ASSURED

D8.1 PROJECT HANDBOOK, QUALITY ASSURANCE AND RISK MANAGEMENT

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Abstract	The purpose of the deliverable Project Handbook, Quality Plan & Risk Management, which is essentially the Quality Assurance Plan (QAP) of the ASSURED project, is to provide a single point of reference on the quality that will be governed during the course of the project. The deliverable at hand defines the project organisation, roles and responsibilities with emphasis on the quality control and quality assurance activities that will be carried out. It describes how the project will execute its day-to-day activities from a quality perspective, and ensures that standards, processes, and procedures are defined so that their execution is continuously monitored and improved. This deliverable defines all the necessary mechanisms and structures for the management and administrative coordination of the project with emphasis on the governance, change management, communication plan, project calendar, stages, milestones, and reporting roles and responsibilities for all the partners is also made.
Keywords	Project Management Plan, change management, scope management, cost management, cost baseline, schedule baseline, schedule management, effort, budget, indicators, quality management, risk assessment, communication management, communication matrix, software management, guidance, administration

Document Revision History

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V0.2	06/11/2020	Addition of Security review procedures	Prof. Athanasios Giannetsos (DTU),
v0.3	20/11/2020	2nd review and proof reading	Ellen Juel Nielsen
V0.4	24/11/2020	3rd and final version including all comments received	Jean-Baptiste Milon

DISCLAIMER

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Nature of the deliverable:	**R**	
Dissemination Level		
PU	Public, fully open, e.g. web	✓
CL	Classified, information as referred to in Commission Decision 2001/844/EC	
CO	Confidential to ASSURED project and Commission Services	

EXECUTIVE SUMMARY

About the Project Handbook, Quality Assurance and Risk Management:

The purpose of the "Project Handbook, Quality Assurance and Risk Management" of the ASSURED project, is to provide a single point of reference on the quality that will be governed during the course of the project. The deliverable at hand defines the project organisation, roles and responsibilities with emphasis on the quality control and quality assurance activities that will be carried out. It describes how the project will execute its day-to-day activities from a quality perspective, and ensures that standards, processes, and procedures are defined so that their execution is continuously monitored and improved. This deliverable defines all the necessary mechanisms and structures for the management and administrative coordination of the project with emphasis on the governance, change management, communication plan, stages, milestones, and reporting roles and responsibilities for all the partners is also made.

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ABBREVIATIONS

BTD	Before The Deadline
CA	Consortium Agreement
CPS	Cyber-Physical System
CR	Change Request
DEL	Digital Enhanced Learning
DL	Deliverable Leader
DMS	Document Management System
DoA	Description of Action
Dx	Deliverable (where x defines the deliverable identification number e.g. D1.1.1)
EC	European Commission
ECAS	European Commission Authentication Service
EU	European Union
GENA	General Assembly
GA	Grant Agreement
KPI	Key Performance Indicator
MSx	Project Milestone (where x defines a project milestone, e.g. MS3)
Mx	Month (where x defines a project month, e.g. M10)
MoM	Minutes of Meeting
O	Other
P	Prototype
PC	Project Coordinator partner (Martel)
PM	Person Month (a unit to count workload)
PCT	Project Coordination Team
PMCT	Project Management and Coordination Team
PO	Project Officer
PP	Restricted to other programme participants (including the Commission Services)
PPM	Partner Project Manager
PU	Public
QA	Quality Assurance
QAP	Quality Assurance Plan

R	Report	
RE	Restricted to a group specified by the consortium (including Commission Services)	
R&D&I	Research & Innovation & Development	
SM	Scientific Manager	
TL	Task Leader	
WP	Work Package	
WPL	Work Package Leader	
WPS	Work Package Structure	

DEFINITIONS

Beneficiary	EC term used to designate the legal entity which has signed the Grant Agreement. This term is often substituted by the common language term 'partner'.
Consortium	Group of beneficiaries that have signed the Consortium Agreement and the Grant Agreement (either directly as Project Coordinator or by accession through the Form A).
Consortium Agreement	Contractual document signed by all the beneficiaries (and not the EC), explaining how the Consortium is managed and works together.
Deliverable Leader	Responsible for ensuring that the content of the deliverable meets the required expectations, both from a contractual point of view and in terms of usage within the project. Is also responsible for ensuring that the deliverable follows the deliverable process and is delivered on time.
Description of Action	Annex 1 to the Grant Agreement. It contains information on the work packages, deliverables, milestones, resources and costs of the beneficiaries, as well as a text with a detailed description of the action. The DoA is made of Part A (structured data collected in web forms and workplan tables) and Part B (text document describing the action elements).
Dissemination	EC term for communication of information to a wide audience.
Foreground	The results, including information, whether they can be protected or not, which are generated under the project. Such results include rights related to copyright, design rights, patent rights etc.
Grant Agreement	Contractual document which defines the contractual scope of the ASSURED project. It is signed between the EC and the beneficiaries.
Third party	Any legal entity which does not sign the EC Grant Agreement. A subcontractor is a type of third party, but not the only one. In special circumstances, the GA accepts third parties whose costs may be eligible. Third parties are specified in the DoA, GA (Article 14) and CA.

1   INTRODUCTION

1.1 DOCUMENT SCOPE

The purpose of the "Project Handbook, Quality Assurance and Risk Management" of the ASSURED project, is to provide a single point of reference on the quality that will be governed during the course of the project. The deliverable at hand defines the project organisation, roles and responsibilities with emphasis on the quality control and quality assurance activities that will be carried out. It describes how the project will execute its day-to-day activities from a quality perspective, and ensures that standards, processes, and procedures are defined so that their execution is continuously monitored and improved. This deliverable defines all the necessary mechanisms and structures for the management and administrative coordination of the project with emphasis on the governance, change management, communication plan, stages, milestones, and reporting roles and responsibilities for all the partners is also made.

1.2 DOCUMENT STRUCTURE

This document is comprised of the following chapters:

Chapter 1 presents an introduction to the document.

Chapter 2 offers information related to the project objectives and workplan, to provide the context for this document.

Chapter 3 explains the overall strategy and approach towards managing the project including the management structure, partner roles and responsibilities, procedures, baselines, milestones and indicators.

Chapter 4 establishes the baseline performance of ASSURED in terms of schedule, resources, cost and overall quality.

Chapter 5 presents the way the project will handle changes to the established plans and baselines.

Chapter 6 presents the communication flows, instruments and guidelines to the project.

Chapter 7 describes in brief the way the coordination team intends to manage costs and efforts. The two are placed in the same procedure as they are closely linked.

Chapter 8 sets the policy for procurement in the project.

Chapter 9 explains in brief the process of managing the project scope.

Chapter 10 outlines the management of the project schedule.

2   ASSURED CONTEXT

2.1 PROJECT SCOPE AND OBJECTIVES

The ASSURED vision is rooted in the fact that CPS (e.g., manufacturing, aerospace, satellite and smart cities systems) are made up of components supplied by multiple vendors, often also because of the legal obligation not to lock suppliers out of the supply chain. Furthermore, these systems are increasingly integrated with global information and management networks.

Therefore, they constitute ever more complex SoS with no single tenant or provider. In the face of an increasing landscape of cyber-attacks, it must be possible to understand how remediation must be applied rapidly, otherwise we risk major disasters caused by malicious failures of our IT infrastructure. Consequently, we must understand CPS inherently and increasingly as Federated Safety Critical Systems designed, implemented, operated, and owned by multiple tenants with different security goals, requirements, and priorities.

Furthermore, security cannot be seen in an isolated way, but must be considered also in the face of the safety of the overall system. Simply disabling some communication for security reasons may leave the system in an unsafe state and lead to further damage. It is necessary to understand what is semantically sensible for a component of a certain type to do and from this microscopic view expand to overall system analysis.

ASSURED relies on three core pillars:

➲ **Remote attestation of Properties**

➲ **Dynamic real-time risk assessment**

➲ **Enforcement of self-learning adaptable policies and enhanced secure data sharing**

ASSURED has laid out Seven core objectives:

➲ **Objective I:** The design and development of a novel, highly-usable, and resilient cybersecurity, privacy and data protection management framework, targeted at "Systems-of-Systems" (SoS) enabled ecosystems

➲ **Objective II:** The construction of a highly automated middleware for the secure configuration, deployment, operation, management and maintenance of edge devices, processes and safety-critical software components

➲ **Objective III:** The identification and implementation of a reactive, runtime risk assessment model, facilitating the real-time handling of threats and identified risks, for enhancing the security- and privacy-by-design features of the entire ASSURED security assurance and data sharing framework through a holistic threat assessment against aspects of such hyper-connected SoS.

➲ **Objective IV:** The leverage of the ASSURED Framework to automatically infer optimal software deployment plans, for the safe implementation of mixed-criticality applications in CPSs and support their correct execution and verification through an incremental adoption and deployment of (on-demand) capability-oriented security attestation controls.

➲ **Objective V:** The provision of a secure, trusted and audible data sharing environment (for threat intelligence data and beyond) by designing and implementing advanced Blockchain operation and control services through leveraging distributed ledgers infrastructure and

specifying novel Trusted Component (TC)-enabled security and privacy-preserving protocols

- ⭢ **Objective VI:** The delivery of the applicability, usability, effectiveness and value of the ASSURED concepts, models and identified security, privacy, trust and operational assurance enablers in real-world industries, safety critical infrastructures and applications

- ⭢ **Objective VII:** The insurance of wide communication and scientific dissemination of the innovative ASSURED results to the research, academic, and international community, the efficient exploitation and business planning of the ASSURED concepts and tools to SoS and ICT supply chains

2.2 PROJECT WORKPLAN

The ASSURED work plan is organised in eight work packages whose relations are shown in the PERT chart below.

FIGURE 1: ASSURED WP STRUCTURE AND RELATIONS
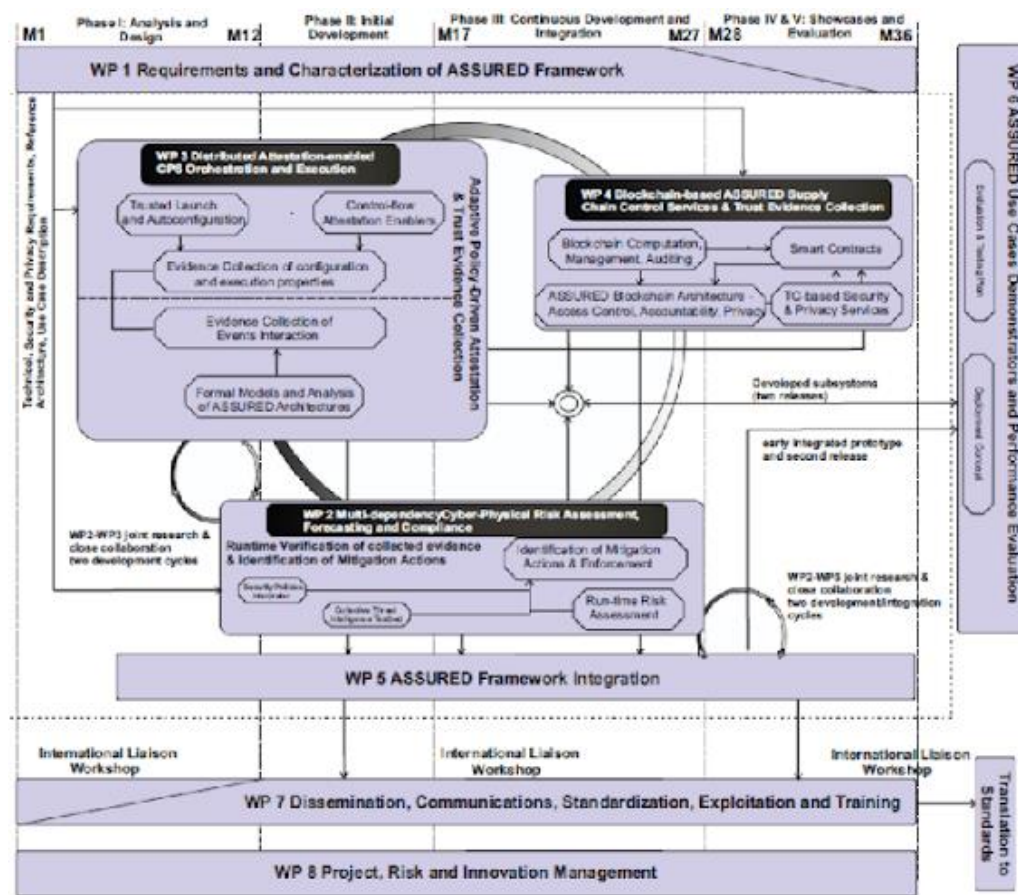
- ⭢ **WP1**, Requirements and Characterization of ASSURED Framework

- ⭢ **WP2**, Multi-dependency Cyber-Physical Risk Assessment, Forecasting and Compliance

- ⭢ **WP3**, Distributed Attestation-enabled CPS Orchestration and Execution

- ⭢ **WP4**, Blockchain-based ASSURED Supply Chain Control Services and Trust Evidence Collection

- ⭢ **WP5**, ASSURED Framework Integration

- ➲ **WP6**, ASSURED Use Cases Demonstrators & Performance Evaluation
- ➲ **WP7**, Dissemination, Communications, Standardization, Exploitation and Training
- ➲ **WP8**, Project Risk and Innovation Management

2.3 MILESTONES

Project milestones are presented in **Annex 1 of the Grant Agreement**, in the **Description of the Action (DoA).** The complete milestone table is provided within Section **1.3.4 WT4: 'List of milestones'** of the DoA, but also in the following table.

