis of risks on current milestones/deliverables according to the DoA.

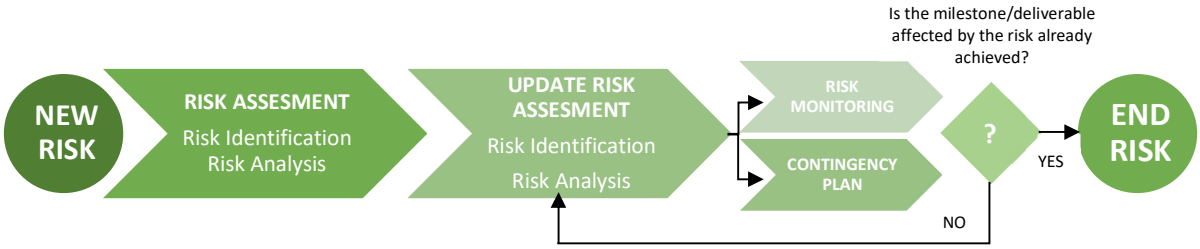

Figure 10: Risk Management Process

9.4.1 Risk Assessment

Risk assessment includes the identification of critical risk events/processes, which could have an adverse impact on the project, and the analysis of these events/processes to determine the likelihood of occurrence variance and consequences.

9.4.1.1 Risk Identification

Risk identification is the first step in the assessment process. The basic process involves searching through the entire PERIVALLON project plan to determine those critical events that would prevent the project from achieving its objectives.

The identified risks will be documented in the Risk Management Table – see Section 9.5 -with a statement of the risk and a description of the conditions or situations causing concern and the context of the risk.

The risks will be primarily identified by the WPL, with the support of Task Leaders. All individuals in the PERIVALLON project can detect and report a risk to a WPL. The basic procedure of identifying risks consists of the following steps:

1. Understand the objectives (both "Technological" and "Impact and user oriented"). Examine the conditions under which the values must be achieved by referring or relating to the DoA.
2. Identify the processes and activities (tasks) that are needed to produce the results.
3. Evaluate each activity/task against sources/areas of risk.

9.4.1.2 Risk Indicators

The following indicators are helpful for identifying risks:

- Lack of stability, clarity, or understanding of requirements: Requirements drive the research and the design of the prototypes. Changing or poorly stated requirements guarantees the introduction of performance, cost, and schedule problems.
- Insufficient or inadequate resources: People, funds, schedule, and tools are necessary ingredients for successfully implementing a process. If any are inadequate, to achieve the foreseen project results, there is risk.
- Test Failure may indicate which corrective action is necessary. Some corrective actions may not fit available resources, or the schedule, and (for other reasons as well) may contain risk.
- Negative trends or forecasts are cause for concern (risk) and may require specific actions to turn around.
- Communication is a critical success factor for PERIVALLON. Failure to provide available information actively as well as to demand required information actively will both introduce considerable risk.

9.4.1.3 Risk Analysis

Risk analysis is an evaluation of the identified risk events to determine possible outcomes, critical process variance from known best practices, the likelihood of those events occurring, and the consequences (impact) of the outcomes. Once this information has been determined, the risk event may be rated against the project's criteria and an overall assessment of low, moderate, or high may be assigned.

The basic procedure for analysing risk comprises the following steps:

1. Gather all identified risks.
2. Assignment of likelihood and consequence to each risk event to establish a risk rating.
3. Prioritisation of each risk event relative to other risk events.
4. Quantitative analysis.

For each risk identified during the risk identification process an assignment using Likelihood and Consequence/Impact assessments will be performed. A risk assessment matrix is used for PERIVALLON, through the Risk Assessment Table, to provide a quantitative approach for this process.

