FCT-9-2015: Law Enforcement Capabilities topic 5: Identity Management

ARIES
"reliAble euRopean Identity EcoSystem"

D7.1 – ARIES Workplan

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CI = Classified, information as referred to in Commission Decision 2001/844/EC.	
Int = Internal Working Document	

D7.1 – ARIES Work Plan

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0.02	2016-09-16	N. Notario (Atos)	Introduction Project Strategy Project roadmap, Resources
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1.00	2016-10-21	N. Notario (Atos)	Final version for submission to the EC

Executive Summary

The present deliverable provides an overview of the initial work plan of the project ARIES. It describes the project concept and objectives, the strategy to accomplish such objectives, as well as the resources to that aim. The work plan addresses the entire project lifetime (30 months), and it is intended to be a living document to be updated and refined according to the project's evolution (even after the delivery to the initial version to the EC).

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1 Introduction

1.1 *Purpose of the document*

The focus of this document is to describe the approaches being taken in the project to manage the various work packages. Figures and other aids are included to assist the reader in better understanding the approaches being used by the project team to ensure that it complies with the work documented in its Grant Agreement (GA) [1] and that it delivers the project outcomes described in that document.

This document does not cover aspects such as document sharing, management and storage, the communication infrastructure, and the quality assurance of project work and risks mitigation procedures associated. These aspects are addressed in the following deliverables and milestones, as specified in the GA:

- MS1 – Project's public website
- MS2 – Collaborative platform setup
- D7.3 - Quality Plan
- D7.4 - ARIES Social Knowledge Management System (SKMS)

Security procedures, initially planned to be delivered in this document, will be finally delivered in D7.3 Quality Plan for convenience. D7.3 deliverable will contain all the procedures that have to be followed by all participants in the project and will include a special chapter focused on the security requirements and procedures to be followed by the people contributing and accessing classified deliverables.

1.2 *Relation to other project work*

This deliverable aims at orchestrating the work under the rest of the work packages. Even when the document initially covers the entire project lifetime, the work plan is intended to be updated according to the project's evolution.

1.3 *Structure of the document*

The document is structured as follows:

- **Chapter 2** provides an overview of the project concept and objectives, which represents the consortium interpretation of the GA.
- **Chapter 3** describes the project strategy in terms of work structure and execution.
- **Chapter 4** considers the temporal aspect of the project.
- **Chapter 5** provides a summary of resources allocated to the different project structures and phases.

1.4 *Glossary adopted in this document*

- **Goal:** A goal indicates the desired ultimate outcome of the project or a work package.
- **Outputs:** An output can be defined as a direct, tangible, and measurable product of an activity towards the achievement of a goal. For example, a deliverable can be considered an output.
- **Tasks or activities:** the major steps that must be taken to achieve the stated goal.
- **Date:** this is the deadline by when the action step will be completed.
- **Milestone:** A milestone is a specific point along a project timeline that signal anchors focusing on major progress points that must be reached to achieve success.
- **Task leader:** the partner most closely responsible and accountable for a given action step.
- **Team members:** the partners that contribute to the task.
- **Resources:** the means (human, financial or material) needed to implement one or more action steps.

1.5   *Acronyms used in this document*

ATOS	Atos Spain sae
BFP	Service Public Federal Interieur
CA	Consortium Agreement
DP	Data protection
Dx.y	Deliverable number y corresponding to WP x
EB	Executive Board
EIM	Exploitation & Innovation Manager
EM	Ethical manager
ERTZ	Gobierno Vasco - Departamento Seguridad
EUCI	European Union classified information
FCT	Fight against Crime and Terrorism
GA	Grant Agreement
GDPR	General Data Protection Regulation
GTO	Gemalto SRO
IPR	Intellectual Property Right
MB	Management Board
MPH	Morpho
MSx	Milestone number x
Mx	Month number x
PC	Project Coordinator
POCC	Police and Crime Commissioner for West Yorkshire
Px	Period number x
QM	Quality Manager
SAHER	Saher UK LTD
SC	Scientific Coordinator
SONAE	Sonae Center Servicos II S.A.
SoTA	State of the art
SPbD	Security-and-privacy-by-design
TRL	Technology Readiness Level
Tx.y	Task number y related to WP x
UMU	Universidad de Murcia
WBS	Work Breakdown Structure
WPL	WP leader

2 Project Concept

2.1 *Project Objectives*

The ARIES project will enable secure, reliable and privacy preserving identity management and derivation techniques to allow a secure user interaction with services and to prevent and reduce the risk of identity theft and fraud crimes. ARIES will provide means for stronger and more trusted authentication, in a user-friendly and efficient manner and with full respect to data subject's rights for personal data protection. It will also provide means to present a proof of identity without need to disclose more personal data than actually needed in a given interaction (data minimization and proportionality).

In order to achieve this main objective, ARIES has four main goals:

1. Set up a reliable **identity ecosystem comprising new technologies, processes and security features that ensure highest levels of quality in secure credentials** for **highly secure and privacy-respecting physical and virtual identity management processes** with the specific aim to **tangibly achieve a reduction in levels of identity fraud, theft, wrong identity and associated crimes** and to create a **decisive competitive advantage for Europe at a global level**. The set of solutions will be designed to achieve required levels of **multi-party trust with efficiency, ease of adoption and convenience** for all end-users (citizens, law enforcement, businesses), consolidating Europe as world leader in enhanced identity-based services as a basis to boost the competitiveness of its economy.

2. Improve ID ecosystem by **strengthening the link between physical documents linked to the biometric identity and the digital (online and also mobile) identity** that can be derived from it, with the direct involvement of key security stakeholders throughout Europe (including public law enforcement agencies, European security industry leaders and end-users). The objective is the widespread and user-friendly **use and adoption of high assurance elements, including biometric verification and non-tamper certified checks with breeder document sources, and mechanisms to map physical identity to virtual identity** that can be derived from such elements in order to foster better user privacy support while at the same time **complying with law enforcement highest standards levels**. This includes securing the link between physical and virtual identities for both individuals and legal entities

3. Validate ARIES' results in terms of applicability of the resulting ecosystem and enabling tools and technologies and effectively demonstrate the progress beyond the state of the art of ARIES achievements in **two high societal and economic impact and realistic scenarios**. While focusing in different aspects of identity and access management, both scenarios are needed to exemplify how ARIES will minimize the opportunities for committing identity fraud and related crimes:

   a. The secure eCommerce scenario will be more focused on demonstrating how virtual identities with different levels of assurance can be used to access different online services and how this level of assurance may determine the operations that peoples are allowed to perform. This scenario will also demonstrate the effective control of citizens over their virtual identities, allowing them to enrol with the ARIES ecosystem and build separate identities, for different purposes, effectively minimizing the disclosure of data and maximizing their privacy.

   b. The identity virtualization scenario will focus on the process of issuing and linking virtual identities with their physical counterparts, clearly establishing their level of assurance and how they can be further derived into convenient and privacy-preserving "pseudo-identities".

4. **Address key legal, ethical, socio-economic, technological and organisational aspects of identity-related crimes** in both virtual (i.e. misuse of information, cyber-mobbing) and physical places (i.e. people trafficking, organized crime), collecting all stakeholder perspectives on them, leading to a **comprehensive picture of the emerging patterns throughout Europe in identity fraud** while highlighting associated social networks. Additionally achieving tangible societal impact and benefits with effective **awareness creation on ID-related crimes** and how they can be prevented by citizens & businesses for enhanced public security, the safeguard of trust and better digital privacy protection.

ARIES will propose an **harmonized identity lifecycle processes** to **allow the linkage of physical identities with new virtual identities** that can be **cryptographically derived from the physical ones** in order to cope with **the need of end users to be able to maintain high levels of privacy preservation** and at the same time based on **quality control and checking technologies and mechanisms** to allow **better law enforcement on identity management, efficient control and threats detection**.

