



**Emerging technologies for the Early location of Entrapped victims under Collapsed Structures & Advanced Wearables for risk assessment and First Responders Safety in SAR operations**

**D10.1 Project Handbook, Quality Plan & Risk Management**

**Work Package:** WP10 – Project Coordination and Quality Assurance

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## Search and Rescue Project Profile

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	NATIONAL TECHNICAL UNIVERSITY OF ATHENS (NTUA) <u>Co-ordinator</u>	Greece
	AIDEAS OÜ (AIDEAS)	Estonia
	SOFTWARE IMAGINATION & VISION S.R.L (SIMAVI)	Romania
	MAGGIOLI SPA (MAG)	Italy
	KONNEKT-ABLE TECHNOLOGIES LIMITED (KT)	Ireland
	THALES ITAIA Italia SPA (THALIT)	Italy
	ATOS IT SOLUTIONS AND SERVICES IBERIA SL (ATOS)	Spain
	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (CERTH)	Greece
	UNIVERSITA DEGLI STUDI DI CAGLAIRI (UNICA)	Italy

	UKEMED GLOBAL LTD (UGL)	Cyprus
	PUBLIC SAFETY COMMUNICATION EUROPE FORUM AISBL (PSCE)	Belgium
	UNIVERSITÀ DEGLI STUDI FIRENZE	Italy
	DEUTSCHES FORSCHUNGSZENTRUM FÜR KUNSTLICHE INTELLIGENZ (DFKI)	Germany
	UNIVERSITÀ CATTOLICA DEL SACRO CUORE (UCSC)	Italy
	VRIJE UNIVERSITEIT BRUSSEL	Belgium
	SYNYO GmbH (SYNYO)	Austria
	UNIVERSITEIT HASSELT (UHASSELT)	Belgium
	SPOLECZNA AKADEMIA NAUK (SAN)	Poland
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	<p>POMPIERS DE L'URGENCE INTERNATIONALE (PUI)</p>	<p>France</p>
	<p>ASOCIATA CLUSTERUL ROAMN RENTRU PROTECTIE SI ECOLOGIE IN DOMENIUL MATERIALELOR CHIMICE, BIOLOGICE, RADIOLOGICE/NUCLEARE SI EXPLOZIVE (PROECO)</p>	<p>Romania</p>
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## Executive Summary

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The Search and Rescue management activities aim to reach the objectives according to the project plan and within the allocated budget, resources and with the needed quality. Therefore, this deliverable defines the structures, the procedures and the supporting documents needed to assure the quality of the project deliverables and project management activities

With regards to the project management structure, it is based on the following bodies and roles: (i) the **Project Coordinator** (PC) as the main responsible of coordination and interface to the Commission (ii) the **General Assembly** (GA) as the supervisory body for the project execution with monitoring functions and decision-making body in all relevant project matters (iii) the **Scientific Technical Coordinator** (STC) as the main responsible for the overall project scientific and technical implementation, (iv) the **Scientific Technical Committee** (STC) as the body supervising accordingly the scientific and technical activities and results of the project, (v) the **Dissemination, Exploitation and Innovation Committee** (DEIC) as the body responsible for the dissemination, exploitation and innovation activities of the S& project and (vi) the **Management Support Team** (MST), as the instrument supporting and facilitating the work of the PC. Additionally, the project will involve Advisory and Ethics Boards, respectively engaging decision makers and stakeholder community representatives providing insights and recommendations, and independent experts monitoring and providing guidance over ethics-related issues.

In order to ensure a fluent communication inside the consortium, the PC will cost effectively schedule meetings, which will allow the participants to communicate face to face, only when necessary and will provide an alternative and maintain the communication during the whole project lifetime through different communication tools (e.g., teleconferences, mailing lists, project repository, etc.).

The document at hand further includes a quality assurance plan that will ensure that project quality remains at a high level throughout the project cycle. This plan sets a final internal review for each deliverable. The Quality Assurance is managed by the Quality Manager (QM) of the Search and Rescue project, who reports to the Project Coordinator.

Finally, the document details a risk management plan in order to anticipate risky situations that can affect the project normal progress or even put it in danger. Additionally, a list of potential mitigation measures is presented in order to take decisions accordingly and act in time to minimise the impact.

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## List of Abbreviations

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Abbreviation /acronym	Description
AB	Advisory Board
DEIC	Dissemination, Exploitation and Innovation Committee
DoA	Description of Action
Dx.y	Deliverable number y belonging to WP x
EB	Ethics Board
EC	European Commission
GA	General Assembly
H2020	Horizon 2020
ICT	Information and Communication Technology
ID	Identifier
ISO	International Organization for Standardization
KOM	Kick-off Meeting
MST	Management Support Team
Mx	Month x
No.	Number
PC	Project Coordinator
QM	Quality Manager
R&D	Research & Development
STC	Scientific Technical Committee
STC	Scientific Technical Coordinator
TBD	To Be Decided
ToC	Table of Contents
WP	Work Package
WPL	Work Package Leader

# 1 Introduction

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## 1.1 Purpose and Scope

The purpose of the present deliverable entitled "Project Handbook, Quality Plan & Risk Management" is to identify the procedures, the metrics and the supporting documents that need to be appropriately established in order to assure the quality of the project's deliverables and project management activities.

In this context, the present deliverable aims to fulfil the following main objectives:

- To establish a quality management system in accordance with the ISO 9001 (Quality Management Systems - Requirements) standard [1] [2].
- To assure the quality of the project's deliverables and project management activities.
- To identify the quality responsibilities of all partners within the consortium.
- To ensure proper co-ordination and communication channels among partners during the project's lifetime.
- To identify the potential risks of the project and to evaluate their impact and exposure.
- To proactively design risk elimination methods in order to guarantee the seamless and proper execution of the project's tasks.

Moreover, in order to ensure relevance of the quality plan, it will be revisited regularly, throughout the project's execution and especially when contractual changes occur.

This quality and risk management plan mainly addresses the consortium partners who are obliged to comply with its requirements.

## 1.2 Structure of the Document

The structure of this document is as follows:

- Section 2 provides an overview of the quality management structure and responsibilities.
- Section 3 presents the project and quality management procedures that will be applied in the span of the Search and Rescue Project.
- Section 4 describes the requirements, the conventions and relevant mechanisms for document control management.
- Section 5 refers to procedures and metrics for quality measurement, analysis and improvement.
- Section 6 presents the risk management plan.
- Annex I cites the relevant bibliography and references.
- Annex II presents the deliverable document template.
- Annex III outlines the presentation template for all presentations under the Search and Rescue scope.
- Annex IV provides the meeting agenda template.
- Annex V presents the meeting minutes' template.
- Annex VI provides the internal audit report template.
- Annex VII presents the template for the configuration management of the Search and Rescue deliverables, reports and documents.
- Annex VIII defines the task management template.
- Annex IX provides the Risk Information template, used for identifying risks.