TABLE 1: LIST OF MILESTONES

No	Milestone title	WP	Date
MS1	Availability of the technical, security, privacy and functional safety requirements to be met by the ASSURED Framework and the use cases	WP1	M06
MS2	Availability of the ASSURED Reference Architecture	WP1	M09
MS3	Availability of the ASSURED conceptual models designing the integral security, privacy, operational assurance and data sharing services	WP1	M12
MS4	Availability of ASSURED's collaborative risk assessment methodology, the design of the operational assurance attestation enablers, the Blockchain architecture and the ASSURED Framework integration plan	WP2 WP3 WP4 WP5	M15
MS5	Availability of the ASSURED Framework Components and Mechanisms – Early Release	WP2 WP3 WP4 WP5 WP6	M18
MS6	Availability of the ASSURED Integrate Framework – First Release	WP2 WP5	M30
MS7	Readiness of the ASSURED Demonstrators & Early Performance Evaluation (1st Demonstration Phase)	WP6	M24
MS8	Availability of the ASSURED Framework, Components and Mechanisms – Final Release	WP2 WP3 WP4 WP5	M30
MS9	Readiness of the ASSURED Demonstrators (2nd Phase)	WP6	M33

| MS10 | Availability of ASSURED Evaluation, Validation, Lessons Learnt and Adoption Guidelines | WP5 WP6 | M36 |

2.4 DELIVERABLES

A detailed deliverable list is presented in **Annex 1 of the Grant Agreement** within Section **1.3.2 WT2: 'List of Deliverables'** of the DoA, but also here:

TABLE 2: LIST OF DELIVERABLES

No	Deliverable title	Delivery Date	Lead Beneficiary	Nature
D1.1	ASSURED Use Cases and System Requirements	M06	UTRCI	R
D1.2	ASSURED Reference Architecture	M09	DTU	R
D1.3	Operational SoS Process Models & Specification of Properties	M12	TUDA	R
D1.4	Report on Security, Privacy and Accountability Models for Dynamic Trusted Consent and Data Sharing	M12	TUE	R
D2.1	Risk Assessment Methodology and Threat Modelling	M15	DTU	R
D2.2	Policy Modelling & Cybersecurity, Privacy and Trust Policy Constraints	M15	MLNX	R
D2.3	ASSURED Runtime Risk Assessment Framework - version 1	M18	UBITECH	O
D2.4	ASSURED Runtime Risk Assessment Framework - version 2	M30	UBITECH	O
D2.5	Security Context Broker Specification and Smart Contract Definition & Implementation for Policy Enforcement - version 1	M18	TUE	R
D2.6	Security Context Broker Specification and Smart Contract Definition & Implementation for Policy Enforcement - version 2	M30	TUE	O
D2.7	ASSURED Collective Threat Intelligence Analysis & Forecasting Framework - version 1	M18	UTRCI	O
D2.8	ASSURED Collective Threat Intelligence Analysis & Forecasting Framework - version 2	M30	UTRCI	O
D3.1	ASSURED Attestation Model and Specification	M15	UBITECH	R

D3.2	ASSURED Layered Attestation and Runtime Verification Enablers Design & Implementation - version 1	M15	TUDA	R
D3.3	ASSURED Layered Attestation and Runtime Verification Enablers Design & Implementation - version 2	M30	TUDA	O
D3.4	ASSURED Real-time Monitoring and Tracing Functionalities - version 1	M18	MLNX	R
D3.5	ASSURED Real-time Monitoring and Tracing Functionalities - version 2	M30	MLNX	O
D3.6	ASSURED Secure and Scalable Aggregate Network Attestation - version 1	M18	TUDA	R
D3.7	ASSURED Secure and Scalable Aggregate Network Attestation - version 2	M30	TUDA	O
D4.1	ASSURED Blockchain Architecture	M15	SUITE5	R
D4.2	ASSURED Secure Distributed Ledger Maintenance & Data Management	M18	SURREY	R
D4.3	ASSURED Blockchain-based Control Services and Crypto functions for Decentralized Data Storage, Sharing and Access Control - version 1	M18	TUE	R
D4.4	ASSURED Blockchain-based Control Services and Crypto functions for Decentralized Data Storage, Sharing and Access Control - version 2	M30	TUE	R
D4.5	ASSURED TC-based Functionalities - version 1	M18	SURREY	R
D4.6	ASSURED TC-based Functionalities - version 2	M30	SURREY	O
D5.1	Technical Integration Points, APIs Specification and Testing Plan	M15	INTRA	R
D5.2	ASSURED Blockchain and Data Storage Environment	M18	UNIS	O
D5.3	ASSURED Secure Information & Attestation Data Exchange Services Implementation - version 1	M21	SUITE5	O
D5.4	ASSURED Secure Information & Attestation Data Exchange Services Implementation - version 2	M30	SUITE5	O
D5.5	ASSURED Integrated Framework, Testing and Refinement - version 1	M21	INTRA	O

D5.6	ASSURED Integrated Framework, Testing and Refinement - version 2	M30	INTRA	O
D6.1	Evaluation Framework and Demonstrators Planning	M18	UTRCI	R
D6.2	First Demonstrators Implementation Report	M24	BIBA	R
D6.3	Final Demonstrators Implementation Reports	M33	UTRCI	R
D6.4	Performance Evaluation and Adoption Guidelines	M36	SUITE5	R
D7.1	Internal and External IT Communication infrastructure and project website	M03	MARTEL	W
D7.2	Exploitation, Standardisation, Dissemination and Communication Activities Report - version 1	M18	TUE	R
D7.3	Exploitation, Standardisation, Dissemination and Communication Activities Report - version 2	M36	TUE	R
D7.4	Market Analysis, Business and Sustainability Plan - version 1	M21	SPACE	R
D7.5	Market Analysis, Business and Sustainability Plan - version 2	M36	SPACE	R
D7.6	Project's Impact Assessment - version 1	M21	DAEM	R
D7.7	Project's Impact Assessment - version 2	M36	DAEM	R
D8.1	Project Quality Plan	M03	MARTEL	R
D8.2	Data Management Plan (DMP) - version 1	M6	MARTEL	R
D8.3	Data Management Plan (DMP) - version 2	M24	MARTEL	R
D8.4	Risk assessment plan	M24	MARTEL	R

3 PROJECT MANAGEMENT APPROACH

3.1 OVERALL MANAGEMENT STRATEGY

The ASSURED project management description is found in **Annex 1 of the Grant Agreement (DoA)**, as part of the contract with the European Commission, along with the project scope and baselines. The **Consortium Agreement** is based on the contract with the European Commission and is another legal instrument establishing the fundamental rights and obligations in the relationships **between partners**. In the metaphor of project management being a building, the Annex 1 of the Grant Agreement (DoA) is the foundation, whereas the Consortium Agreement is the skeleton. All other parts of project management rely on these two. **Quality** and **risk management** are the external walls. They permeate all activities of the project and act as safeguards. Quality is assured and risks are assessed for both project products and project management practices. All activities end with the communication of decisions, changes and actions to consortium members and the European Commission. These are the activities that bound project management for ASSURED as it is shown in the figure below.

FIGURE 2: ASSURED PROJECT MANAGEMENT ARCHITECTURE

The core activities to ensure the project stays on track are the **scope**, **cost** and **schedule management**. They keep the project in line with what the Annex 1 of the DoA prescribes that the project should do, cost and how long it should take to accomplish its objectives respectively. **Procurement management** describes how to handle purchases needed to execute the project at a partner level, while **staff management** defines the needs in terms of people, their roles and who is going to fill those roles in terms of their expertise. The core

activities of project management lead to decisions and changes in both the work of the project and its management but cannot impose practises or plans to partners without their approval. Core activities are managed through **change management**, which feeds into **communications management** ensuring that information reaches all appropriate audiences. The **quality management** contributes in establishing the relevant to the project quality control and quality assurance activities for ensuring an efficient collaboration among the consortium partners and delivery of project results; whereas the **risk management** is necessary for providing the process and techniques for the evaluation and control of potential project risks, focusing on their precautionary diagnosis and handling.

In the frame of the ASSURED Project, Risk Management will be addressed in a separate deliverable D8.4 "Risk Assessment Plan" planned for M12 (August 2021).

3.2 PROJECT MANAGEMENT STRUCTURE AND APPROACH

Overall, project management encompasses operational, technical, financial and administrative co-ordination as well as the supervision of various activities within the project. To manage a project such as ASSURED, a professional and flexible management structure is vital. Transparent decision-making processes are required to both encourage project development and foster confidence amongst the project consortium. Conflict management should be focused on prevention and be apparent from project commencement and contingency plans have to be derived. Clear and pragmatic decision-making and communication pathways and prompt reporting mechanisms are necessary. For this reason, each consortium partner will nominate a **Management Representative** (often referred to as partner project manager or primary contact person). If necessary, one person can fulfil more than one role.

Furthermore, the **Project Coordinator (PC)** (DTU), the **Project Management Office (PMO)** and the **Project Manager** constitute the Project Management and Coordination Team.

To tackle its coordination and technical goals, ASSURED is organized in 8 Work Packages (WPs). WPs are further divided into WP Tasks. Therefore, a **Work Package Leader** per WP and a **Task Leader** per Task are nominated, according to the project plan. WP leaders and Task leaders are responsible for coordinating efforts in the WP and Task level accordingly.

The ASSURED project management takes into account all the partners' interests and expertise, in order to ensure an effective project's time-plan and execution. The main objectives of the project management that have been defined are to:

➲ Ensure the effective administrative, financial and technical management of the project.

➲ Identify quantifiable and targeted measurement criteria of project progress and clear milestones.

➲ Ensure that the project results are achieved within the proposed resources (time, cost, resources).

➲ Apply quality assurance measures to all project related procedures and products,

➲ Provide successful dissemination of project's results and apply efficient exploitation activities and finally.

➲ Strengthen the co-operation of all project partners and external participants.