2.2 *Project Outcomes*

In the end, ARIES will deliver the following products according to two different levels, as shown in Figure 1:

- **General Level:** ARIES general contributions aligned with the specific challenges the project targets.
- **Practical Level:** this refers to tangible results that instantiate the general outcomes. Here we mention the ARIES ecosystem, its individual components and its advancing the SoTA in the prevention of identity fraud.

General Level

- **Promote the use of national and trusted identities** like eID and ePassport as a baseline for citizen digital life credentials that can demonstrably offer high level of security against identity-related crimes;
- **Develop a secure infrastructure able to derive virtual identities considering different levels of assurance** for different purposes and supporting privacy-preserving and anonymization capabilities,
- **Enable and promote the usage of mobile and smart devices for trustworthy online authentication**

Practical Level

- **Derived credentials**: enabling users to create "companion" credentials cryptographically and biometrically linked to their source trusted documents, such as eID or ePassport
- **Regulated virtual identities**: Typically, these are referenced by pseudonyms that cannot normally be linked together (except when required by law enforcement)
- **Identity ecosystem**: A framework that enables the setting up of a reliable electronic identity ecosystem for Europe which combines digital and traditional approaches in novel ways
- **Secure and privacy preserving biometric verification from mobile**
- **Secure Digital Vault:** secure space storing confidential and sensitive information, allowing to rigorously control their access
- **Usage of ID Security Features**: verification of ID documents from mobile devices combining visible end electronic domain security features
- **Secure Mobile Wallet**: A secure element in the mobile storing virtual identity, allowing to rigorously control its access

Figure 1: ARIES outcomes

3   Project strategy

3.1   *Project workflow*

The workflow envisaged in ARIES is a process of two main incremental iterations of a six stages process (see Figure 2) that comprises the full development chain, from requirements towards the release and testing of the final prototypes and platform. The first stage is related to the gathering of requirements. WP2 is responsible for eliciting the requirements, from a multi-stakeholder perspective, that will drive the next stages of the project. WP3 will then take over identified requirements and will design and developed identity management ecosystem including software components and identity management processes that will satisfy the previously identified requirements. Finally and in close collaboration with WP3, WP4 will instantiate, and demonstrate two pilots validating its results in accordance to the requirements laid down in WP2. While the process seems to follow a waterfall approach, the fact that ARIES consortium is considerably short and the close communication and interaction among all partners, this will be a continuous process, avoiding unnecessary delays. However, there are two points that will mark a milestone in the project's execution and which match the official end of the two iterations of the pilot demonstrators (M16 and M28).
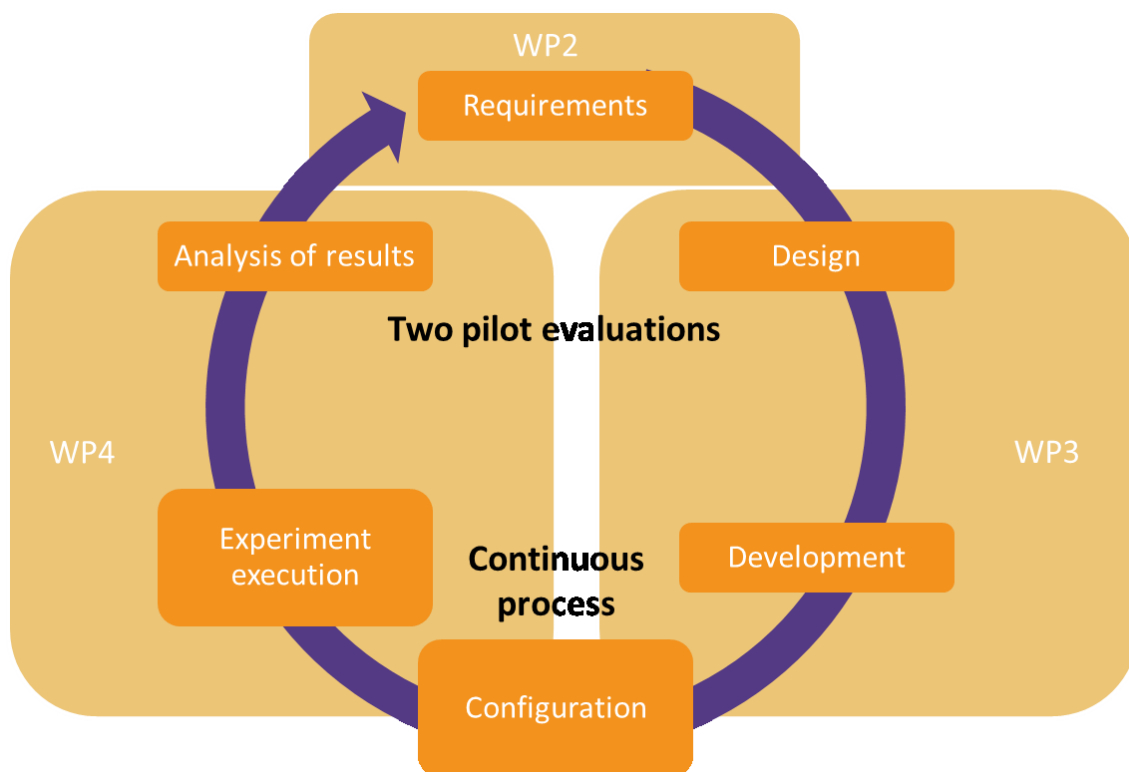
Figure 2: ARIES workflow

By having two main incremental iterations tied to a continuous integration process, ARIES ensures the continuous delivery of a functional platform and to have early feedback from end users, which may lead to the identification or highlighting aspects of the ecosystem where to focus the design and implementation effort.

3.2   *Project breakdown structure*

The project workflow is orchestrated around three technical work packages (WP2-WP4) and four supporting packages (WP1, WP5, WP6 & WP7). Each technical work package clusters together a number of research and technological innovation activities expressed as Tasks that will each focus on achieving a specific part of ARIES results. The figure below (Figure 3) shows the work breakdown structure (WBS) in terms of work packages, and the dependencies between them.
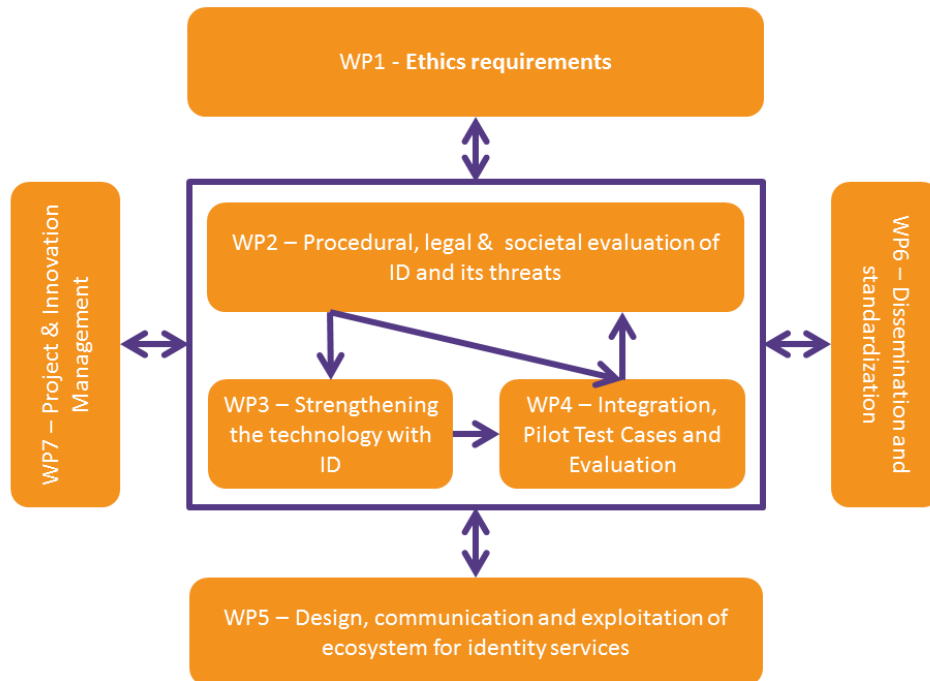
Figure 3: ARIES Work breakdown Structure and dependencies

As previously mentioned there are four work packages that provide support for the execution of the horizontal activities that are part of the project:

- WP1: Support to the completion of the Ethics requirements established by the EC, it receives information regarding the project and its ethics report may also influence the development of the project;
- WP5: Support to all public communication activities of the project and the business development of the results. There is a strong dependency between the business development of the project and the actual advances of the state of the art and the software results and will be strongly on the IPR of these components and even how they are packaged. Some influence from WP5 may also be pushed back to the technical WPs in terms of ways to package the individual components or ways to building a more sustainable ecosystem.
- WP6: Support to the dissemination of the developments of the project, not only from a technical perspective but also from the socio-ethical perspective which is key for the adoption of Identity Management technologies. This WP is basically an output WP, where outputs from the project are transferred to standardization organisms and to the scientific community. Some feedback is also expected in terms of standards that should be supported by the ecosystem.
- WP7: Supports the day-to-day operations of the project, establishing and monitoring the quality procedures that will ensure the success (technical, financial and impact-wise) of the project , It also builds and ensures the adequate communications among the partners but also with the EC interface.

