



An Enhanced Common Information Sharing Environment for Border Command, Control and Coordination Systems

Grant Agreement Number: 833881

D.1.1 Project Management, Quality and Risk Plan

Deliverable Identifier:	D.1.1
Deliverable Due Date:	2019/11/30
Deliverable Submission Date:	2019/11/26
Deliverable Version:	v.1.0
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Work Package:	WP1 Project Coordination & Management
Task:	Task 1.2 Project Management, Quality Control and Risk Management
Dissemination Level:	PU: Public



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 833881.

Document Control Page

Deliverable Number:	D.1.1	
Deliverable Title:	Project Management, Quality and Risk Plan	
Deliverable Version:	v.1.0	
Work Package Number:	WP1	
Work Package Title:	Project Coordination & Management	
Submission Date:	2019/11/26	
Dissemination Level:	☒ PU: Public ☐ CO: Confidential, only for members of the Consortium (including the Commission Services) ☐ RE: RESTREINT UE (Commission Decision 2015/444/EC)	
Status:	☒ Draft ☒ Consortium reviewed ☒ Peer reviewed ☒ Management Support Team reviewed ☒ Project Coordinator accepted	
Author(s):	Alkis Astyakopoulos	KEMEA
Contributor(s):	All partners	
Peer Reviewer(s):	Marios Moutzouris	STWS
	David Merino	GMV
Security Assessment:	☒ Passed ☐ Rejected Comments: No sensitive information included in this Deliverable.	
Funding Authority:	European Commission	
Funding Program:	Horizon 2020 Secure Societies Work Programme 2018 – 2020	
Topic:	SU-BES03-2018 Demonstration of applied solutions to enhance border and external security, Subtopic [2018]: Open	
Rights:	ANDROMEDA Consortium	

Version History

Version	Date	Edited by	Description
v.0.1	2019/10/07	KEMEA	Document Content outline / structure
v.0.2	2019/10/14	KEMEA	Draft version
v.0.3	2019/10/21	KEMEA	Complete versions formatted according to template
v.0.4	2019/10/25	KEMEA	Complete versions with Annexes
v.0.5	2019/11/12	KEMEA	Complete draft review by WP1 Leader
v.0.6	2019/11/20	STWS, GMV	Internal review of the Complete version
v.0.7	2019/11/22	LAUREA	Review by the Ethics Manager
v.0.8	2019/11/22	SAB	Review by the SAB
v.0.9	2019/11/26	MMAIP, KEMEA	Internal approval review by the PM
v.1.0	2019/11/26	MMAIP	Final version submitted

Executive Summary

The ANDROMEDA project aims to unlock the full potential of CISE, by validating in a long period of time CISE-compatible command, control and coordination systems from several Coast and Border Agencies. At the same time, it is envisaged to further enhance, validate and demonstrate CISE by extending its scope for land borders and adapting relevant C2 solutions and associated services. This will be accomplished by extending the CISE data model based on the use cases and requirements and adapting state-of-the-art command & control systems for full compliancy with the enhanced model and CISE message exchange patterns. The project architecture will follow a hybrid scheme in order to allow the usage of the End User CISE Nodes/Gateways and at the same time to allow the testing and validation of the extended data model. The project will leverage on the developments, results and experience of the consortium from current and previous research projects (PERSEUS, CloseEye, MARISA, RANGER), from Public Procurement projects of CISE Nodes and Adaptors implemented at national level and on the CISE infrastructure of the End Users.

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1. Introduction

1.1 Purpose of the document

The aim of this deliverable is to describe the rules, methodology and tools that will be used within ANDROMEDA for the management of the project, including a detailed Data Management Plan (DMP). This deliverable can be used as a reference document from all partners to access information related to management and innovation processes. The proposed rules and procedures are within the framework of European projects and the Horizon 2020 Programme. In the event of a contradiction between the present document and contractual documents, the latter documents shall have precedence.

1.2 Reference documents

[1] ANDROMEDA Grant Agreement No 833881 – Annex 1 Description of the action

[2] ANDROMEDA Consortium Agreement

[3] ANDROMEDA D.7.1 Communication and Dissemination Strategy and Plan

1.3 Definitions

List of Definitions	
CISE	CISE is the Common Information Sharing Environment for the Maritime Domain. It will integrate existing surveillance systems and networks and give to all the relevant authorities (EU and national authorities responsible for different aspects of surveillance) concerned access to the information they need for their missions at sea. The CISE will make different systems interoperable so that data and other information can be exchanged easily through the use of modern technologies.
EUROSUR	The European Border Surveillance system (EUROSUR) is a multipurpose system for cooperation between the EU Member States and FRONTEX in order to improve situational awareness and increase reaction capability at external borders. The aim is to prevent cross-border crime and irregular migration and contribute to protecting migrants' lives.

1.4 Structure of the document

The deliverable presents guidelines and procedures for the efficient management control of the project. It is organised into the following sections:

- Introduction: Includes the aim of this report, a summary of the ANDROMEDA project and the deliverable structure description.
- Governance Structure: Describes the management structure, the relevant bodies, roles and committees.
- Project Meetings and Reviews: Presents the procedures for the management and technical meetings, as well as the project reviews.
- Reports and Deliverables: Presents the methodology for the collection of information and the preparation of the various reports and deliverables.
- Work Breakdown, Schedule and Time Management: Presents an overview of the Work Plan as well as time considerations for the successful completion of the project deliverables and milestones.

- Quality Assurance, Risk Management & Mitigation Plan: Summarises the procedures related to risk management and mitigation.
- Communication and Collaboration Management: Summarises the procedures related to internal and external communication management.
- IPR and Project Results: Presents an overview of the innovation and IPR management with regards to the project results.
- Contractual and Financial Provisions: Provides a selection of contractual and financial elements that are directly related to the efficient project management and development.
- Data Management: Includes a detailed data management plan for the project.
- Annexes: Separate annexes appended at the end of this document include templates for the deliverables, meetings' agenda, minutes, presentations and Interim WP Progress Reports.

1.5 List of Acronyms

List of Acronyms	
AB	Advisory Board
AP	Action Point
CISE	Common Information Sharing Environment
C2	Command and control
DMP	Data Management Plan
DoA	Description of Action
EB	Executive Board
EC	European Commission
EM	Ethics Manager
EUROSUR	European Border Surveillance system
GA	General Assembly
GA	Grant Agreement
HMI	Human Machine Interface
IPR	Intellectual Property Right
IM	Innovation Manager
IT	Information Technology
MST	Management Support Team
PC	Project Coordinator
PDF	Portable Document Format
PERT	Program Evaluation and Review Technique
PM	Project Manager
RP	Reporting Period
SAB	Security Advisory Board
ToC	Table of Contents
TL	Task Leader
UC	User Community
UCL	User Community Leader
WP	Work Package
WPL	Work Package Leader

2. Governance Structure

2.1 Project Management Structure

The organisational structure of the Consortium shall comprise the following Consortium Bodies (Figure 1).

- **General Assembly (GA):** The ultimate decision-making body of the consortium.
- **Management Support Team (MST):** The MST includes the Project Coordinator, Project Manager, Technical Manager and Innovation Manager.
- **Executive Board (EB):** The supervisory body for the execution of the Project which shall report and be accountable to the General Assembly.
- **Work Package Leaders (WPL):** Will coordinate the work in the project's WPs as described in the Annex 1 of the Grant Agreement.
- **Task Leaders (TL):** Will coordinate the work in the project's Tasks as described in the Annex 1 of the Grant Agreement.
- **Advisory Board (AB):** Will advise on strategic directions of the project and provide an external view.
- **User Community (UC):** It covers not only project partners, but also additional organisations, both users and providers of data and services, not directly involved in the project supporting and advising project partners with experience and know how throughout the project duration.
- **Security Advisory Board (SAB):** Will pay specific attention to security related risks and it will be formed from experts on security sensitive matters.
- **Ethics Manager (EM):** Will hold an advisory role for the way ethics related to research, are taken into account and formally treated in compliance with active EU directives and recommendations.

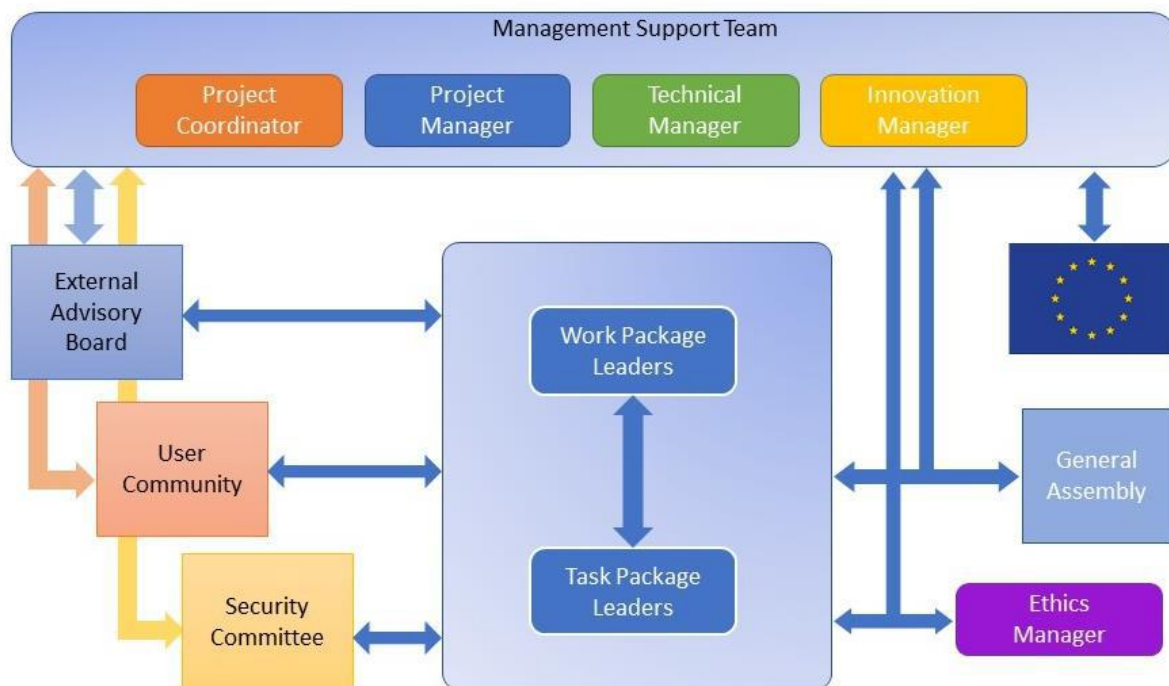


Figure 1: ANDROMEDA Project Management Structure

2.2 General Assembly

The General Assembly (GA) is the ultimate decision-making body of the consortium. The Coordinator shall chair all meetings of the General Assembly. The GA will be responsible for strategic decisions, follow-up of progress, initiating corrections and resolving conflicts. The functions of the GA will be in accordance with the contractual obligations towards the EC. The GA will focus on monitoring progress in the following fields:

- General management progress and quality
- Technological and scientific progress and results
- The management of IPR and dissemination activities
- The management of exploitation and other innovation-related activities

The General Assembly members are:

Table 1: General Assembly members

Name	Organisation	Email
Athina Foka (Chairwoman)	MMAIP	afoka@mou.gr
Jose Prieto	GMV	jprieto@gmv.es
Dimitris Diagourtas	SATWAYS	d.diagourtas@satways.net
Evangelos Sdongos	ICCS	esdongos@iccs.gr
Dimitris Katsaros	EXUS	d.katsaros@exus.co.uk
Hugo Pinto	INOVAWORKS	hugo.pinto@inovaworks.com
Giovanni Coppini	CMCC	giovanni.coppini@cmcc.it
Rauno Pirinen	LAUREA	rauno.pirinen@laurea.fi
Roberto Leuzzi	CODIN	roberto.leuzzi@codin.it
Evtim Yanakiev	STEMO	evtim_yanakiev@stemo.bg
Pantelis Michalis	KEMEA	p.michalis@kemea-research.gr
Giuseppe Vella	ENGINEERING	giuseppe.vella@eng.it
Aggelos Saatsakis	HELLENIC POLICE	a.saatsakis@police.gr
Luigi Ciani	MARINA MILITARE	luigi.ciani@marina.difesa.it
Fidalgo Neves	PORTUGUESE NAVY	fidalgo.neves@marinha.pt
Gal Levy	MOPS-INP	gal.levy@police.gov.il
Peter Kirov, Rumen Nikolov	EAMA	pkirov@marad.bg rumen.nikolov@marad.bg
Konstantinos Papagiannakis	HMOD	kpapagiannakis@dideap.mil.gr
Nexhat Kapidani	MSD	nexhat.kapidani@pomorstome

2.3 Management Support Team

The MST includes the Project Coordinator, the Project Manager, the Technical Manager and the Innovation Manager. The above mentioned four Managers will provide short reports for the GA and Consortium meetings about progress, deviations and corrective actions taken or suggested.

The Management Support Team members are:

Table 2: Management Support Team members

Name	Role	Organisation	Email
Athina Foka	Project Coordinator	MMAIP	afoka@mou.gr
Pantelis Michalis	Project Manager	KEMEA	p.michalis@kemea-research.gr
Alkis Astyakopoulos	Project Manager	KEMEA	a.astyakopoulos@kemea-research.gr
Antonis Kostaridis	Technical Manager	SATWAYS	a.kostaridis@satways.net
David Merino Delgado	Innovation Manager	GMV	dmerino@gmv.es

2.3.1 Project Coordination & Consortium Management

Managing an EC funded project requires significant administrative responsibility and specialised know-how into EC legal & financial regulations. As the Call topic requires it was decided to entrust the project coordination to MMAIP that has the available resources, both technical and administrative and required experience, thus safeguarding a smoother management of the project. MMAIP will be responsible for ensuring that the project meets the interests of all involved parties. The organisation has solid experience in Project Management as it has been involved in national and EU funded projects.

Mrs. Athina Foka, Head of the Executive Structure of National Strategic National Framework of MMAIP will assume the role of the Project Coordinator. She is the operative coordinator of the project and the intermediary between the consortium and the European Commission; PC coordinates Executive Board and the Advisory Board. PC is responsible for the overall contractual, ethical, financial and administrative management of the project. This includes also the supervision of the technical activities of the work package leaders. The PC is the sole contact person for the project with the EC and will ensure the punctual delivery of reports and deliverables; the liaison with the end users/Advisory Board and with the partners.

As the Coordinator, MMAIP will indicatively be responsible for:

- Communications between the consortium members and between the consortium and the EC
- Providing all deliverables and reports in required formats to the EC on time
- The overall legal, contractual, ethical, financial and administrative management of the consortium
- Preparing, updating and managing the consortium agreement between the participants
- Resolution of any administrative or contractual issues within the partnership and with the EC

Main coordination activities are outlined in WP1 and responsibilities will be detailed in the Consortium Agreement.

2.3.2 Project Management

Dr. Pantelis Michalis and Mr. Alkis Astyakopoulos from KEMEA will assume the role of Project Manager for the project. They will support the PC and EB with the following tasks:

- Prepare the meeting agendas, organises venues, schedules, and all activities related to helping the PC with the organisation of the project
- Monitor deadlines on time and budget and issues early warnings in case certain limits are reached
- Monitor of all the deliverables and reports quality aspects
- Provide appropriate reporting and addressing questions, problems, issues to be solved inside the EB meetings

- Manage the risk plan.

2.3.3 Technical Management

The technical management will take responsibility for and ensure that the technical work and associated deliverables are kept to schedule and budget and that the project meets its objectives. In the event of problems or unexpected deviations in a Work Package, the technical manager will flag the issue to the EB and, if needed, bring it to the General Assembly. The GA will in turn determine the appropriate course of action such as further iterations of the development loop, adoption of alternate technologies or finding alternative development routes. The responsibilities of the technical manager include both the management of the technical progress towards the objectives of the project and the exchange of results and knowledge between the partners.

Dr. Antonis Kostaridis from STWS will assume the role of Technical Manager for the project. He will monitor results from the partners at monthly intervals ensuring that the consortium is progressing according to the work program. He will keep particularly close contact with all partners involved in the ongoing integration activities and will in addition be responsible for risk management and contingency planning according to the risk management plan.

2.3.4 Management of Knowledge, Innovation-IPR and dissemination activities

The knowledge arising from work carried out under the project is the joint property of all participants. The protection and management of the knowledge and IPR has been assigned to GMV that will take on the responsibility of securing any IPR generated.

Mr. David Merino Delgado of GMV has agreed to take on the responsibility as Innovation Manager and will ensure the coordination of all activities connected to technology alignment to user needs, technology transfer, management of innovation, including IPR, detection of market opportunities and channels. IM supports the PC and the EB in aligning innovation to user needs, in fostering the exploitation of innovation and in connecting with other suppliers to promote the openness of the approach.

2.4 Executive Board

The Executive Board (EB) is the supervisory body for the execution of the Project which shall report to and be accountable to the General Assembly. It meets at least every 6 months (teleconference every 3 months). The coordinator shall chair the meetings unless otherwise decided. The Executive Board shall consist of the Coordinator, the Project Manager and the WP leaders. Active task leaders are also part of the Executive Board.

The Executive Board shall prepare the meetings, propose decisions and prepare the agenda of the General Assembly. It shall be responsible for the proper execution and implementation of the decisions of the General Assembly. It will monitor the effective and efficient implementation of the Project. It shall collect information at least every 3 months on the progress of the Project, examine that information to assess the compliance of the Project with the Description of Action (DoA).

The ANDROMEDA Executive Board members are:

Project Coordinator: Athena Foka (MMAIP)

Project Manager: Pantelis Michalis, Alkis Astyakopoulos (KEMEA)

Work Package Leaders:

- ITN Capt. Luigi CIANI (WP2 – ITN),

- Fernando Labarga (WP3 – GMV),
- Antonis Kostaridis (WP4 – STWS),
- Filipa Domingues (WP5 – INW),
- Aggelos Vasileiou (WP6 – KEMEA),
- Lazaros Karagiannidis (WP7 – ICCS),
- Athena Foka (WP8 – MMAIP)

2.5 Advisory Board

The ANDROMEDA Consortium has foreseen an Advisory Board (AB). This additional body meets three times throughout the project (M6, M12 and M18) and consists of selected European and International organisations not directly involved in the project as full partners, supports and advises project partners with experience and know-how throughout the project duration. Their valuable feedback to the strategic and technical process of the project brings many benefits for the ANDROMEDA project. Members of the AB will provide an external view. The AB will advise on strategic directions of the project in terms of detailed technical goals and impact, standardisation, ethical and societal issues. To achieve high quality results within the ANDROMEDA project, a strong cooperation with the AB members will actively be pursued and facilitated by frequent interaction. The current composition of the Advisory Board includes¹:

- Mr. Bernard Garnier, Blue Solutions Consulting (FR)
- Mr. Pertti Woitsch, Geowise (FI)
- Dr. Panagiotis Kikiras, EDA R&T Coordinator, HoU Innovative Research (EL)
- Velina Tomova Dobрева, Chief Directorate Border Police, Sofia (BG)

2.6 User Community Management

The User Community includes partners, practitioners involved as full partners, all the associated partners (the organisations that have already expressed interest and are supporting the objectives of the project maritime domain experts, external end users; However, the consortium is always open to accept other members during the execution of the project. it addresses user needs, operational requirements, potential ethical and societal issues. It is coordinated and animated by the User Community Leader.

Mr. Rauno Pirinen from LAUREA will be the User Community Leader (UCL), with vast experience in applying user-driven methodology in the definition of user needs, design and validation of information systems, leads and animates the User Community.

2.7 Security Advisory Board

The SAB will assess the sensitivity of input and deliverables prior to publication and ensure that all partners discharge fully the security delegations of the Project. The responsibilities of the SAB are to:

- Review all the deliverables from the security sensitivity point of view of all WPs – not just classified ones- prior to dissemination outside of the consortium

¹ Mr. Ioannis Karageorgopoulos, Vice Admiral (Ret.) Hellenic Coast Guard (EL) is not included in the Advisory Board of the ANDROMEDA project anymore since from November 2019 he acts as Director of KEMEA.