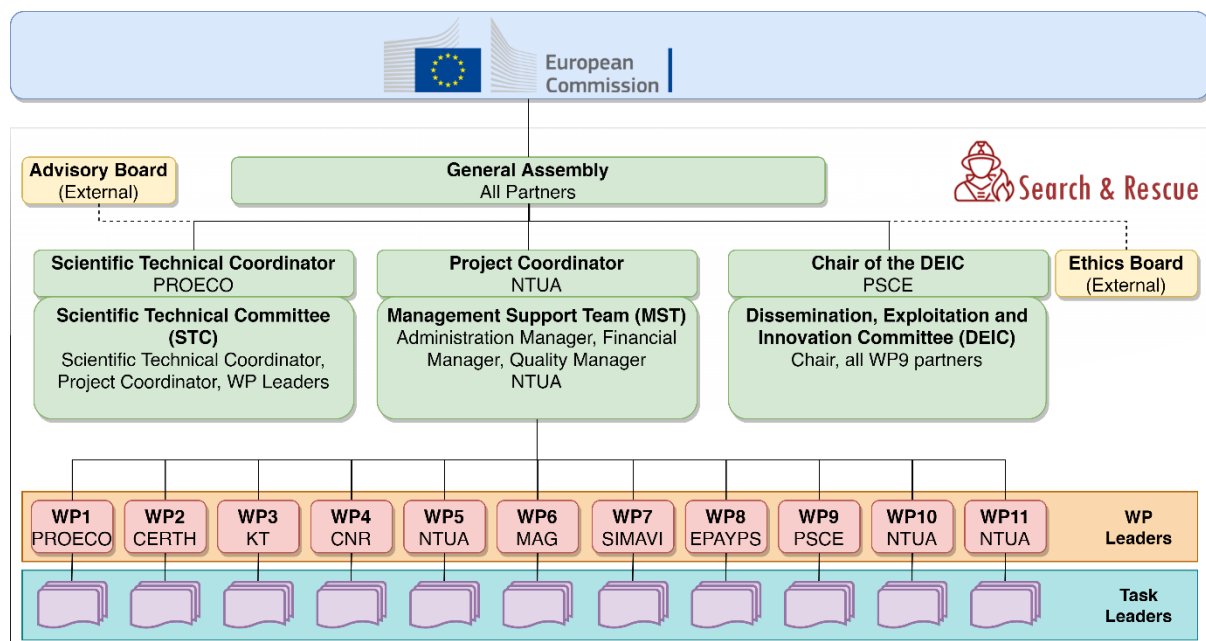
## 2 Quality Management Responsibility

Ensuring that quality objectives are well embedded and addressed through relevant processes during the project's implementation is a key priority in Search and Rescue that has been taken into account from the beginning of the project. The management of Search and Rescue is designed in a way capable of ensuring coherent and effective scientific and technological, administrative and financial coordination, while providing partners with the necessary quality management support to ensure project objectives and goals.

All partners of the consortium are fully committed and agree to collaborate for the timely fulfilment of their responsibilities (including quality management assignments).

The management structure will make extensive use of dedicated tools, such as Alfresco for time planning and monitoring tasks, issues and deliverables as defined in Annex VIII: Task Management Template in a simplified format, in order to facilitate the coordination of the project.

In order to manage efficiently and effectively a demanding Research and Innovation Actions as Search and Rescue over a time period of 36 months, a sound, professional, but also flexible management structure has been adopted, as depicted in Figure 2-1.



**Figure 2-1: Project Organisation Structure**

The responsibility for abiding to the quality management procedures lies on the Project Coordinator and the Quality Manager, while quality assurance of results falls under the responsibility of the Work Package/Task leaders. In particular, a thorough description of each of the management bodies and roles appearing in Figure 2-1 can be found in the following lines:

### **General Assembly (GA)**

The GA is the highest decision-making board and its main task is the project governance. It consists of one representative of each partner and is chaired by the Project Coordinator. It will have the overall responsibility of all technical, financial, legal, administrative, and ethical, dissemination, exploitation, and intellectual property and innovation issues of the project. It will monitor and assess the actual

progress of the project and make amendments, where necessary. The GA assumes the overall management responsibility on behalf of the partners; takes decisions on:

- proposals for changes to Annexes 1 and 2 of the Grant Agreement,
- work-plan,
- resource allocation,
- evolution of the consortium,
- Consortium Agreement,
- identifies breaches, defaulting partners and remedies and
- approves appointments to the other consortium bodies.

### ***The Project Coordinator (PC)***

The PC will be responsible for the overall management, communication, and coordination of the entire research and innovation project. The PC will act as the intermediary between the partners and the European Commission, monitor compliance by the partners with their obligations, control the implementation of the whole project, control the project's resources and budget, handle the financial aspects of the project, control the schedule of activities and the allocation of manpower, ensure the effectiveness of the project's internal communication, apply quality assurance, deal with risk assessment and mitigation plans, undertake quality control of contractual deliverables, ensure that all deliverables will be available on time to the Commission and/or project partners, liaise with and report to the European Commission on all matters concerning the project. The PC will be provided by partner the Coordinator (NTUA), will work closely with the Scientific-Technical Manager and will be supported by the Management Support Team. The Project Coordinator of Search and Rescue will be **Prof. Dimitris Askounis (NTUA)**.

### ***Management Support Team (MST)***

The MST shall assist and facilitate the work of the Project Coordinator for executing the decisions of the General Assembly as well as the day-to-day management of the project. The MST will support partners in administrative matters; assist in the communication and collaboration setting-up, running and maintenance of the project, financial plan & monitoring, reporting, quality assurance and risk monitoring; organise and assist the running and following up of project meetings; follow schedules of reports and deliverables and support maintaining the schedule. The MST will comprise of the Administration, Financial and Quality Managers. The Administration Manager will be involved mostly in tasks related to administrative, contractual, project planning and control issues. The Financial Manager will be involved in tasks related to financial and cost reporting issues. The Quality Manager will propose and establish all relevant quality assurance processes and policies and ensure compliance with them. The MST will be heavily involved in the activities of Task 10.1 Project Coordination and Management and Task 10.3 Quality and risk management. The MST will be provided by partner the Coordinator (NTUA).

### ***Scientific Technical Coordinator (STC)***

The STC will work closely with the PM, and will be responsible for the overall project scientific and technical implementation. STC will ensure the technical cohesion and excellence of the project; oversee the organisation of technical workshops and meetings; supervises the quality of scientific and technical deliverables produced by the WPs; cooperate with the PC to formulate S&R strategic objectives; ensure

architectural harmonisation and integration; consider standardisation issues. The STC of the Search and Rescue will be **Nicolae Maruntelu (PROECO)**.

### ***Scientific Technical Committee (STC)***

The STC is responsible for the consistency, harmonisation and convergence of the scientific and technical activities and results of the project. It consists of the Scientific and Technical Manager, the Project Coordinator, and the Work Package leaders of WP1 to WP7 and operates/meets in project meetings, and/or through calls, and/or on demand whenever deemed necessary. STC will pay special attention to the management of architectural harmonisation and integration across the various WPs, tasks, methodologies and tools and will also highly consider standardisation issues. STC will be chaired by the Scientific and Technical Manager.

### ***Dissemination, Exploitation and Innovation Committee (DEIC)***

DEIC will be responsible for the dissemination, exploitation and innovation activities of the S&R project. It will include representatives by all partners with high expertise in the ICT domain and overall in the commercialisation of R&D and in the ICT service delivery market and operates/meets in project meetings (at least semi-annually), and/or on demand (physically or through conference calls) whenever deemed necessary. DEIC will be responsible to raise public awareness of the project idea; ensure wide dissemination of the project results; share best practices and lessons learnt; identify innovation potential and develop innovation strategies; maintain a list of exploitable results; outline the strategy for knowledge management and protection; agree on and develop the overall exploitation plan; coordinate the development of individual partner exploitation plans; manage the launch & execution of the S&R demonstrators; appraise the technology readiness level of the project results; pursue pre-market strategies for the exploitation of the project results; identify potential investors that would be interested in further investing on S&R results and offerings; identify opportunities in order to ensure the continuation of the project, e.g. through public funding. DEIC will be actively involved in the activities of WP9 Dissemination, Communication, and Exploitation.

### ***Work package Leaders (WPLs) / Task Leaders***

The WP Leader is responsible for implementing the WP plan and for the scientific and technical integrity of the relevant WP contractual deliverables. The partners that have undertaken a WP leadership role are shown in Table 2-1. Each WP leader coordinates, monitors, and assesses the progress of the work package to ensure that performance, budget, and timelines are met; proposes the agenda in the respective meetings; approves deliverables produced in the WP. In cooperation with the Project Coordinator and/or Scientific-Technical Coordinator, work package leaders are responsible for the integration of their results to succeeding tasks or work packages. The Task Leader is responsible for the coordination of work on associated deliverables, has a similar role to the one of the WP Leader above, though on a Task level.