From a technical perspective, there are three work packages to be considered.

- WP2: Being responsible for the elicitation of the requirements by studying existing National Identity Management procedures and typical identity fraud scenarios. It also takes care of ensuring the

adequate alignment of these requirements with the National and European legal frameworks and provides guidance for the privacy and ethical aspects of the project.

- WP3: Develops and integrates the individual technologies that will comprise the ecosystem
- WP4: Builds two pilots demonstrators that will ensure that the resulting ecosystem is fully aligned with the requirements, with legal and ethical principles and that it effectively reduces identity theft, which is the final objective of the project

While WP2 is responsible for providing the requirements for the other technical work packages (WP3 & WP4) the iterative structure identified in subsection 3.1 is easily identifiable (WP2->WP3->WP4->WP2).

Following, a more detailed description of the WPs and their objectives appears afterwards.

3.2.1 WP1 - Ethics requirements

WP1 sets out the 'ethics requirements' that the project must comply with. Specific objectives of this WP are:

- Appoint an independent Ethics Advisor (with expertise in data protection and human rights) to oversee the implementation of the ethical concerns involved in this research;
- Provide an ARIES Ethics Report to the EU regarding the potential impact of ARIES technology at an ethical level and the project's means and measures to minimize potential ethical issues.

3.2.2 WP2 - Procedural, ethical, legal & societal requirements for ID ecosystem

This WP deals with the elicitation of the ecosystem's requirements to overcome socio-economic, legal and societal challenges of identity management. This WP will also provide guidance to the project in terms of legal, ethical and privacy aspects. Specific objectives are:

- Evaluate existing process of identity management in the physical and digital world and analyse potential weaknesses and improvements;
- Assess the societal constraints related to usage of eID and how they relate to ID theft aspects;
- Align the project's outcomes and process with the EU fundamental rights and legal frameworks;
- To provide continuous assistance upholding ethical and privacy-by-design paradigm.

3.2.3 WP3 - Strengthening the technology for ID

WP3 will carry out the research and implementation of the different ecosystem's individual components along with its packaging and integration as a platform. A more concrete list of objectives is:

- Design the virtual identity management architecture;
- Develop the security protocols design and provide reference implementation of virtual identity management components;
- Research & implement secure storage solutions for both, mobile and server, technologies that will support the secure storage of identity and identity derivation proofs;
- Research & develop mobile software components that will enable fraud-proof user's self-enrolment with high levels of identity assurance;
- Align the technical developments with the security, ethical and privacy by design guidelines provided by WP2;
- Integrate all components in stakeholder-oriented software packages and in a unique platform that will support the execution of the two demonstrators of WP4;
- Provide an API that will allow the intercommunication of ecosystem's components and with stakeholders' systems.

3.2.4 WP4 - Demonstrators Integration and Evaluation

WP4 will take care of instantiating ARIES technology in two close-to-operational environments in order to demonstrate the effectiveness of the results in preventing identity theft and associated crimes or in minimizing its impact. Some of the key point objectives of this WP are:

- Develop the framework and plan of the two demonstrators;
- Instantiating the ARIES platform for the two demonstrators according to the demonstration and evaluation plan;
- Execute the secure eCommerce prototype demonstrator;
- Execute the identity virtualization prototype demonstrator;
- To perform the evaluation of ARIES results in the context of the chosen demonstrators;
- To carry out the intermediate evaluation of the demonstrators through a multidisciplinary approach and provide useful feedback to WP3 that will lead to the improvement of the results in the second development cycle.

3.2.5 WP5 - Design, Communication and Exploitation of ecosystem for identity services

WP5 main goal is to guarantee the sustainability of the project by developing suitable business models that will enable a successful transfer to the market. The main objectives of this package are:

- Understand the identity management market and how it affects the adoption of ARIES;
- To identify exploitable items within the results of the project and to define the most adequate business strategy for them to reach the market;
- To define and implement an exploitation strategy to foster the take up of the project's results;
- To effectively communicate project activities and findings, promoting networking and wide impact creation;
- To establish a user community and raise awareness in the broader European population of the relevance of the addressed issues;
- The protection of foreground IPR.

3.2.6 WP6 – Dissemination and Standardisation

WP6 deals with the activities leading to impact creation. This involves several tasks that aim at different objectives related to the impact creation. In particular, the objectives include:

- To contribute to standardisation activities with international, European and national standardisation bodies and explore the possibilities for standardisation of the developed solutions as a way of fostering an easier take-up of ARIES results by industry and citizens;
- To disseminate techniques and results of the project to the public and interested stakeholders;
- To effectively disseminate project activities and findings, promoting networking and wide impact creation.

3.2.7 WP7 – Project & innovation management

WP7 deals with the overall management of the project (strategic and operational) and the cooperation between partners in order to achieve the project objectives. WP7 comprises different tasks focused on contractual, administrative, financial, coordination, organization, and support aspects. In particular the following high-level objectives are to be fulfilled:

- To ensure the close coordination and communication between the European Commission (EC) and the consortium;
- To achieve project objectives within the given time frames;
- To ensure the seamless integration of the activities developed within the other WPs;

- To establish and manage effective collaboration and communication tools for fast and accurate decision-making and transparency;
- To ensure the accuracy, high quality and timeliness of deliverables so that they remain on schedule and budget;
- Anticipate and manage change and solve disputes during the project (i.e. involve all stakeholders in consensus finding, problem solving and establish and maintain a high level of team spirit and esprit de corps);
- To manage of all innovation aspects at project level, in line with impact creation;
- To manage the Intellectual Property and its exploitation;
- To conduct the financial and administrative management of the project.

3.3 *Roles and responsibilities*

3.3.1 The consortium

The project ARIES is carried out by a consortium of seven partners. The consortium is led by Atos Spain sae (ATOS) and its affiliated party Atos Canarias (ATOSCAN), with scientific coordination by Universidad de Murcia (UMU), and the participation of Gemalto sro. (GTO), Morpho (MPH), Saher UK LTD (SAHER), Police and Crime Commissioner for West Yorkshire (POCC), Gobierno Vasco – Departamento de Seguridad (ERTZ), Service Public Federal Interieur (Belgium), Sonae Center Servicos II S.A. (SONAE) and its affiliated party Continente Online (CNT-ONL).

