ANNEX

to the

COMMISSION IMPLEMENTING DECISION

adopting the fourth revision of the work programme implementing the programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (the ISA² programme) and the breakdown of the corresponding budgetary expenditure for 2020

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ISA^2 WORK PROGRAMME

2020

DETAILED DESCRIPTION OF ACTIONS
PART 2/2

Contents

FOREWORD

The structure of the ISA^2 work programme used in this document is designed to help identify links between similar initiatives by grouping them together in "packages".

This document gives a detailed description of each action in the work programme along with detailed budgetary information.

The actions are based on proposals from the Commission and/or the Member States.

Actions under the ISA^2 programme are continuously coordinated and aligned with ongoing work under other EU initiatives. Similarly, the ISA^s programme supports these and similar initiatives whenever they contribute to interoperability between EU public administrations.

6 DECISION MAKING AND LEGISLATION – SUPPORTING INSTRUMENTS

6.1 PARTICIPATORY KNOWLEDGE FOR SUPPORTING DECISION MAKING (2016.04) – FUNDING CONCLUDED

6.1.1 IDENTIFICATION OF THE ACTION

Type of Activity	Reusable generic tools
Service in charge	DG DIGIT B4
Associated Services	DG CNECT.R3, H3, DIGIT.01, SG.A1, Latvian Ministry of Environmental Protection and Regional Development, Parliament, Council, Publications Office

6.1.2 EXECUTIVE SUMMARY

Despite the large amount of opinions, needs and preferences expressed by citizens, governments' decision making processes are so far still not able to consume this unstructured and dispersed knowledge in order to extract meaningful knowledge and use it as input to decision making. Within this context, this action, titled 'Participatory Knowledge for supporting Decision Making Processes', aims at consolidating and integrating existing reusable tools that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge. This knowledge will in turn be used to provide insights on existing decision making, making them data-driven processes.

In phase 1 of this action, executed in 2015, activities were focused on the identification of the requirements stemming from the public administrations in the different Member States in order to provide a panoramic view of the needs within the Member States and Commission Services. With a better visibility of these needs this action started exploring and assessing existing assets, reusable software solutions, standards and vocabularies that can address the identified needs. This action intends to consolidate and generalise the identified solutions in order to allow them to be used in different areas that aim to address a common challenge. The development effort shall focus on the generalisation of components or integration of components as well as the assessment of modular generic components and the subsequent consolidation into a framework of software solutions. Such modular generic components shall include, as an example, components for sentiment analysis techniques, data analytics, data mining techniques, opinion modelling, text mining techniques and components for visual analytics techniques and reporting (dashboards).

Within phase 1 of this action, the above technologies shall be applied in three specific business contexts whereby for each business context a proof of concept will be executed and subsequently further elaborations shall be performed in phase 2 of this action. The three business contexts are (i) the improvement of services through the consumption of citizens' feedback in collaboration with the State Chancellery of Latvia who has developed a leading mobile application called 'Football' (ii) the open participation through perception and opinion elicitation in collaboration with DIGIT IT Governance and Communications Unit and (iii) the execution of policy making through participatory knowledge through the reuse and further extension of the Futurium platform in collaboration with DG CONNECT Support Systems and Tools Unit.

A continuation of such exploratory activities, which were kicked off in phase 1 of this action, shall be continued throughout phase 2, to be executed in 2016. Phase 2 shall be composed of 3 tracks as follows: (i) continue with the further identification of the requirements stemming from the public administrations in the different Member States as well as Commission services (ii) continue the implementation of already identified pilots, details in the 3 business contexts of phase 1, through the development of further functionality as well as the generalisation of the developed functionalities, and (iii) launch a new wave of pilots in specific domains which hold a potential of later being generalised and scaled-up to be made available to different services agnostic of their specific policy area.

Through these efforts this action shall aim at contributing to making governments throughout Europe open and participatory through the implementation of a number of practical activities. These activities shall strive to make better use of data which is already being collected either internally or externally, thus making it the basis for generating knowledge that brings value to business contexts and contribute towards data-driven decision making processes.

6.1.3 OBJECTIVES

Citizens' participation in **governments' decision making processes**, through the ability to express their opinions, needs and preferences, is a valuable asset since it brings **insights** and additional **knowledge** to public administrations. Using this knowledge, public administrations can become **more efficient and effective**, offer **user-friendly services**, whilst **reducing costs and administrative burden**; resulting in a **positive impact** on individuals, society, economy, environment etc.

Within this context, the **main objective** of this action is **to consolidate and integrate existing reusable tools that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge. This knowledge will in turn be used to provide insights on existing decision making, making them data-driven processes. It is not the objective of this action to replace existing stakeholder consultation tools, but to give additional value to them by providing further capabilities for gathering, integrating and analysing big quantities of semi-structured or unstructured information.** The proposed capabilities will in particular cross-fertilise with other existing tools such as EU Survey, Your Voice in Europe or the similar tools in the Member States.

To realise the proposed action the following specific objectives are set out:

- To **cooperate with Member States and related networks**, for instance EUPAN[1], in order to better **identify the technology needs of public administrations** when acquiring stakeholders' opinions as a driving force for open governments. Similarly, this action shall also **cooperate with Policy DGs** in **defining their needs** in shifting towards data-driven decision making processes;

- To **assess different assets that are currently available** for making them accessible, thus allowing for collaboration, transparency and participation;

- To **consolidate and integrate open and reusable software solutions** that will support the interactive knowledge sharing and will allow the elicitation of citizens' opinions and perceptions which is hidden in tacit knowledge. By leveraging on participation and motivation of citizens, such tools can contribute to better informed decisions and improved legitimacy of the policy making.

6.1.4 SCOPE

By enhancing the participation of stakeholders in decision making we enable governments to make more informed policies, legislative acts and internal decisions. This leads to a participatory type of government that relies strongly on the evidence and the collective knowledge that the various stakeholders bring in. This shall also contribute to inter-administration cooperation and better decision making processes taking into consideration different perspectives coming from different domains and Member States.

The proposed action has a clear focus on using, further extending and mainstreaming **reusable software solutions** to facilitate the capturing of elicit knowledge from unstructured content.

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[1] http://eupan.eu/

6.1.5   PROBLEM STATEMENT

Society is demanding public administrations in Europe to become more open, transparent, collaborative and participatory in their pre-legislative consultations, internal decisions and policy-making processes. Citizens, businesses and other key stakeholders expect their voice to be heard and taken into account. Decision makers on the other hand do not always have the means to reach out and listen to the opinions and perceptions of people. More specifically, acquiring the plethora of citizens' opinions is a challenging task since they are often expressed in an unstructured way on different platforms. It is even more difficult and expensive to extract meaningful knowledge that can be used as input to decision making. Data must be gathered, measured and analysed through discovery and analytics tools, which makes it possible to identify trends, issues and challenges. For instance, data coming from interactions on social media contribute towards factors other than evidence. Information that may be captured include personal opinions, corporate interests, lobbying, ideological values and other 'non-measurable' factors that cannot be easily sensed and automatically captured[2]. The collected information provides information that stakeholders and policymakers can use to reshape decisions. Decisions may also be inspired by desirable visions and aspirations that are not necessarily in line with current, short-term trends.

Although European institutions and Member States' public administrations have launched several initiatives to collect citizens' opinions when consulting stakeholders, these activities are often fragmented and developed in "isolation" with limited cross-organisational or cross-border cooperation.

There is a strong link between open government and knowledge - open knowledge that can be shared and reused in different context by different stakeholders and across public administrations. However, a number of roadblocks are currently preventing the opening up of knowledge namely at organisational, semantic, technical and legal level. This action aims to address the challenges around opinion elicitations in particular at the **semantic and technical implementation levels** with a main focus on **reuse of existing assets**.

6.1.6   EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits

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[2] See: The Futurium—a Foresight Platform for Evidence-Based and Participatory Policymaking, Springer, 2013

Beneficiaries	Anticipated benefits

- EU institutions
- Member States public administrations (national, regional, local levels)
	The development of a toolbox will allow the collection of opinions from various digital sources in a standardised manner and support informed decision making. This will provide DGs at the European Commission, EU institutions, European agencies and Member States public administrations at all levels with the following benefits:
	
	• A coherent way to manage open knowledge.
	• Support public administrations to become more modern, adaptive, responsive, dynamic, flexible organisations to better address the expectations of their stakeholders,
	• Reach out to citizens through e-participation and open knowledge sharing. This will ensure higher rates of collaboration as compared, for instance, to traditional expert consultations, thus resulting in more effective processes
	• An increase of the efficiency, e.g. by:
	   o Reducing time to make the right decisions;
	   o Getting the right knowledge/people as needed
	   o Harnessing tacit knowledge to support policy making.
	• A major involvement of the users resulting in:
	   o An increased generation of knowledge.
	   o Maximum re-use of the knowledge.
	   o Higher quality of the activities carried out through the sharing of the knowledge.
	   o An easy clustering of the expertise of the users.

- Citizens, organisations and business in Europe	• Voice their opinion and influence the decisions of governments (supporting e-participation). • Innovate through the reuse of open knowledge and reusable open source software for knowledge discovery. • Empowerment of individuals who have the possibility to build consensus around their own ideas and influence decision makers through a transparent process. • Support to civil organisations, including associations of citizens, youth, unions, and non-governmental

Beneficiaries	Anticipated benefits
	organisations, etc. facilitating their open, transparent and efficient collaboration with governments in policy making matters.

6.1.7   RELATED EU ACTIONS / POLICIES

Action / Policy	Description of relation, inputs / outputs
Digital Agenda	Action 3: Open data and re-use of public sector information This action promotes government bodies at all levels: local, regional, national, European and international, to disseminate and reuse the vast amounts of information that is collected as part of their tasks. Activity 5 of this action promotes the dissemination and reuse of information as a means for improving transparency of organisations.
Better regulation policy	One of the Smart Regulation's policy goals is to remove bottlenecks and streamline the Commission's policy making processes as well as to promote open participation through public consultations.
ISA Action 4.2.5.- Sharing and reuse strategy	The reusable practices and guidelines as well as the reusable software solutions delivered through this proposed action can adopt the strategy defined in Action4.2.5 in order to ensure that the outputs are shared and re-used with public administrations in Europe.
ISA Action 4.2.1.- Bringing together the eGovernment platforms (Integrated collaborative platform – Joinup)	The Joinup collaborative platform shall be used as a means for sharing the experiences as well as the deliverables of this action with the Member States' public administrations.
EuroVoc	**EuroVoc** can be assessed as a potential multilingual, multidisciplinary thesaurus covering the activities of the EU to be used as a basis for the vocabulary used in "Futurium" model (see below).
ISA Action 1.1.- Improving	Reusable interoperability solutions, core vocabularies, studies and other resources made available through SEMIC and which might be

Action / Policy	Description of relation, inputs / outputs
semantic interoperability in European eGovernment systems (SEMIC)	relevant to this action shall be explored and reused as much as possible in order to ensure interoperability as well as continuation of existing efforts.
Your Voice in Europe[3]	'Your Voice in Europe' is an existing platform that allows for public consultations to be carried out in order to collect structured data in the form of questionnaires. This platform will be explored as a data source of stakeholders' opinions.
EU Survey[4]	EU Survey is a platform provided by the European Commission under the ISA Funding programme with the intention of allowing Commission Services to easily create online surveys as a means of stakeholder opinion or other data collection for potentially any domain. This is also considered to be of potential interest to this action as an existing and complimentary source of data that could be consumed by certain business contexts.
'ISA[2] Action ICT implications of EU legislation'	Results and conclusions related with the properly preparation and evaluation regarding the ICT implications will be taken into account for developing reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge.
ISA[2] Action 'Interinstitutional framework for digital OLP management'	The proposed interoperable ways of structuring the content of the documents that need to be exchanged between the institutions for the purposes of the ordinary legislative procedure will be taken into account for developing reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge.
ISA[2] Action 'Legislation interoperability	Existing or under development building blocks (i.e. software, tools etc.) that support and improve the electronic exchange of documents and metadata in the context of the legislative process and the

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[3] http://ec.europa.eu/yourvoice/index_en.htm

[4] http://ec.europa.eu/eusurvey/

Action / Policy	Description of relation, inputs / outputs
tools (LEGIT)'	transformation between different formats will be taken into account for developing reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge.
ISA[2] Action 'European Legislation Identifier (ELI)'	The proposed approach for identifying legislation documents and the supporting assets and solutions will provide input for developing reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge.
ISA[2] Action 'Application of EU law: provision of cross-sector communication and problem solving tools (THEMIS)'	Reusable tools and the underlying semantic structures and data standards for monitoring the application of EU law will be taken into account for developing reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge.

6.1.8 REUSE OF SOLUTIONS DEVELOPED BY ISA, ISA[2] OR OTHER EU / NATIONAL INITIATIVES

The final output of phase 1, which shall amongst other things explore what tools are available for reuse by public administrations, will greatly impact the choice of solutions that might be reused by this action. Currently, the reuse of the following initiatives can be identified:

- The Football mobile application developed by the Latvian government shall be generalised in order to be made available for re-use by other Member States as well as extended with additional components to provide additional functionality.
- The Futurium platform, developed by DG CNECT.R3 and currently used by Commission's services, shall be further extended and generalised within the scope of this action in order to embed further data analytics as well as user interface and gamification capabilities and make them customisable for the governments.

6.1.9 EXPECTED RE-USABLE OUTPUTS (solutions and instruments)

All outputs generated by each of the pilots shall be provided in a re-usable format. The following are concrete re-usable outputs that can be identified at this stage:

Output name	Football Application and complimentary components
Description	The Football Application together with a set of optional and complimentary components that enhance the functionality of the software package shall be made available for reuse to other Member States' public administrations as well as Commission services.
Reference	
Target release date / Status	Q2 2016 / project currently being kicked-off

Output name	Futurium
Description	The Futurium Application shall be generalised and extended further with additional functionality and subsequently made available for re-use by other public administrations and Commission services.
Reference	
Target release date / Status	Q2 2016 / project currently being kicked-off

6.1.10 ORGANISATIONAL APPROACH

6.1.10.1 Expected stakeholders and their representatives

Stakeholders	Representatives
ISA[2]	The ISA[2] Committee will oversee the project, with the assistance of the ISA[2] Coordination Group.
DIGIT.B4 Digital Business Solutions –	This unit is the service in charge of this action. It will coordinate the interaction between the different stakeholders within the European Commission.

Stakeholders	Representatives
Corporate Financial Procurement & Policy Solutions Unit	
DG CNECT.R3

Support Systems and Tools Unit | This unit is an associated service of this project and will take part in the definition of the requirements, the performance and the guidance of this proposal and will ensure collaboration with other units, such as F4, O2, H3, G3, D3, D4, etc. that have developed important policies or R&I related to this proposal. |
| DIGIT.01

Governance and Communication Unit | This unit is an associated service of this project and will take part in the definition of the requirements, the guidance and providing lessons learnt of this proposal. |
| Latvian Ministry of Environmental Protection and Regional Development | Latvia has developed the application "Football", whose aim is to collect citizen's feedback on the quality of the services provided by Latvian public institutions. The application allows citizens to locate the closest public institution, to find the related contact information and to provide comments about the quality of the service they received. Latvia is an associated Member State of this action. |
| SG.A1 | This unit is an associated service of this project and will take part in the definition of the requirements, the guidance and providing lessons learnt of this proposal. |
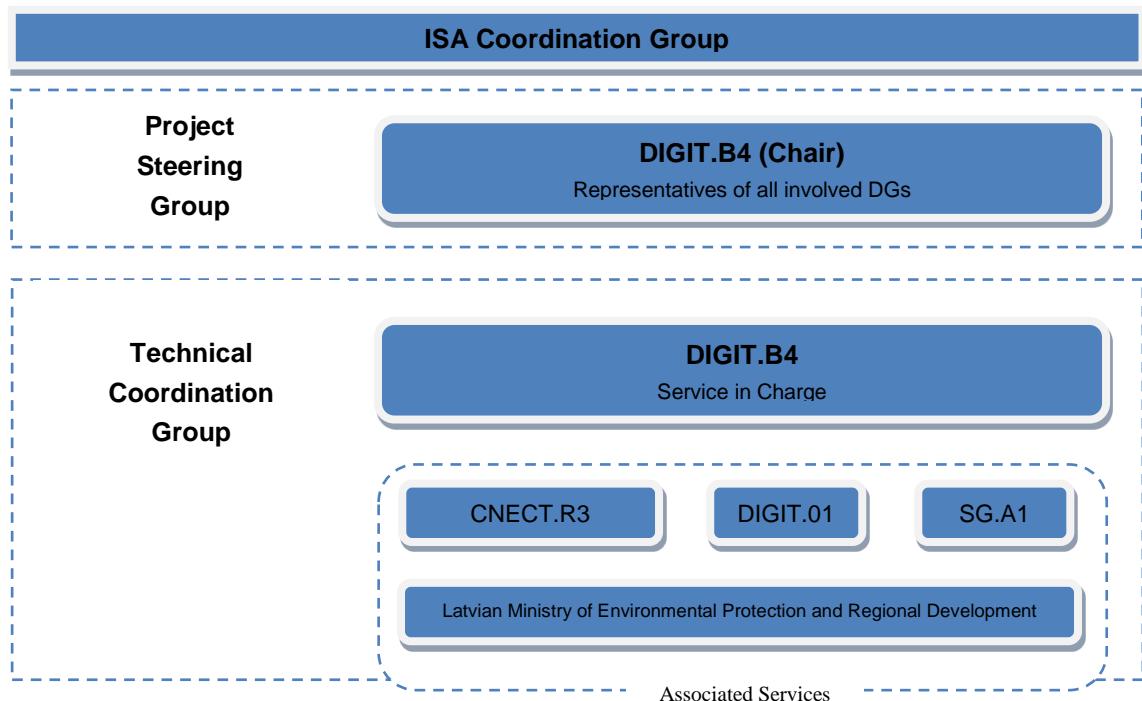
6.1.10.2 Communication plan

Event	Representatives	Frequency of meetings / absolute dates of meetings?
Project kick-off meeting	DIGIT.B4, CNECT, DIGIT.01	Once at the beginning of the project
Technical Coordination Group	Team leader and team members of DIGIT.B4 and CNECT.R3 technical teams	Bi-weekly
Project Steering Group	Team leader and HoU of DIGIT.B4 and team leaders and HoUs of associated services of each of the activities	Bi-monthly
Bilateral meeting with Member States	DIGIT.B4 representatives, Member States representatives	These are arranged by DIGIT B4 on ad hoc basis.
Bilateral meetings with Policy DGs	DIGIT.B4 representatives, Policy DGs representatives	These are arranged by DIGIT B4 on ad hoc basis.
Relevant conferences and events	DIGIT.B4 representatives with any other project stakeholder	On occasions whereby DIGIT is invited to participate in meetings organised by Member States, policy DGs etc.
Dedicated ISA^2 group	DIGIT.B4 team members, Stakeholder's representatives, ISA unit	These meetings are arranged by the ISA unit.
Joinup	(online)	

6.1.10.3 Governance approach

This action is part of the ISA programme and therefore it follows the ISA governance structure with the action reporting back to the Member States' representatives pertaining to the ISA working groups.

This action will actively involve all associated services at each of the different stages. The governance structure for this action is depicted in the following diagram.

In order to achieve its objectives this project will work closely together with primarily identified associated DGs to better define the business needs and challenges, bearing in mind the need of potentially other services in order to come up with generic and extendable software solutions. Particular attention will be given to the coordination activities in order to ensure a successful undertaking of the different activities.

6.1.11 TECHNICAL APPROACH

This action shall aim at contributing to making governments throughout Europe open and participatory through the implementation of a number of practical activities. These activities shall strive to make better use of data which is already being collected either through existing internally provided platforms or else through external data collection sources. This data shall be the basis for generating knowledge that brings value to business contexts and contribute towards decision making processes which are more strongly data-driven.

In **phase 1** of this action, executed in 2015, activities were focused on the **identification of the requirements stemming from the public administrations in the different Member States**. The requirements were captured through a field exercise, primarily in cooperation

with relevant networks such as the European Network of Public Administrations (EUPAN) and the results of which have provided a panoramic view of the needs within the Member States. In addition, this action also cooperates with a number of Commission Services in order to identify the concrete needs and value added that the open and participatory government practices would bring to decision making processes.

With a better visibility of the needs of the Member States and the Commission Services this action started exploring and assessing **existing assets, reusable software solutions, standards and vocabularies** that can address the identified needs. The identified reusable software solutions shall be classified according to the type of participation platform that it belongs to in order to make it easier for public administrations and Commission services to identify which reusable software might be relevant for them to consider according to the type of challenge they wish to address.

The above mentioned activities are complemented by further activities within this action with the intention of consolidating and generalising the identified solutions in order to allow them to be used in different areas that aim to address a common challenge. These are subsequently integrated in a way that they can consume existing data sources, generate knowledge and present outputs. The **provision of a number of generic and customisable reusable software solutions** shall drive forward stakeholder engagement, enable perception and opinion elicitation and facilitate the generation of participatory knowledge in decision making processes.

The development effort for delivering a number of **software solutions** is foreseen to produce two main streams:

Generalisation of components or integration of components:

- In the context of policy making the existing **participatory platform Futurium** (developed by CNECT) will be further generalised and extended with functionalities such as more customisable **workflows, group/community management, access rights as well as user experiences**. The platform is currently used by DG CNECT and other DGs to support stakeholder engagement and evidence based policy for the Digital Single Market. Furthermore, several local governments and non-governmental organisations have shown interest or are willing to adopt the Futurium model to support their policy making

processes[5]. The extended platform should build on and extend the generalisation of the existing open source assets which needs to be consolidated to allow customisability as well as extensibility through the plug in of modular generic components, e.g. by adding graphical, ease-to-use configuration editors.

- **Link to social media and other collaborative work environments** in order to be able to explore different sources of information containing scientific evidence, users' perceptions, expectations and opinions.

Modular generic components to be assessed and consolidated into a framework of software solutions, in accordance with the requirements identified during phase 1 and phase 2 – track 1 (see below) of the action. Potential software components include:

- Components for **sentiment analysis techniques** in order to analyse the comments and co-created content posted by users on the platform and decide whether an input is pro or contra the topic/vision/idea discussed. Such techniques will also provide a means to calculate the overall sentiment of participants with regards to a topic debated on the core platform or other social media, thus building further upon the "likelihood", "feasibility" and "desirability" features that already exist in Futurium. Components to debate and analyse likely impacts of the proposed topics/visions/ideas will be added.

- Components for **data analytics**, in order to be able to classify the different topics discussed and establish some figures about them such as: relevance, periodicity, degree of participation, activity etc.

- Components for **data mining techniques** - in collaboration with action nr. 1.22 Big Data and Open Knowledge - to understand the correlations between variables, cluster data, detect hidden patterns in data, perform trend analysis (including time series), extract facts from evidence, link evidence to the other content types according to relevance, etc. This part of the work should re-use as much as possible existing components and data mining tools, possibly available as open source.

- Components for **opinion modelling and text mining techniques** in order to extract from the posts of users, on the core platform or other existing collaborative tools and/or social

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[5] The Futurium will be discussed in several events where current and perspective users will be invited. This includes a networking session in the context of the annual ICT2015 events in Lisbon.

networking tools, the main topics of interest, the key opinions discussed and also the popularity (strength) of each one. Combined with social network analysis (e.g. types and number of connections, number and popularity of posts), this can also help identify the opinion leaders on the platform. Re-use and adaptation of open source Natural Language Processing (NLP) software will be explored, such as GATE[6,] Apache OpenNLP[7], Apache Mahout[8] or UIMA[9].

- Components for **visual analytics techniques** for presenting opinions, sentiment or any other type of data in formats which can be understood both by participants but also by decision makers, who can then use them as input to legal, organisational or political decision making processes. This will include the graphical representation of various types of user inputs and their inter-relations (e.g. structuring topics/visions/ideas).

- Components for **reporting (dashboards)** will allow to build a more flexible and adaptable solution, since from the reporting area it is possible to focus on the interested domains (or dimensions for analysis) of the organisation. A multi-layer reporting involving different stakeholders will make it easier the decision making resulting in a more efficient organisation.

Within **phase 1** of this action the above technologies shall be applied in **three specific business contexts** whereby for each business context a proof of concept will be executed and subsequently further elaborations shall be performed in phase 2 of this action.

Business context 1: Improving services through the consumption of citizens' feedback

The analysis of citizens' feedback through data mining and visualisation tools allows for public administrations to **capture trends and knowledge that are able to provide insights** that would otherwise be difficult to obtain if analysis is only performed manually by individuals. Such tools allow the generation of knowledge that could provide an edge over manually generated knowledge.

The State Chancellery of Latvia has developed a leading mobile application called 'Football' that not only provides useful information to citizens on the services offered by public

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[6] https://gate.ac.uk/

[7] https://opennlp.apache.org/

[8] https://mahout.apache.org/

[9] https://uima.apache.org/

administrations but also allows the citizens to in turn provide feedback on the services received. The purpose of this application is to promote 'good football' which in Latvian terms reference to the provision of good and effective public services without bouncing citizens around different public administrations.   The feedback captured through this mobile application is currently processed and analysed manually and this action therefore aims at providing data mining and visualisation tools that can digest the free-text form comments provided by citizens in order to complement the existing functionalities of this mobile application.

Business context 2: Open participation through perception and opinion elicitation
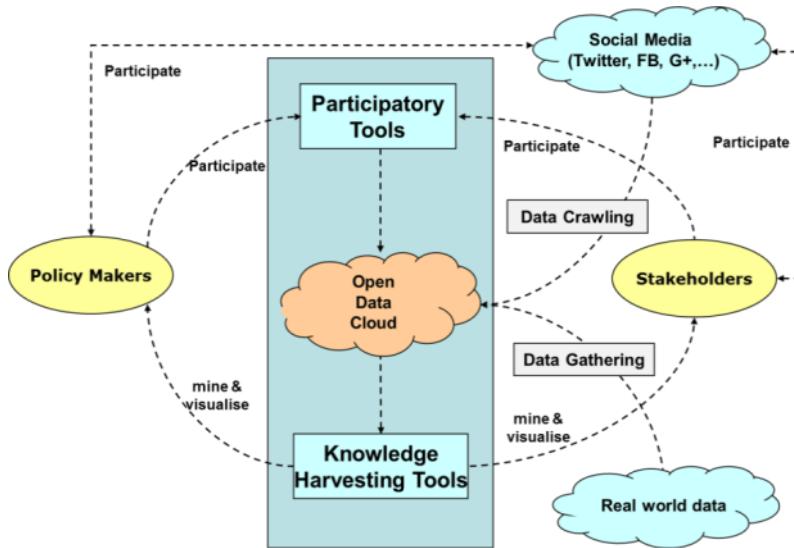
This activity will look into the provision of tools that make use of existing and well established collaborative tools within a public administration in order to elicit users' and staff members' perceptions, expectations and opinions as a means of influencing internal decision making processes related to different domains such as human resources, service provisions as well as internal procedures. Through this influencing mechanism the public administration would be allowing open participation for users and staff members without the need to introduce a new platform to which the participants need to be accustomed to or forced to use in order to communicate their opinions.

Business context 3: Policy making through participatory knowledge

This activity will reuse and extend Futurium in order to develop a **platform for open government through participatory knowledge combining people's opinions with scientific evidence**. [Futurium](#) was initially developed with the primary purpose of hosting and curating visions and policy ideas to support a participatory foresight project, Digital Futures. However, it has turned into a general platform on which to experiment with new **policy-making models** based on **foresight methodology, scientific evidence and participation**. Futurium is based on the open source content management system **Drupal**. The platform implements a data model that maps and co-relates typical policy making concepts (e.g. 'vision', 'desirability', 'evidence', 'impact', 'challenge', etc.) into Drupal content types and allows users to co-create visions and policies and their inter-relations as well as to provide scientific evidences and organise participatory events, just like popular social networks. Extending Futurium, as outlined above, will allow platform users (e.g. local governments, NGOs, Unions etc.) to capture explicit knowledge, but also make use of latent knowledge by employing sentiment and text analysis and opinion modelling techniques.

The Futurium is meant to provide a credible response to the need of running structured conversations with stakeholders and making sense of their input. This is currently difficult to achieve in popular social media because of their unstructured and uncontrolled approach vis-à-vis user's inputs. Conversely, traditional stakeholder surveys provide a fully framed approach to gather data but are usually less usable and attractive than social media. Futurium provides an optimal trade-off between the informal, unstructured and uncontrolled social media approach and the formal, structured and more traditional approach of surveys. This allows broadening participation while providing more accurate and cost-effective feedback to policy makers.

By applying the extended Futurium platform to a policy making context, the knowledge generator will result in better decisions leading to improved accuracy and legitimacy of public administration actions particularly for actions involving multiple administrations. The interaction between the different entities in this action is as per the following diagram:

A continuation of such exploratory activities, which were kicked off in phase 1 of this action, shall be continued throughout **phase 2**, to be executed in 2016. Phase 2 shall be composed of **3 tracks** as follows:

- **Track 1**: continue with the further **identification of the requirements** stemming from the public administrations in the different Member States as well as Commission services. In addition this track shall also continue the exploration and assessment of **existing assets, reusable software solutions, standards and vocabularies** that can

address the identified needs; inputs from early usages of the Futurium platform will be taken into account (we expect that by the time the new project will be launched we will benefit from the input of at least five Futurium instances).

- **Track 2**: continue the implementation of already identified pilots, details in the 3 business contexts of phase 1, through the **generalisation of the Futurium functionalities** and thus the **extension** of their use to **policy agnostic contexts** in order to maximise the benefit and return on investment of the proposed solution. Furthermore, this track shall also ensure that the software components developed for these pilots are extended further through new functionality, new user experience contexts (e.g. gamification, interactive and mobile use,…) which shall be driven by the needs identified;

- **Track 3**: launch a **new wave of pilots** in specific domains which hold a **potential** of later being **generalised** and **scaled-up** to be made available to different services **agnostic of their specific policy area**. One potential area of interest could be the **pre-legislative consultations through stakeholder engagement**. The consolidation and integration of different software solutions shall enable the generation of participatory knowledge through the digestion of data coming from sources that are both internal and external to the public service/organisation.

Pre-legislative consultations will be more information-led by better exploiting evidence/data and opinions collected through existing platforms in a way that give a more accurate and wider consideration of stakeholder perceptions and opinions as well as to scientific evidence. Better digestion of feedback received through the **Better Regulation** initiative can also be considered as a new source of citizen participation that will require better analysis of the feedback received. The aim of this initiative is to ensure that policy is prepared, implemented and reviewed in an open, transparent manner and to ensure that the full process is fed with the best available evidence and as well as stakeholders' feedback. For this reason, after better analysis of the Member States' and the Commission's common needs through the activities defined in track 1 above, some reuse of existing software components, particularly those provided by the Futurium platform, will be pursued in this context.

The software solutions to be considered in this context would support the analytics and discovery of knowledge through methods such as automatic clustering based on the evaluation of structured or non-structured data sources. This is considered to be particularly key in policy areas where large number of consultation feedbacks are

received and are required to be analysed and digested. Techniques to be used could include analytics and discovery as well as reporting and visualisation methods.

NOTE relevant to all activities - Personal Data Privacy

In this process, privacy and data protection rules will be respected and carefully analysed before implementing a solution. Data anonymisation practices, such as data scrambling will be applied if necessary.

6.1.12 COSTS AND MILESTONES

6.1.12.1 Breakdown of anticipated costs and related milestones

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA[2]/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	**Phase 2.1** D.1.- MS and EC requirements assessment D.2.- Inventory of reusable software solutions, standards and vocabularies	80	ISA[2]	Q2/2016	Q1/2017
	Phase 2.2 D.3.- Specification definition D.4.- Generalisation of core platform and modular components D.5.- Extension of core and modular components in the context of the pilots	160	ISA[2]	Q2/2016	Q1/2017

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA^2/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Phase 2.3 D.6.- Pilot requirements assessment D.7.- Specification definition D.8.- Implementation of core and modular components in the context of the pilots	200	ISA^2	Q3/2016	Q1/2017
Operational					
	Total	440			

6.1.12.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution – Phase 2	440	

6.1.13 ANNEX AND REFERENCES

Description	Reference link	Attached document
A vision for Public Services	http://ec.europa.eu/digital-agenda/en/news/vision-public-services	
The Futurium—a Foresight Platform for Evidence-Based and Participatory Policymaking	http://download.springer.com/static/pdf/620/art%253A10.1007%252Fs13347-013-0108-9.pdf?auth66=1410041623_02c8d634d5b06ca384c1cf468537d06d&ext=.pdf	

6.2 LEGISLATION INTEROPERABILITY TOOLS – LEGIT (2016.38)

6.2.1 IDENTIFICATION OF THE ACTION

Service in charge	SG.B4, Legal Service
Associated Services	DIGIT.B2, Council GSC, Parliament, Publications Office of the EU

6.2.2 EXECUTIVE SUMMARY

This action aims specifically at modernising and improving the efficiency and quality of the legislative process across the Union, promoting interoperability between the systems of the different actors of the process. It seeks to facilitate the cooperation between public administrations at EU, national, regional and local levels.

Given the high diversity of legislative traditions encountered across the Union and the different levels of modernisation, it would be extremely difficult to provide a universal single turnkey ICT solution that adapts to each specific context.

Instead, this action proposes an optimal solution based on reusable fundamental building blocks.

The activities covered by this action have been organised in four distinct and complementary clusters.
Community management activities, that are necessary to foster take-up, have been designed to cover all the clusters. These activities have contributed to the delivery of the community strategy and definition of the action plan for the community.
In 2020, the action will focus on ensuring the sustainability of its activities from clusters A, B and D under Digital Europe Programme and prepare for this transition. In order to achieve this, the action will:

- expand the pool of users and strengthen the community by having a more active participation from its members and by delivering trainings;
- continue to improve, together with its community, the solution that will ensure interoperability and have an user-driven evolutive maintenance;
- raise awareness about the results of this action and its community.

By doing this, the action will respond to the recommendations from the Interim evaluation of the ISA[2] programme regarding awareness-raising beyond national administrations and

moving from user-centric to user-driven solutions. It will also support the Specific Objective 5 (f) of Digital Europe Programme:

"support the design, testing, implementation and deployment of interoperable digital solutions for EU level public services delivered through a data-driven reusable solutions platform, fostering innovation and establishing common frameworks in order to unleash the full potential of the public administrations' services for European citizens and businesses;"

Cluster A: Development of a web-based legislation editor – Continuation of LEOS

The LEOS project stressed that drafting legislation in an open and standard XML format would pave the way to efficient interoperability between the different actors of the EU legislative process. After a study on tools currently used by EU and Member States' public administrations to write their legislation, a need for a new generation of authoring tools was raised and the LEOS prototype was released.

This prototype is a web-based authoring tool providing drafting features that enable to easily write legal texts in a controlled WYSIWYG environment, organise it in divisions (articles, chapters, sections…), compare versions, generate printable views, insert comments, highlight some parts of the texts. Stakeholders and key users evaluated the prototype, praised the achievements and highlighted incomplete or missing capabilities.

This action allows development activities necessary to make the existing prototype evolve into a stable, complete and mature product enabling users to draft EU legislation in XML.

Cluster B: Interoperable and re-usable independent products (components, services or applications)

The web-based authoring tool prototype appeared very interesting to a diversified audience that is facing some common problems. The cluster B would focus on understanding the needs of the community and, as a result execute development activities necessary to extend the existing software prototype into more complete and re-usable building blocks released under open source licence.

The development of software components or services for the validation and transformation of semantic elements defined and documented by the IFC are also contained in Cluster B.

Cluster C: Realizing the vision of the legislative process landscaping study

In September 2015, the ISA Unit of the European Commission (DG DIGIT) launched a study to draw a comprehensive view of the EU legislative IT landscape in order to identify any potential gaps, synergies and/or opportunities. This study is made of:

- A description of the overall lifecycle of the inter-institutional legislative process (AS-IS), including the business processes, the systems used in each major legislative step by each of the institutions, the specifications used to exchange information, etc.
- Identification of a first set of areas where intervention is considered beneficial (TO-BE). These include areas where there are opportunities for synergies and efficiency gains, for harmonization of existing standards and specifications, for reuse or extension of tools to cover new needs. Missing pieces and solutions to create a rationalised domain are also identified and proposed for further development.

This action, via its cluster C, is funding the development of parts of the missing software components detected and highlighted in the TO-BE vision defined in the study.

Cluster D: develop a multi-purpose text-mining component based on pattern recognition designed to detect EU references or citations in unstructured text and value them further – continuation of Ref2Link

In the course of their interactions with the European Institution, citizens, businesses and national administrations face a vast amount of online content filled with EU legal references. These legal references are potential direct gateways to full legal texts available in reference databases. However, they do not systematically translate into direct web links, as the process of creating these links for digital service providers can be extremely tedious despite the fact that references are designed as unique identifiers.

Ref2Link – for 'Reference to Link' - aims at filling this gap. Ref2Link can fit in any use case where references that comply with a normalised format have to be processed for domain specific purposes.

It can also provide added-value for Web editors or developers who can delegate this processing logic to a specialised component.

It had been initially developed as a building block by Legal Service IT of the European Commission for its Knowledge Management system, its own information systems and Intranet and is now registered as a candidate corporate building block. It has embarked the ISA² program in 2018 and is seamlessly integrated in LEOS which can be considered as a reference integration although it can still be used independently from it.

The purpose of this action cluster is to enhance the current Ref2Link package to offer it as open source software to other EU institutions, Member States and ultimately to citizens who will benefit from a more straightforward navigation in EU-related online content.

As the ISA² multi-annual program closes to its end, the sustainability path for Ref2Link includes reinforcing it as an internal IT EC building block on its own and applying to join the future wider scope of Digital Europe Program (DEP) currently under consultation.

6.2.3 OBJECTIVES

The objectives of this action are:
- make the legislation process more efficient, proposing new interoperability solutions and replacing repetitive manual tasks at the different actors by automatic processing and reuse wherever possible;
- develop solutions for common needs, and make them available for reuse under EUPL licence;
- support the work of inter-institutional committees, providing reference implementations after publication of their specifications;
- ensure the consistency of different initiatives in the area of the EU decision making process, providing pieces of software necessary for better convergence and efficiency;
- promote the usage of interoperability standards by proposing technical analysis, architecture designs, reference implementations and tools;
- value the references contained in EU related content by automating the creation of clickable links they may contain. Hyperlinks are the core interoperability mechanism of the Web, they are typical silo-breaking gateways fostering navigation across domains;
- develop a component (Ref2link) that could be used in any given country, policy, administrative level or business domain and can act as the glue that binds them all together;
- support and develop a community around the results of this action;
- ensure a smooth transition to the phase coming after the end of ISA^2 programme.

6.2.4 SCOPE

This action delivers software implementing specifications and standards defined by other bodies active in the legislation domain (e.g. standardisation committees).

In scope:

- Development of software supporting interoperability of the legislative process and legislation:
    - tools for drafting legislation in a structured format (XML);
    - tools for providing structured feedback on proposed legislation;
    - tools for the transformation of legislation between different structured formats;
    - tools supporting the electronic exchange of documents and metadata in the context of the legislative process, containing workflow information ;
    - a configurable tool released with a default 'lowest common denominator' detection scheme pointing to the common public EU law or generic repositories such as EUR-Lex, Curia, e-Justice Portal and Council Register.

Not in scope:
    - semantic assets for the legislative process; the definition of common vocabularies and reference tables remains under the responsibility of existing committees or initiatives (SEMIC, ELI, ECLI, IMFC,…);
    - definition of new standard formats for supporting the legislation process interoperability; the action will propose tools supporting the agreed common formats;
    - for Ref2link, the configuration of detection rules for national or specific domain-related repositories, although the documentation necessary to do so will be available.

6.2.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[10].

6.2.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and	The development of a tool for drafting legislation in a structured format will facilitate the electronic exchange of

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[10] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	documents and metadata in the context of the legislative process and thus improve interoperability. The reusable software solutions delivered through the action contribute to the implementation of the *European Interoperability Strategy* by ensuring that the outputs are shared and re-used by public administrations in Europe. The Joinup collaborative platform is used as a means for sharing the experiences as well as the deliverables of this action with the Member States' public administrations. Ref2Link complies from the outset with the principles of openness, transparency, reusability and neutrality. It comes as a building block by design and fosters linking to EU information sources. It adds immediate value to EU repositories, especially when these repositories have implemented and published a systematic semantic interoperability scheme. Such schemes rely on normative and open systems for referencing resources addressable by URIs or linked data technologies. The package will also potentially fit in national or domain interoperability frameworks requirements by allowing the tailoring of detections to these contexts.

Question	Answer
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. This action is driven by the "landscaping exercise on initiatives in the area of the legislative process" aiming at avoiding overlaps with other on-going solution or project. To our knowledge, there is no alternative solution covering the same functional scope.

6.2.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The proposal will allow interoperability of the systems supporting EU decision making process and therefore will enable to improve the quality of EU legislation across all EU policy areas.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Ref2Link is already operational at EC Legal Service. Several EC DGs or EU institutions have expressed their interest in re-using the Ref2Link building block. Because of its core missions, the EC Legal Service has to deal with multiple policy sectors. As a consequence, Ref2Link detection rules have already been configured for domains which are not strictly limited to EU law e.g. competition, trade or financial management.

6.2.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Public administrations from Greece, France, Estonia, Finland, Denmark, Germany and Spain have already shown their interest in LEOS development activities. Also the Slovenian government is currently reusing LEOS components as part of their own IT projects. The following other contacts have shown interest in LEOS: United Nations, Israel, Canada, European Union Intellectual Property Office (EUIPO), European Central Bank, Flemish Parliament. According to the Legislation Editing Open Software (LEOS) Perceived Quality and Perceived Utility Report July 2016, issued as part of the execution of the ISA programme monitoring, the LEOS tool received a positive Perceived Utility assessment (4.07/5). According to the respondents, the LEOS tool allows its users to save costs, improve efficiency and transparency and also allows to facilitate the interconnection of legal databases. Also, the standardisation of the format and the ability to control the workflow are key benefits. The demographic profile of the respondents comes from 6 different Member States. The implementation of a common drafting tool with the Council will

Question	Answer
	further extend the use of the tool to public administrations in EU Member States. Ref2Link is ready to be used by all national administrations when addressing EU law public repositories. They will also be able to tailor it for their own needs.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	N/A

6.2.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. As announced in the DSM strategy, the Commission will support the take-up of the new European Interoperability Framework (EIF) by national administrations with the aim to strengthen the interoperability of public services in the EU. In order to comply with the legal obligations set out for EU public administrations and in view of its own digital transformation, the European Commission has decided to undertake a number of concrete actions. One of these actions is the launch of the pilot phase for drafting legislation in the Ordinary Legislative Procedure using a web-editor based on LEOS in 2017/2018. In order to foster better cooperation and break down organisational and digital silos, the Commission and the Council decided end 2017 to collaborate closely and share the same web-editor. In 2019, this common web-editor based on LEOS has been delivered to the Council and a pilot has been started. The European Parliament is closely associated to the works.

Question	Answer
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The proposed action is fully in scope of ISA² and builds on existing results from the ISA programme (LEOS action). It supports the interactions between European Public Administrations, Businesses and Citizens and contributes to the implementation of the EIF and DSM.

6.2.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	LEOS software components (under EUPL)
Description	Set of software components supporting the edition, the review, the transformation and the validation of legislation
Reference	https://joinup.ec.europa.eu/software/leos/release/all A Github repository might follow.
Target release date / Status	Ad-hoc deliveries
Critical part of target user base	N/A
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	N/A

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Ref2link package, reusable by EU institutions and Member States

Description	The package includes a text processing service available for integration as a client library and a web service. The rules for detection of main EU law repositories are set by default, with the possibility to extend the rules for digital services providers. The package includes supporting material (Web site, documentation, sample application)
Reference	https://webgate.ec.testa.eu/ref2link/ https://webgate.ec.europa.eu/fpfis/wikis/pages/viewpage.action?spaceKey=DAMSP&title=Ref2Link
Target release date / Status	Q4 2019 (first ISA² release on Joinup) Q2/Q4 2020 next releases
Critical part of target user base	EU institutions and Member States
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	EC Legal Service LEOS EC SecGEN DPMS - Data Protection Records Management, it is used by the European Commission DG SG to register data protection declarations. EP Xenat - tool of the European Parliament for the drafting of Legislative Documents

6.2.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	The proposal is reusing the OASIS standard for legislative and Judiciary documents (Akoma Ntoso, aka LegaldocML). Ref2Link makes use of any solution where semantic and technical interoperability is promoted and/or implemented. This covers many pending ISA² actions under the umbrella of SEMIC.

Question	Answer
	ISA² Open CMIS Repo, an implementation of the CMIS open standard for document management that enables LEOS to ensure persistance of the stored data.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Currently, Ref2Link can process ECLI or ELI identifiers and produce links to corresponding EU repositories such as EUR-Lex, Curia or the ECLI Search Engine on the European e-Justice Portal.

6.2.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The action contributes to the Commission priority n°2: A Digital Single Market for Europe and priority n°10 Democratic change, as the development of legislation interoperability tools is bringing down barriers to unlock online opportunities for stakeholders to participate in the law-making process.

6.2.6 PROBLEM STATEMENT

The problem of	Complex EU decision making process wich leaves room for improvement on efficiency and interoperability
Affects	All stakeholders participating in the EU decision-making process, mainly, the Commission, the Council and Member States, the Parliament and the Publications Office
the impact of which is	That several tasks are carried out manually at each institution or public administration, affecting efficiency and sometimes creating quality issues
a successful solution would be	Automatic processing of these tasks, increasing the efficiency of the process and the quality of EU legislation

The problem of	Non-clickable references in EU-related online content
Affects	Users of digital services in the public, businesses and public administrations
the impact of which is	Lack of awareness by failing to consult detailed content. Loss of time by having to navigate to home page of various EU repositories and look up through search forms.
a successful solution would be	Ref2link that translates references to direct links to corresponding resources.

The problem of	Broken links on references in EU related online content
Affects	Users of digital services in the public, businesses or public administrations, editors of Web content.
the impact of which is	A loss of time for Web editors who have to regularly review the links.
a successful solution would be	Ref2link that centrally manages the way links are built and continuously adapts to changes that occur in target repositories in a sustainable way.

The problem of	Manually or specifically building links on references in EU related online content
Affects	Web editors or developers.
the impact of which is	Loss of time when vast amounts of content are involved. The requirement for specific management of the logic for contructing links. Time lost in reviewing content over time. A duplication of efforts.
a successful solution would be	The implementation of Ref2link which automates the creation of links and continuously adapts to changes in target repositories in a sustainable way.

The problem of	The lack of quality, and in particular the lack of proper formats, in the encoding of references in EU-related online content
Affects	Users of digital services in the public, businesses or public administrations.
the impact of which is	Users unable to reach the online resources.
a successful solution would be	Ref2link that will trigger whenever a valid format is detected.

6.2.7 IMPACT OF THE ACTION

6.2.7.1 Main impact list

List the impacts of the action's outputs (following the proposal) on the beneficiaries to the extent possible. Some impacts are listed below – add others as needed.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Tasks carried out manually at each institution and public administrations regarding legislative editing could be automated. Limit specific development solutions for generation of web links.	By the end of ISA² Program	EU institutions; Public administrations
(+) Savings in time	Tasks carried out manually at each institution and public administrations, regarding legislative editing will be automated. Improved user experience, user guidance during drafting and collaboration features provided by	By the end of ISA² Program	EU institutions Public administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	LEOS will improve the efficiency of the drafting process. Productivity gain by speeding up navigation and online content creation		
(+) Better interoperability and quality of digital public service	Legislation will be generated in a format readable by computers Improving content quality thanks to a general silo-breaking effect brought by more links available	By the end of ISA² Program	EU institutions Public administrations , other stakeholders including citizens
(-) Integration or usage cost	The legislative process of the different institutions will be automatically interconnected, without manual transformation being required anymore Based on W3C standards (SOA or Web client integration). Will be supported by online documentation.	By the end of ISA² Program	EU institutions and Public Administration s
(+) Increase in quality of EU legislation	Tasks carried out manually at each institution will be automated, reducing human mistakes	By the end of ISA² Program	EU institutions
(+) Increase in security of EU legislative process	Drafting and reviewing legislation in a structured format (XML) will assure data integrity and consistency of legislative documents over their	By the end of ISA² Program	EU institutions

Impact	Why will this impact occur?	By when?	Beneficiaries
	entire lifecycle within each institution and between institutions. Supporting the electronic exchange of documents and metadata in the context of the legislative process, containing workflow information, will guarantee the availability, the protection, the control and tracking of information		

6.2.7.2 User-centricity

The LEOS system has been designed with the goal of improving user experience. The main goal is to provide a tool that can, at the same time, facilitate automation by structuring content, and ensure a good user experience. To ensure these main goals are met, key users from the Commission services (drafters, lawyers) are regularly consulted to provide feedback on features being developed in the web-editor based on LEOS, by means of several hands-on session during which these users can test the real system and share their feeling about its completeness, efficiency and user friendliness. Further user feedback is collected during demo sessions organised for potential users, and during events where the project is presented. The collected feedback is analysed and areas for improvement are identified and prioritised. The close collaboration which is now developed with the Council will allow to take on board needs of Council users as well as Member States.

As the prototype is constantly improving, the community around LEOS would be used to:

- Improve the quality of the solution by better capturing the user needs and
- Enable the community to contribute and therefore take part together in the co-design and co-creation of LEOS.

Ref2Link has been developed from the beginning with user-centricity in view since its default usage is to generate links for the benefit of users.

6.2.8   EXPECTED MAJOR OUTPUTS

Output name	Technical analysis
Description	Research activities, feasibility study, conclusions driving solutions' implementation
Reference	N/A
Target release date / Status	Adhoc updates, depending on research activities on the agenda

Output name	Architecture design
Description	Based on the conclusions of the technical analysis, architecture guidelines driving the implementation of the prototype
Reference	N/A
Target release date / Status	Adhoc updates, accompanying open source release

A notable side-effect of wide use of a tool like Ref2Link is that it can raise awareness of system owners and suppliers about the importance of providing stable referencing and simple first level linking capacities within their systems. It contributes to the overall semantic and technical interoperability landscape.

Our experience with some EC internal systems is that much focus has been set on SOA interoperability which is already an advanced mechanism. On the other hand, mechanisms for building simple links have not always been implemented and/or openly published.

6.2.9 ORGANISATIONAL APPROACH

6.2.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives
IMFC	Inter-institutional Metadata and Formats Committee
Akoma Ntoso/LegalDocML Oasis Technical Committee	https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=legaldocml
ISA^2 Coordination Group (or ISA CG equivalent)	The group assists the Commission in translating priorities into actions and to ensure continuity and consistency in their implementation.
Secretariat-General of the European Commission	Unit SG.B4 (Working methods & Decision-making Process)
Legal Service of the European Commission	LEG Team (Quality of Legislation) Unit SJ.RHIF.IT (Informatics) EC LEGAL SERVICE INFODOC(Business manager) EC LEGAL SERVICE IT(IT System supplier)
Directorate-General for Translation of the European Commission	DGT.C (Translation) and DGT.S (Customer relations) Unit DGT R3 (Informatics)
Directorate General for Informatics of the European Commission	Unit DIGIT.B.2 (Solutions for Legislation, Policy & HR)
Organisations in Member States	Members States representatives of administrations either working on similar initiatives or interested in using produced software.
General-Secretariat of the Council of the European Union (GSC)	DGF2 DGA CIS

6.2.9.2 Identified user groups

- Legislation drafters from the public administrations in the EU Member States.

- Any public administration, the judiciary and EU citizens using digital services adopting Ref2link.
- Legislation drafters and other actors of the decision-making process in the European Commission services. Drafters will use the editor for their day-to-day work. They participate to workshops organised by the Secretariat- General of the Commission in order to provide feedback on features.
- Users in the General-Secretariat of the Council working with Member States involved in EU law-making.

6.2.9.3 Communication and dissemination plan

The project team will systematically drive development activities after consultation of interested parties. As an example, committees like the IMFC will be consulted before launching any development activities in the area of transformation between formats or the implementation of new metadata extension. The communication with these committees will be handled during the respective meetings (plenary or working group meetings) in which presentations for information or for discussion will be put on the agenda.

As regards the development activities related to the LEOS drafting tool, the Joinup platform and other ISA² communication channels will be used to support the communication and the dissemination of material (software, documents…) between interested stakeholders. Based on a consolidated community strategy several actions would be taken in order to support the natural growth of a community around the results of this action.
In case a community of interest is emerging (made of representatives of some national organisations and Institutions working on similar projects) some workshops could be organised in order to share experiences (lessons learnt, technical issues, change management strategies…) and also to identify and plan development synergies, the Joinup platform being also able to support collaborative development activities.

For Ref2Link, it will focus at business and IT technical levels. As Ref2Link is potentially a multi-domain tool, it is difficult to estimate the number of integrations amongst EU institutions and members states.
For this reason, all the material and supporting technical documentation related to the use and integration of Ref2Link will be made available through Joinup and use the ISA² communication channels made available in the course of the program (web site, newsletters, events).

Ref2Link is contributing to the Interoperability academy by providing support material illustrating the benefits of using Euopean standards for the referencing of legal resources.

6.2.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[11] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of drafted acts	All proposals in the Ordinary Legislative Procedure	2019/2020
Number of transmitted acts to other Institutions	All proposals in the Ordinary Legislative Procedure	2019/2020

Description of the KPI	Target to achieve	Expected time for target
Number of Digital services or IT systems – outside of EC Legal Service - using Ref2Link.	10	Q4 2020

6.2.9.5 Governance approach
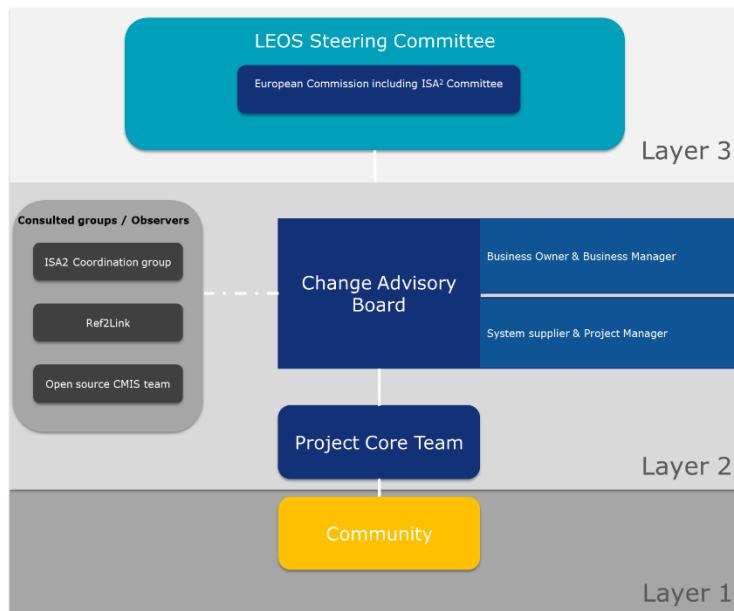
The governance approach for LEOS as part of **2016.38. Legislation Interoperability Tools – LEGIT** has been drafted in accordance with Article 4 Decision (EU) 2015/2240[12]. Additional sources of inspiration were the proposal on governance mechanism[13] put forward by the ISA[2]

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[11] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

[12] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA2 programme) as a means for modernising the public sector https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32015D2240

[13] https://joinup.ec.europa.eu/collection/sharing-and-reuse-it-solutions/2-governance-mechanism#2.1

Action - **2016.31 Sharing and reuse** and other best practices of well-established open source communities.

Figure 1 LEOS Governance structure

Layer 1 – the Community

The first layer is the one driving the evolution of the project, and its members are the main beneficiary of the results of the action.