The figure below illustrates the coherent and highly structured management scheme that has been designed for the effective management and co-ordination of the ASSURED project.
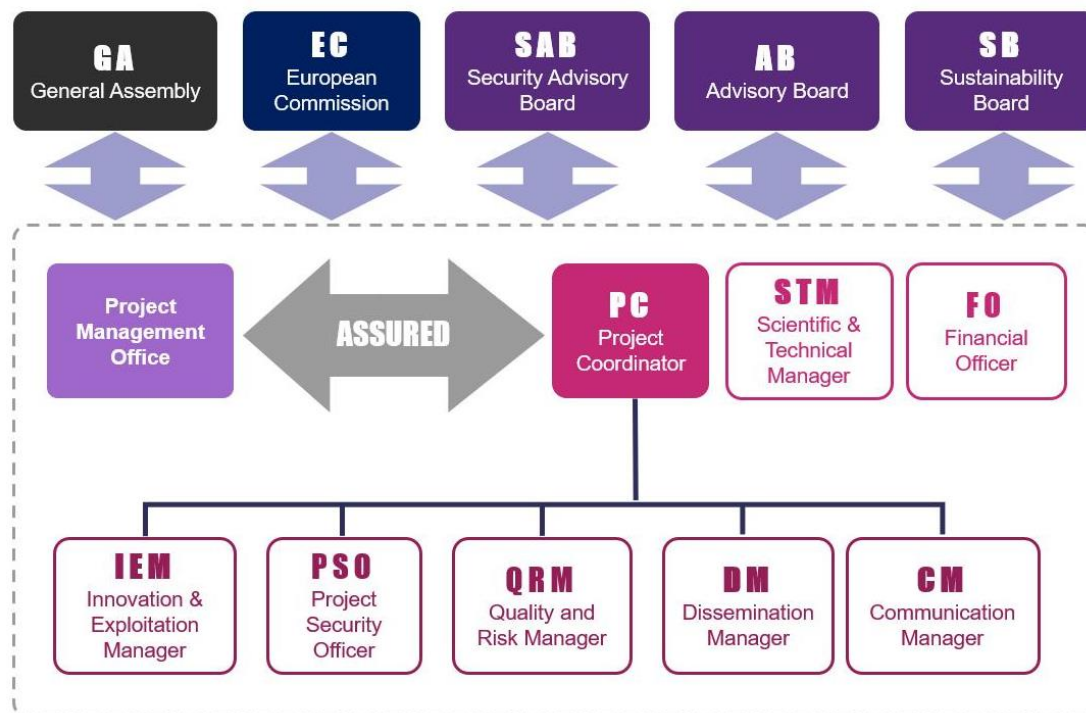
FIGURE 3: ASSURED GOVERNANCE STRUCTURE

The ASSURED hierarchical organization positioned above is comprised of the:

The Project Coordination Team (PCT) gathers the PC, the PMO, the work package leaders, the Scientific Manager (SM). It is chaired by the PC and is responsible for the day-to-day running of the project. This includes ensuring a clear and coherent technical view across the project, evaluating progress against the milestones according to the project plan, revising the project plan when necessary, taking final responsibility for approving deliverables and handling liaisons external to the project.

The General Assembly (GENA) that will comprise one representative of each partner in the ASSURED consortium will be chaired by the PC, with the goal to keep coordination (between partners and with the EC) as simple and as effective as possible.

The Project Management Office (PMO), led by DTU and Martel, ensures the day to day project management tasks; manages the delivery and the workflow and follow-up on daily administrative and financial duties, being responsible for project progress reporting and financial matters, collecting, checking and consolidating cost reports from partners, distributing payments and keeping financial records; is a permanent contact point for the PC and all the Partners regarding their participation in the project, responding to any relevant requests and maintaining a high level of communication within the Consortium.

In this structure, the key project management persons have specific functions:

➲ **Project Coordinator -** In the ASSURED Configuration two persons at DTU endorse respective Project Coordination roles:

- The **Project Legal Coordinator (PLC) - DTU** responsible for the overall management, communication, and coordination of the entire research and innovation project.

- The **Project Technical Coordinator (PTC) - DTU** responsible for the overall management, communication, and coordination of the entire research and innovation project.

➲ The **Project Manager (PM) - MARTEL** (as member of the Project Management Office) assists the PC in the day to day project management tasks; is a permanent contact point for the PC and all the Partners regarding their participation in the project, responding to any relevant requests and maintaining a high level of communication within the Consortium. The PM will be in constant communication with the PC on the status of the project (new results, new risks, modifications, doubts, etc.).

➲ The **Work Package Leaders (WPLs)** are in charge of co-ordinating work at work package level, making sure that technical objectives and deadlines of the work package are being met.

Each Work Package/Task is led by the partner most competent in the domain concerned as identified within the Annex 1 of the DoA. Work Package leaders and Task leaders are responsible for co-ordinating efforts in the Work-Package and Task level accordingly. Reporting on the successful completion of tasks, progress on deliverables, and on problems, delays and conflicts and proposals for decision making start from the partners involved at the Task level and escalate up to the final decision body that is the **Project Coordination Team**. Active support will be given and formal controls will be applied to ensure sufficient feedback loops and close, effective, and efficient inter-relation and co-operation of all parties involved, through the quality and risk management, the project management office and the PCT.

However, the PMO retains the responsibility to intervene at any point of the management structure if the cohesion of the project is threatened. More specifically, in case of:

➲ Decisions which have broader project implications and/or involve communication with the Project Officer and contradict the DoA,

➲ Delays, costs overruns or other lack of project progress against the objectives described in the DoA,

➲ Conflicts, which the Work Package leader is unable to resolve or whose resolution remains elusive for an extended period of time, threatening overall project progress.

Beyond these roles, also the **Deliverable Leader (DL)** is defined. DLs are listed in the table of Section WT2: 'List of Deliverables' in the Annex 1 of the DoA. They are the **ultimate responsible** partners to produce the deliverable for which they are listed as Lead Beneficiary. They **plan and coordinate** the deliverable production process **following the project guidelines** and they are not precluded from contributing to the deliverable. They are responsible for the content of the deliverable including its veracity, quality and technical integrity. DLs report progress of the work to WPL. Each deliverable is assigned **internal reviewers** agreed by the consortium members. The DL is responsible to incorporate the reviewers' comments in the deliverable. Given that the Consortium is composed of 14 partners, Reviewers can be chosen among project the partners that are not DLs for the specific deliverable.

Based on the aforementioned, the various project management bodies and roles are further described in the Annex I of DoA.

3.3 ETHICS

Within the course of the ASSURED project we foresee to especially cater for ethical issues that might arise, i.e. issues of data privacy, potential for infringement of human rights, personal

data collection and misuse of technologies developed. The PCT will ensure that each partner strictly adheres to the highest privacy and ethical standards regarding all activities that will be carried out within the design and functional implementation during the project, making sure that they conform to the legislation regulations in force in the countries where the research will be carried out, as well as to the EC Ethical Legislation.

Regarding data collection, storage, protection, retention and destruction, it is hereby confirmed that these activities will be rigorously implemented in compliance with the privacy and data collection rules and regulations as they are applied nationally and, in the EU, as well as with the H2020 rules. PCT will safeguard the Privacy and Data Protection, as well as Human Data Collection as follows. Data will be:

- ➲ Fairly and lawfully processed
- ➲ Processed for limited purposes
- ➲ Adequate, relevant and not excessive
- ➲ Accurate
- ➲ Not kept longer than necessary
- ➲ Processed in accordance with the data subject's rights
- ➲ Secure
- ➲ Not transferred to countries without adequate protection

About the GDPR: The EU General Data Protection Regulation (GDPR) is a regulation with the intent to strengthen and unify data protection for individuals within the European Union, which replaces the data protection directive (95/46/EC) from 1995[1]. The ASSURED project pays special attention to fulfil GDPR requirements:

- ➲ Making sure subscribers may easily change or delete their subscription;
- ➲ Making sure there is no pre-checked or automatically pre-filled forms on the websites;
- ➲ Simplifying the language of the forms on the website;
- ➲ Informing visitors on the website to use Cookies;
- ➲ Informing visitors clearly on the website who is the Data Controller of the personal data and what it means;
- ➲ Making sure Privacy Policy on the website is written in words understandable for everyone.

In case any personal data related to the ASSURED project is processed by a third party (a Data Processor) a written contract or other legal act will be prepared between a beneficiary (a Data Controller) of the ASSURED project and a third party. The contracts will contain: the subject matter and duration of the processing; the nature and purpose of the processing; the type of personal data and categories of data subject; and the obligations and rights of the controller.

3.3.1 Ethical, Privacy and Data Protection Requirements

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[1] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2016.119.01.0001.01.ENG&toc=OJ:L:2016:119:TOC

ASSURED will primarily focus on the design and development of an innovative, formally verified runtime assurance framework for securing CPS supply chains: by leveraging edge computing ecosystems, a universal distributed solution will be developed for the transformation of CPSoS into distributed safety-critical CPSoS solutions, hosting multiple mixed-criticality applications. As described in Section 1.3.3 "Positioning and Technology Readiness" (DoA-Part B), ASSURED targets a TRL level of 5 which reflects the experimentation and demonstration of the project outputs in "*industrially relevant environments in the case of key enabling technologies*". In all its use cases, demonstrators will be based on targeted (simulated-based) environments, provided by the (corresponding) leading industrial partners. Therefore, the already discussed plan is that experimentation will not entail the collection, storage and use of any user personal data (that would raise ethical issues) but will leverage simulated data towards evaluating the security guarantees provided by the incorporation of ASSURED technologies. As described in Section 2.2.4 "Research Data Management, Data and Information Governance, Data Privacy" (DoA-Part B), all simulated and technical research data, generated from the proof-of-concept system demonstrators, will be kept and managed securely by the project coordinator. A Data Management Plan will be created, maintained and updated throughout the duration of the project (deliverable D8.2a, b) specifying which data will be generated, collected and processed during the project.

The ASSURED consortium is aware of possible potential ethical and privacy issues that may arise from the incorporation of trusted computing technologies in application domains such as the ones envisioned in the use cases. However, as the focus of the project revolves around security-related (and not privacy) objectives, this will be made clear in deliverable D6.4 when presenting the adoption guidelines of how such secure-hardware solutions can benefit not only the industries of interest (Smart Manufacturing, Smart Aerospace, Smart Cities and Digital Security of Smart Satellite Communications) but also other domains such as Intelligent Transportation Systems, eHealth, Industry 4.0, Digital Media and Content protection, etc. Although not directly related to ASSURED, such a privacy analysis (on user personal data in these domains and services) will be included in D6.4 so as to highlight the steps that need to be taken into consideration when applying trusted computing technologies. The evaluation methodologies that will be followed for the evaluation of the components/mechanisms developed within ASSURED as well as the definition of suitable acceptance criteria per component/mechanism will be realized. This will be based on all existing ethical guidelines and regulations for which ASSURED consortium is well aware of.

3.4 MANAGEMENT PROCEDURES

Project and quality management activities will ensure the proper implementation of the project plan and the realisation of its objectives. Decisions will normally be taken by the responsible team members based on the work to be performed, as stated in the **Grant Agreement**, **the Description of the Action (DoA)** and the individual Work Package or Task plans.

During the project, the participating organisations will have to reach an agreement and resolve various technical issues. This agreement/resolution can be reached by informal contact as a first step, followed by official verification by means of e-mail, letter or minutes. Technical issues/conflicts within the given contractual commitments that do not involve alterations in the **Grant Agreement (DoA)**, in budget and in the overall focus will be initially handled on the Work Package basis.

In the event of a project conflict among partners, the participants, with the intervention of the Project Manager if necessary, settle conflicts at the daily management level. If no consensus is achieved the conflict will be resolved by the PCT. Any issues that cannot be set amicably will be set in accordance to the relevant provisions of the Consortium Agreement.

4   PROJECT BASELINES

INTRODUCTION

The project's baseline is used to measure how performance deviates from the plan and it is defined as the original scope, cost and schedule and must be completely documented before the project execution and control activities are initiated. Of course, the project performance measurement would only be meaningful if an accurate baseline is set. Once the project is initiated, the project's baseline is put under change control to enable the evaluation of any further change and/or impact on the project. In the event where there is a change to the project baseline, the new baseline is redefined as the original plan plus the approved changes. The project scope is defined in Section 2.1 of this document where a reference to the project original cost and schedule is made within this chapter.

In addition, a Section is dedicated to the quality baseline that records the minimum project indicators, which are an important performance management tool for the project to help measure progress in achieving the associated goals and meeting the basic requirements.

4.1   SCHEDULE BASELINE

The **Overall Gantt chart** in SECTION **3.1.2 'Gantt Chart'** within Part B of the Description of Action (DoA), presents the schedule baseline of the project.

4.2   RESOURCE CALENDAR

The **resource calendar** indicates the overall envisaged effort resource consumption spent by all Work packages in person-months per month for the whole project duration. This is derived by cumulating the individual planned effort resource spent by each partner at the beginning of the project according to the efforts declared within the .xlsx file used for project scheduling as explained in SECTION **10.2 "Schedule Management"**. Each WP leader is responsible for submitting to the PMO at the beginning of the project their planned efforts for the whole project duration in relation to the Tasks where assigned person months are allocated, and the PO is responsible for maintaining a consolidated version of it for the whole project.