3.3.2 Organizational Structure

Figure 4 shows the organizational structure of the project and its interfaces with external stakeholders.
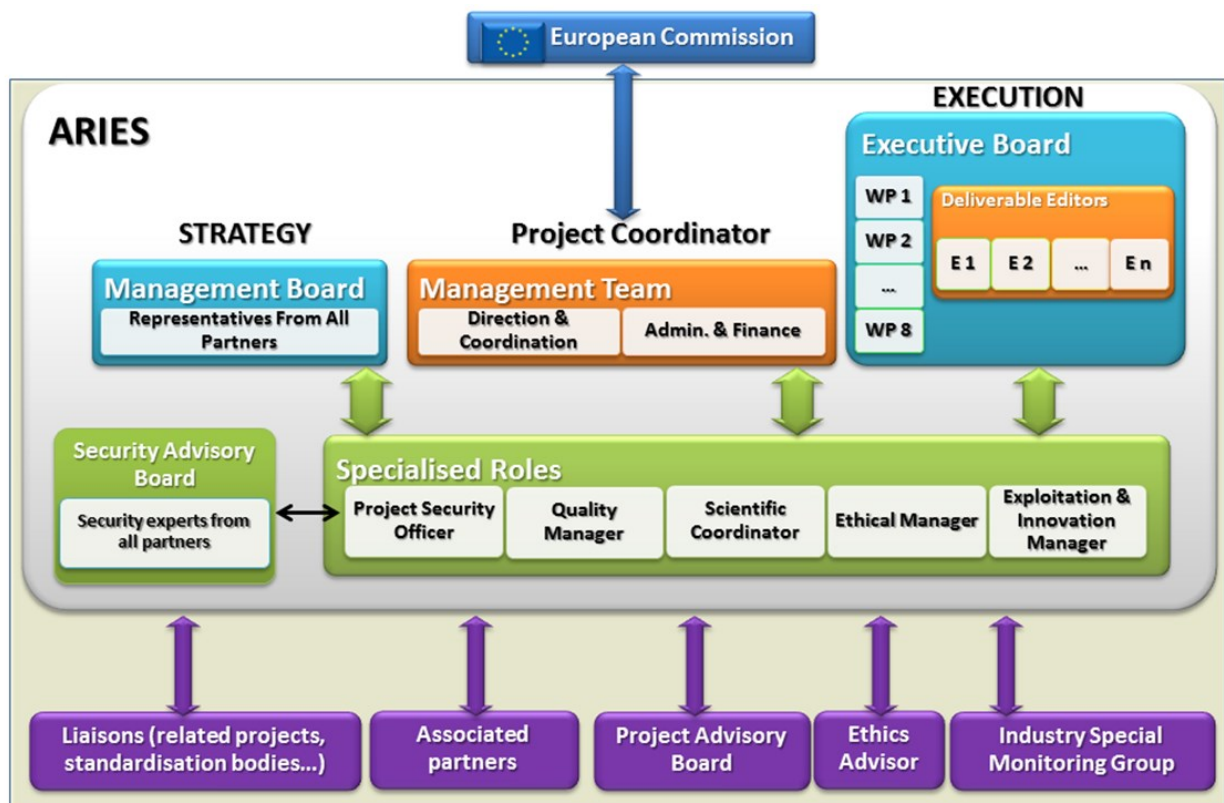
Figure 4: ARIES Organizational Structure

The project governance structure consists of two bodies: the Management Board (MB) and the executive board (EB):

- The Management Board, is the ultimate decision-making Consortium Body;
- The Executive Board is the supervisory body for the implementation of the project, and shall report to and be accountable to the Management Board.

The EB is chaired by the Project Coordinator and consists of the following individuals:

- The Project Coordinator (PC) acts as the interface between the project and the Commission, and performs overall project monitoring and supervision. This role is played by ATOS.
- The Quality Manager (QM) is in charge of installing and monitoring in-house quality procedures according to suitable standards. It is also responsible for setting the success indicators in all scopes, and measuring the evolution of the project. This role is played by ATOS.
- The Scientific Coordinator (SC) monitors the general scientific and technological community and the technical implementation of the project. It is also in charge of technically assessing liaison between ARIES and related projects. This role is played by UMU.
- The Exploitation & Innovation Manager (EIM) coordinates consortium efforts for exploitation of the project results, and monitors the external innovation actions to align the innovation actions at project level with impact creation. This role is played by ATOS.
- The Ethical manager (EM) is in charge of ensuring due consideration for ethical requirements in concrete implementations of ARIES's research results. This role is played by SAHER.
- All WP leaders (WPL). The WP leader is responsible for the monitoring and management of the activity and results within his WPs. The WP leaders are:
  - WP1: ATOS
  - WP2: UMU
  - WP3: GTO
  - WP4: POCC
  - WP5: the Exploitation & Innovation Manager (ATOS)
  - WP6: UMU
  - WP7: the Project Coordinator (ATOS)

The EB is ruled by the provisions of the Consortium Agreement (CA).

The MB is chaired by the Project Coordinator and consists of one official senior delegate of each partner and is responsible for the decisions related to:

- Content, finances, and intellectual property rights of the project;
- Evolution of the Consortium;
- The appointment, if necessary, of Executive Board members.

Besides these two main bodies there are three additional structures/roles:

- The Security Advisory Board (SAB) with one security expert from each of the partners that will assess the sensitivity of deliverables prior to publication
- The Project Security Officer (PSO) is the chair of the Security Advisory Board and will oversee all security aspects of the project development. It will be responsible for implementing a security policy respectful with the legal framework and with the security requirements associated to the management of the project results according to its classification level. This role is played by MPH.
- The Project Advisory Board (PAB) with experts in relevant fields and from different sectors and domains like industry, science, policy, academia, legal and ethical. The PAB will ensure an even broader, interactive exchange with peers from outside the project, and will increase the dissemination and impact of ARIES

3.3.3 Work distribution

The following table describes the WBS into tasks (labelled as Tx.y), indicating which is the leading partner of each activity, the team members (contributors to the activity), and the expected outputs.

WP	Task	Leader	Other partners	Outputs
WP1	Ethics requirements	ATOS	Ethical Advisor	D1.1, D1.2
WP2	Procedural, legal & societal requirements for ID ecosystem	UMU		
	T2.1 Functional requirements for ID ecosystem	UMU	ATOS, GTO, MPH, SONAE	D2.1
	T2.2 Societal Evaluation of ID and threats	SAHER	SONAE	D2.2
	T2.3 Legal requirements for law enforcement	UMU	POCC, ERTZ, BFP	D2.3
	T2.4: Privacy and data protection compliance	UMU	ATOS, GTO, MPH	D2.4
WP3	Strengthening the technology for ID	GTO	ATOS, UMU, MPH	
	T3.1:Definition for the system architecture	GTO	ATOS, UMU, MPH	D3.1
	T3.2 Virtual identity developments	GTO	ATOS, UMU, MPH	D3.2
	T3.3 Enrolment and authentication tools for ICAO-compliant face acquisition and liveness detection	MPH	GTO	D3.3
	T3.4 Platform integration and API specification	ATOS	UMU, GTO	D3.4
WP4	Demonstrators Integration and Evaluation	POCC	All partners	
	T4.1: Demonstration Setup	UMU	ATOS, GTO, MPH	D4.1
	T4.2 - Pilot Demonstration and Evaluation Plan	SAHER	ATOS, GTO, POCC, ERTZ, BFP, SONAE	D4.2
	T4.3 - Pilot Demonstration One - Secure eCommerce	SONAE	ATOS, SAHER, POCC, ERTZ	D4.3
	T4.4 - Pilot Demonstration Two - Identity virtualization	POCC	ERTZ, BFP	D4.4

WP	Task	Leader	Other partners	Outputs
	T4.5 - Evaluation and Validation	GTO	All partners	D4.5
WP5	Design, Communication and Exploitation of ecosystem for identity services	ATOS	All partners	
	T5.1: Sustainability design of ecosystem of identity services	ATOS	UMU, GTO, MPH, SAHER, POCC, ERTZ, BFP	D5.1, D5.2
	T5.2: Exploitation Plan and Report	ATOS	UMU, GTO, MPH, SAHER, SONAE	D5.1, D5.2
	T5.3: Communication activities & Public Web Presence	ATOS	All partners	D5.3, D5.4
WP6	Dissemination and Standardisation	UMU	All partners	
	T6.1: Engaging scientific and technical community: Dissemination	UMU	All partners	D6.1, D6.2
	T6.2: Standardisation	GTO	MPH	D6.1, D6.2
	T6.3: ARIES Project Advisory Board	UMU	ATOS, GTO, POCC	D6.3
WP7	Project and Innovation Management	ATOS	All partners	
	T7.1 Project Steering	ATOS	-	D7.1
	T7.2 Innovation Management	ATOS	UMU	D7.2
	T7.3 Quality Assurance	ATOS	-	D7.3
	T7.4 Project reporting	ATOS	All partners	Interim reports, periodic reports, final report
	T7.5 Social Knowledge Management System (SKMS) & Internal communication	ATOS	-	D7.4

Table 1: List of WPs and tasks.