The community can encompass stakeholders from following categories:

- Member States (first priority);
- Others according to Article 14 of Decision (EU) 2015/224014.

International cooperation

1. The ISA^2 programme shall be open to participation by other countries of the European Economic Area and by the candidate countries within the framework of their respective agreements with the Union.

2. Cooperation with other third countries and with international organisations or bodies shall be encouraged, in particular within the framework of the Euro-Mediterranean and Eastern Partnerships and with neighbouring countries, in particular those of the Western Balkans and Black Sea regions. Related costs shall not be covered by the ISA^2 programme.

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[14] https://eur-lex.europa.eu/eli/dec/2015/2240/oj

> *3. Where appropriate, the ISA² programme shall promote re-use of its solutions by third countries.*

Layer 2 – Operational/Technical layer

The middle layer ensures that the policies and strategies for the action are implemented accordingly and in time. This layer includes the following governance bodies:

- **Project Core Team** – responsible for the technical direction of the ISA² action, for receiving and filtering the requests from the community; mainly DIGIT.B2 development team. The Project Core Team will be able to deal with most requests from the users without consulting the Change Advisory Board. Only the requests that are of Change Request nature will be submitted to the Change Advisory Board. The team will take note of the requests as soon as possible, taking into account the current workload and established priorities.

- **Change Advisory Board (CAB)** – responsible to advice the Change Manager (DIGIT.B2) in the processes of evaluation, prioritisation and resolution of changes. DIGIT.B2 as the president of the CAB meetings, who prepares the agenda, takes the meeting minutes and takes a decision when there is no consensus reached.

- **Consulted groups / Observers** – depending on the topic of the CAB meeting, the consulted groups / observers might be invited or consulted. Convening consulted groups or observers is an option at the prerogative of the CAB.

Layer 3 – Policy and strategy

This layer is responsible for defining the policy and strategy of the ISA² work programme together with its actions. This layer can also deal with requests that have been escalated from the Community layer, after having been rejected/parked by the Operational/Technical layer, to be added for review when updating the ISA² action description.

As concerns the use of LEOS within the EU Institutions, the European Commission and the General Secretariat of the Council signed a Memorandum of Understanding in 2017 outlining their collaboration on a common solution for legislation drafting. Following this signature, the governance of the action has been updated as following:

A **Steering Committee (SC)**, organised at director level meets at least every 3 months and is chaired and hosted alternatively by business representatives of the Commission and the GSC. The SC's main responsibilities is to guide and promote the project, to take stock of its progression, to ensure that the outcome meets the business expectations, to agree on yearly work plans during the life of the project, including budgetary planning and to arbitrate on development priorities, depending on the budget available and each party's specific needs.
The permanent members of the Steering Committee shall be:

- o the System/Business Owner (SO/BO) of the Commission, the Business Owner (BO) of the GSC at director level;
- o the System Suppliers (SSs) of the Commission and GSC at directors' level, who assume the overall accountability for IT deliverables and services requested by the System Owner (SO) and Business Owners (BO);

Under the guidance of their respective System Owner (SO) and Business Owner (BO) at director level, the Heads of Unit of the services involved ensure management and follow-up of the advancement of the project. They prepare the meetings of the Steering Committee based on the input provided by the Project Management Team (PMT).

The Business Managers (BM) and Project Managers of the Commission and the GSC regularly participate at the Steering Committee meetings.

The European Parliament and the Publications' Office participate to the SC as observers.

The **Project Management Team (PMT)** consists of the Business Managers (BM) and Project Managers of the Commission and the GSC and is chaired by the Project Manager of the Commission. The PMT is in charge of the development of the tool and the implementation of its functionalities, taking into account the needs of the end users and following the guidance of the Steering Committee, to which it reports.

The PMT shall organise, as necessary, technical meetings, so as to discuss, inter alia, technical specifications, development needs, developments completed and ensure convergence on the common needs for legislative drafting.

	Project Roles	European Commission	General Secretariat of the Council	European Parliament
	System Owner (SO)	Director SG.B (alternate Head of Unit SG.B4)	N/A	
Business representatives	Business Owner (BO)	Director SG.B (alternate Head of Unit SG.B4)	Director DQL	
	Business Manager (BM)	Business manager in SG.B4	Business manager in SMART.1.B	
IT representatives	System Supplier (SS)	Director DIGIT.B (alternate Head of Unit DIGIT.B.2)	Director SMART.1 (alternate Head of Unit SMART.1.D)	
	Project Manager (PM)	Project manager in DIGIT.B.2	Project manager in SMART.1.D	
	Observers	Publications' Office		Director (DG PRES - Directorate for Legislative Acts) Head of Unit (DG IPOL - Conciliation and Codecision Unit)

The involvement of key services (legal services, translation services…) is also essential for the success of the project. They will be regularly invited to meetings where their expertise is required.

For Ref2link during the course of this ISA² action, the current IT governance internal structures of EC Legal Service will be responsible for the ISA^2 action cluster and act as a gateway to the ISA^2 corresponding governance body in close cooperation with the action SC and PMT.

The business owner will be the head of Information and Documentation whereas the IT sector will be the supplier.

6.2.10 TECHNICAL APPROACH AND CURRENT STATUS

6.2.10.1 Technical strategy

The swift implementation and deployment of complementary, standardised and interoperable ICT solutions is a critical element to drive innovation, ensure sustainability, increase re-usability, reduce fragmentation and avoid duplication of efforts.

This action is driven by an agile, efficient and pragmatic technical approach by combining established and emerging standards, industry best practices and state of the art technologies to empower the delivery of high quality and highly reusable software products that can either be used in isolation or composed together to implement interoperable ICT solutions. Reliable and sound ICT solutions are essentially achieved by composing independent products (components, services and even applications), leading to strong architectures and resilient systems. These are better prepared to deal with failures by providing graceful degradation of the affected capabilities and guaranteeing overall system availability.

Independent products, complying with the principle of single responsibility, translate to sustainable evolution in both business and technical perspectives. Independent teams are masters of their own business specificities. Usually they are focused on a particular business domain inside an organization, easily copping with business changes, able to avoid the barriers and coordination overhead of dealing with a large and complex organizational structure, inevitable when addressing a wider business domain. Independent products are supported by independent teams, which are establishing well-defined boundaries and focusing on contracts, interfaces, communication and data. These are key concepts to achieve unconstrained product evolution, responding to business changes by incorporating new features and capabilities or deprecating obsolete ones, but still maintaining backwards compatibility. Single responsibility products have clearly defined behaviour and are designed to be easy to understand, to test and to validate against predefined key metrics. Each product

should be enriched with instrumentation capabilities to report meaningful usage and performance statistics as an added value.

Software components (frameworks or utility libraries) should be implemented at least in one mainstream programming language (e.g. Java), with the possibility to provide bridge application programming interfaces (APIs) for other languages. This strategy ensures sustainable development of a main reference implementation, high re-usability through thin bridge APIs and lower maintenance efforts.

Software services (SOAP web services, RESTful services or micro-services) should exchange data in well-defined open formats. The focus is on the exchange of rich data structures where data, together with its schema, is fully self-describing. Such principle is the strongest foundation to build reliable data exchange and processing systems where producers and consumers can exchange data schemas, facilitating the understanding of the exchanged data and enabling seamless data adaptation to comply with divergent schema versions or even disparate schemas altogether. This strategy ensures easier consumption and flexible composition of services, independently of programming languages and execution platforms.

Ref2Link is a text mining tool: it provides the detection and extraction of useful references from unstructured text on the basis of declarative rules in XML driven by pattern recognition.
A typical front-end usage is the automatic generation of web links within a web page. Back-end usage is also possible in the form of a micro-service based on SOAP or RESTful for the automation of data processing.
It can be integrated as a web 'fat-client' in a JavaScript library or called through web services.
Given its horizontal nature, Ref2Link has been developed as technology-neutral as possible to keep open the possibility to integrate it in multiple technical environments in a sustainable way.

6.2.10.2 Current status

Report on activities carried out in 2016, 2017, 2018 and 2019
In June 2016, the Secretariat-General of the European Commission decided to plan a pilot for the Commission services drafting legislation with the LEOS tool. The scope of this pilot is the Ordinary Legislative Procedure, the main legislative process enabling the Commission to propose to co-legislators proposals for Directives, Regulations and Decisions.

End of 2017, the Council of the European Union decided to use LEOS as a drafting tool for the elaboration of the mandate of the Council before the Trilogue negociations on the proposal submitted by the Commission.

Cluster A

The first phase of the pilot started in 2017, covering only the initial drafting of the proposals. During this first pilot phase the LEOS editor was extended to support the drafting of different types of proposals, their annexes and the explanatory memorandum accompanying each proposal. These development activities were delivered in July 2017

Being able to produce legal documents in an xml format is the first step to build a complete interoperable xml document flow. The second step is the integration with the IT systems managing the decision making workflow in public administrations.

Improving the LEOS tool in order to make it easier to plug it to decision making workflow management tools is part of the second phase of the pilot. These improvements will be piloted internally with the integration with the Interservice Consultation module of the European Commission decision-making management tool (D*e*cide) .

In addition to these new integration feature the need to improve the user interface to better support the review of documents (comments and suggestions) was also identified in oder to achieve the second phase of the pilot.

The new user interface proposing advanced features for comments and suggestions was delivered in June 2018. It was presented to a large panel of drafters and reviewers during hands on workshop, where very positive feedback was received.
In June 2019 another version was released that included further user interface improvements for the proposal viewer, legal text viewer, explanatory memorandum viewer, annex viewer and annotations.
The release of the new integration features as well as an internal integration pilot with the decision-making system of the European Commission was planned for Q4 2018. Following the signature of the MoU between Commission and Council electing LEOS as the tool for the preparation of the mandate of the Council, new needs were identified. These new requirements came from the need of the Council to have features facilitating the amendment of XML legal documents. These new functionalities were planned to be delivered in acceptance in December 2018, delivered beginning of 2019 and the pilot has started.

In 2019 the following activities are being performed:

- Second phase of improvements of LEOS to facilitate its integration with the European decision-making management tools and interinstitutional translation tools. These improvements will be piloted internally by integrating LEOS with the Decide Decision module and with the translation tools of the European Commission and of the Council
- New common features coming from the Commission, the Council services and their exchanges with the Member States and from the Open source community if any.
- Improve LEOS interoperability and compliance with IFC standards based on the findings from the internal pilots (integration with the Trilog table Editor from the European parliament for instance) and interactions with the open source community if any.

These 2017, 2018 and 2019 activities were or will be reported under Cluster A.

Cluster B

In order to ensure a smooth transition to the new XML format, a module enabling to export these XML Proposals in the previous format (LegisWrite) had to be developed.

Moreover, the Commission took advantage of this action to release in open source its CMIS implementation, developed by DG TRADE, used internally to provide back-end document management services. This implementation is fully compatible with LEOS and could have high added values for public administration looking for an efficient and robust CMIS implementation.

The development of the conversion service, delivered in July 2017, and the adaptation required to make this CMIS implementation an open source solution have been reported under package B. This Open Source CMIS implementation was released open source in May 2019.

In 2017 the following activities have been performed:

- Improved version management, with major versions and possibility to see differences between versions;
- Management of acts as a set of elements and global metadata are propagated across sub-elements;
- Import feature, enabling to import some content already published in the Official Journal of the EU.

The action will also reinforce its means for helping Member States having the willingness to move to XML legislation editors. In 2018 Spain (Ministerio de la Presidencia y para las

Administraciones Territoriales) and France (Cabinet du Secrétaire général du Gouvernement / Secretariat General of the French Government) expressed their interest and contacted the LEOS development team.

In 2018 the following activities were performed:

- several security and version management improvements;
- new feature – annotations which makes it possible to:
  - add comments & highlights using annotations,
  - add suggestions on a part of text with the feature to accept and reject them or not,
  - validation of AKN,
  - internal references generation,
  - proposal uploader.

In 2018, regarding the open source community, the action consolidated the strategy for an iterative approach to community management. After the community strategy, the action looked at potential and existing users of the open source, re-evaluated their needs, and defined how the community can support the delivery of these needs. The activities have and will continue to be planned and adjusted for each stage of the community lifecycle. Once started, the results of the community management will be re-evaluated after 6 months to test the maturity of community. In the community lifecycle, it should be taken into account the activitities necessary for the sustainability of the community beyond ISA^2 Programme and the possibility of the continuation under the Digital Europe Programme.

In 2019 the following activities have been performed:

- Improved LEOS configuration that would make the customisation of LEOS to support MS legislation easier:
  - o New roles/actions configuration to ease customization;
  - o Templates configuration improvements;
  - o Possibility to support templates that don't have memorandum mandatory by default;
- Integration with ISA² Open CMIS Repo;
- Improved user interface, co-edition icon and alerts , implicit saving while editing;
- Proposal Viewer – addition of a new feature called milestones;
- New services for the integration with other systems;
- Technical improvements and bug fixes;
- Other improvements (for more information on please see Joinup[15]).

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[15] https://joinup.ec.europa.eu/solution/leos-open-source-software-editing-legislation/releases

Cluster C

In the context of the landscaping exercise it was decided that the "TO BE" vision would be defined in the context of the ISA² action *Interinstitutional framework for digital OLP management (2016.17)*. Therefore all activities covered by Cluster C have all been put on hold as long as the TO BE model has not been defined and validated.

Cluster D

Ref2Link (EC internal release) is currently in use in the EC Legal Service business applications and Intranet since 2015.

Following its promotion as EC building block since beginning of 2017, Ref2Link has been further improved and the Legal Service has established contacts with several DGs and institutions for possible integration. Ref2Link was enroled in the ISA² program in 2018. The European Publications Office has expressed its interest and has been associated to the action.

In addition to undergoing implementation phase, a number of technical integration and ugrades have been carried out on the basis of the EC internal release.

A number of major Ref2Link dedicated presentations and demonstrations have taken place from end of 2018 up to the mid of 2019 for events or bodies such as ISA² mid-term conference booth, EU Publications Office, EU Court of Justice or EU Council including members States 'working party on EU Law'.

Ref2Link has been integrated in LEOS and several EU IT systems as an independent software library.

Ref2Link has been made available on testa through a simple front-end application (LinkPad).

Established contacts with potential users and other activities

Public administrations from Greece, France, Estonia, Finland and Spain have shown their interest in LEOS development activities. Also the Slovenian government is currently reusing LEOS components as part of their own IT projects. The following other contacts have shown interest in LEOS: United Nations, Israel, Canada, European Union Intellectual Property Office (EUIPO), European Central Bank, Flemish Parliament.

The project has presented at the following events:

- ISA[2] mid-term conference[16] in Brussels – 29 November 2018;
- Legal Open Document and Data - Summer School LEX2018 in September 2018;
- Presentation in Prague at a conference organised by the Office of the Government of the Czech Republic, 18th of October 2018.

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[16] https://ec.europa.eu/isa2/isa2conf18/legislation-editing-open-software-leos_en

Activities planned for 2020

In 2020, the action will focus on ensuring the sustainability of its activities from clusters A, B and D under Digital Europe Programme and prepare for this transition by:

- expanding the pool of users and strengthen the community by having a more active participation from its members and by delivering trainings;
- continuing to improve, together with its community, the solution that will ensure interoperability and have an user-driven evolutive maintenance;
- raising awareness about the results of this action and its community.

In order to achieve the above objectives, the action will do at least the following:

A. Further improving the quality of the solution in order to increase its adoption rate:

➢ Support for Amendments to existing legislation.

➢ Support for new templates.

➢ Text comparison improvements.

➢ Annotations improvements.

➢ Improve management of footnotes.

➢ New edition features and improvements.

➢ Improve the import from other sources, like the Official Journal of the European Commission

➢ More Integration services:

  o creation of proposal from external systems,

  o management of collaborators from external systems.

➢ Technical improvements:

  o Update of libraries and security updates,

  o Explore other document storage technologies,

  o Explore LEOS Cloud solution,

  o General Improvements on performance, scalability, availability.

B. Increase the maturity level of the open source community by:

➢ making use of the governance set in place,

➢ organising regular workshop with the community,

➢ offering training in order to ensure a good knowledge base,

➢ increase participation in other related open source communities.

By doing this, the action will respond to the recommendations from the Interim evaluation of the ISA[2] programme regarding awareness-raising beyond national administrations and moving from user-centric to user-driven solutions. It will also support the Specific Objective 5 (f) of Digital Europe Programme:

"support the design, testing, implementation and deployment of interoperable digital solutions for EU level public services delivered through a data-driven reusable solutions platform, fostering innovation and establishing common frameworks in order to unleash the full potential of the public administrations' services for European citizens and businesses;"

For Ref2Link, the year 2020 will be the end of development year following the release of the first ISA² version on joinup by end of 2019. Resources and documentation aimed supporting the product and at easing a smooth integration of the component in various technical environement will be beefed up.

Following the functional enhancements delivered in 2019, focus on a better multiligual support will be consolidated so that the main detection rules are available in member states languages. Current plan envisions distributing not only a multilingual detection engine but also leaner language specific engines for EU national languages. Continuous support for ELI and ECLI standards with alignments on their last developements will be pursued.

It will be possible for EU institutions or Member States to assess the tool at an early stage on basis of the first ISA² release on the joinup platform .

In the perspective of the DEP enrolement, with a wider use as a micro-service, the question of an upscaled hosting solution will have to be addressed while maintaining the continuity of operations for current integrators.

6.2.11 COSTS AND MILESTONES

6.2.11.1 Breakdown of anticipated costs and related milestones

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception	Project charter	100	ISA²	Q2/2016	Q3/2016
Execution 1	Technical analysis 1.0 Architecture design 1.0	400	ISA²	Q3/2016	Q3/2017

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA^2/others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Reference Implementation V1.0				
Execution 2	Technical analysis 2.0 Architecture design 2.0 Reference Implementation V2.0	661	ISA^2	Q3/2017	Q3/2018
Execution 3	Ref2Link Functional specification	50	DG SJ	Q1/2018	Q1/2018
	Ref2Link Architecture Specification	30	DG SJ	Q2/2018	Q2/2018
	Reference Implementation V2.1	290	ISA^2	Q3/2018	Q1/2019
		100	HeadingV	Q3/2018	Q1/2019
	Ref2Link Development	75	ISA^2	Q3/2018	Q1/2019
	Reference Implementation V3.0	690	ISA^2	Q1/2019	Q3/2019
		100	HeadingV	Q1/2019	Q3/2019
Execution 4	Technical analysis 4.0 Architecture design 4.0	200	ISA^2	Q3/2019	Q3/2020
	Ref2Link Development	90	ISA^2	Q2/2019	Q3/2020
	Reference Implementation V4.0	765	ISA^2	Q3/2019	Q3/2020
Execution 5	Technical analysis 5.0 Architecture design 5.0	200	ISA^2	Q3/2020	Q3/2021
	Reference	800	ISA^2	Q3/2020	Q3/2021

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA^2/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Implementation V5.0				
	Ref2Link Development and execution report	90	ISA^2	Q3/2020	Q3/2021
	Sustainability beyond ISA^2 – workshops, awareness-raising etc.	100	ISA^2	Q3/2020	Q3/2021
Closing		10	ISA^2	Q3/2021	Q3/2021
	Total	**4 751** **(ISA²:4 471)**			

The governance board of the action is regularly reviewing the allocation of funds, following the agreed business priorities.

6.2.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Inception	100	100
2016	Execution 1	400	400
2017	Execution 2	661	661
2018	Execution 3	1 055	1 055
2019	Execution 4	1 055	
2020	Execution 5	1 190	
2020	Closing	10	

6.2.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
LEOS as-is study	https://joinup.ec.europa.eu/elibrary/document/isa-leos-final-results	
LEOS editor release	https://joinup.ec.europa.eu/software/leos/release/all	
Ref2Link (LinkPad)	https://webgate.ec.testa.eu/ref2link/	

6.3 LEGAL INTEROPERABILITY (2016.23)

6.3.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D2
Associated Services	The Commission's Secretariat-General, Legal Service and corporate IT governance, and any Directorates-General wishing to assess the ICT impacts and interoperability aspects of its legislation, or creating regulatory reporting requirements in its new legal proposal.

6.3.2 EXECUTIVE SUMMARY

This action serves the 'legal interoperability' layer of the European Interoperability Framework (EIF). According to the EIF, legal interoperability is about ensuring that organisations operating under different legal frameworks, policies and strategies are able to work together. To this end, the EIF recommends to perform 'interoperability checks' by screening existing legislation to identify interoperability barriers (like over-restrictive obligations to use specific digital technologies, for example). It also advises to make new legislative proposals consistent with relevant legislation and duly address their ICT impacts, by performing 'digital checks'. The ministers in charge of eGovernment policy across the European Union also acknowledged this need for digital-ready legislation in their Tallinn declaration by calling upon the Commission *'to fully integrate digital considerations into existing and future policy and regulatory initiatives'*[17].

So far the main achievements of the action are:

- awareness-raising within the European Commission (EC) about the importance of considering interoperability already in the legislative phase (e.g. Better Regulation guidance, presentations and training);
- development and testing of the 'legal interoperability screening' methodology[18], which is run for both existing EU legal acts and new policy initiatives of the EC in order to ensure their coherence and smooth application;
- support to policy officers in the EC to draft digital-ready policy proposals which foster interoperability (e.g. ICT impact assessment guidelines and their application);

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[17] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the Council of the EU on 6 October 2017. Link: https://ec.europa.eu/digital-single-market/en/news/ministerial-declaration-egovernment-tallinn-declaration
[18] This methodology is a merge of the previous digital screening and interoperability checks methodologies.

- recommendations on how to improve the regulatory reporting practices[19] within the EC;
- assessment of the usefulness of an interoperability cost-benefit assessment tool; and
- sharing of good practices on legal interoperability with some Member States.

In 2020, the action will focus on the sustainability of its various deliverables and activities. It will build communities and longer-term sponsorship on the one hand, and prepare for the transition to the Digital Europe Programme on the other hand.

Building communities and sponsorship:

- Within the EC:
    - The legal interoperability screening is at the interest of the corporate IT governance, which intends to ensure that any new EC proposal respects the principles – such as interoperability – defined in the European Commission Digital Strategy[20]. Discussions have started to adapt and pilot the interoperability screening mechanism with the help of colleagues overseeing the IT developments of several EC Directorates-General ('DG families'). This decentralisation of the screening activity can safeguard its sustainability.
    - The efforts to improve the EC regulatory reporting practices may be sponsored by the Information Management Steering Board (IMSB) of the EC. Discussions are ongoing to include the activities planned by the action in the IMSB 2020-2021 Work Programme. In this work, cooperation is foreseen with the EC's recently established 'local data correspondents' network.
    - Regarding the sustainability of the ICT impact assessment and interoperability cost-benefit assessment methodologies, the action owner will start discussions with the following potential sponsors: 1) The Joint Research Centre (JRC) helps policy DGs with the impact assessments of their policy proposals. For this reason, the JRC may be interested to take over and maintain the before-mentioned methodologies. 2) The corporate IT governance is committed to learn about ICT-related policy proposals early on and to support the policy DG in preparing such proposals.
- With Member States:
    - The action became mature enough to start exchanging good practices with interested Member States. In 2020, the efforts will continue to build a legal interoperability community of experts and practitioners from academia and European public administrations.

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[19] Reporting requirements often form part of EU legal acts and experience shows that they can create interoperability barriers if not wisely defined and implemented.

[20] C(2018) 7118, Communication to the Commission, European Commission Digital Strategy - A digitally transformed, user-focused and data-driven Commission.
https://ec.europa.eu/info/sites/info/files/strategy/decision-making_process/documents/ec_digitalstrategy_en.pdf

Transition to the Digital Europe Programme:

Legislation plays a crucial role when it comes to building European public services: it defines the mandate and the high-level requirements towards such services. The Digital Europe Programme foresees that public administrations – when building public services – deploy and access state-of-the-art digital technologies, reuse existing interoperability solutions and frameworks and promote interoperability and standardisation in general[21]. To deliver on this ambition, new legislative proposals should already contain such digital and interoperability requirements. The legal interoperability action, as part of the planned Digital Transformation Platform ecosystem[22], could help policy-makers with this challenge, by sharing knowledge, giving trainings and maintaining related communities.

Moreover, the action is experimenting with new emerging technologies as well. In 2019, the possibility to automate the currently manually performed legal interoperability screening was explored. Work is ongoing together with the JRC to prove the concept of using artificial intelligence in the screening process valuable. In 2020, it is planned to extend the pilot and to cover related business cases too.

The action plans to launch a feasibility study and related proof-of-concept work on drafting legislation as code still under ISA[2]. In case of promising results and interest, a large-scale pilot could be proposed under the Digital Europe Programme later on.

The above-presented activities will also address the recommendations of the interim ISA[2] evaluation on the need for more awareness-raising and user-centricity:

- The community building and training activities will result in awareness-raising and improved digital skills among Better Regulation practitioners, IT colleagues and policy makers in the EC and the MS.
- Relying on a dedicated community will improve the user-centricity of the proposed solutions. For example, the planned regulatory reporting guidance will be validated by the network of the EC local data correspondents, who will eventually promote and apply the guide themselves.

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[21] See Article 8 of the Digital Europe Programme proposal – COM(2018) 434. https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52018PC0434&from=EN
[22] See the Draft Orientations for the preparation of the Digital Europe work programme(s) 2021-2022, http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=61102

6.3.3 OBJECTIVES

The objective is to ensure that the EIF recommendation on legal interoperability is well served when EU legislation is prepared. This involves that planned legislative initiatives and existing legal acts under evaluation undergo an interoperability screening and the proposals with potential ICT or interoperability impacts get dedicated support from domain-specific experts.

6.3.4 SCOPE

In scope:

- All new EU legislation and all legislation under evaluation mentioned in the Commission Work Programme (CWP);
- Tools, which may automate the interoperability screening;
- Regulatory reporting requirements set in various EU legal acts (both in primary and secondary legislation);

Out of scope:

- Member States administrations should use by themselves the methods produced as tools for their own needs.

6.3.5 ACTION PRIORITY

6.3.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* - *the new European Interoperability Framework (EIF),* - *the Interoperability Action Plan and/or*	The action contributes to all EU policies, as it is about ensuring that EU legislation, no matter the policy area, takes into account ICT aspects and related impacts and fosters cross-sector and cross-border interoperability. The proposal: - Implements recommendation 27 on legal interoperability of the EIF. - Implements the interoperability action plan action 3 of focus area 1 and actions 19 and 20 of focus area 5. - Implements 3 activities mentioned in

Question	Answer
• *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	the ISA[2] decision under Article 3.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. The need is to raise awareness about the importance to consider ICT and interoperability impacts in EU legislation from its conception. To address this need, the action is aligned with and serves the Better Regulation Guidelines of the Commission which is considered to be the only guiding method for Impact Assessments and Evaluation of EU legislation. There is no other known action to fulfil such an interoperability need.

6.3.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes. The new work strand on regulatory reporting is a fine example for the action's cross-sector fertilizing effect. In fact, the action aims to identify good reporting practices of certain policy domains (like environment or financial markets), then generalise and promote them so policy drafters could rely on them in all policy sectors.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The ICT impact assessment service and support of the action have been used for Impact Assessments and Evaluations in many different sectors, i.e. HOME, JUST, OLAF, CLIMA and MOVE, which proves its cross-sector nature.

6.3.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Possibly yes. The updated ICT impact assessment guidelines were released in July 2018, while the legal interoperability screening of EU legislation has been piloted since January 2019. At this stage, both tools focus on EU legislation prepared by the EU institutions.

Question	Answer
	When these solutions become mature enough, Member States may decide to take them and adapt them to their national needs.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	

6.3.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	The action is urgent in the sense that it serves an actual/running need, which is law-making and evaluation. In October 2017, the ministers in charge of eGovernment policy across the European Union also called upon the Commission in the Tallinn declaration *"to fully integrate digital considerations into existing and future policy and regulatory initiatives"*[1]. Moreover, the European Commission Digital Strategy[4] also stresses that new technologies and IT issues should be addressed in new legislation.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	There is no other known instrument or funding mechanism to support the action.

6.3.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Legal interoperability knowledge base
Description	Repository of EC policy proposals assessed from the ICT and interoperability point of view together with the screening results
Reference	First version of the repository: https://webgate.ec.europa.eu/CITnet/confluence/x/PgXcHw (access is restricted to the Commission departments involved in new EU legislative initiatives)
Target release date / Status	First version of the repository is available since January 2016. The revamped legal interoperability knowledge base will be operational in 2020.
Critical part of target user base	IT governance colleagues, policy officers and IT experts of the lead DG working on the assessed legislation
For solutions already in operational phase, actual reuse level (as compared to the defined critical part)	The existing repository is used by the corporate IT Governance to identify upcoming initiatives critical from the ICT point of view. The future knowledge base is intended for the use of Better Regulation practitioners, IT colleagues and policy drafters as well.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Updated ICT impact assessment guidelines
Description	Method to assess the ICT impacts of EU legislation
Reference	https://ec.europa.eu/isa2/sites/isa/files/ict_impact_assessment_guidelines.pdf
Target release date / Status	Available since July 2018.
Critical part of target user base	Policy officers working on new policy proposals accompanied by an impact assessment and presenting

	ICT impacts.
For solutions already in operational phase – actual reuse level (as compared to the defined critical part)	The method has been used so far in about 11 concrete cases.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Method and text mining tool to perform interoperability screening on EU legislation
Description	Methodology supported by a text mining tool to explain the process to follow, to define the exact scope and the tools to use in order to ensure that EU legislation fulfils the interoperability criteria of the EIF.
Reference	Not yet published.
Target release date / Status	Revised methodology is used since January 2019. Text mining tool is under development.
Critical part of target user base	Policy officers and IT experts of the lead DG responsible for the evaluation of the assessed legislation.
For solutions already in operational phase, actual reuse level (as compared to the defined critical part)	62 initiatives were screened between January and July 2019.

6.3.5.6   Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Yes. The community building experience of the LEGIT action. The EIF training materials from

Question	Answer
	the NIFO action.
	The example for a knowledge base from the ELI action.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	The action proposes the use of various interoperability solutions (ISA2 and other) depending on the need identified in the screened legislation (either during digital or interoperability checks) among which EIF, EIRA, TESCart, Core Vocabularies.

6.3.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The action has a horizontal value as it can be used for the law-making/evaluation of every EU policy. Special contribution is indirectly made to the DSM, as the more the action is assessing EU legislations the more digital and interoperable they become.

6.3.6 PROBLEM STATEMENT

The problem of	not performing interoperability screening on EU legislation
affects	the Commission services involved in the preparation, adoption, implementation and evaluation of the concerned legislation and the legislation's target audience, usually EU Public Administrations, citizens and businesses
the impact of which is	to have EU legislation that is not coherent and may impose requirements which do not facilitate interoperability
a successful solution would be	to identify interoperability gaps in existing EU legislation and propose remediation early on.

The problem of	not taking into account ICT and interoperability impacts of EU legislation during the legislative proposals' preparation stage or at legislation evaluation
affects	the Commission services involved in the preparation, adoption, implementation and evaluation of the concerned legislation and the legislation's target audience, usually EU Public Administrations, citizens and businesses
the impact of which is	moderate ICT implementation quality, at higher cost, unmet deadlines, lack of interoperability, possible sub-optimal implementation of the legislation due to insufficient ICT support, potential organisational inefficiency created by legislative rules, etc.
a successful solution would be	the early consideration of ICT and interoperability impacts when EU legislation is prepared or evaluated by following the ICT impact assessment methodology and seeking advice from the relevant experts.

6.3.7 IMPACT OF THE ACTION

6.3.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Having assessed EU legislation at an early stage allows a proper technical evaluation and to identify reusable building blocks (software, specifications, services), thus saving cost. Also lifting interoperability gaps in EU legislation saves money from implementing technical work-arounds	Recurrent, this is not a one-off action	EU departments involved in law-making, Member States administrations and stakeholders impacted by EU legislation
(+) Savings in time	Having assessed EU legislation at an early stage allows for better implementation and saves time due to reuse	Recurrent, this is not a one-off action	EU departments involved in law-making, Member States administrations and stakeholders impacted by EU legislation
(+) Better interoperability and quality of digital public service	Having assessed EU legislation at an early stage and – consequently – having identified and resolved interoperability gaps promotes a proper implementation of legal interoperability, the top layer of the EIF model, and safeguards that interoperability can be	Recurrent, this is not a one-off action	EU departments involved in law-making, Member States administrations and any stakeholders impacted by EU legislation

Impact	Why will this impact occur?	By when?	Beneficiaries
	more easily applied at the layers below thus increasing the efficiency of public administrations.		
(-) Integration or usage cost	Not foreseen		

6.3.7.2 User-centricity

The action has involved all related stakeholders from the Commission DGs and from the Member States representatives to ISA[2]. Whenever the ICT impact assessment method was applied in practise, a report was produced to assess its effectiveness and results were all put together to conduct the final release in July 2018.

This user-centric approach is maintained in ongoing and future activities like interoperability screening and regulatory reporting.

6.3.8   ORGANISATIONAL APPROACH

6.3.8.1   Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission services	The Secretary General and any Commission DGs in charge of preparing new or evaluating existing legislation.	Contribute to the interoperability screening with domain specific knowledge. Also benefit from the results of this screening and from the related DIGIT support. Use the ICT impact assessment guidelines and give feedback for improvement.
Legal Service of the European Commission	The Legal Service is in charge of giving legal advice to other services.	Provide legal advice concerning the regulatory reporting work strand.
Member States	Member States representations to the ISA^2 Committee and Coordination group.	Comment and give feedback from national experiences.

6.3.8.2   Identified user groups

Impact Assessment Working Group (IAWG): It is a forum of exchange of best practises and experiences in Impact Assessments under the chairmanship of the Secretariat General, which can benefit from the results and evolution of the action.

Monitoring and Quantification Working Group (MQWG): The aim of the group is to support the Commission work on improving monitoring and quantification of the impacts of EU actions, through increasing knowledge and sharing of experiences. The output of the group can contribute to the commitments to quantification and better monitoring included in the

Better Regulation Communication[23] and the Inter-Institutional Agreement on Better Law Making.

The network of local data correspondents was established in 2019 and gathers data experts representing from each DG. This network is relevant for the regulatory reporting work strand of the action.

6.3.8.3 Communication and dissemination plan

The communication plan includes:

for interoperability screening:

- Promotion/consultation rounds with the Commission stakeholders such as, the IT heads, the Impact Assessment units and the concerned policy units of the Commission DGs;
- Communication with the Secretary General services responsible for Impact Assessment and Evaluations. The method and outputs of interoperability screening of EU legislation will be presented with the purpose of being (better) integrated into the law-making process and better regulation agenda of the Commission;
- Communication with the corporate IT Governance of the Commission to better align the law-making and the ICT development processes within the Commission thus ensuring policy coherence and maximising ICT rationalisation effects;
- Active participation to the Impact Assessment Working Group and communication of the benefits resulting from the assessment of the ICT impacts;
- Promotion of the tool automating the interoperability screening of legislation.

for regulatory reporting:

- Communication with Commission services via the MQWG or the local data correspondents' network in order to get input, share findings and get further feedback to produce fit for purpose artefacts. This communication channel should also allow reaching users for testing our solutions.

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[23] http://ec.europa.eu/smart-regulation/better_regulation/documents/com_2015_215_en.pdf

- Communication and strong collaboration with the Legal Service to clarify and establish the legal value to digital assets, which is important in order to improve the regulatory reporting practice of the Commission.

for all activities:

- Communication with the MS representatives through the regular ISA^2 management meetings – and if relevant – through ad-hoc webinars and workshops.

6.3.8.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[24] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
% of new EU legislation to screen from the ICT point of view (digital checks)	100	Reached in 2016, 2017 and 2018. Following the merge of the digital checks and interoperability checks into the legal interoperability screening, this <u>KPI is abandoned</u> and a new one is proposed.
% of EU legislation under evaluation (REFIT) screened to identify common/core businesses processes	100	Reached in 2017. <u>KPI is abandoned</u> though as from 2018 based on the outcome of the related ISA^2 project, which suggested to focus on one specific core business process, namely on regulatory reporting instead[25].
% of EU legislation under evaluation (REFIT) to screen for interoperability gaps	100	The draft interoperability checks methodology is applied for all evaluations announced on the

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[24] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

[25] New KPI may be defined in the future depending on the involvement of ISA^2 in regulatory reporting.

Description of the KPI	Target to achieve	Expected time for target
(interoperability checks)		Europa portal since April 2018. Following the merge of the digital checks and interoperability checks into the legal interoperability screening, this <u>KPI is abandoned</u> and a new one is proposed.
Percentage of EU legislation[26] going through legal interoperability screening	100	Reached in 2019.
Number of legislative proposals closely followed up from the interoperability angle after their legal interoperability screening	5	Reached in 2019 and to reach in 2020.

6.3.8.5 Governance approach

The action will be managed by DIGIT with the support of an external contractor. Whenever major deliverables are to be published, the validation of the MS representatives will be sought.

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[26] EU legislation announced on the Commission's "Have your say – Published initiatives" website under the 'in preparation' or 'roadmap' stages.

6.3.9 TECHNICAL APPROACH AND CURRENT STATUS

State-of-play:

- The updated ICT impact assessment guidelines became public in July 2018. Besides, support was provided to policy officers in the EC to draft digital-ready policy proposals, which foster interoperability.

- Between 2016 and 2018, all published Inception Impact Assessments were screened for possible ICT impacts relying on the 'digital screening' methodology. The results were communicated to the IT Governance of the Commission. In 2018, systematic follow-up was provided to new Commission proposals with detected ICT impacts as well.

- In 2019, the legal interoperability screening methodology replaced the previous digital screening mechanism, extending with interoperability checks this latter. 97 policy proposals have been screened until mid-September 2019. Work started to build a knowledge base capturing the screening results and allowing for their reuse.

- In 2019, the interoperability cost-benefit mechanism was tested in the impact assessment of a policy proposal and the findings were documented.

- In 2019, a report was published on the observed regulatory reporting practices within the EC along with practical recommendations.

- Awareness-raising efforts continued within the EC about the importance of considering interoperability already in the legislative phase (e.g. Better Regulation guidance, presentations and training).

- Exchange of good practices started with Denmark.

Future development (Q2/2020 – Q4/2021):

- In 2020-2021, strong emphasis will be placed to ensure the sustainability of existing deliverables and activities. The action will build communities and longer-term sponsorship on the one hand, and prepare for the transition to the Digital Europe Programme on the other hand.

Building communities and sponsorship:

- Within the EC:
  - In collaboration with the corporate IT governance, the action will promote the decentralisation of the legal interoperability screening through revising the screening mechanism, knowledge transfer and community-building events

(trainings and presentations). Work started in 2019 will continue on the knowledge base, which will facilitate the reuse of earlier screening results. The network of domain-specific experts − who can give tailored support to the policy DGs based on the screening results – will be further strengthened.

o The action will improve the EC regulatory reporting practices by following up on the recommendations of the related 2019 report. In this endeavour it will rely on the EC's recently established 'local data correspondents' network. With the users in mind, the action will prepare guidelines on how to draft reporting requirements in legal acts. It will also take stock of the IT tools, which support the reporting process and are operational or under development in the EC. Finally, the action will produce some guidance facilitating the reuse of the before-mentioned IT solutions.

o Regarding the ICT impact assessment and interoperability cost-benefit assessment methodologies, the action owner will start discussions with the Joint Research Centre (JRC) and the corporate IT governance about their hand-over / maintenance. Moreover, it will create a repository of costs data used for evaluating the reuse of IT building blocks in previous impact assessments.

- With Member States:
  o In 2020, the efforts will continue to build a legal interoperability community of experts and practitioners from academia and European public administrations. A Joinup collection is planned to support the knowledge sharing between community members.

Transition to the Digital Europe Programme:

- The proof-of-concept work will continue with the JRC to automate the legal interoperability screening with the help of new technologies. The ambition is to have an operational solution by end of 2021, which could facilitate the decentralised screening process. On the way, related business cases will be also identified with a view to foster the reuse of our future tool in other parts of the legislative cycle.

- The action will also launch a feasibility study and related proof-of-concept work on drafting legislation as code. In case of promising results and interest, a large-scale pilot could be proposed under the Digital Europe Programme later on.

6.3.10 COSTS AND MILESTONES

6.3.10.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	• Screen/Monitor all published Inception Impact Assessments and Roadmaps of the Commission to identify the need of ICT impact analysis; • Assess ICT implications of Impact Assessments and Evaluations as needed through a service provided by DG DIGIT; • Update the method as needed; • Pilot and finalise a	745	ISA[2]	Q2/2016	Q2/2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	measurement mechanism for costs and benefits of interoperability and make it available as a service				
	• Run digital checks to identify ICT implications of EU legislation • Run interoperability checks on EU legislation, identify interoperability gaps and propose measure to ensure compliance with the EIF for legislation relevant to interoperability • Support the	300	ISA^2	Q2/2018	Q3/2019

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	application of and optimise the mechanism to measure costs and benefits of interoperability				
	• Run digital and interoperability checks on EU legislation • Build up and provide appropriate support for policy DGs to address the ICT impacts and interoperability aspects of their legislations • Promote the application of and optimise the mechanism to measure costs and benefits of interoperability	530	ISA^2	Q2/2019	Q2/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	• Further explore how to improve the regulatory reporting aspects of EU legislation in order to foster legal interoperability • Assess and improve the sustainability of the legal interoperability action • Ensure the involvement of appropriate technical expertise in the delivery of this action.				
	Sustainability of the action: • Build legal interoperability communities within the EC and with MS	400	ISA[2]	Q2/2020	Q4/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	• Decentralise the legal interoperability screening mechanism • Create practical guidelines on regulatory reporting • Prepare for the transition to the DEP by experimenting with legislation as code and with AI in legal interoperability screening.				
	Total	**1975**			

6.3.10.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		450	
2017		295	
2018		300	
2019		530	
2020		400	

6.3.11 ANNEX AND REFERENCES

Description	Reference link	Attached document
Updated ICT Impact Assessment Guidelines 2018	https://ec.europa.eu/isa2/sites/isa/files/ict_impact_assessment_guidelines.pdf	

6.4   EUROPEAN LEGISLATION IDENTIFIER (2016.08)

6.4.1   IDENTIFICATION OF THE ACTION

Service in charge	Publications Office of the European Union (OP.A.1)
Associated Services	Publications Office of the European Union (OP.A.2 and OP.C.2) ELI Task Force Council of the EU (working party on e-Law); **ELI implementers**: Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Luxembourg, Portugal, Spain, United Kingdom; Norway and Serbia

6.4.2   EXECUTIVE SUMMARY

The European Legislation Identifier (ELI) is an initiative of the Member States to identify and describe law in a harmonised way across national legislation systems. ELI is a basic building block for the interoperability and exchange of legislation data in Europe. It provides a practical and flexible system for naming legislation documents and for sharing metadata that is sufficiently standardised to realise the benefits of interoperable legislative data, while respecting each Member State's unique legislative and legal traditions. ELI comes as a response to the problem of not being able to refer in a unique and commonly acceptable way to EU and national legislation, thus hindering the exchange and sharing thereof, although it is at large available in electronic format.

ELI proposes a unique identifier (HTTP URI), recognisable, readable and understandable by both humans and computers. In addition, ELI proposes a set of metadata elements to describe legislation in compliance with a recommended ontology. ELI aims to take into account not only the complexity and specificity of regional, national and European legislative systems, but also changes in legal resources (e.g. consolidations, repealed acts, codes etc.). ELI has been carefully constructed to respect the legal and constitutional differences between Member States.

The present funding request aims to pursue the efforts started in the context of ISA Action 1.21 (2014-2015) and ISA² Action 6.4 (2016-2018) and leverage the potential of ELI to drive forward interoperability between national and EU legislation. The aim is to extend the coverage of ELI to include all EU Member States. In case this cannot be achieved until the

end of the ISA^2 programme, funding will be requested in the context of the Digital Europe Programme, under the digital transformation of public administration and interoperability area.

6.4.3 OBJECTIVES

Thanks to the support provided by the ISA^2 funding, a number of assets has been created to support implementation of ELI by Member States. This support has contributed to the adoption of ELI by a growing number of national legislation publishers to build on the potential of the semantic web, and improving the access to legal information and interoperability between systems.

The objective of the present action is to continue supporting Member States who wish to implement ELI in their systems, leverage the potential of ELI, building on existing national implementations and develop interoperability solutions between national and EU legislation.

6.4.4 SCOPE

Tasks to be conducted in the scope of the proposed action:

1. Provide assistance to Member States in implementing ELI

This task foresees delivering technical and organisational assistance to Member States who are interested in implementing ELI; assistance can be delivered in the form of workshops, trainings, technical meetings, consultancy, etc. The training material and the implementation guides will be made available as well on the Interoperability Academy.

2. Leverage ELI by developing integrated reusable solutions

As the number of governmental legislation publishers who have adopted the ELI convention is growing, the focus of the ELI action is turned towards developing integrated reusable solutions building on existing ELI implementations (i.e. cross-border search functions, solutions for thematic legislation bundling, etc.). This involves analysing, studying and building services and tools to foster interoperability and create added value between stakeholders and systems. This may involve surveying stakeholders in order to identify which services/tools best would respond to their actual needs. Prospection and analysis of solutions in view of conceiving and deploying tools and services for legislation publishers are also foreseen (i.e. mutualisation of systems and resources, RDF transformations, visualisations, increased linking granularity, editing/ annotating semantic metadata, preparing and converting

legacy data, searching across semantic metadata and full text of legal publications, alignment of national and EU legal vocabularies…). This also includes development, deployment, testing, hosting and related tasks to ensure the functioning of the needed services/tools. Investigation on legal requirements as to licensing/reuse can also be foreseen.

3. Maintenance and evolution of existing ELI assets and knowledge base

It is important to update existing technical and general documentation to take on board the knowledge and expertise acquired by new ELI implementers (update of implementation guide, good practices, technical guidelines, etc.). Facilitating information exchange and peer review exercises via appropriate fora is also foreseen.

For the maintenance of the knowledge base, editorial content about ELI will be prepared for various dissemination channels. Reporting about progress on ELI and presenting the ELI project to various types of audiences is also to be covered. Editorial content will be in various languages, which includes translation and editing activities.

A number of generic assets has been developed since the beginning of the ELI initiative. These assets must be maintained and adapted to new requirements. This can include updating existing ELI tools to changes in formats, standards or platforms. It can also mean further evolutions of the CELLAR, the content and metadata repository of the Publications Office of the EU. This also includes possible adaptations/configurations of developed solutions with the objective of making them more easily re-usable by Member States or other stakeholders.

4. Development of new assets

Following the progress that has been made by the ELI Taskforce members to disseminate structured metadata in a common model/format, the time has come to create a central repository to gather and expose these metadata through a single search entry point, a kind of "central ELI search engine". This new asset will also help improve the quality of published ELI metadata, and the provision of these datasets to data reusers.

5. Promotion of ELI and participation in groups working in areas related to ELI

This includes driving ELI forward as a standard in the EU and internationally as well as engaging with groups and communities working in areas that relate to ELI. Reaching out to commercial and non-commercial re-users as well as to the academic community is also to be foreseen. The action will support the organisation of events to promote ELI (conference/hackaton) including the direct funding of a prize/award in the frame of an event to support ELI.

6.4.5 ACTION PRIORITY

The ELI action strongly contributes to the interoperability landscape by enabling the exchange of legislation at EU level and beyond. Its results and outputs are reusable and are effectively being used by a growing number of governmental legislation publishers. In 2019, 14 legislation publishers have effectively deployed the European Legislation Identifier in their systems (https://eur-lex.europa.eu/eli-register/implementation.html), while others were in the process of doing so. The adoption of ELI in the European Union relies on the financial support provided via the ISA[2] programme, as no other funding is available.

6.4.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The proposed ELI action meets the recommendations included in the new European Interoperability Framework (EIF) as it contributes to improving interoperability within the EU and across Member State borders and sectors. By making legislation available on the web in a structured way, it will be easier to find, share and reuse legislation, as prescribed by the public sector information (PSI) directive.
Does the proposal fulfil an interoperability need for which no other alternative	ELI comes as a response to the problem of not being able to refer in a

Question	Answer
action/solution is available?	unique and commonly acceptable way to the EU and national legislation, thus hindering the exchange and sharing thereof, although it is at large available in electronic format for which no other solution is available.

6.4.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	It is also in line with the European Union's commitment to open up legislation as part of the implementation of the G8 Open Data Charter, which aims to promote, amongst other things, transparency and government accountability. It also contributes to the re-use of public sector information and is thus in line with Directive 2013/37/EC.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The ELI initiative is bearing fruit in the policy areas listed above as, by 2019, 14 legislation publishers have deployed ELI in their systems thus enabling the improved exchange of legislation at EU level and beyond. Moreover, ELI is also a tool to facilitate reporting about the transposition process of EU legislation

Question	Answer
	into national legislation.

6.4.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	The European Legislation Identifier is useful from an interoperability point of view inasmuch as it aims at promoting access and exchange of legal information within and across borders. As such, ELI contributes to the development of the common area of freedom, security and justice. Out of 21 Member States/candidate countries and Lugano States who have expressed their interest in the ELI action at the time of drafting of the present request, (participation in studies, trainings, requests or other) 14 have, by mid-2019, effectively implemented ELI. The 14 legislation publishers are at this stage, in addition to the Publications Office of the European Union: Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Luxembourg, Portugal, Spain, the United Kingdom, Norway and Serbia.

Question	Answer
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	14 legislation publishers[27] have effectively implemented ELI in their national legislation publishing systems.

6.4.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	This action is not urgent. The present request aims to pursue the efforts conducted in the context of ISA Action 1.21 (2014-2015) and ISA Action 6.4 (2016-2018).
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	No other financial sources are available.

6.4.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.
Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new	ELI specifications

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[27] Cf. ELI registry for list of legislation publishers who have implemented ELI: http://www.eur-lex.europa.eu/eli

proposals) or produced (for existing actions)	
Description	The ELI ontology and technical conventions to uniquely identify structure and enrich legal acts. For more information, please refer to the ELI ontology repository on: http://eurlex.europa.eu/eli The ELI ontology needs to be maintained and evolve. Its evolution is essential to cater for the needs of implementing governmental legislation publishers. The main ongoing extension of the ELI ontology is related to the semantic annotation of draft legislation.
Reference	http://eurlex.europa.eu/eli/
Target release date / Status	Available
Critical part of target user base	Yes
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	By 2019, 14 legislation publishers base themselves on the ELI ontology for legal resources. By 2020 we count on 2 to 4 legislation publishers to adopt ELI to annotate draft legislation

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	ELI: Alignment of EU and national legal vocabularies
Description	Alignment of national and EU legal vocabularies allows: 1. access to linguistic resources available in the EuroVoc thesaurus to enrich their national legal vocabulary and allow multilingual searches; 2. interoperability between national legislations based on the alignment of legal vocabularies used to annotate legislation. First tests have been realized in 2018-1019, implementation should start in 2020.

Reference	http://eurlex.europa.eu/eli/
Target release date / Status	2020 for first real size implementations of legal vocabulary alignments.
Critical part of target user base	Yes
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	ELI validator: http://publications.europa.eu/eli-validator/
Description	It is a validator that checks the conformance of RDF data against a set of rules. The RDF data can be extracted from RDFa metadata in a webpage, or provided in a 'raw' RDF file. The rules are expressed using the SHACL language (RDF SHapes Constraints Language). The validator is generic: it can be provided with any set of SHACL rules and any RDF data to check. However, it is also specifically adapted to verify the conformance of ELI metadata (European Legislation Identifier) published by European official legal publishers in their webpages.
Reference	http://eur-lex.europa.eu/eli-register/resources.html
Target release date / Status	Available
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	ELI annotation tool
Description	Application allowing official journals and/or other organisations in charge of the official publication of legal resources, to identify and describe legal resources in compliance with the ELI convention and publish this description on the web using structured data embedded in HTML pages.
Reference	http://eur-lex.europa.eu/eli-register/resources.html
Target release date / Status	Available
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	ELI XML serialisation
Description	ELI/XML is an encoding of ELI metadata in an XML schema (XSD). It can be used standalone or imported into other XML documents, typically in a metadata header. The ELI/XML schema is provided with a set of XML transformations to generate ELI in RDF/XML, RDFa header or HTML+RDFa. It is meant to facilitate the integration of ELI in XML-based document workflows.
Reference	http://eur-lex.europa.eu/eli-register/resources.html
Target release date / Status	Available
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new	Open Source ELI Cellar

proposals) or produced (for existing actions)	
Description	Source code of Cellar available under EUPL licence for possible reuse by interested third parties. System made available to legislation publishers interested in an advanced system that can be configured with ELI ontology
Reference	https://joinup.ec.europa.eu/software/cellar/description
Target release date / Status	Available
Critical part of target user base	No
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	N/A

Name of reusable solution	RDFEdit
Description	RDFEdit is a tool to search, display and edit the metadata of legal resources for users of the Publications Office's Open Source Cellar.
Reference	https://joinup.ec.europa.eu/svn/rdfedit/
Target release date / Status	Available
Critical part of target user base	No
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	N/A

6.4.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Vocbench is used for the maintenance of the ELI ontology Using Ref2Link for the automatic generation of ELI links will be explored ISA Action 1.1. Improving semantic interoperability in European eGovernment systems
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	- The ELI deployment at the Publications Office uses persistent URIs under the data.europa.eu sub-domain - The Joinup platform to disseminate the ELI Open Source developments - CIRCABC is used as a document exchange platform with the Members of the ELI Taskforce

6.4.5.7   Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The proposal directly contributes to building bridges between the different national legal systems across the EU. As such it directly contributes to the priority https://ec.europa.eu/priorities/justice-and-fundamental-rights_en The ELI initiative allows the reuse of

Question	Answer
	data and thereby creates the opportunity of texts being reused and new added-value services to be developed. As such it contributes to priority: https://ec.europa.eu/priorities/digital-single-market_en

6.4.6 PROBLEM STATEMENT

The problem of	Not being able to refer in a unique and common way to EU and national legislation resources
affects	Interoperability between legislation systems
the impact of which is	a barrier to access and exchange of legal information between legislation systems at EU level and beyond
a successful solution would be	To use the ELI convention as a way to streamline digital structuring and interconnecting legislation

6.4.7 IMPACT OF THE ACTION

6.4.7.1 Main impact list

A Member State having implemented ELI will be able to exchange legislative information more quickly, efficiently and reliably. ELI also facilitates efficient searching of legislation of other jurisdictions with cross border searches. It also enables a more precise investigation and understanding of the transposition of directives. A concrete example thereof is France. It has successfully implemented a mechanism to link ELI references from http://data.europa.eu/eli and display them on Légifrance: http://www.legifrance.gouv.fr/. The implementation of this interoperability feature by France demonstrates a concrete benefit of the ELI system.

ELI is cost-effective because it is merely a specialisation of how resources are generally identified on the web. As ELI is targeted as being an extension to existing systems, the initiative can be implemented by Member States at a reasonable cost.

Finally, it is important to note that the approach to ELI benefits from the work that goes into technologies and standards for Linked Open Data and the semantic web.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Improved quality of legislation through use of common IT standards	Following implementation of ELI	Legislation publishers
(+) Savings in time	Advanced publishing workflows Faster access to legal information	Following implementation of ELI	Legislation publishers Legal practitioners
(+) Better interoperability and quality of digital public service	Improved cooperation at legal level Improved circulation of legal information at EU level and beyond. Potential for third parties to develop services building on a standard shared by European Legislation Publishers	Following implementation of ELI	European administrations, businesses and citizens
(-) Integration or usage cost		Following implementation of ELI	
[add other impacts as needed]			

6.4.7.2 User-centricity

The ELI initiative is governed by a Task-force made up of national legislation publishers who have implemented ELI, and the action holder, the Publications Office of the European Union.

This organisational structure allows the action holder to gather direct feedback from the ELI implementers, in this case the national legislation publishers. Legislation publishers are in a position to relay to the needs of legislation users. This allows to make decisions based on real needs and requirements.