- Monitor the production of and access to classified information and use of and access to any classified background information, ensuring best practises and methodology as in the Security Classification Guide tables
- Monitor and review any publications and dissemination activities in the context of security sensitivity
- Provide independent advice and feedback about security issues arising in the project, on request by any beneficiary or through monitoring of activities, alerting the consortium and Coordinator accordingly
- Collaborate closely when needed with the Coordinator for handling security issues
- Ensure the application of the security rules for protecting EU classified information as per the Commission Decision (EU, Euratom) 2015/444 of 13 March 2015 and report their findings to the General Assembly

The SAB will be chaired by the **Project Security Officer (PSO), Dimitrios Myttas from KEMEA**, and will be formed from specialised professionals coming from the ANDROMEDA end-user members. The ANDROMEDA SAB members are the following:

- Lt Commander HCG Sotiris Gkekas from the Ministry of Maritime Affairs and Insular Policy
- Police Major Panagiotis Mertis from the Hellenic Police,
- Captain Luigi Ciani from the Italian Navy,
- Kiril Penchev from the Bulgaria Maritime Administration
- Lt. Commander HN Konstantinos Papagiannakis from the Hellenic Ministry of Defence

2.8 Ethics Management

Mr. Tuomas Tammilehto from LAUREA will be the Ethics Manager, with an extensive expertise for the ethics work. Her responsibilities are:

- Identifies and analyses ethical and societal framework
- Monitors the ethical concerns in the project
- Ensures that the project will comply with the Research Ethics taking all relevant international ethical aspects into consideration, prior to the execution of the operational trials
- Translates and implements the ethical requirements to the various deliverables in the project
- Provides advice on assessments on ethics in the ethical and societal reports
- Facilitates collaboration with all the project actors

2.9 Work Package Leaders

The Work-Package Leaders (WPLs) will perform the following specific functions:

- Coordinate on a day-to-day basis the progress of the technical work done inside the WP
- Deliver outputs at each agreed step for a Work Package and advise the Project Coordinator of any delay in delivery that could impact other WPs or the project as a whole.

The WP titles and WP Leaders are listed in Table 3.

Each WP Leader will report formally to the Project Manager on the progress of the work and related administrative aspects – the methodology is presented in Section 4.1. The reporting will underline the problems

encountered and will detail the corrective actions put in place. The reporting will also present the anticipated difficulties for the following months, as well as the measures taken to limit them.

Table 3: Work Package Leaders allocation

WP No	WP Title	Lead Partner	WP Leader	Email
WP1	Project Coordination & Management	MMAIP	Athena Foka	afoka@mou.gr
WP2	Operational Analysis, User Requirements and Technical Specifications	MARINA MILITARE	Capt. Luigi CIANI	luigi.ciani@marina.difesa.it
WP3	Overall Design, Architecture & Interoperability Framework	GMV	Fernando Labarga	flabarga@gmv.com
WP4	ANDROMEDA System Developments	STWS	Antonis Kostaridis	a.kostaridis@satways.net
WP5	System Integration and Testing	INW	Filipa Domingues	filipa.domingues@inovaworks.com
WP6	Pilot Demonstrations, Validation & Evaluation	KEMEA	Aggelos Vasileiou	a.vassileiou@kemea-research.gr
WP7	Impact Creation, Exploitation and Standardization Activities	ICCS	Lazaros Karagiannidis	lkaragiannidis@iccs.gr
WP8	Ethics requirements	MMAIP	Athena Foka	afoka@mou.gr

Table 4: Task Leaders allocation

WP No	Task No	Task Title	Lead Partner	Task Leader	Email
WP1	T.1.1	Administrative & Financial Planning and Coordination	MMAIP	Athena Foka	afoka@mou.gr
	T.1.2	Project Management, Quality Control and Risk Management	KEMEA	Alkis Astyakopoulos	a.astyakopoulos@kemea-research.gr
	T.1.3	Innovation Management	GMV	David Merino	dmerino@gmv.com
	T.1.4	Legal, Policy, Social and Ethical Management	LAUREA	Tuomas Tammilehto	tuomas.tammilehto@laurea.fi
WP2	T.2.1	User Community Interactions	LAUREA	Rauno Pirinen	rauno.pirinen@laurea.fi
	T.2.2	User Requirements and Technical Specifications	KEMEA	Constantinos Rizogiannis	c.rizogiannis@kemea-research.gr
	T.2.3	Legal and Ethical Context Analysis	LAUREA	Tuomas Tammilehto	tuomas.tammilehto@laurea.fi
	T.2.4	Operational Scenarios & Trials Definition	ENGIN	Giovanni Barone	giovanni.barone@engin.it
WP3	T.3.1	Enhanced CISE (e-CISE) Data Model for Border Monitoring & Control	STWS	Spyros Antonopoulos	s.antonopoulos@satways.net
	T.3.2	Physical and Logical System Architecture	INOVA	João Pastor	joao.pastor@inovaworks.com

WP No	Task No	Task Title	Lead Partner	Task Leader	Email
	T.3.3	Land Borders C2 Design	GMV	Fernando Labarga	flabarga@gmv.com
	T.3.4	Maritime Borders C2 Design	STWS	Manolis Tsogas	m.tsogas@satways.net
	T.3.5	Data Fusion, Situation Awareness and Decision Support Services Design	EXUS	George Lalas	g.lalas@exus.co.uk
WP4	T.4.1	Development of Land C2 Systems Adaptations	STWS	Aggelos Aggelis	a.aggelis@satways.net
	T.4.2	Development of Maritime C2 Systems Adaptations	GMV	Juan Manuel Grenner	hmgrenner@gmv.com
	T.4.3	Development of enhanced CISE Adaptors	INOVA	João Pastor	joao.pastor@inovaworks.com
	T.4.4	Development of Data Fusion, Situation Awareness and Decision Support Services	EXUS	George Lalas	g.lalas@exus.co.uk
WP5	T.5.1	Test Architecture, Sensor and Data Integration	ICCS	Thanasis Douklias	thanasis.douklias@iccs.gr
	T.5.2	Definition and Implementation of Integration Platforms	GMV	Juan Manuel Grenner	hmgrenner@gmv.com
	T.5.3	Definition of System Configurations for Each Trial	INOVA	Filipa Domingues	filipa.domingues@inovaworks.com
	T.5.4	Factory Integration and Testing of Trial Configurations	STWS	Spyros Antonopoulos	s.antonopoulos@satways.net
WP6	T.6.1	Operational Trials Context	KEMEA	Aggelos Vasileiou	a.vassileiou@kemea-research.gr
	T.6.2	Iberian Maritime Border Trial	INOVA	Filipa Domingues	filipa.domingues@inovaworks.com
	T.6.3	Greece-Bulgaria Land Border – Maritime Trial	STWS	Aggelos Aggelis	a.aggelis@satways.net
	T.6.4	Ionian-Adriatic Maritime Border Trial	CODIN	Leuzzi Roberto	roberto.leuzzi@codin.it
	T.6.5	Trials Validation and Evaluation	MMAIP	Athena Foka	afoka@mou.gr , eyzed.yna@yen.gr
WP7	T.7.1	Dissemination and Communication	STWS	Souzanna Sofou	s.sofou@satways.net
	T.7.2	Workshops Coordination	ICCS	Pantelis Kanellopoulos	pantelis.kanellopoulos@iccs.gr
	T.7.3	IPR Review and Patenting Process	KEMEA	Galateia Kapellakou	g.kapellakou@kemea-research.gr
	T.7.4	Exploitation Plan and Market Large Uptake Assessment	GMV	David Merino	dmerino@gmv.com
	T.7.5	Standardization	ICCS	Alexandros Kordonis	alexandros.kordonis@iccs.gr

3. Project Meetings and Reviews

This section presents the procedures for the management and technical meetings. The objective is to provide specific guidelines and processes for the efficient communication and collaboration between the partners.

3.1 Meetings Organisation

During the lifetime of the ANDROMEDA project, various management and technical meetings will be held. The management meetings include the Kick-Off meeting, GA meetings, Plenary meetings, AB meetings, and Project Review meetings. Technical meetings are mainly associated with the technical WPs and the related tasks including the project demonstrations. The meeting organization process may also be partially applied to other information and dissemination events. Aiming at advanced efficiency and reduced expenses, there will be an effort to combine meetings where possible.

Each partner hosting a project meeting will follow the organisational procedures listed below:

- Collaborate with the Project Coordinator and Project Manager for the administrative preparation of the meeting.
- Prepare logistics information for the meeting, including meeting facilities, directions to the meeting location, hotels in the area, access to wireless internet in the meeting room(s).
- Provision of coffee, refreshments, lunch for all partners for the duration of the meeting.

The hosting partner is responsible for the administrative and logistic planning expenses of the meeting. Each partner will contribute to the meeting preparation as requested by the Project Coordinator, including any follow-up actions. The requested information shall include the personal information and the contact details of each participant and any other material required for the preparation of the meeting and of any follow-up documents (e.g., meeting minutes).

Full scale ANDROMEDA Consortium meetings will take place approximately every 3 months for the duration of the project. According to the project's needs, additional meetings of any type could also be organised at the discretion of the Project Coordinator.

3.2 Meetings' Agenda

The meeting agenda will be prepared by the Project Manager in cooperation with the hosting partner. The meeting agenda will be distributed to relevant ANDROMEDA partners as soon as possible and at least seven (7) calendar days preceding the meeting. The agenda should cover the following items (a word template is provided to partners, presented in Annex B: Meeting Agenda Template):

- Meeting title
- Date/time
- Exact location and/or the tele-conference tool to be used
- Detailed program of activities, including the coffee breaks, lunch, etc.
- The various sessions per day and the partners leading each session
- The preparation needed for each session by the attendees
- Preparation of decisions to be taken; the preparation may include the following input:
 - Proposal description
 - Action Item related to the proposal

- Relevant WP - partners involved/responsible for action
- Deadline
- Clarifications/comments (e.g., possible implications of non-implementation)

3.3 Meetings Minutes

The chairperson in collaboration with the Project Manager shall produce written minutes of each meeting which shall be the formal record of all decisions taken. The chairperson, in collaboration with the Project manager, shall send the draft minutes to all Members within ten (10) calendar days of the meeting.

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

The chairperson shall send the accepted minutes to all the Members of the General Assembly, and to the Project Coordinator, who shall safeguard them.

The meeting minutes should contain the following information (a word template is provided to partners, presented in Annex C: Meeting Minutes Template):

- Meeting title
- Date/time
- Exact location and/or the tele-conference tool used
- List of Participants
- Effective Agenda and Links with the presentations
- Meeting Summary including the Main Decisions taken
- Detailed Action Points list, including:
 - Numbering
 - Relevant Task/Topic/Item
 - Description
 - Responsible partners and/or names
 - Due date

3.4 Project Review Meetings

Project Reviews are typically one-day meetings scheduled after the end of each reporting period or on an ad-hoc basis. In these meetings the status of the project is presented to the Project Officer and the appointed project reviewers. The objective of a Project Review is to assess the work carried out during the precedent reporting period.

3.4.1 Preparation of Project Review Meetings

The Project Reviews are prepared by the Project Coordinator in cooperation with the Project Officer. Other partners may be requested to provide inputs and/or to participate in the Review meeting.

The following general principles will be taken into consideration for Project Review preparation:

- The Project Coordinator will identify the objectives of the Project Review (e.g., present an important result), assign roles to the participants, prepare a detailed agenda and ask participants to prepare their contribution.

- The Project Coordinator will send the Project Review agenda to the Project Officer and possibly the Project Reviewers.
- The Project Coordinator collects all the presentations for the review and provide comments to the participants.
- Before the review, the Coordinator assesses the material with the assistance of the participating partners with respect to the objectives, the consistency, the structure of the presentations, the supporting material, the roles and propose corrective measures if necessary.
- The meeting host, with the assistance of the Project Coordinator, check/verify the logistics (meeting room, internet access, software/hardware support for demonstration, etc.)

3.4.2 Agenda of Project Review Meetings

The Project Review meeting agenda will include the following items:

- List of Participants: Project Officer, Project Reviewers, Project Coordinator, Project Manager, Technical Manager, Innovation Manager, Ethics Manager, WP Leaders and if needed Task Leaders.
- Project Overview (objectives, partner roles, overall presentation, planning).
- Management Report (presentation of finance elements, and of any critical issues).
- Detailed Review (presentation on a task/WP level)
- Exploitation and Dissemination.
- Legal, Ethics and Societal challenges.
- Conclusion and plans for the next period.

3.5 Meetings and Reviews Schedule

A preliminary plan of meetings and reviews to be held in the lifetime of the ANDROMEDA project is presented in Table 5. The exact timings remain to be confirmed and will depend on the availability of Partners and Reviewers as well as on unforeseen circumstances. Additional meetings may be scheduled if deemed necessary.

Table 5: Planned Meetings and Reviews

No	Meeting Type	Month	Date	Location (partner)
1	Kick-Off Meeting	1	September 2019	Athens MMAIP
2	End users meeting + Technical meeting	3	November 2019	Rome (ITN)
3	Project plenary meeting + Technical meeting + Innovation meeting + Advisory Board meeting	6	February 2020	Lisbon (PTN)
4	Project Technical meeting + Innovation meeting	9	May 2020	Helsinki (LAU)
5	Review meeting	10	June 2020	Brussels (EC)
6	First Field Trial Setup	11	July 2020	Lisbon
7	Second Field Trial Setup	11	July 2020	Alexandroupoli/Sofia
8	Project plenary meeting + Technical meeting + Advisory Board meeting + 1st Workshop	12	September 2020	Madrid (GMV)
9	Final Field Trial Setup	15	November 2020	Athens/Rome

No	Meeting Type	Month	Date	Location (partner)
10	3 demonstration days	17	January 2021	Lisbon/Athens/Rome (PTN, KEM, ITN)
11	Project plenary meeting + 2nd Workshop + Advisory Board	18	February 2021	Athens (MMAIP)
12	Final review meeting	20	April 2021	Brussels (EC)

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20
Project Milestone	MS1				MS2		MS3				MS4	MS5	MS6		MS7			MS8		
Plenary Meetings (EB)	EB1		EB2T			EB3			EB4T			EB5			EB6T			EB7		
Technical Meetings			TM1			TM2			TM3			TM4								
Advisory Boards						AB1						AB2						AB3		
User Community Workshops			UC1									UC2						UC3		
Innovation Meetings						IM1			IM2											
Review Meetings										RV1										RV2
First Field Trial Setup											TR1									
Second Field Trial Setup											TR2									
Final Field Trial Setup															TR3					
Demonstration days																	3			

Figure 2: Project Meetings Master Schedule

Table 6: Project Meetings Timetable

Project Milestones - MS1 – M1 - MS2 – M5 - MS3 – M7 - MS4 – M11 - MS5 – M12 - MS6 – M13 - MS7 – M15 - MS8 – M18	Plenary Meetings and Executive Board Meetings/ Teleconferences - EB1 – M1 - EB2 (telco) – M3 - EB3 – M6 - EB4 (telco) – M9 - EB5 – M12 - EB6 (telco) – M15 - EB7 – M18	Technical Meetings - TM1 – M3 - TM2 – M6 - TM3 – M9 - TM4 – M12
Advisory Board Meetings - AB1 – M6 - AB2 – M12 - AB3 – M18	User Community Workshops - UC1 – M3 - UC2 – M12 - UC3 – M18	Innovation Meetings - IM1 – M6 - IM2 – M9
Review Meetings - RV1 – M10 - RV2 – M20	Field Trial Setups 1st Trial Setup – M11 2nd Trial Setup – M11 - Final Trial Setup – M15	Demonstration Days 3 Demo Days – M17

4. Reports and Deliverables

The reports and deliverables of the ANDROMEDA project will follow the guidelines set by the EC for the H2020 projects – according to the H2020 Online Manual²². ANDROMEDA has one official reporting period:

- RP1: from month 1 (M1) to month 18 (M18)

In addition to the Periodic Reporting, the Project Coordinator and the Project Officer will monitor the progress of the project with the use of Project Reports. In the framework of WP1, on semi-annual basis, i.e. every six (6) months, the Project Coordinator will prepare a Project Report, i.e. D1.2: Project Initial Report [6], D1.3: Project Intermediate Report [12] and D1.4: Project Final Report [17].

The following subsections present the procedures for the collection of the information and the preparation of the reports.

4.1 Interim Management Report

Each WP Leader will submit an Interim Management Report (IMR) to the Management Support Team (MST) for the monitoring of the progress of the project. The Interim Management Report will be prepared by each WP Leader for M3, M9 and M15.

IMPR No.	Period covered	Deadline for submission
WPX IMR1	M1 – M3 (September 2019 – November 2019)	November 2019
WPX IMPR2	M6 – M9 (February 2020 – May 2020)	May 2020
WPX IMR3	M12 – M15 (August 2020 – November 2020)	November 2020

The template for the Interim Management Reports for the WP Leaders is given in Annex E: WPX Interim Management Report. This report will include information on:

- The technical progress of the project and the deliverables
- Problems encountered during the project
- Dissemination and other activities

The Interim Management Reports (IMR) are not official deliverables of the project and will be used internally by the MST to review the project progress and follow-up work according to the plan.

4.2 Project Reports

The Project Reports are official deliverable of the project and the procedure for collecting the reports is the following:

Step 1: The Project Coordinator will send a template to the partners and the WP Leaders, with instructions, at least 21 days before the deadline.

Step 2: Each partner and each WP Leader will complete the template, including man months and expenses estimation, and send the report back to the Project Coordinator. Innovation activities will be also reported.

²² H2020 Online Manual: http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm

Step 3: Based on the provided reports by the partners, a draft Project Report will be created by the Project Coordinator.

Step 4: After integration of any comments from the Project Coordinator and/or the Executive Board, the Project Coordinator will submit the Project Reports at M6 (D1.2: Project Initial Report), M12 (D1.3: Project Intermediate Report) and M17 (D1.4: Project Final Report).

PR No.	Period covered	Deadline for submission
D1.2: Project Initial Report	M1 – M6 (September 2019 – February 2020)	February 2020
D1.3: Project Intermediate Report	M6 – M12 (February 2020 – August 2020)	August 2020
D1.4: Project Final Report	M12 – M17 (August 2020 – January 2021)	January 2021

4.3 Final Reporting

The ANDROMEDA Consortium will use the Periodic Report Template³ as provided by EC for H2020 projects. The Final Report shall be submitted by the Coordinator within 60 days following the end of RP1.

Reporting Period	Period covered	Deadline for submission
RP1	M1 – M18 (September 2019 – February 2021)	April 2021

The Final Report contains the Final Technical and Final Financial Report of RP1.

The Final Technical Report consists of two parts:

- Part A contains the cover page, a summary that can be published 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 2020 key performance indicators and the Horizon 2020 monitoring requirements. Part A is generated by the IT system. It is based on the information entered through the continuous reporting modules of the electronic exchange system in the Participant Portal. The Project Coordinator can update the information in the continuous reporting module at any time during the project lifecycle.
- Part B is the narrative part that includes explanation of the work carried out by the beneficiaries during RP1. Part B needs to be uploaded as a PDF document following the template of Part B Periodic Technical report.

The Final Financial Report consists of:

- 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 ‘final summary financial statement’, created automatically by the electronic exchange system, consolidating the individual financial statements and the information on the use of resources, including the request for payment of the balance.

³ Periodic Report Template, Version 2.1, 19 December 2017

https://ec.europa.eu/research/participants/data/ref/h2020/gm/reporting/h2020-tmpl-periodic-rep_en.pdf

- a ‘certificate on the financial statements’ (drawn up in accordance with Annex 5) for each beneficiary, if it requests a total contribution of EUR 325 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2).

4.3.1 Preparation and Submission of Final Report

The preparation of the Final Report is a continuous process that includes the following functionalities:

- Continuous reporting functionality in the participant portal: it is activated at the time the project starts and it is continuously open for the beneficiaries to submit deliverables, to report on progress in achieving milestones, to follow up of critical risks, ethics issues, publications, communications activities, and the answers to the questionnaire on horizontal issues.
- Periodic reporting functionality in the participant portal: following the end of RP1, the functionality of periodic reporting in the Participant Portal will be activated. While the periodic reporting session is open in the electronic exchange system:
 - Each participant will be able to complete on-line their own Financial Statement, including the explanations on the use of resources.
 - Project Coordinator will be able to upload the Part B of the Final Technical Report as a PDF document.

When the coordinator submits the Final Report, the IT tool will capture the information from the continuous reporting module in order to generate the Part A of the Final Report. The IT tool will consolidate the individual financial statements and it will generate automatically the report with explanations of the use of resources and the summary of the Financial Statements, which corresponds to the request for balance payment.

4.4 Deliverables

A Project Deliverable is an output of the project which is subject to review by the EC. Deliverables should be submitted on the due date as specified in Annex I of the Grant Agreement. The Project Coordinator will submit them through the electronic exchange system.

4.4.1 Deliverable Structure

All ANDROMEDA deliverables will have the following structure:

- Introductory pages:
 - Cover page
 - Deliverable number and title
 - WP number and title
 - Due date/Submission Date
 - Dissemination Level
 - Document control page
 - Document version history
- Executive summary, disclaimer and Copyright message
- Table of Contents
- Table of Figures
- Table of Tables

- Main body:
 - Introduction
 - Purpose of the document
 - Reference documents
 - Definitions
 - Structure of the document
 - List of Acronyms
- Conclusions
- References
- Annexes
- Quality Review Report
- Ethics Checklist

A template for the ANDROMEDA deliverables, that follows the aforementioned structure, has been created by the MST and distributed to the partners; the present deliverable is created based on the ANDROMEDA Deliverable Template (see Annex A: Deliverable template)

4.4.2 Deliverable Preparation

Each deliverable lead beneficiary will be responsible for producing the Deliverable on its due date in consultation with the respective WP Leader and Project Coordinator. The following steps comprise the production process for ANDROMEDA project.