3.4 *Project outputs*

The project outcomes are mostly materialized in terms of project deliverables, as stated in the GA. Table 2 summarizes the list of deliverables associated to each work package. It also describes the type of deliverable, the dissemination level, the delivery date (measure in months from the starting date), as well as the main editor and contributors.

Official deliverables are labelled as Dx.y, where "x" indicates the WP number, and "y" the number of the deliverable. Other outputs, such as interim reports are not labelled with any particular tag at this moment.

The type of deliverable is expressed as:
- R: Document, report.
- DEM: Demonstrator, pilot, prototype, plan designs.
- DEC: Websites, patents filing, press & media actions, videos, etc.
- OTHER: Software, technical diagram, etc.
- ETHICS : Ethics requirement

The dissemination level of the deliverable is expressed as:
- PU: Public, fully open.
- CO: Confidential, restricted under conditions set out in Model Grant Agreement.
- EU-RES: EU Restricted, restricted under conditions set out in Model Grant Agreement.

WP	Deliverable Number	Title	Lead Beneficiary	Type	Diss. Level	Due Date	Contributors
WP1	D1.1	GEN - Requirement No. 1	ATOS	Ethics	CO	12	N/A
	D1.2	GEN - Requirement No. 2	ATOS	Ethics	CO	3	N/A
WP2	D2.1	Analysis of Identity procedures, life cycles and their weaknesses	UMU	Report	EU-RES	18	ATOS, GTO, MPH, SONAE
	D2.2	Socio-ethical analysis and requirements	SAHER	Report	PU	15	SONAE
	D2.3	Legal requirements and analysis of ID legislation and law enforcement aspects	UMU	Report	PU	12	POCC, ERTZ, BFP
	D2.4	Privacy and data protection compliance report	UMU	Report	PU	24	ATOS, GTO, MPH
WP3	D3.1	ARIES eID ecosystem technical design	GTO	Report	CO	11	ATOS, UMU, MPH
	D3.2	Virtual identity developments	GTO	Other	CO	22	ATOS, UMU, MPH
	D3.3	Enrolment/authentication tools and liveness detection tools	MPH	Other	CO	22	GTO
	D3.4	Platform integration and API specification	ATOS	Other	CO	26	UMU, GTO
WP4	D4.1	ARIES Prototype Instantiation	UMU	Other	PU	24	ATOS, GTO, MPH
	D4.2	ARIES Demonstration and Evaluation Plan	SAHER	Report	PU	12	ATOS, GTO, POCC, ERTZ, GFP
	D4.3	Secure eCommerce prototype demonstrator	SONAE	Report	PU	28	ATOS, SAHER, POCC, ERTZ
	D4.4	Identity virtualization prototype demonstrator	POCC	Report	PU	28	ERTZ, BFP
	D4.5	Evaluation and Validation Report	GTO	Report	PU	30	All
WP5	D5.1	Initial Business and Exploitation Plan	ATOS	Report	PU	21	All
	D5.2	Final Business and Exploitation Plan and Report	ATOS	Report	PU	29	All
	D5.3	First Communication Plan and Activities Report	ATOS	Report	PU	12	All
	D5.4	Final Communication Plan and Activities Report	ATOS	Report	PU	30	All

WP	Deliverable Number	Title	Lead Beneficiary	Type	Diss. Level	Due Date	Contributors
WP6	D6.1	First Dissemination, Standardisation Activities Report	UMU	Report	PU	15	All
	D6.2	Final Dissemination, Standardisation Activities Report	GTO	Report	PU	30	All
	D6.3	Advisory Board Activities Report	UMU	Report	PU	30	ATOS, GTO POCC
WP7	D7.1	ARIES Work Plan	ATOS	Report	CO	2	N/A
	D7.2	ARIES Innovation Plan	ATOS	Report	CO	12	UMU
	D7.3	ARIES Quality Plan	ATOS	Report	CO	3	N/A
	D7.4	ARIES Social Knowledge Management System (SKMS)	ATOS	Other	PU	9	N/A

Table 2: ARIES list of deliverables

4 Project roadmap

4.1 *Project timeline*

The project lasts 30 months, starting on September 1st of 2016.

It is divided in two reporting periods:

- Period 1: From September 2016 (M1) to February 2018 (M18)
- Period 2: From March 2018 (M19) to February 2019 (M30)

The project can be divided in three natural years:

- Year 1: From September 2016 (M1) to August 2017 (M12)
- Year 2: From September 2017 (M13) to August 2018 (M24)
- Year 3: From September 2018 (M25) to February 2019 (M30)

Finally, the project has two development incremental iterations:

- First iteration: ends on December 2017 (M16)
- Second iteration: ends on December 2018 (M28)

During the first year (M1-M12) all WPs will be running. However the focus of the project lies in the progress of WP2, WP3, WP4 and its fine interaction. ARIES will be dealing mostly with the requirements elicitation and analysis (WP2), but there will be also work on the definition of the common architecture and the setup of early mockups of individual. Piloting activities will start by developing the piloting framework and by setting up demonstrators (WP4).

The project will reach its first major milestone in M12, where it is expected to have completed an initial draft of procedural, ethical, legal & societal requirements for ARIES ecosystem (WP2), and an initial implementation of technology for eID (WP3). At this stage, detailed use-case descriptions of the pilot partners will have been provided as basis for the development of the piloting activities (WP4).