Ad-hoc meetings/workshops with national legislation publishers have been organised to take stock of their needs and requirements and foresee their inclusion during the periodical review of the ELI specifications. Likewise, requirements expressed by users have materialised into reusable tools funded under ISA[2] (ex. ELI validator, ELI annotations tool, etc.).

6.4.8 EXPECTED MAJOR OUTPUTS

Output name	ELI methodology and technical guide – 3rd edition
Description	Third edition of the implementation guides covering both general and technical aspects of the ELI implementation. It is an updated version of the ELI guides which are an essential resource for interested implementers. This third edition will contain the extension of ELI for Draft Legislation
Reference	https://publications.europa.eu/s/hPoe and https://publications.europa.eu/s/hPod
Target release date / Status	Q4/2020

Output name	ELI: Legal vocabulary usage and alignment
Description	First edition of the guide covering both best practice in the management and use of legal vocabulary, and methodology to realize alignment of national and EU legal vocabulary to facilitate legislation interoperability among European legislations.
Reference	
Target release date / Status	Q4 2020

Output name	ELI subdivisions
Description	Update of ontology and relative documentation allowing access to lower granularities (articles, paragraphs…) in acts
Reference	
Target release date / Status	Q4/2019

Output name	ELI workshops
Description	Workshops with Member States and stakeholders inside the European Institutions
Reference	

Output name	ELI Repository
Description	Single triple store with search features gathering all ELI metadata
Reference	
Target release date / Status	Q4/2021

Output name	ELI Pillar 4: Metadata repository/Search engine
Description	A central repository and search engine that gathers the ELI metadata disseminated by ELI partners and allows a cross-national legislation search. This will also probably lead to the release of different open-source subcomponents.
Reference	
Target release date / Status	More precise planning should follow after a specification work to be conducted Q4/2019-Q1/2020

6.4.9   ORGANISATIONAL APPROACH

6.4.9.1   Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Publications Office of the European Union	Willem van Gemert Deputy Head of Unit OP.A.1: Standardisation willem.van-gemert@publications.europa.eu Maria Westermann Head of Unit OP.C.2: EUR-Lex and Legal Information maria.westermann@publications.europa.eu Enrico Francesconi Unit OP.A.2 Common Data Repository enrico.francesconi@publications.europa.eu www.publications.europa.eu	ELI coordination and budgetary/contractual questions ELI implementation at the Publications Office of the EU ELI technical implementation at the Publications Office of the EU
Member States	Luxembourg John Dann - Chair of the ELI Task Force Directeur Ministère d'État Service central de législation john.dann@scl.etat.lu www.legilux.public.lu	ELI implementation in Luxembourg Chairman of the ELI Task Force
	France Jean-Michel Thivel – Chair of the Council expert group on ELI Chef du service Administration générale, documentation et informatique Premier ministre Secrétariat général des affaires européennes jean-michel.thivel@sgae.gouv.fr	ELI implementation in France Chairman of the ELI Expert Group
	United Kingdom	ELI implementation

Stakeholders	Representatives	Involvement in the action
	Matthew Bell Head of Legislation Services The National Archives matthew.bell@nationalarchives.gsi.gov.uk	in the United Kingdom
	Denmark Søren Broberg Nielsen Soren.Nielsen@civilstyrelsen.dk www.civilstyrelsen.dk	ELI implementation in Denmark
	Ireland Gerry Matthews eISB Project team - electronic Irish Statute Book (eISB) Office of the Attorney General gerry_matthews@ag.irlgov.ie www.irishstatutebook.ie	ELI implementation in Ireland
	Italy Ing. Antonio Antetomaso Technical Project Management and Design Istituto Poligrafico e Zecca dello Stato S.p.A. a.antetomaso@ipzs.it	ELI implementation in Italy
	Finland Aki Hietanen Chief of Information Services Ministry of Justice Finland aki.hietanen@om.fi	ELI implementation in Finland
	Portugal Helder de Sousa Santos Legal expert at the Office for Official Publications, National Printing Office and Mint / Imprensa Nacional-Casa da Moeda (INCM). Helder.Santos@incm.pt	ELI implementation in Portugal
	Spain Susana Gómez Aspe	ELI implementation in Spain

Stakeholders	Representatives	Involvement in the action
	Directora del Dpto. de Gestión Editorial, Documentación e Información Agencia Estatal Boletín Oficial del Estado susana.gomez@boe.es	
	Norway Managing Director Odd Storm-Paulsen The Lovdata Foundation eli@Lovdata.no.	ELI implementation in Norway

6.4.9.2 Identified user groups

List the main group of end-users of your solutions.

Member States	Facilitating access to legislation reduces burden for public administrations. Structuring data and optimisation of production flows can lead to reduction of production cost for legal information publishers. Improved transparency
Member States - implementers	Member States can draw on the knowledge base acquired, based on the experience of pioneering implementers to adopt the ELI standard. Technical documentation, as well as training and assistance, can be offered to facilitate the implementation of ELI by future implementers.
European Commission	Improved transparency and better integration and efficient exchange of information, e.g. transposition of Directives. Increased quality and reliability of data. Greater interoperability and improved cooperation.
Citizens and businesses	Effective, user-friendly and faster access to legislation as well as exchange of information between heterogeneous systems for citizens and legal professionals (legislators, judges …). Improved discoverability of legal data, reducing costs for businesses. Smart use of data allowing the development of new value-added services on existing data. An improvement of metadata, through the ELI ontology, could lead to more informative summaries of legislation, especially for non-legal

	professionals.
Candidate countries, EFTA and other countries	Better integration and efficient exchange of legal information with the European Union.

6.4.9.3 Communication and dissemination plan

The following regular communication events with our stakeholders are planned for 2020/2021:

e-Law group of the EU Council	EU e-Law working party members	Twice a year during each Presidency, June and December.
ELI expert group of the Council	EU e-Law working party members	Specific meetings to be organised
Promote and share the work on ELI	National/International community	Specific events to be organised
ELI Taskforce meetings	ELI Taskforce members	Specific meetings to be organised
Stakeholders interested in ELI	ELI page published on EUR-Lex	Regular updates
Communication via the ISA2 communication channels	People interested in interoperability solutions	Regular updates

6.4.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with identified metrics[28], indicate the current values.

Description of the KPI	Target to achieve	Expected time for target

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[28] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

Description of the KPI	Target to achieve	Expected time for target
Number of ELI implementers	15	2020
Number of participants in ELI discussion/review fora:	22	2020
Total number of ELI assigned to legal resources (i.e. work-level)	4,5 million	2020
Annotation of draft legislation based on ELI	1 Member State	2021

6.4.9.5 Governance approach

The ELI work programme actions are implemented by the Publications Office of the EU, who is in charge of budgetary and contractual management, as action holder.

The ELI Task Force (ELI TF) defines ELI-related specifications and ensures their evolution and maintenance in a structured framework. The ELI TF drafts the specifications of the ELI standard and defines the processes to change and maintain the ELI specifications foreseeing the involvement of interested ELI stakeholders. The Taskforce develops guidelines and resources aimed at helping legislation publishers adopt ELI. Governance rules of the ELI TF: http://eur-lex.europa.eu/content/eli-register/governance_rules.pdf.

A Council expert group on ELI was created in 2017, in the framework of the working party on e-Law of the Council of the European Union, where all Member States are represented in order to allow exchanging experiences and good practice on the deployment of the European Legislation Identifier.

The Council Conclusions on the European legislation Identifier of 6 November 2017 (C 441/05) https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017XG1222(02) state that apart from Member States, candidate countries, Lugano States and others are encouraged to use the ELI-system.

6.4.10 TECHNICAL APPROACH AND CURRENT STATUS

ELI is based on a gradual three-step approach defined as follows:
• uniform rules governing the identification and designation of and access to national and European legislation (URI: Uniform Resource Identifiers),
• metadata describing the legislative resources,

• ontology - information exchange format - describing the properties of the legislative texts and their relationship with other concepts or legislation.

Currently, ELI is implemented by 14 legislation publishers. See the most recent implementation status of the ELI initiative on the ELI registry site: http://eurlex.europa.eu/eli. The aim is to extend the coverage of ELI to include all EU Member States. To this purpose, workshops with the Member States that have not yet implemented ELI are scheduled. In case this cannot be achieved until the end of the ISA^2 programme, funding will be requested in the context of the Digital Europe Programme, under the digital transformation of public administration and interoperability area.

6.4.11 COSTS AND MILESTONES

6.4.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (2019)	End date (2020)
Execution	Assist Member States in ELI adoption	60		Q2/2019	Q4/2020
Execution	Leverage ELI by developing integrated reusable solutions	50		Q2/2019	Q4/2020
Execution	Maintenance of existing assets and knowledge base	20		Q2/2019	Q4/2020
Execution	Promotion of ELI and participation in groups and communities working in areas that relate to ELI	20		Q2/2019	Q4/2020
Execution	Assist Member States	40		Q2/2020	Q4/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (2019)	End date (2020)
	in ELI adoption				
Execution	Leverage ELI by developing integrated reusable solutions	40		Q2/2020	Q4/2021
Execution	Maintenance of existing assets and knowledge base	10		Q2/2020	Q4/2021
Execution	Promotion of ELI and participation in groups and communities working in areas that relate to ELI	10		Q2/2020	Q4/2021
	Total	**250**			

6.4.11.2 Breakdown of ISA2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2014 - ISA		300	300
2015 - ISA		340	300
2016 - ISA^2		400	314
2017 - ISA^2		295	167
2018 - ISA^2		150	150
2019 - ISA^2		150	
2020 - ISA^2		100	

6.5 THEMIS - APPLICATION OF EU LAW: PROVISION OF CROSS SECTOR COMMUNICATION AND PROBLEM SOLVING TOOLS (2016.01)

6.5.1 IDENTIFICATION OF THE ACTION

Type of Activity	Common Services
Service in charge	SG.F3
Associated Services	SG.C5, SG.C4, EU Publications Office , DG CONNECT, DG COMM, Parliament, Council

6.5.2 EXECUTIVE SUMMARY

In 2016, the first module of THEMIS – THEMIS/EU Pilot – was released, replacing the old EU Pilot application, focusing on the pre-litigation dialogue between the Commission and the Member States. THEMIS/EU Pilot delivered a number of web services, funded by the ISA action 1.20, which provide a reliable, robust and secure mechanism to interconnect THEMIS/EU Pilot with in-house information systems in Member States' public authorities. This interconnection ensures that information existing in the Member States' IT systems does not need to be re-encoded in THEMIS/EU Pilot.

THEMIS/Infringements, the second module of THEMIS, that supports the management of infringement files, from their creation to their closure, directives and national transposition measures, will be released at the beginning of 2020. This module, that will effectively substitute the existing MNE and NIF applications, will deliver the original expected outcome of this ISA[2] action.

There is a third, and final, component of THEMIS – THEMIS/Complaints – that the Secretariat-General will start building in Q4/2019, with an expected delivery date of the final version in Q2/2021. This module will focus on the management of complaint files. The updates on this action for the ISA[2] 2020 Work Programme are aimed at covering this final component.

The THEMIS/Complaints project, in scope of this updated action, will be funded by the following budget lines for a total of 1160 K€:

- ISA[2] funding (300 K€), to build the secure external (on Europa) web site, accessible via EU Login, that allows citizens to easily file complaints.
- SG Administrative budget line (640 K€), to build the software solution and its long-term sustainability via minor evolutions, maintenance and support.
- SG Registers and Publications budget line (170 K€), to build the software solution and to provide training and support activities in the long-term.

- SG study budget lines (50 K€), to perform the usability study of the solution.

Context

Under article 17 TUE, the Commission shall oversee the application of EU law under the control of the Court of Justice of the EU. This monitoring task is entrusted to the Commission in its exclusive role as "guardian of the Treaties".

The monitoring of the application of EU law is a complex task, involving a number of steps and specific rules which are inter alia provided for by article 258 TFUE (Treaty on the Functioning of the European Union). The cooperation between the Commission and the Member States through the whole process remains a crucial element in the effective monitoring of the application of EU law.

Any natural person or body (legal entity) may lodge with the Commission a complaint about the application of EU law by Member States.

When directives have been adopted and come into force, Member States are required to notify their national transposition measures to the Commission by a given deadline. In cases where the Commission considers that such measures only partially transpose the directive or when there are no measures communicated, an infringement case is opened against that Member State. The Member State replies then to the letters of formal notice (the first step in an infringement procedure) as well as to any other official letters sent by the Commission as part of the infringement procedures.

When a directive has been fully transposed, situations may arise where a Member State's transposing legislation is not in conformity with the directive. In those cases, either an informal dialogue is initiated with the Member State concerned to resolve the situation and avoid opening a formal infringement procedure, or an infringement procedure is launched.

When entering into an informal dialogue with the Member State concerned or launching a formal infringement procedure for the non-conform transposition or application of EU law, the Commission acts either on the basis of complaints received from citizens or on its own initiative.

When an infringement procedure is launched, it undergoes inter-service consultation and involves decisions taken by the Commission.

To allow a seamless workflow of all these actions, the existing applications need to be merged in one information system composed of inter-connected modules, which fully communicate with each other and are integrated into other corporate applications, such as D*e*cide.

Problem statement

The facilities to assist the Commission's staff in this monitoring task are currently provided by a family of applications (CHAP, THEMIS/EU Pilot, MNE, NIF) covering (partially)

different phases of the overall process (transposition of directives, complaints handling, pre-infringement phase and infringements procedure).

All these applications, even though they provide the basic needs for the management of the day-to-day activities for the above-mentioned process, have gradually become inadequate (except THEMIS/EU Pilot) to comprehensively provide the functionalities corresponding to the evolving business requirements.

To comply with current needs, major evolutive development is necessary. The supporting technologies and the state of the existing applications, which have undergone a series of enhancements since 2004 (launching date of the current NIF application), advice against this approach. Such development would be extremely costly due to the instability, limitations and lack of flexibility of the existing applications to incorporate advanced and/or new functionalities. Furthermore, they lack common methods of operation and offer different interaction patterns and limited inter-operability.

<u>Proposed solution</u>

The Information Technology unit of the Secretariat-General started in 2015 the development of a new information system to provide complete coverage of the lifecycle of a (potential) infringement case, from its creation to its final closure, with the aim of effectively substituting all existing EU law applications. In addition, the new application should also automate those parts of the process not covered by any IT tool and should be linked to D*e*cide for the inter-service consultation, decision-making and execution phases.

The proposed approach towards a new solution will be fully aligned with the requirements of the on-going rationalisation efforts within the "Legislative Lifecycle" domain and the principles of the Digital Strategy of the Commission. It will have a significant impact to overcome the above-mentioned deficiencies.

THEMIS – as the envisaged solution – will enhance the execution of the Commission's fundamental task of monitoring the implementation and application of EU law by the Member States. It will provide an end-to-end management of the full inherent life cycle of EU law processes, exposing one single, user-friendly and coherent point of access for the Commission and the Member States. Thus, it will improve the efficiency and transparency of the implementation and application of EU law by Member States.

In essence, THEMIS will improve the inter-operability of the IT tools related to the transposition of directives, complaints handling, pre-infringement and infringement procedures, and integrate them with D*e*cide for the inter-service consultations and Commission decision-making processes. This will allow simplification of the working methods and help to avoid data inconsistencies and duplication.

6.5.3 OBJECTIVES

Better and more efficiently managed application of EU law involves both the European Commission and the Member States, working in close partnership. Member States are responsible for the timely and correct implementation and application of EU law while the Commission's responsibility is to ensure that EU law is applied consistently.

In addition to this, citizens or organisations are entitled to lodge complaints on alleged breaches of EU law by a certain Member State. Such complaints might trigger a pre-litigation dialogue and / or an infringement procedure. The Commission is required to inform the complainant throughout the process until its final resolution. It is intended to consider options for a more user-friendly, modern and secure technical solution to allow citizens to lodge complaints online and follow up on the handling of their complaint.

Therefore, the objectives of this action can be summarised as follows:

- To identify and implement common web services of interest that can ensure and support a consistent application of EU law.

- To expose a secure external (on Europa) web site, accessible via EU Login, that allows citizens to easily file complaints. The complainant will additionally have access to information about different steps throughout the life cycle of the complaint(s).

The project will analyse, design and implement a number of services to manage and support the exchange of information between Member States and the Commission during all phases of an infringement procedure. These web services will be integrated in the THEMIS/EU Pilot and THEMIS/Infringements modules..

Additionally, the project will analyse, design and build an external space on Europa to allow citizens to lodge complaints. This interface will be linked to THEMIS/Complaints module.

In detail, this action aims at:

- Providing a single point of access for Member States as regards to application of EU law.

- Reducing administrative burden of the Member States and of the Commission.

- Providing a secure external interface for citizens to lodge complaints.

-   Enhancing efficiency and transparency of reporting and monitoring of EU law application.

-   Improving statistical tools to simplify the gathering of information, its dissemination and reporting.

6.5.4 SCOPE

The scope of this action can be summarised as follows:

-   Better integration between Commission and national IT tools:

    Thanks to improved interoperability, national IT tools should be able to connect and interact easily and automatically with Commission systems.

    This is becoming increasingly important as the national administrations are developing more and more in-house IT applications and online services managing EU legislative work, in particular for infringement proceedings.

-   Management of infringement procedures through a modern workflow system:

    The need to speed up procedures and rationalise the decision-taking process makes it necessary to use advanced technologies for workflow management. Commission services and Member States should be able to work in a system, which allows a complete follow up of infringement procedures, from the creation to the final closing of the case, including any attendant communication and publication of information.

-   Secure and personal space to lodge citizen's complaints:

    The exposure of an Europa secure space, with EU Login as authentication mechanism, for citizens to lodge complaints, as well as to provide a central repository of information on steps taken in the treatment of the complaints available at all times.

-   Statistical facilities and search tools:

    There is need for more elaborated reporting and statistical tools to facilitate overall reporting on the application of Union law, including for the purpose of preparing the Annual Report on monitoring the application of EU law and the publication of other information.

Deliverables related to the web services in scope of this action will include their corresponding backend services, providing for bi-directional data and document exchange facilities for the infringements proceedings domain[29]. The Commission will offer these deliverables as a service to Member States, developing the required application and interfaces and hosting the computing infrastructure. They will be all accompanied by technical documentation detailing the interfaces to be used. Furthermore, on request, the Commission will provide assistance to Member States, in order to ensure correct and reliable interconnection between Member States' system and THEMIS.

The portal for the citizens to lodge complaints will be integrated in Europa.

6.5.5 PROBLEM/OPPORTUNITY STATEMENT

The monitoring of the application of EU Law is a complex task, involving a number of steps and very specific rules. Currently, this task is only partially supported by a family of old information systems that are technologically obsolete and lack interoperability amongst them.

Even though these applications fulfil the basic needs for the management of the day-to-day activities for the above-mentioned process, they have gradually become inadequate to comprehensively cover the evolving business requirements.

To comply with current needs, the largely outdated systems in operation today need to be replaced by a modern, well performing system, which is built on a sound technological platform and offers the required interoperability.

6.5.6 EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
Member States and European	**Security, rapidity and privacy, preservation of information:** The service dedicated to the communication of infringement

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[29] **The underlying principle is that public authorities responsible for implementing and ensuring compliance with EU legislation should not be presented with a proliferation of different information systems but rather a single interface in the form of the future THEMIS system and its externally accessible interfaces, thus ensuring that information existing in Member States own system(s) need not be re-encoded.**

Beneficiaries	Anticipated benefits
Commission	notifications will guarantee the information exchange system providing: - immediate transmission (Member States are required to respect deadlines), - secure transmission with acknowledgement of receipt (high level of trust), - secure data preservation (legal security for both Member States and the Commission).
Member States and European Commission	**Data quality** THEMIS external services will improve data quality, integrity and preservation of information by implementing a state-of-the-art user interface and interoperability to back-office and by using reliable and trusted data transfer. Search and statistics retrieval will be also improved.
Member States and European Commission	**Better cooperation** THEMIS external services will improve the transparency and openness of data exchange between Commission and Member States by developing/adapting and using a component to share case/project related data.
Member States	**Administrative simplification, effectiveness and efficiency, data quality** THEMIS external services will increase efficiency and data quality by implementing state-of-the-art user interface and interoperability (system-to-system) for the transmission of replies and prolongation of deadline requests in the matter of infringement proceedings.
European Commission	**Efficient management of infringements** THEMIS external services will provide data quality, efficient and secure data dissemination among services and will be the basis of the decision making process in matter of infringements.
European Commission	**Efficient IT development and evolution, flexibility, scalability, adaptability to legislation change** THEMIS external services will be flexible, scalable and adaptable by being developed as a service and component oriented IT

Beneficiaries	Anticipated benefits
	architecture.
Citizens and organisations	**Secure and personal online space to lodge complaints** The exposure of a secure space on Europa for citizens to lodge complaints, as well as to receive information on steps taken in the treatment of their complaints, will improve the handling of complaints, ensuring that complainants have all information on their ongoing complaints available at all times.

6.5.7 RELATED EU ACTIONS / POLICIES

Action / Policy	Description of relation, inputs / outputs
Communication "Towards interoperability for European public services" COM(2010) 744 final	This Communication introduces European Interoperability Strategy (EIS) and the European Interoperability Framework (EIF) for European public services, being part of the Digital Agenda, focusing on interoperability.
eGovernment Action – Plan 2011 -2015	Reducing administrative burden by horizontal integration of processes across administrative authorities.
ISA^2 Action 'Participatory knowledge for supporting decision making'	Reusable solutions that allow the electronic participation of stakeholders, the analysis of the captured opinions and the discovery and generation of knowledge will be taken into account for enhancing the monitoring of EU law implementation and its application by Member States.
ISA^2 Action 'Legislation interoperabilit	Existing or under development building blocks (i.e. software, tools etc.) that support and improve the electronic exchange of documents and metadata in the context of the legislative process and the

Action / Policy	Description of relation, inputs / outputs
y tools (LEGIT)'	transformation between different formats will be taken into account for enhancing the monitoring of EU law implementation and its application by Member States.
'ISA^2 Action ICT implications of EU legislation'	Results and conclusions related with the properly preparation and evaluation of EU legislation regarding the ICT implications will be taken into account for enhancing the monitoring of EU law implementation and its application by Member States.
ISA^2 Action 'European Legislation Identifier (ELI)'	The proposed approach for identifying legislation documents and the supporting assets and solutions will be taken into account for enhancing the monitoring of EU law implementation and its application by Member States.
ISA^2 Action 'Interinstitutional framework for digital OLP management'	The proposed interoperable ways of structuring the content of the documents that need to be exchanged between the institutions for the purposes of the ordinary legislative procedure will be taken into account for enhancing the monitoring of EU law implementation and its application by Member States.

6.5.8 REUSE OF SOLUTIONS DEVELOPED BY ISA, ISA^2 OR OTHER EU / NATIONAL INITIATIVES

THEMIS will assess the feasibility of re-using solutions and/or results outcome of other ISA, ISA^2 or EU / National initiatives, specifically ISA Action 1.8, ISA Action 1.11, ISA Action 1.14, ISA Action 1.18 and ISA Action 1.21.

Action / Policy	Description of relation, inputs / outputs
ISA Action 1.8 – Trusted Information Exchange Platform	THEMIS will develop the future Infringement module as a single exchange platform and repository of all official infringement documents exchanged between Member States and the Commission (by using the eTrustEx platform for the transmission of official documents to the Member States and reception of acknowledgement from them), mainly in legislation and competition policy areas.

Action / Policy	Description of relation, inputs / outputs
ISA Action 1.11 – Interoperable and generic notification services.	THEMIS will assess the feasibility of re-using the results of ISA Action 1.11 in relation to the notification services developed within the scope of this action.
ISA Action 1.18 – Federated Managed Authentication Services for ECAS	THEMIS will assess the feasibility of re-using the results of ISA Action 1.18 in relation to its outcome web services interfaces developed.
ISA Action 1.21 – European Legislation Identifier	ISA Action 1.21 will provide input to this action.
ISA^2 Action 2018.05 – Electronic Access to the European Commission Documents	THEMIS will assess potential synergies with the Electronic Access to European Commission Documents action in relation to the citizens' portal in scope of this action.

6.5.9 EXPECTED RE-USABLE OUTPUTS (solutions and instruments)

Output name	Web services tailored to infringement management processes
Description	The web services in scope to develop as part of this proposal are tailored to infringement management processes. Nevertheless, there may be possibilities to reuse/apply certain outputs to other purposes.
Reference	

Target release date / Status	Q1 2020
Output name	Citizens' portal
Description	A secure external space on Europa to provide a more user-friendly, modern and secure technical solution to allow citizens to lodge complaints online and follow up on the handling of their complaint.
Reference	
Target release date / Status	Q2 2021

6.5.10 ORGANISATIONAL APPROACH

6.5.10.1 Expected stakeholders and their representatives

Stakeholders	Representatives
European Commission – administrator	Unit SG.F3 of the Secretariat-General administrating the application, providing policy guidance on its use. Unit SG.C4 of the Secretariat-General registering the complaints lodged by citizens, including those received via the online complaint form (part of CHAP system).
Project Owner	Unit SG.F3 of the Secretariat-General responsible to coordinate the Commission's actions as guardian of the Treaties.
Solution Provider	Unit SG.C5 (Information Technology) responsible for the development of THEMIS.
End users – Commission Services	Infringement correspondents and infringements case handlers in all Commission services.
End users - Member States authorities	Current MNE and MNE/INFR end users (various national administrations in all Member States) in the Member States.
End users – complainants	End users of the online platform.

6.5.10.2 Communication plan

The main communication actions, both for the Directorates-General' and Member States' users of THEMIS, are described next:

- Written communication, both to internal and external stakeholders (newsletter via e-mail).

- Awareness sessions with the Member States representatives and with the Directorates-General representatives – to present the project.

- Dissemination material for all relevant stakeholders:

  o Directorates-General: Leaflets, posters and a quick-start guide.

  o Member-States: Quick start guide.

- Meetings:

  o With external stakeholders, once a year, in the frame of the EU Law Network meetings, to provide status and recollect feedback.

  o With internal stakeholders, twice a year, as part of the Directorates-General infringement correspondents meeting, to provide status and recollect feedback.

- First-line support: The Project Support Team will help users through the change and collecting feedback.

- CIRCABC group of interest on "Implementation and application of EU law", members of which are the Member-States representatives.

Event	Representatives	Frequency of meetings / absolute dates of meetings
EU law Network	All Member States	Normally, once or twice a year
Infringement correspondents meetings	Representatives from all Directorates-General	Once or twice a year
Directors network	Representatives from all Directorates-General	Once or twice a year
Project owner/System supplier	SG.F3/SG.C5	Quarterly reporting using PM² methodology
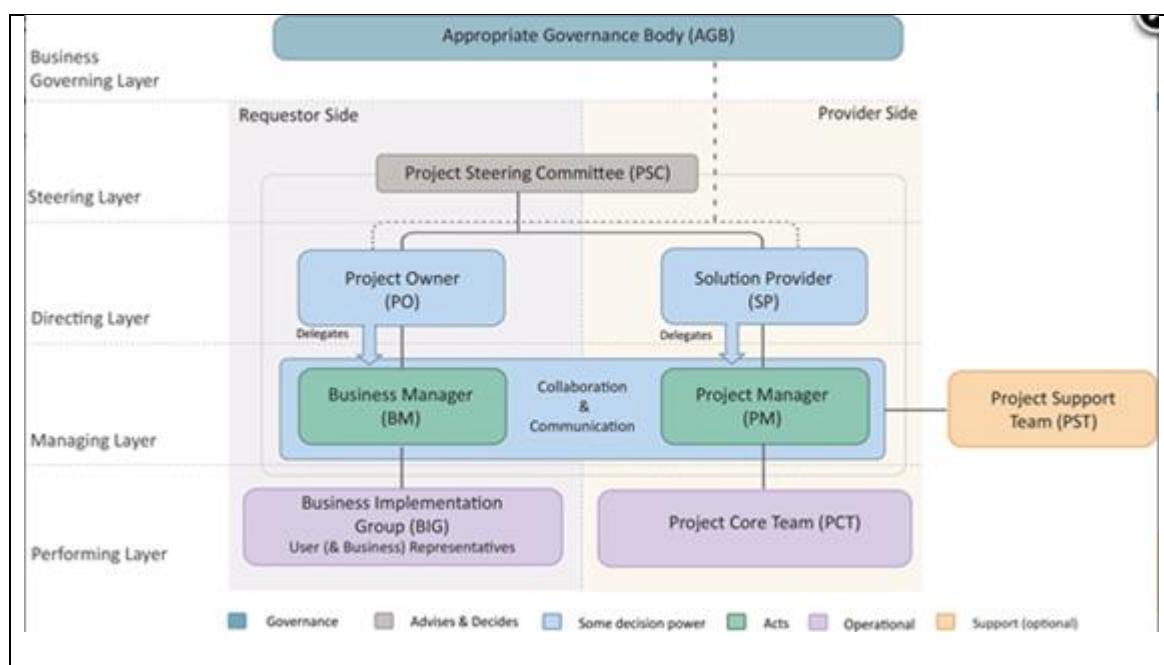
Training sessions will also be organised for end users, both internal (services of the Commission) and external (Member States). Training material will be produced by the Secretariat-General corporate training, tailored to each end user population group (internal and external, including also citizens within the scope of the online secure site). Part of such material could potentially be submitted to the new "Interoperability Academy".

In the case of external users, information about the public portal will be disseminated once it is ready (or shortly before) by using the means available from ISA^2 communication team, as well as by all means that the Communication Unit in the Secretariat-General can provide.

Achievements will also be shared via ISA^2 official communications channels (ISA^2 website, ISA^2 newsletter…).

6.5.10.3 Governance approach

This project will follow the standard PM2 project governance structure.

Project Owner: Mr. SLOOTJES, Rene (SG.F3)

Solution Provider: Mr. GRITSCH, Martin (SG.C5)

Project Manager: Mr. BLAZQUEZ DE MIGUEL, Víctor (SG.C5)

Business Manager: Mrs. BURGUET Isabelle (SG.F3)

Mrs. TRASCA Raluca, BATAGOI, Loredana, CAPORALE Diane (SG.F3)

Project Support Team (PST): Appointed.

Project Core Team (PCT): Appointed.

Business Implementation Group (BIG): 1 representative per Directorate-General and 1 representative per Member-State. Appointed.

The governance approach has established weekly coordination meetings between SG.F3 (project owner) and SG.C5 (solution provider). In addition, this action will respect the general ISA Governance under the supervision of the ISA Coordination Group inside the cluster "Trusted Information Exchange".

The governance of this action project is set up in the Project Charters of both THEMIS/Infringements and THEMIS/Complaints modules. According to these documents, the Steering Committee monitors completion of the project phases; sets project requirements, objectives and outcomes, validates project deliverables, tests activities and disseminates information about the project to the Commission services. It is composed of members from Units F3, C4 and C5 of the Secretariat-General and representatives of those services which manage complaints and infringement procedures (DG AGRI, DG CLIMA, DG CNECT, DG EMPL, DG ENER, DG GROW, DG ENV, DG FISMA, GROW, HOME, DG JUST, Legal Service, DG MOVE, DG SANCO and TAXUD).

In parallel, Member States are participating in THEMIS work through the EU Law Network. Tests and feedback can be submitted to the functional mailbox SG-THEMIS @ec.europa.eu.

6.5.11 TECHNICAL APPROACH AND CURRENT STATUS

The services in scope of this proposal will represent the common future external module of the THEMIS system (incorporated both within the THEMIS/Infringements and THEMIS/EU Pilot modules), providing a reliable, robust and secure mechanism to connect to systems in Member States' public authorities (existing or under development).

System-to-system data exchanges between the national administrations and the Commission will reduce extra manual data encoding. This will allow Member States to transmit data directly from their back-office systems in respect of the following principles of the European

Interoperability Framework: security and privacy, multilingualism, administrative simplification, transparency, preservation of information, openness, reusability, effectiveness and efficiency. History of all data exchanges with the Member States' administrations should be accessible to either party.

All services will be strongly integrated to ensure a consistent and reliable workflow.

The technical implementation of the proposed data-exchange services has the following requirements:

- State of the art secure web services allowing for the exchange of meta-data for confidential (official notification of infringements and MS replies to those notifications) dossiers; these services should permit uploading such information from MS systems into the Commission system.
- Non-repudiation for official notifications of infringements.
- Legally binding electronic signature for official notification of infringements and transmission of the corresponding Member States' replies (explicit requests by Spain and Germany).
- A transfer mechanism allowing for highly reliable exchange of documents, including very large documents if needed (electronic transmission should be the unique notification mechanism).
- A publishing service allowing MS to 'pull' information accessible to them in a format compliant with open government publication standards, allowing them to integrate the extracted information into their own IT systems.
- A notification service which will inform the concerned parties that new tasks/data are available in the system, allowing either for specific action in the external interface, or automated download procedures for available data.
- A reporting and statistics service which will allow Member States to retrieve, at any time, different sets of statistics and historical data of EU law proceedings they are / have been involved in.

Backwards compatibility with the current basic web services used by Member States needs to be ensured for an initial length of time (6-12 months), since often Member States have out-sourced IT developments and any changes on our side will have a non-negligible impact for them.

By the same token, it is imperative to involve Member States in order to ascertain that current and future Member States requirements are met. The Commission will inform Member States at an early stage of the projected developments and collect feed-back from them. This will be

channelled through the existing EU Law Network, with regular coordination meetings in Brussels.

The online platform for citizens' complaints, linked to the THEMIS/Complaints module, has the following requirements:

- Compliance with the new General Data Protection Regulation (GDPR), which has been in application since 25 May 2018, and the new data protection rules for EU institutions and bodies, including the corresponding new implementing rules.
- Coherent and user-friendly interfaces, providing a modern user experience, compliant with the recommendations and guidelines[30] of the Commission web presence on Europa, built upon the European Component Library (ECL).
- Strong authentication mechanisms, ensured by the usage of EU Login.

    Re-use of existing building blocks such as, but not limited to, Hermes-Ares-Nomcom (HAN), Poetry and Corporate Search (Europa).

Current status of the action

The services in scope of this action will be delivered embedded within the THEMIS/Infringements module of the THEMIS application In order to avoid an impact on the last Commission and to ensure a smooth transition of the users to the new application, the project stakeholders have agreed to start using the THEMIS/Infringements module with the new Commission. Therefore, the module will be fully operational at the beginning of 2020.

This action officially kicked-off on 1 October 2016, after the finalisation and release in production of the THEMIS/EU Pilot module, and after receiving approval from the IT Board on the Project Charter of the THEMIS/Infringements module. The first iteration of the detailed formal analysis of the new business services and the proof-of-concept prototype for the core infrastructure of the system were completed in 2017.

The main results achieved during the period spanning from 01/01/2018 – 30/06/2019 are as follows:

- The first phase of THEMIS / Infringements, which implements the modules related to the management of directives, national transposition measures and the MDH (mise en demeure par habilitation) procedure, is currently under development and soon will be completed. This first phase covers the web services corresponding to the use cases ISA 5, ISA 7 and ISA 8 (see the next section for details on the use cases).

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[30] Information Providers Guide (IPG). http://www.cc.cec/home/europa-info/index_en.htm

- The second phase of THEMIS/Infringements, which implements the module related to the management of infringements, is currently under development. During the reporting period subject of this document, the Project Team has completed the web services that correspond to the use cases ISA 1, ISA 2, ISA 3, ISA 4 and ISA 6 (see the next section for details).

From 2021 onwards, the THEMIS/Complaints system will be sustained both by the Secretariat-General administrative budget line (to maintain and evolve the solution) and the Registers and Publications budget line (to provide training and support activities).

The situation for THEMIS/Infringements is alike the one for THEMIS/Complaints, with the difference that operational activities will start in 2020.

6.5.12 COSTS AND MILESTONES

6.5.12.1 List of use cases identified: 10 use cases for common services and infringements management + 5 use cases for complaints handling

- *ISA 1 Submit reply to infringement notification:* This technical use case describes the required actions, associated data and the web-service call structure to correctly upload meta-data and associated documents for the reply by a MS to an official infringement notification.

- *ISA 2 Request an extension of deadline for a reply to an infringement:* This technical use case describes the required actions, associated data and the web-service call structure to correctly upload a meta-data and associated documents with regards to a request for an extension of deadline to reply to an infringement case.

- *ISA 3 Retrieve reply:* This technical use case describes the required actions and the web-service call structure to retrieve all meta-data and documents associated with a reply to an infringement notification in a machine-readable format (XML).

- *ISA 4 Retrieve infringement notification:* This technical use case describes the required actions and the web-service call structure to retrieve all meta-data and documents associated with a given dossier and accessible to a MS in a machine-readable format (XML).

- *ISA 5 Retrieve infringement dossier:* This technical use case describes the required actions and the web-service call structure to retrieve all meta-data and associated documents accessible to a MS for an entire infringement dossier in a machine-readable format (XML).

- *ISA 6 Communication of additional information:* This technical use case describes the mechanism and web-service structure to provide additional information to on-going infringement cases at any time during their life-cycle.

- *ISA 7 User management:* This technical use case describes the mechanism and web-service structure to manage Member States users. Add, delete or update users, define roles and rights, or re-assign / delegate cases are actions to be supported by this web-service. As part of this use case, feasibility of re-using the results of ISA Action 1.18 (Federated Authentication Action) will be checked.

- *ISA 8 Notifications and Alerts:* This use case describes the mechanism and web-service structure to retrieve new tasks/data available in the system, allowing either for specific action in the external interface, or automated download procedures for available data. As part of this use case, feasibility of re-using the results of ISA Action 1.11 (Interoperable and generic notification services) will be checked.

- *ISA 9 Statistics and reporting – Infringement cases:* This technical use case describes the mechanism and web service structure to retrieve different reporting and statistics related to infringement cases, from the Member State perspective.

- *ISA 10 Statistics and reporting – EU law proceedings life-cycle:* This technical use case describes the mechanism and web service structure to retrieve different reporting and statistics throughout the whole life cycle of EU-LAW proceedings, from the Member State perspective.

- *ISA 11 Lodge citizen complaint:* This use case describes the feature for citizens to submit a complaint via a form exposed within the external secure online space. *[Note: It is for the Commission services to check if the communication from a citizen/organisation fulfils the criteria of a 'complaint concerning the application of EU law'; if not the case, the file is handled in Ares and not in THEMIS/Complaints.]*

- *ISA 12 Inform the complainant:* This use case describes the feature to allow the lead service of a complaint file to inform the complainant about the receipt of his/her complaint and the follow up to the respective complaint, including prior notice about the intended closure of the complaint and the confirmation of its closure. This feature will also allow to have a proof of receipt by the complainant of these letters. The final letters will be made available within the complainant's personal space on the online portal.

- *ISA 13 Generate letters:* This use case describes the feature to generate letters required at different states of the life cycle of a complaint (notably acknowledgement of receipt and closure letters), for a lodged complaint. The sent letters will be made available within the complainant's personal space on the online portal.

- *ISA 14 Search :* This use case describes the feature to search through the history of complaints, and related information, the complainant has submitted to the Commission.

- *ISA 15 Update profile:* This use case describes the feature for the complainant to update her/his personal profile, including, but not limited to, her/his personal details and contact information.

The following table summarises the scope of the identified use cases. The use cases are grouped in two releases: V1 release includes the use cases related to the management of infringements and common services of THEMIS, while V2 release includes the use cases related to the citizens' online portal.

Use case	Name	Release	Scope
ISA 1	Submit reply to infringement notification	V1	Infringements management
ISA 2	Request an extension of deadline for a reply to an infringement	V1	Infringements management
ISA 3	Retrieve reply	V1	Infringements management
ISA 4	Retrieve infringement notification	V1	Infringements management

Use case	Name	Release	Scope
ISA 5	Retrieve infringement dossier	V1	Infringements management
ISA 6	Communication of additional information	V1	Common services
ISA 7	User management	V1	Common services
ISA 8	Notifications and Alerts	V1	Common services
ISA 9	Statistics and reporting – Infringement Cases	V1	Statistics and Reporting
ISA 10	Statistics and reporting – EU-LAW proceedings life-cycle	V1	Statistics and Reporting
ISA 11	Lodge citizen complaint	V2	Complaints handling
ISA 12	Inform the complainant	V2	Complaints handling
ISA 13	Generate letters	V2	Complaints handling
ISA 14	Search	V2	Complaints handling
ISA 15	Update profile	V2	Complaints handling

6.5.12.2 Breakdown of anticipated costs and related milestones

Release V1: Infringements management and common services

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Planning	Requirements gathering, assuring alignment with Decide's scope.	30	ISA[2]	Q4/2016	Q1/2017
Planning	Detailed formal analysis (technical use cases) of the in scope identified business services and	60	ISA[2]	Q2/2017	Q3/2018

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	their exposure through web services. Validation of the proposal by all actors.				
Executing	Development of 'in/out' web services and their correspondent backend business services.	190	ISA[2]	Q3/2017	Q1/2019
Executing	Testing and training; updated technical documentation for Member States to allow them to integrate their systems with the new services.	30	ISA[2]	Q2/2019	Q2/2019
Closing	Roll-out V1	30	ISA[2]	Q2/2019	Q2/2019
Monitor & Control	Monitor and report on on-going project activities and project performance, planning and implementing corrective actions in case of need.	30	ISA[2]	Q4/2016	Q1/2020
	Total	**370**	**ISA[2]**		

Release V2: Citizens' online portal[31]

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Planning	Requirements gathering, assuring alignment with Europa's restrictions	30	ISA^2	Q1/2020	Q1/2020
Executing	Detailed formal analysis of the in scope identified use cases for the external citizen's portal. Validation of the proposal by all actors.	50	ISA^2	Q1/2020	Q2/2020
Executing	Development of the features in-scope and their link with THEMIS/Complaints.	140	ISA^2	Q3/2020	Q1/2021
Executing	Testing and training; updated documentation for Commission	30	ISA^2	Q1/2021	Q2/2021

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[31] The Total Cost of Ownership (TCO) for the THEMIS/Complaints project adds up to 1.050 K€, out of which 350 K€ lie on the ISA^2 budget line, 100 K€ on Registers & Publications and the remaining 600 K€ on the Common budget line.

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	services and user's guide for citizens.				
Closing	Roll-out V2	30	ISA[2]	Q2/2021	Q2/2021
Monitor & Control	Monitor and report on on-going project activities and project performance, planning and implementing corrective actions in case of need.	20	ISA[2]	Q1/2020	Q2/2021
	Total	**300**	**ISA[2]**		

6.5.12.3 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Planning (release V1)	90	370
2016	Executing (release V1)	220	
2016	Closing (release V1)	30	
2017[32]	Monitor & Control (release V1)	30	
2019	Planning (release V2)	30	150
2019	Executing (release V2)	120	
2020	Executing (release V2)	100	150
2020	Closing (release V2)	30	
2020	Monitor & Control (release V2)	20	
	Total	**670**	**670**

6.5.13 ANNEX AND REFERENCES

Description	Reference link
THEMIS/Infringements Project Charter	https://myintracomm-collab.ec.europa.eu/projects/SGISPM/PROJ_DOC%20%20Themis/Project%20management%20and%20planning/Initiating/%5BINF%5D.Project_Charter.(THEMIS_INFRINGEMENTS).(11-01-2019).(v1.6).docx?Web=1
THEMIS/Complaints Project Charter	https://myintracomm-collab.ec.europa.eu/projects/SGISPM/PROJ_DOC%

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[32] Budget received on 2016

Description	Reference link
	[20%20Themis/Project%20management%20and%20planning/Initiating/%5BCHAP%5D.Project_Charter.(THEMIS_COMPLAINTS).(22-01-2019).(v1.7).docx?Web=1](#)
Articles 4 and 17 TEU	UU[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:083:0013:0046:EN:PDFUU](#)
Articles 258 and 260 TFEU	UU[http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2010:083:SOM:EN:HTMLUU](#)
Decision 2002/47/CE, CECA, Euratom for document management rules	OJ L 21, 24.1.2002, p. 23–27
Annual Reports on monitoring the application of Community law	UU[http://ec.europa.eu/eu_law/infringements/infringements_annual_report_en.htmUU](#)
Communication 'A Europe of results – Applying Community law' (the 2007 Communication)	COM (2007) 502
Communication 'EU law: Better results through better application'	C/2016/8600, OJ C 18, 19.1.2017
Communication on the application of Article 260 (3) TFEU	UU[http://ec.europa.eu/eu_law/infringements/infringements_260_en.htmUU](#)
Framework Agreement between the Commission and the European Parliament (Section on 'Monitoring the application of Community law')	UU[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:304:0047:0062:EN:PDFUU](#)
Public access to documents relating to infringement proceedings	SEC(2003)260/3 UU[http://www.cc.cec/sg_vista/cgi-bin/repository/getdoc/COMM_PDF_SEC_2003_0260_3_EN.pdfUU](#)
Monitoring the application of community law: manual of procedures	SEC(2005)254/5 UU[http://www.cc.cec/sg_vista/cgi-](#)

Description	Reference link
	bin/repository/getdoc/COMM_PDF_SEC_2005_025 4_5_EN.pdfUU

6.6 INTERINSTITUTIONAL FRAMEWORK FOR DIGITAL OLP MANAGEMENT, JOINT LEGISLATIVE PORTAL AND LEGAL INFORMATION (2016.17)

6.6.1 IDENTIFICATION OF THE ACTION

Service in charge	Publications Office of the European Union, Directorate A Information Management : Unit A.1 Standardisation, Directorate C Access to and reuse of public information : Unit C.2 EUR-Lex and Legal Information
Associated Services	Parliament, Council, Commission

6.6.2 EXECUTIVE SUMMARY

This action contributes to the overall objective of modernising and improving the efficiency, quality and transparency of the legislative process across the European Union by facilitating interoperability between the different actors of the process.

1. On the one hand, the action comprises the definition of common standards for the exchange of data in the scope of the EU law- making process, in particular for the structuring of the exchanged documents.

The purpose is to define a "Common Exchange Model", i.e. the specifications that are needed for the implementation of the future document exchange between the different actors. This will also allow for a transparent access to the public information by interested third parties and re-users.

The "Common Exchange Model" is based on LegalDocML, a standardisation initiative of OASIS that supports the use of XML in the domain of legislation in general. LegalDocML is based on the UN project Akoma Ntoso-UN[74]. Therefore, the "Common Exchange Model" was re-named "Akoma Ntoso for EU legal documents", in short "AKN4EU".

In this context the AKN4EU defines the application profile (or localisation) of LegalDocML for documents that are exchanged in the scope of the law-making process of the EU.

The action is in line with the ISA^2 supported landscaping exercises on the rationalisation of systems, tools and specifications participating in the EU legislative process ("AS-IS"

report in 2016, "TO-BE" report in 2018) that aimed at proposing a future architecture for the digital operation of information flows that support the legislative process. Thus it underpins in particular the recommendation of the landscaping exercise "TO-BE" to base the exchanges on machine-readable, structured formats.

The action also supports the ongoing development of an Open Source Software for editing legislation (EdiT, ISA^2 action 2016.38 Legislation Interoperability Tools – LegIT) and the ongoing initiative of the Council and the European Parliament for the development of a new tool to support negotiations in the scope of the legislative process (Trilogue Table Editor).

Hence it is guaranteed that the programme's results will last beyond its completion, because the deliverables form an essential contribution to the solutions developed by the Institutions for their data exchanges during the legislative process.

(For the sake of clarity, this part of the action is hereinafter referred to as "Digital OLP Management").

2. On the other hand, this action focuses on the **interoperability and transparency in the dissemination of information concerning legislative process** (and by extension EU law and related national law).
First of all, it proposes to build the (initial version) of the Joint Legislative Portal ("JLP"), a single-point access to all documents and information in the legislative procedure, enabling citizens to learn about the positions taken in that process by the different institutions, as well as by national parliaments. The JLP, an interoperable solution, will be built as part of the EUR-Lex environment (the EUR-Lex portal, its underlying repository and the common exchange protocol and transmission channels used to support the legislative process).

Secondly, the action includes extensions to national law implementing EU law, by providing explicit links to national resources. This can be achieved by establishing technical connections with national law databases - as is partially the case nowadays in in the N-Lex portal[33] - and by application of interoperability frameworks such as the European Legislative Identifier (ELI) and European Case Law Identifier (ECLI).

Thirdly, the action will analyse and propose solutions on how to make the EU law in force (the EU law as applicable at the time of the user query) easier to find and read and how to present the legal information in a way that responds to the specific needs of specific types of users (thematic searches).

Within this part of the action, the initial versions of new solutions will be developed in order to demonstrate the feasibility and the benefits for the different stakeholders: citizens, businesses and public administrations. The implementation of the final solution could be covered by other budgetary sources.

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[33] http://eur-lex.europa.eu/n-lex/index_en

(For the sake of clarity, this part of the action is hereinafter referred to as "JLP and Legal Information").

6.6.3 OBJECTIVES

The objective of the action is, on the one hand, to contribute to the implementation of a seamless, fully interoperable end-to-end document exchange for the legislative process of the European Union, in order to increase efficiency, performance and quality of the process (Digital OLP Management), and, on the other hand, to increase transparency by creating a single, robust access point to the information on the EU law-making process, national transposition measures and the EU law in force (JLP and Legal Information).

In the current stage, the focus of the Digital OLP Management is on documents exchanged in the scope of the ordinary legislative procedure (OLP) and on delegated acts (DAs).

The Member States' document exchanges with the EU Institutions in the context of legislative processes at EU level can also benefit from the application of the agreed standards and solutions.

6.6.4 SCOPE

Digital OLP Management:

The current work of the Interinstitutional Metadata and Formats Committee (IMFC) focuses on the Common Vocabulary (CoV), a business level description of semantic and structural concepts for the documents that are exchanged in the scope of the ordinary legislative procedure (OLP) and for delegated acts (DAs), as well as on AKN4EU, comprising the definition of a representation of these concepts in a machine-readable format.

In 2020 the coverage of AKN4EU will be extended to supplementary document types and variants of already integrated document types (version 4.0). The library of examples marked-up according to the AKN4EU specifications and the validation framework (allowing to formally checking the compliance of a document to AKN4EU) will be extended accordingly to complement the specification.

Furthermore, the tool for the conversion of existing XML legacy data into Akoma Ntoso (FMX2AKN) will also be developed further to be compliant to AKN4EU version 4.0.

JLP and Legal Information:

The initial version of the JLP will provide access to documents and information about the ordinary legislative procedure (OLP) and in particular:

- an easy way to access the content by topics and by other search criteria
- a meaningful timeline highlighting pre-defined key events
- a user-friendly interface showing the current stage of a procedure and the expected future stages, with the possibility to see the previous stages of the legislative procedure
- an expert view for users needing all details.

This part of the action includes also analysing, devising and implementing of solutions to improve access from the EUR-Lex environment (and including N-Lex) to national law which has links to EU law, namely to national transposition measures and national case law applying EU law. It also includes all solutions enabling automatic exchanges between national law websites and the EUR-Lex environment, between EUR-Lex environment and THEMIS application, as well as wider inclusion of the e-Translation tool. Consultancy services and support to Member States in implementation of connectors on N-Lex are included.

The "EU Law in Force" will be a concise site, reusing the building blocks of the Publications Office Portal and offering an easy and quick access to the EU legislation currently in force (in its consolidated versions), the case law of the Court of Justice of the European Union and a selection of most important contextual information (legal metadata).

This part of the action also includes analysing, devising and developing EUR-Lex features which are specific to certain type of users/certain type of legal information (thematic searches) and which are currently not accessible from one single point of access. In this context, synergies with e-Justice Portal and ECLI search engine will be explored.

6.6.5 ACTION PRIORITY

The vision of a seamless, fully interoperable end-to-end document exchange for the production of multilingual EU laws across the Institutions, and even with the Member States, matches the current Commission's explicit commitment to improving the quality of EU policy- and law-making. This is contributing directly to a better regulation in the context of President Juncker's "Democratic change" target. It is in the nature of the action that it will contribute to all the Commission's priorities as soon as legislative procedures come into play.

Consequently, the impact will be across all fields of policies and activities of the EU Institutions. It will be beneficial to all players involved in legislative procedures at EU level, including Member States and interested third parties (businesses, lobby organisations, academics, etc.).

6.6.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	An improved document exchange between the EU Institutions, and between EU Institutions and Member States, is necessarily based on increased interoperability. As such, it meets the requirements of the European Interoperability Framework. In addition, it directly contributes to the European Interoperability Strategy and has an immediate impact on the interaction, exchange and cooperation between European public administrations for their legislative activity (as a delivery of public service). The action also contributes to the implementation of the Inter-institutional Agreement on Better Law-Making of 13 April 2016, which foresees establishment of a dedicated joint inter-institutional database on the state of play of legislative acts. It contributes to improving the access to EU law in force and related national law.
Does the proposal fulfil an interoperability need for which no other alternative	Yes, the EU Institutions agree that they will widely benefit from the

Question	Answer
action/solution is available?	application of agreed standards, and are thus contributing to the preparatory work done in the context of the Interinstitutional Metadata and Formats Committee (IMFC).

6.6.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	By its nature, the action will impact, once completed, all EU policy areas and all EU Institutions.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	This proposal is not yet in an operational phase. (However, a first document transmission by the European Commission using AKN4EU had been scheduled for Q3/2019 as part of a pilot project.)

6.6.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	The proposal involves the EU Institutions, but its geographical reach aims at covering all Member States. Once completed, the national public administrations will benefit when exchanging documents with the EU Institutions.

Question	Answer
	The result of the action will also enable creating bridges between the EU law portals (EUR-Lex and N-Lex) and national law portals. The JLP will depict the role of national parliaments and national administrations in the EU law-making/EU law transposition, thus making it easier for them to follow the context of their work.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	This proposal is not yet in an operational phase.

6.6.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	JLP: The action is urgent as it fulfils the commitment of the Institutions to create a joint legislative database on the state of legislative files set up by the Inter-institutional Agreement on better law-making of 13 April 2016[34]. For the rest, there is no explicit mentioning of the action in an EU policy or legislation, but the proposal addresses directly and exclusively interoperability. In addition, an implicit urgency has to

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[34] OJ L132, 12.5.2016, p. 1.

Question	Answer
	be assumed due to its impact on the majority of legislative activity in all policy fields.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Interoperability is at the very core of the action. Furthermore, the overall project is across policy sectors, Institutions and borders as well as of multiannual nature. This action will produce re-usable results along the way.

6.6.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Common Vocabulary (CoV)
Description	Business level description of the semantic and structural concepts that are present in the documents that are exchanged in the scope of the OLP and in the scope of the consultation process for delegated acts.
Reference	IMFC_CoV
Target release date / Status	12/2017: CoV version 1 adopted 09/2018: CoV version 2 adopted 0Work ongoing for CoV version 3 (target date 9/2019) 09/2020 as target date for CoV version 4
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Akoma Ntoso for EU legal documents (AKN4EU) (formerly known as Common Exchange Model - CEM)
Description	Formal specification for the exchange of OLP and DA document types, based on the IMFC Common Vocabulary's structural components
Reference	IMFC_AKN4EU
Target release date / Status	03/2018: CEM version 1 adopted 12/2018: CEM version 2 adopted, Work ongoing for AKN4EU (formerly CEM) version 3 (target date 12/2019) 12/2020 as target date for AKN4EU version 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	First exchanges are foreseen based on AKN4EU as part of a Commission/SG pilot project. This is particular important because the Commission and the Council have agreed to use the same editing tool (EdiT) based on the open source solution LEOS.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	AKN4EU business validation rules
Description	Update of the definition in a human readable way of the business rules need for the AKN4EU version 4.0
Reference	IMFC_ AKN4EU _BR
Target release date / Status	12/2020 to be released with AKN4EU 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual	See "Akoma Ntoso for EU legal documents (AKN4EU)".

reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	AKN4EU technical validation rules
Description	Update of the definition of validation mechanisms for the AKN4EU business validation rules and of technical validation rules beyond the business validation, e.g. checking of file naming conventions.
Reference	IMFC_ AKN4EU _TR
Target release date / Status	12/2012 to be released with AKN4EU 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	See "Akoma Ntoso for EU legal documents (AKN4EU)".