Step 1: The deliverable lead beneficiary will be responsible for distributing the Deliverable outline to the relevant partners who will provide their inputs and to the WP Leader – at least 2 months before the due date.

Step 2: The deliverable lead beneficiary will then collect the partners' inputs and create a consolidated version of the Deliverable. This version will be sent to the partners and the WP Leader for another round of inputs to compose the final version.

Step 3: The deliverable lead beneficiary will send the final version to the MST, the Peer-Reviewers, the Ethics Manager and the SAB for review – at least three (3) weeks before the due date.

Step 4: The afore-mentioned Reviewers will complete the review of the deliverable at least two (2) weeks before the due date. The allocated time for the review is 7 calendar days. The review includes the completion of the following parts of the deliverable:

- Consolidated Quality Review Report by the assigned two (2) Peer-Reviewers
- Ethics Compliance Check Report by the Ethics Manager
- Security Assessment Check-box by the appointed member of the SAB

Step 5: The deliverable lead beneficiary makes the necessary corrections and updates according to the above Review Reports at least one (1) week before the deadline and sends the final version of the deliverable to the Project Coordinator and the deliverable approval reviewer (see Table 14) who submits the deliverable to the EC through the electronic exchange system before the due date.

Step 6: Deliverable acceptance: following Project Reviews, the Project Officer notifies the consortium regarding the formal acceptance of the deliverable.

4.4.3 Deliverable Production Conventions and Protocols

Deliverable production should follow the following rules:

- Working draft of the deliverables should be produced as a Word (.doc, .docx) document.
- Final releases of the deliverables should be produced as a PDF documents.

The following naming conventions (Table 7) should be used to name the deliverable documents.

Table 7: Deliverable File Naming Conventions

Deliverable Status	Document Name Structure and Example
Working Draft	ANDROMEDA_D<DeliverableNumber>_<DeliverableTitle>_<YYMMDD>_v<Version Number>_<LeadBeneficiaryCode>_<AuthorInitials>.doc Example: ANDROMEDA_D.1.1_Project Management Quality and Risk Plan _190923_v0.4_KEMEA_AA.doc
Final Release	ANDROMEDA_D<DeliverableNumber>_<DeliverableTitle>_<YYMMDD>_Final.pdf Example: ANDROMEDA_D.1.1_Project Management Quality and Risk Plan _161231_v1.0.pdf

Table 8: Deliverable Versioning Protocol

Deliverable Production / Editing Stage	Version Number
Document Content Outline / Structure versions	v.0.1xx
Draft versions	v.0.2xx
Complete versions formatted according to template	v.0.3xx
Complete versions with Annexes	v.0.4xx
Internal review by WP Leader	v.0.5xx
Internal review by Peer Reviewers	v.0.6xx
Review by the Ethics Manager	v.0.7xx
Review by the Security Advisory Board	v.0.8xx
Internal approval review by the Project Coordinator or Appointed Approval Reviewer from MST	v.0.9xx
Final version to be released for submission	v.1.0

4.4.4 Roles

The deliverable production process is led by the deliverable author(s), that are responsible for the submission of a high-quality deliverable in due time. The author(s) are also the main contact point with the other roles, being in charge of uploading the document to the right location in the project repository and of notifying the peer reviewer(s), the Ethical Manager, the Security Advisory Board and the Management Support Team whenever the document is ready for the next step in the deliverable production process. Alongside the deliverable author(s), the deliverable production process involves deliverable contributors, peer reviewers, the Ethical Manager, the Security Advisory Board and approval reviewer.

The deliverable contributors participate in the production of the deliverables by providing content and supporting material as requested by the deliverable author(s).

Peer reviewers must not be the author or a contributor to the deliverable and they are responsible for carefully reviewing the content of the deliverable, ensuring that the deliverables' objectives are met from a scientific/technical point of view, as well as that the overall review objectives are fulfilled.

The Ethics Manager is appointed to review the deliverable and ensure that all relevant ethical issues are properly addressed and that the project's ethics requirements are met according to the ethical monitoring plan.

Deliverable approval reviewer is either the Project Coordinator or a person from the MST, e.g. the Project Manager, the Technical Manager or the Innovation Manager. The approval reviewer ensures that the comments/requests in the deliverable Quality Review Report have been indeed addressed by the deliverable author(s) and contributors. The appointed approval reviewer must update the corresponding section in the Review Protocol in due time. Optionally, the approval reviewer can make other suggestions or comments to the deliverable author(s). The deliverable document must be uploaded to the EC platform and the project repository and the deliverable author(s) must be notified accordingly.

4.4.5 Process

The stages of the deliverable production process are presented in the tables below.

Table 9: Document Writing Process

Process Stage	Document writing
Responsible role	Deliverable Author(s)
Other roles involved	Deliverable Contributors
Deliverable state	Draft
Input	N/A
Output	Deliverable document

Table 10: Peer Review Process

Process Stage	Document writing
Responsible role	Two (2) Appointed Peer Reviewers
Other roles involved	Deliverable Author(s)
Deliverable state	Draft
Input	Deliverable document: consolidated draft, ready for review
Output	Deliverable document with comments and the completed Quality Review Report

Table 11: Ethical & Security Approval Process

Process Stage	Document writing
Responsible role	Ethics Manager, Security Advisory Board members
Other roles involved	Deliverable Author(s)
Deliverable state	Draft
Input	Deliverable document: consolidated draft, ready for review
Output	Deliverable document with comments, the completed Ethics check list and the security assessment in the Document Control Page

Table 12: Review Approval Process

Process Stage	Document writing
Responsible role	Project Coordinator or Appointed Approval Reviewer from MST
Other roles involved	Deliverable Author(s)
Deliverable state	Final
Input	Deliverable document: updated addressing peer review, ethics and security comments and requests for changes
Output	Deliverable document with the updated Quality Review Report section, and optionally with comments.

4.4.6 Schedule

The review process will have to start ideally three weeks before the deliverable submission deadline, so as to allow for various feedback loops between the reviewers and the deliverable author(s). The schedule proposed in the table below is recommended and deliverable author(s) are encouraged to adhere to it. The timing of specific review stages can be reduced if previously agreed between the deliverable author(s) and the corresponding reviewers.

Table 13: Review Approval Process with timeline

Process Stage	Initialisation before the submission	Duration	Roles involves
Submission of the Table of Contents (ToC), sections contents in bullet form with brief explanation, and writing allocation (who is writing each section) for the deliverable to WPL and all partners involved.	8 weeks	5 weeks	Deliverable Author(s) Deliverable Contributors
Submission of the draft deliverable by the Deliverable Author(s) to the MST (Project Coordinator, Project Manager, Technical Manager, Innovation Manager), the Peer Reviewers, the Ethics Manager and the Security Advisory Board (SAB). The review will last 1 week.	3 weeks	1 week	Deliverable Author(s) Deliverable Contributors Peer Reviewers Management Support Team Ethics Manager Security Advisory Board
Updates to the draft deliverable by the Deliverable Author(s) according to the comments received by the MST, the Peer Reviewers, the Ethics Manager and the SAB. The updates will last 1 week.	2 weeks	1 week	Deliverable Author(s) Deliverable Contributors Peer Reviewers Management Support Team Ethics Manager Security Advisory Board
Submission of the final draft of the deliverable to the Project Coordinator and the appointed reviewer from the MST, Approval and submission of the final deliverable to the EC services.	1 week	1 week	Deliverable Author(s) Appointed Approval Reviewer

4.4.7 Reviewers

The reviewers for each deliverable have been appointed by the Project Manager and Technical Manager and agreed with all partners. The appointment of a reviewer to each deliverable has followed some basic rules.

- **Peer reviewer:** Must not be one of the main deliverable author(s) and should have a special interest in the topic covered by the deliverable (e.g. a related WP/task/deliverable leader, main role in a task that depends on the work described in the deliverable).
- **Ethics reviewer:** Must not be one of the main deliverable author(s) and should have a special interest in the topic covered by the deliverable (e.g. a related WP/task/deliverable leader, main role in a task that depends on the work described in the deliverable). This role will be primarily covered by the Ethics Manager.
- **Security reviewer:** Must not be one of the main deliverable author(s) and should be one member of the Security Advisory Board. This role will be covered by a member of the SAB.
- **Approval reviewer:** The person appointed by the Project Coordinator as approval reviewer must not be one of the main deliverable author(s).

Table 14: Deliverables Internal and Approval Reviewers

Deliverable No	Deliverable Title	WP No.	Internal Reviewer #1	Internal Reviewer #2	Approval Reviewer
D1.1	Project Management, Quality and Risk Plan	WP1	GMV	SATWAYS	PC
D1.2	Project Initial Report	WP1	KEMEA	SATWAYS	PM
D1.3	Project Intermediate Report	WP1	KEMEA	SATWAYS	PM
D1.4	Project Final Report	WP1	KEMEA	SATWAYS	PM
D1.5	Legal, Societal, Ethical Initial Report	WP1	ENG	KEMEA	PM
D1.6	Legal, Societal, Ethical Final Report	WP1	ENG	KEMEA	PM
D2.1	User Community Initial Report	WP2	EXUS	ICCS	PM
D2.2	User Requirements & Technical Specifications	WP2	SATWAYS	GMV	PM
D2.3	Interaction with Legacy Systems	WP2	ICCS	INW	PM
D2.4	Legal, Ethical and Societal Aspects	WP2	ENG	KEMEA	PM
D2.5	User Community Final Report	WP2	EXUS	ICCS	PM
D2.6	Operational Scenarios and Trials	WP2	ITN	GMV	PM
D3.1	e-CISE Data Model description	WP3	INW	ENG	TM
D3.2	Architecture Design	WP3	ICCS	CODIN	TM
D3.3	Land Border C2 System Design	WP3	STEMO	HELPOL	TM
D3.4	Maritime Border C2 System Design	WP3	GMV	HMOD	TM
D3.5	Data Fusion, Situational Awareness and Decision Support Services Design	WP3	CMCC	SATWAYS	TM
D4.1	Interoperable C2 for Land Border Operations	WP4	INW	HELPOL	TM
D4.2	Interoperable C2 for Maritime Border Operations	WP4	GMV	INW	TM
D4.3	Nodes and Services for e-CISE Information Exchanges	WP4	SATWAYS	GMV	TM

Deliverable No	Deliverable Title	WP No.	Internal Reviewer #1	Internal Reviewer #2	Approval Reviewer
D4.4	Data Fusion, Situational Awareness and Decision Support Services	WP4	CODIN	CMCC	TM
D5.1	Test Architecture and Data Integration	WP5	INW	ENG	TM
D5.2	Definition of Integration Platforms	WP5	ENG	SATWAYS	TM
D5.3	Definition of Trial Configurations	WP5	GMV	ENG	TM
D5.4	Integration and Validation Test Plan	WP5	EXUS	ICCS	TM
D5.5	Integration and Validation Test Report	WP5	STEMO	CODIN	TM
D6.1	Validation in operational trial approach and plan	WP6	MDN	MOPS-INP	PM
D6.2	Operational Trials Results Report and Lessons learnt	WP6	MSD	EAMA	PM
D7.1	Communication and Dissemination Strategy and Plan	WP7	ICCS	MMAIP	PC
D7.2	Initial Dissemination Materials	WP7	SATWAYS	MMAIP	PC
D7.3	Final Dissemination Materials	WP7	SATWAYS	MMAIP	PC
D7.4	Andromeda Initial Web Presence	WP7			PC
D7.5	Andromeda Final Web Presence	WP7			PC
D7.6	Initial Workshops Organization and Results	WP7	EXUS	GMV	IM
D7.7	Final Workshops Organization and Results	WP7	EXUS	GMV	IM
D7.8	Exploitation Plan	WP7	SATWAYS	INW	IM
D7.9	Exploitation and Large Uptake Assessment	WP7	SATWAYS	INW	IM
D7.10	Standardization Report	WP7	ENG	SATWAYS	IM
D8.1	H - Requirement No. 1	WP8	LAUREA	ALL	PM
D8.2	H - Requirement No. 2	WP8	LAUREA	ALL	PM
D8.3	H - Requirement No. 3	WP8	LAUREA	ALL	PM
D8.4	POPD - Requirement No. 4	WP8	KEMEA	ALL	PM
D8.5	POPD - Requirement No. 5	WP8	KEMEA	ALL	PM
D8.6	POPD - Requirement No. 6	WP8	KEMEA	ALL	PM
D8.7	POPD - Requirement No. 7	WP8	KEMEA	ALL	PM
D8.8	POPD - Requirement No. 8	WP8	LAUREA	ALL	PM
D8.9	POPD - Requirement No. 9	WP8	KEMEA	ALL	PM
D8.10	POPD - Requirement No. 10	WP8	KEMEA	ALL	PM
D8.11	EPQ - Requirement No. 11	WP8	LAUREA	ALL	PM
D8.12	DU - Requirement No. 12	WP8	KEMEA	ALL	PM
D8.13	M - Requirement No. 13	WP8	KEMEA	ALL	PM

5. Work Breakdown, Schedule and Time Management

5.1 Project Schedule

The ANDROMEDA project started on 1st September 2019 and ends on 28th February 2021. The key management stages of the project are listed below in Table 15.

Table 15: Key Management Stages

Project Stage	Key Management Procedures
Pre-Project	Grant Agreement Preparation and Signature
	Consortium Agreement Preparation
Project Initiation	Distribution of Grant Agreement and its Annexes
	Kick-Off Meeting
	Distribution of Pre-financing
	Project templates preparation
	Planning Activities
Delivery Stage	Project Management, Quality and Risk Plan (M3)
	Project Initial Report (M6)
	Project Review (M10 tbc)
	Project Intermediate Report (M12)
Final Delivery Stage	Project Final Report (M17)
	Project Final Review (M20 tbc)
Project Closure	Distribution of final payment after receipt of the funds from the EC
	Project's closure activities

5.2 Work Packages Management

ANDROMEDA will be implemented on the basis of an 18-month Workplan, which is structured in eight (8) Work Packages over a duration of 18 months. A short description of each WP follows.

WP1 “**Project Coordination and Management**” will interact with all other WPs in order to ensure a successful project lifetime with respect to risk and innovation management. WP1 shows dependencies to all other WPs as it coordinates and ensures that the tasks are in line with the project work plan and performs technical coordination as well, in order to reach the common goal of ANDROMEDA.

WP2 “**Operational Analysis, User Requirements and Technical Specifications**” develops the ANDROMEDA user community to foster pro-active involvement of stakeholders following a user-centric approach in the design and validation addressing user needs & requirements, user experience animation, legacy systems connectivity, co-creativity and collective trust building. The active involvement of the “end user practitioners” is key to identify acceptability issues and societal impacts that proposed solutions may entail and employs guidance to the partners and fosters interactions in the consortium. The interactions include the verification and validation during the operational trials.

WP3 “**Overall Design, Architecture & Interoperability Framework**” starts from starts from user needs, use cases definition and identified interfaced/legacy systems output from WP2 to design the Interoperable Command and Control Systems and associated Situational Awareness, Information and Communication technologies. The existing capabilities of the partners’ systems are analysed together with the end-users in the consortium and a concept of generic HMI functions for Land and Maritime operations are developed, taking

into account the interoperability aspects of CISE, EUROSUR, the advanced Situational Awareness, the Fusion Services and the Decision Support tools. The C2 HMI's role is key in easing the interaction of users with the various services but also empowering them to tune the services to their own needs.

WP4 “**ANDROMEDA System Developments**” encompasses all the activities dealing with extensions to the CISE model, adaptations of advanced C2 systems for Land and Maritime Border Surveillance for enhanced CISE compatibility, the Data Fusion and analytics services and the associated information and communication services. All the above activities will be based on the user requirements, technical specifications and trial configurations.

WP5 “**System Integration and Testing**” goal is the integration and test of the integrated Command & Control, Data Fusion, Situational Awareness, Information, Communication and Sensor systems of ANDROMEDA on a reference distributed platform to provide WP6 with qualified systems to support the trials. The various components of the ANDROMEDA ecosystem coming from WP4 will be integrated and validated for every trial configuration. External interfaced systems will be simulated/emulated whenever not available.

WP6 “**Pilot Demonstrations, Validation & Evaluation**” will demonstrate and validate the Interoperable Land and Maritime C2 systems and associated services and communications in operational trials. Three operational trials will be defined according to the operational scenarios defined in WP2 involving end-users and interfacing existing systems/legacy systems.

WP7 “**Impact Creation, Exploitation and Standardization Activities**” will obtain inputs from all other WPs and ensures the communication and dissemination of results achieved within the individual WPs to the outside parties as well as to participating entities. The project's activities are focused on innovating based on high-TRL systems and technologies and special emphasis is put on exploitation and market uptake assessment. Finally results within each WP will lead to contributions for standardisation measures, coordinated by this WP.

WP8 “**Ethics Requirements**” is responsible for delivering a set of deliverables associated with ethical issues involved in the project. WP8 ethics monitoring activities will feed all WPs.

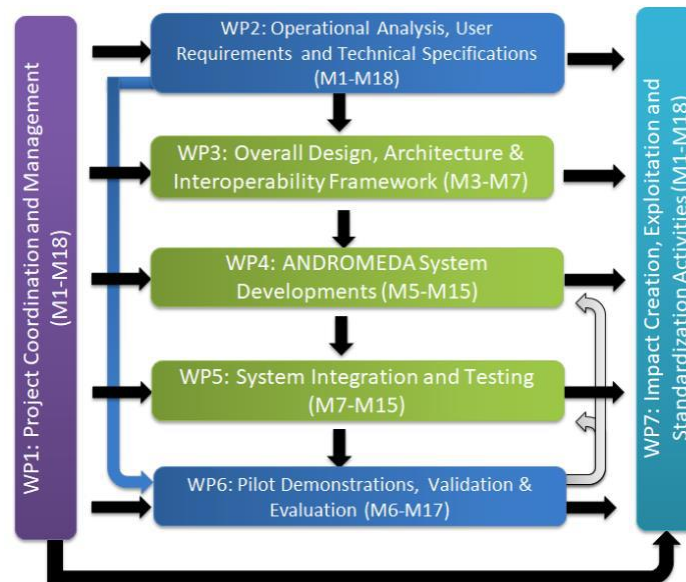


Figure 3: ANDROMEDA WPS Structure

The following Figure shows inter WP dependencies among the eight work packages. WP2 provides the user requirements to WP3 and WP6 for the design of the ANDROMEDA system and operational trials. WP6

provides feedback to WP3-5 which will be used to fine tune the outcome of the corresponding WPs during the operational trials period.

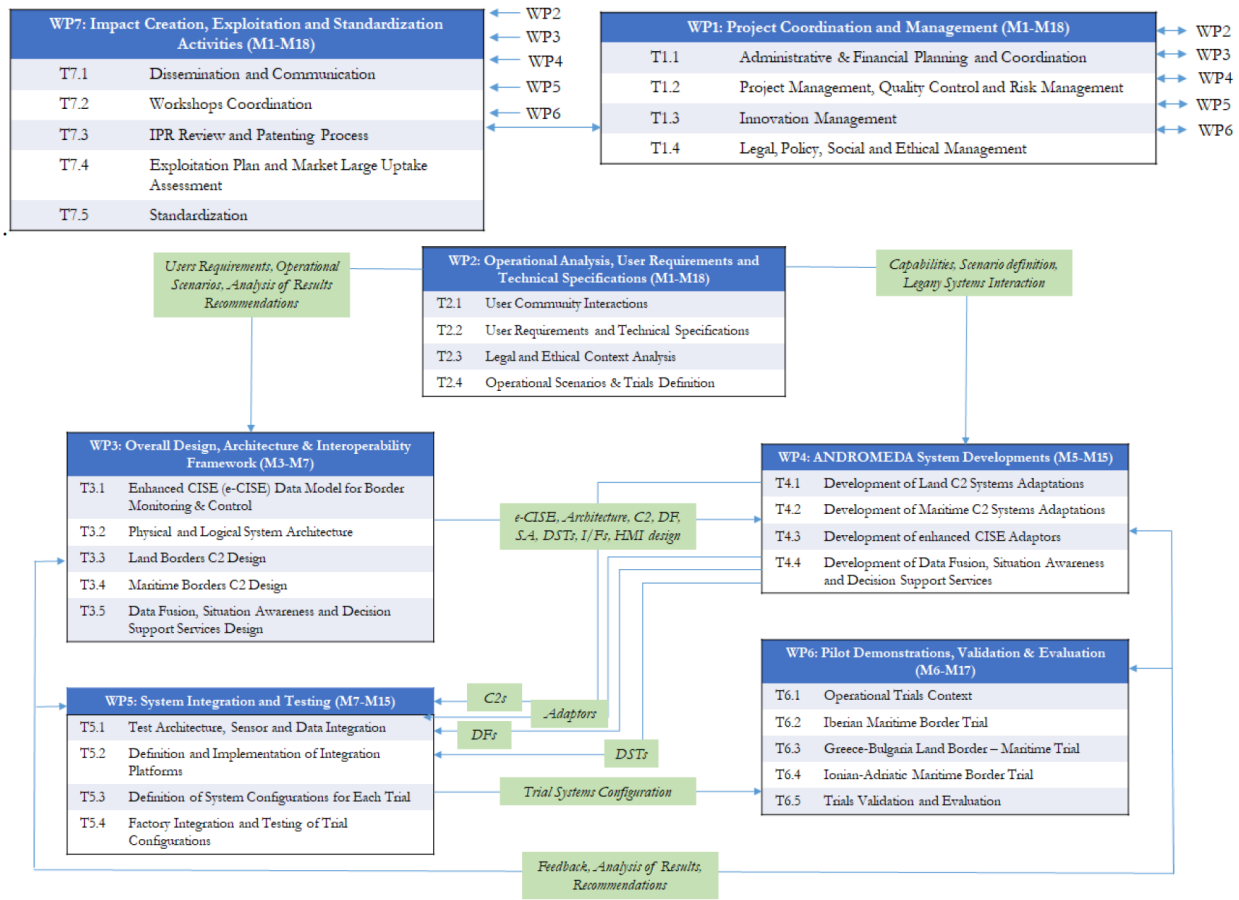


Figure 4: Components inter relation (PERT Chart)

The WPs are to remain active within the periods indicated in Table 16.