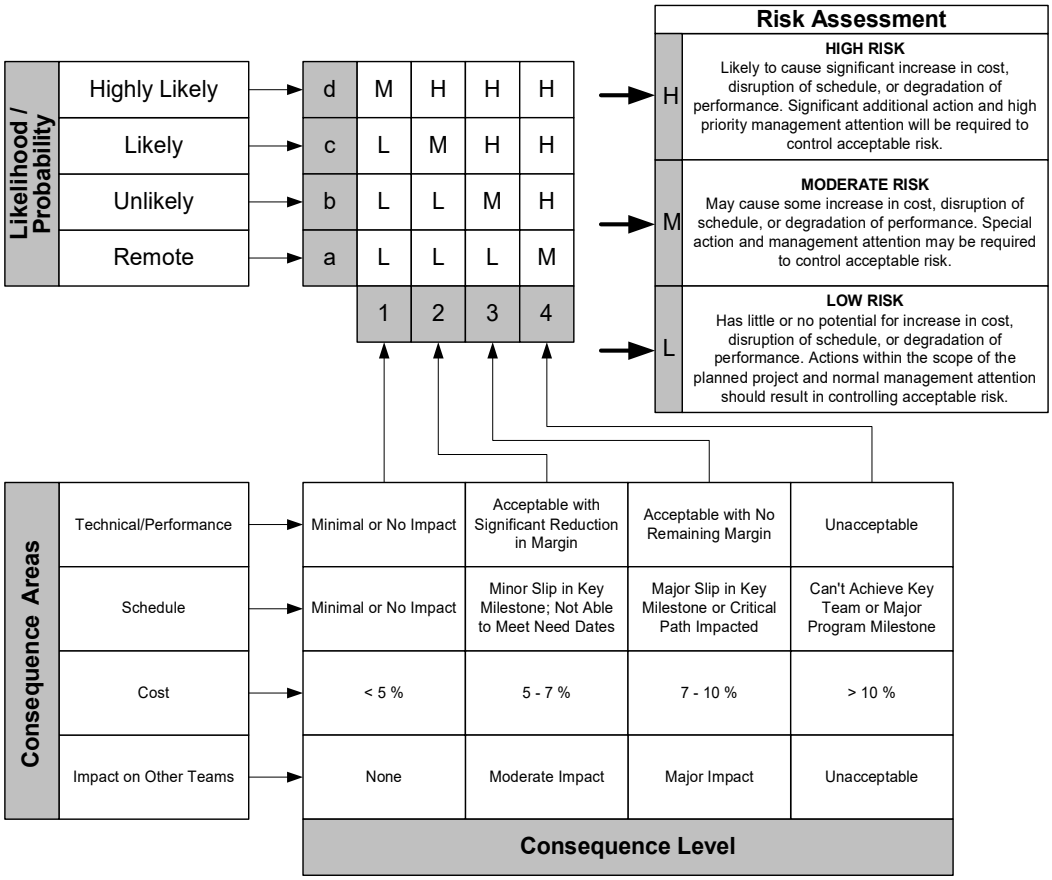

Figure 11: Risk Assessment Matrix

The following items provide some more details on the most important issues of the risk assessment matrix:

- **Likelihood/Probability:** For each risk area identified, the likelihood of the risk must be determined. There are four levels (a-d) in the PERIVALLON risk assessment process, with the corresponding criteria of Remote, Unlikely, Likely and Highly Likely. If there is zero likelihood of an event, there is no risk per our definition.
- **Consequence/Impact:** For each risk area identified, the following question must be answered: Given that the event occurs, what is the magnitude of the consequence? There are four levels of consequence (1-4) for this project. Further, there are four areas that we will evaluate when determining consequence: technical performance, schedule, cost, and impact on other teams (work packages). At least one of the four consequence areas need to apply for there to be a risk; if there is not adverse consequence in any of the areas, there is not risk at all.
    - **Technical Performance:** this category refers to content and includes all requirements that are not included in the other three metrics of the consequence table.
    - **Schedule:** this category refers to impacts in the overall time framework of the project. It is important to avoid excluding a consequence level from consideration just because it does not affect the work plan of a specific team/work package – i.e. try to have the whole PERIVALLON consortium in mind.

- **Cost:** since costs vary significantly within PERIVALLON, the percentage criteria shown in the matrix may not strictly apply at the lower levels of the work breakdown structure. Therefore, the work package leaders may set the percentage criteria that best reflect their situation, but have to report any deviation from the matrix to the PC.
- **Impact on Other Teams (work packages):** both the consequence of a risk and the mitigation actions associated with reducing the risk may impact another team. This may involve additional coordination or management attention (resources) and may therefore increase the level of risk.