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Examples
Description	Demonstrate the application of the AKN4EU by the elaboration of an extended representative set of examples.
Reference	IMFC_ AKN4EU _EXA
Target release date / Status	12/2020 to be released with AKN4EU 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to	See "Akoma Ntoso for EU legal documents (AKN4EU)".

the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Validation Framework
Description	Upgrade of existing version to support AKN4EU 3.0 and industrialization.
Reference	IMFC_ AKN4EU _VAF
Target release date / Status	12/2020 to be released with AKN4EU 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	See "Akoma Ntoso for EU legal documents (AKN4EU)".

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Legacy Data Converter for XML
Description	Upgrade of existing version to support AKN4EU 3.0 and industrialization
Reference	IMFC_ AKN4EU _CONV
Target release date / Status	12/2020 to be released with AKN4EU 4.0
Critical part of target user base	n/a
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new	Joint Legislative Portal (initial version)

proposals) or produced (for existing actions)	
Description	The information federated by the JLP can be reused via web services, a RESTful API and a SPARQL endpoint. In the future, the JLP components could be reused to display similar type of legal information, e.g. other (internal) decision-making procedures or EU court procedures.
Reference	JLP
Target release date / Status	Q3 2021
Critical part of target user base	European public administrations, legal information providers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n.a.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Specifications for connectors
Description	The specifications for connectors between the EUR-Lex environment (including N-Lex) and national law databases could later be reused for building connectors with other national databases (e.g. different court databases).
Reference	CONNECTORS_SPEC
Target release date / Status	Incrementally
Critical part of target user base	European public administrations, courts
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n.a.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Bulk export service
Description	A standalone service developed within the strand of thematic searches, which would be potentially usable for any document available in the Publications Office repository by any of its website or system, as well as by external re-users. Upon receiving a request containing a list of document identifiers, the desired language and format, this service will assemble the corresponding files into a single file and report to the requester system the outcome of the operation. Any interaction with the end user would be handled by the requester system (EUR-Lex in the first place).
Reference	BULK EXP
Target release date / Status	Q3 2021
Critical part of target user base	European public administrations, legal information providers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n.a.

6.6.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Yes, the proposal is built on the re-use of the Common Vocabulary defined by the IMFC and supported by ISA[2]. In addition, the action is based on the

Question	Answer
	results of the ISA "AS-IS" and "TO-BE" landscaping exercises (in the context of ISA^2 Action 2016.38 Legislation Interoperability Tools – LegIT) and makes use of authority tables available from EU Vocabularies[35].
	Other interoperability solutions/frameworks reused:
	2016.08 European Legislation Identifier (ELI): ELI will be used as the main identifier for the JLP and the "EU Law in Force".
	2016.19 Trusted Exchange Platform (e-TrustEx): The communication between the Institutions' systems supporting the JLP will be by default via eTrustEx or eDelivery.
	2016.01THEMIS - Application of EU law: provision of cross sector communication and problem solving tools: Automatic sending of national transposition measures, complying with standard exchange protocol, from the THEMIS repository is envisaged

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[35] See: EU Vocabularies (https://publications.europa.eu/en/web/eu-vocabularies)

Question	Answer
	(for the strand "Improved linking between EU law and national law").
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	This proposal is not yet in an operational phase.

6.6.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Yes, in the Political Guidelines for the next European Commission 2019-2024, the President-elect of the Commission, Ms von der Leyen declares the need for transparency throughout the legislative process and for the possibility to be given to citizens to know which positions the Institutions defend in the process. The proposal also directly contributes to the current Commission high political priority n° 10 "Democratic change", and more specifically fosters better regulation[36]. It aims at improving the Ordinary Legislative Procedure by facilitating the EU Institutions' document exchange, and at the same time makes the processes

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[36] See: Commission and its priorities - Priority **Democratic change:** Making the EU more democratic (https://ec.europa.eu/commission/priorities/democratic-change_en)

Question	Answer
	more transparent. Additionally, by allowing an integrated digital access to information on the adoption and implementation of EU law, the action improves the quality of public service and contributes to priority No 2 "Digital Single Market ("Access" pillar).

6.6.6   PROBLEM STATEMENT

The problem of	the Institutions' current implementations for themanagement of the legislative process (lacking interoperability and being not always per se aligned)
affects	Institutions involved in legislative processes and delegated acts (for the former: also Member States),
the impact of which is	that the Institutions generally agree that they would widely benefit from applying agreed standards to allow for automated validation and quality control
a successful solution would be	based on the results of the landscaping exercises and coordinated with ISA^2 Action 2016.38 (Legislation Interoperability Tools – LegIT) to apply agreed standards like AKN4EU in the context of the digital OLP for the legislative process to become more efficient, more performant and less error prone.

The problem of	fragmentation of information about the state of play of EU legislative files
affects	the possibility for the stakeholders, Member States, businesses and citizens to follow efficiently the law-making process,
the impact of which is	increased cost of administration, barrier to access to law, lack of transparency,
a successful solution would be	to develop an interoperable, user friendly information aggregator including all information related to legislative process.

The problem of	absence of easy access to EU law in force per domain,
affects	the possibility for businesses and citizens to easily understand the rights and obligations they derive from EU law,
the impact of which is	increased cost of administration, barrier to access to law, lack of transparency,
a successful solution would be	to develop an interoperable user friendly tool allowing to search for consolidated EU legal texts in specific domains.

The problem of	Absence of proper linking between EU law and national law,
affects	the possibility of businesses and citizens to know they rights and obligations which derive from EU law, as transposed in national law,
the impact of which is	barriers to four freedoms of the single market,
a successful solution would be	to develop an interoperable one-stop-shop giving access to the « European legal space ».

6.6.7   IMPACT OF THE ACTION

6.6.7.1   Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in resources (when drafting, proofreading, translating, amending or publishing)	Reduced manual intervention, increasing automatized processing and enabling automated quality control	2019-2022	All Institutions involved in OLP and DAs
(+) Savings in resources (when consulting legislation and law in general)	Building one single, easy-to-use access point to information about EU legislative process, to EU law in force, national transposition and all related information, facilitates the work of people who need to follow EU legal order developments.	Gradually, according to the achievement of milestones	European public administrations, legal professions, businesses, citizens
(+) Better interoperability and increased transparency of digital public service	The common standards used by the Institutions for the exchange will be available for all other interested parties. Digital access to law will be improved.	2019-2022	All Institutions involved in OLP and DAs; European public administrations; citizens; businesses facilitating reuse of EU legislation for economic operators
(+) Implementation cost	Reusing the existing elements of the EUR-Lex environment for the	Throughout the action	All Institutions involved in OLP

	construction of JLP saves money as compared to developing a solution from scratch.		
(-) Implementation cost	The implementation will require change in existing systems or even new developments. I.e. during the transition phase, there will be supplementary costs.	2019-2022	All Institutions involved in OLP and DAs

6.6.7.2 User-centricity

Digital OLP Management:

The Institutions involved in the OLP and DAs are working collaboratively on the IMFC's Common Vocabulary and on AKN4EU. As agreed common standards these tools represent the Institutions' needs and requirements. During and after implementation the collaboration will need to continue.

JLP and Legal Information:

The main users of the results of this part of the action will be people with the need of legal information: European public administrations, businesses, legal professionals and citizens at large. Their input before the action implementation will be sought via different channels: at the different inter-institutional fora (users from EU institutions), the Council E-law Working Party meetings (representing the users from national public administrations) and through user surveys (all type of users). The involvement of users from the Commission, Parliament and the Council will also be ensured via the governance of the JLP project.

The JLP will be developed applying an iterative approach in which users will test developments at pre-defined phases. Some time after the system has been put in production, feedback will be collected again and processed, as appropriate.

6.6.8 EXPECTED MAJOR OUTPUTS

Digital OLP Management:

The objective for 2020 is to further extend and improve the reusable solutions that are listed in chapter 1.1.5.5.

JLP and Legal Information:

Output name	JLP interface – initial version
Description	Functionalities: personalisation based on individual accounts, extended data view for "expert" users, multilingual display, single click access to main documents, advanced search functions, export functionalities for search results, contextual help providing explanations of the different procedural steps, RSS feed or other type of notifications, responsive design (desktop/mobile device), accessibility for disabled users.
Reference	JLP_FRONT
Target release date / Status	Q3 2021

Output name	JLP back office
Description	Functionalities: possibility to generate usage statistics and data overviews, possibility to manually add/edit additional information not provided by existing data sources, tools to check consistency of data (automatic identification of dead links, checking of past/future dates etc.).
Reference	JLP_BACK
Target release date / Status	Q3 2021

6.6.9 ORGANISATIONAL APPROACH

6.6.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Publications Office (OP)	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex, Units A2, A3 and C2 (for JLP and Legal Information)	1. Action management 2. Solution provider for JLP and Legal Information, member of JLP steering group and JLP working group
Parliament	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex and others (to be confirmed)	1. Providing business and technical expertise 2. JLP strategy definition, member of JLP steering group and JLP working group, adaptation of EP systems to JLP
Council	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex and others (to be confirmed)	1. Providing business and technical expertise 2. JLP strategy definition, member of JLP steering group and JLP working group, adaptation of Council systems to JLP
Commission	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex and others (to be confirmed)	1. Providing business and technical expertise

Stakeholders	Representatives	Involvement in the action
		2. JLP strategy definition, member of JLP steering group and JLP working group, adaptation of Commission systems to JLP
Court of Justice	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex	Observing & providing where applicable business and technical expertise Consulted for JLP and Legal Information
European Economic and Social Committee	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex	Observing & providing where applicable business and technical expertise Consulted for JLP and Legal Information
Committee of the Regions	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex	Observing & Providing where applicable business and technical expertise Consulted for JLP and Legal Information
Court of Auditors	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex	Observing & Providing where applicable business and technical expertise Consulted for JLP and Legal Information
European Central Bank	Members of OP Management Committee, IMFC Plenary and Inter-institutional Group Lex	Observing & Providing where applicable business and technical expertise Consulted for JLP and Legal Information

Stakeholders	Representatives	Involvement in the action
Member States	Technical experts on interoperability in the public sector, Council E-Law working party, N-Lex network	Observing, receivers of support for building connectors for national law databases
Users of legal information (including legalinformation industry)		Observing JLP and Legal Information: consulted before and during implementation

6.6.9.2 Identified user groups

Digital OLP Management: Expert teams in the EU Institutions and in all Member States participating in the legislative procedures at EU level and any third party re-using documents pertaining to EU legislative procedures, including delegated acts.

JLP and Legal Information: European public administrations, legal professionals, businesses, citizens at large

6.6.9.3 Communication and dissemination plan

Digital OLP Management:

The Interinstitutional Formats Committee (IFC) was set up in 2014 and its two subgroups *Common Vocabulary* and *Formats Guidelines* were bringing together expert representatives of all Institutions involved. The IFC governance assured the coordination with other bodies (e.g. the Interinstitutional Informatics Committee, CII) as well as a bi-annual exchange on IFC plenary level. On 23 April 2018 OP's Management Committee had decided to merge the IFC and the Interinstitutional Metadata Maintenance Committee (IMMC) to become the Interinstitutional Metadata and Formats Committee (IMFC).
The regular meetings ensure the communication with stakeholders at the appropriate level even beyond the lifetime of the action, because the collaboration in the IMFC will continue.
The public at large will be informed in a non-technical manner to explain the relevance of improving the legislative process.

Results of the activity are publicly available, also for reuse, from the EU Vocabularies[37] and Joinup[38] websites. This availability also includes every future milestone release, also be covered by an ISA NewsFlash.

JLP and Legal Information:

Internal communication within EU institutions on the action progress will be ensured via the governance bodies of the project and representatives of stakeholders identified in the point above. Achievement of important milestones (go-live of JLP) will be communicated to the Secretariats-General of the Institutions. Communication with Members States will be channelled via the Council E-Law Working Party and the established network of the N-Lex contact points. External communication will include news about the achievement of action milestones on the EUR-Lex website and on the Publications Office Portal, dissemination via the EUR-Lex newsletter, launch and progress statements on social media, as well as communication at events. Additional publicity measures will be considered, such as press release for go-live of the JLP.

6.6.9.4   Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
k.2016.17-1 Alignment of AKN4EU with the business specifications	The mapping of example documents representing new types of document to LegalDocML; details to be specified in the course of Q4/2019.	Q4-2020
k.2016.17-2 Major releases of AKN4EU	The target is to adopt and to publish at least one major release of AKN4EU per year.	Q4-2020
k.2016.17-3 Percentage of newly initiated legislative files (ordinary	100 %	Q3 2021

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[37] See: EU Vocabularies (https://publications.europa.eu/en/web/eu-vocabularies)

[38] See: Joinup (https://joinup.ec.europa.eu/)

Description of the KPI	Target to achieve	Expected time for target
legislative procedure) available in JLP (from COM proposal)		
k.2016.17-4 Number of visits of the JLP/quarter	15% increase compared to visits of the "Law-making procedures" on EUR-Lex	6 months after go-live

6.6.9.5 Governance approach

Digital OLP Management:

Coordinated by the Publications Office the action will be implemented in close collaboration with and the support of the Parliament, the Council, the Commission and other Institutions that are represented in the Interinstitutional Metadata and Formats Committee (IMFC) and thus under the guidance of the Interinstitutional Interoperability Steering Committee.

The IMFC, gathering representatives from all EU Institutions as stakeholders of the action, will supervise the execution of the work and will formally approve the results.

The merging of the IFC and the Interinstitutional Metadata Maintenance Committee (IMMC) into the Interinstitutional Metadata and Formats Committee (IMFC) creates synergies and efficiencies for the management of related standards for content and metadata. The action also contributes to the achievement of one of the Publications Office's Strategic Objectives 2017-25[39]: the exchange of all legal data with Institutions in a secure and automated way based on common standards (metadata and content in structured format). The Strategic Objectives 2017-2025 have been adopted by the Publications Office's Management Committee where all Institutions are represented and that governs its operation. In consequence, a regular reporting on the progress of the work to the Management Committee is ensured.

JLP and Legal Information:

The three Institutions - European Parliament, Council and Commission, as the project owners, will have the overall responsibility for the decisions related to the project, whereas the Publications Office will have the role of the solution provider and be in charge of the

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[39] See: Publications Office's Strategic Objectives 2017-25 (https://publications.europa.eu/en/publication-detail/-/publication/d192d7e9-809a-11e7-b5c6-01aa75ed71a1)

implementation. The three institutions will determine the vision and strategy for the organisation of the project. For this purpose, a *JLP steering group* comprising members from the three institutions as well as the Publications Office will be set up.

A *JLP working group* with representatives from the three institutions and the Publications Office will follow the project closely and take the decisions at operational level. A *Project Manager* on the side of the Publications Office will manage the daily progress of the project and the reporting according to the PM2 methodology.

The strands covering EU Law in Force, Improved linking between EU and national law and Thematic searches will be managed by the Publications Office in consultation with the Inter-institutional Lex Committee (GIL) and the Council e-Law working party.

6.6.10 TECHNICAL APPROACH AND CURRENT STATUS

Digital OLP Management:

Based on AKN4EU version 3, progress is envisaged in 2020 regards the following tasks and deliverables:

- Continuation of Core task 1 Elaboration of AKN4EU (formerly:Common Exchange Model (CEM))
    o Continuation of core task 1.2 maintaining the correspondence between CoV and AKN4EU
    o Continuation of core task 1.3 Extending the scope of CoV (FoG_DLV 2)
    o Continuation of core task 1.4 Incorporation of new document types and examples (input from CoV, (FoG_DLV 3)
    o Continuation of core task 1.6 updating the AKN4EUdocumentation (FoG_DLV 5)

    o Mark-up of references inside an act (references to another act)
    o Mark-up for acts that modify (an)other act(s)
    o Mark-up for recast versions of acts
    o Identification of substructures (to support synoptism between language versions)
    o Mark-up of modifications in amending and consolidated acts (active/passive).

- Continuation of core task 2 Adding & updating of business validation rules (FoG_DLV 6)

- Continuation of core task 3 Adding & updating technical validation rules (FoG_DLV 7)
    o Enriching & updating the technical specifications for the validation framework: (FoG_DLV 8)
    o Updating the documentation for the technical validation rules (FoG_DLV 9)

The above-mentioned deliverables are part of AKN4EUversion 4.0, the release of which is envisaged for Q4/2020. This release will also comprise the following tools in an updated version to be fully compliant to AKN4EU 4.0 (also based on the IMFC high level work plan):
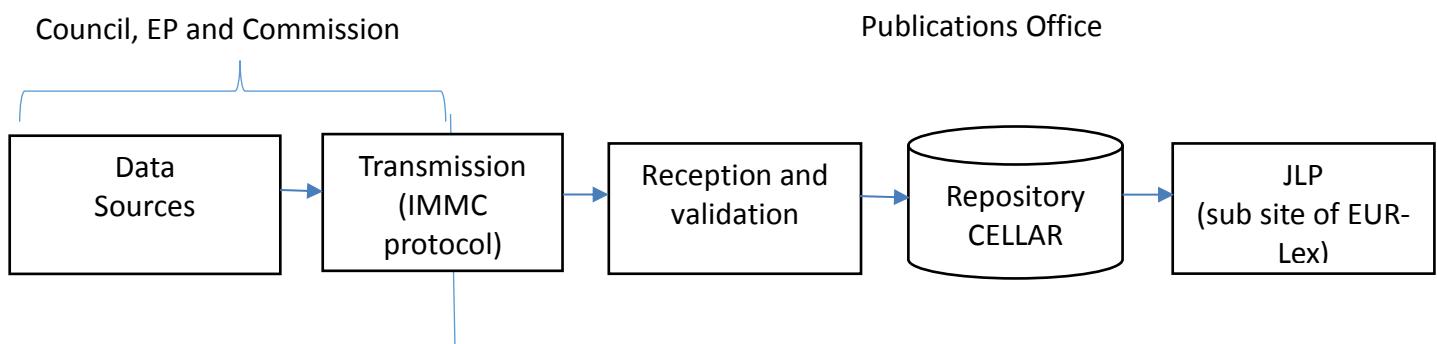
- Converter FMX2AKN (conversion Formex to Akoma Ntoso)
- Validation framework.

It is guaranteed that the programme's results will last beyond its completion, because the deliverables form an essential contribution to the solutions developed by the Institutions for their data exchanges during the legislative process. Furthermore the Publications Office is preparing for the reception of legal data comprising AKN4EU documents (in continuation of the use of its proprietary XML specification (Formex)).

JLP and Legal Information:
The JLP will be built as a sub-site of EUR-Lex, on its proven architectural components, as represented in the schema below:
- the EUR-Lex portal and the Publications Office's common repository (CELLAR)
- a standard exchange protocol (the so-called IMMC protocol, already used by EU Institutions for the exchange of legal data including exchanges with Member States)
- the existing transmission channels already setup with the Council, EP, Commission and other actors that contribute to the legislative process.

Each institution will provide its content contributing to the legislative procedure through IMMC transmissions. The content will be automatically ingested and aggregated in the CELLAR repository. The representation of the information in the CELLAR is defined by an ontology, the Common Data Model.

The JLP itself will become a new sub site of EUR-Lex with a new look & feel.

The Legal Information strands will equally be developed mainly in the EUR-Lex environment. The EU Law in Force will be first integrated in the Publications Office Portal and its infrastructure in order to test a search tool, which might in the future be used in EUR-Lex. The N-Lex portal and its infrastructure could be used for better linking between the EU and national law. A standalone service will be developed for thematic bulk extractions of documents.

The reuse of existing architecture components guarantees the continuity and sustainability of the action.

6.6.11 COSTS AND MILESTONES

6.6.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Digital OLP Management:					
Inception, execution, operational	Project management and execution	35	ISA	Q3 2016	Q4 2016
Inception, execution, operational	CEM version 1; Business validation rules; Technical validation rules; Project management	78	ISA	Q1 2017	Q4 2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception, execution, operational	CEM version 2; FMX2AKN (Formex to Akoma Ntoso) converter; Validation framework; Project management	100	ISA	Q1 2018	Q4 2018
Inception, execution, operational	AKN4EU version 3; FMX2AKN (Formex to Akoma Ntoso) converter; Validation framework; Project management	200	ISA	Q1 2019	Q4 2019
Inception, execution, operational	AKN4EU version 4; Specification, Project management	150	ISA	Q1 2020	Q4 2020
Inception, execution, operational	FMX2AKN (Formex to Akoma Ntoso converter)	50	ISA	Q1 2020	Q4 2020
Inception, execution,	Validation framework	50	ISA	Q1 2020	Q4 2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
operational					
	Subtotal	663			
JLP (initial version)					
Execution	Functional specifications	n.a.	n.a.	Q2/2019	Q1/2020
Execution	Technical specifications	50	ISA	Q2/2020	Q3/2020
Execution	Development	100	ISA	Q4/2020	Q3/2021
Execution	Data acquisition (developments on the side of the Institutions	120	ISA	Q4/2020	Q2 /2021
	Subtotal	**270**	**ISA**		
JLP – Legal Information (EU Law in Force, improved linking between EU law and national law, thematic searches)					
Execution	Functional specifications	n.a.	n.a.	Q2/2019	Q1/2020
Execution	Technical specifications	30	ISA	Q2/2020	Q3/2020
Execution	Development	90	ISA	Q4/2020	Q3 2021
	Subtotal	**120**	**ISA**		
	TOTAL	**1053**	**ISA**		

6.6.11.2 Breakdown of ISA2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	35	35
2017	Execution	78	78
2018	Execution	100	100
2019	Execution	200	
2020	Execution	640	

6.7 ELI@EULAW - INTEGRATION OF THE RETRIEVAL OF LEGISLATIVE DATA COMPLIANT WITH THE EUROPEAN LEGISLATIVE IDENTIFIER WITH THE INFORMATION SYSTEMS FOR MONITORING THE APPLICATION OF EU LAW (2017.02) - FUNDING CONCLUDED

6.7.1 IDENTIFICATION OF THE ACTION

Service in charge	SG.F3 (Project Owner)
Associated Services	SG.C5 (Solution Provider), Publications Office

6.7.2 EXECUTIVE SUMMARY

Context

Under article 17 TEU, the Commission shall oversee the application of Union law under the control of the Court of Justice of the EU. This monitoring task is entrusted to the Commission in its exclusive role as "guardian of the Treaties".

The monitoring of the application of Union law is a challenging task, involving several services at various stages and specific rules to be followed. The cooperation between the Commission and the Member States is a crucial element in the effective monitoring of the application of EU Law.

Adopted legislative acts setting up the goals that all EU countries must achieve, when coming into force, require Member States to communicate their national transposition measures to the Commission by strict given deadlines.

Current situation

The exchange of data relating to legislation has grown considerably at EU level. These data originate from regional, national and EU bodies. However, the exchange of data is hindered by disparities between legal systems at country and EU level.

Within the context of EU Law, transposition of adopted directives implies national legislative changes which are currently notified to the Commission via filling in a form and attaching all relevant legislative texts sustaining the transposition within an existing IT system (currently MNE, future THEMIS).

This method of notification is tedious and leads to inefficiencies and discrepancies as the notified information is duplicated (at Member State and Commission databases), not necessarily up to date, forcing Member States to further notify as their national legislation evolves.

As of the 1st of October 2016, Member States can elect to have their national transposition measures published on EUR-Lex. These issues will be then further propagated once these measures are transmitted from the Commission's internal application (MNE, future THEMIS) to Eur-Lex in order to be published.

Proposed solution

The European Council conclusions[40] foster for the introduction of a European Legislation Identifier (ELI), aimed at providing simple access to information relating to EU and EU countries' national legislation.

The adoption of ELI enables EU and national legislation to be referenced in a harmonised and stable way, resulting in a faster and more efficient search and data exchange system which is accessible to citizens or specific users such as legislators, judges and legal professionals.

The outcome of this proposal will be a solution which enhances and simplifies the transmission and dissemination of legislation related data, within the context of EU Law proceedings, by integrating the ELI link within notifications, aiming at simplifying working methods and avoiding data inconsistencies and duplication.

6.7.3 OBJECTIVES

Better and more efficiently managed application of EU law involves both the European Commission and the Member States, working in close partnership. Member States are responsible for the timely and correct implementation and application of EU law while the Commission's responsibility is to ensure that EU law is applied consistently.

The specific objective of this action is to identify and implement common web services of interest aimed at improving communication and information exchange between Commission services and Member States. The project will analyse, design and develop services to manage and support the exchange and dissemination of data relating to legislation, via the adoption of the ELI link, between Member States and the Commission whenever needed through the lifecycle of an infringement proceeding.

These services will become part of the catalogue of existing services developed within the scope of ISA Action 1.20, "Application of EU Law: Provision of cross-sector communication and problem solving tools", which have been integrated into THEMIS. THEMIS is the central Commission IT application which will provide a one-stop solution for Commission services and Member States' administrations with regard to all aspects of the application of EU law;

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[40] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:jl0068

starting from the transposition process of directives into national legislation and the notification of the corresponding legal acts to the Commission, through dialogue based problem resolution triggered either by complaints or own-initiative of the Commission, onto the full bi-directional flow of information in the context of infringement proceedings.

6.7.4 SCOPE

The scope of this action can be summarised as follows:

- Guidelines on the implementation of ELI within the context of EU Law proceedings

    The introduction of ELI is optional. EU countries and the European Union can decide to introduce this identifier on a voluntary and gradual basis. Some countries (i.e. France and Luxembourg) have already developed solutions to comply with ELI. However, we have detected inconsistencies in how the solutions from the different countries have addressed the support of ELI.

    In this respect, an initial work in scope of this action is focused on defining guidelines to determine how ELI should be addressed, within the context of EU Law proceedings, ensuring that system-to-system communication can be achieved in a harmonised way and that legislation related data can be inter-exchanged easily regardless of its source.

    These guidelines will also help other Member States to adopt ELI in a much faster and reliable way.

- Common web services to improve inter-exchange and dissemination of legislation related data

    Design and develop services – and the underlying back-end infrastructure - to manage and support the exchange and dissemination of data relating to legislation, via the adoption of the ELI link, between Member States and the Commission whenever needed through the lifecycle of an infringement proceeding.

    The proposed services will provide a reliable, robust and secure mechanism to inter-exchange data in an ELI compliant data structure.

    The new services in scope of this proposal will be added to the catalogue of existing ones developed within the scope of ISA Action 1.20 and its continuation ISA[2] Action

2016.01, "Application of EU Law: Provision of cross-sector communication and problem solving tools", which will be integrated into THEMIS.

In particular, the following web services have already been identified:

- ELI data retrieval: Receives as input an ELI link, identifies and establishes a connection with the source system – Member State's or Commission's – from where the service retrieves the related meta-data and documents for the specific legislation and returns such data and documents in a standard format.

- ELI transmission: Transmits the meta-data and documents of a specific legislation received from the ELI data retrieval web service to EUR-Lex for publication.

- ELI measure notification: Adaptation of the existing web service, part of the THEMIS catalogue, Member States use to notify on transposition measures, to incorporate the possibility to add the ELI link (which will be read and decoded by the ELI data retrieval web service).

- Integrated approach to national IT tools

Interoperability between THEMIS and national IT tools will be supported. The identified web services will allow for a seamless system-to-system exchange of data related to legislation between Member States and the Commission wherever needed within the lifecycle of an infringement procedure.

The European Commission offers the deliverables output of this proposal as a service to Member States and hosting the computing infrastructure. This will be accompanied by technical documentation detailing the interfaces to be used.

Furthermore the Commission will provide assistance to Member States, in order to ensure correct and reliable interconnection between Commission's and Member States' systems.

6.7.5 ACTION PRIORITY

The proposed action complies with the following prioritisation criteria listed in art 7 of the ISA^2 Decision[41], as follows:

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[41] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

(a) the contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union;

Interoperability between Commission's and national IT tools so as to support the inter-exchange and transmission of data related to legislation.

(b) the scope of the action, measured by its horizontal impact, once completed, across the sectors concerned;

National legislation transposing EU directives and notified by Member States to the Commission cover all sectors of EU activity.

(c) the geographical reach of the action, measured by the number of Member States and of European public administrations involved;

The geographical reach of this action covers all Member States which either have already adopted ELI or will do so in the future, as they will have the possibility to choose whether to notify national legislation complying with EU directives via ELI links or following the standard existing approach (which all Member States are currently using).

Moreover, the Publications Office will be closely associated to the work, as they are also an actor within infringement proceedings (they will need to publish in EUR-Lex the notified transposition measures of those Member States who decide to do so).

(d) the urgency of the action, measured by its potential impact, taking into account the lack of other funding sources;

As of the 1st of October 2016, Member States can elect to have their national transposition measures published on EUR-Lex for which the ELI support within infringement proceedings must be provided as soon as possible.

(e) the re-usability of the action, measured by the extent to which its results can be re-used;

Even though the web services in scope to develop as part of this proposal are tailored to infringement management processes, particularly the ELI data retrieval web service could potentially be provided as a general service for initiatives where legislation data needs to be inter-exchanged.

(f) the re-use by the action of existing common frameworks and elements of interoperability solutions;

- The IMMC Core Metadata exchange protocol will be used to ensure a good understanding between the different systems involved.

- Transmission to EUR-Lex, for publication, of national legislation transposing EU directives notified by Member States.

(g) the link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

The Commission, as "Guardian of the Treaties", is required to monitor the correct application of Union Law by Member States. This proposal has a link with the 'democratic change' priority of the Juncker Commission and addresses several objectives of the Digital Single Market initiative.

6.7.5.1   Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
Does the proposal directly contribute to implementing the European Interoperability Strategy, the European Interoperability Framework, or other EU policies with interoperability requirements, or needed cross-border or cross-sector interoperability initiatives? If yes, please indicate the EU initiative / policy and the nature of contribution.	Yes. The proposal will allow the exchange of legislative information in a standardised format between Commission services and Member State administrations. It will make the notification and publication process of National measures more efficient and will avoid re-encoding of data that already resides in other systems.
Does the proposal fulfil an interoperability need for which no other alternative solution is available?	Yes. There is no other current alternative other than THEMIS to notify to the Commission national legislation which transposes Union Law.

6.7.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the sectors concerned

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? If yes, which are those?*	Yes. Union Law adopted by the Commission, which Member States need to comply with, covers all EU policy areas. The proposal will improve the interoperability of systems supporting the EU Law domain both Commission's and Member states. It will improve the notification process, making it more efficient, the quality of the data and its publication.
*For proposals or their parts **already in operational phase**: have they been utilised in two (2) or more EU policy areas? Which are they?*	N/A

6.7.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and used by public administrations of three (3) or more EU Members States?*	Yes. All Member States are required to notify on their national legislation transposing adopted EU Law. As the introduction of ELI is voluntary, not all Member States will make use of the output of this proposal at first, but it is probable that they will join at a later

Question	Answer
	stage. One of the key parts of this proposal is to define guidelines on how to use ELI within the context of infringement proceedings. These guidelines will ease transition for Member States towards ELI. As of today, public administrations from France and Luxembourg already provide support for ELI – to some extent – while other like Austria and Italy are in the process.
*For proposals or their parts **already in operational phase**: have they been utilised by public administrations of three (3) or more EU Members States?*	N/A

6.7.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. As of the 1st of October 2016, Member States can elect to have their national transposition measures published on EUR-Lex. As the publication of measures is triggered from THEMIS, the services in-scope of this proposal, providing support for ELI, must be ready as soon as possible.
Does the ISA[2] scope and financial capacity	Yes. We believe that this action

Question	Answer
better fit for the implementation of the proposal as opposed to other identified and currently available sources?	perfectly aligns with the scope of ISA[2].

6.7.5.5 Reusability of action outputs

The web services in scope to develop as part of this proposal are tailored to infringement management processes. Nevertheless, there may be possibilities to reuse/apply certain outputs to other purposes – to be explored during the Planning phase of this action.

The following output of this proposal has already been identified as perfect candidate for re-usability purposes:

Name of reusable solution	ELI data retrieval services
Description	A set of services that will allow other Information systems to retrieve and display the metadata and documents from the systems in the Member states.
Reference	
Target release date / Status	Q4 2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	N/A

6.7.5.6 Level of reuse by the proposal

The re-use by the action of existing common frameworks and elements of interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Yes. The proposed solution will be based on the results of the ELI ISA action. Additionally, the proposed solution will use the eTrustEx platform for the secure exchange of information between the Commission and the Member states.
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	N/A

6.7.5.7 Interlinked

The link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Yes. This proposal has a link with the 'democratic change' priority of the Juncker Commission and the Digital Single Market initiative.

6.7.6 PROBLEM STATEMENT

The exchange of data relating to legislation has grown considerably at EU level. These data originate from regional, national and EU bodies. However, the exchange of data is hindered by disparities between legal systems at country and EU level.

Within the context of EU Law, transposition of adopted directives implies national legislative changes which are currently notified to the Commission via filling in a form and attaching all relevant legislative texts sustaining the transposition within an existing IT system (currently MNE, future THEMIS).

This method of notification is tedious and leads to inefficiencies and discrepancies as the notified information is duplicated (at Member State and Commission databases), not necessarily up to date, forcing Member States to further notify as their national legislation evolves.

As of the 1st of October 2016, Member States can elect to have their national transposition measures published on EUR-Lex. These issues will be then further propagated once these measures are transmitted from the Commission's internal application (MNE, future THEMIS) to Eur-Lex in order to be published.

6.7.7 EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
Member States and European Commission	**Security, rapidity and privacy, preservation of information.** The facilitation of structured data exchange between Member States and the Commission via application interfaces and web-services in the domain of the notification of transposition measures in the form of national legislative acts, as well as their subsequent transmission to the Publications Office and their publication on the EUR-Lex web site. Reduction of administrative burden of the Member States who have already implemented ELI. The service dedicated to the communication of transposition measures will guarantee the information exchange system providing: - Immediate transmission (MS are required to respect deadlines). - Secure transmission with acknowledgement of receipt (high level of trust).

Beneficiaries	Anticipated benefits
	- Secure data preservation (legal security for both MS and the EC).
European Commission	**Efficient IT development and evolution, flexibility, scalability,** **adaptability to legislation change.** When further Member states adopt ELI, use by these MS of ELI in THEMIS will be transparent.
Citizens and businesses	**Transparency and openness through efficient** **interoperability with Eur-Lex.** Greater transparency by making the national transposition measures available to the general public on EUR-Lex.

6.7.8 EXPECTED MAJOR OUTPUTS

Output name	ELI guidelines
Description	Guidelines to determine how ELI should be addressed, within the context of EU Law proceedings, ensuring that system-to-system communication can be achieved in a harmonised way and that legislation related data can be inter-exchanged easily regardless of its source. These guidelines will also help other Member States to adopt ELI in a much faster and reliable way.
Reference	
Target release date / Status	Q4 2018

Output name	ELI data retrieval
Description	A service that will allow other Information systems to retrieve and display the metadata and documents from the systems in the Member states.
Reference	
Target release date / Status	Q4 2018

Output name	ELI transmission
Description	A service to transmit the meta-data and documents of a specific legislation received from the ELI data retrieval web service to EUR-Lex for publication.
Reference	
Target release date / Status	Q4 2018

Output name	ELI measure notification
Description	Adaptation of the existing web service, part of the THEMIS catalogue, Member States use to notify on transposition measures, to incorporate the possibility to add the ELI link (which will be read and decoded by the ELI data retrieval web service).
Reference	
Target release date / Status	Q4 2018

6.7.9   ORGANISATIONAL APPROACH

6.7.9.1   Expected stakeholders and their representatives

Stakeholders	Representatives
European Commission – administrator	Unit SG F3 of the Secretariat General administrating the application, providing policy guidance on its use.
Project Owner	Unit SG. F3 of the Secretariat General responsible for application of the EU law.
Solution Provider	Unit SG C5 (Information Technology) responsible for THEMIS.
End users - Commission	Infringement correspondents and case handlers in all Commission services.
End users - Member States authorities	Infringement correspondents and case handlers in all Member States (various national administrations in all Member States) and Member States Central Managers (Ministry of Foreign Affairs).

Stakeholders	Representatives
End users – citizens and businesses	Persons and entities which would like to have easy access to updated national legislation texts and national measures notified by Member States transposing adopted Union Law.

6.7.9.2 Identified user groups

Commission infringement correspondents and case handlers, Member states infringement correspondents and case handlers, European Commission and the public at large.

6.7.9.3 Communication plan
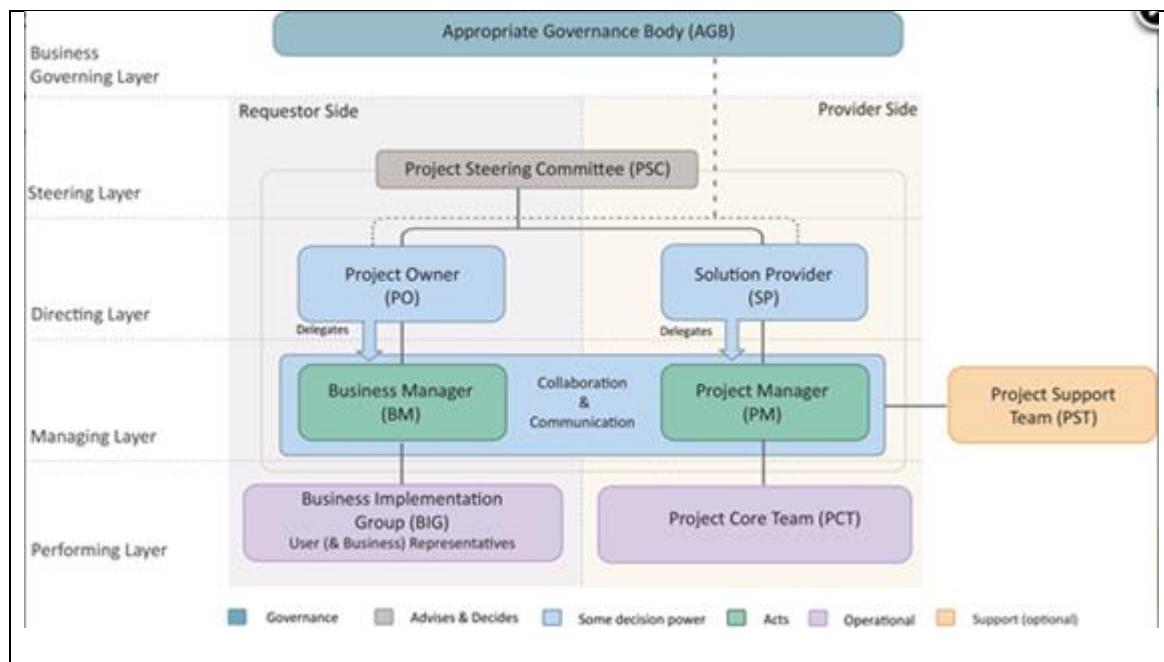
The main communication actions are described next:

- Written communication, both to internal and external stakeholders (newsletter via e-mail).

- Awareness sessions – 1 with MSs representatives and 1 with DGs representatives – to present the project.

- Dissemination material for all relevant stakeholders:

    o DGs: Leaflets, posters and a quick-start guide.

    o MSs: Quick start guide.

- Meetings:

    o With external stakeholders, once a year, in the frame of the EU Law Network meetings, to provide status and recollect feedback.

    o With internal stakeholders, twice a year, as part of the DGs infringement correspondents meeting, to provide status and recollect feedback.

- First-line support: The Project Support Team will help users through the change and collecting feedback.

- CIRCABC group of interest on "Implementation and application of EU law", members of which are MS representatives.

Event	Representatives	Frequency of meetings / absolute dates of meetings
EU Law Network	All Member States	Normally, once or twice a year
Infringement correspondents meetings	Representatives from all DGs	Once or twice a year
Directors network	Representatives from all DGs	Once or twice a year
Project owner/System supplier	SG.F3/SG.C5	Quarterly reporting using PM² methodology

6.7.9.4 Governance approach

This project will follow the standard PM^2 project governance structure.

Project Owner: Mr. SLOOTJES, Rene (SG.F3)

Solution Provider: Mr. GRITSCH, Martin (SG.C5)

Project Manager: Mr. BLÁZQUEZ DE MIGUEL, Víctor (SG.C5)

Business Manager: CUADRAT-GRZYBOWSKA, Katarzyna (SG.F3)

Project Support Team (PST): Appointed.

Project Core Team (PCT): Appointed.

Business Implementation Group (BIG): 1 representative per MS. To be appointed at a later stage.

The governance approach has established weekly coordination meetings between SG.F3 (project owner) and SG.C5 (solution provider). In addition, this action will respect the general ISA^2 Governance under the supervision of the ISA^2 Coordination Group.

The governance of this action project is set up in the vision document for THEMIS. According to this document, the Steering Committee monitors completion of the project phases; sets project requirements, objectives and outcomes, validates project deliverables, tests activities and disseminates information about the project to the relevant stakeholders.

6.7.10 TECHNICAL APPROACH AND CURRENT STATUS

The services in scope of this proposal will extend the common external module of the THEMIS system, providing a reliable, robust and secure mechanism to provide system-to-system connectivity between in Member States public authorities' and Commission's (existing or under development).

System-to-system data exchanges between the national administrations and the Commission will reduce extra manual data encoding. This will allow Member States to transmit data directly from their back-office systems in respect of the following principles of the European Interoperability Framework: security and privacy, multilingualism, administrative simplification, transparency, preservation of information, openness, reusability, effectiveness and efficiency. History of all data exchanges with the Member States' administrations should be accessible to either party.

All services will be strongly integrated to ensure a consistent and reliable workflow.

The technical implementation of the proposed data-exchange services has the following requirements:
- State of the art secure web services allowing for the inter-exchange of meta-data and documents related to national or EU legislation.

- A transfer mechanism allowing for highly reliable exchange of documents, including very large documents if needed (electronic transmission should be the unique notification mechanism). To be checked if this can be covered by the eTrustEx platform.
- Legally binding electronic signature for official notification of infringements and transmission of the corresponding MS replies (explicit requests by Spain and Germany). Here we see a potential to leverage the eTrustEx platform.
- A publishing service allowing THEMIS to 'push' legislation related information to EUR-Lex, making the actual transmission of the corresponding document representing the national legislative act obsolete.

It is imperative to involve Member States in order to ascertain that compliance with ELI is achieved in a transparent and homogeneous way, within the scope of infringements proceedings. This will be channelled through the existing EU Law Network, with regular coordination meetings in Brussels.

Current status of the action

The action started on the 1st of September 2017. The specification of the requirements and the detailed formal analysis of the web services in scope of this action were completed and agreed upon by all project's stakeholders in 2017.

The main results achieved during the period from 1 January 2018 to 31 December 2018 are:
- The **first version and the second improved final version of the web services** in scope of this action were finalised and validated by all relevant stakeholders.
- The **acceptance-testing** phase of the web services of ELI@EULAW was successfully finalised.
- The **guidelines on the implementation of ELI** were prepared.

The web services will be used by the module THEMIS / Infringements (see the ISA[2] action 2016.01: THEMIS – Application of EU Law: Provision of Cross Sector Communication and Problem Solving Tools).
There were no problems to report. This action is closed.

6.7.11 COSTS AND MILESTONES

6.7.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Implemented solution	128	ISA2	Q3/2017	Q4/2018

6.7.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Initiating		128
2017	Planning		
2018	Executing	128[42]	
2018	Closing		
2017-2018	Monitor & Control		

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[42] Allocation received in 2017

6.7.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Articles 4 and 17 TEU	UUhttp://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:083:0013:0046:EN:PDFUU	
Articles 258 and 260 TFEU	UUhttp://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2010:083:SOM:EN:HTMLUU	
Decision 2002/47/CE, CECA, Euratom for document management rules	OJ L 21, 24.1.2002, p. 23–27	
Annual Reports on monitoring the application of Community law	UUhttp://ec.europa.eu/eu_law/infringements/infringements_annual_report_en.htmUU	
Communication 'A Europe of results – Applying Community law' (the 2007 Communication)	COM (2007) 502	
Communication on the application of Article 260 (3) TFEU	UUhttp://ec.europa.eu/eu_law/infringements/infringements_260_en.htmUU	
Framework Agreement between the Commission and the European Parliament (Section on 'Monitoring the application of Community law')	UUhttp://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:304:0047:0062:EN:PDFUU	

Description	Reference link	Attached document
Public access to documents relating to infringement proceedings	SEC(2003)260/3 UUhttp://www.cc.cec/sg_vista/cgi-bin/repository/getdoc/COMM_PDF_SEC_2003_0 260_3_EN.pdfUU	
Monitoring the application of community law: manual of procedures	SEC(2005)254/5 UUhttp://www.cc.cec/sg_vista/cgi-bin/repository/getdoc/COMM_PDF_SEC_2005_0 254_5_EN.pdfUU	

6.8 REFIT PLATFORM (2017.03) – FUNDING CONCLUDED

6.8.1 IDENTIFICATION OF THE ACTION

Service in charge	SG A2 Evaluation, Regulatory Fitness and Performance, Directorate Smart Regulation and Work Programme Secretariat-General
Associated Services	DIGIT.D1, SG.C5

6.8.2 EXECUTIVE SUMMARY

The REFIT Platform was set up by the May 2015 Better Regulation Communication to advise the Commission on how to make EU regulation more efficient and effective while reducing burden and without undermining policy objectives. It consists of a Government Group, with one seat per Member State and a Stakeholder Group with 18 members and two representatives from the European Social and Economic Committee and the Committee of the Regions. Platform members' work includes reviewing suggestions received via the online Better Regulation Portal 'Lighten the load - Have your say' and making recommendations to the Commission.

The Platform is therefore designed to play an important role in the development of the work programme of the Commission and therefore also the EU agenda and to improve the coherence and efficiency of the EU and Member State regulatory environment.

Since its start several hundred suggestions have come in to the Platform from government authorities, stakeholders and other interested parties. Managing this workload requires a new IT tool to support the process. The current IT infrastructure does not satisfy the needs and ensure the success of the REFIT Platform which is central to EU policy-making, the development of EU and Member State regulation as well as for the policy on Better regulation.

This application concerns a project on developing an IT tool that facilitates smarter cooperation by a large number of Commission officials, Member State government ministries and other experts in managing incoming suggestions and preparing positions on a high number of suggestions within a reasonable timeframe. The IT tool should enable multiple external users to work on the same document, avoid document down- and uploads and serve as a repository for all in-coming suggestions. The proposal meets in particular with ISA Article 7 priorities (b), (c) and (d).

6.8.3 OBJECTIVES

The expected outcomes would have to include:

- Development of a user-friendly, interactive web-based application (IT tool) to serve the REFIT Platform to be used by the REFIT Platform members comprising Member State administrations and stakeholder members, the Secretariat (SG), the Directorate Generals (DGs) in charge of files being handled by the REFIT Platform;
- The application should be able to manage each suggestion coming in, each work-step of developing an opinion including adding up-to-date background information through-out to the adoption of the opinion with a view to:
  - Significantly enhance the active contributions of the 48 platform members leading to better and inclusive opinions of the platform. Positive impact on platform members' satisfaction with and readiness to contribute to the process.
  - Reduce workload related to the preparation and publication of suggestions in the form of 'Assessment Sheets' (AS) (a burden both on SG and DGs)
  - More timely production of AS with more up-to-date information
  - Better and more reliable storage and classification of suggestions and ASs allowing for a smarter use of information (once only) already received
  - Greater DGs buy-in and a more positive approach towards the platform process

6.8.4 SCOPE

To replace the current use of CircaBC, emails, Collaborative Workspace and the Europa website, the scope of the project is to develop an IT tool facilitating the participation of all 48 REFIT Platform members in developing opinions on a broad array of subject matters based on hundreds of suggestions.

The IT tool needs are:

- Two separate 'channels' with the same functionalities, one for all with different access rights, one for Commission internal.
- Automatic generation of an Assessment Sheet when a suggestion is introduced via the website 'Lighten the load…' and notification to relevant Commission services requesting contributions.

- When the Assessment Sheet is available on the 'external channel' it should allow the 48 members to indicate their interest in leading the work; entitlements to fill-in their contribution to the opinion in predetermined boxes and enable a pre-set sequence of input; initiation of formal 'written adoption' where relevant; availability of each opinion-document with all changes visible and clean version.
- The IT tool should support a single, shared document on which several members can work simultaneously (no down- and upload of documents)
- Authorised Members (or their assistant) entitled to edit documents in the IT tool but delegation only based on prior approval by the Secretariat.
- Automatic follow up of the work following the meetings of Stakeholder group and Government group and the adoption of the finalised opinions in the Joint meetings of both groups. The documents to be work on should follow the pre defined schedule of the meetings to be sure that (1) the Stakeholder group reporters work on the assessment sheet automatically created, (2) the adoption by the other members of the Stakeholder group of the same assessment sheets, then (3) the Government group members to work on the assessment sheets prepared by the Stakeholder groups and finally (4) adoption of the opinions at the joint meeting by both groups.
- Automatic reminders sent to the relevant persons working on the document via the tasks overview in sharepoint.

The Better Regulation Portal and the 'Lighten the load – Have your say' are not within the scope of this project, but appropriate alignment with these is required.

6.8.5 ACTION PRIORITY

The proposal for a REFIT Platform IT tool is important for the success of the REFIT Platform, which is one of the flagship actions in the May 2015 Better regulation agenda[43] of the European Commission and one of the 10 Juncker priorities. The action will therefore make an important contribution to EU and Member State cooperation and responses to suggestions from citizens, businesses and local and national authorities with on-the-ground experience with application of the EU law.

The IT tool will significantly help the geographical reach of the Platform so as to ensure equal and inter-active engagement of all Member States and of European public administrations

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[43] See: http://ec.europa.eu/info/files/better-regulation-better-results-eu-agenda-0_en

involved, stakeholder members based in various parts of Europe and between the different Commission Directorates General and Secretariat-General because all sectors / EU policies are involved.

The proposal will facilitate cooperation between the Commission, Member States and stakeholders by supporting cross-border and cross-sector exchanges of information that will enable more efficient, secure and collaborative public services.

This interoperability solution will facilitate successful implementation of policies and offers great potential to overcome cross-border electronic barriers, further securing the emergence of new, or the consolidation of developing, higher quality and more coherent public services at Union level.

6.8.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
Does the proposal directly contribute to implementing the European Interoperability Strategy, the European Interoperability Framework, or other EU policies with interoperability requirements, or needed cross-border or cross-sector interoperability initiatives? If yes, please indicate the EU initiative / policy and the nature of contribution.	Yes, It helps to elaborate the better regulation agenda of the European Commission and to efficiently and effectively improve electronic cross-border and sector interaction between Commission and the members of the REFIT platform (Member States and stakeholders) and between the members of the Platform supporting the implementation of Union policies and activities. More efficient use of reported data is a key area of work for the REFIT Platform.
Does the proposal fulfil an interoperability need for which no other alternative solution is available?	Other solutions (CIRCA BC and a collaborative workspace) are available but they are not user-friendly for the REFIT platform members.

Question	Answer
	The CIRCA BC is used to distribute documents to the REFIT platform members. There is no online collaboration between platform members through CIRCA BC as it does not allow for a simultaneous collaboration on word documents. The newsgroup option is not used, as it is considered not to be particularly user friendly.

6.8.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the sectors concerned

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? If yes, which are those?*	The REFIT Platform covers all EU policy areas where suggestions from citizens, businesses, stakeholders and public authorities are made. Once completed the IT tool will increase the speed with which the Platform works and thus help the Platform to cope with the high and diverse work load covering the whole EU regulatory acquis across all policy areas.
*For proposals or their parts **already in operational phase**: have they been utilised in two (2) or more EU policy areas? Which are they?*	N/A

6.8.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and used by public administrations of three (3) or more EU Members States?*	Yes. The REFIT Platform consists of two Commission expert groups. A Government group in which all Member States are represented. And a Stakeholder group with representatives of businesses, social partners, civil society organisations in various member states, the Economic and Social Committee and the European Committee of the Regions.
*For proposals or their parts **already in operational phase**: have they been utilised by public administrations of three (3) or more EU Members States?*	N/A

6.8.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Better regulation is one of the 10 Commission Juncker priorities. The REFIT Platform is one of the key new developments in the Commission May 2015 Better regulation package. The Platform started its work in January 2016 offering a dialogue between all relevant actors (EC, MS and

Question	Answer
	stakeholders). It is urgent to ensure the efficient functioning of the Platform within the mandate of this Commission.
Does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Yes, the ISA scope and conditions fits well with the objective and scope of the REFIT Platform. Other resources are not available.

6.8.5.5   Reusability of action outputs

The proposed IT tool is tailored to the needs of the REFIT Platform. Nevertheless, there may be possibilities to reuse / apply certain or even major outputs to other Commission expert groups – to be explored during the Planning phase of the project.

6.8.5.6   Level of reuse by the proposal

The re-use by the action of existing common frameworks and elements of interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	Yes. REFIT intents to make use of the e-TrustEx platform for the secure exchange of documents amongst Member States' representatives and the Commission. Additionally, REFIT will make use of the MT@EC translation service for working documents.
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	N/A

6.8.5.7   Interlinked

The link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Better Regulation is priority 10 of the Juncker Commission. The work of the Platform potentially contributes to all Union priorities dependent on the issues sent in to and taken up by the Platform.

6.8.6   PROBLEM STATEMENT

Collaborative Workspace, ordinary emails and CIRCABC are used to prepare documents internally in the commission and to share documents with the Platform members. Combing these tools is inefficient, been criticized by the external members and do not meet all the needs. The main problems identified include:

- Commission services are reluctant to use Collaborative workspace when preparing the Assessment Sheets. It has no workflow management (including validation), no tracking of progress and no effective storage and classification of documents,
- The CIRCABC newsgroup is not user-friendly; does not allow for a simultaneous collaboration on documents and its user-interface is archaic resulting in little use and extra work when email distribution is required.

6.8.7   EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

The IT tool will be tailor-made to the needs of an effectively managed REFIT Platform. Those involved with the REFIT Platform work will be the immediate beneficiaries of an IT tool that will reduce the current administration and document handling.

In a wider sense a more productive and inclusive REFIT Platform process will enhance the chances of success for the 'Better regulation' agenda which is seen as critical to revitalise

European cooperation based on policies and laws that are responsive to the citizens and businesses directly affected.

Beneficiaries	Anticipated benefits
REFIT Platform members	Greater online interaction of platform members leading to better cooperation and more inclusive opinions of the platform, increased commitment to the work of the Platform and enhanced productivity. Positive impact on platform members' satisfaction with the process.
Platform members and EC (SG and DG´s)	Better storage and classification of suggestions and Assessment Sheets allowing for a smarter use of information already received, time and resources saved.
EC (SG and DGs)	Reduced workload related to the preparation and publication of Assessment Sheets Significant reduction in potential for mistakes or incoherent documents
EC (SG and DGs)	More transparency throughout the process leading to greater DGs buy-in and a more positive approach towards the platform process

6.8.8 ORGANISATIONAL APPROACH

6.8.8.1 Expected stakeholders and their representatives

Stakeholders	Representatives
European Commission	CAB Timmermans, the Secretariat General, concerned DG´s
Refit Platform	Stakeholder members and Member State authorities and their assistants

6.8.8.2 Identified user groups

Everyone involved with the REFIT Platform either in general or in specific cases. These are typically the experts in European Commission services; the cabinet of the FVP, the Secretariat General in its capacity as Secretariat. Externally the users will be the 48 members of the

REFIT Platform and their 1-2 assistants i.e. the stakeholder group members and Member State authorities.