Table 16: ANDROMEDA List of Work Packages

WP No	WP Title	Lead Partner	Start Month	End Month
WP1	Project Coordination & Management	MMAIP	1	18
WP2	Operational Analysis, User Requirements and Technical Specifications	MARINA MILITARE	1	18
WP3	Overall Design, Architecture & Interoperability Framework	GMV	3	7
WP4	ANDROMEDA System Developments	SATWAYS	5	15
WP5	System Integration and Testing	INOVAWORKS	7	15
WP6	Pilot Demonstrations, Validation & Evaluation	KEMEA	6	17
WP7	Impact Creation, Exploitation and Standardization Activities	ICCS	1	18
WP8	Ethics requirements	MMAIP	1	18

5.3 Deliverables and Milestones Schedule

5.3.1 Deliverables

Project Deliverables are the means by which the project progress is articulated. The efficient development of the project will largely depend on the timely submission of such deliverables. It is therefore crucial that the delivery dates outlined in the Description of Action (DoA) in Annex 1 of the Grant Agreement and in Table 17 below (in chronological order) are strictly adhered to.

Table 17: List of Deliverables in chronological order

Deliv No	Deliverable Title	WP No.	Lead Beneficiary	Type	Diss level	Due Month	Due Date
D1.1	Project Management, Quality and Risk Plan	WP1	KEMEA	R	PU	3	Nov-19
D7.1	Communication and Dissemination Strategy and Plan	WP7	SATWAYS	R	PU	3	Nov-19
D2.2	User Requirements & Technical Specifications	WP2	KEMEA	R	RE	4	Dec-19
D2.3	Interaction with Legacy Systems	WP2	MARINA MILITARE	R	CO	4	Dec-19
D2.4	Legal, Ethical and Societal Aspects	WP2	LAUREA	R	PU	4	Dec-19
D2.6	Operational Scenarios and Trials	WP2	ENG	R	RE	4	Dec-19
D8.8	POPD - Requirement No. 8	WP8	MMAIP	ETH	CO	4	Dec-19
D8.9	POPD - Requirement No. 9	WP8	MMAIP	ETH	CO	4	Dec-19
D3.2	Architecture Design	WP3	GMV	R	CO	5	Jan-20
D1.2	Project Initial Report	WP1	MMAIP	R	PU	6	Feb-20
D8.1	H - Requirement No. 1	WP8	MMAIP	ETH	CO	6	Feb-20
D8.2	H - Requirement No. 2	WP8	MMAIP	ETH	CO	6	Feb-20
D8.3	H - Requirement No. 3	WP8	MMAIP	ETH	CO	6	Feb-20
D8.4	POPD - Requirement No. 4	WP8	MMAIP	ETH	CO	6	Feb-20
D8.5	POPD - Requirement No. 5	WP8	MMAIP	ETH	CO	6	Feb-20
D8.6	POPD - Requirement No. 6	WP8	MMAIP	ETH	CO	6	Feb-20
D8.7	POPD - Requirement No. 7	WP8	MMAIP	ETH	CO	6	Feb-20
D8.10	POPD - Requirement No. 10	WP8	MMAIP	ETH	CO	6	Feb-20
D3.1	e-CISE Data Model description	WP3	SATWAYS	R	PU	7	Mar-20
D3.3	Land Border C2 System Design	WP3	INW	R	RE	7	Mar-20
D3.4	Maritime Border C2 System Design	WP3	SATWAYS	R	RE	7	Mar-20
D3.5	Data Fusion, Situational Awareness and Decision Support Services Design	WP3	EXUS	R	RE	7	Mar-20
D5.1	Test Architecture and Data Integration	WP5	ICCS	R	CO	8	Apr-20

Deliv No	Deliverable Title	WP No.	Lead Beneficiary	Type	Diss level	Due Month	Due Date
D5.2	Definition of Integration Platforms	WP5	GMV	R	CO	8	Apr-20
D1.5	Legal, Societal, Ethical Initial Report	WP1	LAUREA	R	PU	9	May-20
D8.11	EPQ - Requirement No. 11	WP8	MMAIP	ETH	CO	9	May-20
D8.13	M - Requirement No. 13	WP8	MMAIP	ETH	CO	9	May-20
D5.4	Integration and Validation Test Plan	WP5	SATWAYS	R	CO	10	June-20
D5.3	Definition of Trial Configurations	WP5	INW	O	CO	11	July-20
D6.1	Validation in operational trial approach and plan	WP6	ENG	R	RE	11	July-20
D1.3	Project Intermediate Report	WP1	MMAIP	R	PU	12	Aug-20
D2.1	User Community Initial Report	WP2	LAUREA	R	PU	12	Aug-20
D4.3	Nodes and Services for e-CISE Information Exchanges	WP4	INW	R	PU	12	Aug-20
D7.2	Initial Dissemination Material	WP7	ICCS	R	PU	12	Aug-20
D7.4	Andromeda Initial Web Presence	WP7	SATWAYS	WEB	PU	12	Aug-20
D7.6	Initial Workshops Organization and Results	WP7	ICCS	R	PU	12	Aug-20
D7.8	Exploitation Plan	WP7	GMV	R	PU	12	Aug-20
D8.12	DU - Requirement No. 12	WP8	MMAIP	ETH	CO	12	Aug-20
D4.1	Interoperable C2 for Land Border Operations	WP4	GMV	R	RE	15	Nov-20
D4.2	Interoperable C2 for Maritime Border Operations	WP4	SATWAYS	R	RE	15	Nov-20
D4.4	Data Fusion, Situational Awareness and Decision Support Services	WP4	EXUS	R	CO	15	Nov-20
D5.5	Integration and Validation Test Report	WP5	SATWAYS	R	RE	15	Nov-20
D7.3	Final Dissemination Material	WP7	ICCS	R	PU	15	Nov-20
D1.4	Project Final Report	WP1	MMAIP	R	PU	17	Jan-21
D6.2	Operational Trials Results Report and Lessons learnt	WP6	GMV	R	RE	17	Jan-21
D1.6	Legal, Societal, Ethical Final Report	WP1	LAUREA	R	PU	18	Feb-21
D2.5	User Community Final Report	WP2	LAUREA	R	PU	18	Feb-21
D7.5	Andromeda Final Web Presence	WP7	SATWAYS	WEB	PU	18	Feb-21
D7.7	Final Workshops Organization and Results	WP7	ICCS	R	PU	18	Feb-21
D7.9	Exploitation and Large Uptake Assessment	WP7	GMV	R	CO	18	Feb-21
D7.10	Standardization Report	WP7	ICCS	R	PU	18	Feb-21

5.3.2 Milestones

The ANDROMEDA milestones are listed in chronological order in the Table 18 below. The Project Coordinator and the WPLs will be monitoring their progress throughout the duration of the Project. In case of potential delays, the Project Coordinator will work with the WPLs to develop a contingency plan. Acute delays will be brought to the attention of the Project Officer. Progress on the milestones' achievement will be described in the Project Reports and Final Report.

Table 18: List of Milestones

Mil No.	Milestone	WP	Lead Beneficiary	Due Month	Means of verification
MS1	Project Start	WP1, WP2, WP3, WP4, WP5, WP6, WP7, WP8	MMAIP	1	Host the kick off meeting and start the interworking and cooperation between the partners.
MS2	Initial Definition of User community needs, operational trial scenarios and strategy	WP2, WP3, WP5, WP6, WP7	MARINA MILITARE	5	User Community established. Initial User needs and operational trial scenarios strategy and definition achieved (D2.2, D2.3, D2.4 and D2.6 submitted) Availability of project management, quality and risk plan (D1.1). Architecture defined (D3.2), Establishment of communication and dissemination strategy and plan (D7.1). Web Site established and populated with dissemination material.
MS3	ANDROMEDA Initial Design	WP3, WP5	GMV	7	Definition of ANDROMEDA design achieved (D3.1, D3.3, D3.4, D3.5 submitted). Web Site populated with dissemination material. Initial Project Report produced (D1.2 submitted)
MS4	Integration Completed for 1st and 2nd Trial	WP4, WP5, WP6	INW	11	Definition of integration test approach and plan achieved (D6.1 submitted). Initial Societal Ethical Report available (D1.5). Definition of the Integration and Validation Test Plan (D5.4 submitted), Factory Integration and testing of the 1st and 2nd trial configuration achieved.
MS5	Mid-Term Review	WP1, WP2, WP4, WP7	MMAIP	12	Nodes and Services for CISE and e-CISE information exchanges defined (D4.3 submitted), Definition of Trial Configurations (D5.3 submitted), User Community Initial Report (D2.1 submitted), Project Intermediate Report produced (D1.3 submitted), First workshop achieved (D7.6 submitted), Andromeda Initial Web Presence (D7.4 submitted), Initial set of Dissemination material produced (D7.2 submitted), Exploitation plan defined

Mil No.	Milestone	WP	Lead Beneficiary	Due Month	Means of verification
					(D7.8 submitted). Factory Integration and testing of the 2nd trial configuration achieved.
MS6	Integration Completed for 3rd Trial	WP5	INW	13	Factory Integration and testing of the 3rd trial configuration achieved.
MS7	System Developments Completed	WP4	STWS	15	All functions of Interoperable C2, Data Fusion and SA services implemented (Deliverables D4.1, D4.2 and D4.4 submitted), Integration and Validation tests achieved (D5.5. submitted), Final Dissemination material produced (final D7.3 submitted).
MS8	Project Completion	WP1, WP2, WP3, WP4, WP5, WP6, WP7, WP8	MMAIP	18	Operational Trials completed and results available (D6.2 submitted), final Legal, Societal and Ethical issues defined (D1.6 submitted), final workshop achieved (D7.7 submitted), Final Web site with dissemination content (D7.5 submitted), Exploitation and Market Uptake Assessment achieved (D7.9 submitted), Standardization actions achieved (D7.10 submitted), Project Final Report produced (D1.4 submitted).

5.3.3 Gantt Chart

The Figure 5 shows the master schedule of the different work packages. The whole project duration of the project is 18 months.

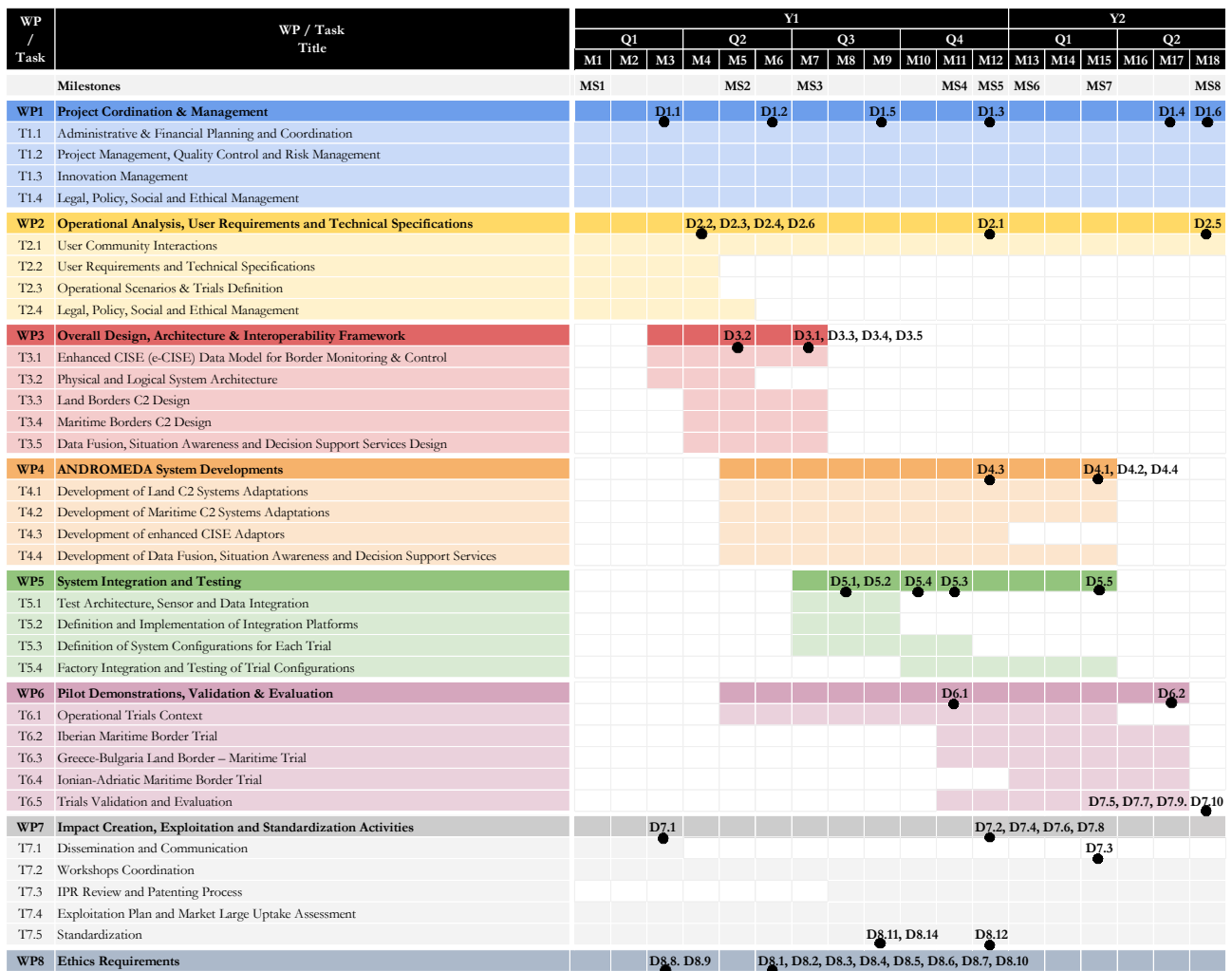


Figure 5: Gantt Chart

6.1 Quality Dashboard

The Project Manager will have at his disposal a Quality Dashboard (Responsibility Assignment Matrix, Actions Register and Risks Register) for the real time, online monitoring of project progress, consisting of a series of Worksheets depicting the actual status of various aspects of project work in comparison to planned and/or contractually agreed progress. The different Quality Dashboard excel files are available on SharePoint under WP1 - Project Coordination & Management\T1.2 - Project Management, Quality Control and Risk Management folder (see Sections 6.1.1, 6.1.2 and 6.1.3).

The various Worksheets are described below.

6.1.1 Responsibility Assignment Matrix

6.1.1.1 RASCI Matrix

The RASCI Matrix is a responsibility assignment matrix system that has been used to bring structure and clarity in the roles that each organisation will have in the project. The RASCI grid describes the participation by various roles in completing the tasks of the project. The roles that have been assigned are the following:

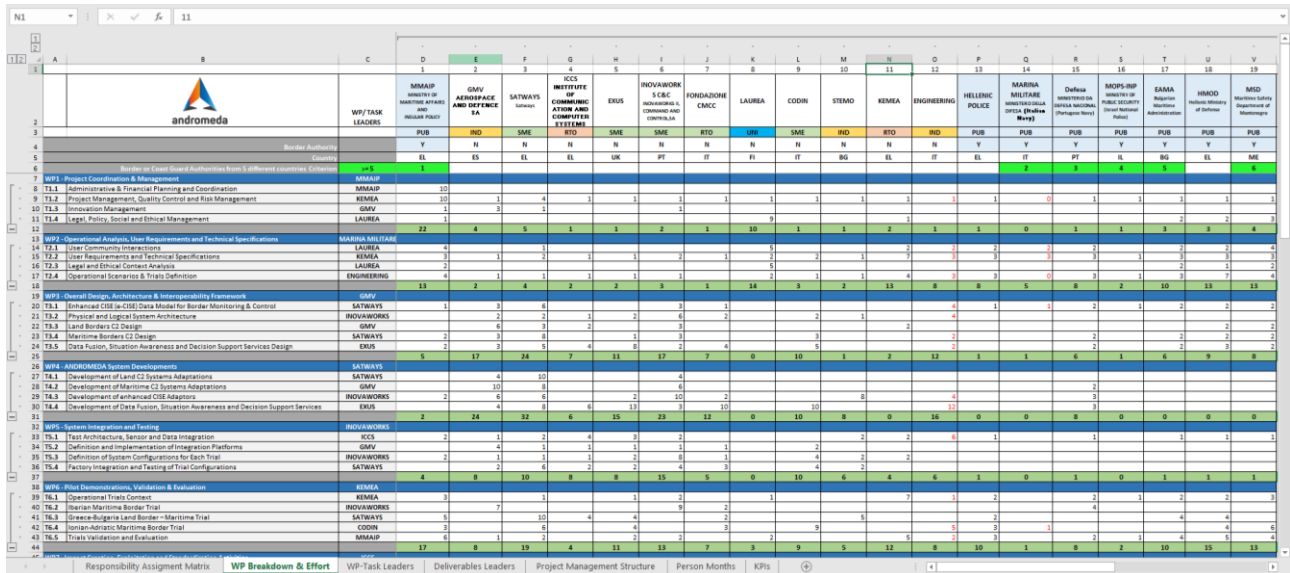
- **R = Responsible:** Those who do the work and are responsible for the result. They report directly to the person accountable.
- **A = Accountable:** The one ultimately responsible and authorised to hold accountable those responsible.
- **S = Supportive:** Those who provide support and assistance to those responsible for the result.
- **C = Consulted:** Those whose opinions are sought before decisions or steps are taken to achieve the result (two-way communication).
- **I = Informed:** Those who are informed after decisions have been made or results have been achieved. They have no influence over the result.

[illegible]

Figure 6: ANDROMEDA RASRCI Matrix

6.1.1.2 Effort Worksheet

A generic Worksheet depicting all project effort per partner, WP and Task has been created. It is intended to be used mainly by the Project Coordinator and Technical Manager in order to assess if project resources are properly used.

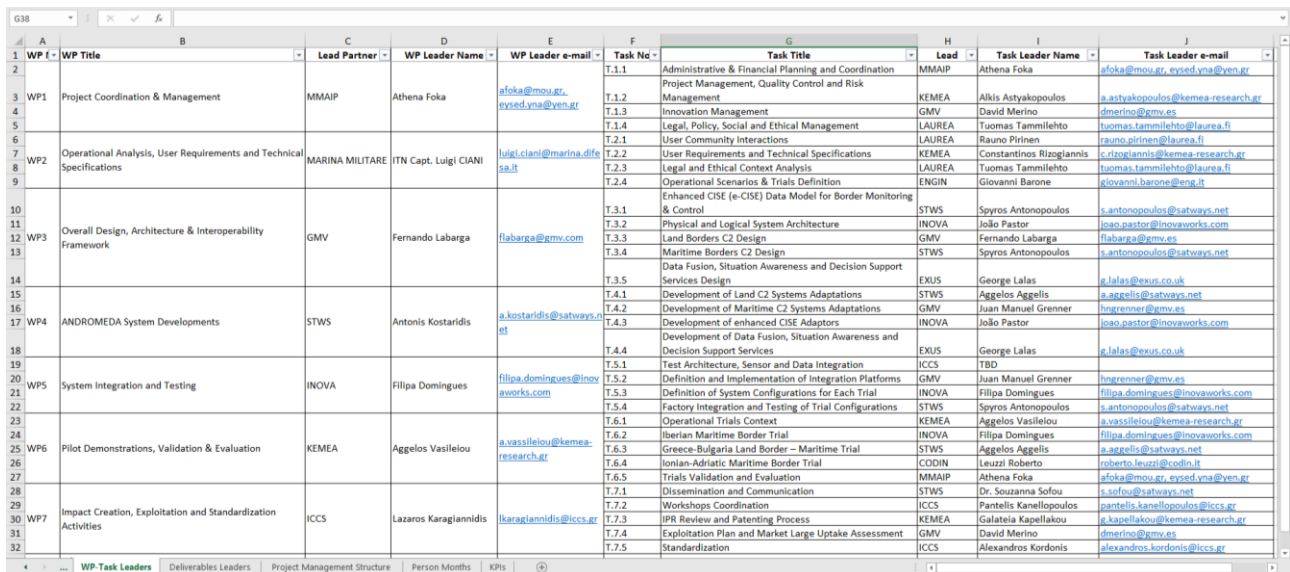


The screenshot displays a complex spreadsheet titled 'ANDROMEDA Effort Worksheet'. It features a grid with columns for various partners (e.g., MMAIP, GMV, SATWAYS, EXUS, INOVAWORK, FONDATIONE CNCC, LAUREA, CODIN, STWIS, KEMEA, ENGINEERING, HELLENIC POLICE, MARINA MILITARE, MOPIR-IP, EXAMA, INMAD, MSD) and rows for different work packages (WP) and tasks. The effort is quantified in person-months (PM) for each task, with a total effort of 11 PM indicated at the top. The bottom of the sheet includes a 'Responsibility Assignment Matrix' and a 'WP Breakdown & Effort' section.