The Figure 5 summarizes this entire project work plan strategy from a timely perspective (main tasks per WP and how they span across the project's periods). Figure 6 zooms in this time perspective and provides more details regarding the tasks and their actual distribution in terms of months.
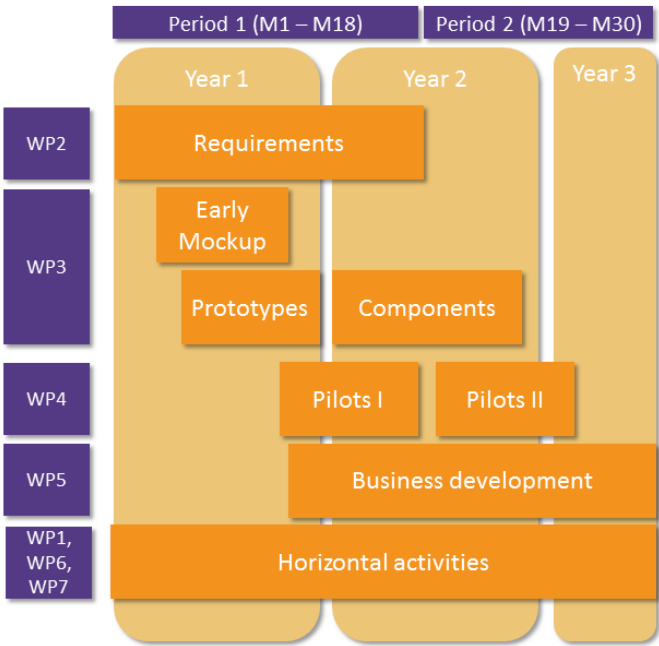
Figure 5: ARIES high level timeline
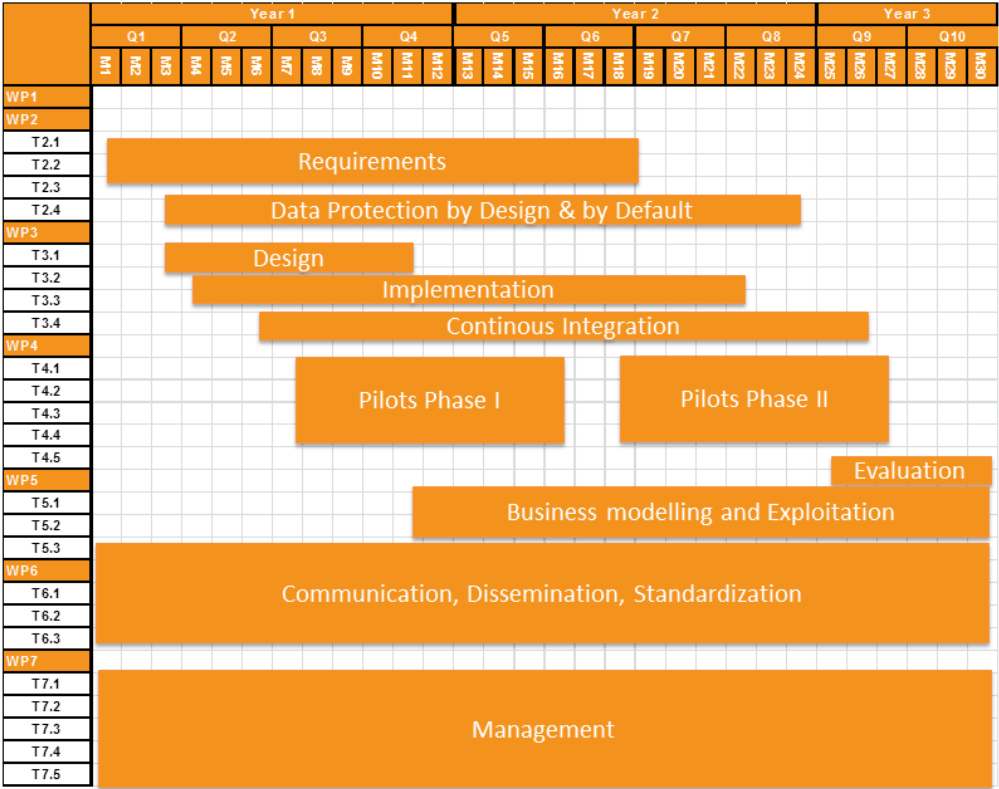
Figure 6: ARIES roadmap

4.2 *Project milestones*

The following table summarizes the project milestones, which are key control points of the project execution.

Estimated date	Milestone name	Related WP(s)	Milestone number	Lead beneficiary	Means of verification
M01	Project's public website	WP7	MS1	ATOS	There will be public website with basic information of the project, its goals and its partners
M03	Collaborative platform setup	WP7	MS2	ATOS	A repository of documentary and other information relevant for the project execution will be available for partners' collaboration
M07	Analysis and requirements	WP2	MS3	UMU	By this time, detailed use-case descriptions of the pilot partners are provided as basis for the requirements of the ARIES building blocks (D1.1) and the legal requirements (D2.1).
M08	Mockup technology for eID	WP3	MS4	GTO	Mock-up of individual technological components with enough detail to start its integration and its instantiation in the two demonstrators.
	Privacy by Design guidelines	WP2	MS5	UMU	An initial set of guidelines will be available to all partners which must apply them to project's work and outcomes
M12	Identity procedures weaknesses	WP2	MS6	UMU	The selected identity procedures with the initial set of identified weaknesses will be made available to partners. This information will be also considered EU-RESTRICTED and will be subject to the same requirements as D2.1
	Initial enabling technology for eID	WP3	MS7	MPH	Initial version of individual technological components that can be used for integration
M16	Initial evaluation and feedback	WP3, WP4	MS10	POCC	Available results included in D4.3 and D4.4 that will be provided to task 2.1 for a second cycle and task 3.4 for platform integration aspects
M18	Exploitation plan draft	WP5	MS8	ATOS	An initial project-wide as well as partner specific exploitation plans for the ARIES ID Ecosystem will be available to all partners
M22	Final enabling technology for eID	WP3	MS9	MPH	Final deliverables from task 3.2 and task 3.3 and components available for integration in task 3.4

Estimated date	Milestone name	Related WP(s)	Milestone number	Lead beneficiary	Means of verification
M26	Second evaluation and feedback	WP3, WP4	MS11	POCC	Intermediate report of second version of D4.3 and D4.4 with feedback to task 3.4 and final D3.5
M30	Final evaluation	WP3, WP4	MS12	GTO	Deliverable D4.5

Table 3: ARIES milestones

4.3 *Project Gantt*

Table 4 shows the project Gantt measured in months from the project start.

It shows the duration of the seven WPs and the tasks under each of them.

The Gantt indicates the delivery date of the project outputs (deliverables) associated to the tasks and the milestones of the project.

It also indicates the project reviews. According to the Grant Agreement, the project has two reviews tentatively scheduled in months M20 and M30.

	Year 1												Year 2												Year 3					
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
WP1 - Ethics Requirements			D1.2									D1.1																		
WP2 – Procedural, legal & societal requirements for ID ecosystem																														
T2.1: Functional requirements for ID ecosystem							MS3					MS6					D2.1													
T2.2: Societal Evaluation of ID and threats							MS3								D2.2															
T2.3: Legal requirements and impact on law enforcement							MS3					D2.3																		
T2.4: Privacy and data protection compliance																								D2.4						
WP3 – Strengthening the technology for ID																														
T3.1: Definition for the system architecture											D3.1																			
T3.2: Virtual identity developments							MS4					MS7									D3.2									
T3.3: Enrolment and authentication tools for ICAO-compliant face acquisition and liveness detection							MS4					MS7									D3.3									
T3.4: Platform integration and API specification																										D3.4				
WP4 – Demonstrators Integration and Evaluation																														
T4.1: Demonstration Setup																								D4.1						
T4.2: Prototype Demonstration and Evaluation Plan												D4.2																		
T4.3: Secure eCommerce prototype demonstrator																MS10												D4.3		
T4.4: Identity virtualization prototype demonstrator																MS10												D4.4		
T4.5: Evaluation and Validation																														D4.5

	Year 1												Year 2												Year 3					
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30
WP5 – Design, Communication and Exploitation of ecosystem for identity services																														
T5.1: Sustainability design of ecosystem of identity services																					D5.1									
T5.2: Exploitation Plan and Report																					D5.1								D5.2	
T5.3: Communication activities & Public Web Presence												D5.3																		D5.4
WP6 – Dissemination and Standardization																														
T6.1: Engaging scientific and technical community: Dissemination															D6.1															D6.2
T6.2: Standardisation															D6.1															D6.2
T6.3: ARIES Project Advisory Board																														D6.3
WP7 – Project and Innovation Management																														
T7.1: Project Steering		D7.1																												
T7.2: Innovation Management												D7.2																		
T7.3: Quality Assurance			D7.3																											
T7.4: Project reporting																														
T7.5: Social Knowledge Management System (SKMS) & Internal communication	MS1		MS2							D7.4																				
EC Reviews																					RV1									RV2

Table 4: ARIES Gantt chart

5 Resources

This section summarizes the project personnel resources, measured in person-months. Other required resources, such as development tools, communication infrastructure, or any supporting means are not here described. The reason is that in most cases this is a decision to be agreed within the scope of the work packages, and it is to be taken in due moment according to the work needs.