**Table 2-1: Work Package Leaders**

WP No	Name	Organisation
WP1	Alexandru Dimitrascu	PROECO
WP2	Ioannis Benekos	CERTH
WP3	Angelos Liapis	KT
WP4	Simona Panunzi	CNR

WP5	Sofia Karma	NTUA
WP6	Alberto Casanova	MAG
WP7	Monica Florea	SIMAVI
WP8	Michail Chalaris	EPAYPS
WP9	Marie Christine Bonnamour	PSCE
WP10	Christos Ntanos	NTUA
WP11	Christos Ntanos	NTUA

### **Advisory Board (AB)**

The AB will be one key instrument to strategically engage with decision makers and the wider stakeholder community. The AB will actively engage AB members and key partners of the S&R consortium, thereby providing AB members with early insights into AB results and findings, whilst providing S&R members with external views and recommendations. The AB will engage in the following ways: (1) challenge S&R work against new developments and advances in the state-of-the-art; (2) ensure that S&R stays in the highest level of scientific and technical quality, thereby ensuring expected impact; (3) provide scientific, technical and domain expertise on S&R results and methodology; (4) share common priorities and establish future cooperation opportunities of mutual benefit; (5) disseminate and multiply project results by informing the various networks of AB members, thereby fostering active engagement of external organisations in the areas tackled within S&R. The AB will include members stemming from all identified user groups dealing with USaR operations; Civil Protection, Police, Health Services, Military and Non- Governmental Organisations. AB will advise the project on the following tasks:

- Consultation on user requirements and operational scenarios
- Consultation on the harmonisation of the procedures
- Evaluation of the S&R pilots
- Consultation on European norms and standards regarding procedures

These activities will be conducted by inviting AB members in workshops and pilots. During S&R project lifecycle, it is foreseen that a number of Workshops will be realised, allowing for gathering user requirements, preparing near-real operational scenarios, as well as for cross-fertilisation of information on operations and procedures of players from different states and domains; while at the same time creating awareness, and disseminating the project results and preparing their take-up.

**Table 2-2: Search and Rescue Advisory Board**

<b>Members of S&amp;R Advisory Board</b>		
Mr. Dimitrios Dimitriou	President of the Board of Directors in AIA	Greece
Mr. Alexandros Deloukas	Vice President and Deputy Manager of R&D in Attiko Metro	Greece
Mr ZongPing Wu	Central Police University	Taiwan
Dr. Antoaneta Staykova	Cambridge University Hospitals	UK

### **Ethics Board (EB)**



An EB involving independent experts will be established with the responsibility to monitor all ethics-related issues in the project and provide relevant guidance and expertise. The EB will be established in the context of Task 10.3 and will more specifically consult the project consortium on the potential ethical impacts of the S&R platform and methodology.

## 3 Project and Quality Management Process

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### 3.1 Communication Strategy

#### 3.1.1 Information Flow

Effective channels of internal communication have been established from M1 in order to exchange all the necessary information for the project's implementation, such as deliverables and relevant documentation. Internal communication channels are also used for exchanging meeting minutes and progress reports, ensuring a common understanding among all partners regarding the required achievements during the lifetime of the project as well as the procedures that have to be followed for fulfilling them.

The means for remotely conveying information among Search and Rescue partners include:

- E-mail communication and file transfer over the Internet. Dedicated mailing lists have been created for the following purposes:
  - [all@search-and-rescue.eu](mailto:all@search-and-rescue.eu) has been created to serve the project's implementation needs, when it comes to announcements to all people that work in the Search and Rescue consortium.
  - The dedicated WP lists
    - [wp1@search-and-rescue.eu](mailto:wp1@search-and-rescue.eu)
    - [wp2@search-and-rescue.eu](mailto:wp2@search-and-rescue.eu)
    - [wp3@search-and-rescue.eu](mailto:wp3@search-and-rescue.eu)
    - [wp4@search-and-rescue.eu](mailto:wp4@search-and-rescue.eu)
    - [wp5@search-and-rescue.eu](mailto:wp5@search-and-rescue.eu)
    - [wp6@search-and-rescue.eu](mailto:wp6@search-and-rescue.eu)
    - [wp7@search-and-rescue.eu](mailto:wp7@search-and-rescue.eu)
    - [wp8@search-and-rescue.eu](mailto:wp8@search-and-rescue.eu)
    - [wp9@search-and-rescue.eu](mailto:wp9@search-and-rescue.eu)
    - [wp10@search-and-rescue.eu](mailto:wp10@search-and-rescue.eu)have been created to facilitate communication at WP level.
  - [pm@search-and-rescue.eu](mailto:pm@search-and-rescue.eu) has been created for Project Management issues.
  - [ga@search-and-rescue.eu](mailto:ga@search-and-rescue.eu) has been created to assist General Assembly Board communication.

If new members from a partner would like to join the mailing list, the PC needs to be previously informed via email from the partner leader in order to send them a personal electronic invitation for the group. Urgent correspondence via e-mail needs to be sent with a request for acknowledgement or read receipt.

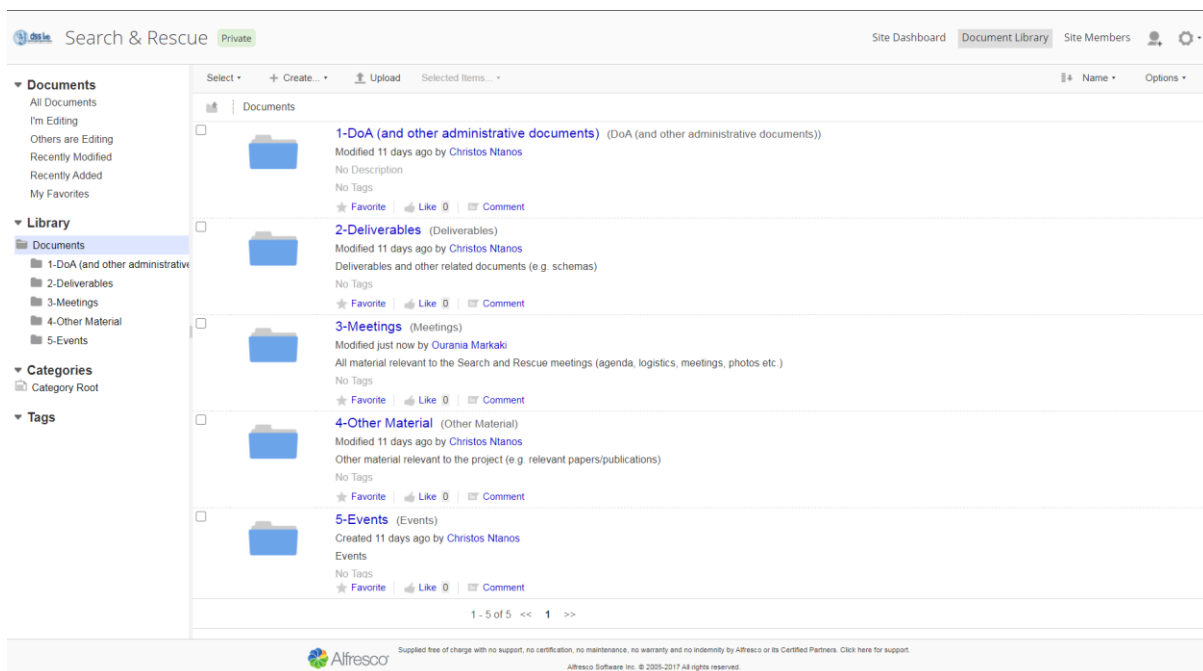
- Use of popular cloud-based services for collaboratively developing content for the project, in line with local and European legislation, including GDPR compliance.
- Microsoft Teams<sup>1</sup>, Skype<sup>2</sup>, other communication tools and Telephone facilities for teleconferencing purposes among the partners based on the project WP needs.