Figure 7: ANDROMEDA Effort Worksheet

6.1.1.3 WP Leaders and Task Leaders Worksheet

A Worksheet containing all the names and the emails of the appointed WP Leaders and Task Leaders has been created giving a clear information about the roles that have been assigned and ensuring that proper communication among the responsible persons is in place.

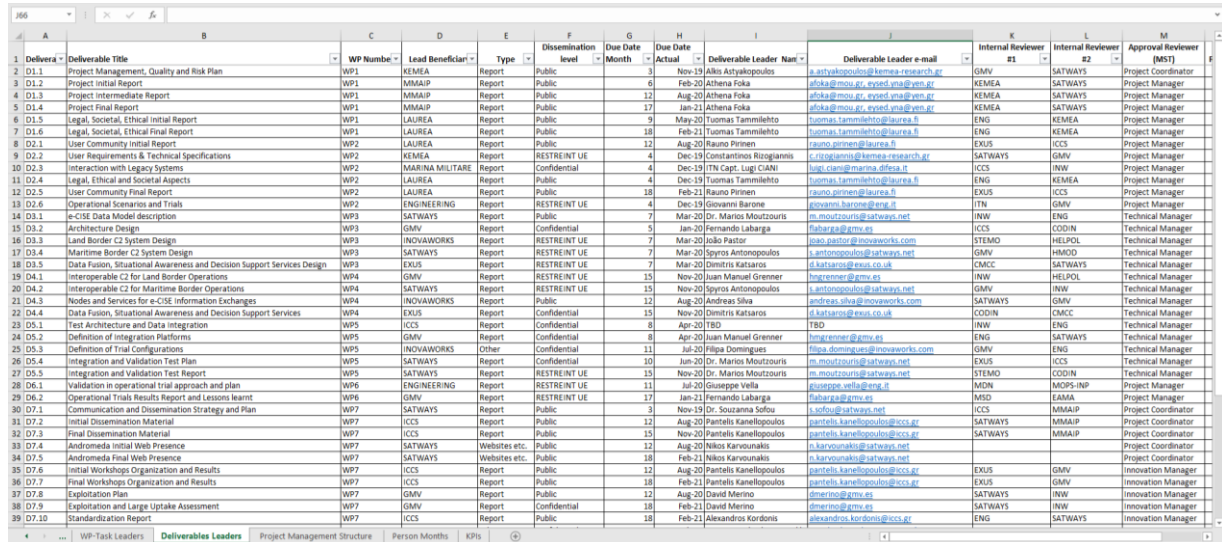


The screenshot shows a spreadsheet titled 'ANDROMEDA WP and Task Leaders'. It lists work packages (WP) and tasks, along with the assigned WP Leader and Task Leader, including their names and email addresses. The bottom of the sheet includes a 'WP Task Leaders' section and a 'Deliverables Leaders' section.

Figure 8: ANDROMEDA WP and Task Leaders

6.1.1.4 Deliverables Worksheet

A Worksheet containing the project deliverables has already been created giving full insight to all aspects of deliverable preparation, review (internal) and submission (Figure 9). The Project Manager will be able to organise and sort the deliverables virtually any way he sees fit in order to gain the best overview of how project work is progressing. The Deliverables Worksheet currently incorporates the following information: Number (ID), Title, WP, Leader, Internal Reviewer #1, Internal Reviewer #2, Type, Dissemination Level, Due Date (Project Month), Due Date (calendar date), Review Date, Submitted (date), and Status.

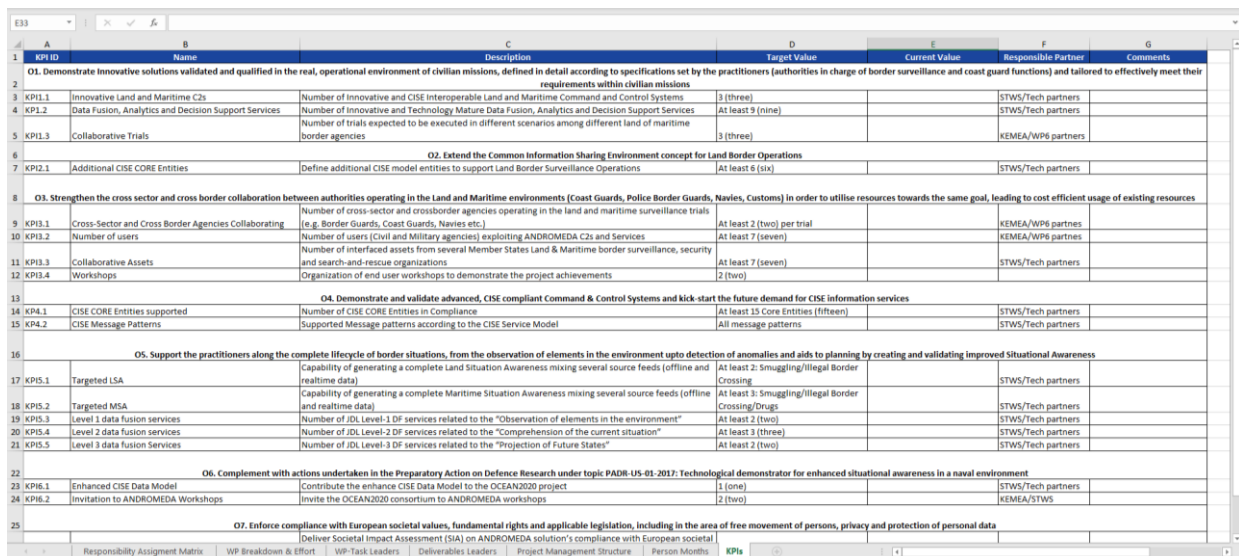


#	Deliverable ID	Deliverable Title	WP Number	Lead Beneficiary	Type	Dissemination Level	Due Date (Project Month)	Due Date (calendar date)	Deliverable Leader Name	Deliverable Leader e-mail	Internal Reviewer #1	Internal Reviewer #2	Approval Reviewer (MST)
1	D1.1	Project Management, Quality and Risk Plan	WP1	KEMEA	Report	Public	3	Nov-19	Alekos Astylosopoulos	a.astylosopoulos@kemea-research.gr	GMV	SATWAYS	Project Coordinator
2	D1.2	Project Initial Report	WP1	MMAIP	Report	Public	6	Feb-20	Athena Foka	afoka@mmoi.gr, ayvendi@mmoi.gr	KEMEA	SATWAYS	Project Manager
3	D1.3	Project Intermediate Report	WP1	MMAIP	Report	Public	12	Aug-20	Athena Foka	afoka@mmoi.gr, ayvendi@mmoi.gr	KEMEA	SATWAYS	Project Manager
4	D1.4	Project Final Report	WP1	MMAIP	Report	Public	17	Jan-21	Athena Foka	afoka@mmoi.gr, ayvendi@mmoi.gr	KEMEA	SATWAYS	Project Manager
5	D1.5	Legal, Societal, Ethical Initial Report	WP1	LAUREA	Report	Public	9	May-20	Tuomas Tammielto	tuomas.tammielto@laurea.fi	ENG	KEMEA	Project Manager
6	D1.6	Legal, Societal, Ethical Final Report	WP1	LAUREA	Report	Public	18	Feb-21	Tuomas Tammielto	tuomas.tammielto@laurea.fi	ENG	KEMEA	Project Manager
7	D2.1	User Community Initial Report	WP2	LAUREA	Report	Public	12	Aug-20	Rauno Pinnen	rauno.pinnen@laurea.fi	EXUS	ICCS	Project Manager
8	D2.2	User Requirements & Technical Specifications	WP2	KEMEA	Report	RESTREINT UE	4	Dec-19	Constantinos Ritzogiannis	c.ritzogiannis@kemea-research.gr	SATWAYS	GMV	Project Manager
9	D2.3	Interaction with Legacy Systems	WP2	MARINA MILITARE	Report	Confidential	4	Dec-19	TN Capt. Luigi Ciani	luigi.ciani@marina.difesa.it	ICCS	INW	Project Manager
10	D2.4	Legal, Ethical and Societal Aspects	WP2	LAUREA	Report	Public	4	Dec-19	Tuomas Tammielto	tuomas.tammielto@laurea.fi	ENG	KEMEA	Project Manager
11	D2.5	User Community Final Report	WP2	LAUREA	Report	Public	18	Feb-21	Rauno Pinnen	rauno.pinnen@laurea.fi	EXUS	ICCS	Project Manager
12	D2.6	Operational Scenarios and Trials	WP3	ENGINEERING	Report	RESTREINT UE	7	Mar-20	Spyros Antonopoulos	s.antonopoulos@satways.net	GMV	HMSO	Technical Manager
13	D3.1	e-CISE Data Model Description	WP3	SATWAYS	Report	Public	7	Mar-20	Dr. Marios Moutzouris	m.moutzouris@satways.net	INW	ENG	Technical Manager
14	D3.2	Architecture Design	WP3	GMV	Report	Confidential	5	Jan-20	Fernando Labarga	flabarga@gmv.es	ICCS	CODIN	Technical Manager
15	D3.3	Land Border C2 System Design	WP3	NOVAWORKS	Report	RESTREINT UE	7	Mar-20	Josko Pastor	josko.pastor@novaworks.com	STEMO	HELPO	Technical Manager
16	D3.4	Maritime Border C2 System Design	WP3	SATWAYS	Report	RESTREINT UE	7	Mar-20	Spyros Antonopoulos	s.antonopoulos@satways.net	GMV	HMSO	Technical Manager
17	D3.5	Data Fusion, Situational Awareness and Decision Support Services Design	WP3	EXUS	Report	RESTREINT UE	7	Mar-20	Dimitris Katsaros	d.katsaros@exus.co.uk	CMCC	SATWAYS	Technical Manager
18	D4.1	Interoperable C2 for Land Border Operations	WP4	GMV	Report	RESTREINT UE	15	Nov-20	Juan Manuel Grenier	jmgrenier@gmv.es	INW	HELPO	Technical Manager
19	D4.2	Interoperable C2 for Maritime Border Operations	WP4	SATWAYS	Report	RESTREINT UE	15	Nov-20	Spyros Antonopoulos	s.antonopoulos@satways.net	GMV	INW	Technical Manager
20	D4.3	Nodes and Services for e-CISE information Exchanges	WP4	NOVAWORKS	Report	Public	12	Aug-20	Andreas Silva	andreas.silva@novaworks.com	SATWAYS	GMV	Technical Manager
21	D4.4	Data Fusion, Situational Awareness and Decision Support Services	WP4	EXUS	Report	Confidential	15	Nov-20	Dimitris Katsaros	d.katsaros@exus.co.uk	CODIN	CMCC	Technical Manager
22	D5.1	Test Architecture and Data integration	WP5	ICCS	Report	Confidential	8	Apr-20	TBD		INW	ENG	Technical Manager
23	D5.2	Definition of Integration Platforms	WP5	GMV	Report	Confidential	8	Apr-20	Juan Manuel Grenier	jmgrenier@gmv.es	ENG	SATWAYS	Technical Manager
24	D5.3	Definition of Trial Configurations	WP5	NOVAWORKS	Other	Confidential	11	Jul-20	Felipe Dominguez	felipe.dominguez@novaworks.com	GMV	ENG	Technical Manager
25	D5.4	Integration and Validation Test Plan	WP5	SATWAYS	Report	Confidential	10	Jun-20	Dr. Marios Moutzouris	m.moutzouris@satways.net	EXUS	ICCS	Technical Manager
26	D5.5	Integration and Validation Test Report	WP5	SATWAYS	Report	RESTREINT UE	15	Nov-20	Dr. Marios Moutzouris	m.moutzouris@satways.net	STEMO	CODIN	Technical Manager
27	D6.1	Validation in operational trial approach and plan	WP6	ENGINEERING	Report	RESTREINT UE	11	Jul-20	Giuseppe Vella	giuseppe.vella@eng.it	MDN	MOPS-INP	Project Coordinator
28	D6.2	Operational Trials Results Report and Lessons learnt	WP6	GMV	Report	RESTREINT UE	17	Jan-21	Fernando Labarga	flabarga@gmv.es	HMSO	EAHA	Project Manager
29	D7.1	Communication and Dissemination Strategy and Plan	WP7	SATWAYS	Report	Public	3	Nov-19	Souzanna Sofos	s.sofos@satways.net	ICCS	MMAIP	Project Coordinator
30	D7.2	Initial Dissemination Material	WP7	ICCS	Report	Public	12	Aug-20	Pantelis Kanellopoulos	pantelis.kanellopoulos@iccs.gr	SATWAYS	MMAIP	Project Coordinator
31	D7.3	Final Dissemination Material	WP7	ICCS	Report	Public	15	Nov-20	Pantelis Kanellopoulos	pantelis.kanellopoulos@iccs.gr	SATWAYS	MMAIP	Project Coordinator
32	D7.4	Andromeda Initial Web Presence	WP7	SATWAYS	Website etc.	Public	13	Aug-20	Nikos Karvounakis	n.karvounakis@satways.net	EXUS	EAHA	Project Manager
33	D7.5	Andromeda Final Web Presence	WP7	SATWAYS	Website etc.	Public	18	Feb-21	Nikos Karvounakis	n.karvounakis@satways.net	EXUS	EAHA	Project Manager
34	D7.6	Initial Workshops Organization and Results	WP7	ICCS	Report	Public	12	Aug-20	Pantelis Kanellopoulos	pantelis.kanellopoulos@iccs.gr	EXUS	GMV	Innovation Manager
35	D7.7	Final Workshops Organization and Results	WP7	ICCS	Report	Public	18	Feb-21	Pantelis Kanellopoulos	pantelis.kanellopoulos@iccs.gr	EXUS	GMV	Innovation Manager
36	D7.8	Exploitation Plan	WP7	GMV	Public	Public	12	Aug-20	David Merino	dmerino@gmv.es	SATWAYS	INW	Innovation Manager
37	D7.9	Exploitation and Large Uptake Assessment	WP7	GMV	Report	Confidential	18	Feb-21	David Merino	dmerino@gmv.es	SATWAYS	INW	Innovation Manager
38	D7.10	Standardization Report	WP7	ICCS	Report	Public	18	Feb-21	Alexandros Kordonis	alexandros.kordonis@iccs.gr	ENG	SATWAYS	Innovation Manager

Figure 9: ANDROMEDA Deliverables Worksheet

6.1.1.5 Key Performance Indicators (KPIs) Worksheet

A special Worksheet has been devised for the continuous monitoring of all project KPIs. The MST will have access to the KPIs Worksheet in order to follow close the project progress. The KPIs Worksheet currently incorporates the following information: KPI ID, Name of the KPI, Description, Target Value, Current Value, Responsible Beneficiary (Partner), and Comments.



#	KPI ID	Name	Description	Target Value	Current Value	Responsible Partner	Comments
1	O1	Demonstrate innovative solutions validated and qualified in the real, operational environment of civilian missions, defined in detail according to specifications set by the practitioners (authorities in charge of border surveillance and coast guard functions) and tailored to effectively meet their requirements within civilian missions					
2	KPI1.1	Innovative Land and Maritime C2s	Number of Innovative and CISE Interoperable Land and Maritime Command and Control Systems	3 (three)		STWS/Tech partners	
3	KPI1.2	Data Fusion, Analytics and Decision Support Services	Number of Innovative and Technology Mature Data Fusion, Analytics and Decision Support Services	At least 9 (nine)		STWS/Tech partners	
4	KPI1.3	Collaborative Trials	Number of trials expected to be executed in different scenarios among different land of maritime border agencies	3 (three)		KEMEA/WP6 partners	
5	O2	Extend the Common Information Sharing Environment concept for Land Border Operations					
6	KPI2.1	Additional CISE CORE Entities	Define additional CISE model entities to support Land Border Surveillance Operations	At least 6 (six)		STWS/Tech partners	
7	O3	Strengthen the cross sector and cross border collaboration between authorities operating in the Land and Maritime environments (Coast Guards, Police Border Guards, Navies, Customs) in order to utilise resources towards the same goal, leading to cost efficient usage of existing resources					
8	KPI3.1	Cross-Sector and Cross Border Agencies Collaborating	Number of cross-sector and crossborder agencies operating in the land and maritime surveillance trials (e.g. Border Guards, Coast Guards, Navies etc.)	At least 2 (two) per trial		KEMEA/WP6 partners	
9	KPI3.2	Number of users	Number of users (Civil and Military agencies) exploiting ANDROMEDA C2s and Services	At least 7 (seven)		KEMEA/WP6 partners	
10	KPI3.3	Collaborative Assets	Number of interfaced assets from several Member States Land & Maritime border surveillance, security and search-and-rescue organizations	At least 7 (seven)		STWS/Tech partners	
11	KPI3.4	Workshops	Organization of end user workshops to demonstrate the project achievements	2 (two)			
12	O4	Demonstrate and validate advanced, CISE compliant Command & Control Systems and kick-start the future demand for CISE information services					
13	KPI4.1	CISE CORE Entities supported	Number of CISE CORE Entities in Compliance	At least 15 Core Entities (fifteen)		STWS/Tech partners	
14	KPI4.2	CISE Message Patterns	Supported Message patterns according to the CISE Service Model	All message patterns		STWS/Tech partners	
15	O5	Support the practitioners along the complete lifecycle of border situations, from the observation of elements in the environment upto detection of anomalies and aids to planning by creating and validating improved Situational Awareness					
16	KPI5.1	Targeted LSA	Capability of generating a complete Land Situation Awareness mixing several source feeds (offline and realtime data)	At least 2: Smuggling/Illegal Border Crossing		STWS/Tech partners	
17	KPI5.2	Targeted MSA	Capability of generating a complete Maritime Situation Awareness mixing several source feeds (offline and realtime data)	At least 3: Smuggling/Illegal Border Crossing/Drugs		STWS/Tech partners	
18	KPI5.3	Level 1 data fusion services	Number of JDL Level-1 DF services related to the "Observation of elements in the environment"	At least 2 (two)		STWS/Tech partners	
19	KPI5.4	Level 2 data fusion services	Number of JDL Level-2 DF services related to the "Comprehension of the current situation"	At least 3 (three)		STWS/Tech partners	
20	KPI5.5	Level 3 data fusion services	Number of JDL Level-3 DF services related to the "Projection of Future States"	At least 2 (two)		STWS/Tech partners	
21	O6	Complement with actions undertaken in the Preparatory Action on Defence Research under project PADR-US-01-2017: Technological demonstrator for enhanced situational awareness in a naval environment					
22	KPI6.1	Enhanced CISE Data Model	Contribute the enhanced CISE Data Model to the OCEAN2020 project	1 (one)		STWS/Tech partners	
23	KPI6.2	Invitation to ANDROMEDA Workshops	Invite the OCEAN2020 consortium to ANDROMEDA workshops	2 (two)		KEMEA/STWS	
24	O7	Enforce compliance with European societal values, fundamental rights and applicable legislation, including in the area of free movement of persons, privacy and protection of personal data					
25		Deliver Societal Impact Assessment (SIA) on ANDROMEDA solution's compliance with European societal					

Figure 10: ANDROMEDA Key Performance Indicators Worksheet

6.1.2 Action Points Register

ANDROMEDA foresees keeping of meeting minutes for all physical or virtual (audioconferences, teleconferences, etc.). The minutes of each project meeting usually contain Action Points (APs), concrete actions that have to be performed by one or more Partners in a specific time period. A specific Worksheet has been created for all APs of the project per WP, giving the ability to the Project Manager and all partners to have a real time, online, clear, fine-grained view of how project work is progressing (Figure 11). Again, here the user is able to organise and sort APs virtually any way he likes in order to gain best insight. APs Worksheet currently incorporates the following information: ID, Description, Responsible (partner), Place where the Action has been identified, Date when the Action has been identified, Deadline, Related Risk and Status.