6.8.8.3 Communication plan

The main communication actions are:
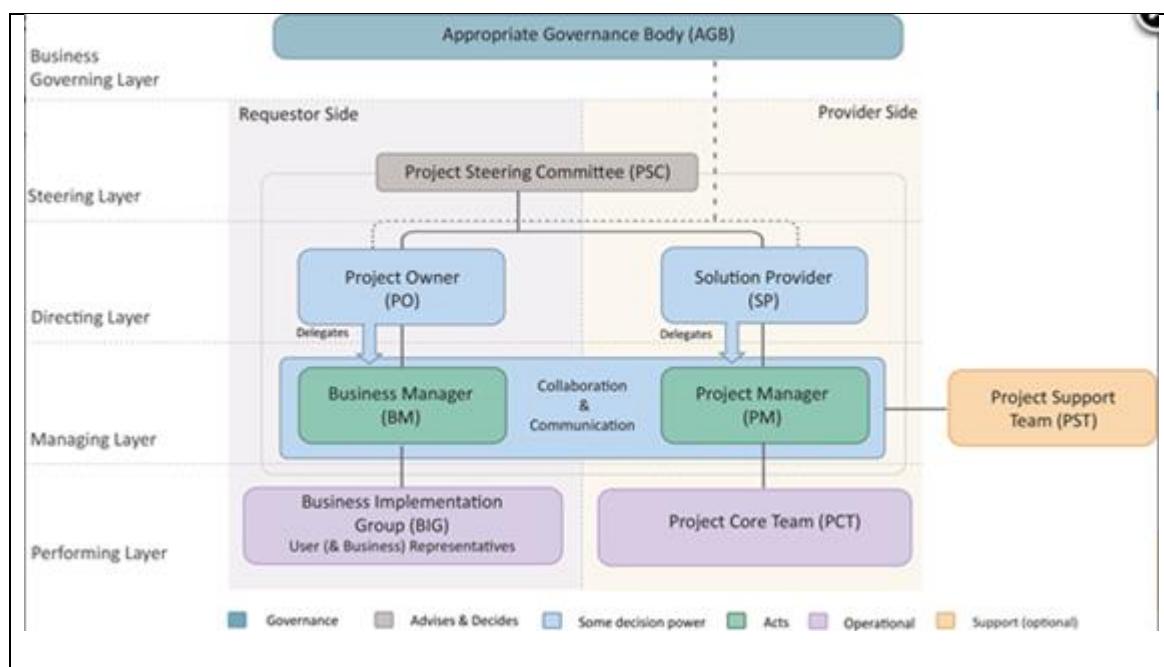
- Written communication, both to internal and external parties involved with the REFIT Platform and its activities (e-mail). + Business architecture document to be provided to the testers (SG.A2) + regular updates/minutes of the meetings

- 'Hands-on' awareness sessions – One with all the members of the REFIT Platform and one with the DGs 'Better regulation' representatives – to present the project.

- Dissemination material for all relevant stakeholders:

  - DGs: a quick-start guide.

  - MSs: a quick start guide.

- Meetings:

  - With external stakeholders, the REFIT Platform meets every 2 - 3 months and will continuously be provided with status and given the opportunity to provide feedback.

  - With internal stakeholders, twice a year, as part of the regular DGs 'Better regulation correspondents meeting, to provide status and receive feedback.

- First-line support: The Project Support Team will help users through the change and collecting feedback.

Event	Representatives	Frequency of meetings / absolute dates of meetings
REFIT Platform group meetings	All Member States and all Stakeholder group members	Meetings every 2 -3 months
Better regulation correspondents meetings	Representatives from all DGs	Once or twice a year
Directors network	Representatives from all DGs	Once or twice a year

Event	Representatives	Frequency of meetings / absolute dates of meetings
Project owner/System supplier	SG.A2/ DIGIT.D1 and SG.C5	Quarterly reporting using PM² methodology

6.8.8.4 Governance approach

This project will follow the standard PM2 project governance structure.

Project Owner: Ms CIPOLLONE, Antonina (SG.A2)

Solution Provider: Mr. BARCELLAN Roberto (DIGIT.D.1), Mr. GRITSCH, Martin (SG.C5)

Project Manager: Mr. BOTA Florin Mircea (DIGIT.D.1); Mr. COZMA Michael (DIGIT.D.1); Mr. CLEYMANS Tom (SG.C5)

Business Manager: Mr. SAGSTETTER, Norbert (SG.A2), Ms. GEROLYMATOU Maria (SG.A2) (back up Julie Guermonprez)

Project Support Team (PST): Appointed.

Project Core Team (PCT): Appointed.

Business Implementation Group (BIG): 1 representative per interested DG and 3 representatives from the REFIT Platform Government group and 3 from the Stakeholder group. To be appointed at a later stage.

The governance approach has established regular coordination meetings between SG.A2 (project owner), DIGIT.D.1 and SG.C5 (solution providers). In addition, this action will respect the general ISA Governance under the supervision of the ISA Coordination Group inside the cluster "Trusted Information Exchange".

A Steering Committee will monitor completion of the project phases; set project requirements, objectives and outcomes, validate project deliverables, test activities and disseminate information about the project to the Commission services. It will be composed of members from Units C.1 and R.3 of the Secretariat General and Unit D.1 of DIGIT and representatives of those services who have been most involved with REFIT Platform suggestions (DG AGRI, DG GROW, DG ENV, DG FISMA, DG SANTE and DG TAXUD).

6.8.9   TECHNICAL APPROACH AND CURRENT STATUS

The Platform is composed of two groups, one for Member State experts ("Government group") and one for representatives of the Economic and Social Committee and the Committee of the Regions, business, social partners and civil society organisations having direct experience in the application of Union legislation ("Stakeholder group").

The task of the Platform is to invite and collect suggestions on regulatory and administrative burden reduction, to assess the merits of these suggestions, to forward for comment those suggestions considered to merit most attention to the Commission services or to the Member State concerned and to respond to each suggestion and publish the response. This means that altogether 48 experts are involved and are supposed to actively contribute to preparation of the opinions to be adopted. Unlike other Commission expert groups, the Commission (SG.A2) acts as Secretariat, but the active opinion formulation is the responsibility of the members.

Currently a Collaborative Workspace and CIRCABC are used to prepare and share documents with the Platform members. The suggested IT tool should be developed separate from but compatible with the development of the Better Regulation portal (BRP). The primary objective of the IT tool is to manage the preparation and publication of ASs as part of the development of the new "lighten the load" phase.

The technical implementation of the IT tool has the following requirements:

- Two separate 'channels' with the same functionalities, but one dedicated strictly to Commission-internal document preparations and another one open to all 48 members and the Commission (with different access rights concerning each of the REFIT Platform groups).

- The 'internal channel' should enable automatic generation of an Assessment Sheet when a suggestion is introduced via the website 'Lighten the load…' with the functionality that SG.A2 can quality control before notifying the relevant services that a new Assessment Sheet needs input. The approved Assessment Sheet should automatically be available in the 'external channel' with notification to (1) the relevant reporters of the Stakeholder groups, (2) the other members of the Stakeholders group and then (3) the Government group.

- The 'external channel' should allow Members to indicate their interest in leading the work so it is visible who is in charge of a file.

- Each of the two Platform groups should have unique entitlements to fill-in their contribution to the opinion in a dedicated box in the document. The box should be visible and open for editing to all members of the specific group, with clear indication of who has made what changes. This box should only be visible to the other group once the lead member has verified that the document is ready to be shared. Once both groups have verified that their box have been filled-in (including the option of not having any opinion) both groups should have access to and editing-rights to draft a joint summary opinion.

- The leaders from both groups are entitled to sign-off the joint summary opinion indicating that the opinion is ready for 'written adoption' whereby it automatically notifies all members of the time they have to react or the conclusion that the draft opinion will need to be discussed at a meeting.

- The IT tool should automatically make available both a version with all the individual contributions / comments and a clean version, which is the basis for adoption (which consists in an anonymised version for the Government group members e.g. Member State 1 instead of Spain).

- In the 'external channel' only SG.A2 should have editing rights in the entire document while other Commission services should have continuous access to edit their own contribution only.

- The IT tool should support a single, shared document on which several members can work simultaneously (and avoid down- and upload of documents)

- Members must be able to download documents for internal coordination. However, only authorised Members (or their assistant) must be entitled to edit documents in the IT tool and delegation of that right should not be possible without prior approval by SG.A2.

To address these needs, this action will provide a collaborative workspace with a restricted area for working group members and an integrated workflow system.

Version 1: Specifically, a workspace for members will be developed allowing them to exchange ideas and suggestions, draft working papers, etc. in an interactive way. Workflows will be designed to cover the entire cycle from the submission of comments by stakeholders, to exchanges with lead DGs, to consultation and publication of results (including the tracking of follow up actions if relevant).

Version 2: Additionally, a middleware component will be developed that will interconnect the collaborative workspace, an off-the-shelf solution hosted in the cloud, with Commission systems, and more particularly the Better Regulation Portal (BRP). This middleware component should be reusable by any other Commission system that should be linked to a cloud collaborative solution.

DIGIT has delivered the collaborative platform off-the-shelf solution hosted in the cloud and the workflows for the Platform members in December 2017.

During the first half of 2018, the project team finalised the development, the integration and the testing of the middleware module that links the Better Regulation Portal back-end with the cloud-based collaborative workspace through web services.

The middleware component will also be added to the Commission's corporate IT catalogue, so that it will be available for reuse by any DG/Service across the European Commission.

In the context of the planned maintenance in 2018, the middleware will be fine-tuned and the workflow on the collaborative platform improved.

6.8.10 COSTS AND MILESTONES

6.8.10.1 Breakdown of anticipated costs and related milestones

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Planning	Requirements gathering, assuring alignment with scope of the Better Regulation Portal and existing 'Lighten the load – Have your say'.	30	ISA[2]	Q2/2017	Product delivery - Q1/2018 as announced at the ISA2 meeting of 14/12/2017
Planning	Detailed format (business use cases) of the in-scope identified business services. Planning of the version 1: the collaborative workspace and the related workflows. Planning of the version 2: middleware component and the communication between BRP and the collaborative workspace via the middleware.	50	ISA[2]	Q2/2017	Q3/2017

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Validation by all actors of the business use cases.				
Executing	Implementation of the collaborative workspace and the related workflows, version 1.	100	ISA^2	Q3/2017	Q4/2017
Executing	Implementation of the REFIT related functionalities in the Better Regulation Portal - BRP (extension of the BRP to cover the internal workflow from the reception of the 'Lighten the load' proposals to their submission to the REFIT platform)	40	Others COSME	Q2/2017	Q4/2017
Executing	Testing and training; updated the documentation for Platform members, version 1.	35	ISA^2	Q4/2017	Q4/2017 – for version 1. System will be fully operational once the middleware between BRP and Sharepoint

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
					is implemented (foreseen in March 2018)
Infrastructure	Infrastructure costs covering the virtual machines in the cloud for the collaborative off-the-shelf platform	22	Others COSME	Q2/2017	Q4/2017
Closing	Roll-out Version 1	25	ISA[2]	Q4/2017	Q4/2017
Monitor & Control	Monitor and report on on-going project activities and project performance, planning and implementing corrective actions in case of need, Version 1.	25	ISA[2]	Q2/2017	Q4/2017 for version 1 - (final deployment 2018)
Executing	Detailed format (technical use cases) of the 'in/out' web services and their correspondent backend business services. System	117	ISA2	Q4/2017	Q1/2018

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	architecture and system core implementation. Development of 'in/out' web services and their correspondent backend business services, development of the middleware for the communication between BRP and the collaborative workspace, version 2.				
Executing	Testing and training; updated technical documentation, version 2.	30	ISA2	Q1/2018	Q2/2018
Infrastructure (will continue the following years)	Infrastructure costs covering the virtual machines in the cloud for the collaborative off-the-shelf platform	22	Others COSME	Q1/2018	Q4/2018
Closing	Roll-out version 2	25	ISA2	Q2/2018	Q2/2018
Monitor & Control	Monitor and report on on-going project activities	25	ISA2	Q4/2017	Q2/2018

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	and project performance, planning and implementing corrective actions in case of need.				
Maintenance (will continue the following years)	Costs for the maintenance of the solution in production	40	Others COSME	Q1/2018	Q4/2018
	Total	462	ISA^2	Q2/2017	Q2/2018
	Total	124	Others COSME	Q2/2017	Q4/2018
	Grand Total	586	ISA2 + Others (COSME)	Q2/2017	Q4/2018

6.8.10.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Planning, executing, closing, monitoring and control, version 1	462	462
2018	Planning, executing, closing, monitoring and control, version 2	0	

6.9 REGISTER OF DELEGATED AND IMPLEMENTING ACTS (EX INTER-INSTITUTIONAL REGISTER OF DELEGATED ACTS) (2017.04)

6.9.1 IDENTIFICATION OF THE ACTION

Service in charge	European Commission, Secretariat General (SG.G4)
Associated Services	European Commission, DG DIGIT, Secretariat General SG.C5

6.9.2 EXECUTIVE SUMMARY

Delegated acts are acts adopted by the Commission in order to amend or supplement non-essential elements of basic acts, on the basis of empowerments given by the legislator (European Parliament and Council) in the basic acts themselves[44]. The Commission adopts around 130 such acts per year, across quasi all policy areas.

Delegated acts are planned, prepared by the Commission with the help of expert groups, adopted by the College and then subject to an objection period by the legislator. During this scrutiny period, the European Parliament and the Council can each decide to tacitly agree, to object the act, to extend the objection period or to express its early non-objection to the act. Should no objection be raised, the act is then published in the Official Journal and enters into force. Several documents can be produced during the lifecycle of delegated acts. Prior to the set-up of the Inter-institutional Register of Delegated Acts[45], there was no system allowing for an integrated view. Moreover, there was also no inter-institutional working tool allowing for a smooth communication and interaction between the three institutions around such acts.

That is why the three institutions decided, in the Inter-Institutional Agreement on Better Law-Making of 13 April 2016, to jointly set up and manage a joint dedicated Register for Delegated Acts. This Register, due to go live at the end of 2017, would allow an integrated view over the full life-cycle of delegated acts and related documents, including the actions taken by the Institutions, in addition to serving as a transmission tool between the three Institutions for all exchanges related to such acts. It is built on the basis of existing tools, reusing as much as possible from what has already been implemented in other projects and

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[44] See art. 290 TEU and the Common Understanding on Delegated Acts annexed to the Inter-Institutional Agreement on Better Law-Making of 13 April 2016.

[45] The set-up of the Register is financed under the ISA2 2017 Work Programme (Action 2017.14)

acting mainly as an information aggregator, avoiding information duplication. Also, it is built with future inter-operability in mind, in order to allow its evolution towards increased inter-connectivity in the future.

The European Commission adopts every year around 1600 implementing acts, through a procedure that involves committees made up of Member State representatives ("comitology" committees). There are around 250 such committees active, across all policy areas[46]. The work of these committees, clearly framed by Regulation 182/2011[47], has been documented since 2008 in the Comitology Register[48], with an older Register covering the period 2002-2008. The existing Register is technologically old, isolated from all other IT tools in the Commission, and not very user-friendly. For instance, is does not have committee-specific pages, nor does it provide timeline views on the evolution of draft implementing acts during their preparation and adoption.

Given that the current Interinstitutional Register of Delegated Acts[49] offers a model of how to best integrate internal applications in order to provide the public with complete timeline views of acts, from planning to publication in the Official Journal, we are now enlarging the scope of this Register and transforming it into a 'Register of Delegated and Implementing Acts' that would offer complete information on all the acts (delegated and implementing) adopted on the basis of mandates given by the European Parliament and the Council to the Commission in legislative acts. At the same time, the work of the comitology committees themselves would be presented in a more user-friendly and accessible way, in a way similar to how the work of expert groups is currently incorporated into the Register of Delegated Acts.

The integration work will continue in 2020 so that, by the end of the ISA² programme, we can offer an integrated Register of Delegated and Implementing Acts and easy, streamlined and integrated access to the work of the bodies helping the Commission prepare such acts (comitology committees and expert groups).

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[46] The Commission reports every year on the work of the committees, see Annual Reports on http://ec.europa.eu/transparency/regcomitology/index.cfm?do=Report.Report

[47] *Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by Member States of the Commission's exercise of implementing powers*

[48] http://ec.europa.eu/transparency/regcomitology/index.cfm

[49] https://webgate.ec.europa.eu/regdel/#/home

6.9.3 OBJECTIVES

The objective of this action is to continue and finalize the developments for the Inter-institutional Register of Delegated Acts, that both responds to the needs of the three Institutions (Commission, European Parliament, Council) and increases the transparency of the preparation and adoption of delegated acts, so that the Institutions, the Member States and the public at large have a better view of the full life-cycle of delegated acts, from planning to entry into force. As such, the Register complies with the objectives of the ISA2 programme of increasing interoperability (given that it is designed to be an interinstitutional interoperable tool), of facilitating electronic cross-sector interactions (given that delegated acts are adopted in all policy areas) and of promoting reuse of interoperability solutions by European public administrations (by heavily relying on already existing solutions).

Building upon the experience gained with the development of the Interinstitutional Register of Delegated Acts and drawing from the analysis carried out in the study on the future of the Comitology Register (action 2018.04), the main aim for 2019 is to create one Register of delegated and implementing acts, thereby offering a one-access point to all the regulatory measures adopted by the European Commission based on empowerments given by the European Parliament and the Council in legislative acts. This is fully in line with the objective to re-use existing cross-sector interoperability solutions.

There are two main objectives for 2020. On the one hand, to finalize the integrations with other systems, manage the transmission function from the new Register and validate and polish the new system before its launch (including the implementation of the security measures proposed by the security plan analysis). On the other hand, as by mid-2020 we will have an integrated Register of Delegated and Implementing Acts, we will be able to focus, in the second half of the year, on providing an integrated access to the work of the bodies supporting the Commission in the preparation of such acts, namely comitology committees and expert groups. By the end of the ISA² programme we would therefore have delivered an integrated Register of Delegated and Implementing Acts and an integrated access to the work of the committees and expert groups, all with subscription and notification facilities for the users and fully in line with the Commission objectives of streamlining its Registers.

6.9.4 SCOPE

The Register covers the entirety of the lifecycle of a delegated act, from planning and preparation down to adoption and entry into force, including revocation/tacit renewal of the

empowerment. It offers a timeline view of all the relevant documents with the focus being on every individual delegated act. Also, it allows searching for the different delegated acts adopted (or under preparation) on the basis of the same basic act and for delegated acts adopted linked to the different expert groups.

The scope of the second phase of the project includes supporting procedures linked to delegated acts that were not covered in phase I (notably revocation of delegation, refusal to extend the delegation and corrigenda after the publication of a delegated act in the Official Journal). It will also include additional application management tools (such as enhanced user management and reporting functionalities), as well as machine-to-machine communication channels to set the basis of further interoperability

In 2019, the project will deliver an integrated Register of Delegated and Implementing acts, building upon the current Register of Delegated Acts, as well as an improved access to information on the work of the comitology committees (supporting the Commission in the adoption of implementing acts). In order to allow for information to automatically flow into the new interface, integration work between several Commission IT systems (notably Decide and AGM) will also take place.

In 2020/2021, the project will finalize the developments, by delivering, in addition to the Register of Delegated and Implementing Acts, a new REGCOM Back Office application integrated with several Commission IT systems (Decide, AGM, CircaBC, eDelivery, CNS…) and a new front office for committees and expert groups.
In order to ensure a smooth launch of the new system, the project will also deliver migration, training and documentation artifacts.
In order to allow for a smooth and reliable feeding of the new front-office for committees and expert groups, the back-office dealing with expert groups will also be integrated, by re-using the RegCom developments, with the relevant applications (notably AGM).

6.9.5   ACTION PRIORITY

6.9.5.1   Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	This Register is a clear example of interoperability between the Commission, EP and Council, being the first true joint interinstitutional tool, across policy areas. An integrated Register of Delegated and Implementing Acts would allow Member State administrations to follow more easily the regulatory activity of the Commission (and even receive directly alerts and notifications).
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	There is currently no structured exchange of documents/information between the three institutions as regards the preparation and post-adoption treatment of delegated acts. The creation of the Register is therefore seen as the best solution, given the business workflows it needs to support.

6.9.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of*	The Register will be used in all policy area, see annex II for an overview

Question	Answer
view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.	(using the DGs as proxy). The Commission adopts more than 1600 implementing acts every year, across all policy areas. This work is supported by around 250 comitology committees, also across all policy areas. The Commission is also supported by around 730 expert groups, out of which around 130 are directly involved in the preparation of delegated acts.
For proposals completely or largely already **in operational phase,** *indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	N/A

6.9.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Although the use of the inter-operability solutions by Member States administrations is not in the scope of the project, the solutions built for the exchange of information between the European institutions could be used by Member States too. It could also serve as an example for other tools in which Member State administrations have a strong interest (such as the Comitology Register for instance). All Member State administrations are concerned, as all Member States are members of the comitology committees that support the process of adoption of implementing acts. Member State authorities are also members of the great majority of Commission expert groups.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	The current Register of Delegated Acts is used by national administrations to follow the evolution of such acts. While we do not have concrete figure, we do have positive feedback from national ministries.

6.9.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes, the requirement to deliver the Register by the end of 2017 comes from the Inter-Institutional Agreement on Better Law-Making of 13 April 2016. The current Comitology Register dates back to 2008, is technologically nearly obsolete and in dire need of modernisation. The current Register of Expert Groups is also old, isolated in the Commission IT landscape, with the Front End technologically nearly obsolete and in need of modernisation.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	As this is by definition a multi-institution, cross-border and cross-sector project, ISA2 seems to offer the best framework for its development.

6.9.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new	System-to-system events interface

proposals) or produced (for existing actions)	
Description	The system will include a system-to-system events interface, based on a JMS topic, that will allow different systems to subscribe and take automatic decisions (for instance trigger withdraw a process after one Institution objection) based on the consumed event
Reference	
Target release date / Status	
Critical part of target user base	All involved Institutions
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	New interface for comitology committees as a baseline for the further integration of the Register of Expert Groups
Description	The new public interface documenting the work of comitology committees could be reused, at a later stage, either as a baseline to review the current Register of Expert Groups or even as a baseline for the federation of Commission Registers documenting the work of committees and groups assisting the Commission in the policy-making process (expert groups and comitology committees).
Reference	
Target release date / Status	Q4 2019
Critical part of target user base	All stakeholders
For solutions already in operational phase - actual	

reuse level (as compared to the defined critical part)	

6.9.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	The proposed system will use eTrustEx for the exchange of information between the institutions.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	The IMMC schema is used to simplify the understanding and re-use of the information (both by the parties included in the proposal and by any other future stakeholder) TESTA-NG is used to securely connect the backend systems of the involved Institutions.

6.9.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	This project has a clear link with one of the ten priorities of the Juncker Commission, namely "democratic change". Increased transparency over the decision-making process and facilitating stakeholder participation in the policy-making process are elements of this strategic objective. The Register, by allowing an integrated view over

Question	Answer
	the lifecycle of delegated and implementing acts, will greatly facilitate both stakeholders' and institutional players' participation.

6.9.6 PROBLEM STATEMENT

Delegated acts are prepared by Commission services with the help of expert groups. They are then adopted by the College, normally through written procedure, and sent to the EP and Council for their scrutiny during the objection period. Once the objection period is over, they are published in the Official Journal and enter into force. The table in Annex I provides the full list of documents produced in the lifecycle of a delegated acts and the IT applications/websites where they are available today. It shows that information, while in general publicly available, is dispersed. Also, there is currently no standard practice/unified transmission channel at the preparatory stage (expert groups), DGs using e-mail, CIRCABC, own websites, etc. in order to document the discussions in the expert groups. At the other end of the process, there is no centralized repository of documents after the adoption stage, documenting the position of and the actions taken by the other institutions (objections, extensions of deadlines, early non-objections, revocation of empowerments). The Joint Register aims to remedy these shortcomings, by offering an integrated access to all the stages in the lifecycle of a delegated act and by serving as an aggregator of information between the three institutions.

The problem of	Not having an unique "one-stop shop" dedicated to delegated acts processing
affects	The different EU Institutions, Member States and citizens
the impact of which is	There are delays in processing and information is not well disseminated among relevant stakeholders
a successful solution would be	To develop an interoperable user friendly information aggregator including all information related to delegated act processing

The problem of	Fragmentation of information about delegated and implementing acts
affects	The transparency of the decision-making process and the capacity of stakeholders and Member State administrations to follow it
the impact of which is	Difficult to have an overview of the on-going and adopted delegated and implementing acts
a successful solution would be	An integrated Register providing access to both delegated and implementing acts, as well as to their legal basis and workflow information

The problem of	Technical obsolescence of the current Comitology Register and Front End of the Register of Expert Groups
affects	The Commission capacity to modernise the existing tools in line with stakeholder demands
the impact of which is	Isolated, not very user-friendly Registers
a successful solution would be	Modern, user-friendly access to information on the work of the comitology committees and expert groups

The problem of	Isolation of the current Comitology Register and the Register of Expert Groups in the IT landscape
affects	Data quality and transparency
the impact of which is	A currently fragmented view on the work of the committees and expert groups, making the process very difficult to follow
a successful solution would be	An integrated workflow, ensuring data quality and transparency over the entire preparation and adoption process

6.9.7 IMPACT OF THE ACTION

6.9.7.1 Main impact list

The Register's main impacts lie in the areas of transparency, increased legal certainty and increased inter-operability. With information being available in one single place as compared to several databases and websites today, it will also increase the efficiency of staff in charge of following such acts, irrespective of whether they are working in the European institutions, Member State administrations or in stakeholder groups.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Easier to follow the process, potentially less staff needed (or staff reassigned to other tasks)	As of Q1 2018	Member State administrations, stakeholders, EU Institutions
(+) Savings in time	By making all information and documents about delegated and implementing acts available in one single place, the Register will greatly facilitate the work of people who have an interest in following such files	As of Q1 2018	Stakeholders, staff in national administrations and permanent representations, staff in EU institutions
(+) Better interoperability and quality of digital public service	By aggregating information coming from the back-end systems of the European Commission, European Parliament and Council, the Register offers a one-stop shop to the whole procedure of delegated and implementing acts, irrespective of who the actor in charge of a particular step in the procedure is.	As of Q1 2018	EU institutions, Member State administrations, stakeholders

Impact	Why will this impact occur?	By when?	Beneficiaries
(-) Integration or usage cost	A less cumbersome process of following the work of the committees and the evolution of implementing acts	As of Q2 2020	Stakeholders, staff in national administrations and permanent representations, staff in EU institutions
(-) Integration or usage cost	Easier access to the work of expert groups supporting the Commission in the policy preparation process.	As of Q4 2020	Stakeholders, staff in national administrations and permanent representations, staff in EU institutions
(+) Increased transparency	By making all information and documents about delegated and implementing acts available in one single place, the Register increases the transparency of the process of preparing, adopting and scrutinizing such acts.	As of Q1 2018	Stakeholders, staff in national administrations and permanent representations, staff in EU institutions
(+) Data quality and legal certainty	Increased data quality for implementing acts by automatic feeding of the public interface from the Commission workflow systems	As of Q2 2020	Member State administrations, stakeholders, EU Institutions

6.9.7.2 User-centricity

Improving access to information on the lifecycle of delegated and implementing acts is a central objective of the Register, together with helping streamline communication. Users are therefore central actors, not only in the institutions concerned (European Commission, European Parliament, Council), but also in a wide sense of the word, encompassing citizens, stakeholders, Member State experts, etc. Once the Register is in place, users will have the opportunity to subscribe to notifications in order to be immediately and directly informed of any event occurring in the lifecycle of a particular delegated act, basic act or policy area. The user interface is also being designed from a user-centricity perspective.

Users have already been involved in the on-going study on the future of the Comitology Register, precisely in order to take their input into account already at the early analysis stage. Internal users in the Commission, but also from the other institutions have been heard and will further accompany the analysis and development work. Input from external stakeholders is also being incorporated, in order to make sure that the public interface meets their needs. We will follow the same approach when further integrating the Register of Expert Groups.

6.9.8 EXPECTED MAJOR OUTPUTS

Output name	Support for revocation of delegation
Description	Include the elements to support the process of revoking delegations by the European Parliament and the Council, together with all of its related events and documents
Reference	
Target release date / Status	4Q2018

Output name	Support for the refusal to extend the delegation
Description	Include the elements to support the process of refusing to extend the delegation by the European Parliament and the Council, together with all of its related events and documents
Reference	
Target release date / Status	4Q2018

Output name	Support to corrigenda after the publication of a delegated
Description	Include the elements to support corrigenda to already published delegated acts, made by the European Commission, together with all of its related events and documents
Reference	
Target release date / Status	4Q2018

Output name	Reports on use of powers
Description	Include all elements in the system to provide the mandatory reports on the use of powers by the European Commission
Reference	
Target release date / Status	4Q2018

Output name	Register of delegated and implementing acts public interface
Description	Extension of scope of the current Register of delegated acts in order to also include implementing acts, linked to the relevant basic act, and offering an individual page per implementing act with a timeline and the associated events and documents
Reference	
Target release date / Status	Q4 2019

Output name	Revamped interface for comitology committees
Description	A revamped interface for the documentation of comitology committees: their legal basis, rules of procedure, meetings and associated documents
Reference	
Target release date / Status	Q2 2020

Output name	Revamped back-office for implementing acts
Description	A revamped back-office for the processing of the comitology workflows, integrated with Decide, AGM and able to serve as a transmission channel to the European Parliament and the Council
Reference	
Target release date / Status	Q2 2020

6.9.9 ORGANISATIONAL APPROACH

6.9.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Roles
European Commission	SG.G4 and DIGIT.B2	SG.G4 is the system owner, DIGIT B.2 the solution provider.
European Parliament	DG IPOL (CODE), DG ITEC	DG IPOL is the business owner on the EP side, with DG ITEC in charge of the necessary adaptations in the EP back-end system. Both are also represented in

Stakeholders	Representatives	Roles
		the governance bodies of the project.
Council of the EU	GIP (DRI Legislation Unit), DGA 5	GIP is the business owner on the Council side, with DGA5 in charge of the necessary adaptations in the Council back-end system. Both are also represented in the governance bodies of the project.
EC comitology and expert group coordinators	User group	Consulted during the analysis and the development
MS administrations	-	Informed, feedback welcome
Stakeholders at large	-	Informed, feedback welcome

6.9.9.2 Identified user groups

DG coordinators for comitology and expert groups, EP and Council coordinators (to be defined), Member State administrations and the public at large.

6.9.9.3 Communication and dissemination plan

Dedicated trainings will be organised in the three institutions targeting the main user groups of the future Register (for the Commission that would be the comitology coordinators and the expert group coordinators). In terms of external communication, the necessary

communication strategy will be put in place, involving a press release, launch statements on social media, communication via the representations in the Member States.

In addition, the communication channels of the ISA² programme (twitter account, newsletter, blog posts, etc.) will be used to disseminate the results.

Training material for external users will be prepared and shared via the e-learning platform of the Interoperability Academy.

6.9.9.4   Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[50] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Delegated Acts available via the Register	All acts adopted	As of Q1 2018
DA procedures supported by the Register	90%	Q4 2018
Users subscribed to the notifications	200	Q4 2018
Number of e-mail based interactions between the institutions	25% lower than today	Q4 2018
Number of committees migrated to the new interface	100%	Q4 2019
Uptime of the extended Register	>95%	After go-live
Number of visits per month		After go-live
Number of expert groups available in the new public interface	100%	Q4 2020
Number of expert groups supported in the new backend	100%	Q2 2021

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[50] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

6.9.9.5   Governance approach
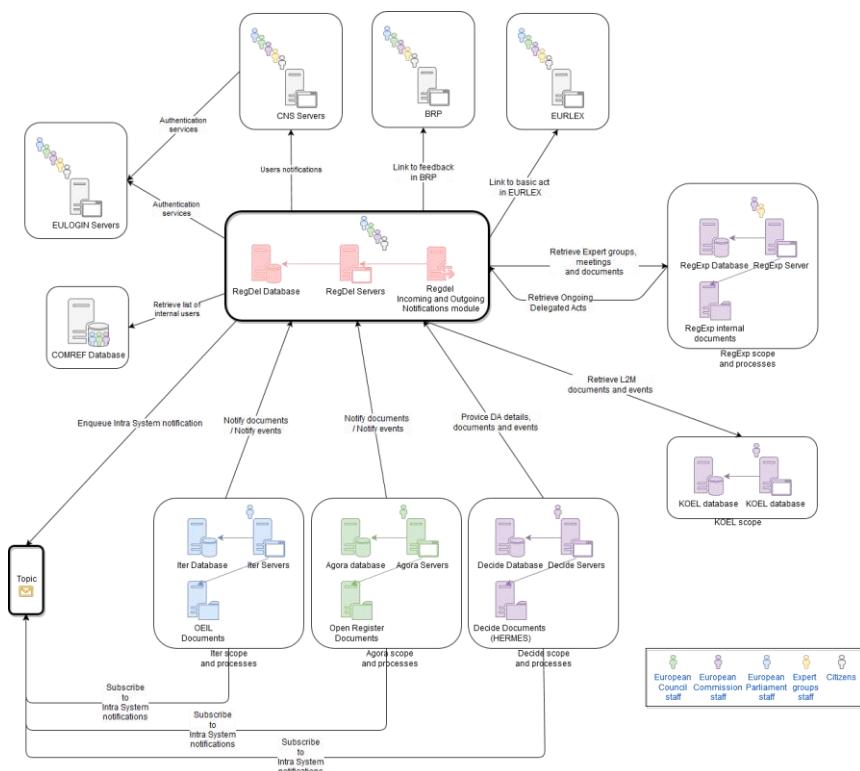
The project will follow the standard PM2 governance structure:

Business Implementation Group (BIG): Representatives from the Institutional Affairs Unit in the Commission, and the Codecision Units in the EP and the Council. The network of comitology coordinators in the Commission.
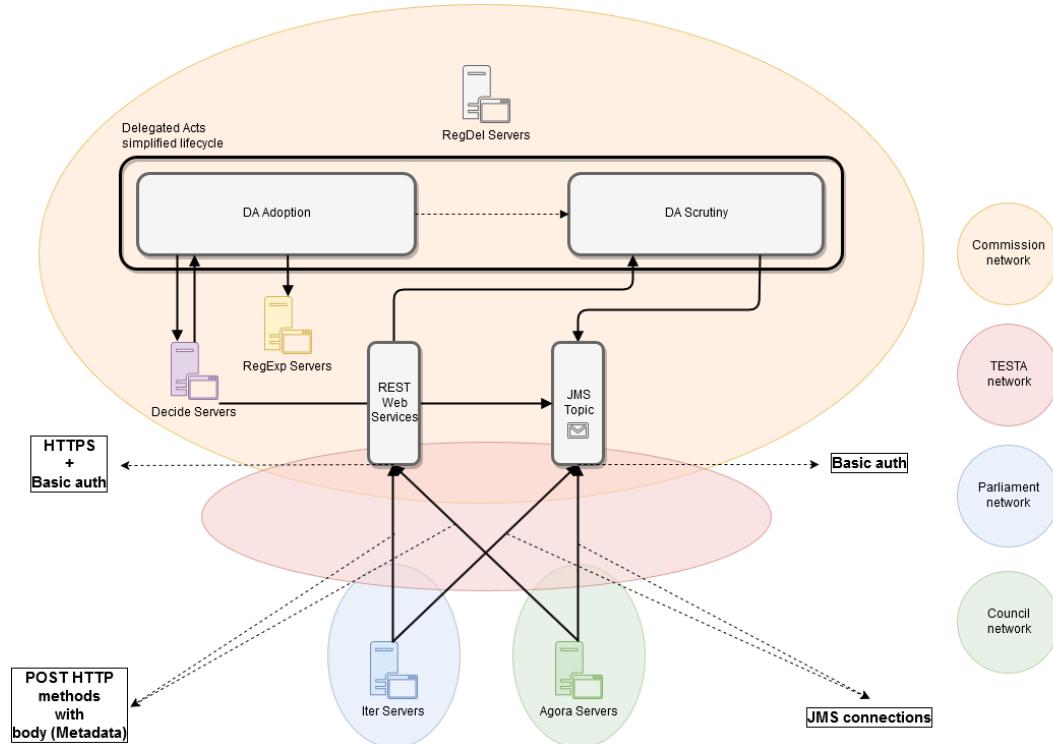
The Heads of Unit of the Codecision Units in the EP and the Council are part of the Project Steering Committee together with the standard members (Project Owner, System Supplier, Business Manager and Project Manager). It is left to each institution to organize itself internally for the link between business and IT and to decide on the participation to the coordination meetings of other colleagues, according to the topics on the agenda. A formal inter-institutional project team structure was established in September 2016 and formalised through endorsement of the GCI (Groupe de Coordination Inter-Institutionnelle).

6.9.10 TECHNICAL APPROACH AND CURRENT STATUS

As from the December 2017, the first version of the Inter-institutional Register of Delegated Acts will go-live. This initial version provides an overview of the delegated acts processing, including all related events and documents, based on the aggregator principle. The register does not store any document but points to the place this document is already available, avoiding information duplication. The picture below depicts the landscape of systems integrated with the register:

It is also important to mention that that in order to inter-connect different back-end systems of three different Institutions, services will be deployed in TESTA-NG, following below schema:
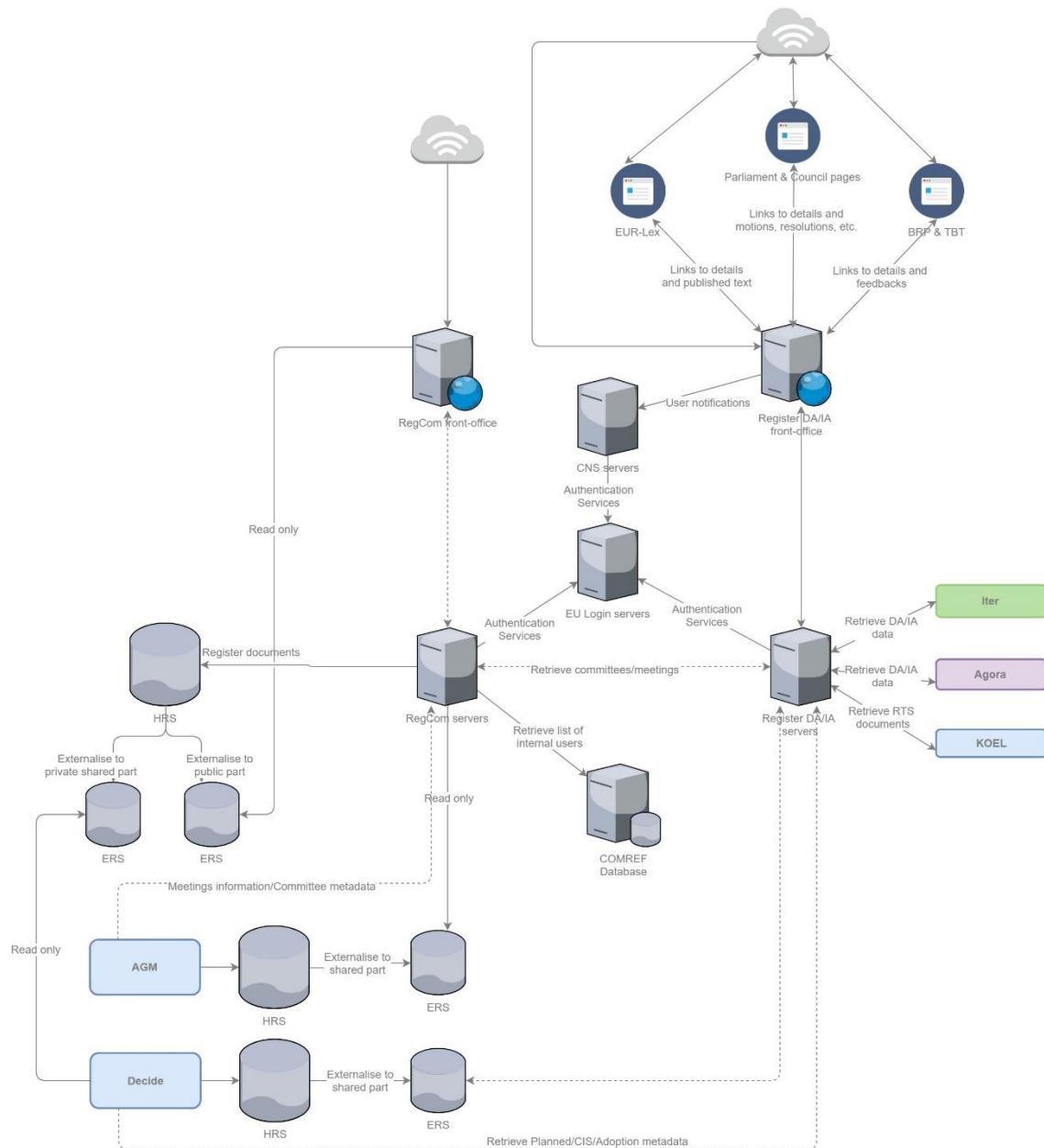
Based in the aforementioned technical approach, the second version of the register will incorporate the following new functionality:

- Remaining processes not covered in the first version (notably revocation of powers, refusal to extend, corrigenda after the publication of delegated acts in the Official Journal) in order to fully cover the delegated acts lifecycle.
- Functionality to extract the mandatory reports on use of powers that the European Commission has to regularly provide to the co-legislators.
- Reporting facilities with information on:
    - Number of registered users.
    - Number of accesses and subscriptions
    - Number of accessed documents
    - ….
- Improvements in expert groups and subscription mechanism (allowing advanced filtering, calendar items export…)

Technical improvements to ease user management, error handling, troubleshooting and system operation.

The extension of scope leading to the new Register of delegated and implementing acts will follow the same aggregator principle, avoiding storing data already available in other external systems to prevent information duplication. The diagram below depicts the landscape of systems to be integrated:

Three main work strands can be identified, focusing on delivering the following:

- An improved **back-office system** accessible to the users of the European Commission with an ECAS based authentication system providing the management of data related to the comitology process (creation of committees, management of committee meetings and documents, transmission of relevant documents to the European Parliament and the Council);

- An improved user-friendly **front-office** accessible to the users of the three institutions as well as citizens and Member State administrations, providing access to the information related to the work of comitology committees (committee name, code, legal basis, Rules of Procedure, meetings and meeting documents);

- A **public interface being the main entry point to information related to implementing acts**. This interface will be included as an extension of the current Interinstitutional Register of Delegated Acts. Each implementing act will be linked to its basic act, have its individual timeline, and present all relevant events and committee meetings in a chronological way. European Parliament resolutions can also be included where relevant.

Work on the three strands above will continue in 2020, with a go-live date by mid-2020. We will then have the capacity to move on to the next step towards completing the vision of offering the public an integrated and easy access to all regulatory acts prepared by the Commission (delegated and implementing acts) and to the work of all the groups assisting the Commission in its policy preparation (comitology committees and expert groups). This last step is namely the revamp of the Register of Expert Groups, reusing the developments done for the comitology committees, work that will stretch from Q3 2020 to Q2 2021.

6.9.11 COSTS AND MILESTONES

6.9.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Business process definition	100	Heading 5	1/9/2016	28/2/2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticip ated Allocati ons (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YYYY)
Execution	Initial Proof of Concept	35	ISA	1/3/2017	31/4/2017
Execution	Development of RegDel version 1	689	ISA	1/5/2017	15/12/2017
Execution	Development of RegDel version 1	59	Heading 5	1/5/2017	15/12/2017
Execution	Maintenance and support of RegDel version 1	189	Co-financed by Commission, EP and Council	1/1/2018	31/12/2018
Execution	Development of RegDel version 2	550	ISA	1/1/2018	15/12/2018
Execution	Maintenance and support of RegDel version 2	100	Co-financed by Commission, EP and Council	1/1/2019	31/12/2019
Execution	Register of Delegated and Implementing Acts – version 1 Public interface for committees (new REGCOM front end)	1000	ISA	Q1/2019	Q4/2019

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Back-office implementing acts (new REGCOM back end) Public interface for expert groups (new REGEXP front end)				
Execution Closing	Register of Delegated and Implementing Acts – version 2 Public interface for committees (new REGCOM front end) – version 2 Back-office implementing acts (new REGCOM back end) - version 2 Back office expert groups (new REGEXP back end)	600	ISA	Q1/2020	Q4/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Project closure				
Execution	Maintenance and support of REGDIA for DA part	100	Co-financed by Commission, EP and Council	Q1/2020	Q4/2020
Execution	Maintenance and support of REGDIA for comitology part	40	Registers & Publications	Q1/2020	Q4/2020
Execution	Development and maintenance for Register of Expert Groups	105	Registers & Publications	Q1/2020	Q4/2020
	TOTAL	**3 567**			

6.9.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Initiation	35	35
2017	Execution	689	689
2018	Execution	550	550
2019	Development – phase I of integrated Register	1000	
2020	Development – phase II (end)	600	
	TOTAL	**2 874**	

6.10 STUDY ON THE FUTURE COMITOLOGY REGISTER (2018.04) – FUNDING CONCLUDED

6.10.1 IDENTIFICATION OF THE ACTION

Service in charge	European Commission, SG.G4
Associated Services	European Commission, DIGIT.B2
	European Commission, SG.C5

6.10.2 EXECUTIVE SUMMARY

The Commission is often empowered to implement EU legislation with the assistance of committees composed of representatives from EU countries. As such, it adopts around 1600 implementing acts every year, across all policy areas. The procedures underlying this process are set out in Regulation 182/2011 (the Comitology Regulation).

The Comitology Register (RegCom) contains background information and documents relating to the work of these committees, including all documents forwarded to the EU Parliament and the Council for information or scrutiny (on average approximately 20.000 documents per year). As such, the Register allows users to trace the different stages of an implementing measure throughout its entire lifecycle. The current version of the Register dates back to 2008 (with an even older version, now archived, operational since 2002). It reaches its tenth anniversary and it is necessary to rethink the Register from an IT, inter-operability as well as financial perspective. The Register has expanded considerably over the years and reached a level of such complexity that it is considered being a high level risk to do any more development work in the current Register. This action aims to prepare the grounds for the building of a RegCom2 in 2019, by analysing how best to integrate it with other corporate tools (notably Decide and Agora Meetings – AGM), how to streamline transmissions to the other institutions (notably by moving away from e-mail and relying on eTrustEx/eDelivery) and how to improve transparency and access to information for the users.

The action concluded, as planned, at the end of 2018. Its findings are being incorporated into action 2017.04 and serve as the analytical work at the basis of the inclusion of implementing acts in the Register of delegated and implementing acts.

6.10.3 OBJECTIVES

The main objective of this action is to analyse how best to rebuild the Comitology Register, in order to make it interoperable, sustainable, more user-friendly, and better equipped to respond to the needs of Member State administrations, the other institutions and stakeholders in general.

6.10.4 SCOPE

This action will investigate how best to develop the new Comitology Register (RegCom2). As such, it will analyse the best integration scenarios, both with the corporate Commission internal decision-making and meeting organisation tools, and with the more modern transmission tools (eTrustEx/E-Delivery). It will also look at the Register from a transparency perspective and suggest the way forward for the public interface. There is no development work in scope for this action, the purpose is only to analyse the best way forward, before moving to implementation in 2019.

6.10.5 ACTION PRIORITY

The proposed action complies with all the prioritisation criteria listed in art 7 of the ISA² Decision (Decision (EU) 2015/2240), as follows:

(a) the contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union;

The current Comitology Register responds to the legal obligation of the Commission to make public a set of documents (either in full or only at the level of the metadata) listed in art. 10 of Regulation 182/2011 (the Comitology Regulation). The current Register also serves as an official transmission channel of such documents to the European Parliament and the Council (although the transmission method used is outdated and clearly improvable). Nevertheless, it stands in complete isolation from the other IT tools in the Commission (such as Decide or AGM). Currently the transmission of the documents to the Member States is done by various different means (in the future it should happen via AGM), requiring in all cases to be uploaded to Comitology Register separately from that transmission. Similarly, the documents that must be adopted as a result of the comitology procedure must be uploaded in Decide in order to proceed with the adoption process. This need to upload the same documents twice or more in different systems is both inefficient and prone to errors. Analysing how the Register of the future should look like from an interoperability perspective is a first step towards putting the Comitology Register on the interoperability map, not only within the Commission but also in relation to the other institutions and the Member States.

(b) the scope of the action, measured by its horizontal impact, once completed, across the sectors concerned;

The Commission adopts every year around 1600 acts following a comitology procedure. The process leading to the adoption of these acts, at committee stage, is documented in the Register, who is therefore home (and transmission vehicle) for thousands of acts every year[51], across all policy areas.

(c) the geographical reach of the action, measured by the number of Member States and of European public administrations involved;

Member States are members of the comitology committees whose work is documented by the Register. Member State administrations have, therefore, a great interest in being able to follow such files and would all benefit from an improved Register. Moreover, the analysis should identify the services needed to better share the information between the institutions. Such services could also be used by the Member States should they be interested.

(d) the urgency of the action, measured by its potential impact, taking into account the lack of other funding sources;

The current Comitology Register dates back to 2008. The technology underlying it is out-dated and any further development work is high risk. Moreover, it was conceived in isolation from all the other IT tools in the Commission (it is older than Decide for instance).

(e) the re-usability of the action, measured by the extent to which its results can be re-used;

Building on the experience acquired with building the Inter-Institutional Register of Delegated Acts, the study will look at the Comitology Register in the context of its interoperability with Parliament, Council and Member State tools. On the basis of the study developments will be launched in 2019. In this context, the relevant existing services will be reused and any new services to be developed will be conceived with interoperability in mind. One such service, of interest beyond the future Comitology Register, is one linking the steps and documents in the decision-making process with documents exchanged with Member State administrations/experts in official fora (comitology committees, expert groups) that are part of the same logical file.

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[51] For more detailed numbers see the Annual Reports on the functioning of the comitology committees on http://ec.europa.eu/transparency/regcomitology/index.cfm?do=Report.Report

Also, the analysis will take into account the results of the study on the Digital OLP management ("to be" landscaping exercise). As the purpose of this study is to look into how to improve document exchanges between the institutions in the framework of the Ordinary Legislative Procedure, its findings and proposed next steps are relevant for implementing acts as well. Although not part of the Ordinary Legislative Procedure, such acts are nevertheless officially adopted by the Commission and transmitted to the other institutions, so any improvements that are relevant for this process will be taken into account. As such, this analysis will pave the way for extending the findings and recommendations of the "to be" landscaping exercise to other areas of decision-making and inter-institutional exchanges.

(f) the re-use by the action of existing common frameworks and elements of interoperability solutions;

The study should identify such solutions to be re-used. As a minimum, one can already mention the
IMMC Core Metadata exchange protocol, eTrustEx/e-Delivery and TESTA-NG.

(g) the link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

This project has a clear link with one of the ten priorities of the Juncker Commission, namely "democratic change". Increased transparency over the decision-making process and facilitating stakeholder participation in the policy-making process are elements of this strategic objective. The study on the future Comitology Register will look at both interoperability and increased transparency, with a view to set the grounds for a better functioning and more user-friendly Register.

6.10.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and	Implementing acts are the largest number of legal acts produced by the Commission and the system which

Question	Answer
businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	supports their processing works in isolation. Analysing the possibility of replacing it by an interoperable solution will contribute to the implementation of the following elements: • **Regarding the EIS**, our proposal falls in the scope of the following clusters: ○ "Access to data/Data Sharing/Open Data". ○ "EU policies – supporting instruments" • **Regarding the EIF**, our action promotes the following principles: user-centricity, multilingualism, transparency, openness and reusability and supports scenarios of technical interoperability to exchange information between the Commission and other European (European Parliament, Council of the European Union) or national Institutions
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	It addresses a **technical interoperability** issue, by identifying an interoperable solution for the Comitology Register, which currently supports the process that produces the largest number of legal acts at the EU level

6.10.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	All policy sectors are concerned, as implementing acts with committee control are adopted in all policy areas.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	

6.10.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	All Member States are concerned, as they all are members of the different comitology committees and will need to be able to follow this process.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	

6.10.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	The volume of produced acts, together with the isolation of the current IT tools, makes the revision urgent.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Given the cross-policy and cross-administration (both national and EU-level) dimensions of this project, ISA2 seems its natural home. Moreover, this would place the future Register within the wider scope of on-going ISA2 actions such as the landscaping exercise[52] and the Inter-institutional Register of Delegated Acts.

6.10.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Study on technical solutions for the Comitology Register
Description	The conclusions of the study will be a reusable element, that might feed other on-going works like

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[52] Action 2016.17. Interinstitutional Framework for Digital OLP Management

	the further evolution of the Inter-institutional Register of Delegated Acts or the future implementation actions stemming from the "to be" landscaping exercise ("Digital OLP management")
Reference	
Target release date / Status	2018Q4
Critical part of target user base	European Institutions, Member State administrations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

6.10.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	The study will take into account the experience acquired in other ISA2 actions (landscaping exercise, Inter-Institutional Register of Delegated Acts). The feasibility of using standards like IMMC and technical elements like TESTA-NG within the proposed solution will also be analysed during the study.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

6.10.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	This project has a clear link with one of the ten priorities of the Juncker Commission, namely "democratic change". Increased transparency over the decision-making process and facilitating stakeholder participation in the policy-making process are elements of this strategic objective.

6.10.6 PROBLEM STATEMENT

The problem of	The Comitology Register not being interoperable with other systems from other EU Institutions and Member States
affects	The efficiency of staff in the Commission, European Parliament, Council and Member State administrations and the transparency of the European public administration
the impact of which is	Increased difficulty to follow comitology files, double-encodings, difficult transmission processes and impact on the reputation of the Institutions
a successful solution would be	A future Register that is fully part of the interoperable landscape and takes into account the conclusions of the related previous interoperability actions

6.10.7 IMPACT OF THE ACTION

6.10.7.1 Main impact list

List the impacts of the action's outputs (following the proposal) on the beneficiaries to the extent possible. Some impacts are listed below – add others as needed.

Not applicable as the objective of this action is a study. Once the results of the study implemented through the development of a new Register in 2019 one can start discussing about savings.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money			
(+) Savings in time			
(+) Better interoperability and quality of digital public service			
(-) Integration or usage cost			
[add other impacts as needed]			

6.10.7.2 User-centricity

One of the conditions for maximizing the impact of the ISA2 actions is by ensuring that they meet users' needs. For this to happen, users' engagement and involvement is needed before and during solutions' implementation, and users' feedback is sought after solutions are in operation. Explain how you intend to achieve the above.

Users will be at the center of the study, as the focus will be both on institutional users (staff from the European Commission, European Parliament, Council and Member State administrations) and on citizens and stakeholders in general (from a transparency and user friendliness perspective). Within the Commission, the network of DG comitology

coordinators will be the main vehicle for engaging with the internal users. This network meets regularly and will be consulted specifically on the future of the Comitology Register.

6.10.8 EXPECTED MAJOR OUTPUTS

Output name	Study on technical solutions for the new Comitology Register
Description	An analysis of the best way to re-build the Comitology Register, in order to maximize inter-operability, increase transparency and facilitate the work of its users.
Reference	
Target release date / Status	Q4 2018

6.10.9 ORGANISATIONAL APPROACH

6.10.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission	SG.G4	System owner/business manager
European Commission	DIGIT.B2 and SG.C5	Main contributors to the analysis
European Commission	DG comitology coordinators	Main user group
European Parliament	Reception and Referral Unit	Consulted, main stakeholder
Council of the EU	General Secretariat	Consulted, main stakeholder

6.10.9.2 Identified user groups

While the study itself will be mostly directed at the European Commission (who will then need to implement its findings), the users that would most benefit from a renewed

Comitology Register are: staff in the EU institutions (Commission, European Parliament, Council), in the Member State administrations (including Permanent Representations), stakeholders and citizens.