4.3   COST BASELINE

The **cost baseline** concerns the amount of money that the project is predicted to cost and when that money will be used throughout the project lifespan. This is derived according to the:

➲ **Project Budget** (as declared in table of Annex 2 of the Grant Agreement: 'Estimated budget for the action')

➲ **Effort Allocation** (as declared in table of SECTION WT6: 'Summary of project effort in person-months' in Annex 1 of the Grant Agreement)

➲ **Resource Calendar** (described in previous SECTION WT3)

In essence, the cost baseline converts efforts to personnel cost per month, including indirect, other costs and subcontracting expenses. For the calculation of the project cost baseline the same policy as with the definition of the resource calendar described above is applied. In this instance, all consortium partners at the beginning of the project will need to provide the PMO

with their **planned expenses per reporting period**, and their average person rate in case this is different from what it is documented in the Annex 1 of the Grant Agreement (DoA). By the end of **each reporting period**, all partners will be requested to provide to the PCT with the actual costs consumed.

4.4 QUALITY BASELINE

Project indicators are an important performance management tool for projects to help measure progress in achieving their goals and meeting requirements, hence, it is important that the chosen success criteria are quantifiable and critical to the success of the project. These indicators are chosen to be direct (no complex calculations), objective, adequate, practical, and reliable. This section provides **performance indicators** for meeting the specific objectives of the project.

The project will be measured against its performance indicators at a number of stages:

➲ the two officially planned by the EC project reviews; and

➲ within additional **internal quality reviews, every four (4) months,** as intermediate checking point from the official reporting periods. This will be based on the establishment of Interim Management Reports which enabling each partner to provide information regarding their ongoing and planned work as well as information on the resources spent. The IMR will be planned as a short report every 4 months. It is an efficient tool to provide the project management team a good understanding of the status and progress of the work and to detect any possible delays or deviations well in advance. Furthermore, the cumulative report serves as a helpful basis for the creation of the periodic reports.

The results of performance measurement and evaluation (indicators and their values) will be part of the progress reporting to the European Commission.

The baseline **Key Performance Indicators (KPIs)** that have been identified for the purposes of the ASSURED project, are detailed in the following table, in agreement with the KPIs included in SECTIONs **1.1 and 2.2 of Part B of the DoA**. It is mentioned that for some KPIs the targeted values are set either at yearly or project basis (or both).

TABLE 3: ASSURED KPIS

Strategic Generic Impact #1: Improved market opportunities for the EU vendors of security components.		
KPIs	**Target Value**	**Means of verification**
Number of reusable SDKs per component	>3	D2.3; D2.5; D4.2; D4.3; D4.3; D5.4
Number of reusable lightweight crypto operations	>5	D3.4
Number of reusable control flow attestation methods	>5	D3.2, D3.3; D3.5

Grow revenues and market opportunities through easy cybersecurity services onboarding and plug-and-play capabilities	>15% per vertical	D6.2; D6.3

Strategic Generic Impact #2: Increased trust both by developers using/integrating the ICT components and by the end-users of IT systems and services.		
KPIs	**Target Value**	**Means of verification**
Lowering access barrier for developers and end-users to the integration and improvement of cybersecurity technologies through SDKs, APIs and reusable functions	20%	D2.3; D2.5; D4.2; D4.3; D4.3; D5.4
Contributions to open source repositories	2	D7.2
Easy and fast cybersecurity services deployment through SDKs	<1 min.	D5.4
Advancement of real-time risk assessment services for multi dependency cyberattacks management and reduction of detection time	>40% (attack vector identification) & > 25% (reduction of detection time)	D2.1; D2.2; D2.3; D2.4; D2.5
Edge trust assurance services and advanced real-time policy-driven attestation	>3	D3.4; D3.5

Strategic Generic Impact #3: Protect the privacy of citizens and trustworthiness of ICT.		
KPIs	**Target Value**	**Means of verification**
Forecasting efficiency of fraudulent abuse of citizens data and ICT SoS through the Blockchain-enabled Collective Threat Intelligence and Forecasts Engine	>60%	D2.5
Contributions in secure data sharing through the Blockchain-enabled Collective Threat Intelligence Engine of for collectively acquiring private and trustworthy evidence against breaches per Demonstrator; set of newly designed TC-based Operation and Verification services for the secure and efficient Blockchain management	>4	D6.2; D6.3
Successful attempts at breaching privacy to personal, societal and industrial data	0	D6.2; D6.3
Validation scenarios through real-life industrial and operational demonstrators	4	D6.2; D6.3

Strategic Generic Impact #4: Acceleration of the development and implementation of certification processes.		
KPIs	**Target Value**	**Means of verification**

Number of SDKs per component	>3	D2.3; D2.5; D4.2; D4.3; D4.3; D5.4
Universal Data Model for harmonisation and mutual recognition	1	D1.4
Number of reusable lightweight crypto **operations**	>5	D3.4
Number of control flow attestation methods	>5	D3.2, D3.3; D3.5
Number of certificates produced per component	>2	D2.3; D2.5; D4.2; D4.3; D4.3; D5.4

Strategic Generic Impact #5: Advanced cybersecurity products and services will be developed improving trust in the Digital Single Market.

KPIs	Target Value	Means of verification
Self-reported protection, security and legal compliance services for multi dependency cyberattacks management and reduction per day per entity	>10	D1.4; D2.2
Prediction efficiency of fraudulent abuse across multiple infrastructures, Systems of Systems and Platforms of Platforms	>15%	D2.5
Identification, reporting and decrease of cyber-threats per organisational entity	>3	D5.2
Collective and shared incidents among different systems, infrastructures and platforms	>10	D2.5
Contributions in data sharing through the Blockchain-enabled Collective Threat Intelligence Engine of collectively private and trustworthy evidence breaches per Demonstrator	>2	D6.2; D6.3

Strategic Generic Impact #6: The use of more harmonized certification schemes will increase the business cases for cybersecurity services as they will become more reliable.

KPIs	Target Value	Means of verification
Universal Data Model for harmonisation and mutual recognition	1	D1.4
Collective and shared incidents among different systems, infrastructures and platforms	>10	D2.5
Data and evidences exchange through the Blockchain-enabled Collective Threat Intelligence Engine of private and trustworthy evidence breaches per Demonstrator	>2	D6.2; D6.3

Number of certificates produced per component	>2	D2.5; D4.2; D4.3; D4.3; D5.4

Strategic Generic Impact #7: Validation platforms will provide assessments with less effort compared with nowadays and assure a better compliance with relevant regulations and standards.

KPIs	Target Value	Means of verification
Contributions to open source initiatives and standardization groups dealing with IoT/edge and cloud for cybersecurity paradigms	4	D7.2
Participation in cybersecurity working groups, organizations and EU projects	>10	D7.2
Validation platforms through diverse and real-life demonstrators	4	D6.2; D6.3

5   CHANGE MANAGEMENT PLAN

INTRODUCTION

The **Change Management Plan** sets expectations on how the approach to changes will be managed, what defines a change, the purpose and role of the **PCT**, and the overall change control process. All consortium members are expected to submit or request changes to the ASSURED project in accordance with this **Change Management Plan** and all requests and submissions will follow the process detailed herein.

5.1   CHANGE MANAGEMENT APPROACH

The **Change Management approach** is not to be confused with the **Change Control Process** which is detailed in Section 5.5. The approach provides the general principles to which the process must adhere. The Change Management approach introduces the following rules:

- ⮞   Ensure changes are within scope and beneficial to the project
- ⮞   Ensure that all proposed changes are described adequately, reviewed, and agreed upon, so they can be properly implemented and communicated to all consortium members
- ⮞   Determine adequately how the change will be implemented
- ⮞   Manage the change and its impacts as it is implemented

The **Change Control Process** has been designed to make sure this **approach** is followed for all changes. By using this approach methodology, the ASSURED project will prevent unnecessary changes from occurring and focus its resources only on beneficial changes within the project scope.

5.2   DEFINITION OF CHANGE

There are several types of change that may be requested and considered for the ASSURED project. Depending on the extent and type of proposed changes, changes to the project documentation (i.e. project contract, internal or external deliverables, reports and other documentation) may be required. Additionally, the communication of these changes may need to include any approved changes into projects plan and ensure all consortium partners are notified. Types of changes include:

Scheduling Changes: changes that will impact the approved project schedule, i.e. schedule baseline. These changes may require fast tracking or re-baselining the schedule depending on the significance of the impact.

Budget Changes: changes that will impact the approved project budget. These changes may require reallocation of budget or may require changes to the cost baseline and a contract amendment. Under any circumstances, no additional overall project funding will be approved.

Effort Changes: changes that will impact the effort allocated to specific tasks. Depending on the size of these changes, they may require a contract amendment. For minor changes to the planned effort allocation partners with the involvement of WP leaders can address these issues between them while keeping the PCT informed.

Scope Changes: changes that are necessary and impact the project scope which may be the result of unforeseen requirements. These changes will be reported and documented in project reports.

Quality Changes: changes that will impact the quality of project deliverables. Depending on the extent of the impact on quality, these changes may require the modification of impact indicators and the contract with the European Commission. These changes may be reported and documented in project deliverables and reports.

All changes must be communicated to the PCT and management team and examined for their impact to scope, budget/effort, schedule and quality.

The PC must ensure that any approved changes are communicated to the consortium partners. Additionally, as changes are approved, the PC must ensure that the changes are captured in the project documentation where necessary and is ultimately responsible for these changes. These document updates must then be communicated to the consortium partners as well.

5.3 CHANGE PROCESS

Project Coordination Team is the approval body for all change requests pertaining to ASSURED. For major changes affecting the contract and/or have overreaching impact to the project, the PCT will put the changes for approval to the European Commission -through the PC- and/or consortium. The PCT reviews all change requests, determines their impacts on the project risk, scope, cost, and schedule, and filters change requests.

As **Change Requests (CR)** are submitted to the TLs and WPLs by the project team members, they rate them and forward to the PCT. The PCT logs the requests in a change log. All change requests will be reviewed during the PCT meetings. For a change request to be approved, all PCT members must vote in favour. For changes impacting the contract, the PCT will consult the European Commission and initiate a contract amendment. In the event more information is needed for a particular change request, the request will be deferred and sent back to the requestor for more information or clarification. If a change is deemed critical, an ad hoc PCT meeting can be called in order to review the change prior to the next scheduled PCT meeting.

5.4 ROLES AND RESPONSIBILITIES

The following are the roles and responsibilities for all change management efforts related to the ASSURED project:

TABLE 4: TABLE OF CHANGE MANAGEMENT ROLES AND RESPONSIBILITIES

Entity	Actions	Responsibilities
Project Coordinator (PC)	• Logs received or generated change requests from consortium members • Conducts preliminary cost, schedule, scope analysis of change prior to PCT meetings • Seeks clarification from change requestors on any open issues or concerns • Makes documentation revisions/edits as necessary for all approved changes • Participates on PCT meeting	Authority

	• Maintains the Change Log • Plans, controls and monitors the implementation of approved change requests	
Project Management Office (PMO)	• Conducts preliminary risk and quality analysis if change prior to PCT meeting • Seeks clarification from change requestors on any open issues or concerns • Makes documentation revisions/edits as necessary for all approved changes • Participates on PCT meeting • Plans the implementation of approved change requests	
Work Package Leaders (WPL), Task Leaders (TL)	• Receives and/or generates, filter all change requests from consortium members and inform the PC • Conducts preliminary cost, schedule, scope analysis of change prior to PCT meeting • Seeks clarification from change requestors on any open issues or concerns • Makes documentation revisions/edits as necessary for all approved changes • Participates on PCT meeting • Plans the implementation of approved change requests	Assign priority (i.e. emergency or not) and level of impact (i.e. high, medium, low) on each change request
Partners	• Submit all change requests through the project hierarchy • Provide all applicable information and detail • Be prepared to address questions regarding any submitted change requests • Provide feedback as necessary on impact of proposed changes • Implements and tests approved Changes	
Project Coordination Team (PCT)	• Reviews and prioritises all the Change Requests • Accepts or Rejects Changes presented by the PCT	Approves/Rejects Changes provided the PC

5.5 CHANGE CONTROL PROCESS

The PCT has overall responsibility for executing the change management process for each change request. The Change Control Process for the ASSURED Project will follow the steps below.