	A	B	C	D	E	F	G	H	I	J
	Guidelines	<Actions can be organised in different categories according to the Work Package that they refer to...>	<Description of the Actions that should be tackled at WP level. Each Partner is responsible to add any action deemed necessary and include from which Partner(s) or other organizations a contribution or input is needed>	<The responsible Partner to accommodate the Action>	<Refer to the place where the Action has been identified (e.g. KOM, technical meeting, end-users meeting, teleconferences etc.)>	<Refer to the date when the Action has been identified>	<Refer to the deadline when the Action should be accommodated/completed>	<Refer to a potential related Risk from the Risk Register file>	<Refer to the current status of the Action (e.g. Open or Closed)>	
2	ACT01	WP1	Preparation of a Technical Factsheet in order to activate the pre-financing payments procedures. It should include a short description of the project scope, part of the GA, signed Financial Identification Forms from each partner and other relevant attachments as necessary.	MMAIP	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	ASAP	R13	Open	
3	ACT02	WP1	The Technical Factsheet and all necessary attachments should be officially translated to the Greek language and transferred to the Directorate General for Financial Services of the Ministry of Maritime and Island Policy for assessment and approval.	MMAIP	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	ASAP	R13	Open	
4	ACT03	WP1	Request signed financial identification forms from each partner	KEMEA	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	11/6/2019	R13	Closed	
5	ACT04	WP1	Send to all partners a Doodle poll to request their availability in order to fix the dates of the KOM in September 2019. A 2-days meeting will be required.	KEMEA	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	11/6/2019	n/a	Closed	
6	ACT05	WP1	Send the signed financial identification forms and the letter for the pre-financing to MMAIP.	KEMEA	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	Following ACT03	R13	Closed	
7	ACT06	WP1	Prepare a Responsibility Assignment Matrix for the WP1 in order to set-up a common understanding about the roles and responsibilities of each organization in the project management.	KEMEA	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	14/06/2019	n/a	Closed	
8	ACT07	WP1	Arrange a physical meeting with the Directorate General for Financial Services of the Ministry of Maritime Affairs and Island Policy on 24th June 2019 (at 10.00 am). This meeting will be combined with a discussion about the project scope and impact at technical level with the presence of the Technical Manager from SATWAYS.	MMAIP/KEMEA/SATWAYS	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	24/06/2019	n/a	Closed	
9	ACT08	WP1	Check various options for the venue where the KOM will be hosted and decide which is the preferable one.	MMAIP	1st preparatory meeting between MMAIP and KEMEA	10/6/2019	24/06/2019	n/a	Closed	
10	ACT09	WP1	Prepare and send a Draft Agenda of the KOM, having first confirmed the	MMAIP/KEMEA	1st preparatory meeting between	10/6/2019	28/06/2019	n/a	Closed	

Figure 11: ANDROMEDA Key Performance Indicators Worksheet

6.1.3 Risks Register

Finally, as part of the Quality Assurance process, ANDROMEDA will apply a risk management approach assessing risk in technical, operational and human resources, the probability that they happen and the impact they will have in the project. Risks will be reported in the Project Reports as well as the actions to reduce the threats and to solve the situations when these threats materialise. Risks Register Worksheet currently incorporates the following information: Risk No, Risk Opening Date, Risk Creator, WPs involved, Risk Type, Risk Description, Risk Status, Probability of occurrence, Expected Impact, Possible Solutions/Way to prevent, Remarks.

Risk number	Risk opening date	Risk creator	WP(s) involved	Risk type	Risk description	Risk status	Probability of occurrence	Expected impact	Possible solution/way to prevent	Remarks (including reference to eventual relevant action)
R1	Proposal stage	Consortium	WP1	Management	Insufficient resources and personnel committed to the project: Partner being in difficulties (company reorganization) or partner withdrawal	Identified	L	H	Raise the issue urgently with higher level management in partner organisation, ask EB to proposed solutions, in case of withdrawal replace partner	
R2	Proposal stage	Consortium	WP1	Management	Partners cost expenses under/over budget.	Identified	L	M	Control mechanisms at each partner and internal periodic reports to control spending and activities	
R3	Proposal stage	Consortium	WP2	Technical	Identifying legal and institutional constraints that will influence the design and operational use of ANDROMEDA solution.	Identified	L	H	One of the tasks within WP2 (T2.3) is devoted to identify these possible constraints and provide the legal guideline in order to ensure the project complies with the current normative.	
R4	Proposal stage	Consortium	WP2,WP3	Technical	If the requirements are not precise, there is risk that the implementation of the components does not meet the users needs.	Identified	M	M	This risk is mitigated by the Model Based Systems Engineering approach adopted for design and the Agile development. At the same time the practitioners are involved as full partners and have close cooperation with the technical partners	
R5	Proposal stage	Consortium	WP3	Technical	Interaction with legacy operational border surveillance systems could pose the following risks: • security restrictions can prevent a seamless integration with the network envisaged • daily operations (planned or unplanned) of existing civil and military systems could delay the trials envisaged	Identified	H	M	Early engagement of End users (full partners) responsible of the current border surveillance operational systems to assess the security restrictions. In addition the three trials will span over several months each thus enabling several alternative times slots for legacy systems availability	
R6	Proposal stage	Consortium	WP3,WP4,WP5	Technical	Technical risk in the design phase of ANDROMEDA solution that shall be only detected at verification/validation time.	Identified	M	M	ANDROMEDA consists of High TRL components and during the development phase the Model Based Systems Engineering approach will help to identify any design inefficiencies early. In addition the three trials span over several months and allow feedback to the development and integration tasks.	
R7	Proposal stage	Consortium	WP5	Technical	Delay in testing and validation of the software	Identified	L	H	ANDROMEDA relies on software components that are already existing and largely tested, integrated with new software development. Then, the complexity of the software to be developed is reduced. Delays will affect individual components and not the system as a whole.	

Figure 12: ANDROMEDA Risks Register Worksheet

6.2 Risk management and Mitigation Plan

The risk management and mitigation plan aims at identifying potential risks that can impact or threaten the success of the project, and to plan mitigation measures in order avoid or minimize the impact of unforeseen developments throughout the lifetime of the project. To that end, the purpose of T1.2 Project Management, Quality Control and Risk Management (DoA, Part A, Section 1.3.3) is to ensure that the ANDROMEDA project meets its quality requirements by closely monitoring and tracking of all activities, involving process and technical quality and risk assessment.

A key choice towards reducing risks is that this project will exploit the mature platforms and services of the technical partners and an Agile software development process so that the integration and evaluation work starts as early as possible in the project. Thus, in case of problems, there is time to resolve difficulties. This is particularly important for ANDROMEDA since it depends heavily on the integration of a relatively large number of different technologies. All partners will start the integration early, even while the contributing WPs are only partially completed. Additionally, the prior experience of Consortium partners and their long records in research projects ensure that risks will be identified as soon as possible. We have assessed the possible risks for every Work Package and developed suitable contingency plans as depicted in Table 19.

Table 19: Critical Implementation Risks and Mitigation Actions

Risk	Description of risk	WP	Proposed risk-mitigation measures
1	Insufficient resources and personnel committed to the project: Partner being in difficulties (company reorganization) or partner withdrawal	WP1	Raise the issue urgently with higher level management in partner organisation, ask EB to proposed solutions, in case of withdrawal replace partner
2	Partners cost expenses under/over budget.	WP1	Control mechanisms at each partner and internal periodic reports to control spending and activities
3	Identifying legal and institutional constraints that will influence the design and operational use of ANDROMEDA solution	WP2	One of the tasks within WP2 (T2.3) is devoted to identifying these possible constraints and provide the legal guideline in order to ensure the project complies with the current normative.

Risk	Description of risk	WP	Proposed risk-mitigation measures
4	If the requirements are not precise, there is risk that the implementation of the components does not meet the users' needs.	WP2, WP3	This risk is mitigated by the Model Based Systems Engineering approach adopted for design and the Agile development. At the same time the practitioners are involved as full partners and have close cooperation with the technical partners
5	Interaction with legacy operational border surveillance systems could pose the following risks: - security restrictions can prevent a seamless integration with the network envisaged - daily operations (planned or unplanned) of existing civil and military systems could delay the trials envisaged	WP3	Early engagement of End users (full partners) responsible of the current border surveillance operational systems to assess the security restrictions. In addition, the three trials will span over several months each thus enabling several alternative times slots for legacy systems availability
6	Technical risk in the design phase of ANDROMEDA solution that shall be only detected at verification/validation time.	WP3, WP4, WP5	ANDROMEDA consists of High TRL components and during the development phase the Model Based Systems Engineering approach will help to identify any design inefficiencies early. In addition, the three trials span over several months and allow feedback to the development and integration tasks.
7	Delay in testing and validation of the software	WP5	ANDROMEDA relies on software components that are already existing and largely tested, integrated with new software development. Then, the complexity of the software to be developed is reduced. Delays will affect individual components and not the system as a whole.
8	The major risk at the integration phase is clearly that a number of components do not match the agreed specification, functionalities or simply interfaces.	WP6	The software engineering methods adopted allows to keep the complexity of the development at reasonable level. In addition, the possibility to test in advance the ANDROMEDA solution in synthetic environment reduces the risk to have troubles during the physical trials.
9	Components not stabilised or not mature for integration	WP5	WP5 will deliver tested and qualified components prior to delivery to WP6
10	Unavailability of sensible data to sustain the trials impact	WP2, WP6	The End-users will jointly define the trials in WP2 with technical partners, which reduces any mismatch between trial objectives and end-users' data availability.
11	Difficulty in finding stakeholders willing to express their interests or interested in the final solution	WP7	A comprehensive market uptake assessment will be carried out in WP7; two workshops will be conducted during the project lifecycle. ANDROMEDA end users have already expressed during the proposal phase their need for CISE Interoperable C2s and associated Data Fusion and Analytics services.

7. Communication and Collaboration

An efficient and frequent communication as well as a close collaboration among Consortium Partners are essential aspects for the successful development of the ANDROMEDA project. Apart from the physical meetings that have been scheduled throughout the project's lifetime, a remote communication and collaboration scheme is to be implemented, granted that the partners reside in distant locations. This scheme will be underpinned by dedicated supportive means and instruments that have been selected according to the nature of each communication and collaboration process and are presented herein.

7.1 Email correspondence and Mailing Lists

Email messages will be the most common method of communication among the Consortium partners. The following guidelines should be respected by the partners in all internal email correspondence:

- Messages should be kept concise and relevant to the subject but should include enough information to convey the intended meaning unambiguously.
- Different points should be elaborated upon in different paragraphs. When multiple issues are brought up, they should be clearly distinguished, numbered and organised in sections. Consecutive responses should refer to the structure/numbering of the original message.
- The recipients of each email message should be selected based on the relevance to the subject and the role of each contact point in the project. The mailing lists can facilitate this process.
- When forwarding or re-posting information communicated by another party, the original content needs to be preserved verbatim and the source needs to be clearly referenced, while explicit permission needs to be obtained in advance from the involved party.
- When a dispute arises over a topic among two parties on a specific issue, the discussion can be continued bilaterally and in private. The outcome of the discussion can be communicated to all other interested parties after the dispute has been resolved. If the dispute can't be resolved, the procedures described in Section 7.5 (Conflict Resolution) in D1.1 are to be followed.

Apart from standard means for bilateral communication, such as email and phone, internal communication and collaboration involving multiple parties among the Consortium partners will be facilitated through dedicated mail distribution lists. A repository of the email addresses of contact points and associated roles from all Consortium partners has been prepared and shared with all partners. In addition, the following mailing lists have been created to accommodate the distribution of email correspondence to the intended parties and facilitate internal communication relating to the project's activities.

Table 20: Project Mailing Lists

Contact point groups	Mailing list address
All contact points of all ANDROMEDA Consortium Partners	andromeda_general@kemea-research.gr
Contact points involved in the Management Support Team	andromeda_mst@kemea-research.gr
End-users from the ANDROMEDA Consortium Partners	andromeda_endusers@kemea-research.gr
User community outside the ANDROMEDA	andromeda_usercom@kemea-research.gr
Contact points involved in technical aspects	andromeda_tech@kemea-research.gr
WP1 mailing list	andromeda_wp1@kemea-research.gr
WP2 mailing list	andromeda_wp2@kemea-research.gr
WP3 mailing list	andromeda_wp3@kemea-research.gr

Contact point groups	Mailing list address
WP4 mailing list	andromeda_wp4@kemea-research.gr
WP5 mailing list	andromeda_wp5@kemea-research.gr
WP6 mailing list	andromeda_wp6@kemea-research.gr
WP7 mailing list	andromeda_wp7@kemea-research.gr
WP8 mailing list	andromeda_wp8@kemea-research.gr
Advisory Board (AB) members	andromeda_ab@kemea-research.gr
Security Advisory Board (SAB) members	andromeda_sab@kemea-research.gr

All E-mail subject headings must start with the text “[ANDROMEDA]”. Additional tags can be added to specify relevant work packages, tasks, and deliverables where appropriate, and if deemed useful. The tags should never contain spaces within the square brackets. Some examples of email subject headings are:

- [ANDROMEDA] [WP1] Title
- [ANDROMEDA] [WP2] [Task2.1] [D2.1] Title..... document
- [ANDROMEDA] [WP3] [Task3.3] Title

7.2 Supporting Tools

A series of dedicated tools that have been selected specifically for each process of communication and collaboration is presented in this section.

7.2.1 Calendar

All ANDROMEDA related activities, including deadlines, scheduled meetings and events that refer to specific dates will be entered in a shared **Google Calendar**⁴, accessible by all partners in order to become aware of and monitor the associated dates. Features for notification generation will be used to alert the partners about upcoming dates.

7.2.2 Teleconferences

As previously mentioned, teleconference calls will be the preferred choice over physical meetings, for purposes of more efficient time management and reduced travelling expenses. The Consortium will use commonly available solutions for this purpose, such as **Skype**⁵ and **GoToMeeting**⁶. In cases where presentations or demonstrations by partners are necessary, the screen sharing features of the relevant applications will be used. Landline phone calls will be avoided, unless no other communication option is available and in such cases Skype will be used to connect involved parties participating via landline phone. The **doodle.com**⁷ polling web application will be used to plan meeting attendance and finding mutually convenient time slots in advance.

7.2.3 Project Repository

Particular attention will be given to the efficient management and documentation of the data, working documents, reports and other resources that will be generated throughout the project implementation through

⁴ <https://www.google.com/calendar>

⁵ <https://www.skype.com>

⁶ <https://www.gotomeeting.com>

⁷ <https://doodle.com>

a central project repository and associated folders that will allow all Consortium members to access and contribute any necessary information. A repository for storing all ANDROMEDA related documents and data has been set up using the **SharePoint**⁸ platform and is hosted on the Project Manager's server⁹. SharePoint provides access through a web interface and includes a cross-platform file sync system that can be used to provide local copies of the repository at each user's device, thus maximizing accessibility options. In addition, it supports access control on a user and group level and allows for read-only and editing permission specification. The SharePoint repository will contain all information related to ANDROMEDA both from external sources and collected or produced internally by the Consortium. Regular backups of the repository will be obtained to ensure data integrity. The main project folders that have been generated are:

- Consortium Agreement
- Deliverables submitted
- Grant Agreement
- Meetings
- Proposal Evaluation
- Templates
- WP1 - Project Coordination & Management
- WP2 - Operational Analysis, User Requirements and Technical Specifications
- WP3 - Overall Design, Architecture & Interoperability Framework
- WP4 - ANDROMEDA System Developments
- WP5 - System Integration and Testing
- WP6 - Pilot Demonstrations, Validation & Evaluation
- WP7 - Impact Creation, Exploitation and Standardization Activities
- WP8 - Ethics requirements
- Images Library
- Contacts

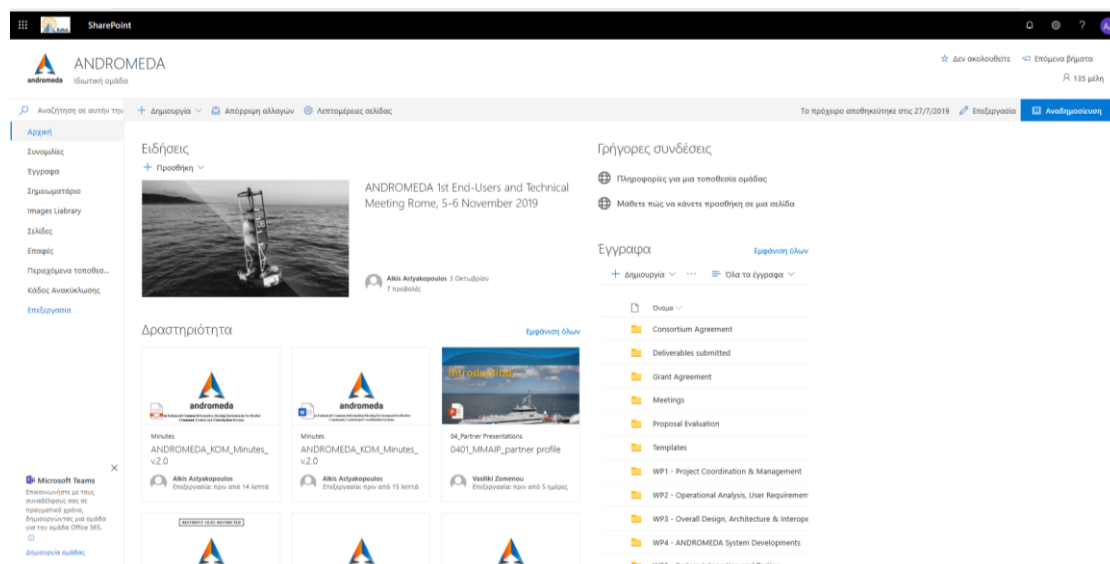


Figure 13: ANDROMEDA SharePoint screenshot

⁸ <https://products.office.com/el-gr/sharepoint/collaboration>

⁹ <https://kemearesearch.sharepoint.com/sites/andromeda2>

7.2.4 Project Templates

In order to have a unified visual identity across the multiple documents that will be developed during the ANDROMEDA lifetime, a set of graphic and text document templates have been prepared intended to be used by all Consortium Partners. The following templates have been prepared:

- Deliverable document template (for both PU/CO and RE dissemination level)
- Meeting Agenda template
- Meeting Minutes template
- Meeting Presentation template
- WPX Interim Management Report
- Timesheet template

Other templates might be produced during the project's lifetime for purposes not foreseen at the project's initial stages. These templates will be accessible through the respective repository folder.

7.3 Internal Communication and Information flow

The consortium partners will exchange information on a regular basis so as to coordinate for the successful execution of all planned tasks and address all issues that arise throughout the project development. Closer collaboration will occur between partners that are jointly responsible for specific tasks and deliverables, as defined in the in the DoA in Annex 1 of the Grant Agreement and in the deliverables list in Section 5.3.1 of the current document.

Consortium Meetings have been scheduled at regular intervals throughout the whole duration of the project, allowing for direct discussion among partners for the resolution of issues. Meetings at pivotal stages of the project will occur physically, whereas other planned meetings will occur remotely via telecommunication in order to reduce expenses. The planned meetings for the project lifetime and related information are presented in Section 3.5. Additional meetings further to the ones already planned may occur, should issues arise that are found to be more effectively addressed via direct discussion.

Other forms of remote communication will occur on a frequent on-demand basis, in order to coordinate the steps that are required for the execution of each task, exchange material that is required for the project development and resolve any issue that arises.

WPLs are responsible for coordinating the meetings discussion and communication on an overall WP organizational level and where communication of information across WPs is required. Direct bilateral communication between partners will occur for jointly developed tasks, with initiative of each lead Task beneficiary. The Project Coordinator, assisted by the Project Manager, will coordinate the overall project communications and will act as an intermediary between the Consortium partners and EU assigned Project Officer.

7.4 Dissemination Activities

7.4.1 Procedure

Deliverable D7.1 "Communication and Dissemination Strategy and Plan" has already described the basic strategies to be applied for all activities related to dissemination and communication to external audiences. All activities related to dissemination along with associated partners has been documented in a spreadsheet (Dissemination and Communication Table) for progress monitoring purposes. In addition, a dissemination

calendar in a spreadsheet format has been prepared that sets a timewise schedule of the activities. Both these spreadsheet documents have been prepared as live documents to accommodate real-time monitoring and updating by all partners and a static copy will be periodically obtained and stored as a different version in the WP7 folder of the project repository.

All dissemination activities and communication to external audiences of ANDROMEDA will follow the Dissemination Rules described in the Grant Agreement (paragraph 29.1) and the Consortium Agreement (paragraph 8.4.4.1).

Objections and Resolution rules are described in Consortium Agreement 8.4.1.2 and 8.4.1.3, respectively.