6.10.9.3 Communication and dissemination plan

The study itself will be nourished through dialogue with relevant stakeholders, who would thereby already be informed of the upcoming revision of the Comitology Register. Once the study is finished, its findings will be communicated both to the specialized stakeholder groups (notably in the institutions and the Member State administrations) and to the wider audience (notably via the ISA2 communication actions).

6.10.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[53] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Future architecture of the Comitology Register clear	100%	Q4 2018
Impact of the future architecture on other systems (notably Decide and AGM) clear	100%	Q4 2018
Impact of the future architecture on other institutions and Member State systems clear	100%	Q4 2018

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[53] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

6.10.9.5 Governance approach

The study will be managed by SG.G4, as system owner of the current Comitology Register (and owner of its successor). In any case, both SG.C5, as current supplier of the Comitology Register, and DIGIT.B2, as current supplies of Decide and future supplier of AGM, will be closely associated to the analysis.

6.10.10 TECHNICAL APPROACH AND CURRENT STATUS

Not applicable, as the action is a study. The study finished as planned in Q42018.

6.10.11 COSTS AND MILESTONES

6.10.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Study completed	80	ISA 80	Q1/2018	Q4/2018
	Total	**80**			

6.10.11.2   Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016			
2017			
2018	Analysis	80	80
2019			
2020			

6.10.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Regulation 182/2011	http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32011R0182	
Comitology Register	http://ec.europa.eu/transparency/regcomitology/index.cfm	

7 EU POLICIES – SUPPORTING INSTRUMENTS

7.1 CISE - DEVELOPMENT OF THE INFORMATION SHARING ENVIRONMENT FOR THE SURVEILLANCE OF THE EU MARITIME DOMAIN (2016.13)

7.1.1 IDENTIFICATION OF THE ACTION

Service in charge	DG MARE A3
Associated Services	JRC E5 – DIGIT B4 – DG MOVE D1 & D2 & D4 – DG HOME B4 & C1 – DG CNECT H4 – DG TAXUD A1, A3 & A5 – GROW F3 & H3 – ECHO B1 – ENV D2 – JUST B3

7.1.2 EXECUTIVE SUMMARY

The initiative to develop a Common Information Sharing Environment (CISE) for the EU maritime domain was launched in 2009[54].It has been supported by several Commission Communications and Council Conclusions[55]. Since 2014, it is implemented as a part of the EU Maritime Security strategy.

The last Commission Communication underlines that CISE[56] is to be a "*voluntary collaborative process in the European Union seeking to further enhance and promote relevant information sharing between authorities involved in maritime surveillance. Its ultimate aim is to increase the efficiency, quality, responsiveness and coordination of surveillance operations in the EU maritime domain and to promote innovation, for the prosperity and security of the EU and its citizens*".

The cornerstone of maritime CISE is that, through an improved interoperability, information collected by a maritime public authority for a specific purpose can become easily available to other maritime public authorities performing different missions[57]. Earlier studies have indicated that information exchange between maritime surveillance authorities, across sectors and borders, is unsatisfactory. Even though the situation has improved in the last years, the exchange of relevant and sometimes key information is still affected by the lack of

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[54] Commission Communication (2009)538 final

[55] http://ec.europa.eu/maritimeaffairs/pdf/external_relations_council_conclusions_17112009_en.pdf

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/genaff/122177.pdf

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/genaff/115166.pdf

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/104617.pdf

[56] Commission Communication of 8th July 2014, COM (2014)451 final.

[57] Maritime surveillance encompasses seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

interoperability between maritime authorities' systems, as well as by other organisational and legal barriers at national level.

The CISE process is focusing nowadays on the Transitional phase (2019 – 2020) set up with EMSA as main coordinator, in view of the operational implementation of the CISE. The main objective of this phase is to further support MS efforts to as far as possible implement the CISE interoperability building blocks in their systems (considering those developed and tested in the FP7 pre-operational validation project EUCISE2020[58]). It also aims to work towards coherence of CISE with the overall European maritime surveillance framework and maritime information systems.

The ISA2 programme is expected to support a set of actions undertaken by the Commission to implement CISE interoperability solutions mainly at Member States level, by further exploiting the results of the pre-operational phase undertaken by EUCISE2020 in order to make them operational. These actions could inter alia cover the following activities:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to enhance the CISE solutions.
- Define CISE technical and operational processes taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Further develop the CISE interoperability models (data and service model) and common software components (gateways, registry of authorities and services, etc.), taking into account the results and lessons learnt from the FP7 pre-operational validation project ('EUCISE 2020'), to deliver fully-operational solution matching the CISE high-level requirements.
- Provide a contribution by CISE to the EU standardisation process[59] in order to facilitate the definition of a technical reference architecture for public services (in line with the European Interoperability Reference Architecture)
- In cooperation with the national authorities, conduct preparatory activities required to launch the standardisation process of the CISE interoperability models before the start of the operational phase of CISE.
- Support MS authorities willing to connect with other authorities to upgrade their maritime surveillance systems to best reuse the CISE interoperability solutions and to conclude agreements on data sharing, in order to exchange information within the CISE environment.
- Promote the use of the CISE interoperability solutions among national authorities,

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[58] http://www.eucise2020.eu/

[59] ICT standardisation Regulation (EU) No 1025/2012

- Promote the reuse of existing and future reusable building blocks and solutions, such as the CEF DSIs and results of existing ISA² actions.
- Provide support for the definition and implementation of management processes facilitating the uptake of CISE interoperability solutions.

It should be noted that ISA^2 programme is one of the means employed to finance the CISE process, all intended to support complementary activities. The FP7 EUCISE 2020 project mainly focused on developing and testing common data and service protocols. It has set up a network of 12 CISE Nodes, in 10 European countries connecting 17 surveillance systems. The European Maritime and Fisheries Fund (EMFF) provided support to national authorities to update their ICT systems in order to enhance the information exchange and be ready to connect to the CISE.[60] The EMFF also supports the European Maritime Safety Agency (EMSA) – through a €3.5M grant - to maintain the existing network of connected surveillance systems, to interface its systems with the Member States ones and to prepare the future operational phase of CISE. The main focus of the ISA^2 contribution will be therefore to support MS authorities to upgrade their maritime surveillance systems to best reuse the CISE interoperability solutions in order to exchange information within the CISE environment.

With the CISE Transitional Phase the Commission prepares the future Operational Phase of CISE and the sustainability plan after the end of ISA² programme. The Commission defined the following activities to be performed in this phase:

- Support the Member States in joining the CISE Network and in offering new data exchange services to other Public Authorities in Europe
- Involve the European Maritime Safety Agency (EMSA) in the maintenance of the CISE Network and in the steering of the process along with the Member States
- Further develop and maintain the interoperability specifications of CISE (CISE data and service model)
- Maintain the CISE Common Components to ensure the security, scalability and maintainability required by the operational phase
- Prepare the future governance of CISE

From 2021 onwards, it is envisaged that the management and maintenance of the operational CISE will be completely transfer to EMSA and partially financed by the EMFF.

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[60] The EMFF provided, in the period 2014 – 2017, financial support (totalling 5.8 mil Euro) to specific CISE projects aimed to improve ICT interoperability at national level . 10 projects have been finalised and 3 are still ongoing until end of 2019.

7.1.3 OBJECTIVES

The overarching objective of CISE is to enhance information exchange in order to increase awareness of what is happening at sea to best support maritime security activities. In line with the ISA2 objectives, this requires setting up and implementing multilayer interoperability solutions enabling trusted cross-sector and cross border data exchange between EU and Member States public administrations. The intention is not to build up a new maritime surveillance system, to create new information sources or to set up new man-to-machine interfaces, but to inter-connect existing systems to cater for a better flow of information.

7.1.4 SCOPE

There are over 300 public authorities at EU and national level, belonging to the seven maritime surveillance sectors[61] in Europe today which need to exchange information relevant for the maritime domain, and thus relevant for the CISE process either as data providers or end-users (i.e. data consumers), or both. CISE supports the establishment of common specifications and generic reusable tools to achieve interoperability among these authorities' ICT systems, focussing on three complementary layers: at EU level, between Member States and the inter-connection between Member states and EU level systems.

The ISA^2 programme is expected to further support the CISE process by contributing to the consolidation of the operational interoperability solutions developed by the EUCISE2020 project.

7.1.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[62].

7.1.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer

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[61] Maritime surveillance encompasses seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

[62] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The action contributes to the implementation of following EU policies and initiatives: **1. Integrated Maritime Policy.** The creation of a Common Information Sharing Environment for the EU maritime domain (CISE) has been a flagship initiative of the Integrated Maritime Surveillance pillar since 2009. The objective is to develop interoperability between maritime authorities, across sectors and borders, allowing for an enhanced maritime awareness picture and contributing to maintaining safe, secure and clean seas. **2. Maritime sectorial policies.** The seven user communities to be interconnected through an enhanced interoperability (CISE): maritime transport safety and security, marine environment preparedness and response to pollution, fisheries control, border control, general law enforcement, customs and defence. Cross-border and cross-sectoral data exchange generates knowledge and enables sound decision making and better implementation of EU legislation in the above policy areas. **3. Security related policies.** The CISE process is relevant for an important number of security-related policies developed at the EU level such as EU Maritime Security Strategy, European Agenda for Security, European

Question	Answer
	Migration Policy, Common Security and Defence Policy (CSDP).
	4. Digital Single Market (DSM).
	The CISE process contributes to the objectives of the DSM, in particular to the development of digital networks and services, and the enhancement of industrial competitiveness through promoting solutions which match the pace of technology and support improvement of data exchange.
	In that regard CISE actions are developing technical, semantic and organisational interoperability solutions aiming to improve the cross-border and cross-sectoral interlink between national maritime authorities, based on common specifications and standards;
	CISE process also fosters investment in R&D technologies for maritime surveillance and security.
	Moreover, the technical solutions developed under the CISE process will allow for the optimization of data exploitation.
	5. ISA2 actions.
	There is a strong connection between the CISE process and a number of ISA2 actions such as the Semantic interoperability, European interoperability architecture, Trusted Exchange Platform, etc.
	6. The Connecting Europe Facility (CEF).

Question	Answer
	The CEF building blocks are a set of highly reusable tools and services that have been mainly developed and piloted by the Member States in different large scale pilots. As the CISE process is approaching its operational implementation phase, the linkage with the CEF is considered a priority. The partners designed and implemented the communication protocols and software components bearing in mind the possibility of replacing certain components with the CEF Building blocks identified as relevant: e-Delivery, e-ID and e-Signature.
	7. European e-Government Action Plan.
	The CISE process is in line with the principles and actions of the e-Government Action plan, which aims at helping national and European policy instruments to work together, supporting the transition of e-Government into a new generation of open, flexible and collaborative seamless services at local, regional, national and European level. CISE action supports the exchange of machine-readable information among the public maritime surveillance authorities across the EEA borders, following the "once only" principle. It promotes the use of secure digital services that enable interoperability among the IT systems. In addition, the CISE interoperability

Question	Answer
	solutions are defined in the framework of the European Interoperability Framework and the reuse of the CEF building blocks are a priority for CISE. **8. EU Standardisation WP.** CISE is part of the EU work programme for standardisation and closely follows the developments within the industrial standardisation domain, since the development of interoperability solutions may only benefit from the standardisation of certain components. In addition, CISE is included in the 2018 Rolling Plan for ICT Standardisation and the EUCISE2020 project through its partners will launch in 2019 a coordinated standardisation initiative (possibly an Industry Specification Group through ETSI).
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Other interoperability solutions have been developed at the EU level trough systems such as SafeSeaNet, NSW (Single National Window) and EUROSUR. They enable a good level of interoperability through a number of services developed and exchanged among concerned authorities, within the same sector. However, they do not cover the entire spectrum of maritime sectors and authorities as these interoperability solutions remain mostly sector specific and cannot be reused for exchanges across sectors. Nevertheless, the CISE interoperability solutions under

Question	Answer
	development intend to take into account all the existing standards in the maritime domain to ensure a maximum compatibility and complementarity with the existing systems and their interoperability solutions. CISE will therefore not affect exchanges within sectors which will continue to use their specific sectoral solutions/ systems.

7.1.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The action is developing interoperability solutions to be used across seven maritime sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence. Civil-military exchanges are prioritised. As representatives from all these sectors, from most of the EU Member States have been involved in developing these solutions, we expect a high degree of up-take.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	n/a

7.1.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States?*	Once completed the action will provide tailored solutions which could support an enhanced flow of information across sectors and between

Question	Answer
Detail your answer for each of the concerned Member State.	member states, with a specific focus on civilian – military exchanges (mostly supporting maritime security). The level of commitment has been tested in several CISE projects and in particular in the ongoing EUCISE 2020 POV project which involves authorities' representatives from 16 Member States. The further commitment of Member States will be encouraged in the future work.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	n/a

7.1.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	There is a relative urgency in the implementation of the action as the results of the EUCISE 2020 project would need to be consolidated in order to become operational. In addition, there are a number of initiatives ongoing and coming up at EU level to which the CISE process will have to be synchronised. In particular, the revision of the EU

Question	Answer
	Maritime Security Strategy (EUMSS) Action Plan, adopted by the Council in June 2018 renewed the MS commitment to implement CISE.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	ISA² scope and financial capacity fits perfectly the purpose of supporting the development of CISE, which seeks to improve cross sector and cross border interoperability. ISA² funding will thus complement funding through the European Maritime and Fishery Fund, as highlighted above.

7.1.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Data model
Description	The CISE data model, consolidated under the EUCISE2020 project, provides a common European cross-sector format to share data between national authorities across countries and sectors. It represents the most useful data for all maritime surveillance authorities, as identified and validated by a representative group of national experts representing all relevant maritime surveillance sectors at EU and national level. In addition, the model is compatible

	with sectorial data models used by the EU agencies.
Reference	
Target release date / Status	An initial version has been released in 2015 (based upon the outcome of the Cooperation Project). This version has been updated in 2017 and tested by the CISE pre-operational validation project which ended in March 2019. This version will be revised to include the feedback from the EUCISE2020 project and will be included in an Industry Specification within ETSI. The Industry Specification Group started working on the subject in May 2019 and should deliver the new specifications after 2 years.
Critical part of target user base	The number of national authorities involved in the Maritime Surveillance across the EU is more than 300. It represents the maximum number of participants, as several authorities can also access CISE behind a single node. The CISE pre-operational validation project has delivered a network of 12 nodes involving 10 countries and 17 surveillance systems. Additional Member States are interested to join the network during the transitional phase. A transition phase of 2 years has been launched beginning of 2019 to maintain this network, prepare for a new version of CISE components and prepare the CISE operational phase.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new proposals) or produced (for	Service model

existing actions)	
Description	The CISE service model, consolidated under the EUCISE2020 project, defines the specifications of the services offered by an information provider, including the behaviour of the service and the input and output data expected by/from the service to ensure the expected behaviour For each data entity defined the CISE data model (i.e., each information type: Vessel, Cargo, Person, etc.), the CISE Service Model defines a service and specific operations that support the exchange of that specific data entity using the four known communication patterns.
Reference	
Target release date / Status	An initial version has been released in 2015 (based upon the outcome of the Cooperation Project). This version has been updated in 2017 and tested by the CISE pre-operational validation project which ended in March 2019. This version will be revised to include the feedback from the EUCISE2020 project and will be included in an Industry Specification within ETSI. The Industry Specification Group started working on the subject in May 2019 and should deliver the new specifications after 2 years.
Critical part of target user base	The number of national authorities involved in the Maritime Surveillance across the EU is more than 300. It represents the maximum number of participants, as several authorities can also access CISE behind a single node. The CISE pre-operational validation project has delivered a network of 12 nodes involving 10 countries and 17 surveillance systems. Additional Member States are interested to join the network during the transitional phase. A transition phase of 2

	years has been launched beginning of 2019 to maintain this network, prepare for a new version of CISE components and prepare the CISE operational phase.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Registry of authorities and services
Description	This registry is a software tool that provides information about the participating authorities, their systems and the information they make available within CISE. Once fully implemented, the registry will support the governance, development and the operating phases of CISE fulfilling the operational (e.g., search for information, operational contacts, automatic service discovery) and the technical needs of the participants (e.g., technical IT support contacts).
Reference	
Target release date / Status	First specifications available end 2015[63] First implementation by the CISE pre-operational validation project delivered in 2018 and tested until March 2019. A release of a new version of the registry software is envisaged after the transition period (2021)
Critical part of target user base	The number of national authorities involved in

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[63] Deliverable of the MARE-JRC AA SI2.692869 "Specifications of the CISE Registry", in line with the EUCISE2020 deliverable D4.3 Technical Specifications.

	the Maritime Surveillance across the EU is more than 300. It represents the maximum number of participants, as several authorities can also access CISE behind a single node.
	The minimum number of participants to allow for significant results at the EU level should be 10.
	The CISE pre-operational validation project involved 16 Member States. The registry has been tested by authorities from 10 MS in the validation phase of the project.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CISE Nodes
Description	Interface among the maritime surveillance IT systems enabling the exchange of information between national authorities, using the data and service model. The CISE Node is also connected to the Registry to enable automatic discovery of services.
Reference	
Target release date / Status	First specifications available: end 2015[64]
	Development of version 1 and testing by the CISE pre-operational validation project until March 2019.
	Release of a new versionenvisaged after the transition period (2021)
Critical part of target user base	The number of national authorities involved in the Maritime Surveillance across the EEA is more than 300. It represents the maximum number of

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[64] EUCISE2020 deliverable D4.3 Technical Specifications

Question	Answer
	participants, as several authorities can also access CISE behind a single node. The minimum number of participants to allow for significant results at the EU level should be 10. The CISE pre-operational validation project has involved 16 Member States. The CISE Node has been tested by authorities from 10 MS in the validation phase of the project.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

7.1.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	CISE action in general, and the CISE pre-operational validation project ('EUCISE 2020') in particular, considered the reuse of the CEF solutions building blocks: e-Delivery, e-Signature, e-ID, e-Document, etc. It will be re-assess during the transition phase and the preparation of the new version of the CISE components. In addition, the process of developing and implementing CISE will require further investigations to find suitable re-usable components (e.g. from the JOINUP Catalogue of interoperability solutions) The development of conformity test tools for CISE will rely on the ISA²

Question	Answer
	interoperability test tool component.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	n/a

7.1.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	1. Integrated Maritime Policy and the Ocean Governance. JOIN(2016) 49 final 2. Communication on "A Digital Single Market Strategy for Europe" COM(2015)192 (DSM) 3. European eGovernment Action Plan 2016-2020 4. ICT standardisation Regulation (EU) No 1025/2012 The level of contribution is described at points 1.1.5.1.

7.1.6 PROBLEM STATEMENT

Due to the organisational complexity and the diversity of legacy systems at national and EU levels, the automatic exchange of data among national authorities, across borders and sectors, remains limited in the field of maritime surveillance. Progress has been registered in

exchanging data across borders, in the same sector (i.e. transport, border control, fisheries), due to a good coordination provided by the relevant EU agencies and supported by a dedicated legislative framework. However, to enhance relevant and efficient/seamless data sharing between, in particular, national authorities, across borders and sectors, the development of common semantic, technical and organisational interoperability specifications/solutions is essential.

The problem of	Multiple national systems using a wide range of different data structures
affects	The maritime authorities' capacity to effectively exchange and re-use the data available in other authorities' systems
the impact of which is	limited information exchange – lack of crucial information / delayed acquisition of essential information / duplicated efforts in acquiring relevant information
a successful solution would be	The development and implementation of common interoperability solutions (i.e. Common data and service models) as well as a set of interoperability agreements that would allow for efficient and seamless data sharing across borders and sectors.

The problem of	Vertical (sectorial) approach to information exchange
affects	The willingness and capacity to effectively provide available data to other authorities in a different sector and MS
the impact of which is	limited information exchange – lack of crucial information / delayed acquisition of essential information / duplicated efforts in acquiring relevant information
a successful solution would be	Ensure interoperability and complementarity among solutions for data exchange and between their governance mechanisms (bodies). Build

	trust through successful common experiences in joint activities/ projects

7.1.7 IMPACT OF THE ACTION

7.1.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Re-use of interoperability solutions / re-use of available information through sharing / more efficient use of information gathering assets	Starting from 2021	MS' authorities & EU maritime agencies
(+) Savings in time	The implementation of CISE will allow automated system-to-system information exchange between national authorities, thus minimising the time needed to acquire the data in the end users' systems (which today is often shared by phone, email or fax)	Starting from 2021	MS' authorities & EU maritime agencies
(+) Better interoperability and quality of digital public service	Maritime surveillance activities carried out by MS' authorities will become more effective by leveraging the enhanced interoperability, which will provide the possibility to exchange information in	Starting from 2021	MS' authorities & EU maritime agencies

Impact	Why will this impact occur?	By when?	Beneficiaries
	an automatic and secure way.		
(-) Integration or usage cost	CISE interoperability solution will reduce the cost of integration of new authorities and systems and reduce the effort needed for information exchange by the EEA MS authorities.	Starting from 2021	MS' authorities & EU maritime agencies

7.1.7.2 User-centricity

Since its inception in 2009, the Common Information Sharing Environment (CISE) for Maritime Surveillance put the users' needs at the centre of all its activities.

The Member States Experts Group (MSEsG) and the Technical Advisory Group (TAG) on Maritime Surveillance have channelled the needs of the maritime surveillance authorities and the end-operators in the surveillance operations to the Commission. These needs have driven the development of the interoperability solutions in dedicated pilot projects, as well as in the studies and other developments led by the EC.

During the development phase of CISE, several projects led by MS' authorities have been funded and implemented (period 2010 – 2014), ensuring that the needs of the end users were always in the centre of the discussion. The last project, the FP7 Pre-Operational Validation Project EUCISE2020, involving over 30 authorities from 16 MS, has developed a test-bed for the CISE interoperability solutions. The project partners has carried out a 6-month validation of the CISE concept using their current IT systems and data, from real operations.

13 projects (3 still ongoing) in 9 MS has worked to enable IT interoperability improvements at national level to facilitate compatibility with the CISE solutions. The conclusions of those projects will pave the way for the transition phase, from the pre-operational to the operational CISE. During the transition and operational phases, the MS authorities, as end users, will be involved in most of the activities, thus ensuring that the final results are in line with their needs and expectations.

7.1.8 EXPECTED MAJOR OUTPUTS

Output name	CISE Network
Description	The CISE Network is a cross- sectoral and cross border inter-connection of CISE Nodes belonging to different surveillance systems managed by MS Public Authorities.
Reference	A public website managed by EMSA will be released by the end of 2019, to introduce CISE and bring support to any Public Authorities willing to join.
Target release date / Status	A first version of this CISE Network has been released in 2018 and tested during several month. This Network is maintained by EMSA and the Joint Research Centre during the transitional phase and will be constantly upgraded to prepare the operational phase in 2021.

7.1.9 ORGANISATIONAL APPROACH

7.1.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
EU level: Commission DGs and Agencies	MARE, JRC, MOVE, HOME, TAXUD, ENV, DIGIT, ECHO, JUST EMSA, FRONTEX, EFCA, EUROPOL, EEA, MAOC, EDA, EUSC	Involvement of the specialised EU agencies enabling full compatibility between their interoperability solutions.
Member States	National authorities carrying out maritime surveillance tasks in the seven sectors	Direct involvement in the

Stakeholders	Representatives	Involvement in the action
	described above. The number of potential national authorities to be involved in CISE amounts to over 300. National authorities are steering the CISE development in several ways: - The Member States experts sub-group on the integration of maritime surveillance (MSEsG) is composed of one representative per Member-States speaking on behalf of all national maritime authorities of the said state and is entrusted with the strategic oversight of the transitional activities led by EMSA - The Friends of Presidency Group for the EUMSS is also been kept informed on the developments of the transitional phase as part of the implementation of the EUMSS. - The CISE Stakeholders Group is entrusted with the refinement and execution of the activities needed to reach the objectives of the CISE transitional phase. The CISE Stakeholders Group is responsible for providing the necessary guidance and orientations for the transitional phase.	EUCISE2020 POV project and in national projects (IT interoperability improvements).
Industry	Industrial developers in the area of maritime surveillance	Direct involvement in the EUCISE2020 POV project and in national projects (IT interoperability improvements).

Stakeholders	Representatives	Involvement in the action
		The industry is also involved in the standardisation process with ETSI in 2019-2020.

7.1.9.2 Identified user groups

The stakeholders presented above will also be the possible users of the results of this action (except the industry).

7.1.9.3 Communication and dissemination plan

The communication plan on CISE is threefold:

1. Internal communication within COM and EU agencies:

The inter-service Group on Integrated Maritime Surveillance involves all European Commission services concerned by integrated maritime surveillance. It meets on average 2 times per year.

2. Communication with MS:

Communication with MS is based on three different groups:
  o At policy level, the Friends of Presidency group of the Council managing the EU Maritime Security Strategy (meets minimum 2 times/year)
  o At strategic level, the Member States experts sub-group on maritime security and surveillance (MSEsG) with representatives from national maritime administrations (2-3 meetings/year)
  o At technical level, the Stakeholder Group with representatives from national maritime administrations (3-4 meetings/year)

3. Communication with the general public:

A set of communication tools was developed in 2014. General communication on CISE is made during events/seminars on maritime issues, including the European Maritime Day held each year.
The projects supporting the CISE process (i.e. EUCISE2020 and national ICT interoperability projects) have their own communication and dissemination plans that address directly their involved stakeholders but also the general public.

7.1.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of authorities involved in the transition to the CISE operations	10	Q1 2019
Number of authorities connected to the CISE network	12	Q4/2020
Number of different data type exchanged in the CISE network	10	Q4/2020
Number of exchanges a day (outside position information)	100	Q4/2020
Number of Legacy Systems re-integrating information from CISE network	20	Q4/2020
Number of CISE solutions proposed for standardisation	2	Q1 2019
Number of ISA and CEF solutions re-used by CISE	2	Q1 2021

7.1.9.5 Governance approach

The management of the action is performed jointly by DG MARE A3, EMSA and JRC E5, under the provisions of the Administrative Arrangement (AA) n°796133 from 18th December 2018 between DG Mare and the JRC, and under a Grant Agreement between DG Mare and EMSA. Fourteen persons (2 from DG MARE, 6 from the JRC and 6 from EMSA) are responsible for the implementation of the action.

Additionally, the Commission is assisted in developing this action by the relevant EU maritime agencies (FRONTEX, EMSA and EFCA), under the framework of the Inter-agency cooperation on Coastguard functions as defined in their respective Founding Regulations amended or adopted by co-legislators under the border and coastguard package in 2016.

There are already established bodies/groups ensuring stakeholders' involvement and coordination at all levels:

(a) an Inter-service group consisting of representatives of all associated DGs ensures coordination at Commission level

(b) the Member States Experts sub-group (MSESG) which is the principal actor for the implementation of the CISE is kept updated regularly on CISE developments.

(c) the Stakeholder Group which is chaired by EMSA and steers the operational and technical work of the Transitional Phase

(d) Policy review is made through the FOP of the Council managing the EU Maritime Security Strategy

7.1.10 TECHNICAL APPROACH AND CURRENT STATUS

Actions carried out previously since the launch of CISE in 2009 until 2014 have focused on the following primary preparatory areas:
- Landscaping of existing governmental information-exchange systems in the maritime field
- Analysis of data gaps and needs
- Definition of CISE high-level requirements and architectural options
- Development of CISE data and service model

The CISE process is focussing nowadays on implementing interoperability solutions allowing for enhanced information exchange between 1) systems managed at Member State level – technical solutions tested in the FP7 pre-operational validation project (EUCISE2020)[65] - 2) systems managed at EU level and 3) EU and Member State systems, with the objective of ensuring full complementarity between the solutions for these three layers.

In 2015, CISE entered into a pre-operational testing phase, in which the proposed interoperability solutions, to be used in exchanges between national authorities, has been tested and validated in the context of the FP7 project 'EUCISE 2020' until March 2019. This project was led by a large group MS' authorities closely supported by the Commission. This testing phase has paved the way towards the establishment of full-fledged interoperability solutions.

From April 2019, CISE has entered into the Transitional Phase to further support MS efforts to implement the CISE interoperability building blocks in their systems (considering those developed and tested in EUCISE2020 project), to maintain the CISE Network developed

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[65] http://www.eucise2020.eu/

under the EUCISE2020 project and to prepare the definition of the future framework for the day-to-day operations in the CISE network and the interoperability solutions.

The ISA2 programme is expected to support actions undertaken by the Commission to implement CISE interoperability solutions mainly at Member States level, by further exploiting the results of the pre-operational phase undertaken by EUCISE2020 in order to make them operational. These actions could inter alia cover the following activities:

- Identify relevant IT interoperability endeavours/solutions for information sharing in third countries/ maritime regions to enhance the CISE solutions.
- Define CISE technical and operational processes taking into account current solutions and lessons learnt from existing EU information-exchange solutions (e.g. IMI, EESI, EURES, CCN/CSI).
- Further develop the CISE interoperability models (data and service model) and common software components (gateways, registry of authorities and services, etc.), taking into account the results and lessons learnt from the FP7 pre-operational validation project ('EUCISE 2020'), to deliver fully-operational solution matching the CISE high-level requirements.
- Provide a contribution by CISE to the EU standardisation process[66] in order to facilitate the definition of a technical reference architecture for public services (in line with the European Interoperability Reference Architecture)
- In cooperation with the national authorities, conduct all the preparatory activities required to launch the standardisation process of the CISE interoperability models before the start of the operational phase of CISE.
- Support national authorities willing to connect to other authorities to upgrade their maritime surveillance systems to best reuse the CISE interoperability solutions and to conclude agreements on data sharing, in order to exchange information within the CISE environment.
- Promote the use of the CISE interoperability solutions among national authorities,
- Promote the reuse of existing and future reusable building blocks and solutions, such as the CEF DSIs and results of existing ISA actions and future ISA2 actions.
- Provide support for the definition and implementation of management processes facilitating the uptake of CISE interoperability solutions.

It should be noted that ISA^2 contribution is one of the means employed to finance the CISE process, all intended to support complementary activities. The FP7 EUCISE 2020 project

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[66] ICT standardisation Regulation (EU) No 1025/2012

mainly focused on developing and testing common data and service protocols. The European Maritime and Fisheries Fund (EMFF) provided support to national authorities to update their ICT systems in order to enhance the information exchange and be ready to connect to the CISE.[67] The EMFF supports also the European Maritime Safety Agency (EMSA) – through a €3,5M grant - to maintain the existing network of connected surveillance systems, to interface its systems with the Member States ones and to prepare the future operational phase of CISE. The main focus of the ISA^2 contribution will be therefore to consolidate the CISE common interoperability components/specifications (tested in EUCISE2020) to be used in exchanges between authorities, across sectors and borders.

7.1.11 COSTS AND MILESTONES

7.1.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Identify relevant IT interoperability endeavours/achievements enabling information sharing in third countries/ maritime regions to assess their potential to support CISE development.	200	ISA^2	Q4/2016	Q4/2017
Execution	Development of pilots with the Member States' Authorities. Development of compliance test tools.	950	ISA^2	Q4/2018	Q4/2020

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[67] See footnote 8.

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Maintenance of the CISE specifications.				
Execution	Development of enhanced CISE security specifications for the operational phase	400	ISA^2	Q4/2019	Q4/2020
	Total	1550	ISA^2		

7.1.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	200	239 = 174.5 (2015) + 64.8 (2016)
2017	Execution	0	
2018	Execution	950	
2019	Execution	400	
2020	Execution	0	

7.1.12 Planning for the tendering procedures to be launched for the action

Call for tenders foreseen Global amount in KEUR	Call for Tenders Duration in years	Indicative planning of publication (QX/YYYY)
Development of enhanced CISE security specifications for the operational phase (400KEUR)	1 year	Q4/2019

7.1.13 ANNEX AND REFERENCES

Description	Reference link	Attached document
Council conclusions	http://ec.europa.eu/maritimeaffairs/pdf/external_relations_council_conclusions_17112009_en.pdf http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/EN/genaff/122177.pdf http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/genaff/115166.pdf http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/gena/104617.pdf	
Communication	Communication from the Commission to the Council and the European Parliament on a Draft Roadmap towards establishing of the Common Information Sharing Environment for the surveillance of the EU maritime domain (COM(2010)584 final)	
Communication	CISE - Communication from the Commission to the European Parliament and the Council - COM(2014)451 final	
Impact assessment	Impact assessment - SWD(2014)225 final	
CISE Architecture Visions Document	n/a[68]	
CISE data model report (version 2015)	n/a	
Report on CISE service model report	n/a	
Concept Paper on Access Rights for CISE	n/a	

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[68] Most of the documents are for restricted distribution. They can be provided at all moments upon request.

Description	Reference link	Attached document
Final report of the project "Consolidation of Common Information Sharing Environment (CISE) development"	https://publications.europa.eu/en/publication-detail/-/publication/ba8df65d-93a6-11e8-8bc1-01aa75ed71a1/language-en	

7.2 EUROPEAN CITIZENS' INITIATIVES AND EUROPEAN PARLIAMENT ELECTIONS (2016.14)

7.2.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT B.2
Associated Services	SG A.1 JUST D.3

7.2.2 EXECUTIVE SUMMARY

This action is carried out in the context of the European Citizens' Initiative (ECI), as introduced by the Treaty on European Union, Art. 11.4 and European Parliament Elections.

The objectives of this ISA² action are to continue the efforts for improving the already provided tools; and to propose, study, assess and develop new solutions in order to improve the whole process.

Under the first ISA programme action 1.12, several goals were achieved including:

As regards the European Citizens' Initiative:

- The ECI Online Collection Software (OCS) was developed. The tool helps the ECI organisers collect online statements of support.
- A Validation Tool, a re-usable tool helping Member States to validate the statements of support collected by ECI organisers was further developed by the Commission based on the original prototype provided by Germany.
- A new version of the Online Collection System was released improving the User Experience for the citizens and organisers of initiative.
- Proposals to improve the current ECI Online Collection System and the ECI Register.
- Study on electronic identification in the context of ECI Online Collection System.
- Accessibility study for the ECI Online Collection System.

As regards European Parliament elections:

- Tools to improve the mechanism preventing double voting in European Parliament elections (Directive 93/109/EC - participation of EU citizens in EP elections) were developed and offered to Member States
- Improvement of the European Parliament Crypto tool.

A helpdesk to assist users of the above-mentioned tools was established.

In line with the scope of the ISA^2 programme, and subject to the outcome of an ongoing study, the activities for the year 2020 aim at enhancing the above-mentioned tools in the following areas:

As regards the European Citizens' Initiative:

- Continuous improvement of the ECI Register and the Central Online Collection System in the context of the new ECI regulation 2019/788 adopted in April 2019 and that will enter into application on 01/01/2020.
- Support of the Online Collection software for organisers having started their initiative during 2019 and that will finish in 2020.
- Update of the European Parliament Crypto tool for Citizens and Member States for its usage in the context of the European Citizens' Initiative.
- Technical advice in relation to development of regulatory framework (studies, risk analysis, impact assessment)
- Evaluate the possibility to interface the Online Collection System with campaigning websites.
- Integration of the eIDAS in the Central Online Collection System of the Member States that will be notified in 2020.

As regards European Parliament elections:

- Updates of the European Crypto tool to the latest security standards.
- Any incremental change requests coming from Member States following the EP 2019 elections, with a view to preparations for the 2024 elections.
- Technical advice in relation to development of the legislative framework (in the event that studies, risk analysis, impact assessments etc. are conducted)

In terms of sustainability, the activities related to the European Citizens Initiative and the European Parliament Crypto tool will continue evolving after the ISA² programme. The scope of the evolutions and the programmes that will finance them are being evaluated.

7.2.3 OBJECTIVES

The overall objective is to improve the ECI and EP elections processes by enhancing the existing tools, carrying out research and developing new solutions.

7.2.4 SCOPE

The scope of this action covers the study, analysis, assessment and supply of tools and documentation directly related to the European Citizens' Initiative (Central Online Collection System, Online Collection Software mainly but also the ECI Register), and European Parliament Elections software (Crypto Tool) and their interoperability with tools directly related to them.

This action does not cover the development of a campaigning platform/websites for the ECI organisers.

7.2.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[69].

7.2.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public	This proposal contributes via the following elements:

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[69] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	1) *EU initiative / policy:* European Citizens' Initiative. *Nature of the contribution:* Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative (ECI Regulation): Article 6(2): *By 1 January 2012, the Commission shall set up and thereafter shall maintain open-source software incorporating the relevant technical and security features for compliance with the provisions of this Regulation regarding the online collection systems. The software shall be made available free of charge.* The action will maintain and further develop OCS for the initiatives that started an initiative in 2019 in order to comply with this legal obligation. The transnational interoperability is implemented in this software as it has to comply with the data requirements as defined for all Member States, and set out in annex III to the ECI Regulation. 2) *EU initiative / policy:* European Citizens' Initiative. *Nature of the contribution:* Regulation (EU) 2019/788 of the European Parliament and of the Council of 17 April 2019 on the European citizens' initiative (new ECI Regulation): Article 10(1): *For the purpose of*

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Question	Answer
	online collection of statements of support, the Commission shall set up, by 1 January 2020, and operate as of that date, a central online collection system, in accordance with Decision (EU, Euratom) 2017/46.
	The costs of the setting up and operation of the central online collection system shall be borne by the general budget of the European Union. The use of the central online collection system shall be free of charge.
	3)*EU initiative / policy:* EU Treaty – Elections to European Parliament
	Nature of the contribution: Council Directive 93/109/EC of 6 December 1993
	Article 13
	Member States shall exchange information required for the implementation of Article 4 (...)
	4) *EU initiative / policy:* Recommendation on EP elections
	Nature of the contribution: Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament:
	"Technical means for safe and efficient transmission of data
	8. For exchanging the data as provided in Article 13 of Directive

Question	Answer
	93/109/EC the Member States should use a uniform and secure electronic means, as set out in the Annex ...”
	“ANNEX
	1. For exchanging the data as provided in Article 13 of Directive 93/109/EC the Member States should use files following the Extensible Markup Language format (“XML”). These XML files should be transmitted exclusively via electronic means in a secure way. [...]
	3. The Member States should use the W3C XML Encryption Syntax and Processing recommendation, [...]”
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	No other alternatives have been identified

7.2.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes: *For the ECI/OCS system*, Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the European citizens' initiative & Regulation (EU) No 2019/788 of the European Parliament and of the Council of 17 April 2019 on the citizens' initiative (new ECI Regulation) & ISA action 1.12 *For the European Parliament crypto tool*: the Council Directive 93/109/EC of 6 December 1993 & Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament: The crypto tool module is used in both areas: ECI Online Collection Software and EP elections.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Yes, same as above.

7.2.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed**, be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes, ECI-OCS is useful to the citizens of all the Member States. It is also useful to public administrations in all Member States as it facilitates the verification of the statements of support. Regarding the European Parliament Crypto tool, it is useful to the public administrations of all the Member States
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Yes, same as above

7.2.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. 2020 will be a critical year for ECI as the new ECI regulation will enter into force on 1 January 2020 and when the Central Online Collection System and the new ECI Register will be rolled out. The ECI OCS is a key feature enabling the good functioning of the instrument and is actively used by European citizens; and the Crypto tool is critical

Question	Answer
	for MS administrations and must be operational in the context of the new ECI regulation. Following the last EP elections, Member States have been invited to provide feedback on the tool for the next elections (2024).
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	While the ECI Online Collection Software and the Central Online Collection System and ECI register requires continuous update and potential improvement, the ISA² Programme offers stability by the continuous financial framework therefore. To note that the contribution from ISA² to the implementation of ECI is referred to explicitly in the Legal Financial Statement annexed to the Commission proposal adopted in September 2017 together with other sources of funding (see http://ec.europa.eu/citizens-initiative/files/ECI_2017_Proposal_Annexes_en.pdf §3.2) and is critical to the successful implementation of the proposed regulation.

7.2.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Online Collection Software
Description	Software for collecting Statement of Supports. It can be reused by an organisers' committee of any

	European citizens' initiative.
Reference	
Target release date / Status	Depending on the User's need
Critical part of target user base	The Online Collection Software can be used for an unlimited number of citizens' initiatives.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	From April 2012 until April 2019 45 initiatives out of 57 have collected the statements of support using this software

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Crypto Tool
Description	Tool to encrypt xml files exchanged by Member State at every European Parliament election.
Reference	
Target release date / Status	Q2 2020
Critical part of target user base	The EU Member States Organisers of Citizens' Initiative
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	EU Member States National Administrations

7.2.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any	Yes,

Question	Answer
ISA², ISA or other relevant interoperability solution(s)? Which ones?	a) It is planned to reuse the ISA² action related for the development of an open source and multilingual audio Captcha (EU CAPTCHA (2018.08) b) It is planned to use the ISA² action Circabc (2016.34) in the context of exchange of files with Member States
For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?	Yes, the Joinup – European collaborative platform and catalogue (2016.20)

7.2.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Yes, the OCS directly links to the 10th Juncker's Commission political priority, namely "A union of democratic change" Yes, refer to above chapter Contribution to the interoperability landscape

7.2.6   PROBLEM STATEMENT

7.2.6.1   European Citizens' Initiative

The European Citizens' Initiative (ECI) instrument enables one million citizens who are nationals of a significant number of Member States to take the initiative of inviting the

Commission to submit any appropriate proposal on matters where citizens consider that a legal act of the Union is required for the purpose of implementing the Treaties.

If the organisers of an ECI wish to collect statements of support for their initiative online, they must build an online collection system complying with the rules set out in the ECI Regulation. This means, in particular, that ECI organisers need to choose an online collection software incorporating the relevant technical and security features and to find a hosting provider ensuring that the data collected can be stored in the territory of a Member State.

In order to facilitate, on the one hand, compliance with these requirements by organisers of initiatives and, on the other hand, certification of online collection systems by the relevant Member State authorities, the ECI Regulation[70] (Article 6(2)) requires that the Commission develops and maintains an open source software for online collection (the OCS) made available under the EUPL license which would satisfy the requirements of the regulation and could be freely downloaded by anyone.

The new ECI regulation[71] provides for further development including the creation of a central online collection system to be made available free of charge to citizens and Member States, the costs of which would be borne by the general budget of the European Union. This central platform should be operational when the future ECI Regulation enters into application on 01/01/2020. This Central platform will also make use of the EP crypto tool that will be made available to citizens and Member States.

The problem of	Gathering the support of at least 1.000.000 EU citizens and get their statements of support verified by the relevant Member States' authorities
affects	The European Citizens & the Member States
the impact of which is	The need for an ECI website/register and an open source OCS
a successful solution would be	The Commission to develop an ECI website/register and OCS as set out in

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[70] Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative.

[71] Regulation (EU) No 2019/788 of the European Parliament and of the Council of 17 April 2019 on the European citizens' initiative.

	Regulation (EU) No 211/2011 that will still apply for the Online Collection System of organisers having launched their initiatives in 2019.

The problem of	Setting up of a Central Platform in the context of the new ECI Regulation 2019/788
affects	The European Citizens & the Member States
the impact of which is	The Commission must build a central platform
a successful solution would be	The Commission to develop this central platform in time for the entry into application of the Commission regulation proposal

7.2.6.2   European Parliament Elections

In the 2010 EU citizenship report the Commission announced that it would take action to improve the mechanism for preventing double voting in European Parliament elections which is laid down in Directive 93/109/EC (participation of EU citizens in EP elections). Recommendations for this purpose were addressed to the Member States in 2013[72], including recommendations for using common IT tools when implementing the data exchange mechanism. A Crypto Tool was developed by the Commission to help Member States in implementing this recommendation.

It was highlighted in the Report on the 2014 European Parliament elections73 that the vast majority of Member States welcomed the recommendations and reported that the measures had a significant positive impact in terms of cutting red tape. The report concluded that the Commission will continue, together with the Member States, to explore ways of further improving the efficiency of the mechanisms preventing double voting.

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[72] Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament.

[73] COM(2015) 206 final.

This ISA² action will focus mainly in addressing the above needs, in the context of the follow-up of the election to the European Parliament of 2019, and preparation for the elections in 2024.

The problem of	Securing the data exchange of Mobile voters and Mobile candidates
affects	the Member States
the impact of which is	The need to develop a crypto tool that every MS could use to exchange those files
a successful solution would be	The Commission to develop a crypto tool for the Member States

7.2.7 IMPACT OF THE ACTION

7.2.7.1 Main impact list

As per Regulation (EU) No 211/2011, the Commission is in charge of setting up and maintaining a register of European Citizens' Initiatives as well as an Online Collection Software that can be used by organisers of citizens' initiatives to build their online collection systems. Organisers are free to use this software or another of their choice.

With more than 80% of organisers using the ISA funded OCS, it proved to be a success.

Member States benefit from the Commission OCS as it offers a standard format to submit statements of support for the initiatives that reached 1 million signatures. The current OCS makes MS save quite some budget by allowing them to reuse the same mechanism to import Statements of support in their system.

Finally, the new Regulation (EU) 2019/788 obliges the Commission to set-up a Central Online Collection System free of charge for Citizens. This Central Online Collection System will be built based on the Online Collection Software developed under Regulation (EU) No 211/2011

Regarding the EP Crypto tool, it is the only current available software that Member States use to exchange file related to their mobile candidate or voters during the European Parliament Election. In case it would not be there, Member State would have to develop such a system or find an alternative solution at their own cost.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money ECI/OCS	Because OCS provides a standard interface for exporting the data that each MS can predict when importing the data	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Savings in time ECI/OCS	Because of the standard interface, MS do not have to rebuild the importing of data for every different initiative submitting their data	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Better interoperability and quality of digital public service ECI/OCS	Given that OCS offers a standard interface, it improves the interoperability and quality.	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(-) Integration or usage cost	Due to the OCS standard interface, the integration of OCS data output is easier for Member States.	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Savings in money EP Crypto tool	The EP crypto tool saves Member States from having to build their own solution for exchanging EP elections data	For every European Parliament election	Member States
(+) Savings in time EP Crypto tool	The EP crypto tool offers a solution by which Member States can exchange data electronically rather than	For every European Parliament election	Member States

Impact	Why will this impact occur?	By when?	Beneficiaries
	via paper email.		
(-) Reduction in security risk of exchange of personal data	The EP crypto tool offers a single standard encrypted data exchange solution which is more secure than previous exchanges by ordinary email	For every European Parliament election	Member States
(+) Better interoperability and quality of digital public service EP Crypto tool	The EP crypto tool offers a standard interface for Member States to exchanges election data	For every European Parliament election	Member States
(-) Integration or usage cost EP Crypto tool	The EP crypto tools offers standards that ease the integration of data received from other Member States	For every European Parliament election	Member States

7.2.7.2 User-centricity

At least twice a year in the context of the European Citizens' Initiative and in the context of the EP Crypto tool project, Expert group meetings are organised with Member States where progress is presented and feedback received.

Throughout the year, results of studies or new software are sent to them for their review and comments.

Every year, an ECI day event is organised by the European Economic and Social Committee where citizens can test the existing and new releases of the software and provide their feedback.

There is also a closer relationship with those Member States that are more actively involved in the ECI OCS operational activities (e.g. Luxembourg for certification of the Commission OCS).

In 2020, the Online Collection System will continue improving its accessibility after having been rewarded in 2019 for its efforts on this topic by a Spanish organisation verifying online accessibility compliance.

7.2.8　EXPECTED MAJOR OUTPUTS

All major outputs have been already mentioned under section 7.2.5.5

7.2.9　ORGANISATIONAL APPROACH

7.2.9.1　Expected stakeholders and their representatives

Stakeholders	Representatives
Member States	ISA² Coordination Group
Member States competent authorities	Expert group on the citizens' initiative
SG – Secretariat-General of the European Commission	SG.A1. – Work Programme and Stakeholder Consultation
DIGIT – Directorate General of Informatics of the European Commission	DIGIT.B.2. – Solutions for Legislation, Policy & HR
JUST – Directorate Justice and Consumers	JUST D.3. – Union citizenship rights and Free movement
Member States' competent authorities	Expert group on electoral matters

7.2.9.2　Identified user groups

User groups of the ECI Register/OCS include citizens interested in supporting European citizens' initiatives and organisers of such initiatives. Member States administrations interested in the Crypto tool are represented by respectively expert groups on the Citizens' Initiative and Electoral Matters. As OCS is published as open source, it can also be adapted for other purposes.

7.2.9.3　Communication and dissemination plan

European Citizens' Initiatives:

The representatives of SG and DIGIT meet twice per year to agree on the mid- and long-term developments and, on working level, as well as on a Bi-weekly basis to discuss short- and mid-term developments.

The expert group on the European Citizens' Initiative meets twice per year in the European Commission premises. The members of the expert group can also be contacted bilaterally.

European Parliament elections:

Expert group on electoral matters meets yearly (or more often if required) in the European Commission premises. The members of the expert group can also be contacted or share information on an online forum. DG JUST and DIGIT will meet regularly, according to the actual needs.

7.2.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of downloads of the OCS	3600	1 year
Number of organisers using the OCS already installed on the Commission servers to collect statements of support online or the Central Online Collection System.	45	1 year
Number of organisers using the OCS or the Central Online Collection System	50	1 year
Percentage of organisers using the OCS or the Central Online Collection System	85%	1 year
Number of statements of support collected via the Online Collection Software or the Central Online Collection System	5 600 000	1 year

7.2.9.5 Governance approach

The project steering committee, comprised of the heads of unit of the concerned services, meets twice per year to provide overall guidance and steer the direction of the project. The working level representatives of the services meet weekly or every two weeks to organise and manage the daily work.

The expert groups on the Citizens' Initiative and Electoral Matters provide expert knowledge. With regard to the ECI, this mainly covers questions of interoperability and concepts of e-Identification and e-signatures. With regard to EP elections, this will cover especially questions related to the management of electoral rolls by the national authorities.

7.2.10 TECHNICAL APPROACH AND CURRENT STATUS

The software components developed under this action are implemented based on an agile, efficient and pragmatic technical approach. This approach combines established (XSDs) and emerging standards (REST), industry best practices and state of the art technologies (SOA, Angular) to empower the delivery of high quality and reusable software components.

The delivery of the new or improved functionalities is grouped in bi-annual releases. The scope and timing of the releases is defined based on the priority and value of the proposed implementations as agreed with the main stakeholders, and can evolve depending on the impact of possible legislative changes. If needed due to legal or technical constraints the releases can be further split or combined. When needed, a feasibility study will be conducted to assess the value of the different implementation options prior to committing the actual implementation. For urgent changes to the software components, two patches (or mini-release) can be added on top of the standard bi-annual releases.

In the scope of this ISA² programme the action aims to enhance in particular the following aspects of the tools concerned. For 2019, the priorities are the following:

As regards the European Citizens' Initiative:

- Improvements for European citizens, users of the Online Collection Software
  - Continuous improvement of the Central Online Collection System in the context of the ECI regulation 2019/788
  - Continuous integration of the e-IDAS solutions when available from Member States
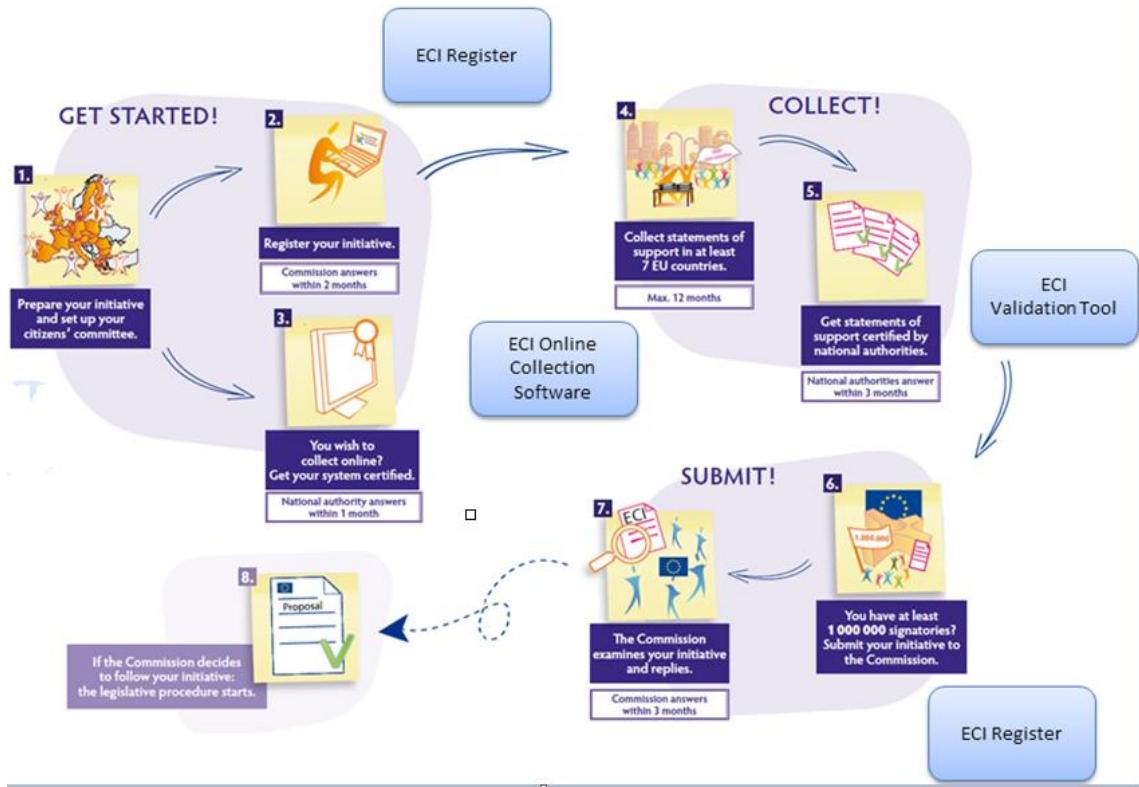
- o Support of the Online Collection software for organisers having started their initiative during 2019 and that will finish in 2020.
  - o Evaluate the possibility to interface the Online Collection System with campaigning web site.
- Improvements for ECI Register
  - o Continuous improvement of the ECI register in the context of the ECI regulation 2019/788
- Interoperability improvements
  - o Enhancements of the Crypto Tool, Validation tool and the Live DVD
  - o Update of the European Parliament Crypto tool for Citizens and Member States for its usage in the context of the European Citizens' Initiative.
- Technical advice in relation to development of the legislative framework (risk analysis, studies, ICT impact assessment)

As regards European Parliament elections:

- Updates of the European Crypto tool to the latest security standards.
- Any incremental change requests coming from Member States following the EP 2019 elections, and preparation for the elections in 2024.
- Technical advice in relation to the implementation and the use of the IT tools developed under this project to exchange data under Directive 93/109/EC.

The list above is non-exhaustive and may evolve depending on the outcome of the ongoing ECI review process and the assessment of the value of each of the proposed implementations and the decisions taken by the steering committee.