TABLE 5: CHANGE CONTROL PROCESS

#	Steps	Who	To whom	When	Status
1	Identify the need for a change – Change requester will submit a	Consortium partner	WPL, TL, PMO	Immediately	Initiated

	change request via e-mail up the project hierarchy. The e-mail should contain at minimum the following information: ● Description of the cause of the request ● Description of the change requested ● Description of the suggested solution ● Impacts to schedule, budget, effort, scope, risk and quality					
2	Conducts a preliminary analysis on the impact of the change to risk, cost, schedule, quality, risk and scope and seek clarification from team members and the change requestor. The assigned team members (PMO, WPL, TL) will determine its priority (i.e. Emergency or Standard) and impact (i.e. Critical, Significant, Standard) and forward to the PC along with a decision to continue to discuss the request or not.	PMO, WPL, TL	PCT	Immediately	Initiated	
3	Logs the change request and decides to forward to the PCT immediately or wait until next PCT meeting.	PCT	PCT	Immediately	Logged	
4	The PCT members will conduct a full analysis on the impact of the change to risk, cost, schedule, quality, risk and scope and seek clarification from project partners and the change requestor.	PCT	PCT	As needed	Evaluation	
5	The PCT will discuss the proposed change at the next PCT meeting. It will decide whether or not to approve each change request based on the available information or put the issue for discussion with the Consortium. For changes, which require modification of the Technical Annex I DoA, the Consortium agreement will be required.	PCT	-	During PCT Meeting	Approved/ Rejected	
6	If a change is approved by the EC, the PC will update and re-baseline project documentation as necessary. S/he will inform all involved parties and monitor the implementation of the change.	PC	PCT, Consortium	As needed	Implementation	

5.6 CHANGE REQUEST EVALUATION CRITERIA

Change requests are evaluated using the following **priority** and **impact** criteria:

TABLE 6: CHANGE REQUEST PRIORITY CRITERIA

Priority	Description
Emergency	The change request is time critical and an accelerated authorization and planning is required.
Standard/Low	The change request can wait until the next scheduled project management meeting.

TABLE 7: CHANGE REQUEST IMPACT CRITERIA

Impact	Description
Critical	Presents an extraordinarily high risk which will impact the delivery of the project and/or may require a contract amendment.
Significant	It requires management decision at the level of the PCT and may have broader impact for the project.
Standard / Low	It is presented to the management for informational reasons only. The matter is routine and can be resolved at the WP level.

6   COMMUNICATION MANAGEMENT PLAN

INTRODUCTION

The **Communication Management Plan** sets the communication framework for ASSURED project among the Partners and among the Consortium and the EC. It will serve as a guide for communication throughout the life of the project and will be updated as communication requirements change. This plan identifies and defines the roles of ASSURED project partners as they pertain to communications. It also includes a communications matrix, which maps the communication requirements of this project, and communication conduct for meetings and other forms of communication. A project team directory is also included to provide contact information for all partners directly involved in the project.

6.1   COMMUNICATION MANAGEMENT APPROACH

The **project management and coordination team** will take a central and proactive role in ensuring effective communication on this project. The communication requirements are documented in the **Communication Matrices** that are presented in Section 6.4. The **Communication Matrices** will be used as the guide for what information to communicate, who is to do the communicating, when to communicate it and to whom to communicate.

Overall information flow within the project will be ensured by the following means / guidelines:

⮞   Activities like exchange of information, internal technical and business documents (i.e. meeting minutes), technical documentation generated by the project, notifications of relevant new publications, reports from external / bilateral meetings (if any), notifications of the consortium of any updates from the relevant standardisation bodies, are foreseen to occur in electronic format via the project's web based repository as well as by e-mail. For each document upload the consortium will be notified by email.

⮞   Urgent correspondence over e-mail will be sent with a request for explicit acknowledgement and indicated in the title with "URGENT".

⮞   Ordinary mail will be used for strictly formal correspondence, i.e. when executive signatures are required.

⮞   A defined calendar of Telco meetings will be set, in order to ensure the communication among members.

6.2   PROJECT TEAM DIRECTORY

ASSURED maintains a listing with **communication information** for all people identified in this communications management plan, available at the **cloud document repository** (Section 6.4). Based on this directory, a mailing list has been created including representatives from all partners: all@project-assured.eu.

6.3   COMMUNICATION CHANNELS

This section presents several communication matrices with all the types of communication needs, which have been identified in the context of the project such as meetings, reports, reviews etc. In addition, the attributes of each identified type are specified.

The communication requirements from the project stakeholders in terms of the type, level of detail, and format of the information that they need will be analysed and documented. The documents from the Commission or other projects will be circulated as appropriate. For all matters within the scope of the project, there will be no limitations on access to information from the Partners and this is also foreseen in the project Consortium Agreement.

External communication: For external communications, the consortium will establish its own website and also communicate with external stakeholders by e-mail, social media accounts and social platforms. For relevant aspects of the work, the partners shall produce high quality presentations and digital material / news items, announcements for publication in the online presence means. These efforts will be pursued throughout the project to raise awareness, ensure high visibility of the project results and objectives, and establish the grounds for knowledge transfer and proper support of the project activities.

Internal communication: The project will use advanced ICT means, like audio and video conferencing (**Skype**, **GoToMeeting**), instant messaging, electronic mail, e-mailing lists (all@project-assured.eu), along with thematic ones where necessary, online Docs (**GoogleDocs, Online MS soluctions**) and Document Management System (DMS) within **cloud infrastructure offered by DTU**. Moreover, the project will hold various physical meetings hosted in turn by Partners. At least two to four plenary (meetings are planned yearly to guarantee consistency and integrity of the project. PCT meetings will be held in this context. Additional workshops or meetings will be held as required by the work plan and the needs identified by the project. In case of special conditions that do now allow the organisation of physical meetings, online meetings will be planned instead properly.

The **Sharepoint** tool set up and maintained by DTU, will be utilised for the exchange of working documents and ideas for brainstorming, as well as keeping an action plan of activities. This platform will provide a digital workspace to support the electronic communication and cooperation between project team members. Through this platform, users will have access to a wide range of tools and features necessary for the successful coordination of the team, such as e-mail, on-line forums, dynamic news board, document management etc. The platform will support the team to share project files, exchange and co-edit files, share information and organize discussions across members of the consortium.
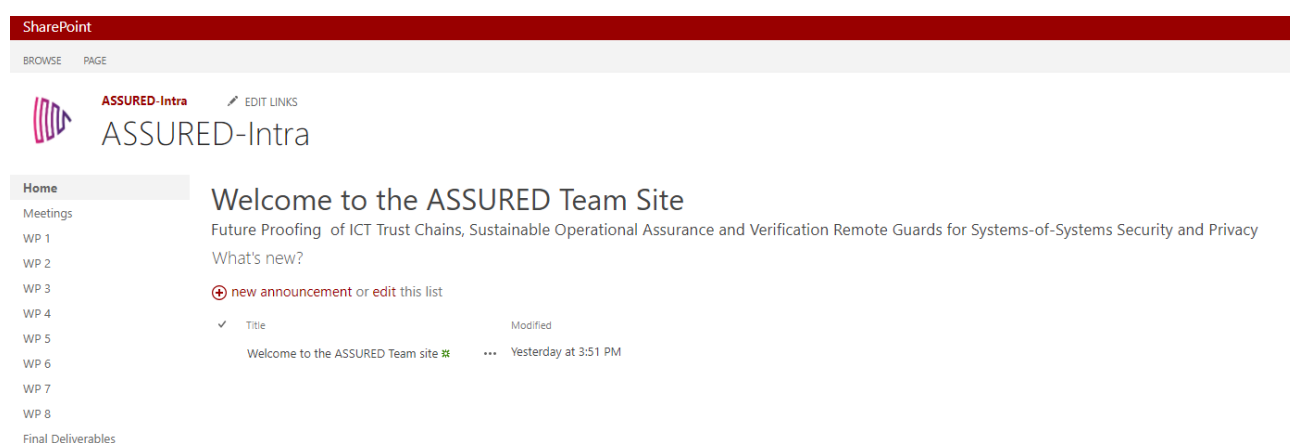

FIGURE 4: PHYSICAL STRUCTURE OF DOCUMENT REPOSITORIES

6.3.1 Project Meeting Matrix

Due to the 2020 outbreak of Coronavirus and the various preventive measures enforced by EU and national governments, all project meetings will be held online including plenary

meetings until all travel restrictions are lifted by competent authorities allowing all partners to physically attend the foreseen project meetings.

The following table identifies the communication requirements for project coordination.

TABLE 8: PROJECT MEETING MATRIX

Meeting	Objectives	Audience	Freq. / Time	Prior Notice	Chair	Medium / Location	Output
Kick-Off Meeting	Introduce the team, roles and members. Review project history, scope, objectives, planning and management approach.	All project partners	Once M1	1 month	PMO	Online	Agenda Meeting presentations Minutes - Action Plan
Interim Project Review	Evaluation of project results by European Commission.	All project partners, EC	Within 60 days after M18	Upon communication with the EC	EC, PCT	Face-to-Face or online	All deliverables to be submitted by M18
Physical Plenary Meetings	To direct the project, ensure correct implementation of activities at all project levels, monitor the project's progress, and examine future plans	All project partners	To be held every 4-6 months	2 months	PCT	Face-to-Face or online	Agenda Meeting presentations Minutes Action Plan
Online plenary meetings	To direct the project, ensure correct implementation of activities at all project levels, monitor the project's progress, and examine future plans	PCT	To be held monthly	Set once for the project lifetime	PCT	Online	Agenda, minutes, action plan
WP meetings	Each WP leader will define the meeting schedule according to the needs and the coordinating	WP related partners	To be held every month	15 days to 1 month	WP participating partners	online	WP related issues

	actions among the involved parties for the implementation of WP activities.						
Ad hoc meetings	Organised in case of an emergency or a conflict resolution as specified in the escalation procedure.	PMO + relevant partners	Ad hoc		PMO	TBD per case	Agenda Decisions taken Action Plan
Final Project Review	Evaluation of project results by European Commission.	All project partners, EC	Within 60 days after project completion	Upon communication with the EC	EC, PCT	Face to Face or online	All deliverables to be submitted by M36

6.3.2 Project Report Matrix

The following table identifies the Project Reporting Matrix.

TABLE 9: PROJECT REPORTING MATRIX

Meeting	Objectives	Freq / Time	Leader	Contribu-tors	Output
Interim Progress Reports	18-month reporting progress of project achievements and effort consumption for evaluation by the European Commission.	18 months	PC	All Partners	Delivery of interim project progress report following the structure of the European Commission H2020 Guidance Notes on Project Reporting .doc template and the format of the ASSURED Deliverable .doc template Upload of Form C (and Certificate of Financial Statement; where needed) to the European Commission Participant Portal (ECAS system).
Deliverables	Concise document reporting the outcomes of the work for the deliverable. For deliverables which are not	According to 'List of Deliverables' at section WT2: 'List of Deliverables' in the	DL	Contributing Partners	Utilising the ASSURED Deliverable .docx template.

	reports, an executive summary providing information about the deliverable should be provided.	Annex 1 of the DoA			

6.4 COMMUNICATION GUIDELINES

6.4.1 Meeting Guidelines

6.4.1.1 Meeting Requests

Meetings will be organized using the **Doodle online service** (http://www.doodle.com) for determining the dates most partners are available. The meeting chair is responsible for initiating the meeting organization. Meetings will be collocated with other events that the partners participate when possible to minimize expenses and travel time of partners. The strategy is to hold fewer but larger meetings in order to reduce costs.

6.4.1.2 Participants to Meetings

All partners are required to be present at meetings either themselves or through substitute or proxy. Additionally, they must participate in a cooperative manner. During the management meetings the representatives should be in the position to take decisions.

6.4.1.3 Meeting Agenda

For face-to-face meetings, a draft meeting Agenda will be prepared by the meeting chair and distributed 15 business days in advance of the meeting following the template that is available; the meeting agenda is also maintained within the **Sharepoint**. Any partner can add an item to the original agenda by written notification to all the other partners no later than 10 calendar days preceding the meeting (7 calendar days for an extraordinary meeting). During the meeting the consortium can add new items on the agenda following a unanimous decision. Any agenda item requiring a decision from the Consortium body must be identified as such on the agenda. For Telco meetings, the same policy applies with the only exception on the meeting announcement date that may be less than a week.

6.4.1.4 Meeting Minutes

Meeting minutes will be distributed within 10 calendar days following the meeting by the chair; the meeting minutes template is maintained within the documents repository and **all meeting minutes of all nature will be uploaded at the document repository** too. The minutes (or a corrected version of them) shall be considered as accepted if, within 15 calendar days from distributing them, no partner has sent an objection in writing to the chairperson. All decisions become binding after they have been recorded in the meeting minutes and the meeting minutes are accepted.

6.4.1.5 Meeting Chair Person

The Chairperson is responsible for distributing the meeting agenda, facilitating the meeting and distributing the meeting minutes. The Chairperson will ensure that the meeting starts and ends on time and that all presenters adhere to their allocated time frames.