Each partner that considers a dissemination or communication activity needs to provide the following information:

- Title
- The document itself (in electronic format)
- The type and format of the public release (conference paper, journal paper, presentation, demonstration, press release, etc.) and the information of the associated event or publication medium.
- The activity category included in the Dissemination and Communication Table that the activity under consideration refers to.
- Expected cost of proposed activity.

Moreover, the Security Advisory Board will monitor and review any publications and dissemination activities in the context of security sensitivity', as per GA. This is an internal process for dissemination and communication that will be in line with:

- Relevant rules of the Grant Agreement and the Consortium Agreement
 - Dissemination rules
 - Rules on non-disclosure
 - Rules on visibility
 - Disclaimer
- Security Advisory Board role
- Budget

7.4.2 Rules for Publication

Any dissemination activity resulting to communication to external audiences should conform to the following rules:

- Particular attention needs to be paid in order to avoid disclosure of confidential information, as per the rules of the Grant Agreement, and the paragraph 8.4.2. of the Consortium Agreement.
- Any communication to external audiences that involves graphic content should also bear the ANDROMEDA logo, conforming to the rules on visibility of the Grant Agreement paragraph 29.4, guidelines specified in Chapter 3 of D7.1 "Communication and Dissemination Strategy and Plan".
- In cases where the ANDROMEDA Consortium is mentioned, the Beneficiaries' logos may appear according to the specifications set in Chapter 3 of D7.1 "Communication and Dissemination Strategy and Plan".
- In cases where any of the above rules contradict to restrictions set by the publication medium, as is often the case with scientific papers, the project and partner logos do not need to be included.

- All publications shall include the following statement:

“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 833881”.

- All publications shall include the following disclaimer:

- i) Any dissemination of Andromeda Results should include the following disclaimer:

‘The content of this research article reflects only the authors’ views and the Research Executive Agency (REA) is not responsible for any use that may be made of the information it contains.’

- ii) The communication material should include the following disclaimer: *This communication material reflects only the authors’ views and the Research Executive Agency (REA) is not responsible for any use that may be made of the information it contains.’*

- Any publicity, including at a conference or seminar or any type of information or promotional material must also display the EU emblem according to the guidelines provided by the EC¹⁰.

7.5 Conflict Resolution

As a general rule, ANDROMEDA project management will aim at a consensus building and promoting in order to ensure the maximum cooperation within the consortium. The parties shall endeavour to settle their disputes amicably. However, in the unlikely event that a conflict arises, a majority rules approach will be adopted so that the issue may be resolved through a fair and transparent decision-making process. Where possible, issues will be resolved at WP level; where the issue could not be resolved at the WP level then the matter will be reported to the GA with appropriate supporting evidence, which may include a full report or a presentation of the main issues of contention. The GA will review the issue and report back with a final decision, which will be taken by majority vote, within one month from receipt of report/presentation. In the unlikely event that the GA cannot resolve a dispute within the consortium on a legal matter, the conflict shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules. The place of arbitration shall be Brussels if not otherwise agreed by the conflicting Parties. The award of the arbitration will be final and binding upon the Parties.

¹⁰ http://ec.europa.eu/dgs/communication/services/visual_identity/pdf/use-emblem_en.pdf

8. Contractual and Financial Provisions

This section provides a selection of contractual and financial elements – from the Grant Agreement and the Consortium Agreement – that are directly related to the efficient implementation of the project. In the event of a contradiction between the present document and contractual documents, the latter documents shall have precedence.

8.1 Grant Agreement

All partners signed the Grant Agreement, accept the Grant and agree to implement it under their own responsibility and in accordance with the Agreement, with all the obligations and conditions it sets out.

The Grant Agreement is composed of the following sections:

- Terms and Conditions
- Annex 1 Description of the action
- Annex 2 Estimated budget for the action
 - 2a Additional information on the estimated budget
- Annex 3 Accession Forms
- Annex 4 Model for the financial statements
- Annex 5 Model for the certificate on the financial statements
- Annex 6 Model for the certificate on the methodology

8.2 Consortium Agreement

The purpose of the Consortium Agreement is to specify – with respect to the project – the relationship among the partners, in particular concerning the organisation of the work between the partners, the management of the project and the rights and obligations of the partners, access rights and dispute resolution.

The general principles are the following:

- Each partner undertakes to take part in the efficient implementation of the project, and to cooperate, perform and fulfil, promptly and on time, all of its obligations under the Grant Agreement and the Consortium Agreement as may be reasonably required from it and in a manner of good faith.
- Each partner undertakes to notify promptly, in accordance with the governance structure of the project, any significant information, fact, problem or delay likely to affect the project.
- Each partner shall promptly provide all information reasonably required by a Consortium Body or by the Coordinator to carry out its tasks.
- Each partner shall take reasonable measures to ensure the accuracy of any information and Intellectual Property Rights (IPR) or materials it supplies to the other partners.

8.3 Financial Provisions

8.3.1 Distribution of financial contribution

The financial contribution of the Funding Authority to the Project shall be distributed by the Project Coordinator according to:

- the Consortium Plan
- the approval of reports by the Funding Authority, and
- The provisions of payment in Section 7.3 of the Consortium Agreement.
- A partner shall be funded only for its tasks carried out in accordance with the Consortium Plan.

8.3.2 Funding Principles

In accordance with its own usual accounting and management principles and practices, each partner shall be solely responsible for justifying its costs with respect to the project towards the Funding Authority. Neither the Project Coordinator nor any of the other partners shall be in any way liable or responsible for such justification of costs towards the Funding Authority.

A partner which spends less than its allocated share of the budget as set out in the Consortium Plan or (in case of reimbursement via unit costs) implements less units than foreseen in the Consortium Plan will be funded in accordance with its actual duly justified eligible costs only.

A partner that spends more than its allocated share of the budget as set out in the Consortium Plan will be funded only in respect of duly justified eligible costs up to an amount not exceeding that share, whilst the partner has to notify the Project Coordinator in advance.

If the total amount of a partner's accepted costs by the EC is less than the total amount transferred to the partner's account as pre-financing payments, then this overpaid amount should be refunded to the Project Coordinator to be distributed among the partners according to their share and accepted costs by the EC, whilst the partner has to notify the Project Coordinator in advance for planning purposes.

Where several partners spend more than their allocated share, the EB will propose to the GA a pro-quota scheme for distributing any unspent contribution left by other partners.

Where all partners spend more than their allocated share, they will be funded only in respect of duly justified eligible costs up to an amount not exceeding that share.

In case that, in accordance with the Grant Agreement, the Funding Authority takes into account any Receipts of a partner (as defined in the Grant Agreement) and, accordingly, reduces the grant amount of the Project, this reduction will be entirely assumed by the partner(s) that received those Receipts.

A partner leaving the consortium shall refund all payments it has received except the amount of contribution accepted by the Funding Authority or another contributor. Furthermore, a Defaulting Party shall, within the limits specified in Section 5.2 of the Consortium Agreement, bear any reasonable and justifiable additional costs occurring to the other Parties in order to perform its and their tasks.

8.3.3 Checks, Reviews, Audits and Investigations

The EC will — during the implementation of the action or afterwards — check the proper implementation of the action and compliance with the obligations under the Agreement, including assessing deliverables and reports. For this purpose, the EC may be assisted by external persons or bodies.

The EC may also request additional information in accordance with Article 17 of the Grant Agreement. The EC may request beneficiaries to provide such information to it directly. Information provided must be accurate, precise and complete and in the format requested, including electronic format.

The EC may also — during the implementation of the action or afterwards — carry out reviews and audits on the proper implementation of the action (including assessment of deliverables and reports), compliance with

the obligations under the Agreement and continued scientific or technological relevance of the action. Reviews may be started up to two years after the payment of the balance (see details in Article 22.1 of the Grant Agreement).

8.3.4 Re-distribution of financial contribution

In case of major deviations in the progress of the project or in the use of resources by partners, the GA may include a discussion about the re-distribution of resources in the GA. In case the GA decides to modify the budget, the Coordinator needs to negotiate this with the EC.

8.3.5 Payments

The payment schedule, which contains the transfer of pre-financing and final payments to Parties, will be handled according to the following:

Funding of costs included in the Consortium Plan will be paid to Parties after receipt of the funding from the Funding Authority without undue delay and in conformity with the provisions of the Grant Agreement. Costs accepted by the Funding Authority will be paid to the Party concerned.

The Project Coordinator is entitled to withhold any payments due to a Party identified by a responsible Consortium Body to be in breach of its obligations under this Consortium Agreement or the Grant Agreement or to a Beneficiary which has not yet signed this Consortium Agreement.

The Project Coordinator is entitled to recover any payments already paid to a Defaulting Party. The Project Coordinator is equally entitled to withhold payments to a Party when this is requested by or agreed with the Funding Authority.

9. Data Management Plan

The scope of the Data Management Plan (DMP) is to provide the outline of the project’s policy for data management including the acquisition, processing, storage, management, sharing, and archiving of data. Specifically, the DMP will include the a) data collected, tested and piloted as on the ANDROMEDA platform. b) research data collected during the ANDROMEDA project (e.g. interviews, surveys etc.)

This Section of the D.1.1 provides this plan, by following the “Guidelines on Data Management in Horizon 2020” by the European Commission Directorate-General for Research and Innovation¹¹ and specifies the required information and processes for the following issues:

- what data will be collected, processed or generated
- what methodology and/or standards will be applied
- how will this data be exploited and/or shared/made accessible for verification and reuse
- the handling of research data during & after the project

It should be noted that ANDROMEDA will not take part in any Open Research Data pilot, however the Consortium will outline based on the available information and the Consortium decisions made by M3 how the project’s policy for data management will be handled.

The Data Management Plan is not a fixed document but evolves during the lifespan of the project and can be updated – if appropriate in the context of the Project Reports.

9.1 Data Summary

9.1.1 Purpose of the data collection/generation and its relation to the project’s objectives

The purpose of data collection and generation under ANDROMEDA is to demonstrate the full capabilities of CISE by enhancing the Maritime CISE Model and by extending its scope to the Land Surveillance Sector. The proposed solution is a distributed set of systems and services interconnected according to the CISE principles that aim to foster faster detection of new events, better informed decision making and achievement of a joint understanding and undertaking of a situation across borders. Specifically, ANDROMEDA encompasses all the activities dealing with extensions to the CISE model, adaptations of advanced C2 systems for Land and Maritime Border Surveillance for enhanced CISE compatibility, the Data Fusion and analytics services and the associated information and communication services.

9.1.2 Types and formats of data that the project will collect/generate

In order to provide an overview of the different data sets that are currently available and will be produced in the ANDROMEDA project, the following table shows the data type, the origin of the data, the related WP number and the format, in which the data will be presumably stored.

Table 21: ANDROMEDA Data types and formats

No.	Data Type	Origin	WP	Format
1	Vessel Tracks	Generated during project	WP4, WP5, WP6	e-CISE
2	2D Tile Maps – Streets	OpenStreetMap	WP4, WP5, WP6	.png

¹¹ Guidelines on Data Management in Horizon 2020, version 2.1, 15 February 2016, European Commission, Directorate-General for Research & Innovation

No.	Data Type	Origin	WP	Format
3	2D Tile Maps – Sea	OpenSeaMap	WP4, WP5, WP6	.png
4	Video streaming and imagery from terrestrial in-situ camera sensors	Terrestrial in-situ camera sensors & Generated from terrestrial in-situ camera sensors data processing	WP4, WP5, WP6	*.mp4, *.ogv, *.avi, *.jpg, *.tif, *.img, *.png, etc
5	Video streaming and imagery from UAVs	UAV flight & Generated from UAV data processing	WP4, WP5, WP6	*.mp4, *.ogv, *.avi, *.jpg, *.tif, *.img, *.png, etc
6	Vehicle Tracks	Generated during project	WP4, WP5, WP6	e-CISE
7	Personnel Tracks	Generated during project	WP4, WP5, WP6	e-CISE
8	Radar Tracks	Generated during project	WP4, WP5, WP6	e-CISE
9	Satellite Imagery	Primary data	WP4	TIFF
10	AISHUB data from Public Domain, used in MARISA	Primary data	WP4	CSV
11	GNSS/INS positions	UAV flight	WP4, WP5, WP6	*.doc, *.csv, *.xlsx, *.pdf, *.txt, *.xml, *.kml, *.kmz, etc
12	Event data	UAV processing & terrestrial in-situ camera sensors processing	WP4, WP5, WP6	*.csv, *.xlsx, *.txt, *.xml, *.json
13	Metadata of UAV and Terrestrial In-Situ Camera Sensors	UAV & terrestrial in-situ camera sensors	WP4, WP5, WP6	*.csv, *.xlsx, *.txt, *.xml, *.json
14	End-Users Questionnaire Data	Primary data	WP2	.xlsx, .docx
15	Workshops Data	Primary data	WP7	.xlsx, .docx

In the following section, details on the 15 datasets identified in ANDROMEDA are given below. They will be updated as more data are produced in the project.

Dataset#1: Vessel Tracks

Purpose and relation to the objectives of the project:	To be able to visualize them on a map and to provide them as source information to DF and DST services
Data types:	Vessel
Data formats:	e-CISE
Reuse of existing data:	None
Data production methods:	AIS and/or Radar
Expected size of the data:	Unknown
Data utility:	Andromeda Operators / DF and DST services

Dataset#2: 2D Tile Maps – Streets

Purpose and relation to the objectives of the project:	To provide visualization context for vessel tracks
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Data types:	Images
Data formats:	.png
Reuse of existing data:	Reused from the public domain – not generated
Data production methods:	Open Street Map (www.openstreetmap.org)
Expected size of the data:	A few GBs
Data utility:	ANDROMEDA Operator

Dataset#3: 2D Tile Maps – Sea

Purpose and relation to the objectives of the project:	To provide visualization context for land-based tracks
Data types:	Images
Data formats:	.png
Reuse of existing data:	Reused from the public domain – not generated
Data production methods:	Open Sea Map (www.openseamap.org)
Expected size of the data:	A few GBs
Data utility:	ANDROMEDA Operator

Dataset#4: Video streaming and imagery from terrestrial in-situ camera sensors

Purpose and relation to the objectives of the project:	Such data contribute to Land border surveillance operations and to the extension of the corresponding Common Information Sharing Environment concept.
Data types:	Video streaming and imagery
Data formats:	*.mp4, *.ogv, *.avi, *.jpg, *.tif, *.img, *.png, etc
Reuse of existing data:	No reuse
Data production methods:	Terrestrial in-situ camera sensors & Generated from terrestrial in-situ camera sensors data processing
Expected size of the data:	The size of the data is strongly dependent on the duration of the operation, resolution of the used sensor, spectral information, etc. Expected: <10Mb/sec
Data utility:	End-users associated with Land border surveillance operations

Dataset#5: Video streaming and imagery from UAVs

Purpose and relation to the objectives of the project:	Such data contribute to Land border surveillance operations and to the extension of the corresponding Common Information Sharing Environment concept.
Data types:	Video streaming and imagery
Data formats:	*.mp4, *.ogv, *.avi, *.jpg, *.tif, *.img, *.png, etc
Reuse of existing data:	No reuse of existing data
Data production methods:	UAV flight & Generated from UAV data processing
Expected size of the data:	Size of the data is strongly dependent on the duration of the operation, resolution of the used sensor, spectral information, etc. Expected: <10Mb/sec
Data utility:	End-users associated with Land border surveillance operations

Dataset#6: Vehicle Tracks

Purpose and relation to the objectives of the project:	To be able to visualize them on a map and to provide them as source information to DF and DST services
Data types:	Vehicle
Data formats:	e-CISE
Reuse of existing data:	None
Data production methods:	Radar or Electro-Optical
Expected size of the data:	Unknown
Data utility:	ANDROMED Operators / DF and DST services

Dataset#7: Personnel Tracks

Purpose and relation to the objectives of the project:	To be able to visualize them on a map and to provide them as source information to DF and DST services
Data types:	Person
Data formats:	e-CISE
Reuse of existing data:	None
Data production methods:	Radar or Electro-Optical
Expected size of the data:	Unknown
Data utility:	ANDROMEDA Operators / DF and DST services

Dataset#8: Radar Tracks

Purpose and relation to the objectives of the project:	To be able to visualize them on a map and to provide them as source information to DF and DST services
Data types:	Radar
Data formats:	e-CISE
Reuse of existing data:	None
Data production methods:	Radar
Expected size of the data:	Unknown
Data utility:	ANDRMEDA Operators / DF and DST services

Dataset#9: LandSat Imagery and SRTM

Purpose and relation to the objectives of the project:	This dataset is used as the based datum for the environment disqualifying. Allowing environment visualizations.
Data types:	Data is presented as TIFF WGS84 multilevel tiles.
Data formats:	TIFF.
Reuse of existing data:	N/A.
Data production methods:	Capture by LANDSAT7 mission and acquired by Inovaworks.
Expected size of the data:	3TB.
Data utility:	Data is useful to all system operators.

Dataset#10: MARISA – Trial AIS

Purpose and relation to the objectives of the project:	This dataset is used as the input for Level2 data fusion services.
Data types:	AIS data.
Data formats:	CSV.
Reuse of existing data:	Data will be re-used from MARISA project.
Data production methods:	Capture by land AIS antennas.
Expected size of the data:	20GB.
Data utility:	Data might be useful to end users and technical companies that want to perform data fusion activities on AIS traffic data.

Dataset#11: GNSS/INS positions

Purpose and relation to the objectives of the project:	Such data contribute to Land border surveillance operations and to the extension of the corresponding Common Information Sharing Environment concept.
Data types:	GNSS/INS positions
Data formats:	*.doc, *.csv, *.xlsx, *.pdf, *.txt, *.xml, *.kml, *.kmz, etc
Reuse of existing data:	No reuse of existing data
Data production methods:	UAV flight
Expected size of the data:	It is not expected higher of 10Kb/sec
Data utility:	End-users associated with Land border surveillance operations

Dataset#12: Event data

Purpose and relation to the objectives of the project:	Such data contribute to Land border surveillance operations and to the extension of the corresponding Common Information Sharing Environment concept.
Data types:	Event data such as object detection, motion detection, anomaly detection, object tracking
Data formats:	*csv, *.xlsx, *.txt, *.xml, *json, *GeoJSON
Reuse of existing data:	No reuse of exiting data
Data production methods:	UAV processing & terrestrial in-situ camera sensors processing
Expected size of the data:	Depending on the number and complexity of events. Expected: <10Mb/sec
Data utility:	End-users associated with Land border surveillance operations

Dataset#13: Metadata of UAV and Terrestrial In-Situ Camera Sensors

Purpose and relation to the objectives of the project:	Such data contribute to Land border surveillance operations and to the extension of the corresponding Common Information Sharing Environment concept.
Data types:	Metadata related to UAV (such as telemetry data, equipment data, sensor data etc.), and metadata related to in-situ camera sensors (such as type cameras, resolution etc.)
Data formats:	*csv, *.xlsx, *.txt, *.xml, *json
Reuse of existing data:	No reuse of exiting data

Data production methods:	UAV & terrestrial in-situ camera sensors
Expected size of the data:	Depending on the number of number of metadata. Expected <100Kb/s
Data utility:	End-users associated with Land border surveillance operations

Dataset#14: End-Users Questionnaire Data

Purpose and relation to the objectives of the project:	This data set contains the data from the survey conducted under WP2 in the ANDROMEDA project. The target group of the survey is the User Community of the project consisted mainly of border and coast guard authorities. The purpose of the questionnaire is to identify, elucidate and validate the initial set of user requirements that need to be mapped into technical specifications.
Data types:	Electronic Data
Data formats:	.docx, .xlsx
Reuse of existing data:	None
Data production methods:	Questionnaire templates
Expected size of the data:	Few KBs
Data utility:	The survey, which will be implemented in ANDROMEDA, is conducted at authority level and its outcomes are important for understanding the needs and requirements of the end-users and for delivering an accurate high-level architecture and software design of the CISE compliant ANDROMEDA C2s and Data Fusion, Analytics and Decision Support tools, including the supporting legacy system Gateways and CISE Adaptors. Moreover, following the necessary declassification of the generated deliverable(s), the data may be potentially interesting for other researchers and standardization bodies working in this field either for (full or partial) secondary analysis or comparative analysis.

Dataset#15: Workshops Data

Purpose and relation to the objectives of the project:	The data contain proceedings, written notes and summaries collected during the two (2) workshops, which will be organized in the context of ANDROMEDA. The aim of the workshops is to present and promote the ANDROMEDA results to the Consortium partners, end-users, practitioners and other policy makers and stakeholders.
Data types:	Electronic Data
Data formats:	.docx, .xlsx
Reuse of existing data:	None
Data production methods:	Presentations, Feedback forms
Expected size of the data:	Few MBs
Data utility:	ANDROMEDA workshops will present and disseminate up-to-date information through presentations and live system demonstrations with as much as possible real-time data.

9.1.3 Roles and responsibilities for the process of collection, verification, harmonization, dissemination and conservation of the data that will be collected/generated during the project

The data that will be gathered during the project (as presented in Table 21), will be collected, verified, harmonized, disseminated and conserved by partners involved in the relative WPs that each data source is handled. More specifically:

Collection: Partners involved in all WPs will collect data. Each partner will collect data sources that are related to the WP s/he gets involved.