9.4.1.4 Evaluation of Risks

During Risk Analysis, it is possible that identified scenarios of occurring risk events cause impact to several impact areas. In this case, a consequence combination is present, and the worst case of the risk assessment (high risk, moderate risk, low risk) is applicable and influences the required actions as described in the matrix. Of course, all identified consequence areas to a risk event must be recorded and the consequence area causing the final assessment must be clearly identified.

9.4.1.5 Quantitative analysis

After completion of the risk analysis, the quantitative analysis takes place and assigns a rating to each risk (low, medium, high). This finally yields an overview on the risk status over the entire course of the project and is part of the risk table in section 9.5.

9.4.2 Risk Monitoring

Risk monitoring systematically tracks and evaluates the performance of risk-handling actions. It is part of the PC function and responsibility and will not become a separate discipline. Essentially, it compares predicted results of planned actions with the results actually achieved to determine the status and the need for any change in risk-handling actions.

To ensure that significant risks are effectively monitored, risk-handling actions will be reflected in the Risk Table and analysed at each CP meeting. Identifying these risk-handling actions and events in the context of the work breakdown structure establishes a linkage between them and specific work packages, making it easier to determine the impact of actions on cost, schedule, and performance.

Each member of the consortium is responsible for monitoring and reporting the effectiveness of the handling actions for the risks assigned to them.

- Risks rated as **High** will be reported to the PC, who will handle and track them until the risk is considered Medium or Low and recommended for "Close Out".
- Risks rated as **Moderate** will be reported to WPLs, who will also track them until the risk is considered Low and recommended for "Close Out". However, the risk will be handled within the work package under the responsibility of the work package leader.
- Risks rated as **Low** are tracked within the Work Package and monitored continuously to ensure they stay low.

The risk management process is continuous. Information obtained from the monitoring process is fed back for reassessment and evaluations of handling actions to improve the process itself in cooperation with the PC and STM.

9.4.3 Contingency Plan

After the project's risks have been identified and assessed, the approach to handle each significant risk must be developed. There are essentially four techniques or options for handling risks:

- Avoidance (application of tasks in order to avoid the risk event).
- Control (watch the environmental conditions for influences on an already assessed risk).
- Transfer (application of tasks to set a risk to a lower level).
- Assumption (base a decision for handling plans on the assumption the risk event happens).

For all the identified risks, the various handling techniques should be evaluated in terms of feasibility, expected effectiveness, cost and schedule implications, the effect on the system's technical quality/performance and the most suitable technique selected. The results of the evaluation and selection will be included and documented in the risk table, with a description of the Contingency Plan or including a link to the relevant project's documents.

The respective Work Package Leader or (in case of high risk) the PC is responsible for evaluating the risk handling options that are best fitted to the project's circumstances. These contingency plans shall be presented during PMB meetings or Plenary Meetings, and once approved, these are included in the work package's or project's strategy or management plans, as appropriate.

For each selected handling option, the responsible project team member will develop specific tasks that, when implemented, will handle the risk.

9.5 PERIVALLON Risk Management Table

The main tool to keep track of the different identified risks is the Risk Management Table. It contains all the fields to correctly assess, monitor and mitigate a risk.

The table is structured considering the WPs in PERIVALLON in order to create a direct connection – by default – between the risks and the responsible of its control. It could be the case that the **risk manager – or WP leader –** is not the same as the **risk responsible – partner that should provide an action plan and mitigate the problem.**

The risk table provides an easy way to quantify the severity of the problem. It implements the methodology described in Section 9.4 to compute a **Global Risk Indicator** that considers the assessment of the four consequence areas as a whole. In this way, the partner identifying a risk (the **WP leader** in collaboration with the task leaders) only must indicate the likelihood of the risk (**HL=Highly Likely=4; L=Likely=3; U=Unlikely=2; R=Remote=1**) and the impact in each of the consequence areas (1 Minimum, 4 Maximum). The table is capable of translating the assessment into the three categories (high risk, moderate risk, low risk) and calculate the Global Risk Indicator as an average of the different areas (0 Minimum, 4 Maximum).

A low global indicator may still imply a high risk, since the worst case should always be considered. A high risk in a single area will imply a low global indicator; however, it requires the maximum priority and

attention. The global indicator serves to prioritize and order risks with the same qualification but affecting more than one area.