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<sup>1</sup> <https://www.microsoft.com/en/microsoft-365/microsoft-teams/group-chat-software>

<sup>2</sup> <https://www.skype.com/>

An internal workspace that is created based on the Alfresco<sup>3</sup> platform used for document management purposes, available only to consortium partners (Figure 3-1).



**Figure 3-1: Search and Rescue Document Management in Alfresco**

Apart from the above-mentioned electronic communication means, express mail (via post) will be used for strictly formal correspondence, i.e. when executive signatures are required.

The PC is responsible to ensure adherence to the aforementioned communications channels.

Furthermore, in order to ensure that the right information will reach the right people in larger, external to the consortium communities, the following mechanisms that will be finalised in Deliverable "D9.2: S&R Dissemination Plan" under T9.1 Dissemination Plan in M18 shall be appropriately considered: Mailing lists, Web site, Blog, Social Media such as Twitter<sup>4</sup>, LinkedIn<sup>5</sup>, Facebook<sup>6</sup>, SlideShare<sup>7</sup>, YouTube<sup>8</sup>, etc. The appropriate combination of such communication mechanisms will be used for enhancing the project's visibility.

### 3.1.2 Meetings and Workshops

Regular and ad-hoc meetings will be held during the project's lifecycle, including:

- **Management Board Meetings**, held at least once a year in order to ensure the implementation of the Project.

<sup>3</sup> <https://www.alfresco.com/>

<sup>4</sup> <https://twitter.com/>

<sup>5</sup> <https://www.linkedin.com/>

<sup>6</sup> <https://www.facebook.com/>

<sup>7</sup> [www.slideshare.net/](http://www.slideshare.net/)

<sup>8</sup> <https://www.youtube.com/>

The PC is responsible for the meeting formation (agenda of the meeting) and the communication of the meeting details (time, place) at least 3 weeks before the date of the meeting, in order to allow time to the participants for the scheduling and preparation of the necessary information for the meeting.

- **Project Plenary Meetings**, held at least every 6 months either as physical or online meetings in order to ensure that all procedures are understood and implemented in the proper way. The PC is responsible for the meeting formation (agenda of the meeting) and the communication of the meeting details (time, place) at least 2 weeks before the date of the meeting, in order to allow time to the participants for the scheduling and preparation of the necessary information for the meeting.
- **Online Work Package Meetings** held approximately every 15 days according to the work load and performed through the teleconferencing facilities of the WP leader. Each WP leader will propose the meeting schedule according to the WP needs at least 1 week before the date of the meeting and coordinate the necessary actions among the involved partners for the implementation of the WP activities. Each WP leader will communicate the final agenda of the meeting at least 1 day before the meeting date.

A tentative schedule of the project meetings is available in Table 3-1, while some workshops will be also organised during the project lifetime.

**Table 3-1: Tentative Schedule of Upcoming Project Meetings**

Meeting Identifier	Tentative Dates	Place	Hosting Organisation
Kick-Off Meeting	21-22/07/2020 (M1)	Online	NTUA
S&R Design Requirements Workshop	September 2020 (M3)	TBD	KT
M12 Periodic Review	September-October 2021 (M14-M15)	TBD	-
Pilot (UC1) - TS	M14-M33	TBD	MAG, UniCa, UNIFI
Pilot (UC2) - TS	M14-M33	TBD	NTUA, CERTH, UBI
Pilot (UC3) - TS	M14-M33	TBD	SYNYO, DFKI, THALES
Pilot (UC4) - TS	M14-M33	TBD	NTUA, CERTH, UBI
Pilot (UC5) - TS	M14-M33	TBD	KT, THALES, ATOS
Pilot (UC6) - TS	M14-M33	TBD	SIVECO, KT, ATOS,
Pilot (UC7) - TS	M14-M33	TBD	ATOS, KT
Y2 Workshop/Project Meeting	M14-M24	TBD	PSCE
...	...	...	...
Final Review	September – October 2023	TBD	-

Following up on a physical project meeting, the decided meeting minutes will be compiled within 15 calendar days of the meeting and will be the formal record of all the decisions taken. The minutes will be considered as accepted if, within 15 calendar days upon sending them, no partner has declared any written objections to the Project Coordinator with respect to the accuracy of the draft version of the minutes.

The next meeting locations and dates will be decided in project meetings or scheduled with the help of Doodle<sup>9</sup> polls. The PC is responsible for setting up the poll, send the link to partners and decide for the final dates.

Ad-hoc meetings may be organised in case of an emergency or a conflict resolution.

## **3.2 Implementation Aspects**

### **3.2.1 Decision Making**

Decisions regarding the project's implementation will normally be taken by the team members upon reaching consensus with the WP leaders. Typically, agreement will be reached first by informal contact, followed by official confirmation via electronic mail, letter or agreed written minutes. In case there is a dispute between two or more team members, a conflict resolution procedure must be followed, as presented in the following section.

For important issues, the agreement may take the form of a short report that needs to be signed by the Management Board. Non-technical factors such as resource allocation and contractual terms will also need to be agreed and documented in writing.

The key driver for the decision-making procedures is the description of action to be performed as stated in the Contract, the Consortium Agreement, the DoA and the deliverable at hand, and as regularly communicated within the consortium. Transparency of the implementation decisions and actions will be achieved by adequate communication of the emerging issues on project meetings and e-mail communications.

### **3.2.2 Conflict Resolution**

Generally, technical issues or conflicts within the contractual commitments that do not involve any contract, budget, resource allocation or overall project focus changes will be discussed at work package level first.

If the decision reached between team members is unacceptable by other partners, the conflict will be resolved according to a conflict resolution procedure which can be summarised in the next steps:

1. The team members involved in the implementation of the work package will inform the WP leader of the emerging conflict.
2. The WP leader will decide whether the issue needs to be discussed in a teleconference or a dedicated WP Meeting. The WP Leader will inform the PC of the planned actions.
3. The result of the teleconference or the meeting will be communicated to the PC.
4. If no consensus has been reached so far, the PC will contact the responsible persons and will try to resolve the conflict.

In case that the disagreement remains, the issue will be escalated in the GA. The decision that will be taken at this level, based on the provisions of CA, will be considered as the final resolution of the issue.

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<sup>9</sup> doodle.com/

### 3.3 Reporting Progress

#### 3.3.1 Official Reporting

Meticulous reports to the European Commission will ensure the proper implementation of the project objectives both from the consortium side as well as the European Commission. All reports are presented in the deliverables list.

During the project, an interim and a final review meeting will be held, for the reporting periods, as indicated in the following table, as well as one more on M9. The possibility to convoke formal sub-reviews when needed, on specific areas, with the participation of external reviewers, is also envisaged.

**Table 3-2: Search and Rescue Review Meetings**

Month	Meeting Identifier	Estimated Duration	Mechanism	Planned Venue
M12	RV1 (1 <sup>st</sup> reporting period)	1 Full Day	Official dedicated review meeting with reviewers	TBD
M36	RV2 (2 <sup>nd</sup> reporting period)	1 Full Day	Official dedicated review meeting with reviewers	TBD

The Project Coordinator with contributions from all participants submits the management reports to the European Commission after the end of each reporting period.

All management reports and deliverables shall be submitted within 60 days following the end of the respective periods.

#### 3.3.2 Internal Reporting

For internal project management purposes, every 3 months, the Search and Rescue partners will submit their actual resources consumption, including:

- Person-months per task spent in the reference period (3 months),
- Person-months per task scheduled to be spent until the end of the reporting period (next 3 months),
- Subcontracting, travel and other direct costs spent in the reference period (3 months).

The PC will send a relevant request to all partners, including the template for collecting resources data. This data will then be added to a master resources file on Alfresco. Each WP leader will be requested to approve the budget for its WP. The file will be automatically updated when all resources reporting for a period is complete.

### 3.4 Management of Knowledge and Intellectual Property

Knowledge and intellectual property issues will be addressed in compliance to H2020 contract template/contractual conditions. Such issues include ownership and protection of knowledge, dissemination of knowledge, access rights, etc. as described in the Consortium Agreement that is duly signed by all partners.