Verification: Partners assigned to review deliverables/documents etc.

Harmonization: According to the CISE.

Dissemination: All partners and Security Advisory Board (SAB) will be involved in the dissemination process.

Conservation: Partners involved in all WPs.

Data Controllers: Partners involved in all WPs will be data controllers. Each partner will control data sources that are related to the WP s/he gets involved.

Data Processors: Partners involved in all WPs will be data processors. Each partner will process data sources that are related to the WP s/he gets involved.

The roles and responsibilities and the characterisation of the involved partners as Data Controllers/Processors as defined above are going to be re-addressed in the future under the potential update of the current DMP according to the development of ANDROMEDA activities.

9.1.4 Data exchanges outside the Consortium

Personal data will be anonymised before their dissemination outside the Consortium and/or before their use for future research and/ or scientific purposes, unless explicit and informed consent is granted by the data subjects for the dissemination of personal data outside the Consortium and any sensitive information is filtered before this dissemination by the SAB, in accordance with the terms of the Grant Agreement and the Protection of Personal Data Policy specified under WP2 and WP8.

9.2 Allocation of resources

- The cost for data management for the disseminated data is already covered in WP7 “Impact Creation, Exploitation and Standardization Activities”.
- Cost for dataset collection, storage, backup, archiving and sharing that is realized mainly through SharePoint platform is covered from WP1 “Project Coordination and Management”.
- Costs of storage for data that will be created locally during the demonstrations (sensor data etc.) is appointed to WP5 “System Integration and Testing” and WP6 “Pilot Demonstrations, Validation & Evaluation”, and to each partner that is responsible for the system component to be deployed on site.

9.3 Data security

Maximum efforts will be taken so as most of the information processed, is in principle, anonymous. In case personal data are processed, measures as pseudonymisation and/or anonymisation will be implemented. To this extent, a description of the technical and organisational measures that will be implemented to safeguard

the rights and freedoms of the data subjects will be submitted as a deliverable under D8.9, e.g. authentication of data links, network security (firewall), encryption of data and storage.

9.4 Ethical aspects

9.4.1 Personal data protection

During the ANDROMEDA project, personal data may be processed. Data processing procedures include data collection, storage, protection, retention, transfer, destruction and re-use. This part also includes ensuring that informed consent has been obtained and that the transfer of data is subject to appropriate safeguards.

9.4.2 Data collection

ANDROMEDA activities that are associated with the collection of personal data are the following:

- WP1 “Project Coordination and Management”: Provision of electronic tools (private document sharing platform, teleconference services, mailing lists, etc.) for efficient project internal information exchange, partner collaboration and co-ordination.
- WP2 “Operational Analysis, User Requirements and Technical Specifications”: Formulation of the ANDROMEDA User Community of practitioners focused on the goal of “innovation”, delivering the benefits of the Information Sharing Environment through the enhanced CISE models for Land and Maritime Border Surveillance and Monitoring. Collection of data from the User Community through questionnaires and interviews in order to identify and elucidate user requirements, as well as collect feedback about the early prototypes of the ANDROMEDA subsystems. Moreover, the scenarios developed by questionnaires will be performed at the test sites via acting by personnel provided by the practitioners.
- WP5 “System Integration and Testing”: This WP deals with the integration of all components developed in WPs 2,3,4 and their merging to complete functional prototypes that will undergo the verification and validation procedures through scenarios in WP6.
- WP6 “Pilot Demonstrations, Validation & Evaluation”: Data will be collected at the test sites and specifically audio files, video files and images.
- WP7 “Impact Creation, Exploitation and Standardization Activities”: Part of these data will furthermore be provided for dissemination and communication.
- WP8 “Ethics requirements”: Collection of informed consent forms to ensure that data is subject to appropriate safeguards.

The data that ANDROMEDA will be processing are described under Section 9.1.

It is foreseen that personal but not sensitive data may be processed under the ANDROMEDA activities. In any case, the Consortium partners will take all appropriate measures and safeguards to ensure a high level of protection of personal data and that no sensitive data will be processed, as this would fall out of the scope of ANDROMEDA. Under all circumstances, all procedures will be compliant with EU legislation standards and especially GDPR, in case any issues arise.

9.4.3 Data storage

Secure storage of data that will be collected will be ensured.

9.4.4 Data protection measures

The Data Protection measures that will be taken in ANDROMEDA include:

9.4.4.1 Pseudonymisation and Anonymisation

The protection of personal data will be ensured by appropriate pseudonymisation and anonymisation when necessary. (see D8.6)

Personal data will be anonymised before their dissemination outside the Consortium and/or before their use for scientific and/or research purposes, unless explicit and informed consent is granted by the data subjects for the dissemination of personal data outside the Consortium.

9.4.4.2 Data minimisation

Only personal data that are adequate, relevant and limited to the minimum necessary in relation to the purposes of the ANDROMEDA project shall be collected and processed.

9.4.4.3 Confidentiality

The impartiality and independence of all involved researchers will be granted.

9.4.4.4 Profiling and automated decision making

The tasks that could be conducted under ANDROMEDA may fall under the definition of profiling, as profiling is composed of three elements:

- it has to be an automated form of processing;
- it has to be carried out on personal data;
- and the objective of the profiling must be to evaluate personal aspects about a natural person or make predictions about individuals.

In this line, GDPR Article 4 specifies:

“(4) ‘profiling’ means any form of automated processing of personal data consisting of the use of personal data to evaluate certain personal aspects relating to a natural person, in particular to analyse or predict aspects concerning that natural person’s performance at work, economic situation, health, personal preferences, interests, reliability, behaviour, location or movements;”

In this sense, in case the ANDROMEDA research involves profiling, the beneficiary will provide an explanation as to how the data subjects will be informed of the existence of the profiling, its possible consequences and how their fundamental rights will be safeguarded. (see D8.4)

9.4.4.5 Appointment of Data Protection Officers

Article 39 GDPR defines the tasks of the Data Protection Officer:

“The data protection officer shall have at least the following tasks:

- to inform and advise the controller or the processor and the employees who carry out processing of their obligations pursuant to this Regulation and to other Union or Member State data protection provisions;

- to monitor compliance with this Regulation, with other Union or Member State data protection provisions and with the policies of the controller or processor in relation to the protection of personal data, including the assignment of responsibilities, awareness-raising and training of staff involved in processing operations, and the related audits;
- to provide advice where requested as regards the data protection impact assessment and monitor its performance pursuant to Article 35;
- to cooperate with the supervisory authority;
- to act as the contact point for the supervisory authority on issues relating to processing, including the prior consultation referred to in Article 36, and to consult, where appropriate, with regard to any other matter.”.

ANDROMEDA ethics requirements include the confirmation by each institution involved in collecting and/or processing of personal data that it has appointed a Data Protection Officer and that his/her contact details are available to data subjects. (see D8.8)

In case where the appointment of a DPO is not required, a detailed data protection policy for the project including among others the procedures for data collection, storage, protection, retention, and destruction, will be submitted.

Detailed information on the informed consent procedures regarding the collection, storage, and protection of personal data will be submitted as a deliverable (see D8.5).

Each beneficiary involved in collecting and/or processing of personal data must nominate a Data Protection Officer.

9.4.4.6 Informed Consent

ANDROMEDA will be recruiting humans as research participants and will ensure that they are all adequately informed, that they have received and read Information Sheets and that they voluntarily participate in ANDROMEDA activities based on their legally effective explicit (see D8.1) and informed consent if their personal data are to be processed (see D8.5).

9.4.5 Data Sharing / Transfer

During the ANDROMEDA project transfer to third countries is foreseen as partners from Israel and Montenegro participate in the Consortium. However, as D8.10 will demonstrate, any transfer in third countries will be in accordance with Chapter V of the General Data Protection Regulation 2016/679.

In case of transfer of personal data outside the Consortium, this will be done strictly for scientific research purposes and under the respective clause in the Informed Consent forms and Information Sheets.

9.4.6 Data Retention/ Destruction

All personal data will be retained for as long as necessary for and proportionate to the purposes for which they are processed under ANDROMEDA activities, and they will be securely deleted five years after the end of the project, at the latest.

Personal data may be used for future scientific and/or research purposes, as this is not considered incompatible with the initial scope of processing. However, personal data will in any case be deleted after five years after the end of the project at the latest.

9.4.7 Secondary Use

Personal data will not be used outside the scope of ANDROMEDA activities. In the unlikely event where processing of previously collected personal data is required, a new legal basis will be required too and confirmation that technical and organisational measures are in place will be given (see D8.7)

Personal data may be used in the future solely for scientific and/or research purposes, as this is not considered incompatible with the initial purpose of processing. This will be done after informing the data subjects and their consent is granted. Efforts must be made to anonymise the data before their secondary use. Personal data will, in any case, be deleted five years after the end of the project, at the latest.

9.4.8 Misuse

Additionally, under D8.13, a risk assessment as well as details on measures to prevent misuse of research findings will be submitted as a deliverable.

9.4.9 Health and safety

Under D8.11, details on the appropriate health and safety procedures for the research staff involved conforming to the relevant local, national guidelines and legislation will be demonstrated.

9.4.10 Dual Use

Finally, during the ANDROMEDA research project, export licenses and relevant authorisations compliant with Regulation 428/2009 will be obtained prior to using and/ or transferring of the technologies and equipment developed in the project as dual use in the sense of Regulation 428/2009. (see D8.12).

9.5 Timeline for the DMP update

According to H2020 Programme Guidelines on FAIR Data Management in Horizon 2020 Version 3.0 26 July 2016:

- Once a project has had its funding approved and has started, the Consortium must submit a first version of the DMP (as a deliverable) within the first 6 months of the project. The DMP should be updated over the course of the project whenever significant changes arise or as a minimum in time with the periodic evaluation/assessment of the project. If there are no other periodic reviews foreseen within the grant agreement, then such an update needs to be made in time for the final review at the latest.

The ANDROMEDA periodic report takes place in M18 with the conclusion of the project and potential update of the DMP may be considered.

10. Annex A: Deliverable template



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**An Enhanced Common Information Sharing Environment for Border
Command, Control and Coordination Systems**

Grant Agreement Number: 833881

D.X.X Deliverable Title

Deliverable Identifier:	Document number
Deliverable Due Date:	yyyy/mm/dd
Deliverable Submission Date:	yyyy/mm/dd
Deliverable Version:	v.x.x
Author(s) and Organisation:	Name 1 (partner), Name 2 (partner),...
Work Package:	WPx Title
Task:	Task X.X Title
Dissemination Level:	PU: Public CO: Confidential, only for members of the Consortium (including the Commission Services) RE: RESTREINT UE (Commission Decision 2015/444/EC)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 833881.


D.XX Deliverable Name

Document Control Page

Deliverable Number:	DXX	
Deliverable Title:	Deliverable Title	
Deliverable Version:	v.XX	
Work Package Number:	WPX	
Work Package Title:	WP Title	
Submission Date:	yyyy/mm/dd	
Dissemination Level:	☐ PU: Public ☐ CO: Confidential, only for members of the Consortium (including the Commission Services) ☐ RE: RESTREINT UE (Commission Decision 2015/444/EC)	
Status:	☐ Draft ☐ Consortium reviewed ☐ Peer reviewed ☐ Management Support Team reviewed ☐ Project Coordinator accepted	
Author(s):	Name	Organisation
	Name	Organisation
Contributor(s):	Name	Organisation
	Name	Organisation
Peer Reviewer(s):	Name	Organisation
	Name	Organisation
Security Assessment:	☐ Passed ☐ Rejected Comments:	
Funding Authority:	European Commission	
Funding Program:	Horizon 2020 Secure Societies Work Programme 2018 – 2020	
Topic:	SU-BES03-2018 Demonstration of applied solutions to enhance border and external security, Subtopic [2018]: Open	
Rights:	ANDROMEDA Consortium	



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D.X.X Deliverable Name

Version History

Version	Date	Edited by	Description
v.0.1	yyy/mm/dd	BENEFICIARY NAME	1 st draft
v.0.2	yyy/mm/dd	BENEFICIARY NAME	2 nd draft

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D.XX Deliverable Name

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D.X.X Deliverable Name

1. Introduction

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

1.1 Purpose of the document

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

1.2 Reference documents

[1] Reference 1
 [2] Reference 2
 [3] Reference 3

1.3 Definitions

List of Definitions	

1.4 Structure of the document

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

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D.X.X Deliverable Name

1.5 List of Acronyms

List of Acronyms	

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11. Annex B: Meeting Agenda Template

 		Horizon 2020 European Union funding for Research & Innovation
SU-BES03-2018, Subtopic: Open Demonstration of applied solutions to enhance border and external security		
 andromeda		
An Enhanced Common Information Sharing Environment for Border Command, Control and Coordination Systems		
Grant Agreement Number: 833881		
<u>Agenda</u> meeting		
..... Date, City, Country		
<u>Meeting venue</u> Venue Name Venue Address Website (if available)		
	This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 833881.	

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Horizon 2020
European Union funding
for Research & Innovation



Day II – 2019

Timeslot	Presentation	Partner
	Coffee break	
	Lunch break	
	Coffee break	
	Closing of the	

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12. Annex C: Meeting Minutes Template



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**An Enhanced Common Information Sharing Environment for Border
Command, Control and Coordination Systems**

Grant Agreement Number: 833881

..... **Meeting Minutes**

Meeting Date:	
Venue:	
Minutes Version:	v.1.0
Work Package:	
Rapporteur Name:	
Rapporteur Organisation:	
Dissemination Level:	



This project has received funding from the European Union's Horizon 2020 research and innovation ~~programmes~~ under grant agreement No 833881.

[illegible]



..... Meeting Minutes

Actions

No.	Work Package	Description	Responsible	Deadline
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..... Meeting Minutes

List of Attendees

No	Surname	Name	Organisation
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13. Annex D: Meeting Presentation Template

An Enhanced Common Information Sharing Environment for Border Command,
Control and Coordination Systems

Presentation Title 1

Presentation Subtitle

Presenter

Organisation

Insert presentation date and location

This project has received funding from the European Union's Horizon 2020 Work Programme for research and innovation 2018-2020, under the Grant Agreement No 833881

6543210123456

Presentation Contents



➤ Topic





Slide 3

Andromeda Kick-Off Meeting in Athens, September 17-18 2019



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Insert Slide Title

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Slide 7 Andromeda Kick-Off Meeting in Athens, September 17-18 2019

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Thank you for your attention

Any questions?

Presenter

Organisation

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14. Annex E: WPX Interim Management Report Template



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**An Enhanced Common Information Sharing Environment for Border
Command, Control and Coordination Systems**

Grant Agreement Number: 833881

WPX Interim Management Report #Number|

Reporting Period:	MX – MX
Report Due Date:	xxx/mm/dd
Report Submission Date:	xxx/mm/dd
Report Version:	xxx
WPX Leader:	Name (partner)
Author(s) and Organisation:	Name 1 (partner), Name 2 (partner),...
Work Package:	WPx Title
Dissemination Level:	PU: Public CO: Confidential, only for members of the Consortium (including the Commission Services) RE: RESTREINT UE (Commission Decision 2015/444/EC)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 833881.


WPX Interim Management Report #Number

Document Control Page

Deliverable Number:	DX.X	
Deliverable Title:	Deliverable Title	
Deliverable Version:	v.X.X	
Work Package Number:	WPX	
Work Package Title:	WP Title	
Submission Date:	xxxx/mm/dd	
Dissemination Level:	☐ PU: Public ☐ CO: Confidential, only for members of the Consortium (including the Commission Services) ☐ RE: RESTREINT UE (Commission Decision 2015/444/EC)	
Status:	☐ Draft ☐ Consortium reviewed ☐ Peer reviewed ☐ Management Support Team reviewed ☐ Project Coordinator accepted	
Author(s):	Name	Organisation
	Name	Organisation
Contributor(s):	Name	Organisation
	Name	Organisation
Funding Authority:	European Commission	
Funding Program:	Horizon 2020 Secure Societies Work Programme 2018 – 2020	
Topic:	SU-BES03-2018 Demonstration of applied solutions to enhance border and external security, Subtopic [2018]: Open	
Rights:	ANDROMEDA Consortium	

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WPX Interim Management Report #Number

Version History

Version	Date	Edited by	Description
v.0.1	xxx/mm/dd	BENEFICIARY NAME	1 st draft
v.0.2	xxx/mm/dd	BENEFICIARY NAME	2 nd draft

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WPX Interim Management Report #Number

1. WPX objectives and work progress

1.1 WPX objectives for the period

[Please describe the main objectives of WPX covered during the reporting period.]

1.2 Achievements during the period

[This section reports for WPX the following information:

- the status of the work package at task level;
- the achieved results;
- the current status;
- any deviations from DoA]

1.3 Problems encountered, risks and mitigation actions

[Please describe in the following table the problems encountered and/or critical risks during the reporting period (if relevant), the actions and measures taken to solve these problems and specify the impact or delay caused by these problems on the WP and the project in general.]

Table 1: Critical Implementation Risks and Mitigation Actions

Risk description	WP(s) involved	Probability ¹	Expected impact ²	Mitigation action

1.4 Meetings and Teleconferences

Table 2: Meetings and Teleconferences

No	Meeting / Teleconference	WP(s) involved	Organizer	Date	Location

1.5 Planned work

[Please describe the planned work of WPX for the next three months.]

¹ Low, Medium, High

² Low, Medium, High

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15. Annex F: Timesheet Template

TIME RECORDING FOR AN HORIZON 2020 ACTION																															Month:	Year:	
Title of the action / work programme (acronym):																															Grant Agreement No:		
Beneficiary's / partner's/ affiliated entity's name:																																	
Name and function of the person assigned to the action/work programme:																															Type of personnel	Employee	
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total	
Related activities Reference (e.g. work																																0	
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Short description of the activities carried out in the month:																																	
Signed (name of the person assigned to the action/work programme):																																	
Signed (name of the supervisor):																																	
Date:																																	
Signature:																																	

16. Annex G: Quality Review Report

The ANDROMEDA Consortium uses the Quality Review Report process for its internal quality assurance for deliverables to assure consistency and high standard for documented project results.

The Quality Review Report is used individually by selected peer reviewers. The allocated time for the review is 7 calendar days. The author of the document has the final responsibility to reply on the comments and suggestions of the peer reviewers and decide what changes are needed to the document and what actions are to be undertaken.

16.1 Reviewers

Project Coordinator	Mrs. Athena Foka (MMAIP)
Management Support Team Member	Mr. Alkis Astyakopoulos (KEMEA)
Internal Peer Reviewer(s)	Dr. Marios Moutzouris (STWS), Mr. David Merino (GMV)

16.2 Overall Peer Review Result

The Deliverable is:

- ☐ Fully accepted
- ☒ Accepted with minor corrections, as suggested by the reviewers
- ☐ Rejected unless major corrections are applied, as suggested by the reviewers

16.3 Consolidated Comments of Quality Reviewers

General Comments	
Deliverable contents thoroughness	Reviewers comment (STWS): The deliverable is thorough in covering all aspects of managing the project. Reviewers comment (GMV): Satisfactory level of description of managing activities. Author's reply: -
Innovation level	Reviewers comment (STWS): Probably not applicable to this deliverable Reviewers Comment (GMV): Agreed with previous comment. However, the Innovation Level of the Project (and the Innovation Activities) will be assessed in the Project Reports – D1.2 and D1.3, so covering this issue. Author's reply: -
Correspondence to project and programme objectives	Reviewers comment (STWS, GMV): A mandatory document as part of the GA and to guide consortium partners in fulfilling their obligations Author's reply: -
Specific Comments	
Relevance with the objectives of the deliverable	☒ Yes ☐ No ☐ Partially ☐ Not applicable

	Reviewers comment: - Author's reply: -	
Completeness of the document according to the its objectives	☒ Yes ☐ No ☐ Partially ☐ Not applicable Reviewers comment: - Author's reply: -	
Methodological framework soundness	☒ Yes ☐ No ☐ Partially ☐ Not applicable Reviewers comment: - Author's reply: -	
Quality of the results achieved	☐ Yes ☐ No ☐ Partially ☒ Not applicable Reviewers comment: - Author's reply: -	
Structure of the deliverable with clear objectives, methodology, implementation, results and conclusions	☐ Yes ☐ No ☐ Partially ☒ Not applicable Reviewers comment: - Author's reply: -	
Clarity and quality of presentation, language and format	☒ Yes ☐ No ☐ Partially ☐ Not applicable Reviewers comment: Author's reply:	
Detailed Comments		
No.	Reference	Remark
1	Various sections	Comments have been provided inside the deliverable that have been addressed by the Deliverable Author
2	Chapter 4	Maybe it should be mentioned explicitly in Chapter 4 that Innovation activities will be reported (and assessed) in the Project Reports, deliverables D1.2 and D1.3, as mentioned in the GA