The risk table is available at the project repository in Alfresco (PERIVALLON/04_Work Packages/WP1/T1.2). The risks identified in the “List of Critical Risks” of DoA, Part A were included, together with additional risks identified by the Work Package Leaders. An initial risk assessment was performed during the first months of the project and is reported below.

	Nr of Risk	WP leader or Risk Manager	Date		Risk description	Type of Risk (Technical/Financial/Schedule)	Risk responsible	Milestone or deliverable affected	Likelihood HL/L/U/R	Consequence/Severity 1=Minimum-4=Maximum				Risk Assessment	Global Risk Indicator	Dates and trends			Contingency Plan or link to document	Comments
			Identification	Last update						Technical Performance	Schedule	Cost	Impact on other WP		0=Minimum 4=Maximum	Open	Trend (+ - =)	Close		
WP1 - Project Management and Coordination	WP1-1	ETRA	27/01/2023		COVID-19 impacting the working capacity of partners	Technical / Schedule	ETRA	N/A	2	2	2	2	2	LOW	1	27/01/2023			Adaptability of in-person methodologies to alternative methodologies (switch to online proceedings, small groups of participants)	
	WP1-2	ETRA	27/01/2023		Inadequate performance, quality or results	Technical/Financial/Schedule	ETRA/CERTH	MS6, MS8, MS10	2	3	2	3	2	MODERATE	1.25	27/01/2023			Continuos review of progress and results by Coordinator, Technical and Scientific Managers, and end-users through plenary meetings, integration prototype demos, and field trials	
	WP1-3	ETRA	27/01/2023		Personal friction between partner representatives, misunderstandings, and insufficient communication	Technical	ETRA	N/A	2	2	1	1	1	LOW	0.625	27/01/2023			Continuous interpersonal formal and informal communications, creation of a pleasant and collaborative atmosphere. Facilitation of face-to-face and online meetings, encouraging partner-to-partner sessions in addition to Consortium sessions, use of an online forum for open	
	WP1-4	ETRA	27/01/2023		AI tools violate data protection or privacy	Technical	UNIVIE	MS2, MS3, MS6, MS10, D1.2, D1.3, D8.1, D8.2	2	3	2	1	2	MODERATE	1	27/01/2023			PERIVALLON will safeguard all privacy requirements. Any personal data will be (pseudo-)anonymised (where needed) according ethical protocols. The consortium will follow GDPR	
	WP1-5	ETRA	27/01/2023		Partner(s) fail to provide results according to project objectives	Technical/Financial	ETRA/CERTH	N/A	1	3	2	3	3	LOW	0.6875	27/01/2023			To address this risk, the actions envisioned are: (i) attempt to align partner activities and objectives; (ii) allocate/move effort to toher partners/activities; (iii) consider new partners join the consortium	
	WP1-6	ETRA	27/01/2023		1 consortium member not able to fulfil its responsibilities	Technical/Financial/Schedule	ETRA	N/A	2	2	3	3	2	MODERATE	1.25	27/01/2023			The Project Coordinator monitors the partners continuously, including through reports. In case of risk detection, the PMB will decide for possible replacement and redistribution of the tasks	
	WP1-7	ETRA	27/01/2023		Partner drops out the project	Technical/Financial/Schedule	ETRA	N/A	1	2	2	2	3	LOW	0.5625	27/01/2023			Direct replacement with a partner of similar expertise. This will be facilitated by the good reputation of all consortium partners	
	WP1-8	ETRA	27/01/2023		Intellectual property, copyright, licensing, or trade secret issues	Technical	ETRA	MS10, D1.3	3	1	1	1	3	HIGH	1.125	27/01/2023			Binding CA to resolve and clarify IP, licensing, or trade secret sharing issues	
WP2 - Intelligent picture & PERIVALLON requirements and specifications	WP2-1	KEMEA	27/01/2023		Incomplete requirements, unrelistic expectations	Technical	KEMEA	D2.1	2	3	2	2	1	MODERATE	1	27/01/2023			WP2 will define user requirements and ensure feasibility and agreement of end-users and technical partners on the scope	
														LOW	0					
														LOW	0					
														LOW	0					
WP3 - AI-based Geospatial Intelligence, Remote Sensing and Scanning	WP3-1	POLIMI	27/01/2023		Increased computational resources, low performance on detection accuracy, unavailable datasets	Technical	POLIMI	D3.1, D3.2	2	3	2	2	2	MODERATE	1.125	01/02/2023			Optimisation to reduce complexity and usage of high-end hardware components, data augmentation to improve the size of the existing datasets	
	WP3-2	POLIMI	27/01/2023		Unsuccessful cooperation of the 3D mapping techniques with the UAVs' path planning tools, in order to work in a complementary way and provide the best possible results for this task.	Technical	CERTH	D3.1, D3.2	2	3	2	2	2	MODERATE	1.125	01/02/2023			Novel optimisation techniques will be used. The developed solution will be extensively tested both in realistic simulated and real-life environments.	
	WP3-3	POLIMI	27/01/2023		Lack of training datasets relevant to PERIVALLON.	Technical	DYLOG	D3.1, D3.2	2	3	3	2	2	MODERATE	1.25	01/02/2023			Annotated data will be generated	
	WP3-4	POLIMI	27/01/2023		Performance is limited by the quality of the satellite images where an area of interest would be identified for further inspection; varying and changing flight area regulations; bandwidth limitations; lack of real-time communication.	Technical	CERTH	D3.1, D3.2	2	3	2	2	2	MODERATE	1.125	01/02/2023			Precise planning, as well as adaptive orientation and direction with different heights imagery capture will eliminate the occlusion risk of non-defining accurately the area of interest; understanding the regulations in all proposed use cases and develop and demonstrate technological feasibility locally according to known restrictions	