European Citizens' Initiatives
Steps of the process and IT systems

7.2.11 COSTS AND MILESTONES

7.2.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YYYY)
Initiation	Studies/Impact assessments	200	ISA	Q3/2016	Q4/2016
Execution	Release December 2016	300	ISA	Q3/2016	Q4/2016
Execution	Release June 2017	250	ISA	Q1/2017	Q2/2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YYYY)
Execution	Release December 2017	301	ISA	Q3/2017	Q4/2017
Execution	Release December 2017	175	ECI Budget Line 18 04 01 02 (2016 Commitments)	Q3/2017	Q4/2017
Execution	Release June 2018	250	ISA	Q1/2018	Q2/2018
Execution	Release December 2018	223	ECI Budget Line 18 04 01 02 (2017 commitments)	Q3/2018	Q4/2018
Execution	Release December 2018	250	ISA	Q3/2018	Q4/2018
Execution	Release June 2019	175	ECI Budget Line 18 04 01 02 (2018 commitments)	Q1/2019	Q2/2019
Execution	Release June 2019	250	ISA	Q1/2019	Q2/2019
Execution	Release December 2019	290	ISA	Q3/2019	Q4/2019
Execution	Release December 2019	407,5	ECI Budget Line 18 04 01 02 (2019 commitments)	Q3/2019	Q4/2019
Execution	Central platform June 2020	110	ISA	Q1/2020	Q2/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YYYY)
Execution	Release December 2020	985	ECI Budget Line 18 04 01 02 (2020 commitments)	Q3/2020	Q4/2020
Execution	Release December 2020	145	DG JUST Budget line budget line: 33 02 01 (2020 commitments)	Q3/2020	Q4/2020
Operation	Support	210	ISA	Q1/2017	Q4/2019

7.2.11.2 Breakdown of ISA[2] funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Initiation + execution + support	500	500
2017	Execution + support	611	611
2018	Execution + support	570	570
2019	Execution + support	620	
2020	Execution + support	110	

7.2.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Regulation (EU) No 211/2011 of the European Parliament and of the	http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02011R0211-20131008&from=EN	

Description	Reference link	Attached document
Council of 16 February 2011 on the citizens' initiative		
Regulation (EU) 2019/788 of the European Parliament and of the Council of 17 April 2019 on the European citizens' initiative	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0788&from=EN	
Commission Implementing Regulation (EU) No 1179/2011 of 17 November 2011 laying down technical specifications for online collection systems pursuant to Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:301:0003:0009:EN:PDF	
Minutes of the meeting of the ECI Expert Group	http://ec.europa.eu/citizens-initiative/public/legislative-framework	
Directive 93/109/EC – Participation of EU citizens in EP elections	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:31993L0109	
Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament	http://ec.europa.eu/justice/citizen/document/files/c_2013_1303_en.pdf	

Description	Reference link	Attached document
Minutes of the meeting of the Electoral Expert Group held on 12th June 2015	https://circabc.europa.eu/ Interest group: European Parliament Election Data exchange (category: Justice and Consumers).	

7.3 ABCDE - ADMINISTRATION, BUSINESS AND CITIZENS' DATA EXCHANGES IN THE DOMAIN OF CASE MANAGEMENT – (2016.24)

7.3.1 IDENTIFICATION OF THE ACTION

Service in charge	DG COMP.R3
Associated Services	DG DIGIT
	DG MARE
	DG AGRI

7.3.2 EXECUTIVE SUMMARY

The ISA[2] Action "**ABCDE - Administration, Business and Citizens' Data Exchange in the domain of Case Management**" aims at providing interoperable solutions to support data exchanges between the European Commission, Member States' administrations, business and citizens in the domain of Case Management.

Case Management in the context of this ISA[2] Action comprises Competition policy in the European Union, namely the enforcement of the Antitrust / Cartel rules, Merger control and State aid control[74].

Data exchange processes in Case Management are cross-border: they rest upon intense co-operation between the European Commission and the Member States[75], where information systems are prone to reusability at European and national level[76]. Data exchanges cover various entities, such as European Institutions, Member States administrations (i.e. National Competition Authorities and Permanent Representations), EFTA countries, and undertakings (including law firms) located within the EU or even outside the EU.

Data exchange processes in Case Management are cross-sector, covering: Fisheries, Agriculture, Energy and Environment, Information, Communication and Media, Financial

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[74] Potentially extensible to any sector and policy area carrying out dossier-centric and data exchange-intensive administrative services or investigations.

[75] In Antitrust, the European Commission and the National Competition Authorities (NCAs) enforce the same rules of law and coordinate their action through the European Competition Network (ECN). In Merger Control, the European Commission and the NCAs may refer cases to one another. In State aid control, enforcing the rules has become a shared responsibility between the European Commission and Member States following the State aid modernisation.

[76] This stems from the fact that (i) European and National authorities enforce the same or similar rules of law, and (ii) the business processes involved are similar.

services, Basic Industries and Manufacturing, Pharma and Health services, Transport and Post among other services.

ABCDE action is organised around three packages:

i. **Improvement and operation of existing** cross-border and cross-sector common digital solutions serving EU interests, namely:
   a. GENIS (suite of common services for State aid).
   b. ECN2.
   c. COMP eTrustEx.
   d. eQuestionnaire.

ii. **Development and operation of new ABCDE** cross-border and cross-sector common digital solutions serving EU interests, namely:
   a. eRFI[77]. Common digital solution to support requests for information, sector inquiries and market investigations, to replace the ageing eQuestionnaire[78]. Several National Competition Authorities have manifested their interest in reusing this common digital solution. The European Competition Network could be used to promote its re-use among other authorities.
   b. eLeniency. Common digital solution to support the European Commission's immunity and leniency programme in Cartel investigations. eLeniency was presented to the European Competition Network, where several National Competition Authorities manifested their interest in reusing this solution to support their national immunity and leniency programmes.
   c. eConfidentiality. Common digital solution to support confidentiality negotiation of case files with the investigated undertakings. eConfidentiality is potentially reusable by National Competition Authorities of the Member States to support confidentiality negotiations processes at national level.

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[77] During the preliminary analysis of eRFI, we analysed EUSurvey as a potential candidate. Given the wider scope of eRFI requirements which includes: knowledge base management, security constraints (e.g. Non-Repudiation), integration with Case Management back-ends, strong analytics capabilities, the preferred option was to develop eRFI. However we intent to leverage the existing know-how of EUSurvey, by observing its implementation approach (as 'lessons learned').

[78] The scope of eQuestionnaire was recently extended to cover not only Merger but also Antitrust and State Aid policy instruments. As a critical application it will be maintained and evolved until the release in Production of eRFI in 2020.

iii. **Establishment of a common ABCDE architectural framework - CESA**

The subproject CESA (Case Enterprise and System Architecture) will define and setup a common ABCDE architectural framework, aligned with the EIF and the EIRA, that will ensure the long-term sustainability of the ABCDE interoperable common digital solutions by maximising synergies and economies of scale, and reducing operation, improvement, change and development costs.

All digital solutions provided by the ABCDE action will be operational at the completion of the ISA^2 Work Programme 2020.

As enabler for the modernisation and interoperability of public administrations at European and national level in the context of competition enforcement, ABCDE foresees to participate in the Digital Europe Program (DEP) ensuring the sustainability of the ABCDE solutions after the completion of the ISA^2 Programme.

Under the DEP, ABCDE should continue to design, deploy, maintain, evolve and promote its eco-system of secure, multi-lingual, cross-border and cross-sector digital solutions supporting the interoperability between public administrations, businesses and citizens.

7.3.3 OBJECTIVES

The main objective of ABCDE action is to contribute to the better functioning of the internal market in the benefit of consumers, businesses and the European economy as a whole, thus endorsing several European Union's political priorities such as the Jobs and growth agenda, the Digital Single Market or the Energy Union and key areas such as the Banking union and the fight against tax evasion.

In a context of scarce resources at European and national public administrations across Europe, an additional objective of ABCDE is to reduce costs and gain efficiency and efficacy in the enforcement of Competition policy by the European Commission and the Member States' administrations. This will be achieved by different means, namely:

- ABCDE will enable the European Commission and the Member States administrations to save costs by implementing, operating and offering free of cost, common digital solutions in order to comply with European legislation and jointly enforce European and National competition law, thus avoiding disparate IT investments by the EU Member States' administrations.

- ABCDE will enable the Member States administrations to save costs by implementing and offering free of cost digital solutions that can be reused by Member States' administrations (re-use of code) in order to support their own case management sub-

processes such as requests for information, leniency applications and confidentiality negotiations.
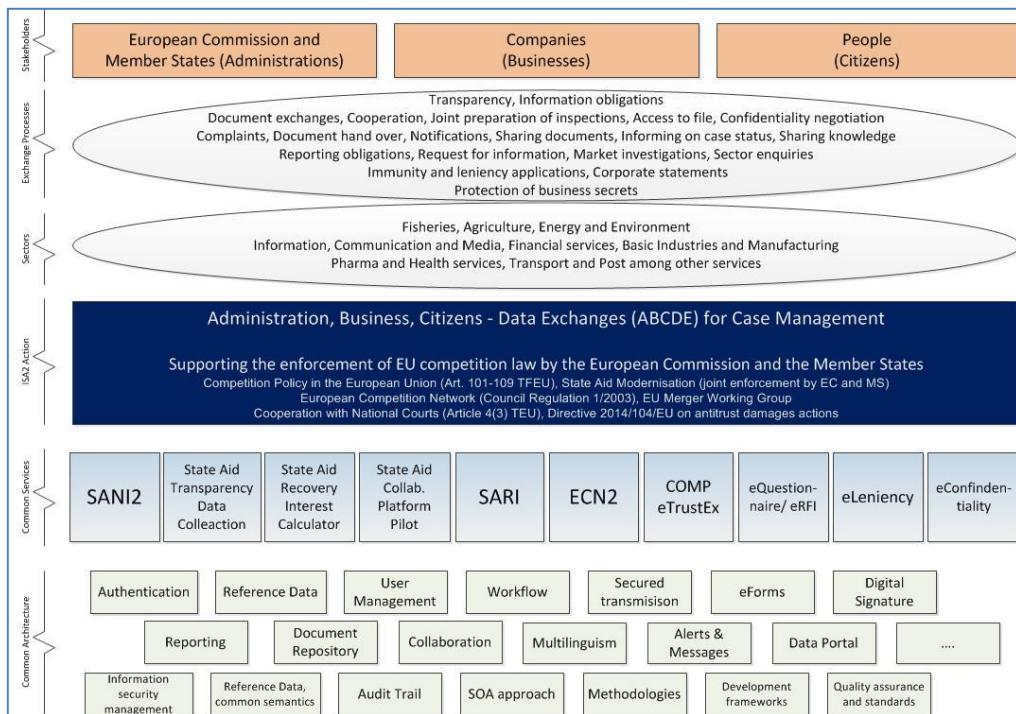
- ABCDE will further automate data exchanges in the domain of Case Management reducing manual intervention and making data exchanges faster, more effective and more efficient, thus reducing operational costs. This will be done by implementing and operating interoperable common digital solutions that will benefit the European Commission services, Member States' administrations, business and citizens.

- ABCDE will promote the re-use and exchange of semantically consistent and highly qualitative data across European information systems in the Case Management domain, fostering cross-border and cross-sector interoperability and applying the 'Only once' principle when possible, thus eliminating unnecessary administrative burden for the European Commission services, Member States' administrations and business.

- ABCDE will optimize costs in the action context by implementing a common architectural framework applicable to all ABCDE common digital solutions. This will enable ABCDE to maximise synergies and economies of scale, and reduce operation, improvement and development costs, while ensuring the long-term sustainability of the common digital solutions.

7.3.4 SCOPE

ABCDE covers the cross-border and cross-sector data exchange processes with or among EU and Member States' administrations, business and citizens in the domain of Case Management. Case Management in the context of the ISA^2 Action comprises the Competition policy of the European Union as well as State aid control in all sectors including Fisheries and Agriculture.
Case Management is potentially extensible to any policy area carrying out dossier-centric and data exchange-intensive administrative services or investigations.

The overall scope of the ISA^2 Action ABCDE is visualised in the diagram below.

The scope of ABCDE action is organised around three packages:

Package I) Operation and improvement of existing common digital solutions
In scope:
Operation and improvement of existing cross-border and cross-sector common digital solutions, serving EU interests, namely: GENIS: State Aid common digital solutions: SANI2, SARI, State Aid Transparency Award Module, State Aid Recovery Interest Calculator, and State Aid Collaboration Platform. These services are used by DG COMP, DG AGRI, DG MARE, the Single Resolution Board and the Member States' administrations of the 28 Member States, as well as EFTA countries, to support the implementation of EU State Aid rules (Art.107, 108 and 109 of the Treaty on the Functioning of the European Union (TFEU)). The main improvements foreseen for the GENIS common digital solutions will include the update of the State Aid Reporting tool (SARI) to further digitise this process. ECN2: common digital solution to support the European Competition Network (formed by DG COMP and the National Competition Authorities) to share case information and case documents, supporting the implementation of Competition policy of the EU, in particular Antitrust/Cartels investigations and Mergers control (Art. 101 to 106, TFEU

Package I) Operation and improvement of existing common digital solutions
In scope:
and Merger Regulation 139/2004). ECN2 also supports exchanges between ECN and administrations of EFTA[79] countries. The main improvements foreseen for ECN2 will facilitate collaboration between the European Commission and the National Courts and the adaptation of the tool to support communications between the Commission and Member States' Permanent Representations for State aid exchanges. ECN2 will be the interoperable, effective and efficient cooperation and data exchange platform between administrations (Member States and European Commission) for the future ECN+. ECN+ is a legislative proposal[80] intended to empower the competition authorities of the Member States to be more effective enforcers of competition law, ensuring a better functioning of the internal market. COMP eTrustEx[81]: common digital solution used by DG COMP and businesses (companies and law firms) to exchange sensitive documents in a secure way. COMP eTrustEx supports the implementation of Competition policy on the EU, namely Antitrust enforcement and Merger control. The main improvements foreseen for COMP eTrustEx are to improve the tool in order to handle exchanges of very large volume of documents as required by Merger control[82]. eQuestionnaire: common digital solution used by DG COMP and businesses (companies, law firms) to request and provide structured information (requests for information, sector inquiries, market investigations) for case investigations. This tool is used in Mergers control, Antitrust/Cartel investigations and State aid control.

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[79] The European Free Trade Association (EFTA) is an intergovernmental organisation set up for the promotion of free trade and economic integration to the benefit of its four Member States: Iceland, Liechtenstein, Norway, and Switzerland.

[80] Proposal Directive of the European Parliament and the Council.
http://ec.europa.eu/competition/antitrust/proposed_directive_en.pdf

[81] Covers the evolution and maintenance of the modules specially developed and used by DG COMP (GUI, adapter, COMP back-end interoperability layer). Maintenance of DIGIT's eTrustExchange platform itself is out of the scope of this action and will be financed by another ISA^2 action.

[82] File submissions in the context of Merger control can go as high as 250.000 files and up to 350 GB.

Package II) Development and operation of ABCDE common digital solutions
In scope:
Development and operation of cross-border and cross-sector common digital solutions serving EU interests, namely: eRFI: common digital solution to support requests for information, sector inquiries and market investigations. eRFI will replace the ageing eQuestionnaire (in Production since 2009). eRFI would be reusable by National Competition Authorities on Member States to support their request for information processes, several of which have already manifested their interest in re-using this common digital solution. eLeniency: common digital solution to support the European Commission's leniency programme in Cartel investigations. Currently, the exchange process with businesses for submitting leniency applications to the Commission is not IT-supported; hence it is resources intensive both for public administrations and business. eLeniency was presented in the European Competition Network, where several National Competition Authorities manifested their interest in re-using this solution to support their national immunity and leniency programmes. eConfidentiality: common digital solution to support the confidentiality negotiations of case files with the investigated undertakings (businesses) in the context of Access to File. Currently, this exchange process with businesses is not IT-supported; hence it is resources intensive, both for public administrations and business. eConfidentiality would be reusable by National Competition Authorities on Member States to support their confidentiality negotiation processes.

Package III) Establishment of a common ABCDE architectural framework (CESA)

In scope:

The common ABCDE architectural framework will ensure the long-term sustainability of the ABCDE interoperable solutions by maximising synergies and economies of scale and reducing operation, improvement, change and development costs. The common ABCDE architectural framework will focus on:

- Common information security management.
- Common business and Service Oriented Architecture (SOA) approach.
- Common interoperability: common technical approach, common semantics, common specifications and standard exchange formats.
- Common methodological approach: based mainly in PM^2, TOGAF and Agile@EC[83].
- Common development frameworks and technology stacks.

The common ABCDE architecture (CESA) will facilitate the reusability of existing building blocks GENIS and Document Repository Services (DRS), as well as the identification of candidate corporate building blocks, and the development of new functionality as modular, re-usable building blocks. The common ABCDE architectural framework will be aligned to EIRA and the re-usable solutions produced mapped to the EICart[84].

7.3.5   ACTION PRIORITY

7.3.5.1   Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?	All common digital solutions provided by ABCDE facilitate the interoperability between the European Commission and Member States' administrations, and with business and citizens.

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[83] PM^2 is the project management methodology of the European Commission. TOGAF is the industry standard for Enterprise Architecture practises. Agile@EC is the software development methodology of the European Commission.

[84] .European Interoperability Reference Architecture (EIRA) and European Interoperability Cartography (EICart)

Question	Answer
In particular, how does it contribute to the implementation of: *• the new European Interoperability Framework (EIF),* *• the Interoperability Action Plan and/or* *• the Connecting European Facility (CEF) Telecom guidelines* *• any other EU policy/initiative having interoperability requirements?*	Moreover, ABCDE contributes to the implementation of the EIF by following several of the EIF's underlying principles such as user-centricity, transparency, preservation of information, reusability, security and privacy, multilingualism, administrative simplification, and assessment of effectiveness and efficiency. Last, ABCDE aligns with the reference architecture proposed by EIRA from an Enterprise Architecture point of view. When possible ABCDE common digital solutions will be mapped to the EICart.
Does the proposal fulfil an interoperability need for which no other alternative solution is available?	**Yes.** ABCDE action implements common digital solutions that fulfil user needs and support exchanges between administrations and businesses, where no satisfactory interoperable solution is available. Some processes that are/will be supported by ABCDE common digital solutions are: • State Aid Notification; • State Aid Expenditure Reporting; • State Aid Transparency obligations; • Merger Notification; • Coordination EC/MS in Antitrust enforcement and Merger control; • Requests for Information; • Applications for leniency; • Confidentiality negotiations.

7.3.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and utilised in two (2) or more EU policy areas? Detail your answer for each of the concerned sectors.*	**Yes**. Additionally to the already operational solutions described below, all new ABCDE common digital solutions will be supporting Competition policy, which is by definition a cross-sector policy and an instrument to guarantee well-functioning markets across different sectors of the economy such as Fisheries, Agriculture, Energy and Environment, Information, Communication and Media, Financial Services, Basic Industries and Manufacturing, Pharma and Health Services, Transport and Post, among other sectors.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The explanation above applies in particular for all common digital solutions in Package I, which are **already operational**: SANI2, State Aid Transparency Award Module, State Aid Recovery Interest Calculator, State Aid Collaboration Platform, SARI, ECN2, COMP eTrustEx, andeQuestionnaire as well as eLeniency. Moreover, GENIS common digital solutions are used by three DGs, MARE, AGRI, COMP and the Single Resolution Board (SRB). Last, ECN2 is used by 13 Sector Regulators in different EU countries (e.g. the Hellenic Telecoms and Post Commission or the UK Office for Regulation of Electricity and Gas).

7.3.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view, and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	**Yes**. Additionally to the Package I digital solutions already operational, and in use by all Member States described below, the new solutions that will be implemented under Package II (eRFI, eLeniency and eConfidentiality) will be made available for national administrations from all Member States for download and re-use. National Competition Authorities from various Member States have already manifested their interest in reusing some of new these common digital solutions.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Most ABCDE common digital solutions included in Package I, are **already operational** and being used by public administrations of all Member States, the EFTA countries and the European Commission. This is the case of the GENIS State Aid common digital solutions (SANI2, SARI, State Aid Transparency Award Module, State Aid Interest Recovery Calculator, etc.) and ECN2.

7.3.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	**Yes.** ABCDE, as enabler of competition policy, contributes to the implementation of several EU high political priorities as the Jobs, Growth and Investment agenda, the Digital Single Market and the Energy Union. ABCDE common digital solutions support the implementation of EU legislation such as: • EU Antitrust/Cartels policy (Art. 101 and 102 of the TFEU);

Question	Answer
	• Council Regulation (EC) No 139/2004 on control of concentrations between undertakings (the EC Merger Regulation); • EU State Aid rules (Art.107, 108 and 109 of the TFEU); • EU State Aid Modernisation (SAM); • Directive 2014/104/EU on antitrust damages actions; • Leniency policy.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	No other sources of financing are currently available to finance this action. ABCDE action fits within the scope of the ISA^2 programme and complies with its objectives, as it aims to facilitate efficient and effective electronic cross-border and cross-sector exchanges between public administrations and between those and businesses and citizens. Moreover, ABCDE complies with several ISA^2 activities by supporting and promoting the assessment, improvement, development, establishment, operation and re-use of existing and new interoperability solutions. ABCDE common services are developed in compliance with the ISA^2 general principles of re-usability, interoperability, multilingualism, administrative simplification and modernisation, transparency, effectiveness and efficiency, and user-centricity.

7.3.5.5 Reusability of action outputs

Name of reusable solution	State aid common digital solutions (developed under ISA Action 1.11 – GENIS):

	- SANI2;
	- SARI;
	- State Aid Transparency Award Module;
	- State Aid Recovery Interest Calculator;
	- State Aid Collaboration Platform.
Description	These common digital solutions are used by the European Commission (DGs COMP, AGRI, and MARE), the Single Resolution Board, the Member States' administrations, and the EFTA countries, to jointly implement State aid rules (Articles 107, 108 and 109 of the TFEU) and the State Aid Modernisation legislation.
References	https://webgate.ec.europa.eu/competition/sani2 https://webgate.ec.europa.eu/competition/sani/sari https://webgate.ec.europa.eu/competition/transparency https://webgate.ec.europa.eu/competition/aidcalculator https://webgate.ec.europa.eu/fpfis/wikis/display/StateAid/Homepage
Target release date / Status	All State Aid common digital solutions are in production.
For solutions already in operational phase - actual reuse level	SANI2: **4397** users. SARI: **3877** users. State Aid Transparency Award Module: **1859**users. State Aid Recovery Interest Calculator: **106** users. State Aid Collaboration Platform: **1155** users.

Name of reusable solution	ECN2: common service developed under ISA Action 2.9 – DRS (ECN Pilot).
Description	ECN2 is used by the European Competition Network (European Commission and the National Competition Authorities in the 28 MS) to jointly implement Antitrust/Cartels rules (Articles 101-102 TFEU), inform each other about the status of Antitrust cases, share related documents and prepare inspections.

ECN2 is also used by the EU Merger Working Group as an |

	efficient and secure mean to exchange documents in Merger cases.
	Finally, ECN2 will be enlarged to be used as secure document sharing platform between the European Commission and the Member States' Permanent Representations for State aid exchanges.
Reference	https://webgate.ec.europa.eu/ecn/
Target release date / Status	ECN2 is in production.
For solutions already in operational phase - actual reuse level	**945** active users.

	New ABCDE common digital solutions with a potential of re-use by Member States administrations:
Name of reusable solution	• eRFI; • eLeniency; • eConfidentiality.
Description	eRFI. Request for information (incl. market investigations and sector inquiries) is a process applied not only by the European Commission but also by National Competition Authorities in Competition law enforcement. Therefore there is a high potential of re-usability of the eRFI common service. Various National Competition Authorities have expressed their interest on re-using the eRFI solution rather than developing their own. eLeniency and eConfidentiality. Immunity/leniency programmes are effective weapons in the fight against Cartels. Confidentiality negotiations are mandatory process for obtaining non-confidential versions of document used as evidences for court decisions. Both processes are implemented both at European and National level and therefore there is a high potential of re-usability of the eLeniency and

	eConfidentiality common digital solutions by National Competition Authorities.
Reference	https://eleniency.ec.europa.eu The URLs for eRFI and eConfidentiality will be published when these digital solutions enter in production.
Target release date / Status	• eLeniency is in production. • eRFI target date for production is Q2 2020. • eConfidentiality target date for production is Q2 2020.
Critical part of target user base	To be defined during the Executing phases of the projects.

Name of reusable solution	Building Blocks: • Document Repository Services (DRS) [85]; • Multilingual; • eForms; • Reference Data; • Audit Trail; • Messaging.
Description	• Document Repository Services: provides full support to document management operations by implementing a full set of services that can be integrated with a client application. • Multilingual: manages sets of translations in all European Commission languages in a central repository and offers these translations to different clients embedded in the user applications. • Reference Data: building block used for the management and dissemination of reference data with special consideration for system performance and reusability. • eForms: generic forms easily defined and maintained.

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[85] This re-usable component was developed by DG DIGIT in the context of ISA Action 2.9 Document Repository Services. Currently its maintenance and operation is financed by ABCDE action, and the budget sub-delegated to DG DIGIT for its maintenance and evolution.

	• Audit Trail: reusable building block to provide audit trail support of the operations carried out in a common service. These modules are decoupled as generic building blocks and published in Join-up for re-use.
Reference	https://joinup.ec.europa.eu/software/drs https://joinup.ec.europa.eu/asset/multilingual/home https://joinup.ec.europa.eu/asset/rd https://joinup.ec.europa.eu/asset/forms/home
Target release date / Status	All building blocks are in production and re-used by several common digital solutions as SANI2, State Aid Transparency Award Module, SARI, State Aid Recovery Interest Calculator and ECN2.
Critical part of target user base	N/A.
For solutions already in operational phase - actual reuse level	Since they were uploaded to JoinUp, the ABCDE building blocks accumulate a total of 272 downloads. GENIS Reference Data building block in particular has a rating of 5 stars out of 5 in JoinUp.

7.3.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	**Yes.** Additionally to the interoperability solutions already re-used by ABCDE that are described below, ABCDE will, as default practise, identify candidate re-usable solutions to provide blocks of functionality in the implementation of new systems and the evolution of the existing ones. Some candidate building blocks that will be evaluated are: • Electronic Signatures Service (ESSI) for e-signature; • eUI for graphical user interface; • Activiti or Compass for workflow; • Enterprise Search for content search; • Corporate Notification Services (CNS) for

Question	Answer
	notifications; • EU Send platform for file transmission. For eRFI, eConfidentiality and eLeniency, will re-use several corporate building block as eUI, EU Send, Machine Translation (MT@EC), Corporate Notification Services (CNS), Translation Services (Poetry) and Authentication Services (EU LOGIN) as well as other common building blocks as CASE@EC's COCOA. Moreover, GENIS common digital solutions uses DG ESTAT's re-usable solution for dissemination of statistical data (ISA^2 - Action 2016.06) in order to produce the State Aid Scoreboard.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	**Yes.** ABCDE common digital solutions in production (SANI2, State Aid Transparency Award Module, State Aid Recovery Interest Calculator, ECN2, etc.) are already re-using solutions implemented by ISA^2 and ISA programs as eTrustEx (ISA^2 2016.19), GENIS building blocks (ISA 1.11) and Document Repository Services (ISA 2.9) as well as other interoperable solutions developed by the European Commission as EU LOGIN or MT@EC.

7.3.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	**Yes.** Competition policy tools are key contributors for the implementation and success of several of the EU high political priorities as A Europe fit for the digital age[86], the Jobs, Growth and Investment agenda, the Digital Single Market (DSM) and the Energy Union[87] and key areas such as the Banking Union and the fight against tax evasion. By providing digital means to facilitate efficient and effective electronic cross-border and cross-sector exchanges between the European Commission, the Member States' administrations and the European business, the ABCDE action acts as key enabler for the implementation of competition policy, contributing to the better functioning of the internal market for the benefit of consumers, businesses and the European economy as a whole.

[86] See President-elect Ursula von der Leyen' Political Guidelines for the next European Commission 2019-2024, https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf

[87] See President Jean-Claude Juncker's Mission Letter to Commissioner Margrethe Vestager, https://ec.europa.eu/commission/sites/cwt/files/commissioner_mission_letters/vestager_en.pdf

7.3.6 PROBLEM STATEMENT

Problems and needs addressed by
Package I) Operation and improvement of existing common digital solutions
Problems: • IT solutions supporting EU legislation could be either implemented in each Member State or with common digital solutions used by all MS. The first option would imply significant expenditures by Member States multiplying IT solutions' developments and operations, as well as a number of different systems hardly interoperating with each other. The use of common digital solutions is the de-facto approach in the ABCDE context, being significantly more cost-efficient and more effective (interoperability, use/reuse and exchange of data, etc.). • Data exchanges – typically ruled by tight legal deadlines – are often carried out in a time-consuming way and with limited security measures (i.e. submission of documents by e-mail or delivery of DVDs or paper documents via mail service). • Ongoing legislation changes requiring adaptations to underlying IT solutions.
Resulting needs: • Need to operate existing cross-sector and cross-border interoperable common digital solutions used by the European Commission and the administrations of the Member States to jointly implement EU legislation: SANI2, ECN2, SARI, State Aid Recovery Interest Calculator, State Aid Transparency Award Module and the State Aid Collaboration Platform. • Need to operate existing cross-sector and cross-border interoperable common digital solutions used by the EC, the Member States' administrations, the business and citizens, to further support secured and efficient data exchanges required by EU legislation: eTrustEx and eQuestionnaire. • Need to improve/adapt existing cross-sector interoperable common digital solutions in the interest of the EU upon legislation changes.

| **Problems and needs addressed by** |
| **Package II) Development and operation of new ABCDE common digital solutions** |

Problems:

- Several resources-intensive, recurrent, critical data exchange processes are currently carried out without IT support in a semi-automated manner both in European and national administrations. This is unbearable in the current political context of limited staff and resources for public administrations across the EU.
- Data exchanges – often ruled by tight legal deadlines – are often carried out in a time-consuming way and with limited security measures (i.e. delivery of paper documents by mail service). Developing common digital solutions addressing this problem will mean significant cost savings and efficiency improvements for the European Commission, the Member States' administrations, business and citizens.
- The European Commission and the Member States enforce, at different levels, similar legislation. Implementing IT solutions supporting similar data exchange processes at EU and national level could lead to disparate expenditures by Member States multiplying IT solutions' developments and operations.

Resulting needs:

- Need to provide state-of-the-art e-solutions to support resource-intensive, recurrent, critical data exchange processes in a more effective and cost-efficient way: "do more with less" through eRFI, eLeniency and eConfidentiality.
- Need to develop and operate cross-sector, cross-border, interoperable common digital solutions used by the EC, the administrations in the Member States, the business and citizens to support secured and efficient data exchanges required by EU legislation: eRFI, eLeniency and eConfidentiality.
- Need to develop IT solutions supporting data exchanges for Case Management prone to reusability at European and national level. Several National Competition Authorities have already expressed their interest in reusing the eRFI solution, rather than developing their own solution. The European Competition Network could be used as a platform to present eRFI, eLeniency and eConfidentiality to other National Competition Authorities.

Problems and needs addressed by
Package III) Establishment of a common ABCDE architectural framework - CESA

Problems:

- Lacking a well-defined common architectural framework would lead to different projects being implemented conform to ISA^2 individually, although architecturally different. This would result in increasing costs over time, eventually resulting in the unsustainability of maintenance and operation of the ABCDE domain's common digital solutions.
- A different information security management by project (i.e. not having a global security strategy and implementation common for the ABCDE domain) would be not only expensive but would also imply a high risk of incoherence in the security implementation of interoperability, resulting inevitably in security vulnerabilities.
- Insufficient use of standard exchange formats in the context of data exchanges in Case Management in the EU, resulting in reduced interoperability and higher costs for data exchanges.

Resulting needs:

- Need for a common ABCDE architectural framework, aligned with the EIF and the EIRA and mapped into the EICart, following a common SOA approach, common semantics and standard exchange formats while aiming at maximising synergies and economies of scale in order to reduce operation, improvement, change and development costs.
- Need for a common, global information security management approach covering all data exchanges in the Case Management domain.
- Need for identifying existing or defining new standard data exchange formats in the context of data exchanges in Case Management in the European Union.

7.3.7   IMPACT OF THE ACTION

7.3.7.1   Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
Effective enforcement of EU competition law (Art. 101-109 TFEU)	State-of-the-art common digital solutions for efficient data exchanges in Case Management will result in a more effective enforcement of EU competition law by the European Commission and the Member States, leading to: • A better functioning of the European Single Market. • Better services and products, more choices, and better prices for European consumers. • More competitive European business better placed in the global economy.	Benefit already provided by Package I digital solutions and eLeniency.Will be completed with the release of eRFI and eConfidentiality in Q2 2020.	European Union as a whole: Institutions, Member States, businesses and citizens.
Cost savings derived from the common use of common ABCDE digital solutions	The provision and operation of central digital solutions jointly used by Member States and the European Commission translates in concrete cost savings, since Member States do not need to engage in significant investments to develop, operate and evolve their own information systems in order to comply with European legislation.	Benefit already provided by Package I digital solutions.	European Commission and Member States' administratio ns.
Cost savings	Similar exchange processes in	Benefit already	European

Impact	Why will this impact occur?	By when?	Beneficiaries
resulting from the re-use of ABCDE common digital solutions by Member States' administrations	the context of Competition policy take place both at European and national level. Implementing digital solutions that can be re-used by Member States to support those processes translates in cost savings (i.e. re-using eLeniency or eRFI by National Competition Authorities).	provided by eLeniency. Will be completed with the release of eRFI and eConfidentiality in Q2 2020.	Commission and Member States' administrations.
Cost and time savings derived from automation of exchange processes	Several data and document exchange processes in Case Management still imply heavy manual intervention by European, National administrations and businesses' staff (foremost the negotiation of confidentiality and leniency applications) as well as high costs derived from the use of postal services (i.e. DHL) or staff displacement (i.e. delivery of leniency applications by lawyers). Automating these processes will reduce the cost, time and manpower required to carry them.	Benefit already provided by Package I digital solutions and eLeniency. Will be completed with the release of eRFI and eConfidentiality in Q2 2020.	European Commission, Member States' administrations and business.
Enhanced security in the manipulation, transmission and storage	The European Commission and Member States have an obligation of professional secrecy to protect confidential data of the business that it receives in its investigations. By	Benefit already provided by Package I digital solutions and eLeniency. Will be completed with	European Commission, Member States' administrations and

Impact	Why will this impact occur?	By when?	Beneficiaries
of sensitive information.	substituting the use of non-automated means (fax, mail post, non-encrypted email, etc.) inadvertent document disclosures will be minimised.	the release of eRFI and eConfidentiality in Q2 2020.	business.

7.3.7.2 User-centricity

ABCDE puts a high focus on principles such as user centricity, user-friendliness and user ergonomics. In order to produce user-centric solutions ABCDE:

- **Alignment Business/IT and user involvement**. With the support of the Business Managers and the sponsorship of the Project Owners, representatives of the end-users (both internal and external) are identified and involved from the early stages of the projects. Their collaboration and input are critical for identifying and prioritizing business needs and requirements, ensuring value for money, defining acceptance criteria and performing user acceptance tests.
- **Follows an agile software development methodology (Agile@EC)**. Users are actively involved in the software development process in a regular and continuous way from the early iterations of the project. This approach allows users to provide immediate feedback on the incremental versions of the systems developed, so the projects can be adjusted accordingly, while favours early delivery and continuous improvement.
- **Carry-out User eXperience (UX) studies**: for new common digital solutions (such as eRFI and eConfidentiality) we are performing studies with User eXperience (UX) specialists in order to design user-friendly interfaces and tools. These studies are helping tailor the systems to the different user profiles types that will interact with them, define friendly and ergonomic user interfaces with intuitive navigation, and detect and correct "user pain points" in the early phases of the projects.

7.3.8 EXPECTED MAJOR OUTPUTS

All major outputs of the ABCDE action are re-usable and have been described under section 7.3.5.5.

7.3.9 ORGANISATIONAL APPROACH

7.3.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives
GENIS State aid common digital solutions	

Stakeholders	Representatives
Project Owner	Carles Esteva Mosso (COMP Deputy DG for State Aid)
ECN2	
Project Owner	Anna Vernet (HoU COMP.A.4)
COMP eTrustEx	
Project Owner	Marc Ekelmans (HoU COMP.R.1)
eQuestionnaire	
Project Owner	Birthe Panhans (DHoU COMP.A.2)
eRFI	
Project Owner	Birthe Panhans (DHoU COMP.A.2)
eLeniency	
Project Owner	Eric Van Ginderachter (Director COMP.G)
eConfidentiality	
Project Owner	Kris Dekeyser (Director COMP.A)
Case Enterprise and System Architecture (CESA)	
Project Owner	Leontina Sandu (HoU COMP.R.3)

7.3.9.2 Identified user groups

European Commission and other Institutions: case managers, case handlers, paralegals and document managers from DG COMP, DG AGRI, DG MARE, as well as from the Single Resolution Board, working in Case Management data exchanges with external parties (mainly Member States' administrations and business).

Member States and EFTA countries national administrations: staff from National Competition Authorities, Sector Regulators and Permanent Representations, collaborating with the European Commission in the joint enforcement of EU competition law, in particular in Antitrust and Cartel enforcement, Merger control and State Aid control.

Business: users from companies' legal services and representing law firms, interacting with the European Commission in the context of requests for information, leniency/immunity applications and negotiation of confidentiality on Access to file requests.

Citizens: consulting State aid individual award data provided by Member States in compliance with the European transparency requirements for State aid, and accessing relevant

information about awarded aid, such as name of the beneficiary, amount, location, sector and objective.

7.3.9.3 Communication and dissemination plan

Common digital solutions under the ISA^2 Action ABCDE will implement their communication management processes following the PM^2 methodology and will participate to the different ISA^2 communication channels (ISA² website, ISA² Newsletter, etc.), working groups and events as appropriate. Some of the meetings taking place will be:

- **Project follow-up and review meetings**. Chaired by the Project Manager and attended by the Business Manager and the Project Core Team, the project follow-up and review meetings aim to discuss the project progress, the identification of new risks and issues, the status of current and future deliverable and/or the testing progress among others. Depending of the project size they are held at least once a month.

- **Project Steering Committee meetings**. Chaired by the Project Owner, and attended by the Business Manager, Solution Provider, Project Manager and other stakeholders, the project steering committee meetings aim at discussing key points meriting management attention (i.e. problems encountered, actions taken, evaluation of the project status with respect to the scope, plan and budget, risk review, etc.). Project Steering Committee meetings are normally held in a quarterly basis. Minutes of the meeting are distributed by e-mail and registered.

- **DIT[88] meetings**. Chaired by COMP's DDG for Mergers and attended by Project Owners, Business Managers, IT and document management specialists. The DIT operates as DG COMP's IT Steering Committee and assures that the investments in IT, including those on the ABCDE action, are aligned with business needs and generate business value. The DIT coordinates the overall execution of the IT strategy and set priorities where necessary. DIT meetings are held bi-monthly. Minutes of the meetings are distributed by e-mail.

- **Working groups and participatory meetings with Member States representatives**. For common digital solutions used by the Member States' administrations, the European Commission holds several meetings per year to ensure the alignment of the common digital solutions with Member States' needs. New versions of the tools are presented for feedback and overview of the forward planning is presented. IT trainings and Questions &

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[88] DIT stands for Document handling and IT systems Group.

Answers sessions are also organised in this context. Needs for educational an eLearning material will be addressed with the support of the ISA² Interoperability Academy action. Some samples of these meetings are the ECN Plenary meeting, the EU Merger Working Group or the Transparency Award Module Steering Group. Minutes of the meetings are distributed by e-mail.

- **ABCDE - CESA – CASE@EC Coordination meetings** brings together representatives from the ABCDE action and CASE@EC project. The purpose of these meetings is to ensure architecture alignment and coherent SOA/interoperability approach between the two projects. ABCDE – CASE@EC meetings are held on a weekly basis.

Re-usable solutions developed under ABCDE action will be made available via the JoinUp platform.

7.3.9.4 Key Performance indicators

The following list of KPIs has been defined together with the ISA² Monitoring and Evaluation team as it is monitored and reported in a quarterly basis. The KPIs defined so far measure the periodic (quarterly) achievement of Package I services' operational goals since the beginning of the ISA² programme).

Description of the KPI	Target to achieve	KPI values Q2 2019
Percentage of State Aid Notifications received via SANI2 common digital solution	80%	99,86%
Number of State Aid Awards published via the Transparency Award Module common digital solution	500 (per quarter)	6526
Number of active users of the Transparency Award Module common digital solution	1000	1811
Number of documents downloaded via ECN2 common digital solution	20 000 (per quarter)	19 910
Number of bundles transferred via COMP eTrustEx common digital solution	600 (per quarter)	805
Availability of eQuestionnaire common digital solution	95%	99,99%

7.3.9.5 Governance approach

The governance of ISA^2 Action ABCDE can be seen from two perspectives: global governance of the action as a whole, and governance of each common digital solution under the umbrella of ABCDE as an individual project/service.

From a global perspective ABCDE is steered and monitored by the DIT (DG COMP's IT Steering Committee, see section 1.1.9.3) in order to ensure its business alignment. From the EC perspective, ABCDE is aligned with the practices established by the Central IT Governance and follow the ISA^2 governance structures and reporting as described in the ISA^2 legal basis.

From an individual project/service perspective, each ABCDE common digital solution implements a governance model based on the PM^2 methodology. The roles and responsibilities of the Project Owner and the Business Manager are defined, and each project has its Project Steering Committee (see 1.1.9.1). The Steering Committee guides, promotes, monitors and evaluates the successful execution of the project. Project Steering Committee meetings are held in a quarterly basis. The different Project Steering Committees report to the DIT.

7.3.10 TECHNICAL APPROACH AND CURRENT STATUS

Package I) Operation and improvement of existing ABCDE common digital solutions.

The common digital solutions under Package I are in operational phase throughout the duration of the ISA^2 programme. The operational phases comprise the improvements of these common digital solutions derived mainly from:
- New requests from users in the European Commission services, Member States, administrations and business;
- Adaptation to legislative changes;
- Step-wise alignment with the ABCDE common architectural framework.

Current status: all GENIS State Aid common digital solutions (SANI2, State Aid Transparency Award Module, State Aid Recovery Interest Calculator, State Aid Collaboration Platform and SARI), ECN2, COMP eTrustEx and eQuestionnaire are operational.

Package II) Development and operation of new ABCDE common digital solutions.

The common digital solutions under Package II are being implemented following PM^2 and Agile@EC methodologies. The initiating and planning phases of the different sub-projects went hand-in-hand with the implementation of the ABCDE common architecture proposed by the CESA project. The executing phases are benefiting from the common architecture by re-using common building blocks, artefacts and technologies.

Current status: eRFI and eConfidentiality projects are currently in Executing phase. eLeniency is currently operational.

Package III) Establishment of a common ABCDE architectural framework - CESA

The implementation of the ABCDE common architecture took input from architectural analysis of the existing common digital solutions under Package I, and from the architectural analysis carried out during the initiating and planning phases of the new common digital solutions under Package II.

Current status: CESA is currently operational.

<u>Services – Quality management, quality assurance, testing, support and hosting</u>

In order to gain efficiency and save costs, several non-development activities are centralised as a horizontal service supporting all the ABCDE common digital solutions. This service offers quality management, quality assurance and quality control capabilities, as well as it provides 2nd level user support to EC institutions, national administrations and business. The cost of hosting is also covered here.

Current status: quality management, quality assurance, testing and support services are operational, providing services to all sub-projects in Packages I, II and III.

7.3.11 COSTS AND MILESTONES

7.3.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiating Planning Executing Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA^2 / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Package I - Operation and improvement of existing ABCDE common digital solutions					
GEN-Operation	GENIS	3310	ISA^2	Q2/2016	Q4/2020
ECN-Operation	ECN2	1455	ISA^2	Q2/2016	Q4/2020
ETX-Operation	COMP eTrustEx	450	ISA^2	Q2/2016	Q4/2020
EQU-Operation	eQuestionnaire	370	ISA^2	Q2/2016	Q3/2020
Package II – Development and operation of new ABCDE common digital solutions					
ERF-Initiating	eRFI	100	ISA^2	Q2/2016	Q4/2016
ERF-Planning	eRFI	60	ISA^2	Q1/2017	Q2/2017
ERF-Executing	eRFI	1255	ISA^2	Q2/2017	Q4/2019
ERF-Closing	eRFI	275	ISA^2	Q1/2020	Q2/2020
ERF-Operation	eRFI	350	ISA^2	Q3/2020	Q4/2020
ELE-Initiating	eLeniency	50	ISA^2	Q3/2016	Q1/2017
ELE-Planning	eLeniency	70	ISA^2	Q1/2017	Q2/2017
ELE-Executing	eLeniency	500	ISA^2	Q3/2017	Q4/2018
ELE-Closing	eLeniency	100	ISA^2	Q1/2019	Q2/2019
ELE-Operation	eLeniency	300	ISA^2	Q3/2019	Q4/2020
ECO-Initiating	eConfidentiality	70	ISA^2	Q3/2016	Q1/2017
ECO-Planning	eConfidentiality	100	ISA^2	Q1/2017	Q2/2017
ECO-Executing	eConfidentiality	880	ISA^2	Q3/2017	Q1/2020
ECO-Closing	eConfidentiality	150	ISA^2	Q2/2020	Q3/2020
ECO-Operation	eConfidentiality	300	ISA^2	Q3/2020	Q4/2020
Package III – Establishment of a common ABCDE architectural framework					
CES-Initiating	CESA	70	ISA^2	Q3/2016	Q1/2017

Phase: Initiating Planning Executing Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA² / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
CES-Planning	CESA	165	ISA²	Q1/2017	Q2/2017
CES-Executing	CESA	280	ISA²	Q3/2017	Q4/2018
CES-Closing	CESA	100	ISA²	Q1/2019	Q2/2019
CES-Operation	CESA	1175	ISA²	Q3/2019	Q4/2020
DRS-Operation	DRS operation	600	ISA²	Q2/2016	Q4/2020
Services – Quality management, quality assurance, testing, support and hosting					
QMA-Operation	Quality Management	510	ISA²	Q2/2016	Q4/2020
SUP-Operation	User support and IS testing	1359	ISA²	Q2/2016	Q4/2020
HOS-Operation	Hosting DIGIT Data Center	680	ISA²	Q2/2016	Q4/2020
	TOTAL	15084	ISA²		

7.3.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Package I - Operation	915	915
2016	Package II - Development	340	340
2016	Package III - Development & Operation	530	530
2016	Services - Operation	550	550
2017	Package I - Operation	1120	1120
2017	Package II - Development	900	900
2017	Package III - Development & Operation	570	570

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Services - Operation	429	429
2018	Package I - Operation	1120	1120
2018	Package II - Development	920	920
2018	Package III - Development & Operation	370	370
2018	Services - Operation	590	590
2019	Package I - Operation	1280	
2019	Package II - Development & Operation	1200	
2019	Package III - Operation	430	
2019	Services - Operation	580	
2020	Package I - Operation	1150	
2020	Package II - Operation	1200	
2020	Package III - Operation	370	
2020	Services - Operation	520	
	TOTAL	15084	

7.4 ELECTRONIC ACCESS TO THE EUROPEAN COMMISSION DOCUMENTS (2018.05)

7.4.1 IDENTIFICATION OF THE ACTION

Service in charge	European Commission, SG
Associated Services	Other European Commission Directorates-General and services, other European Institutions, Member States.
Responsible Action manager name	OLIVAN AVILES Maria (Head of Unit, SG.C.1) BRKIC Dejan (Business Manager, SG.C.1)
Responsible Action manager email	Maria.Olivan-Aviles@ec.europa.eu Dejan.BRKIC@ec.europa.eu

7.4.2 EXECUTIVE SUMMARY

The initial purpose of the action was to conduct a study to analyse and propose an efficient solution for the electronic access to the European Commission (EC) documents 1. In particular, this refers to the process of submitting the access-to-document requests under Regulation 1049/2001 and the subsequent handling of such requests by the Commission.

The analysis covered the entire flow from the moment EU citizens submit a request for access to a document until the answer of the EC, providing access to the requested documents or (partially) refusing access to them. The study also investigated the existing IT tools and identified components that could be reused in order to propose an integrated and fully electronic solution.

Based on the results of the study, the action was extended to implement an online platform for citizens to submit requests for public access to documents under Regulation 1049/2001 as well as to develop a new and improved management system to handle such requests for access to documents by the Commission.

One of the recommendations of the "Study on the Secretariat-General Registers", carried out during 2018 – 2019, is to implement a new Register of Commission Documents (hereinafter "RegDoc"), transform it into the main publication tool of the Commission documents and extend its scope. There is a clear interrelation between the process of submitting and handling the access-to-document requests and RegDoc. The wider the scope of document types published on RegDoc is and the easier is for citizens to find and search for such documents, the less is the number of access-to-document requests they will need to submit. Also, certain documents fully disclosed following such access-to-document requests need to be published

on RegDoc. The new RegDoc will automate the publication of certain documents for which an access to documents request has been handled with a positive result.

The aim is to include more types of documents so that RegDoc contains not only documents currently published on the Registers managed by the Secretariat-General, but potentially also documents published in other Directorates-General's systems, and other documents currently not published at all. Many other document types are of interest for the wider public and could be proactively published. By doing so, the Commission will send a strong message on its commitment to transparency and strengthen its image of an "open" administration.

In 2018, the Commission conducted a survey among the Directorates-General concerning the possibility of a proactive publication of new document types. Even though done at the technical level of the access-to-document teams, an overwhelming majority of Directorates-General showed a strong interest and support for such an initiative. However, even with the endorsement of such an initiative at the higher levels, the current RegDoc has technical limitations, both at the level of document management and user-interface (e.g. presentation of documents, search capabilities), that do not allow for the publication of new document types.

Another objective of the new RegDoc is to improve its search functionalities, to make its design, navigation and presentation more intuitive and user-centric, and to better integrate it with other Commission information systems. Interlinking different websites can unleash the full potential of publicly available information. Currently, RegDoc is only linked with EUR-Lex (e.g. links from the adopted acts leading to the official version published in the Official Journal). Such interlinking could be done for other documents. In other words, once the users find documents on RegDoc (e.g. draft delegated act), they could be pointed to the business-specific registers that are the source of these documents (e.g. Register of Delegated and Implementing Acts, Better Regulation Portal/"Have your say" etc.) and where more information about these documents could be found.

The strategy defined in the "Study on the Secretariat-General Registers" considers the long-term accessibility to the information of the registers and the fact that the archived data will remain available to the public. The archiving process for the documents of the registers is under the responsibility of the registers' owners and providers, in collaboration with the Commission's Historical Archives Service, and has to be well planned. Nevertheless, if the documents were made public in RegDoc before the archiving, they need to remain publicly available after their archiving. In other words, the user experience of citizens should not be impacted when searching and accessing archived documents. The new RegDoc will implement a business and technical solution in that sense. Moreover, we will investigate possible synergies between RegDoc and the "next generation" web portal that will make the Commission's archives available to the public.

Therefore, this ISA2 action has been extended to include the implementation of the new Register of Commission Documents.

Both projects initiated within the scope of this action will be funded by the following budget lines (total budget of 3 265 KEUR):

- ISA² funding (1 530 KEUR): for the development of reusable platforms.
- SG "Registers and Publications" administrative budget line (1 185 KEUR): for the initialisation of the projects and for the long-term sustainability of the software solutions via minor evolutions, maintenance and support.
- SG "Studies" budget line (100 KEUR): for the initiation of security studies.
- Funding by a future programme (450 KEUR): for the further development of the new register of Commission documents.

Legal basis

The right of access to documents is part of the larger goal of making decision-making as open as possible and as close as possible to the citizen (Art. 1 TEU).

The action contributes effectively to achieving this goal. The Treaty (Art. 15 TFEU) gives European citizens and natural persons residing in a Member State a right of access to documents of the European institutions. Legal persons (e.g. companies or NGOs) having their registered office in the EU also have this right. Pursuant to the Commission's implementing rules, the beneficiaries of the right of access are also natural persons from third countries not residing in a Member State and legal persons not having their registered office in a Member State. Therefore, this action will benefit the public at large.

However, this right has its limits:
- the 'access to documents' Regulation (Regulation 1049/2001) lays down the general principles and limits of the right to access documents of the EU institutions;
- the detailed rules for the application of the Regulation within the Commission are stipulated in Commission Decision 3714 of 5 December 2001 amending its rules of procedure.

Member States are only beneficiaries of access to documents under Regulation 1049/2001 whenever they explicitly request access to documents under that framework. Therefore, requests coming from Member States' national (or subnational) administrations are usually

not dealt with under Regulation 1049/2001, but according to the principle of sincere cooperation laid down in the Treaty (Article 4(3) TEU).

Third countries' authorities and international organisations are not included among the beneficiaries under Regulation 1049/2001. Their requests are handled via the applicable diplomatic channels.

The action will only deal with requests which are in the scope of Regulation 1049/2001.

The solution that the action will implement should comply with the new General Data Protection Regulation (GDPR) which has been in application since 25 May 2018, and the new data protection rules for EU institutions and bodies. It should also comply with the corresponding new implementing rules.

The need for a more fully automated access to documents process is especially pressing because the number of documents to be released to the public is expected to increase following recent evolutions in jurisprudence. The Commission could further reduce the number of access-to-document requests and the workload of its staff by publishing new document types that are of interest to the wider public.

Article 4(3) allows the EU institutions to refuse disclosure of a (part of a) document if the disclosure would seriously undermine an institution's decision-making process, "unless there is an overriding public interest in disclosure". However, recent case law seems to suggest that the Court of Justice is taking a more restrictive interpretation of this "decision-making process" exception, in particular in case of documents containing environmental information. Therefore, the scope of documents that need to be provided to the public is expected to increase.

In addition, article 12 of the Regulation (EC) No 1049/2001 stipulates that "the institutions shall as far as possible make documents directly accessible to the public in electronic form or through a register in accordance with the rules of the institution concerned". In 2002, the Commission set up RegDoc but since then there has been no major overhaul of this register.

The revamping of RegDoc is also in line with the European Commission Digital Strategy by providing the Commission with a transparent, digital, efficient and user-focused register of documents.

Process and actors

The access to document process comprises the following actors:
- Public at large, who might search for a document and potentially apply for access if they cannot find it
- Applicants (beneficiaries under [Regulation 1049/2001](#) and [Commission Decision 3714](#));
- Secretariat-General (SG) of the European Commission:
  o Secretary General;
  o Transparency Unit:
    ▪ Head of Unit;
    ▪ Case handlers;
    ▪ Administrative assistants;
- Cabinet of the President of the European Commission;
- Directorates-General and services, under the remit of which requested documents fall:
  o Administrative Coordinator;
  o Legal Coordinator;
  o Units under the remit of which requested documents fall:
    ▪ Case handler;
- Other EU institutions from which requested documents originate;
- Member States from which requested documents originate;
- Third Parties from which requested documents originate.

Requests for access to documents arrive at the EC ([Regulation 1049/2001](#) specifies "any written form"):
- through a [web form](#) in the [Register of EC documents](#) (RegDoc) application . The current IT solutions supporting this process are fragmented, incomplete and written in an old technology (ColdFusion) which will no longer be supported by the Commission IT landscape as from 2021;
- through paper mail or an e-mail from the applicant;
- through an e-mail from the [AsktheEU](#) website (a website from an NGO), when the applicant chooses to file their request through this website.

To the extent that applicants request (a) document(s) by using the web form, they are invited to specify the Directorate-General under the remit of which the document(s) fall(s). In case the applicant does not specify this information, the SG.C.1 attributes the request to the

responsible Directorate-General/service. The Directorate-General/service is responsible for responding to the request of the applicant.

In case of a negative or partially negative response or if the request is not answered within the legal deadline, the applicant has the right to file a confirmatory application. This confirmatory application is handled by the SG.C.1 Unit and the final answer is an EC decision (of the C series) adopted by the Secretary-General (by delegation from the College of Commissioners). The draft decisions in cases which are considered politically sensitive, are sent to the Cabinet of the President of the EC 24 hours before publication.

The adoption of the confirmatory decisions is processed via E-Greffe and the decisions are formally notified to the applicant through express mail (DHL) with acknowledgment of receipt.

Releasing a document to the applicant means, in legal terms, that the document in question becomes, in principle, publicly available for everybody (*erga omnes*). In practical terms, however, most of the documents disclosed to the applicants are currently not automatically made available to the public at large. The only documents automatically put into the public domain after full access to them is granted are those EC documents, which are available in VISTA IT application and, upon disclosure, automatically uploaded into the Register of EC documents (RegDoc).

As for the RegDoc, it provides citizens with the access to documents drawn up by the Commission since 2001 that fulfil the criteria for the release into the public domain. It was set up in line with the Article 12 of the Regulation (EC) No 1049/2001 [R1], which stipulates: "the institutions shall as far as possible make documents directly accessible to the public in electronic form or through a register in accordance with the rules of the institution concerned".