5.1 *Effort per WBS*

This section provides an overview of the total effort allocation according to the work breakdown structure of the project. The WP effort matches the effort stated in the GA. The task effort corresponds to the consortium internal agreement on the effort distribution. As it can be seen in Table 5, while WP1 has no effort allocated as the work will be basically implemented by an independent Ethics Advisor, WP3 is the one with more planned effort, as it is the responsible for the development of the advances in the state of the art and the delivery of the design and the implementation and integration of the technical components. With very similar effort WP2 and WP4 are the second and third most effort-demanding WPs, matches the complexity of analysing and proposing improvements in the actual Identity Management procedures and testing and validating ARIES ecosystem in two realistic scenarios. WP5 is the fourth WP, in terms of effort and is adequate to the expectations of impact-creation intended for the project. Finally WP6 and WP7 are the two packages with less effort but is also appropriate to enable a smooth operation of the project and to establish the necessary liaisons with standardization bodies, manage the Project Advisory Board and to disseminate ARIES results. From a partner-wise perspective, differences in PM allocation to partners are directly related to their respective roles in the project with Atos as Coordinator, Quality and Innovation & Exploitation manager, also responsible for communication, UMU as the scientific coordinator and GTO and MPH as the main technology providers have more effort compared to other partners. SAHER as ethical manager and POCC acting as the coordinator of the demonstrators has lower effort but adequate to its role. ERTZ, BFP and SONAE, as end users are the partners with the lowest efforts, but still adequate to their role of providing and validating the ecosystem and demonstrators requirements and implementation.

		ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
WP1	Ethics requirements	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
WP2	Procedural, legal & societal requirements for ID ecosystem	4,0	20,0	5,0	5,0	3,0	3,0	2,0	2,0	3,0	47,0
	T2.1 Functional requirements for ID ecosystem	2,0	10,0	3,0	3,0	0,0	0,0	0,0	0,0	2,0	20,0
	T2.2 Societal Evaluation of ID and threats	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	1,0	4,0
	T2.3 Legal requirements for law enforcement	0,0	5,0	0,0	0,0	0,0	3,0	2,0	2,0	0,0	12,0
	T2.4: Privacy and data protection compliance	2,0	5,0	2,0	2,0	0,0	0,0	0,0	0,0	0,0	11,0
WP3	Strengthening the technology for ID	18,0	12,0	20,0	14,5	0,0	0,0	0,0	0,0	0,0	64,5

		ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
	T3.1:Definition for the system architecture	5,0	4,0	6,0	2,5	0,0	0,0	0,0	0,0	0,0	17,5
	T3.2 Virtual identity developments	3,0	3,0	7,0	6,0	0,0	0,0	0,0	0,0	0,0	19,0
	T3.3 Enrolment and authentication tools for ICAO-compliant face acquisition and liveness detection	0,0	0,0	5,0	6,0	0,0	0,0	0,0	0,0	0,0	11,0
	T3.4 Platform integration and API specification	10,0	5,0	2,0	0,0	0,0	0,0	0,0	0,0	0,0	17,0
WP4	Demonstrators Integration and Evaluation	6,0	4,0	5,0	4,0	6,5	9,0	5,0	5,0	5,0	49,5
	T4.1: Demonstration Setup	2,0	3,0	2,5	3,0	0,0	0,0	0,0	0,0	0,0	10,5
	T4.2 - Pilot Demonstration and Evaluation Plan	1,0	0,0	0,5	0,0	3,0	2,0	1,0	1,0	1,0	9,5
	T4.3 - Pilot Demonstration One - Secure eCommerce	2,0	0,0	0,0	0,0	2,5	3,0	2,0	0,0	3,0	12,5
	T4.4 - Pilot Demonstration Two - Identity virtualization	0,0	0,0	0,0	0,0	0,0	3,0	1,0	3,0	0,0	7,0
	T4.5 - Evaluation and Validation	1,0	1,0	2,0	1,0	1,0	1,0	1,0	1,0	1,0	10,0
WP5	Design, Communication and Exploitation of ecosystem for identity services	15,0	5,0	4,0	4,0	3,0	2,0	3,0	2,0	2,0	40,0
	T5.1: Sustainability design of ecosystem of identity services	5,0	3,0	1,5	1,5	1,0	1,0	2,0	1,0	0,0	16,0
	T5.2: Exploitation Plan and Report	6,0	1,0	1,5	1,5	1,0	0,0	0,0	0,0	1,0	12,0
	T5.3: Communication activities & Public Web Presence	4,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	12,0
WP6	Dissemination and Standardisation	3,0	8,0	5,0	2,0	2,0	3,0	1,5	1,5	1,5	27,5
	T6.1: Engaging scientific and technical community: Dissemination	2,0	6,0	1,0	1,0	2,0	2,0	1,5	1,5	1,5	18,5
	T6.2: Standardisation	0,0	0,0	3,0	1,0	0,0	0,0	0,0	0,0	0,0	4,0
	T6.3: ARIES Project Advisory Board	1,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	0,0	5,0
WP7	Project and Innovation Management	25,0	3,0	1,0	0,5	0,5	1,0	0,5	0,5	0,5	32,5
	T7.1 Project Steering	7,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,0
	T7.2 Innovation Management	5,0	2,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,0
	T7.3 Quality Assurance	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,0
	T7.4 Project reporting	4,0	1,0	1,0	0,5	0,5	1,0	0,5	0,5	0,5	9,5

	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
T7.5 Social Knowledge Management System (SKMS) & Internal communication	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,0
TOTAL	71,0	52,0	40,0	30,0	15,0	18,0	12,0	11,0	12,0	261,0

Table 5: Effort distributed per WP and tasks.

5.2 *Effort per project deliverable*

This section provides the above indicated effort but rearranged per project deliverable. As some deliverables are related to more than one task, the effort per deliverable is not straightforward to compute, hence, and for these cases (D5.1, D5.2, D6.1 and D6.2) the calculated effort is just an estimate.

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D1.1 - GEN - Requirement No. 1	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
D1.2 - GEN - Requirement No. 2	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
TOTAL	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

Table 6: Effort distributed per WP1

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D2.1 - Analysis of Identity procedures, life cycles and their weaknesses	2,0	10,0	3,0	3,0	0,0	0,0	0,0	0,0	2,0	20,0
D2.2 - Socio-ethical analysis and requirements	0,0	0,0	0,0	0,0	3,0	0,0	0,0	0,0	1,0	4,0
D2.3 - Legal requirements and analysis of ID legislation and law enforcement aspects	0,0	5,0	0,0	0,0	0,0	3,0	2,0	2,0	0,0	12,0
D2.4 - Privacy and data protection compliance report	2,0	5,0	2,0	2,0	0,0	0,0	0,0	0,0	0,0	11,0
TOTAL	4,0	20,0	5,0	5,0	3,0	3,0	2,0	2,0	3,0	47,0

Table 7: Effort distributed per WP2

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D3.1 - ARIES eID ecosystem technical design	5,0	4,0	6,0	2,5	0,0	0,0	0,0	0,0	0,0	17,5
D3.2: Virtual identity developments	3,0	3,0	7,0	6,0	0,0	0,0	0,0	0,0	0,0	19,0
D3.3 : Enrolment / authentication tools and liveness detection tools	0,0	0,0	5,0	6,0	0,0	0,0	0,0	0,0	0,0	11,0
D3.4 : Platform integration and API specification	10,0	5,0	2,0	0,0	0,0	0,0	0,0	0,0	0,0	17,0
TOTAL	18,0	12,0	20,0	14,5	0,0	0,0	0,0	0,0	0,0	64,5

Table 8: Effort distributed per WP3

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D4.1 : ARIES Prototype Instantiation	2,0	3,0	2,5	3,0	0,0	0,0	0,0	0,0	0,0	10,5
D4.2 : ARIES Demonstration and Evaluation Plan	1,0	0,0	0,5	0,0	3,0	2,0	1,0	1,0	1,0	9,5
D4.3 : Secure eCommerce prototype demonstrator	2,0	0,0	0,0	0,0	2,5	3,0	2,0	0,0	3,0	12,5
D4.4 : Identity virtualization prototype demonstrator	0,0	0,0	0,0	0,0	0,0	3,0	1,0	3,0	0,0	7,0
D4.5 : Evaluation and Validation Report [	1,0	1,0	2,0	1,0	1,0	1,0	1,0	1,0	1,0	10,0
TOTAL	6,0	4,0	5,0	4,0	6,5	9,0	5,0	5,0	5,0	49,5