	Nr of Risk	WP leader or Risk Manager	Date		Risk description	Type of Risk (Technical/Financial/Schedule)	Risk responsible	Milestone or deliverable affected	Likelihood HL/L/U/R	Consequence/Severity 1=Minimum-4=Maximum				Risk Assessment	Global Risk Indicator	Dates and trends			Contingency Plan or link to document	Comments
			Identification	Last update						Technical Performance	Schedule	Cost	Impact on other WP		0=Minimum 4=Maximum	Open	Trend (+ - =)	Close		
WP4 - Online Monitoring for Environmental Crime Detection	WP4-1	CERTH	01/02/2023		Difficulties in identifying relevant Web sources	Technical	CENTRIC	D4.1/D4.2	3	3	3	1	2	HIGH	1.6875	03/02/2023			Liaise with end users and domain experts for guidance	
	WP4-2	CERTH	01/02/2023		Collection of complicated user requirements	Technical	DRAXIS	D4.1/D4.2	4	3	3	3	3	HIGH	3	03/02/2023			Dedicated meetings focusing on the users' needs	
	WP4-3	CERTH	01/02/2023		Lack of lexical resources, especially in under-represented languages, may lead to low performance	Technical	CERTH	D4.1/D4.2	3	3	3	1	2	HIGH	1.6875	03/02/2023			Translation of under-represented languages to a better supported one using MT and exploitation of contextual information for possible recovery of missing parts	
	WP4-4	CERTH	01/02/2023		Domain specific visual data (videos or images) may not be available (i.e. cylinder-related objects, cylinders' printed labels)	Technical	CERTH	D4.1/D4.2	4	3	3	1	2	HIGH	2.25	03/02/2023			Data to be annotated by consortium partners; synthetic data or unsupervised/weekly supervised learning-based approaches could be developed	
	WP4-5	CERTH	01/02/2023		Low accuracy of produced models	Technical	MT	D4.1/D4.2	3	3	2	2	2	HIGH	1.6875	03/02/2023			The risk is mainly associated with potential lack of training examples (reported incidents of interest that can be matched in MT's AIS database). In this case synthetic data will be produced with the guidance of experts in the consortium. Additionally, any potential factors which may capture latent features hidden in the data will be incorporated in the trained models.	
														LOW	0					
														LOW	0					
WP5 - PERIVALLON Platform and Intelligent Decision Support System	WP5-1	ETRA	27/01/2023		Different existing solutions brought to the project with different interoperability standards	Technical	ETRA	D5.1, D5.2, D5.3	2	2	2	1	3	MODERATE	1	27/01/2023			A thorough analysis of existing standards and the selection of the most appropriate will be conducted. Interoperability is a main focus of the project and the tools developed.	
														LOW	0					
														LOW	0					
WP6 - Pilot Demonstration, Evaluation, and Training	WP6-1	SAFE	27/01/2023		Insufficient/inadequate feedback collected from end-users during demonstrations phase to be used for the evaluation process	Technical	SAFE	D6.1, D6.3	1	3	2	3	2	LOW	0.625	27/01/2023			End-users are part of the project consortium. Other end-users will be involved by organising meetings/workshops with them, repeating end- user feedback collection procedure if needed.	
	WP6-2	SAFE	02/02/2023		Insufficient/inadequate feedback collected from tech developers concerning requirements to perform testing sessions at SAFE Facility	Technical/Financial	SAFE	T6.1	1	3	1	2	1	LOW	0.4375	02/02/2023			SAFE Facility is already equipped to perform general testing activities. Tech developers are partner of the project and so, committed to aim at benefit from the most suitable testing environment	
	WP6-3	SAFE	02/02/2023		Mismatch between planned activities and availability of SAFE Facility	Schedule	SAFE	T6.3	3	1	2	1	1	MODERATE	0.9375	02/02/2023			SAFE Facility will be made available to tech partners along 24 months of the project implementation, allowing them to access it according to their individual or collective availability	
	WP6-4	SAFE	02/02/2023		Inadequate performance, quality, or results	Technical	CERTH	D6.3	2	4	1	4	3	HIGH	1.5	02/02/2023			PERIVALLON involves multiple Tech solutions that can work whether independently or in a integratted manner. Thus, even though any of them would not reach the expected quality level, the other components will enusre the overall system of technologies is suitable for the purpose	
	WP6-5	SAFE	02/02/2023		Limited availability of end-users to attend training sessions	Schedule	BayHFOD	T6.4	3	1	3	1	2	HIGH	1.3125	02/02/2023			End-users are partner of the projects and committed to involve participants during the project training sessions. An easly plan will ensure a sound coordination with them to identify suitable periods of delivery. Furthermore, the organisation of training sessions will be linked to other project activites/events to increase the number of attendees	
														LOW	0					
														LOW	0					
WP7 - Impact Creation and Outreach	WP7-1	DRAXIS	27/01/2023		Dissemination does not reach a significant number of people	Technical	DRAXIS	D7.2, D7.3	1	1	2	2		LOW	0.3125	27/01/2023			All consortium members have access to relevant communities in their fields and experience in disseminating activities. Increase presence in European and national events and the media	
														LOW	0					
														LOW	0					