6.4.1.6 Resources for Meetings

Budget for meetings has been allocated and can be found under SECTION 3.4.1 of Part B of the DoA.

6.4.2 Document Formats

The following software formats and version of production tools shall be used in the project:

TABLE 10: ELECTRONIC FILE FORMATS

Data type	File format	Tool
Word processing	.docx	Microsoft Word, google docs
Tabular spread sheet information and graphs	.xlsx	Microsoft Excel, google sheets
Presentations	.pptx	Microsoft PowerPoint
Project Planning	.xlsx	Microsoft Microsoft Excel, google docs
Images	.jpeg	Any software tools that can produce .jpeg files
Portable Document Format	.pdf	Any software that can produce .pdf files
Compressed files	.zip, .rar	Any software that can produce .zip and .rar files

It is recommended that changes to draft Word documents are made with track changes on, unless the document author requests otherwise.

The partner shall ensure that the images are suitable for printing and, especially for those images to be used for dissemination purposes, that they can be embedded in larger printing.

The use of the PDF format is limited to its capability of obtaining files that are printable with the same layout regardless of the printer. This explicitly excludes the use of any modification capability that can be offered by a PDF capable tool.

6.4.3 Filename Conventions

The partners are expected to exchange several documents between them during the project's lifetime. In order to facilitate document identification and differentiation between multiple versions of the same document, the following file naming convection should be used for the final version of the documents uploaded in Redmine:

ASSURED _<document name>_<version>_<date>_<company/person>.extension

<date> : dd.mm.yyyy, e.g. 22.10.2020

<document name> short (3-4 words) document name, e.g. D1.1 Project Handbook

<version>: increasing number with decimals between public releases

<company/person>: consortium partner short name e.g. Martel or sender initials e.g. LK for Lamprini Kolovou

e.g. "ASSURED_D1.1_PM Handbook_V03_20.02.2020.docx"

When a partner makes comments or changes to a file, he/she should append his/her "_<company/person>" field just before the .extension.

These filename conventions apply to other electronic objects, besides documents, that are used to exchange project information, e.g. prototype code. If such an object is composed of multiple files organized within a directory structure (e.g. source code that has not been zipped into one file), the filename convention requirement applies only to the top directory name.

6.4.4 Deliverable Preparation Guidelines

A total of 49 deliverables will need to be submitted to the European Commission in the course of the ASSURED project. To ensure smooth and timely delivery of deliverable as well as homogeneous presentation, a set of guidelines for the preparation of deliverables is presented here.

6.4.4.1 Deliverable Types and Confidentiality Levels

The deliverables are classified according to the following types:

P: Prototype

R: Report

D: Demonstrator

O: Other

Insofar the confidentiality of deliverables and other documents, including presentations, is concerned, the following four (4) levels of security are considered:

PU: Public Usage. No restrictions on access (in secured PDF format).

PP: Restricted to other programme participants (including the Commission Services).

RE: Restricted to a group specified by the consortium (including the Commission Services).

CO: Confidential, only for members of the consortium (including the Commission Services).

6.4.4.2   Deliverable Preparation and Peer Review Process

All deliverables should be formed according to the Deliverable template maintained within the documents repositories. The template provides a deliverable identity sheet and specifies formatting for the most used elements of deliverable report. The partners responsible for the deliverable are required to ensure that before releasing the first deliverable draft to partners, it is in the correct template, specified format and the identity sheet is complete. The table below shows the process to be observed for preparing deliverables.

TABLE 11: DELIVERABLE PREPARATION PROCESS

Who	Action	To whom	Deadline
DL	- Prepares Table of Content (ToC) and Circulates for agreement by partnership - Proposes Assignments on the ToC and agrees with the contributors - Presents timetable for intermediate versions	Contributing Partners, Review Team	> 6-7 weeks BTD
DL	Updates ToC according to gathered comments	Contributing Partners	> 1 month BTD
Contributing Partners	- Work on the document - Issue intermediate releases	Contributing Partners	Ad Hoc
DL	- Consolidates all input - Issues initial complete draft - Circulates for comments	Contributing Partners and WPL	2-3 weeks BTD
Contributing Partners and WPL	- Review the document - Provide comments	DL	2 weeks BTD
DL	- Document update addressing comments received - Consolidates all input - Issue updated complete draft - Returns document for internal Peer Review	Consortium Review	1 week BTD
Review Team	- Review the document - Provide comments	DL	1 week BTD
DL	Final editing: Update document addressing comments received	WPL, PM, SM	5 days BTD

	● Final approval (if not approved it returns immediately back to the DL for revision)			2 days BTD
PM	● Submits Deliverable to the European Commission ● Places the submitted PDF version on the DMS under the respective WP folder	European Commission		1 day BTD

6.4.4.3 Deliverable Reviewers

Due to the composition and size of the Consortium all the Partners except the DL are responsible to participate in the Review process.

Furthermore, the ASSURED consortium will take all the necessary measures (as detailed in Section 6 of the DoA-Part B) to make sure that only internal members will have access to the following deliverables that are subject to limited dissemination and also security scrutiny from the project's Security Advisory Board.

TABLE 12: DELIVERABLE REVIEWERS

Del. no.	Deliverable name	WP no.	Lead Participant	Type	Diss. level	Delivery date
D1.1	ASSURED Use Cases and System Requirements	1	UTRCI	R	CO	6
D2.1	Risk Assessment Methodology and Threat Modelling	2	DTU	R	CO	15
D2.7	ASSURED Collective Threat Intelligence Analysis & Forecasting Framework - version 1	2	UTRCI	OTHER	CO	18
D2.8	ASSURED Collective Threat Intelligence Analysis & Forecasting Framework - version 2	2	UTRCI	OTHER	CO	30
D6.2	First Demonstrators Implementation Report	6	BIBA	R	CO	24
D6.3	Final Demonstrators Implementation Report	6	UTRCI	R	CO	33
D6.4	Performance Evaluation and Adoption Guidelines	6	Suite5	R	CO	36

Requests to extend the dissemination to recipients outside the consortium must be made in writing (a request by e-mail will suffice) and should be accompanied by supporting documentation to help the PO make a decision, such as the opinion of the Security Advisory Board. The SAB consists of four well-known, internal to the consortium, experts (*Dr. Stylianos Basagiannis (UTRCI), Mr. Entso Veliou (UBI), Dr. Thanassis Giannetsos (DTU), and Prof. Liqun Chen (SURREY)*) with rich security management experience as pertains to the handling of sensitive information/outputs from research and industrial projects and will be led by Dr. Panagiotis Gouvas (UBI) that will be acting as the Project Security Officer.

The main goal of the formulated SAB is to assess the sensitivity of deliverables prior to their publication and especially those (as aforementioned) that are related to the envisioned Smart Aerospace and Smart Satellite use cases. The Security Advisory Board, besides undertaking regular meetings - to be hosted together with the project's technical plenary meetings – for discussing and overseeing the integration of the ASSURED framework, in the context of the aforementioned use cases, so as to make sure that no sensitive information will be published, will also actively participate in the revision of the "sensitive" declared deliverables based on the process depicted in Section 6.3 of the DoA-Part B.

6.4.5 Quality Control

The focus of quality control is on feedback and deviation management in the project. Quality control ensures that feedback, from internal as well as from external advisors, is taken into account and therefore positively influences the work towards project objectives. Risk Management is an integral element of quality control as the proactive notice of deviations from the DoA allows the consortium to control the consequences or even transform those consequences to opportunities.

6.4.5.1 Quality Control and Security Management

The focus of quality control and security management is on feedback and deviation management in the project and to assess the sensitivity of deliverables prior to their publication and especially those (D1.1, D2.1, D2.7, D2.8, D6.2, D6.3 and D6.4) that are related to the envisioned Smart Aerospace and Smart Satellite use cases. Quality control ensures that feedback, from internal advisors, is taken into account and therefore positively influences the work towards project objectives. Security management is an integral element of quality control as proactive assessment of the sensitive information (possibly) related to the project research outputs will allow the consortium to control the content to be published as part of the deliverables. The review process is shown and explained below:
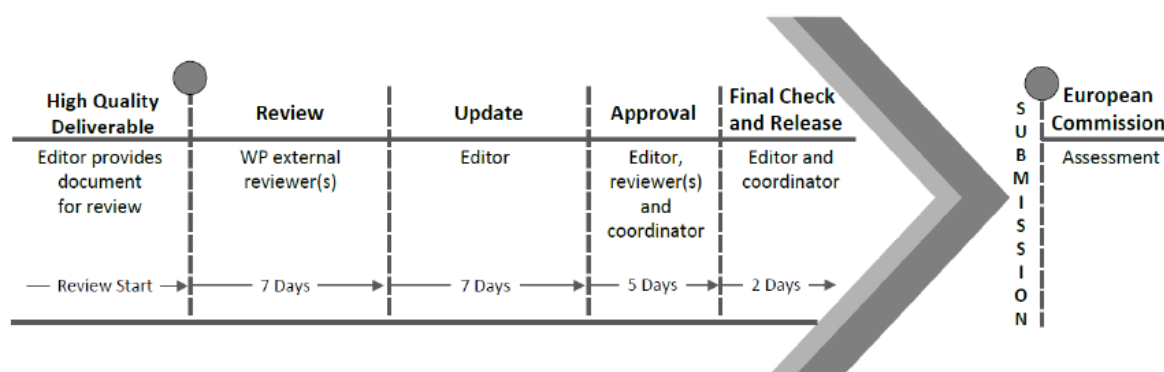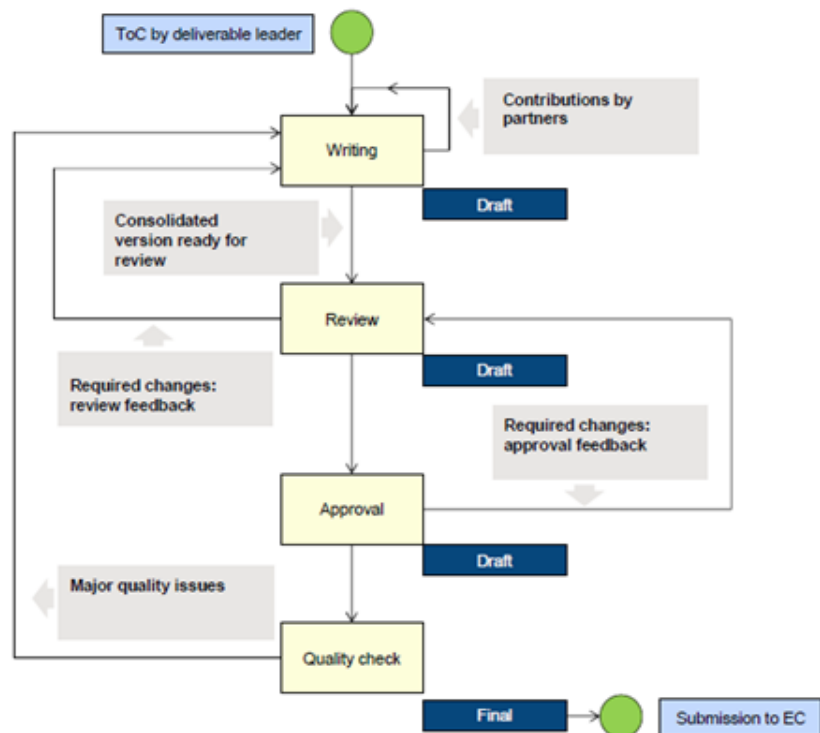

FIGURE 5: REVIEW AND QUALITY ASSURANCE PROCESS FOR DELIVERABLES

Step1 "Review": Partners send the draft to the Project Management Team and to an internal reviewer (appointed WP external, but project internal), who was not directly involved in the deliverable work. The reviewer(s) read(s) the draft, put(s) comments into the document and compare(s) the content against its objective as defined in the work plan.

Step2 "Update": After the review, the editor has to make the necessary changes and updates. For the update it is important that in general, comments are not removed. Instead there must be first a discussion between the involved authors to update the Deliverable according to the received comments. Secondly, the author either adds text to comments how they were addressed or adds additional comments on its own.

"Approval" / Security Advisory Board Review: During the **second review (Approval)** the editor contacts again the reviewer(s) and the Security Advisory Board to check if the initial comments have been addressed and whether any sensitive information has been included that needs to be removed; if required, update review form and state if the deliverable is ready for submission.