The GA will be in charge of monitoring the proper implementation of the conditions specified in the Grant Agreement and the Consortium Agreement.

## 4 Document Control Management

Document Control Management deals with the preparation of template documents, the identification and the tracking of changes related to draft and final versions of documents circulated among the partners.

The Project Coordinator is responsible for the necessary assessment of deliverables, while the Quality Manager will be responsible for the overall monitoring of the entire document control and configuration management activities described in this section.

### 4.1 Documentation Requirements

In the span of the Search and Rescue project, a set of deliverables and relevant documented results are anticipated as depicted in the following table. Such documents will be sent by e-mail and be uploaded in the restricted Search and Rescue document repository, as long as they comply with the following standards:

- Word Processor: Microsoft Word 2007 and higher,
- Spreadsheet: Microsoft Excel 2007 and higher,
- Presentations: Microsoft PowerPoint 2007 and higher.

All files should be scanned for potential viruses before issue and screened on receipt. If an acknowledgement is requested, an explicit request should be included by the sender at the top of the message (e-mail, fax, etc.).

**Table 4-1: Project Documentation**

Type	Responsible	Template
Deliverable submitted to the EC	As per the DoA	Annex II: Deliverable Document Template
Internal Project Presentation	All partners	Annex III: Project Presentation Template
Meeting Agenda	Project Coordinator, NTUA	Annex IV: Meeting Agenda Template
Meeting Minutes	Partner hosting the Meeting	Annex V: Meeting Minutes Template
Reviewed Document	All partners	A new version with track changes on the original version
Internal Review Report	All partners	Annex VI: Internal Review Report Template
Final Activity Report	Project Coordinator / WP Leaders	As per Grant Agreement and Commission guidelines
Final Management Report	Project Coordinator	As per Grant Agreement and Commission guidelines
Consolidated Financial Statement	Project Coordinator	As per Grant Agreement and Commission guidelines
Financial Statement	All Partners	As per Grant Agreement and Commission guidelines

## 4.2 Naming Conventions and Versioning

Document configuration management will be ensured through tracking the versions and the history of changes within the various project documents, such as:

- Deliverables (as stated in the deliverables list in the Search and Rescue DoA),
- Presentations of the project results,
- Meeting agenda and minutes,
- Internal audit reports and reviewed deliverables, including the corrective actions taken.

**Document history** will be tracked in each deliverable in a separate table describing the different versions of the document and the reasons of change/updates on it (please refer to Annex II).

**Document versioning** will be tracked through the monitoring of the Configuration Matrix in which all versions of each document will be tracked (for the template Configuration Matrix, please refer to Annex VII).

### 4.2.1 Deliverables Submitted to the European Commission

**Table 4-2: Deliverables Naming Conventions**

Name	SnR_[Deliverable Code]-[Deliverable Title]-vA.BB
(Draft)	SnR_[Deliverable Code]-[Deliverable Title]_[Partner]-vA.BB
Where	A: Major version of the deliverable (Submission to European Commission)
	BB: Minor version of the deliverable for updates during the preparation phase
Examples	SnR_D1.1- Project Handook, Quality Plan & Risk Managemen-v1.00 (for submission to the European Commission)
	SnR_D1.1- Project Handook, Quality Plan & Risk Managemen_NTUA-v0.30 (for internal updates and submission for internal review)

### 4.2.2 Internal Project Presentation

**Table 4-3: Presentations Naming Conventions**

Name	SnR_[Purpose] or [WP Number]_[Partner]-vA.BB
Where	A: Major version of the presentation (Presentation in the event / workshop)
	BB: Minor version of the presentation for updates during the preparation phase
Examples	Search and Rescue_WP1-WP7_NTUA-v1.00

### 4.2.3 Meeting Agenda

**Table 4-4: Meeting Agenda Naming Conventions**

Name	SnR_[Meeting Number] Agenda_[Place]-vA.BB
Where	A: Major version of the meeting agenda
	BB: Minor version of the meeting agenda for updates during the preparation phase
	Place: Venue city
Examples	SnR_KOM Agenda_Athens-v1.00 (final version)
	SnR_KOM Agenda_Athens-v0.10 (for internal updates and submission for internal review)



#### 4.2.4 Meeting Minutes

**Table 4-5: Meeting Minutes Naming Conventions**

Name	SnR_[Meeting Number] Minutes_[Place]-vA.BB
Where	A: Major version of the meeting minutes
	BB: Minor version of the meeting minutes for updates during the preparation phase
	Place: Venue city
Examples	SnR_KOM Minutes_Athens-v1.00 (final version)
	SnR_KOM Minutes_Athens-v0.10 (for internal updates and submission for internal review)

## 5 Quality Assurance Plan

Quality assurance is generally considered as part of quality management which focuses on providing confidence that quality requirements will be fulfilled. It is achieved with the help of audit control mechanisms internal and/or external to the consortium for the deliverables, appropriate corrective and preventive actions and a set of quantitative quality measures.

In this section, the necessary activities to measure, analyse and improve quality of project results are described.

### 5.1 Internal Audit

The Internal Audit includes audit control and review in two dimensions: technical and quality. The WP leaders and the PC are responsible to conduct internal technical reviews to the deliverables before submission to the European Commission, while the quality review is conducted by the Quality Manager. The Quality Manager is responsible for assigning two (2) additional reviewers (among the project partners) in each deliverable.

Technical aspects of the project documentation will be reviewed in order to ensure that all technical information is consistent to:

- Current state-of-the-art and recent technological research level
- Project objectives, previous project results and specifications

In order to facilitate the technical review process, two reviewers (apart from the deliverable responsible and NTUA that, as the project coordinator will review all deliverables) have been already assigned in each deliverable, as indicated in the Table 5-1.

**Table 5-1: Technical Review Assignments**

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D1.1	Report on user requirements, existing tools and infrastructure	PROECO	JOAFG	CNR	M4
D1.2	Report on the functional specifications of S&R	PROECO	KT	PSCE	M4
D1.3	Definition, evaluation and refinement of the S&R CM governance model	PUI FRA01	THALES	ATOS	M12
D1.4	Establishment of S&R Concept of operations	EPAYPS	HRT	JOHAN	M12
D1.5	Report on user requirements, existing tools and infrastructure, V2	PROECO	PUI	SERMAS	M16
D1.6	Report on the functional specifications of S&R, V2	PROECO	UNICA	UGL	M12

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D1.7	Definition, evaluation and refinement of the S&R CM governance model, V2	PUI FRA01	SAN	PROECO	M24
D1.8	Definition, evaluation and refinement of the S&R CM governance model, V3	PUI FRA01	THALES	PROECO	M36
D2.1	PIA report for the S&R design and development, pilots and platform	CERTH	VUB	SYNYO	M12
D2.2	Report on the S&R social and ethical assessment	VUB	NTUA	PUI	M18
D2.3	Report on the role of civil society involvement in Crisis Management	SAN	VUB	UGL	M36
D2.4	Report on safety and security issues of emergency and crisis management field Actors	PROECO	UNIFI	CERTH	M24
D2.5	Citizens and volunteer organisations involvement in Crisis Management	EPAYPS	PSCE	SAN	M24
D2.6	PIA report for the S&R design and development, pilots and platform, final version	CERTH	PSCE	UCSC	M36
D2.7	Report on the S&R social and ethical assessment, final version	VUB	SERMAS	ESDP	M36
D2.8	Citizens and volunteer organisations involvement in Crisis Management, final version	EPAYPS	SAN	PUI	M36
D3.1	Requirements to knowledge management and SA Model	KT	SIMAVI	MAG	M6
D3.2	Situation Awareness Model – specification	UBITECH	SIMAVI	CNR	M9
D3.3	BIM based services and applications – review and service design	UBITECH	KT	UNIFI	M15
D3.4	BIM based visualisation support integrated with VR interface	UBITECH	MAG	KT	M30