9.6 Opportunity Management Framework Definition

"True" opportunity: event that has not yet occurred but may happen and is positive for the PERIVALLON project regarding the time, the cost and/or the performance.

Probability: it is based on the assessment of the partner detecting an opportunity, that can be successfully realised during the project implementation.

Impact: positive effects that the opportunity will have in the project in case it is materialised.

9.7 Opportunities Management Process

The process to correctly manage the Opportunities follows the steps described in the subsections below: assessment, monitoring and handling.

9.7.1 Opportunities Assessment

The assessment starts with the identification of opportunities which could have a positive impact on the project, and the analysis of the actions that can contribute to its final achievement.

Allocation of responsibilities: identification of the partner in charge of monitoring and handling the opportunity (**Opportunity Owner**). The WPs in which the opportunity may have an impact will be identified. An initial **identification of "Probability" and "Impact"** has to be carried out by the responsible partner, who will rank them into three levels: Low, Medium and High. According to these values, the Interest of the Opportunity will be identified in the register as shown in the Opportunity Interest Matrix (Figure 12 below):

Opportunity Interest Matrix

		Probability		
		L	M	H
Impact	L	L	L	M
	M	L	M	H
	H	M	H	H

Figure 12: Opportunity interest Matrix

Identification of actions: Actions to be carried out during the project implementation activities:

- Actions to get more information about the opportunity.
- Actions to improve the opportunity probability or impact.
- Actions to manage the opportunity once occurred.

This information will be documented in the same file as the Risk Management Table, but in a separate sheet called **PERIVALLON Opportunities Register**, which is available in the Alfresco Repository.