Step4 "Final Check and Release": The editor performs the final check and informs the Coordinator that the deliverable is final. Then the Coordinator performs a final check (formatting updates and creates the final pdf. All deliverables will explicitly declare that they have received approval from the SAB. DTU will then submit the final document to the EC.

6.4.5.2 Advisory Board

The consortium will be supported and advised by an external Advisory Board (AB), consisting of selected organisations not directly involved in the project as partners. Their valuable feedback to the technical process of the project brings many benefits for the ASSURED project. The AB members will provide an external unprejudiced view advising on strategic directions of the project in terms of detailed technical goals and impact, comment on economical feasibility and achieved or missed targets. To achieve high quality results within the ASSURED project, a strong cooperation with the AB members will actively be pursued and facilitated by frequent interaction in the form of face-to-face meetings, conference calls and feedback rounds.

Through the integration of an Advisory Board, interim feedback of enormous importance regarding the overall orientation of the project outcome is expected. This supports the path towards objectives and controls the quality of the project work as well as the quality of expected outcomes. The technical lead is the chair of the AB and is in charge of preparing the implementation of the AB's suggestions.

If confidential information will be provided to the AB members, the Coordinator will ensure that a Non-Disclosure Agreement (NDA) is executed between the consortium and each AB member.

6.4.6 Communication Tools Guidelines

To support the project management of the project and facilitate the collaboration of the partners a number of tools have been provided. This section provides guidelines for the use of these tools:

- ⮕ **Virtual or Face-to-face meeting**: Guidelines for meetings can be found in Section 6.5.1, where a list of the main consortium contacts may be found.

- ⮕ **E-mail**: To facilitate e-mail mass communication for the project a mailing list (all@project-assured.eu) including all consortium members active to the project is compiled. Every email relevant to ASSURED, either sent to an ASSURED mailing list or to a number of members, should have a **subject starting with "[ASSURED]"**, to easily distinguish ASSURED emails from others.

- ⮕ **Document Management System (DMS)**: Due to the need for frequent exchange of documents which often exceed the file size limit of e-mail systems and the structuring of project information, a secure document management system to store and facilitate the exchange of documents is available at **Sharepoint: share.dtu.dk/sites/ASSURED-Intra_465550**.

- ⮕ **Online collaboration tools:** Partners are encouraged to utilize online collaboration tools (such as **Skype, GoToMeeting (CITRIX)**, **Cloud, Google Docs, Online MS Solutions** etc.) to facilitate their day to day work. ASSURED project management places no restriction on the use of tools, however, strongly advices the partners to examine the terms and conditions of these tools in relation to licenses, copyright restrictions and confidentiality as inadvertently may be disseminating confidential information to the public.

- ⮕ **ASSURED public website** (https://www.project-assured.eu/) is the public website of the project.

7 EFFORT AND COST MANAGEMENT PLAN

INTRODUCTION

The **PC** with the support of the **PMO** is responsible for managing and reporting on the project's budget and effort consumption at the project level to the European Commission throughout the duration of the project. During the internal semi-annual, interim and annual progress reports, the PC collects, presents and reviews the project's effort and cost performance for the preceding period. Performance is measured comparing actual consumption against planned. The PC is responsible for accounting for cost and effort deviations and presenting the consortium with options for getting the project back on budget.

7.1 EFFORT AND COST MANAGEMENT APPROACH

Effort and costs for this project will be managed at the Task level of the Work Package Structure (WPS). The financial performance of the project will be measured and managed through comparisons between the actual comparison and the effort calendar and cost baselines. Activity effort is detailed at the task level and costs at the WP level. To avoid confusion and complications due to conflicts between National and European Union reporting rules, all efforts are to be reported in Person Months. Euro amounts are to be reported in two decimals.

Effort and cost variances of **+/- 10% in the cost and effort performance** indexes will change the status of the cost to cautionary. Cost variances of **+/- 20% in the cost and effort performance** indexes will change the status of the cost to an alert stage. These will serve as input to Risk Assessment and may require corrective action by the PC in order to bring the cost and/or effort performance variations below the alert level. Corrective actions will require a project change request and must be approved by the PCT before it can become within the scope of the project.

7.2 PLANNING AND REPORTING EFFORT AND COSTS CONSUMPTION

7.2.1 Planning Effort and Costs Consumption

Planning effort and cost consumption occurs through the completion of the project schedule MS-Excel file referenced in Section 8 for the entire project at the beginning of the project. Additionally, apart from the personnel costs that are reported as envisaged costs that may be consumed under each Task in person hours, all partners should provide a list of planned other direct costs (i.e. travel and other specific costs) for the whole project duration per reporting period. Finally, all partners should report on their average personnel rate, if the one used in the Annex 1 of the DoA is no longer valid. This information is consumed by the PCT to produce the Cost Baseline and Effort Schedule.

7.2.2 Reporting Effort and Budget Consumption

The following reports are established:

➲   Periodic Progress Reports (for external reporting to EC)

⮕ Semi-annual Progress Reports (internal reporting to PC)

⮕ Short progress reports (internal reporting before each GENA meeting)

The PCT on a quarterly basis updates internally the project progress status via the interim management progress reports, i.e. effort / resource consumption xlsx files received by all partners, and the activity bulleted reports provided by the WPLs. More specifically the overall reporting per project period is as follows:

TABLE 13: EFFORT AND BUDGET CONSUMPTION REPORTING PROCEDURE

#	Steps per period	Who	To Whom	When	Tools
1	Each partner provides period effort & cost consumptions, with the effort consumptions, accompanied by work progress description, at Task level.	Partner	PCT	20 days after the end of each year's half	resource consumption xlsx file, work description, word file, email
2	WPLs will perform a consistency check between effort and activities taken place by partners in each task and if needed adaptation/rationalization of effort/activities reported may take place; otherwise this information is transferred to the PCT.	WPL	PMO, PC or PCT	4 days after receipt of reports	e-mail
3	For every reporting period, WPLs should manage the collection of task reports from Task leaders. TLs (also in collaboration with the partners involved in each task) should provide a consolidated report and send this to the respective WPL. The reporting should follow the guidelines set by the European Commission for H2020 Programme[2] and the format of the ASSURED Deliverable .docx template. These reports should also reference any deviations occurred to the project time plan at Task level along with their contingency planning.	Partner TL	TL WPL	TC by each WPL and not later than the end of each reporting period	
4	PCT consolidates all information received and delivers a complete report to European Commission following the guidelines set by the European Commission within H2020 Programme[3] and the format of the ASSURED Deliverable .docx template	PCT	European Commission	60 days after the end of the reporting period (M18 and M36)	Interim/annual deliverable, email

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[2] http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

[3] http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

5	Upload of Form C (and Certificate of Financial Statement; where needed) to the European Commission Participant Portal (ECAS system)	Partners	European Commission	20 days after the end of the reporting period (M18 and M36)	European Commission Participant Portal
6	WPL provides a short WP progress report before each GA physical or teleconference meeting	WPL	PMO	2 calendar days before the meeting	Word template, email

NOTES:

* Project quarters end on M4, M8, M12, M16, M20, M24, M28, M32, M36.
* The preparation of each internal Periodic Progress Report requires steps 1 - 3
* The preparation of each Interim Progress Report requires steps 1 (for 6-month duration) and 4 - 6.
* The preparation of each Periodic Progress requires steps 1 (for 18-month duration) and 4 - 6.

7.2.3 Guidelines for Unplanned Expenses

The Annex 1 to the Grant Agreement details a **budget** for each partner and for each task or activity in ASSURED. Any effort or cost allocation which deviates from this plan presents an unplanned expense. In general terms, unplanned expenses are not allowed. However, due to the realities of implementing a project, there is the possibility that reasonable and justifiable expenses contributing to the project and not contradicting the rules of the project may be eligible.

If a partner has a cost which they believe falls under this category, they must obtain permission from the Project Officer before incurring the cost. To do so, they need to discuss the issue with their WPL as a first step. If they concur, they should e-mail the PCT with a justification to the cost requesting from the PCT to obtain approval from the Project Officer. Follow due diligence, the PCT may reject the justification and inform the partner or accept it and forward the justification to the Project Officer. Once the PCT receives a response from the Project Officer they inform the partner.

For **travel outside the European Union** for dissemination the procedure is particularized as follows: Partners must send a request via e-mail to the dissemination leader well in advance of the trip. The e-mail must contain the following information:

- ⮕ Who is travelling
- ⮕ Destination of the trip
- ⮕ Date of the trip
- ⮕ The trip's relevance to the ASSURED project.

The dissemination leader will examine the request and upon approval will forward it, with the recommended action, to the PCT. In the event the request is accepted the PCT will forward the request to the Project Officer who has the final say on the matter. The partner will be informed of the decision.

7.3 MEASURING PROJECT EFFORT AND COSTS

Following each internal tri-annual management report, the PCT will use a comparison between actual against planned to measure variance.

If the effort and cost have a variance of between 10% and 20% of planned, the reporting Partner must report the reason for the exception. If the variance is greater than 20% the reporting Partner must report the reason for the exception and provide the PCT with a detailed corrective plan to bring the project's performance back to acceptable levels.

7.4 EFFORT AND COST VARIANCE RESPONSE PROCESS

Once the variation exceeds the 20% threshold the reporting PM must present the PCT with options for corrective actions. The PCT will meet to select the best option. The PCT will together with the partner develop a corrective action plan to bring the project back on track. Once the PCT approves the plan, the change control procedure will be activated and the action plan will become part of the project plan.

7.5 COST CHANGE CONTROL PROCESS

The cost change control process will follow the established project change request process. Approvals for extreme project effort/cost changes may require a contract amendment.

8 PROCUREMENT

During the project, partners may be required to acquire from third parties the following services:

➲ Auditing Services for partners exceeding the threshold funding value

➲ Software or hardware equipment (e.g. laptops, license software for additional services etc.). From the original proposal and ASSURED DoA, we do not foresee such costs. However, the consortium should investigate this possibility, in case hosting services will be necessary.

➲ Organization for online or offline meetings for training, dissemination and project meetings.

➲ Production of dissemination material.

➲ Transportation and accommodation for travel.

The number of each item and budget allocation for each category is detailed in the **Annex 1 of the DoA.**

The PC and PMO have oversight of the procurement for the project through the Financial Reports. The actual management for procurement activities falls with the budget holding partner and as these activities are described analytically in the DoA (experts' procurement procedure, reputation management subcontractor). The partner assigned with a subcontracting budget is responsible for following the procedure agreed in the DoA and /or mentioned in the EC guidelines. The partners are required to strictly adhere to the Annex 1 of the DoA and Grant Agreement guidelines for purchases. For deviations in purchases, partners must obtain approval before proceeding with procurement according to Section 6.3.3.

9   PROJECT SCOPE MANAGEMENT PLAN

INTRODUCTION

The **Scope Management Plan** provides the scope framework for this project. This section documents the scope management approach, verification and control measures. Roles and responsibilities as they pertain to project scope, scope definition, scope change control, and the project's work breakdown structure have been discussed in earlier chapters. Any project communication which pertains to the project's scope should adhere to the **Communication Management Plan** (Section 6).

9.1 SCOPE VERIFICATION

The project deliverables will need to be verified against the original scope as defined in the **Annex 1 of the Grant Agreement (DoA)** in the **WT3:'Work package description'**. The verification against the scope occurs through the peer review and approval process described in SECTION 6.5.4 of this document. The European Commission review of the deliverables during the period review meeting is the final check point of the acceptance of the deliverables.

9.2 SCOPE CONTROL

The Partners will work together to control the scope of the project. The project team will leverage the Annex 1 of the DoA using it as a statement of work for each deliverable. The project team will ensure that they perform the work described in the Technical Annex of the DoA and generate the defined deliverables keeping as ultimate guide the project vision. When the WPS does not seem to serve the project vision, partners will introduce change requests through the project structure. The PC along with the Management Team and the PCT will oversee the project team and the progression of the project to ensure that this scope control process if followed.

If a change to the project scope is needed the change control process for recommending changes to the project must be carried out. Any partner can request changes to the project scope. All change requests must be submitted to the PC, WPL, or TL in the form of a change request e-mail and the process in Section 5.6 will be followed.

10 SCHEDULE MANAGEMENT PLAN

INTRODUCTION

The **project schedule** is the roadmap for how the project will be executed. Schedules are an important part of any project as they provide the consortium with a clear picture of the project's status at any given time. The purpose of the **schedule management plan** is to define the approach to project schedule management including monitoring and controlling changes to the baseline. This includes identifying, analysing, documenting, prioritizing, approving or rejecting, and publishing all schedule-related changes.