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D3.5	Data-driven analytics applied on UAV imagery using deep learning	KT	AIDEAS	UBI	M18
D3.6	Multi sensors data fusion and Object detection algorithms for in-disaster scene situation awareness	THALIT	CERTH	AIDEAS	M18
D3.7	Requirements to knowledge management and SA Model, V2	KT	UBI	MAG	M12
D3.8	Situation Awareness Model - specification, V2	UBITECH	THALES	CNR	M18
D4.1	Data aggregation	NTUA	ATOS	SIMAVI	M6
D4.2	Situational Analysis & Impact Assessment	CERTH	AIDEAS	SIMAVI	M12
D4.3	Design of SOT DSS components	CNR	UNICA	ATOS	M14
D4.4	Design of PHYSIO DSS component	CNR	SIMAVI	MAG	M14
D4.5	Development of SOT DSS components	KT	CNR	UNICA	M14
D4.6	Development of PHYSIO DSS component	KT	ATOS	SIMAVI	M14
D4.7	DSS Validation	CNR	AIDEAS	THALIT	M16
D4.8	Data aggregation, V2	NTUA	ATOS	UNICA	M12
D4.9	Design of SOT DSS components, V2	CNR	KT	AIDEAS	M22
D4.10	Design of PHYSIO DSS component, V2	CNR	UNICA	ATOS	M22

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D4.11	Development of SOT DSS components, V2	KT	UNICA	SIMAVI	M22
D4.12	Development of PHYSIO DSS component, V2	KT	ATOS	UNICA	M22
D4.13	DSS Validation, V2	CNR	THALIT	AIDEAS	M26
D5.1	Design & development of the RESCUE MIMS	NTUA	DFKI	UHASSELT	M10
D5.2	First responder prototype uniform and first aid for kids' device design	UNIFI	EPAYPS	HRT	M16
D5.3	Testing and validation of the RESCUE MIMS	NTUA	SYNYO	ESDP	M14
D5.4	Testing of RESCUE MIMS on-board robotic platforms and drones	THALIT	NTUA	DFKI	M16
D5.5	Design & development of the RESCUE MIMS, V2	NTUA	UHASSELT	DFKI	M18
D5.6	First responder prototype uniform and first aid for kids' device design, V2	UNIFI	JOHAN	JOAFG	M32
D5.7	Testing and validation of the RESCUE MIMS, V2	NTUA	UCSC	EPAYPS	M30
D5.8	Testing of RESCUE MIMS on-board robotic platforms and drones, V2	THALIT	UHASSELT	NTUA	M30
D6.1	Analysis of the available interoperability frameworks	UHASSELT	CERTH	THALIT	M20
D6.2	Voice, data and services interoperability frameworks	THALIT	DFKI	UHASSELT	M20
D6.3	Presentation and analysis of the designed S&R interoperability framework	SIMAVI	UHASSELT	KT	M24

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D6.4	S&R lessons learnt mechanism	MAG	CERTH	UBI	M16
D6.5	Establishment of technical components and legacy systems taxonomy	SIMAVI	MAG	NTUA	M18
D6.6	Report on legacy systems and their connection to the S&R related technical characteristics	KT	MAG	NTUA	M16
D6.7	S&R Training System	SIMAVI	KT	UCSC	M16
D6.8	S&R lessons learnt mechanism, V2	MAG	UBI	CERTH	M32
D6.9	Report on legacy systems and their connection to the S&R related technical characteristics, V2	KT	MAG	NTUA	M32
D6.10	S&R Training System, V2	SIMAVI	UCSC	KT	M32
D7.1	S&R extensive service catalogue	SIMAVI	UNIFI	UHASSELT	M6
D7.2	Architecture and Design Specifications of S&R platform	SIMAVI	PROECO	SYNYO	M6
D7.3	Component interface specifications for interoperability within S&R	KT	AIDEAS	UCSC	M16
D7.4	Adapted S&R components and services	KT	UBI	UNIFI	M24
D7.5	Integrated S&R platform 1st version	SIMAVI	DFKI	NTUA	M16
D7.6	Integrated S&R platform 2nd version	SIMAVI	UNIFI	UBITECH	M26
D7.7	S&R Legal and Security infrastructure 1st Version	VUB	CERTH	HRT	M14

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D7.8	S&R Legal and Security infrastructure final	VUB	HRT	CNR	M26
D7.9	S&R platform Test Cases and overall system evaluation results 1st version	THALIT	EPAYPS	UGL	M18
D7.10	S&R platform Test Cases and overall system evaluation results Final version	THALIT	UGL	UCSC	M30
D7.11	S&R extensive service catalogue, V2	SIMAVI	UBITECH	UNIFI	M22
D7.12	Architecture and Design Specifications of S&R platform, V2	SIMAVI	PROECO	SYNYO	M22
D8.1	S&R Pilot guidelines and User's Handbook	EPAYPS	JOHAN	JOAFG	M12
D8.2	S&R Use Case 1: Victims trapped under rubble (Italy) – Pilot plan	EPAYPS	PUI	HRT	M12
D8.3	S&R Use Case 2: Plane crash, mountain rescue, non-urban (Greece) - Pilot plan	EPAYPS	JOAFG	JOHAN	M12
D8.4	S&R Use Case 3: Earthquake / heavy storms between Vienna Rail Station & Kufstein railway station heavy damages in the rail station (Cross-border pilot, Austria-Germany) - Pilot plan	EPAYPS	ESDP	DFKI	M12
D8.5	S&R Use Case 4: Forest fire expanded and threat to industrial zone (Kineta, Agioi Theodoroi, Greece) - Pilot plan	EPAYPS	HRT	JOHAN	M12
D8.6	S&R Use Case 5: Victims trapped under rubbles (France) – Pilot plan	EPAYPS	CNR	SERMAS	M12
D8.7	S&R Use Case 6: Resilience Support for Critical Infrastructures through Standardized Training on CBRN (Romania) - Pilot plan	EPAYPS	SERMAS	ESDP	M12
D8.8	S&R Use Case 7: Chemical substances spill (Spain) - Pilot plan	EPAYPS	PROECO	SERMAS	M12

Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D8.9	S&R Evaluation Framework	JOAFG	EPAYPS	PSCE	M18
D8.10	S&R Pilot Implementation and Evaluation Report 1 <sup>st</sup> version	JOAFG	EPAYPS	PSCE	M28
D8.11	S&R Pilot Implementation and Evaluation Report Final version	JOAFG	PUI	EPAYPS	M35
D8.12	Systems performance assessment manual	ATOS	UGL	VUB	M36
D9.1	S&R dissemination plan	PSCE	VUB	SAN	M6
D9.2	S&R dissemination activities report 1 <sup>st</sup> version	PSCE	JOAFG	JOHAN	M18
D9.3	S&R dissemination activities report final	PSCE	SAN	ESDP	M36
D9.4	S&R web-site and Online dissemination and communication infrastructure	KT	PSCE	UGL	M1
D9.5	S&R Exploitation and Innovation MGT planning	UGL	SAN	VUB	M16
D9.6	S&R Business plan 1 <sup>st</sup> version	UGL	SEEMAS	ESDP	M22
D9.7	S&R Business plan final	UGL	JOAFG	PUI	M36
D10.1	Project Handbook, Quality Plan & Risk Management	NTUA	VUB	SYNYO	M1
D10.2	Data Management Plan 1st version	NTUA	PROECO	CNR	M6
D10.3	Data Management Plan final version	NTUA	CERTH	UGL	M35