Table 9: Effort distributed per WP4

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D5.1 : Initial Business and Exploitation Plan	5,7	1,9	1,5	1,5	1,0	0,4	0,9	0,4	0,6	14,1
D5.2 : Final Business and Exploitation Plan and Report	5,3	2,1	1,5	1,5	1,0	0,6	1,1	0,6	0,4	13,9
D5.3 : First Communication Plan and Activities Report	1,6	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4	4,8
D5.4 : Final Communication Plan and Activities Report	2,4	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	7,2
TOTAL	15,0	5,0	4,0	4,0	3,0	2,0	3,0	2,0	2,0	40,0

Table 10: Effort distributed per WP5

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D6.1 : First Dissemination, Standardisation Activities Report	1,0	3,0	2,0	1,0	1,0	1,0	0,8	0,7	0,7	11,3
D6.2 : Final Dissemination, Standardisation Activities Report	1,0	3,0	2,0	1,0	1,0	1,0	0,7	0,8	0,8	11,2
D6.3 : Advisory Boards Activities Report	1,0	2,0	1,0	0,0	0,0	1,0	0,0	0,0	0,0	5,0
TOTAL	3,0	8,0	5,0	2,0	2,0	3,0	1,5	1,5	1,5	27,5

Table 11: Effort distributed per WP6

Deliverable	ATOS	UMU	GTO	MPH	SAHER	POCC	ERTZ	BFP	SONAE	TOTAL
D7.1 - ARIES Work Plan	7,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,0
D7.2 - ARIES Innovation Plan	5,0	2,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	7,0
D7.3 - ARIES Quality Plan	6,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	6,0
Management / Reporting	4,0	1,0	1,0	0,5	0,5	1,0	0,5	0,5	0,5	9,5
D7.4 - ARIES Social Knowledge Management System	3,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,0
TOTAL	25,0	3,0	1,0	0,5	0,5	1,0	0,5	0,5	0,5	32,5

Table 12: Effort distributed per WP7

5.3   *Effort per project period*

Finally, this section provides an initial estimation of the partners' effort distributed along the project tranches. This estimation is the basis for monitoring and controlling the resources consumption in the reporting dates agreed in the CA, happening every six months. The estimation assumes a uniform effort spent and consistent dedication over the duration of each task, but it will be altered and corrected for the evolution of specific developments and the necessary adjustments due to interdependencies between tasks and moments of receipt of inputs. Therefore, the final reporting will surely display differences (deviations) with regard to this plan.

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	0,98	3,15	0,34	0,23	1,00	5,00	10,70
	M07-M12	0,00	1,47	6,45	2,56	2,41	1,00	5,00	18,89
	M13-M18	0,00	1,01	3,67	0,50	3,91	0,60	5,00	14,69
P2	M19-M24	0,00	0,55	3,36	1,20	4,34	0,20	5,00	14,65
	M25-M30	0,00	0,00	1,36	1,40	4,12	0,20	5,00	12,08
TOTAL		0,00	4,00	18,00	6,00	15,00	3,00	35,00	71,00

Table 13: ATOS effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	6,49	2,48	0,30	0,06	2,80	0,60	12,72
	M07-M12	0,00	8,48	4,53	1,80	0,69	2,80	0,60	18,90
	M13-M18	0,00	3,67	2,31	0,00	1,24	1,60	0,60	9,43
P2	M19-M24	0,00	1,36	2,00	0,90	1,50	0,40	0,60	6,76
	M25-M30	0,00	0,00	0,68	1,00	1,50	0,40	0,60	4,19
TOTAL		0,00	20,00	12,00	4,00	5,00	8,00	3,00	52,00

Table 14: UMU effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,29	4,42	0,32	0,06	0,60	0,20	6,88
	M07-M12	0,00	1,93	7,76	1,93	0,62	0,60	0,20	13,04
	M13-M18	0,00	1,24	4,42	0,00	1,04	1,00	0,20	7,90
P2	M19-M24	0,00	0,55	3,13	0,75	1,17	1,40	0,20	7,19
	M25-M30	0,00	0,00	0,27	2,00	1,12	1,40	0,20	4,99
TOTAL		0,00	5,00	20,00	5,00	4,00	5,00	1,00	40,00

Table 15: GTO effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,29	2,73	0,30	0,06	0,40	0,10	4,87
	M07-M12	0,00	1,93	5,28	1,80	0,62	0,40	0,10	10,14
	M13-M18	0,00	1,24	3,89	0,00	1,04	0,40	0,10	6,67
P2	M19-M24	0,00	0,55	2,60	0,90	1,17	0,40	0,10	5,71
	M25-M30	0,00	0,00	0,00	1,00	1,12	0,40	0,10	2,62
TOTAL		0,00	5,00	14,50	4,00	4,00	2,00	0,50	30,00

Table 16: MPH effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,20	0,00	0,43	0,06	0,80	0,10	2,59
	M07-M12	0,00	1,20	0,00	3,20	0,53	0,80	0,10	5,83
	M13-M18	0,00	0,60	0,00	0,63	0,76	0,40	0,10	2,48
P2	M19-M24	0,00	0,00	0,00	0,75	0,85	0,00	0,10	1,70
	M25-M30	0,00	0,00	0,00	1,50	0,81	0,00	0,10	2,41
TOTAL		0,00	3,00	0,00	6,50	3,00	2,00	0,50	0,50

Table 17: SAHER effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,50	0,00	0,29	0,06	1,00	0,20	3,04
	M07-M12	0,00	1,50	0,00	3,21	0,42	1,00	0,20	6,34
	M13-M18	0,00	0,00	0,00	1,50	0,44	0,60	0,20	2,74
P2	M19-M24	0,00	0,00	0,00	1,80	0,53	0,20	0,20	2,73
	M25-M30	0,00	0,00	0,00	2,20	0,55	0,20	0,20	3,15
TOTAL		0,00	3,00	0,00	9,00	2,00	3,00	1,00	18,00

Table 18: POCC effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,00	0,00	0,14	0,06	0,60	0,10	1,90
	M07-M12	0,00	1,00	0,00	1,61	0,50	0,60	0,10	3,81
	M13-M18	0,00	0,00	0,00	0,75	0,68	0,30	0,10	1,83
P2	M19-M24	0,00	0,00	0,00	0,90	0,86	0,00	0,10	1,86
	M25-M30	0,00	0,00	0,00	1,60	0,89	0,00	0,10	2,59
TOTAL		0,00	2,00	0,00	5,00	3,00	1,50	0,50	12,00

Table 19: ERTZ effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,00	0,00	0,14	0,06	0,60	0,10	1,90
	M07-M12	0,00	1,00	0,00	1,61	0,42	0,60	0,10	3,73
	M13-M18	0,00	0,00	0,00	0,75	0,44	0,30	0,10	1,59
P2	M19-M24	0,00	0,00	0,00	0,90	0,53	0,00	0,10	1,53
	M25-M30	0,00	0,00	0,00	1,60	0,55	0,00	0,10	2,25
TOTAL		0,00	2,00	0,00	5,00	2,00	1,50	0,50	11,00

Table 20: BFP effort distributed per project period

Period	Months	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
P1	M01-M06	0,00	1,02	0,00	0,14	0,06	0,60	0,10	1,92
	M07-M12	0,00	1,32	0,00	1,61	0,45	0,60	0,10	4,08
	M13-M18	0,00	0,66	0,00	0,75	0,52	0,30	0,10	2,33
P2	M19-M24	0,00	0,00	0,00	0,90	0,52	0,00	0,10	1,52
	M25-M30	0,00	0,00	0,00	1,60	0,46	0,00	0,10	2,16
TOTAL		0,00	3,00	0,00	5,00	2,00	1,50	0,50	12,00

Table 21: SONAE effort distributed per project period

6   References

[1]   European Commission. Directorate General for Migration and Home Affairs. Grant Agreement for Research and Innovation action. "*reliAble euRopean Identity EcoSystem"* (ARIES)". No. 700085 H2020-FCT-2014-2015/H2020-FCT-2015

[2]   European Commission. Justice. "*Protection of personal data*". http://ec.europa.eu/justice/data-protection/, retrieved 28-01-2015.