10.1 SCHEDULE MANAGEMENT APPROACH

Project schedules will be in the form of **Gantt Charts**. Schedule planning occurred during proposal stage of the project and can be found in the DoA.

A working version of the current schedule may be found in the following figure. The first column presents the work package and task structure of the project. In the first and second row the calendar year and the calendar months of the projects are shown respectively. Within the area of the three-year duration, the coloured cells indicate the months where each task is active and the Deliverables that are planned for each Task and project month.

	Lead	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
WP1	DTU												
T1.1	UTRCI		D1.1										
T1.2	SPH		D1.1										
T1.3	DTU			D1.2									
T1.4	TUD				D1.3								
T1.5	TUE				D1.4								
WP2	UBI												
T2.1	DTU					D2.1							
T2.2	MLNX					D2.2							
T2.3	UBI						D2.3				D2.4		
T2.4	TUE						D2.5				D2.6		
T2.5	UNIS						D2.7				D2.8		
WP3	TUD												
T3.1	UBI					D3.1							
T3.2	TUD					D3.2					D3.3		
T3.3	DTU												
T3.4	MLNX						D3.4				D3.5		
T3.5	TUD						D3.6				D3.7		
WP4	TUE												
T4.1	S5					D4.1							
T4.2	SURR						D4.2						
T4.3	TUE						D4.3				D4.4		
T4.4	SURR						D4.5				D4.6		
T4.5	TUE						D4.3				D4.4		
WP5	INTRA												
T5.1	INTRA					D5.1							
T5.2	UNIS						D5.2						
T5.3	S5							D5.3			D5.4		
T5.4	INTRA							D5.5					
T5.5	UNIS										D5.6		
WP6	SPH												
T6.1	SPH						D6.1						
T6.2	BIBA												
T6.3	DAEM												
T6.4	UTRCI								D6.2			D6.3	
T6.6	SPH												
T6.6	S5												D6.4
WP7	MARTEL												
T7.1	MARTEL	D7.1											
T7.2	TUE						D7.2						D7.3b
T7.3	SPH							D7.4					D7.5
T7.4	SURR												
T7.5	DAEM							D7.6					D7.7
WP8	DTU												
T8.1	DTU	D8.1											D8.1
T8.2	MARTEL				D8.4								
T8.3	MARTEL		D8.2						D8.3				
T8.4	MARTEL												
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12

FIGURE 6: ASSURED GANTT CHART – PROJECT SCHEDULE

This table will be enhanced with extra columns and rows to depict the estimated effort allocation for each partner at task level. The sums of efforts for each WP, per month and as a WP total, will be automatically calculated and displayed in the table. In the event of delays or rescheduling the white cells also will contain effort allocations i.e. to indicate task extensions. When, the project is on schedule only coloured cells will contain effort allocations. A total row will be added, automatically calculating the effort for each month at the project level as well. In addition, it is important to mention that every project schedule should be accompanied by an action items list indicating the main activities conducted at WP level. This action items list should be composed by the WPLs in collaboration with the TLs and provided to the PC and PMO for review.

In the Annex 1 of the DoA, the project activities were identified organized in work packages which were broken into tasks. The outcomes of one or more tasks are reported in one deliverable. Task sequencing was used to determine the order of tasks. Task duration estimates were performed to months required to complete tasks within the constraints of the program. Duration and resource estimates are used to assign resources to tasks in order to complete schedule development.

The project schedule will be reviewed by the PMO, PC and WPLs on a continuous six-month basis until the project ends. In case of deviations, project partners must agree to the proposed resources, effort assignments, durations, schedule, and once this is achieved the PCT will review and approve the schedule which will become the new baseline.

The PC with the support of the PMO and PCT will be responsible for facilitating the schedule development and adjustments. The PMO will also create the project schedule using MS-Excel and validate the schedule with the partners. The PC may obtain schedule approval by the Project Officer before re-baselining the schedule especially when that entails major calibrations of the agreed schedule.

The partners are responsible for participating in activity definition, sequencing, and duration and resource estimating. Partners will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.

The European Commission will participate in reviews of the proposed schedule through the annual project review and contract amendments as necessary.

10.2 SCHEDULE CONTROL

The **project schedule** will be reviewed as necessary on a **monthly basis** by the respective WPLs following recommendations and input received by the PC and TLs. Better control of the project schedule would be anyway performed during the bi-weekly WP and/or plenary online calls, as they are foreseen to take place during the project course. If a variance of **1 month or more** is observed against the Schedule baseline at WP level, the respective WPL will inform the PCT and PMO who in turn will review the project schedule. Otherwise, project schedule reviews will be held regularly by the PCT and partners **on a tri-annual basis** through the preparation of the internal tri-annual work package progress status report.

The **PCT members** are responsible for discussing schedule variances during the **PCT meetings**, determining impacts; submitting schedule change requests; and reporting schedule status in accordance with the project's communications plan.

The partners are responsible for participating in schedule variance resolution activities as needed.

The PC will communicate to the European Commission of the project schedule status and review/approve any schedule change requests as necessary.

10.3 SCHEDULE CHANGES AND THRESHOLDS

If any partner determines that a change to the schedule is necessary, the **change control procedure** will be initiated. The PC, PCT, WPL, and PMO must analyse the request and determine:

- ⮕ Which tasks will be impacted and in what way,
- ⮕ Variance as a result of the potential change,
- ⮕ Alternatives or variance resolution activities they may employ to see how they would affect the scope, schedule, risks, quality and resources.

If analysis shows that the proposed change may affect the duration of any individual task or the overall project by 2 months, a change request is required. Any other change requests that do not meet this threshold may be submitted for consideration.

Once the change request has been reviewed and approved, the PC and PMO are responsible for adjusting the schedule and communicating all changes and impacts to the consortium and the European Commission. The PMO must also ensure that all change requests are documented in a change log.

11 CONCLUSIONS

This report consists of the ASSURED "Project Quality Plan" and is the single point of reference on the quality that will be governed during the course of the project. It covers all aspects related to: the project concepts and main objectives; the project workplan structure; the overall project management strategy and approach; the change management plan; the reporting plan; procurement; the scope management; the schedule management plan; the risks management plan.

This report is a live document that will be updated as necessary during the lifetime of the project.

APPENDIX A – PROJECT DOCUMENTS TEMPLATES

DELIVERABLES TEMPLATE

Template page 1 (cover):

Grant Agreement No.: 952697
Call: H2020-SU-ICT-2018-2020
Topic: SU-ICT-02-2020
Type of action: RIA

ASSURE

DX.X DELIVERABLE TITLE

SUB-TITLE HERE
IF NEEDED/APPROPRIATE

Revision: v. 1.0

Work package	WP Number
Task	Task Number
Due date	dd/mm/yyyy
Submission date	dd/mm/yyyy
Deliverable lead	Name partner
Version	0.X
Authors	Name Surname (Partner Y)
Reviewers	Name Surname (Partner Y)
Abstract	One paragraph
Keywords	

WWW.PROJECT-ASSURED.EU

Template page 2 (Table of Contents):

Dx.x: Deliverable Title (V x.x)   ASSURE

TABLE OF CONTENTS

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Template page 3:

Dx.x: Deliverable Title (V x.x)   ASSURE

1   SECTION: ABOUT TEXT AND TITLES

GUIDANCE:

Deliverables should not refer to project-internal matters such as WPs.

1.1   FIRST SUBSECTION

Body text
- First level bullet list
  - Second level bullet list
    - Third level bullet list...

1. First level numbered list
   a. Second level numbered list
      i. Third level numbered list...

1.1.1.1   Second subsection

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec a diam lectus. Sed sit amet ipsum mauris. .

1.1.2   Sub-subsection

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec a diam lectus. Sed sit amet ipsum mauris. Maecenas congue ligula ac quam viverra nec consectetur ante hendrerit. Donec et mollis dolor. Praesent et diam eget libero egestas mattis sit amet vitae augue. Nam tincidunt congue enim, ut porta lorem lacinia consectetur.

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1.1.2.1   Sub-sub-subsection

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Template page 4:

Dx.x: Deliverable Title (V x.x)   ASSURE

2   SECTION: ABOUT FIGURES, TABLES AND REFERENCES

Bbb....

2.1   ABOUT FIGURES

About figures please remember to:
- Center them
- Put Figure caption (easier to then cross-reference to them):
- Caption font size should be 8 pt italic and UPPERCASE
- Caption should be centered as well

If the picture is taken from some other sources this should be stated

▲ Illustration of Home Networking with HPNA 3.0 Coax
FIGURE 1: THIS FIGURE IS TAKEN FROM XXX

2.2   ABOUT TABLES

About tables remember to:
- Center them
- Put a Table caption (easier to then cross-reference to them):
- Caption font size should be 8 pt italic and uppercase
- Caption should be centered as well

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PRESENTATIONS TEMPLATE

ONLINE AGENDAS AND MINUTES

ASSURED Project | Future Proofing of ICT Trust Chains:
Sustainable Operational Assurance and Verification Remote
Guards for Systems-of-Systems Security and Privacy
Grant Agreement no 952697

ASSURED online meeting

Template structure

xx.xx.2020 11.00 CEST, Telco

Connecting with GotoMeeting

Access Code: XXXXXXXXX	You can also dial in using your phone.	
to edit (LINK)	Belgium: +32 28 93 7002	Netherlands: +31 207 941 375
	Denmark: +45 32 72 03 69	Norway: +47 2193 37 37
	Finland: +358 942 72 0972	Spain: +34 932 75 1230
	France: +33 170 950 590	Sweden: +46 853 527 818
	Germany: +49 692 5736 7300	Switzerland: +41 225 4599 60
	Ireland: +353 15 360 756	United Kingdom: +44 330 221 0097
	Italy: +39 0 230 57 8180	

At the meeting:

PARTNER	PARTICIPANT(S)	PARTNER	PARTICIPANT(S)
DTU		Martel	
TUe		TUDA	
SURREY		MLNX	
INTRA		UNIS	
UBITECH		SUITES	
UTRC		SPH	
BIBA	• Zied Ghrairi • Karthik Shenoy • Shantanoo Desai	DAEM	

- 1 -

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Grant Agreement no 952697

Useful links:
- Draft agenda for kick-off meeting:
  to edit (LINK)
- **Graphic materials** (brand guidelines, logo, fonts):
  https://drive.google.com/drive/folders/1QI5DuvZ0RKKtqyKBkiQJmQgX4VVlPq5w?usp=sharing
- **Templates** (presentations, deliverables):
  https://drive.google.com/drive/folders/1RpuXQshrLYmDW.gI-5l7oFagW.gfKS9A5?usp=sharing
- Important deadlines and milestones:
  to edit (LINK)
- Telcos minutes:
  to edit (LINK)

Topics & discussion

1. Review preparation steps
   -
   -

2. Review of the agenda
   -
   -

START	END	SESSION	LEAD
9:30	9:40		
9:40	9:55		
9:55	10:20		
10:20	10:45		
10:45	10:55	COFFEE BREAK	
10:55	11:20		
11:20	11:45		
11:45	12:00		

- 2 -

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12:00	12:20	
12:20	12:30	
	END OF REVIEW MEETING	

3. Presentations structure
   -
   -

Milestones status (M1-M36):

#	Milestone name	WPs	Beneficiary / Due	Means of verification	Status & explanation for the SYGMA portal

Deliverables status (M1-M36):

Del. No.	Deliverable name	WP	Leader	Type	Diss. level	Del.	Status

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Topics & discussion

1. **WP1 - Requirements and Characterization of ASSURED Framework** (*DTU*)

Actions from the last meeting

ACTION	OWNER	DEADLINE	STATUS / COMMENTS
•			
•			

2. **WP2 - Multi-dependency Cyber-Physical Risk Assessment, Forecasting and Compliance** (*UBI*)

ACTION	OWNER	DEADLINE	STATUS / COMMENTS
•			
•			

3. **WP3 - Distributed Attestation-enabled CPS Orchestration and Execution** (*DUT*)

ACTION	OWNER	DEADLINE	STATUS / COMMENTS
•			
•			

4. **WP4 - Blockchain-based ASSURED Supply Chain Control Services and Trust Evidence Collection** (*TUE*)

ACTION	OWNER	DEADLINE	STATUS / COMMENTS
•			
•			

Discussion:
-

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