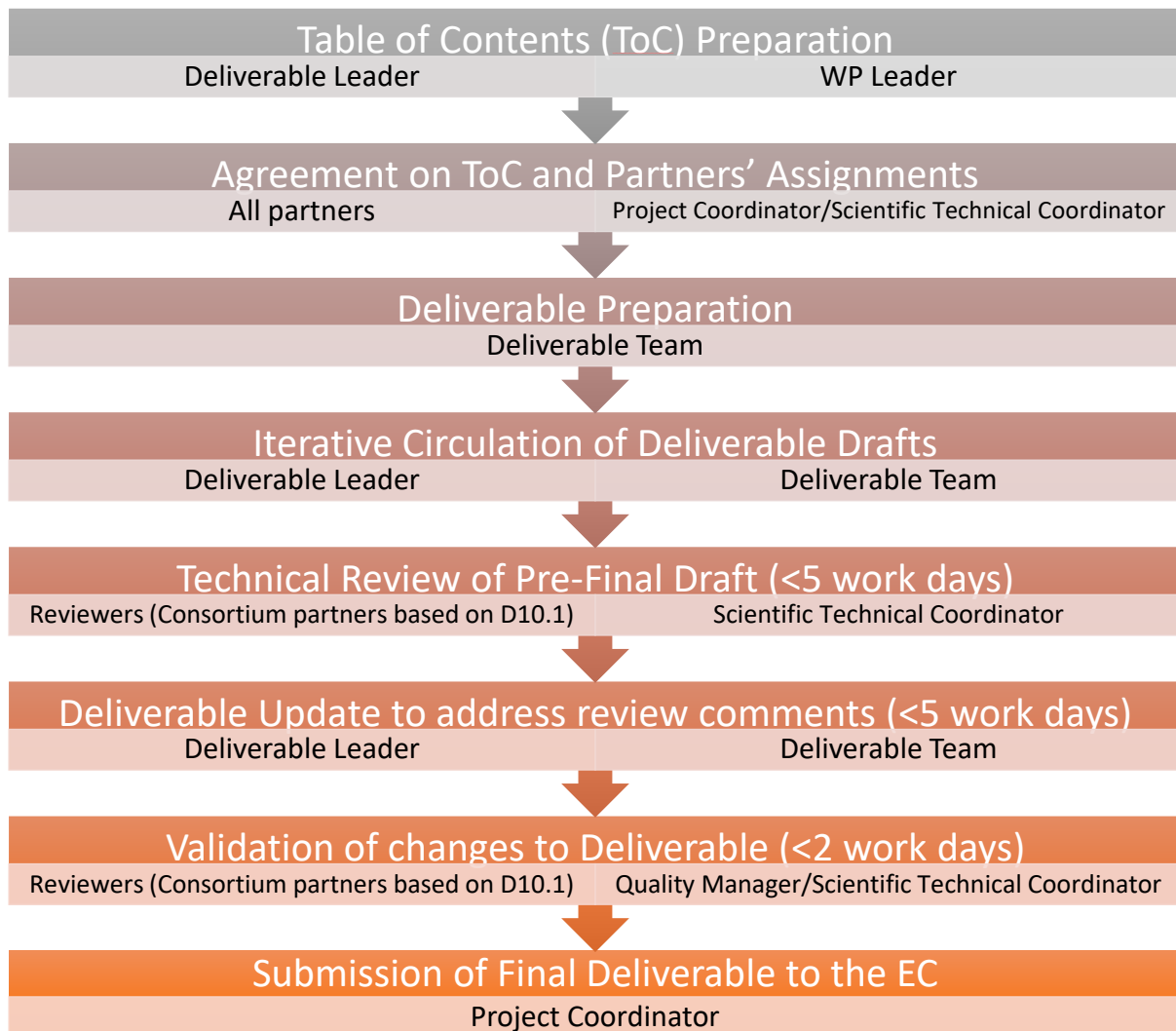


Deliverable Identifier and Name		Responsible	Reviewer 1	Reviewer 2	Due Date
D10.4	Periodic Report for Period 1	NTUA	PSCE	DFKI	M18
D10.5	Periodic Report for Period 2	NTUA	UNIFI	SYNYO	M36
D10.6	Ethical protocol	VUB	SYNYO	THALIT	M3
D10.7	Technical Progress Status Update	NTUA	PROECO	KT	M24
D11.1	H - Requirement No. 1	NTUA	EPAYPS	VUB	M6
D11.2	H - Requirement No. 2	NTUA	SAN	VUB	M6
D11.3	H - Requirement No. 3	NTUA	VUB	VUB	M9
D11.4	POPD – Requirement No. 4	NTUA	VUB	KT	M6
D11.5	EPQ - Requirement No. 5	NTUA	HRT	PUI	M9
D11.6	DU - Requirement No. 6	NTUA	UCSC	UHASSELT	M15
D11.7	GEN – Requirement No. 7	VUB	NTUA	EPAYPS	M9
D11.8	GEN – Requirement No. 8	NTUA	JOAFG	JOHAN	M12
D11.9	GEN – Requirement No. 9	NTUA	SERMAS	ESDP	M24

In general, the procedure and timeline for the internal quality audit controls is illustrated in Figure 5-1. All findings of the internal audit controls will be recorded in a special Review Form (Annex VI: Internal Review Report Template), where the reviewer will provide his/her comments. Then, the WP leader and

the authors need to determine corrective actions and arrange for follow-up actions on the same template. During the technical or quality validation phase, the reviewer can also provide additional remarks on how the specific comment has been implemented in the relevant deliverable.

The complete results of the Internal Quality Audits will be communicated to all partners, related to the specific WP.



**Figure 5-1: Timetable for Internal Audit**

## 5.2 Quality Records Management

A record is defined in ISO 9000 as a document stating results achieved or providing evidence of activities performed. In this context, in Search and Rescue, the quality records refer to project documentation (deliverables, presentations, etc.) along with the Internal Review Reports, corresponding to each deliverable.

Records will be filled in a readily retrievable manner for the minimum period specified under the Search and Rescue Grant Agreement and will be kept in a suitable environment to minimise damage.

The PC is held responsible for maintaining the quality records and making them available to the European Commission, if necessary.

### 5.3 Quality Assurance Metrics

Monitoring of the project quality throughout the project lifecycle will be done through metrics associated to the documentation quality, as indicated in the following section.

**Table 5-2: Documentation Quality Metrics**

Metric ID	Description	Target
#1	No. of inconsistencies according to the deliverable template (format, layout, spelling)	0
#2	No. of legibility issues in text, figures or tables	0
#3	Percentage of correspondence to project objectives	100%
#4	Maximum delay days in the internal submission of documents for review (according to the timetable provided in the document review procedure)	3
#5	Percentage of technical and quality comments addressed (from the internal review)	95%
#6	Maximum number of quality review rounds	1
#7	Maximum number of technical review rounds	2
#8	Delays in the submission to the Commission of the deliverables according to the timetable at the Description of Action (Annex I of the Contract).	0

## 6 Risk Management Plan

Risk management requires identification, control and recording of risks, highlighting of the consequences and the appropriate management actions. Risk management is a balance of judgement so that the risks are minimised without over-emphasising the potential problems. Controlling the risks will help the consortium manage the project in a way to achieve properly the objectives on time and to budget.

The following four activities are enacted through a continuous closed cycle, which will be iterated for each project milestone:

- *Risk Identification:* Determining the risks that may affect the project and documenting their characteristics.
- *Risk Quantification (Analysis):* Prioritising risks by assessing and combining their probability of occurrence and impact and analysing the effect of identified risks on project objectives. During risk analysis, various risk attributes are evaluated to establish values for the probability of the occurrence of the event and the degree of its impact. The following table presents the values used for these aspects for the quantitative analysis of the risks in Search and Rescue.

**Table 6-1: Risk Quantification**

Risk Impact	Risk Probability of Occurrence
1 – Insignificant	1 – Very Low (1-20%)
2 – Low	2 – Low (21-40%)
3 – Moderate	3 – Moderate (41-60%)
4 – Major	4 – High (61-80%)
5 – Catastrophic	5 – Very High (81-99%)

- *Risk Response Planning:* Developing options and actions to enhance opportunities and to reduce threats to project objectives.
- *Risk Monitoring and Control:* Implementing risk response plans and tracking identified risks throughout the project.