9.7.2 Opportunities Monitoring

Once the opportunities have been described jointly with their set of actions and owners, the phase of monitoring starts. The opportunities will be monitored at least each month by the Opportunity Owners and by the PC. Moreover, each time a new information about an opportunity arises, the Opportunities Register will be updated accordingly and distributed inside the consortium.

The monitoring process consists of the following set of activities:

- Review the list of current opportunities status (on-going, paused, closed).
- Identify the action plans to be started.
- Compute the efficiency of the actions plan associated with each opportunity.
- Identify the occurrence of new opportunities that shall go through the same process.
- Update the opportunities register and inform the stakeholders.

Each change in the Opportunities Register will be communicated to the consortium to inform all the partners about the current potential actions that may have an impact for them.

9.7.3 Opportunities Handling

The process to correctly manage the Opportunity handling strategies has the following steps:

- Create: Create a major change in the strategy or direction to realise an opportunity.
- Share: Seeking to share benefits with a third party, another project or organisation.
- Increase: Carry out specific actions to increase the probability or the impact of the opportunity.
- Wait for: Acknowledge the opportunity but not take any specific action to realise the opportunity.

9.8 PERIVALLON Opportunities Register

In this section, the reader can find the initial list of opportunities identified by PERIVALLON partners. This register will be updated once a new opportunity is detected and always after a Consortium Plenary meeting, in which a broad exchange of ideas is expected to occur, thus favouring the identification of opportunities.

OPPORTUNITIES REGISTER

	#	Opportunity Manager	Name	Description	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	Partner creating opportunity	Likelihood HL/L/U/R	Consequence/Impact 1=Minimum,	Interest	Date of identification	Last update	Estimated trend (+, -, =)	Actions to get more information about the opportunity	Action to improve the opportunity probability or impact	Action to manage the opportunity once exploited
Management	OM1	ETRA	Collaborate with sister project EMERITUS	Opportunity to collaborate with the sister project EMERITUS (https://cordis.europa.eu/project/id/101073874), funded under the same call than PERIVALLON	x								SAFE	3	3	HIGH	02/12/2022	27/01/2023	=	To get in touch with the EMERITUS project coordinator	To create a roadmap for collaboration, in which joint activities can take place during the two year of duration for both projects	To involve WP7 leader for dissemination of activities
																LOW						
																LOW						
																LOW						
																LOW						
Technical	OT1	ETRA	Register project under Copernicus Contributing Missions Online	Opportunity to access Copernicus data. If the project is registered, interested partners can file requests for Pleiades and WorldView 3 high resolution data.			x						SATCEN	3.00	3.00	HIGH	01/02/2023	03/02/2023	=	To search the terms and conditions of the service at the European Space Agency: https://spacedata.copernicus.eu/web/guest/non-space-research-eu-funded To meet with organisations in the consortium who already benefited from this service	To define what data will be requested to the service, alligned with the PUCs	TBD
	OT2															LOW						
																LOW						
																LOW						
																LOW						
Business	OB1															LOW						
	OB2															LOW						
																LOW						
																LOW						
																LOW						

10. Conclusions

10.1 Summary

The PERIVALLON cooperation processes and most relevant coordination information, tools and guidelines are summarised in this document. This Project Management and Quality Assurance Handbook offers a synthetic and high-value guide for all partners involved in PERIVALLON in order to facilitate and assure that all actions and activities within the project are coherent and well-coordinated, while a proper level of flexibility is maintained to allow an agile development and coordination of the actions.

This Project Management and Quality Assurance Handbook defines roles and responsibilities, with emphasis on the required skillsets to address the complexities and risks of the project. It also shows how the activities as well as the resources used in the project can be reported and it clearly defines the review process, which is a critical part in the whole process to ensure that the project deliverables achieve a high level of quality. The peer review reports, the different boards, the PMB meetings and the biannual meetings are the main tools in PERIVALLON to monitor the progress and quality of the project.

10.2 Future work and recommendations

This deliverable set PERIVALLON project management tools and guidelines, which should be taken into account by all project partners, and especially PMB members, for the whole project duration. Future work will be devoted to establishing the project Data Management Framework in D1.2, as well as detailed Dissemination and Communication Plan in D7.1.

References

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