The overall management structure of the project and its relevant principles implement several mechanisms to avoid or minimise potential risks. The PC, with the cooperation of the GA, the MST, the STC and the rest of the project management roles (WP Leaders) will be mainly responsible to handle risks and inform all partners when necessary. Milestones, work packages and related tasks are designed and scheduled carefully to minimise the number of complex inter-dependencies to ease development and to reduce the possibility of delays.

As a part of the first iteration of the risk management procedure, risk identification, analysis and response planning activities have been performed and the risks that will be monitored and controlled throughout the project have been identified. In this perspective, we can identify two main classes of risk analysis:

- *Technical Risk Analysis:* Any new research and innovation program contains inherent amount of risk. It is therefore important to design a management procedure to handle these risks and identify a series of contingency actions to minimise their impact.
- *Non - technical Risk Analysis:* Non-technical risks include administrative and operational tasks, which may experience a problem incurred during the course of the project. As a result, it is

designed a non-technical risk action plan including multiple potential risks highlighting their impact and likelihood. Contingency and mitigation plans are also presented for the identified risks. Throughout the project, the technical related tasks will be overseen by the STC and other consortium related tasks will be overseen by the Project Coordinator.

The following table summarises already identified risks.

**Table 6-2: Identified Risks and Proposed Solutions**

Risk ID	Risk Description	WPs Involved	Risk Probability	Risk Impact	Proposed Risk Mitigation Measures
R1	Respecting the planning and meeting the deadlines	10	2	3	The risk is reduced by the expertise of the partners (technical skills and management experience) that will permit to anticipate planning drifts, and by carefully planned work package timing and dependencies. All potential delays will be immediately reported to the Project Coordinator and the Scientific Technical Coordinator who will perform proper actions to reduce the delay.
R2	Shortage of resources	1, 10	2	4	If the requirements analysis and design phase of the project reveals that the dedicated resources and time-schedule are not compliant with the wideness of the topic, a scope reduction might be applied, e.g. additional assumptions introduced to limit the complexity. Nevertheless, a full plan of development and validation based upon the subset will be run. It is coherent with IP scheme, which supports progress towards long-term goals.
R3	Partner leaves consortium	10	3	4	Immediate substitution by another partner, from existing research partnerships or through dissemination activities. Alternatively, immediate redistribution of responsibilities over remaining partners; and where needed and possible redefining of the S&R output.
R4	Partner does not execute agreed tasks	10	3	3	Reactivate partner and in worst case remove partner from consortium in accordance to the consortium agreement.
R5	Problems with anticipated deadlines for deliverables	10	2	3	Enforce deadlines for deliverable preparation and internal reviews; make exceptional use of the 45-day grace period allowed by the EC for deliverable delivery.
R6	Financial divergences	10	2	2	It is not unlikely that excess of the estimated budget might occur. The consortium and mainly the coordinator must review the budget issues throughout the project duration very carefully and monitor costs closely. It is essential for the success of the project to allocate the budget with the appropriate way.
R7	Lack of communication among the partners	10	2	4	Keep close contact with all partners by regular teleconferences and virtual meetings. Organise regular plenary and technical meetings at different partners' sites. Consider reworking the exploitation plans. Detailed project plan that clearly states goals and responsibilities of the partners.

R8	Tight schedule for delivering the S&R platform Architecture and Design specifications	7	2	3	The work package leader of WP7 MAG is a partner with a proven expertise in large scale commercial and R&D projects and resources in managing technical aspects.
R9	Insufficient ethical compliance	1, 10, 2	3	4	The changes in the European and national legislation with regard to the personal data privacy and protection, and the sharing and reuse of user data in research could possibly pose some ethical issues regarding privacy. However, the constant EU-wide monitoring of the legislation and the establishment of a team for monitoring and checking the legal and ethical compliance of the designed and developed S&R platform services will minimise and eliminate this risk.
R10	The developed platform will be proved to be unsatisfactory	6, 7	2	3	Analysis of conceptual and development problems. Address conceptual problems in the reiteration of the architecture and design and re-visit development issues in the next cycle. Potentially assign more effort to performance, scalability and robustness rather than new features.
R11	Unstable Specifications	1, 4	2	4	Freeze the use of a certain version of the standard to be used in the project and re-align with the standard at a later stage, in order to avoid too many resources to be bound by re-implementation activities.
R12	Poor requirements definition	1	2	3	Start architecture work based on expertise and knowledge of the partners and liaise with other projects for exchange of requirements. Responsible WP leaders (mainly WP1) and the Project Coordinator to plan how to overcome this lack of requirements.
R13	Not all software components are available for integration in time	3, 4, 5, 6, 7	4	4	Re-planning of the integration and potentially reduction of the release features.
R14	Competitor technology appears	1, 9	3	3	Study technology and determine how S&R results can be improved; seek user continued input along the project.
R15	Conflicts over ownership	9	2	3	Disagreements in the consortium over ownership may result in non-agreement on IPR. The Consortium Agreement and ongoing IPR inventory will ensure a proper protection of generated and prior IPR.
R16	Market area too immature	1, 9	2	3	Updated versions of dissemination and exploitation plans. Continuous market analysis as basis for the exploitation plans under the coordination of the Dissemination and Exploitation work package leader.

R17	Low interest of stakeholders in project's outcomes	9	2	3	The project depends highly on the involvement of the project participants, which creates a reassuring effect for the project's results. The utilisation of partners' contacts and the confident dissemination of the project will minimise this risk.
R18	Stakeholders Ecosystem low participation	9	3	3	The "S&R Stakeholders Ecosystem" in particular requires hands-on participation. Benefits could be needed to ensure their continued participation, such as increased visibility in the project's dissemination work. The focus must be to propel them into increased interaction between industry and standards groups and forums, as well as provide expertise on the project's developing.

Regarding risk monitoring, the Project Coordinator will continuously monitor and assess identified risks and pay specific attention to risks that have been ranked as with high and medium exposure.

The risk information template included in Annex IX is to be used for identifying new risks as well as modifying the status of risks, tracking the status and monitoring the mitigation strategy evolution, when appropriate.

## Annex I: References

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- [1] ISO 9001:2000, Quality management systems — Requirements
- [2] Hoyle D. (2006) ISO 9000 Quality Systems Handbook, 5th Edition, Butterworth-Heinemann, Elsevier



## **Annex II: Deliverable Document Template**

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Please refer to attached file entitled: Search and Rescue-Document Template-v1.00.dotx

## **Annex III: Project Presentation Template**

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Please also refer to attached file entitled: Search and Rescue\_Presentation Template-v1.00.potx

## **Annex IV: Meeting Agenda Template**

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Please refer to attached file entitled: Search and Rescue-Meeting Agenda Template-v1.00.dotx

## **Annex V: Meeting Minutes Template**

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Please refer to attached file entitled: Search and Rescue-Meeting Minutes Template-v1.00.dotx

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## **Annex VI: Internal Review Report Template**

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Please refer to attached file entitled: Search and Rescue-Internal Review Report Template-v1.00.dotx

## Annex VII: Configuration Management Template

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Configuration Matrix				Last Update [date]	
Code	Title	Owner	Version	Date	Status

Where Status: Draft / Final / Submitted / Accepted

## Annex VIII: Task Management Template

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Action List					Last Update [date]	
#	WP	Action	Responsible	Deadline	Status	Comments

Where Status: Pending / Completed

## Annex IX: Risk Information Template

Risk ID <sup>10</sup>		Related WP / Activity	
Date Identified		Originator <sup>11</sup>	
Risk Statement			
Risk Impact		Risk Probability	
Proposed Solution / Mitigation Strategy			
Status <sup>12</sup>		Status Date	
Comments			
Closing Date <sup>13</sup>		Approval <sup>14</sup>	

<sup>10</sup> In the form Ri.j where i=WP number and j=1,...n. Example R3.1 is Risk No 1 for WP3.

<sup>11</sup> Name, organisation

<sup>12</sup> Identified, Monitored, Contained

<sup>13</sup> Date when related activity is completed

<sup>14</sup> WP Leader