Currently, all documents and metadata published on RegDoc come from the Commission corporate system supporting the decision-making process (Decide) via the VISTA information system. The register takes a subset of documents/metadata available in VISTA and stores it on its local repository before publishing it. Due to the upcoming decommissioning of VISTA, the migration and the long-term preservation (archiving) of VISTA documents, the current feeding mechanism of RegDoc will no longer be available in the future. Therefore, we need to find a business and technical solution that ensures at the very least the same level of transparency, by making suitable documents and information

available publicly. Moreover, the documents currently available in the register should remain public, regardless of the fact that they will be archived or not.

Some statistics concerning the current process

Annually, the European Commission receives approximately 6000 initial applications for access to documents to which [Regulation 1049/2001](#) applies. Of these requests, approx. 65% come through the web form, while 35% come through other means (as detailed above: paper mail, e-mail from the applicant, e-mail via Ask the EU website).

Annually, the European Commission receives approximately 300 confirmatory applications for the review of initial replies. All these applications come via paper mail, e-mail from the applicant or e-mail via Ask the EU website.

The Register of European Commission documents (RegDoc) provides metadata for approximately 260 000 documents. Out of this, around 29 000 documents (11%) have PDF (Portable Document Format) files attached, translated in multiple languages. As a consequence, RegDoc contains around 350 000 PDF files in total. The documents for which the metadata are provided in RegDoc represent approximately two thirds of the documents available in Vista, whereas Vista contains only a fraction of the documents stored in European Commission repositories such as ARES (internal European Commission document management application) and other systems.

In 2018, nearly 20 000 document references were published in the register. Out of those, for around 15% the actual document was also published, but for the rest only the metadata of the document was publicly available. In these cases, the document can be obtained only by submitting a request for access-to a document under Regulation (EC) No 1049/2001. Such a high number of "references" sends a wrong message about the Commission and implies it is not transparent enough. It is also one of the reasons for a high number of access to document requests. While some documents are genuinely sensitive and need to continue to be published as "references", many others are not and could be published in future.

Currently, the following types of documents are published on RegDoc:
- COM documents (proposals, communications etc.);
- C documents (delegated acts, implementing acts etc.);
- OJ documents (agendas of Commission College meetings);
- PV documents (minutes of Commission College meetings);
- SWD documents (staff working documents such as impact assessments etc.);

- SEC documents that cannot be classified into any other group above;
- JOIN documents (Commission and High Representatives Join Acts)

Purpose of the action

Concerning the access-to-document requests, this action aims to implement a faster and easier solution for EU citizens and other beneficiaries to request access to the documents in possession of the European Commission, to communicate through an online platform with the Commission during the handling of their requests, to follow-up on their requests and to electronically receive the requested documents. It will also modernize and simplify the management system used by the Commission for registering, assigning and handling such requests. This will be explored with the ultimate goal in mind of bringing the EU decision-making process closer to its citizens, and making it more cost-effective.

Concerning the new Register of Commission Documents, the action will transform it into a modern and user-centric register that will serve as a starting point for accessing Commission documents and that will be flexible enough to allow the publication of new document types. In this way, the Commission will not only reinforce its image as a transparent and open administration but also reduce the workload of its staff responsible for access-to-document requests.

Combined, these two initiatives will result in the greater transparency of the Commission and simplify and reduce the need for the submission of acess-to-document requests.

In particular, concerning the access-to-document requests part of the action, the propose is to:
- create an online portal for citizens and businesses dedicated to access-to-document requests:
    o submit easier initial and confirmatory applications for access to documents;
    o provide step-by-step guidance on how best to identify, in their requests, the documents they want;
    o provide an electronic overview of all their requests and all their communications with the Commission regarding their requests;
    o facilitate the communication with the Commission whenever additional information on the request is needed;
    o provide access through the platform to the (fully or partially) released documents;
    o have a personalised user account, update their profile and easily access their personal data held by the Commission in the framework of the treatment of their requests for access to documents;

- o facilitate electronic consultations of third parties in cases where the documents requested originate from them;

- o replace the current paper-based system of communicating with and notifying decisions to applicants by a fully electronic system that will result in decreased delays in providing the requested documents (or a reasoned refusal of access to (parts of) them).

- develop a management system to handle the requests, that provides:
  - o a workflow system for an efficient management of the request;
  - o an easy and integrated way of requesting translations when necessary;
  - o guidance and templates for generating the documents corresponding to each step of the handling of the request;
  - o statistics and reports on requests received, answers provided and documents identified;
  - o where possible, automatic publication of documents to which access is granted in the relevant registers;

To this end, the action will propose a business workflow and also a generic technical solution that could benefit to any transnational, national or sub-national authority dealing with access to document requests, while at the same time investigating the reuse of already existing ISA², EC and open source components.

As for the new Register of Commission Documents, the action will:

- transform it into the main publication tool of the Commission documents;

- allow the public to access up-to-date and user-friendly information;

- allow the publication of new Commission document types;

- make available the documents to the public, even after their archival;

- make the published documents easier to find and access by providing better search capabilities based on the documents' metadata;

- better integrate it with other Commission information systems by linking the documents to their business-specific registers where more information could be found;

- improve user experience in terms of graphic design and navigation;

- implement a modular and flexible architecture allowing an easy expansion of the documents included in the register even beyond the scope of this action.

The new Register of Commission Documents will simultaneously improve the document publication processes, including setting up the workflow for the publication of any new

document type, the user-interface and interlinking with other Commission registers and websites.

7.4.3 OBJECTIVES

The initial objectives of the action were, first, to study the existing processes related to the access-to-document requests and to propose an integrated solution enabling electronic workflows and fully electronic exchanges between all actors involved, and second, to build the solution based on the results of the study.

In light of the "Study on the Secretariat-General Registers", another complementary objective was identified: the need of implementing a new Register of Commission Documents, including the underlying document publication processes, the user-centric interface, the improved search functionalities and the extension of the scope of documents to be published.

In the context of access-to-documents requests process, the action investigates the reuse of existing components to automate and streamline the public access to the EC documents and the supporting flows within the EC, the other EU institutions and the Member States from the first request of the applicant to the final answer of the EC. This includes all communications and exchange of documents with the applicant as well as the consultations with Member States, other EU institutions or third-parties, if applicable.

It is imperative to implement such a solution by 2021, when the current Commission's IT solutions supporting the processes to request public access to documents, implemented in a phasing-out technology (ColdFusion), will no longer be supported by the Commission IT landscape.

The initial study in scope of this action investigated how to give the EU citizens and other beneficiaries a complete overview and traceability of their respective requests and an easy way to communicate with the Commission (e.g. providing extra information on a request) and file confirmatory applications (i.e. administrative appeals).
The action will build a solution allowing the EU citizens and other beneficiaries to receive the requested documents solely by electronic means. At the same time, the solution will ensure the formal traceability of the communication with the applicants, thereby doing away with the need to send messages by paper mail with acknowledgment of receipt. The analysis and the implemented solution will also take into account that the documents to which access is granted under Regulation 1049/2001 should be made available to the public.

This will give Member States, other EU institutions and third parties an overview of all consultations they are involved in and an easy way to respond to these consultations.

On the other hand, the new Register of Commission Documents will take the opportunity to:
- reuse corporate systems such as the Commission document management suite HERMES and building blocks suck as Corporate Search/EUROPA Search, e-UI, ECL;

- implement a modular and flexible architecture allowing easily expanding the new Register of Commission Documents' scope to any type of document that is considered fit for publication;

- transforming the Register of Commission Documents into the central publication tool for Commission documents;

- optimally exploit synergies and provide links to other business-specific registers.

It is also imperative to provide the new RegDoc by 2021 because the current register is implemented in the ColdFusion technology that will not be supported anymore in the Commission.

These objectives relate in the following way to the ISA² objectives: (the ISA² objectives, as listed in decision 2015/2240, are provided in italics)

The objectives of the ISA² programme shall be to:
(a) develop, maintain and promote a holistic approach to interoperability in the Union in order to eliminate fragmentation in the interoperability landscape in the Union;

The current landscape of tools supporting the public access to documents in possession of the EC is fragmented and many exchanges are not electronic:

- The EC provides, as part of RegDoc, a web form allowing EU citizens and other beneficiaries, to request access to the documents in possession of the EC. The current IT solutions supporting this process are fragmented, incomplete and written in a phasing-out technology (ColdFusion) which will no longer be supported by the Commission IT landscape as from 2021.

- The NGO Access Info Europe, established in Madrid in 2006, provides a separate/private website, 'AsktheEU', in which access to information and access to document requests forwarded by e-mail to the EC are published. It makes use of [Alaveteli](#) software, which is an open-source platform for making public freedom of information requests to public bodies. Requests for access to documents under Regulation 1049/2001, submitted via the 'AsktheEU' website, the answers to these requests and the disclosed documents are automatically made public on that website. The disadvantages are that:
  - the personal data contained in the communication between the EC and the applicant are published automatically, including biometric data such as the signature of the Commission official signing the reply to the application;
  - the system does not generate acknowledgments of receipt of the answer and the documents, which are critical to judge whether the confirmatory application was submitted within the stipulated deadlines.
- Today, applicants have no electronic means at their disposal to file confirmatory applications ("appeals" when an initial application is rejected or partially rejected).
- Whereas the consultations concerning documents originating from other institutions are conducted via e-mail only, the consultations with Member States and third-parties are not fully electronic:
  - the consultations concerning documents originating from third parties are conducted via registered mail / DHL and e-mail;
  - the consultations concerning documents originating from Member States are delivered by hand by drivers (SG.C) and e-mail.
- All substantive written exchanges with the applicants, Member States, third parties and other EU institutions are afterwards manually encoded in a different information system, which is called GestDem.
- Currently, all (partially) negative initial replies are delivered by registered mail and by e-mail and all confirmatory decisions are notified to the applicants via DHL by SG.C and by e-mail.
- Notification/Consultation via registered mail (DHL) is required in order to ensure the traceability of communication with the applicants, third parties and Member States.

This action aims to investigate and build the best business and technical solution to reduce this fragmentation while reusing existing components as much as possible. The analysis will focus on the following needs:

- filing initial and confirmatory applications;

- communicating with applicants throughout the application process;
- consulting Member States, other EU institutions and third-parties;
- answering the requests;
- making documents easily and intuitively available for the public, even after their archival;
- interlinking the documents in the Register of Commission Documents with the other business-specific registers from the Commission in order to provide more information, for example on the context and the timeline of the documents.

(b) facilitate efficient and effective electronic cross-border or cross-sector interaction between European public administrations on the one hand, and between European public administrations and businesses and citizens on the other, and to contribute to the development of a more effective, simplified and user-friendly e-administration at the national, regional and local levels of public administration;

This ISA² objective will be met by analysing and implementing a solution for:
- providing better search capabilities based on the documents' metadata, to allow the public to easily find the documents they are interested in;
- proactively publishing more Commission documents that are found fit for publication;
- providing the applicants with an electronic overview of all their requests and all their communications with the EC regarding their requests for access to documents;
- allowing applicants to easily file their initial and confirmatory applications (i.e. "appeals");
- warning the applicants of the deadlines until which a confirmatory application can be filed;
- providing applicants and EC staff with a functionality allowing them to communicate electronically on all applications (e.g. allowing EC staff to request further information from the applicant and allowing applicants to provide further information);
- providing Member States, other EU institutions and third parties with an electronic overview of all consultations they were involved in;
- providing Member States, other EU institutions and third parties with a technical possibility to respond to consultations;
- publishing and making available (excl. storage) of documents, to which access was (partially) given,;
- facilitating the compilation of statistics on requests received, answers provided and documents identified to which access was given or (partially) refused.

The technical solution should be generic in order to be reusable by any transnational, national or subnational authority dealing with access to documents.

(c) create and operate interoperability solutions supporting the implementation of Union policies and activities;

The project relates to this ISA² Objective in the following way.

The handling of requests for access to documents from the public and the publication of documents are regulated by [Regulation 1049/2001](#) and [EC Decision C(2001) 3714](#). The current tools implementing this regulation and decision are in an out-dated technology (ColdFusion) which will no longer be supported by the Commission IT landscape as from 2021 and lead to a fragmented and cumbersome process. The analysis and implementation will investigate the best solution (both in terms of technology and in terms of business process) to provide crucial transparency, in line with the Juncker Commission priority of 'Democratic Change'.

(d) facilitate the re-use of interoperability solutions by European public administrations. The ISA^2 programme shall take into account social, economic and other aspects of interoperability, as well as the specific situation of SMEs and microenterprises, in order to improve interaction between European public administrations on the one hand, and between European public administrations and businesses and citizens on the other.

The project relates to this ISA² Objective in the following way.

The action will explore solutions to provide applicants, Member States, other EU institutions and third parties with a user-friendly interface to the EC. The action will investigate the feasibility of integrating existing ISA² solutions such as Open e-TrustExand EUSurvey with EC corporate solutions (such as CNS, EU Login, HERMES and eTranslation) and other existing solutions, such as the open source [Alaveteli](#) platform (which is used by AsktheEU.org). The aim of the solution is to be generic in order to be reused by any transnational, national or subnational administration to manage public access to documents.
The frontend of the new Register of Commission Documents will be user-centric, with a generic documents/metadata retrieval service that will call the backend, and that could be linked to an open source database instead of the External Repository Services (ERS) of the HERMES suite.

In addition, the action will also investigate how the implemented solutions could be reused to share documents between Member States and EU institutions in order to comply with the duty of sincere cooperation laid down in Article 4(3) TEU.

7.4.4 SCOPE

In scope of the action includes:
- the study of the solution that supports access to documents processes:
  o analysis of the existing access to document processes and the needs for automation;
  o analysis of the existing IT tools and reusable components;
  o proposal of an integrated, generic and reusable solution which includes both the future business process and the technical platform and which is based on the identified business needs and the existing components;
- the implementation of the solution for submitting and handling access to document requests, based on the results of the study:
  o technical architecture of the online platform and underlying analysis;
  o online platform for applicants, enabling the public to request documents, communicate with the Commission and access the (fully or partially) released documents through the platform;
  o management system for the handling of requests for access to documents. . The use of artificial intelligence techniques to facilitate the management of requests for access to documents will be investigated;
  o training material and communication to the users.
- the implementation of the new Register of Commission Documents:
  o technical architecture of the new portal;
  o analyse and review of the scope of documents that will be made publicly available;
  o interlinks with other systems in order to offer the user more detailed information;
  o retrieval of the documents and metadata in the backend from the Commission corporate document system HERMES via the External Repository Services (ERS).;
  o indexation of the metadata to allow for quickly search and retrieval of documents;
  o user-centric frontend, with a generic documents/metadata retrieval service that will call the backend, and that could be linked to any open source database

storing documents. The frontend will include presentation of metadata/documents, search functionalities based on keywords, full-text search (generic service calling the full-text search functionality of the backend), quick search functionalities based on themes that are part of metadata, and generic links between documents and their public business-specific source system. The use of artificial intelligence techniques to facilitate for example the retrieval of documents will be investigated.

Out of scope of the action are:
- the repository where the documents are stored;
- the automatic public release of correspondence relating to requests for access to documents;
- requests for documents from Member States not specifically requesting access under Regulation 1049/2001, and from other EU institutions, as they are out of scope of Regulation 1049/2001 and are handled according to the principle of sincere cooperation laid down in the Treaty (Article 4(3) TEU);
- requests for documents from third countries and international organisations as they are out of scope of Regulation 1049/2001 and are handled via the diplomatic channels;
- the publication in RegDoc of documents that are not created by the Commission.

7.4.5   ACTION PRIORITY

The proposed action complies with all the prioritisation criteria listed in art 7 of the ISA[2] Decision (Decision (EU)2015/2240), as follows. (Hereafter, we indicate the exact wording of article 7 in italics.)

(a) the contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union;

The action responds to a pressing need for interoperability in the public access to documents process between the EC, the European citizens and other beneficiaries, the Member States, other EU institutions and relevant third parties.

As described in section "1.1.3 Objectives", the current landscape of processes and tools supporting the public access to the documents in possession of the EC is fragmented and many exchanges are not electronic.

This action aims to eliminate this fragmentation allowing for efficient and effective electronic cross-border interaction between the Commission and businesses and citizens on the one hand, and between the Commission and Member States, other EU Institutions or further third parties on the other hand. In particular, it will implement a holistic solution for
- filing initial and confirmatory applications;
- communicating with applicants throughout the application process;
- consulting with Member States, other EU institutions and third-parties;
- replying to requests for access to documents;
- making documents available to the public, thereby contributing to the development of a more efficient, modern and user friendly e-administration;
- publication of new documents.

Revamping RegDoc is equally urgent. Not only is it based on on a phasing out technology but its insufficient scope of documents published, outdated design and limited search capabilities prevent citizens from participating and informing themselves about the Commission activities and decision-making processes.

RegDoc will be transformed into the main publication tool of the Commission where the citizens could access and search for Commission documents, regardless if they are archived or not. The new Register of Commission documents will contribute to citizens' increased awareness and understanding of European Union affairs and will stimulate citizens interest to directly engage with "the faces of the Commission" be it locally, nationally or Europe-wide. This approach for transparency supports the Commission Communication "Communicating Europe" (Communication on how to make the Union more united, stronger and more democratic in communication terms) adopted in 2019.

(b) the scope of the action, measured by its horizontal impact, once completed, across the sectors concerned;

Regulation 1049/2001 applies to all areas of activity of the European Union. Therefore, the proposed action will be useful from an interoperability point of view to all EU policy sectors, as a request can concern any document in the possession of the EC.

In 2018, a little bit more than 3 000 documents were published in RegDoc. These documents concern all sectors impacted by European Commission decision-making process. For nearly 16 500, only the metadata (without the document) was made publicly available. This is partly

the reason why there is such a big number of access-to-document requests, in addition to the insufficient scope of documents published on RegDoc.

Annually, the EC receives approximately 6000 initial applications and 300 confirmatory applications for access to documents under Regulation 1049/2001. While some documents are genuinely sensitive and need to continue to be published as "references" (metadata without the document), many others are not and could be proactively published in future.

(c) the geographical reach of the action, measured by the number of Member States and of European public administrations involved;

The potential applicants can be citizens of any Member State or other natural or legal persons irrespective of the place of their residence or registered office. Moreover, the documents requested can be in the possession of the European Commission but originate from the administration of any Member State, in which case the Commission consults the concerned Member State before answering the applicant's request.
The RegDoc users are citizens from across the EU and beyond.

(d) the urgency of the action, measured by its potential impact, taking into account the lack of other funding sources;

The right of access to documents and its implementation are laid down in Article 15 of the Treaty on the Functioning of the European Union, Article 42 of the Charter of Fundamental Rights of the European Union, Regulation 1049/2001 and EC Decision C(2001)3714.

The current tools supporting the public access to documents process are fragmented and are sustained by an old technology (ColdFusion) which will no longer be supported by the Commission IT landscape as from 2021. RegDoc itself is based on the same ColdFusion technology.

Moreover, the future access to documents process needs to become much easier and more user-friendly for the citizen in order to make the EU decision-making process more transparent in line with the Juncker Commission priority of "Democratic Change".

On the other hand, the current system for access to documents has triggered criticism by the European Ombudsman, who considers it to be cumbersome and not citizen-friendly enough. In particular, the requirement of providing the Commission with a postal address (resulting

from the need to notify formally the Commission decisions) is regarded as an instance of maladministration.

The ISA^2 scope and financial capacity fits better for the implementation of the proposal, because the aim of the action is to improve the interoperability and exchange of information and documents with citizens and businesses, Member States, other EU institutions and further third parties.

(e) the re-usability of the action, measured by the extent to which its results can be re-used;

Concerning the access-to-document part, the action will implement a generic solution that may be reused by the Member States and the other EU institutions in order to manage requests they receive from the public for access to documents.
In addition, the solution could also be reused to share documents between Member States and EU institutions in order to comply with the duty of sincere cooperation laid down in Article 4(3) TEU.

The online platform for public access to documents held by the Commission, through which citizens and businesses would have the opportunity to request documents, communicate with the European Commission and receive the Commission's reply could be re-used for other business processes where the public makes a request, communicates with the Commission and receives its decision.
This is, for example, the case for complaints filed by citizens and businesses about infringements of EU-Law (synergies with the ISA2 action 2016.01 "THEMIS – Application of EU law: provision of cross sector communication and problem solving tools" will be investigated), EU competition rules on the market or EU rights.

Moreover, the Register of Commission Documents' frontend will be user-centric with a generic documents/metadata retrieval service that will call the backend, and that could be linked to any open source database storing documents. The frontend will include presentation of metadata/documents, search functionalities based on keywords, full-text search (generic service calling the full-text search functionality of the backend), quick search functionalities based on themes that are part of metadata, and generic links between documents and their public business-specific source system.

(f) the re-use by the action of existing common frameworks and elements of interoperability solutions;

The implemented solution for the management of access-to-document requests will be based on the results of the initial study that will determine which ISA^2 actions can be re-used within the scope. The action will investigate the feasibility of reusing and integrating the following frameworks and components:

- existing ISA/ISA² solutions such as
    - Open e-TrustEx for communication with and delivery of documents to applicants;
    - e-Delivery for conducting consultations and exchange of documents, messages and information with Member States, other EU institutions and third parties;
    - EUSurvey for public consultation on the requirements of the online platform for requests for public access to documents held by the European Commission and for gathering feedback from different stakeholders;

- EC corporate solutions such as:
    - CNS (Central Notification System) for sending notifications to applicants, or third parties;
    - EU Login for authentication;
    - HERMES for the storage and management of documents;
    - ERS (External Repository Services) for the publication of documents;
    - eTranslation services;#
    - IMMC Core Metadata to store the metadata of the document in a format that can be shared by the different systems accessing it;

- other solutions such as:
    - the open source Alaveteli platform.

(g) the link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

The action contributes to the principle of transparency, good governance and participation of civil society, as enshrined in Article 15 of the Treaty on the Functioning of the European Union. It also has a clear link with one of the ten priorities of the Juncker Commission, namely 'Democratic Change'. Increased transparency of the decision-making process and facilitating stakeholder participation in the policy-making process are key elements of this strategic objective. The action will increase transparency by making it easier for the public to request documents in the possession of the European Commission.

7.4.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	See answer to 1.1.5 Action priority – criteria (a).
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. No other alternative action or solution is available for a fully electronic access to document process. However, the action will strive to reuse existing components as much as possible. Yes. The current RegDoc does not fulfil the needs of the large public, due to the fact that it does not publish all the types of documents that should be available for the public. The Commission needs to have a modern, centralized and user-friendly register of documents.

7.4.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	See answer to 1.1.5 Action priority – criteria (b).
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The current RegDoc web form and the external/private AsktheEU website are used for requests across all policy sectors. RegDoc contains documents related to the Commission decision-making process across all policy sectors.

7.4.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	See answer to 1.1.5 Action priority – criteria (c).
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	As explained above, the current 'access to documents' process already contains consultations with all Member States and the analysis and solution implementation will reflect this. The RegDoc users are citizens from across the EU and beyond.

7.4.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	See answer to 1.1.5 Action priority – criteria (d).
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA² fits better as the goal is to improve the interoperability and exchange of information and documents with the EU citizens and other beneficiaries, the Member States, the other EU institutions and third parties. RegDoc is based on a phasing out technology and it is urgent to replace it with a new improved solution.

7.4.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Solution automating the process to handle requests for public access to documents from the initial request to the final answer
Description	See answer to 1.1.5 Action priority – criteria (e).
Reference	
Target release date / Status	Study to be delivered in Q4/2018. The first operational electronic solution will be delivered in Q4/2020.
Critical part of target user base	- The public - Administrations of Member States - EC Staff - Other EU institutions staff - Third parties
For solutions already in operational phase - actual reuse	

level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	The new Register of Commission Documents will be user-centric, with a generic documents/metadata retrieval service that will call the backend, and that could be linked to any open source database storing documents.
Description	See answer to 1.1.5 Action priority – criteria (e).
Reference	
Target release date / Status	The first operational version of the new RegDoc will be delivered in Q4/2020.
Critical part of target user base	- The public - Administrations of Member States - Third parties
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

7.4.5.6   Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	See answer to 1.1.5 Action priority – criteria (f).
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

7.4.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	See answer to 1.1.5 Action priority – criteria (g).

7.4.6 PROBLEM STATEMENT

The problem of	Outdated, mostly paper-based communication process with applicants, Member States, other EU institutions and further third parties.
Affects	The current process and web form for requesting access to documents, effective communication with the Commission and the smooth receipt of the requested documents.
the impact of which is	- Suboptimal e-administration for citizens and businesses on the one hand, and for Member States, other institutions and further third parties on the other hand; - Time and resource consuming, as the manual processing of applications results in difficulties to respect the legal deadlines of 15 working days laid down by Regulation 1049/2001; - Notification costs for correspondence sent by surface mail (DHL, Belgian post); - Manual, routine work for Commission staff; - An image of the Commission as an outdated public administration.
a successful solution would be	A comprehensive analysis and fully electronic solution that would allow citizens and businesses to request access to documents, communicate effectively with the Commission and receive the

	requested documents electronically. In addition, it would allow Member States, other EU institutions and third parties to communicate electronically with the Commission in a speedier and more efficient manner.

The problem of	There is no unique register where all public Commission documents can be found. Current registers form "isolated hubs" of information, each one serving its very specific purpose.
Affects	The public who needs to search in many different registers in order to find the information they are looking for.
the impact of which is	- Commission image is tarnished and implies that is not transparent enough; - The citizens are often not able to find the Commission document they are searching for; - Less visibility of Commission documents; - A lot of requests for access to documents.
a successful solution would be	Implementing a new Register of Commission Documents whose scope will be to: - Render as the unique, modern and user-centric register of all documents published by the Commission; - Review of the scope of the documents and metadata published on the register, in cooperation with the relevant business units, to include as many documents as possible in the register, not only from the Secretariat-General but potentially documents produced in other Directorates-General's systems; - Interlink with relevant data published on other Commission systems or external systems (e.g. EurLex) in order for the user to be able to access more information about the documents.

The problem of	Having an outdated IT system for handling requests for access to documents
affects	the speed, quality, cost and outcome of the work on access to documents
the impact of which is	- Delays in the handling of the requests; - Absence of statistics providing an overview of the requests dealt with, the documents requested and the released documents; - Inconsistencies in the handling of identical/similar requests; - Manual and repetitive work for staff of the Commission, other EU institutions, Member States and further third parties; - The absence of workable statistics and delay monitoring; - Difficulties in finding similar documents to which access was already granted in the past; - Complications when finding back personal data of an applicant in case the latter asks for an overview of its own personal data.
a successful solution would be	A requests management system that allows an efficient up to date handling of the request and identification of identical/similar/repetitive requests for access to documents.

The problem of	The current IT system is written in a phasing-out technology (ColdFusion) which will no longer be supported by the Commission IT landscape as from 2021. This may result in the absence of any IT system for handling requests for access to documents.
Affects	The current web form for requesting access to documents. The continuity of service, speed and cost of the work on access to documents.
the impact of which is	- Rising maintenance costs and risk of service discontinuity; - Major delays in the handling of the requests; - Consequent increase of manual work for staff of the Commission; - If the new system is not operational before 2021: the absence of any database for handling requests for access to documents, as the IT platform on which the current database GESTDEM and the current RegDoc are based will not be supported by that time.
a successful solution would be	Modern, interoperable, secure and reliable IT systems supporting the full process for handling requests for access to documents. A technical solution that reuses existing components as much as possible and that may benefit to any transnational, national or subnational administration dealing with access to document requests and the publication of Commission documents.

7.4.7 IMPACT OF THE ACTION

7.4.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	The possibility of sending documents electronically would save costs associated to postal sending of the documents (DHL and Belgian Post).	Q4/2020	European Commission
(+) Savings in time	An online platform would allow citizens and businesses as well as public administrations to gain time when filing/handling a request for access to documents.	Q4/2020	Citizens / businesses / national administrations
(+) Savings in time	Proactively publish more documents in the new Register of Commission documents will reduce the number of electronic requests for access to documents.	Q4/2020	Citizens/ businesses/ national administrations
(+) Savings in time	A more efficient way to identify the requested documents, the documents released as well as similar/identical requests would save time and increase the quality of replies. Electronic exchanges, replacing a paper signatory, would save time and resources and reduce avoidable administrative work.	Q4/2020	European Commission
(+) Better interoperability and quality of digital public service	An online platform for requests for public access to documents held by the European Commission will provide a better quality digital service, which is more user-friendly, more up to date and better meets the needs of the Commission, other institutions,	Q4/2020	Citizens / businesses / EU and national administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	citizens, businesses and Member States.		
(+) Increased transparency	An online platform will make it easier to introduce and follow-up requests for public access to documents. More types of documents will be published on RegDoc, therefore the system becomes the main repository for the public in order to find Commission documents, not only from the Secretariat-General but potentially documents produced in other Directorates-General's systems.	Q4/2020	Citizens / businesses / EU and national administrations
(+) Better interoperability with other Commission information systems	Interlinking of the new Register of Commission documents with different websites will unleash the full potential of publicly available information.	Q4/2020	Citizens / businesses / EU and national administrations
(+) Technological evolution	Implement the principles and logic of the Commission web presence when publishing information on EUROPA and provide a modern user experience, further boosting Commission's transparency.	Q4/2020	Citizens / businesses / EU and national administrations

7.4.7.2 User-centricity

During the analysis phase, we will deliver a user role model. On this basis, we plan to assemble a user task force where all user roles are represented. This user task force will help the Business Analyst capture use cases and business needs.

As part of the study, several consultations were organised:
- a consultation on EUSurvey to gather feedback from the external stakeholders (citizens, private organisations and/or any other potential applicant). This public consultation took placefrom 29 June 2018 to 21 September 2018;

- a consultation of internal users using/knowing the current IT system was carried out on 26 and 29 June 2018 based on a specific questionnaire conceived for internal users. The target group was composed of Legal and Administrative coordinators for access to documents in all Commission Directorates-General;
- a consultation of the users in the Transparency Unit of the Secretariat-General took place on 11 July 2018 based on the questionnaire for internal users;
- another consultation was done for users who represent other institutions and/or Member States in their role of potential authors of documents on which they need to be consulted;
- end-user usability testing based wire-frames and high-fedility prototypes will be performed within the scope of the business analysis;
- applicable artificial intelligence, data mining and data analytics techniques will be inventoried and studied to assess their potential added-value in helping users find the relevant documents

During the implementation of the solution, the group of internal users will be kept closely involved in the project, while the external ones will be consulted if needed.

The solution for the management of the access-to-document requests and the new RegDoc will be user-centric and try to minimize manual data encodings throughout the business process. The respective online portals will also be designed from a user-centricity perspective, in order to provide to the EU citizens, the applicants, the staff of the Commission, other EU institutions, Member States and further third parties a user-friendly interface and notification mechanisms for important events throughout the process.

7.4.8 EXPECTED MAJOR OUTPUTS

Output name	Assessment of security & confidentiality
Description	Examine how the personal data of the applicants, the staff of EU institutions, Member States and third parties can be kept confidential and protected, in accordance with - the new General Data Protection Regulation (GDPR Regulation (EU) 2016/679); - the data protection rules for EU institutions and bodies (Regulation (EU) 2018/1725; - and the corresponding new implementing rules that the Commission will put in place.
Reference	
Target release date / Status	Study to be delivered in Q4/2018. The first operational electronic solution will be delivered in Q4/2020.

Output name	Requests Management system (version 1, version 2, version 3)
Description	Management system to handle the access to requests, including: - the workflow for the handling of access of documents requests; - assessment of the requests to detect similar/identical requests; - electronic guidance and templates for providing assistance to internal users to draft outgoing communications, decisions and/or other required documents; - creation of statistics on the requests received, documents released etc; - creation of additional features to translate documents; - creation of the online platform allowing to communicate with third parties;

	- possibility to automatically publish released documents; - integration with corporate decision-making systems.
Reference	
Target release date / Status	Q1/2021

Output name	Public Portal for the access-to-document requests (version 1, version 2)
Description	- creation of the online platform allowing to communicate with applicants and third parties; - possibility to launch an Ares workflow through the online platform; - integration with the new RegDoc.
Reference	
Target release date / Status	Q1/2021

Output name	Backend of the new Register of Commission Documents
Description	- The backend will retrieve the documents and metadata from the HERMES suite via the External Repository Services (ERS). Moreover, it will store the metadata to allow for their indexation.
Reference	
Target release date / Status	Q4/2020

7.4.9 ORGANISATIONAL APPROACH

7.4.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission	SG.C1	Project Owner, Business Manager
European Commission	SG.C5	System Provider, Project Manager
European Commission	DIGIT.B.2	System provider of HERMES (the Commission's corporate document management system) and Decide (the system supporting the decision-making process of the Commission)
European Commission	SG.B.4	System owner of Decide
European Commission	SG.G.4	System owner of several Secretariat-General Registers
European Commission	SG.A.1	System Owner of European Citizen's Initiative
European Commission	SG.DPO	System Owner of the Data Protection Records Management System
European Commission	DIGIT.S.1	Unit responsible for the IT Security Policy
European Commission	DIGIT.D.1	Provider of Data Services for the application of artificial intelligence and data analytics techniques
European Commission	OIB.OS.1	System Owner of the Historical Archives
Applicants (European citizens, as well as other natural and legal persons, irrespective of the		End users of the online platform. Consulted as part of the initial study; public consultation from 29 June to 21 September 2018.

Stakeholders	Representatives	Involvement in the action
place of their residence or registered office)		
Commission services		End users of the requests management system
AsktheEU.org	Access Info Europe	Business owners of one of the external/private systems in the current fragmented landscape
Member States	Permanent Representations	Involved in the consultation process prior to replying to some access to documents requests.
Other EU institutions	Access to documents units of other EU institutions	Involved in the consultation process prior to the EC replying to some access to documents requests.
Third parties		Involved in the consultation process prior to the EC replying to some access to documents requests.
mySociety	mySociety is a not-for-profit social enterprise, based in the UK but working with partners internationally. They build and share digital technologies that give people the power to get things changed, across the areas of Democracy, Freedom of Information, and Better Cities.	Providers of Alaveteli, one of the components that will be assessed during the study

7.4.9.2 Identified user groups

The main end-users of the solution would be:

1. Public at large, who searches for a document on RegDoc and potentially apply for access if they cannot find it;
2. Applicants, which may be EU citizens, or other natural or legal persons, irrespective of the place of their residence or registered office;
3. NGOs defending the rights of applicants;
4. EC staff from different Directorates-General and Services, from the Secretariat-General and from the Cabinet of the President (e.g. Legal and Administrative coordinators for access to documents and Case handlers, Transparency Unit staff dealing with access to documents in the Secretariat-General);
5. Other EU institutions' staff;
6. Member States' administration or Permanent Representation staff;
7. Third parties.

7.4.9.3 Communication and dissemination plan

The initial study was nourished through dialogue with the stakeholders. Once the study was finished, its findings will be communicated to the user task force and to other relevant stakeholders.

In particular, there are regular meetings, which take part at least twice a year of the network of Legal and Administrative coordinators for access to documents, through which they will be engaged for feedback or participation in the action. This has already been done during the study phase and will continue during the solution implementation phase. Trainings sessions will also be organised once the system is mature enough for all end users (coordinators and case handlers). The training material (hands-on/off course material, user manuals and e-learning modules) will be produced by the SG corporate training team. Once they have been thoroughly reviewed and tested, they could be submitted to the new "Interoperability Academy".

In the case of external users, information about the public portal will be disseminated once it is ready (or shortly before) by using the means available from ISA[2] communication team, as well as by all means that the Communication Unit in SG can provide. Noteworthy achievements will also be shared via ISA² communication channels such as the newsletter and web site.

7.4.9.4 Key Performance indicators (KPIs)

Description of the KPI	Target to achieve	Expected time for target
Comprehensive analysis and modelling of the business process for the management of access-to-document requests	100%	Q4/2018
Comprehensive proposal of a generic technical solution for the management of access-to-document requests	100%	Q3/2019
% of requests for access-to-document through the web portal answered electronically	100%	Q4/2020
# of replies by manually written email outside of the web portal for the access-to-document requests	0%	Q4/2020
Number of initial and confirmatory applications answered outside of deadline	0%	Q4/2020
Increase the number of documents published via the new Register of Commission Documents	10%	Q4/2020
Increase the document categories/types published via the new Register of Commission documents	10%	Q4/2020
Increase the users' satisfaction with the new Register of Commission Documents	80%	Q4/2020

7.4.9.5 Governance approach

The action will be implemented by the two different projects (EASE for the management of the access-to-document requests and the new RegDoc) and will follow the standard PM2 governance structure:

- System Owner: Ms. OLIVAN AVILES Maria (SG.C1)

- System Provider: Mr GRITSCH Martin (SG.C5)

- Project Manager: Mr. CHARMANT Thomas (SG.C5)

- New RegDoc Project Manager: Mr. REVUELTA RODRIGUEZ Javier (SG.C.5)

- Business Managers:Mr Dejan BRKIC (SG.C1)

- Project Support Team (PST): Appointed

- Project Core Team (PCT): Appointed

- Business Implementation Group (BIG):

    o Representatives from SG.C.1 unit(access to documents sector),

    o Legal and administrative coordinators in other Commission departments,

    o Representatives from other EU institutions,

    o Representatives from the Member States,

    o Representatives from civil society.

7.4.10 TECHNICAL APPROACH AND CURRENT STATUS

The main results achieved during the period 01/01/2018 – 30/06/2018 are as follows:

- The team progressed with the analysis of the requirements for the management of the access-to-document requests of the different stakeholders involved in the process.
- A consultation of internal users of the current IT system was carried out on 26 and 29 June 2018 based on a specific questionnaire. The target group was composed of Legal and Administrative coordinators for access to documents in all Directorates-General.
- A consultation was carried out using EUSurvey to gather feedback from external stakeholders (citizens, private organisations and/or any other potential applicant). This public consultation took place from 29 June to 21 September 2018.

During the second half of 2018, the following activities were carried out:

- The results of the external and internal stakeholder consultation exercises were analysed and documented.
- The current and future access to document requests processes were modelled, validated and documented.
- Based on the newly acquired feedback and requirements the EASE project was initiated and the Business Case was drafted to fledge out the scope, benefits, risks and alternatives.

The results and achievement during the period 01/01/2019 – 30/06/2019 were as follows:

- The Business Case and Project Charter documents for the EASE project were finalised and meetings with the suppliers of existing IT frameworks and components were organised to decide on the main architectural features of the EASE citizen's portal and back-office system.
- The procurement procedures for the business analysis of the EASE project were launched.

- The new RegDoc project was initiated in light of the conclusions of the "Study on the Secretariat-General Registers" as an extension to this ISA² action. The corresponding Business Case document was drafted and approved by the IT governance bodies.

In the second part of 2019, the analysis and development of the new solution for the management of the access-to-document requests (EASE) will start within the scope of the EASE project. In parallel, the Project Charter and the analysis of the new RegDoc will be carried out. The following milestones will be delivered:
- The business analysis and technical architecture of the future access to Commission documents requests management system.
- Results of the usability testing and stakeholder feedback.
- The first deliveries of the workflow management system. The procurement procedures will be prepared during the third quarter to start the development work towards the end of the year.
- The Project Charter of the new RegDoc.
- The analysis of the new RegDoc will start.

From 2021 onwards, the new electronic access to documents platform and the new Register of Commission Documents will be sustained by the SG administrative "Registers and Publications" budget line for minor evolutions, maintenance and support. The Digital

European Programme (DEP) would be the natural choice to continue the successful activities of the new register of Commission documents.

7.4.11 COSTS AND MILESTONES

7.4.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
Planning, Execution	Study to analyse and propose an efficient solution for the management of access to EC documents requests	140	80 : ISA^2 60 : SG administrative budget line 'Registries and publications'	Q2/2018	Q4/2018
Initiation, Planning	EASE Business Case, Project Charter	40	ISA^2	Q1/2019	Q1/2019
Execution	EASE technical analysis, architecture design	200	ISA^2	Q1/2019	Q2/2019
Initiation, Planning	RegDoc Business Case, Project Charter	40	Administrative budget line 'Registers & publications'	Q2/2019	Q3/2019
Execution	Development	320	220 : ISA2	Q3/2019	Q1/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	of the EASE Management system Version 1 (initial application)		100 : SG administrative budget line 'Registries and publications'		
Execution	RegDoc business and technical analysis, architecture design	110	85: Administrative budget line 'Registers & publications' 25: SG "Studies" budget line	Q3/2019	Q1/2020
Execution	RegDoc backend version 1 (first version, retrieving from ERS documents externalised by Decide)	200	Administrative budget line 'Registers & publications'	Q1/2020	Q2/2020
Execution	RegDoc frontend version 1 (first version of the portal, with the search feature and displaying	150	100: ISA2 frontloaded in 2019 50: ISA2 2020	Q1/2020	Q3/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	information of the documents)				
Execution	Development of the EASE Management system Version 2 (confirmatory application)	320	220 : ISA2 100 : SG administrative budget line 'Registries and publications'	Q4/2019	Q3/2020
Execution	Development of the EASE Public Portal version 1 (applicants and third parties)	340	ISA2	Q1/2020	Q4/2020
Execution	RegDoc backend version 2 (First release in production, including the migration of the documents currently in RegDoc)	200	Administrative budget line 'Registers & publications'	Q2/2020	Q4/2020
Execution	RegDoc front-end version 2 (First public release of the portal, including	150	ISA2	Q3/2020	Q4/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	linking to relevant document information in other systems)				
Execution	Development of the EASE management System version 3 (integration with corporate decision making systems)	100	25 : SG administrative budget line 'Registries and publications' 75 : SG "Studies" budget line	Q4/2020	Q1/2021
Execution	Development of the EASE public portal version 2 (integration with RegDoc)	125	50 : ISA2 75 : SG administrative budget line 'Registries and publications'	Q4/2020	Q1/2021
Closing	EASE project closure and Final evaluation	80	ISA2	Q4/2020	Q4/2021
Execution	RegDoc backend version 3 (integrate documents from RegDIA	150	100: SG administrative budget line 'Registries and publications' 50: future	Q1/2021	Q3/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	and RegExp)89		programme		
Execution	RegDoc frontend version 3	100	future programme	Q3/2021	Q4/2021
Execution	RegDoc backend version 4 (integrate documents from ECI, DPMS and DORIE)90	150	100: SG administrative budget line 'Registries and publications' 50: future programme	Q1/2022	Q3/2022
Execution	RegDoc frontend version 4	100	future programme	Q3/2022	Q4/2022
Execution	RegDoc backend version 5 (enlarge further the scope of RegDoc)	150	100: SG administrative budget line 'Registries and publications' 50: future programme	Q1/2023	Q3/2023
Execution	RegDoc frontend version 5	100	future programme	Q3/2023	Q4/2023
	Total	3 265			

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[89] Register of Delegated and Implementing Acts and Register of Expert groups

[90] European Citizen's Initiative, Data Protection Records Management System and the database on documentation and research on interinstitutional issues

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
		(ISA2: 1 530)			

7.4.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016			
2017			
2018	Planning, Execution	80	80
2019	Initiation, Planning, Execution	700	700
2020	Execution, Closing	750	750
	Total	**1 530**	**1 530**

7.4.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Treaty on European Union: - Article 1 states that "decisions are taken *as openly as possible* and as closely as possible to the citizens";	TEU	

Description	Reference link	Attached document
- Article 4(3) enshrines the duty of sincere cooperation between EU institutions and Member States.		
Treaty on the Functioning of the European Union: Article 15 grants, within certain conditions, a right of access to documents of the Union's institutions, bodies, offices and agencies to any citizen of the Union, and any natural or legal person residing or having its registered office in a Member State.	TFEU	
Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents	Regulation 1049/2001	
Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October	Regulation 2018/1725	

Description	Reference link	Attached document
2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC (Text with EEA relevance.)		
Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance)	Regulation 2016/679	
2001/937/EC,ECSC,Euratom: Commission Decision of 5 December 2001 amending its rules of procedure (notified under document number C(2001)	EC Decision C(2001) 3714	

Description	Reference link	Attached document
3714). Article 1 defines beneficiaries of the right of access to documents as EU citizens and other natural and legal persons irrespective of the place of their residence or registered office.		
Study on the Secretariat-General Registers	Ares(2019)3155577	
e-Domec – "electronic archiving and document management in the European Commission"	https://myintracomm.ec.europa.eu/sg/dm/Pages/index.aspx	
European Commission Digital Strategy	https://ec.europa.eu/info/publications/EC-Digital-Strategy_en	

7.5 INTEROPERABILITY REQUIREMENTS FOR THE SINGLE DIGITAL GATEWAY IMPLEMENTATION (2017.05) – FUNDING CONCLUDED

7.5.1 IDENTIFICATION OF THE ACTION

Service in charge	DG GROW.E3
Associated Services	DG GROW.R4, DG.GROW.R3

7.5.2 EXECUTIVE SUMMARY

The proposal for a Regulation on a single digital gateway of 2 May 2017 (COM(2017)256) aims at making it easier for citizens and companies who need to navigate regulatory and administrative requirements to access the necessary information, procedures and assistance services online. It foresees the development of support IT tools:

– a **search facility** that will link to information and procedures located on EC and Member States websites – this search facility may raise interoperability questions in cases where Member States hold the information in specific databases. Furthermore, the search facility will use the information included in a limited set of webpages and portals. The links to these webpages and portals will be included in a repository. Automatic updating of such links should be enabled where technically feasible;

– a **common assistance service finder**, that will link to assistance and problem solving services offered by EC and Member States authorities;

– **user feedback tools** aimed at assessing and improving the quality of information, procedures and assistance services – here interoperability questions may be raised as regards the link to existing user feedback tools and with tools collecting user statistics,

– a **tool for gathering feedback on obstacles to the Single Market** – interoperability questions may be raised as regards the link to information collected by assistance and problem solving services;

– **a backoffice dashboard** collecting input from several sources (common and national user feedback tools, national user statistics collected by web analytical tools, case handling data from assistance services) and offering an interface for analysing and monitoring these data to the national coordinators and the Commission;

– tools for supporting the **acceptance and the exchange of digital evidence** in the frame of administrative procedures (being developed as part of The Once Only Project - TOOP project).

To optimise their functioning and to limit administrative burden, it is essential that they are conceived and developed in a manner that ensures:

- optimal synergies between the tools themselves;
- and interoperability between EU level and Member States IT solutions where relevant.

This action aims to provide the technical basis for implementation of the future Regulation by detailing the IT architecture of the single digital gateway and by ensuring functional, technical and semantic interoperability for the development of the IT tools and their interconnection with Member States IT tools and EU level tools.

The text of the Commission's Proposal has been agreed by the Council and the EP in the first half of 2018 and is foreseen to be formally adopted by the end of 2018.

Meanwhile the Commission has contracted an external consultant to formalise the requirements listed in the current action.

7.5.3 OBJECTIVES

In addition to other preparatory works (ongoing pilot on the search facility, analysis of feedback mechanism, etc.), this action would provide a technical basis for the implementation of the single digital gateway by:

- further specifying the IT architecture, including business processes, data model, identification of services, responsibilities for service provision, and data exchange requirements,
- defining functional and technical requirements (and related KPIs),
- listing cases where functional, technical or semantic interoperability questions may arise, and for each of these cases:
  - o assessing the current situation and identifying interoperability challenges,
  - o assessing the target situation,
  - o assessing interoperability gaps.
- identifying interoperability enablers to address the (potential) gaps: existing tools (such as IMI and YEST), building blocks (such as ISA² and CEF solutions), standards and development needs,
- proposing options for implementation, and estimating related impacts and costs.

This action will directly contribute to the objectives of the ISA² programme by supporting interoperability between public administrations.

7.5.4 SCOPE

The project shall cover all IT tools foreseen to support implementation of the single digital gateway (SDG):

- − search facility and repository for links,
- − common assistance service finder,
- − user feedback tools (quality),
- − user feedback tools (Single Market obstacles),
- − common dashboard,
- − tools for the acceptance and exchange of digital evidence.

The scope might evolve to reflect outcomes of the negotiations with the European Council and the European Parliament.

It shall provide architecture and identify possible solutions to ensure interoperability between the SDG IT solutions at EU level and with Member States IT solutions where relevant.

The expected deliverables are: the IT architecture; a list of requirements; for each of the IT tools listed in the executive summary: analysis of the current and target situations, analysis of interoperability problems; an analysis of interoperability enablers and development needs; and options for implementation.

Development of the IT tools themselves is outside the scope of this project.

7.5.5 ACTION PRIORITY

7.5.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:*	This action will directly contribute to the objectives of the ISA² programme by supporting interoperability between public administrations. It will contribute to the implementation of the overall EIF principles and recommendations, and will look into the

Question	Answer
• *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	possibility to use some aspects of EIRA. Besides, the action will start with an analysis of the current situation, in order to assess the possibility to reuse existing tools and building blocks, such as CEF building blocks.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	In the absence of this action, solutions proposed to address interoperability questions might need to be developed for each tool independently, and not enable an overall interoperability of the SDG tools. This will lead to greater costs and administrative burden.

7.5.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The tools foreseen by the single digital gateway should be used in the internal market covering a wide range of activities linked to, among others, education, employment, civil status, transport, social security, business registration, etc., across all Member States.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	N/A

7.5.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Outcome of the action would apply to EU-level tools. Interoperability challenges with Member States systems may arise across Europe (e.g. interoperability questions on user feedback tools arise for half of the Member States).
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	N/A

7.5.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Assuming that the Regulation is adopted by mid-2018, its provisions would have to be implemented at the latest two years later. Given the time needed to develop the IT tools that should support the single digital gateway, information on interoperability requirements and options for their implementation would need to be known before the development of the tools start, i.e. by the end of 2018 at the latest.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Supporting interoperability between public administrations at the heart of this action. The ISA² programme is therefore the ideal tool to facilitate its implementation.

7.5.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Interoperability solutions
Description	Options to ensure interoperability between the SDG IT tools and with the Member States IT tools
Reference	
Target release date / Status	2018
Critical part of target user base	All Member States authorities, but also at EU level, responsible for IT tools that would need to interoperate with the SDG IT tools (e.g. authorities responsible for databases, for user feedback tools, for tools collecting user statistics, for assistance and problem solving services, etc.)
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	N/A

7.5.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA^2, ISA or other relevant interoperability solution(s)? Which ones?	The proposal will contribute to the implementation of the overall EIF principles and recommendations. The possibility to use the CPSV-AP and the ISA core vocabularies like the persons and location vocabularies in this frame will be assessed. Besides, the action should start with an analysis of the current situation, in order to assess the possibility to reuse existing tools and building blocks.

Question	Answer
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	N/A

7.5.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The proposal is directly aimed at the implementation of the single digital gateway Regulation, which is one of the actions announced both in the DSM and in the Single Market Strategy.

7.5.6 PROBLEM STATEMENT

The problem of	Lack of interoperability between IT tools used by public services
affects	EU and Member States authorities
the impact of which is	Costs, administrative burden
a successful solution would be	Options to ensure interoperability between the SDG IT tools at EU level and with the Member States IT tools

7.5.7 IMPACT OF THE ACTION

7.5.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Direct impact: interoperability will limit the costs incurred by EC and Member States authorities for implementing the SDG Regulation	2020	EC and Member States authorities
(+) Savings in time	Direct impact: interoperability will limit the time spent by EC and Member States authorities for implementing the SDG Regulation	2020	EC and Member States authorities
(+) Better interoperability and quality of digital public service	Increasing interoperability and quality of digital public service is at the heart of this action.	2020	EC and Member States authorities
(-) Integration or usage cost	To be estimated by the action	2020	EC and Member States authorities

7.5.7.2 User-centricity

Member States authorities will be involved in the whole process through exchanges on the project and its implementation in the frame of the meetings of the EUGO network, of the Your Europe Editorial Board, and of the single digital gateway coordination group once established.

7.5.8 EXPECTED MAJOR OUTPUTS

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	IT architecture
Description	IT architecture and possible solutions ensuring interoperability between the SDG IT solutions at EU level and with Member States IT solutions where relevant.
Reference	
Target release date / Status	2018-2019

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Functional and Technical requirements overview
Description	Consolidated list of all legal, organisational and technical requirements to be fulfilled by the SDG
Reference	
Target release date / Status	2018-2019

Output name	Assessment of the current situation and existing tools
Description	Assessment of the current situation and identification of interoperability problems. Identification of existing tools, including possible scenarios for implementation and related costs.
Reference	
Target release date / Status	2018-2019

7.5.9 ORGANISATIONAL APPROACH

7.5.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States authorities (national, regional, local levels)	Points of Single Contact, Your Europe Editorial Board representatives, single digital gateway national coordinators once designated	Regular meetings to discuss development and implementation

7.5.9.2 Identified user groups

EC and Member States authorities.

7.5.9.3 Communication and dissemination plan

The project will be advertised and discussed in the frame of the EUGO network, of the Your Europe Editorial Board and of the single digital gateway coordination group once established. Both groups will enable to reach the authorities that are the main target group for the project. Each group is meeting twice a year and joint meetings could be organised as required. Specific events dedicated to this project may also be organised.

7.5.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[91] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Degree of completeness of the IT architecture	100%	2018

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[91] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

Description of the KPI	Target to achieve	Expected time for target
Number of Member States analysed as regards their existing IT tools	28	2018
Degree of completeness of the functional and technical requirements to achieve the SDG	100%	2018
Number of existing tools and building blocks analysed	At least 2	2018
Degree of completeness of the final recommendations	100%	2018

7.5.9.5 Governance approach

The project will be managed by DG GROW services, as indicated above. Member States authorities will be involved in its development and implementation in the way described above.

7.5.10 TECHNICAL APPROACH AND CURRENT STATUS

The contractor has fulfilled its tasks on project management, delivered IT architecture, functional and technical requirements, identified interoperability challenges, handed over the final report and fulfilled the necessary ad-hoc activities (such as participated on the EUGO/YEEB meeting and delivered a report on it) under the contract of "Study on functional, technical and semantic interoperability requirements for the single digital gateway implementation". We aim to continue the work by launching a follow-up study that would provide us with already specific data interoperability requirements for gateway's feedback tools, statistics tools and assistance services categorization for the assistance service finder.

7.5.11 COSTS AND MILESTONES

7.5.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Inception report	10	ISA²	Q4 2017	Q1 2018
Planning	IT architecture	90	ISA²	Q4 2017	Q1 2018
Planning	Technical and functional requirements overview	100	ISA²	Q4 2017	Q2 2018
Execution	Assessment of the current situation and identification of interoperability problems	60	ISA²	Q2 2018	Q2 2019
Execution	Identification of existing tools, building blocks and development needs	50	ISA²	Q3 2018	Q2 2019
Execution	Options for implementation and estimation of costs	100	ISA²	Q4 2018	Q2 2019
Closing / Final evaluation		10	ISA²	Q4 2018	Q2 2019
	Total	420			

7.5.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Initiation	10	10
2017	Planning/Execution	190	190
2018	Execution	210	
2018	Closing / Final evaluation	10	

7.5.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Proposal for a Regulation on a single digital gateway	https://ec.europa.eu/info/law/better-regulation/initiatives/com-2017-256-0_en	

8 SUPPORTING INSTRUMENTS FOR PUBLIC ADMINISTRATIONS

8.1 EUROPEAN INTEROPERABILITY ARCHITECTURE (EIA) (2016.32)

8.1.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	DG GROW, SRSS

8.1.2 EXECUTIVE SUMMARY

European interoperability architecture (EIA) Coordination between EU and Member States' public administrations is highly important to avoid digital barriers between administrators, businesses and citizens and increase public administration efficiency.

EIRA (European Interoperability Reference Architecture) plays a crucial in the realisation of such coordination as it provides a reference model that describes in a common way digital European public services, making it possible for you to search, share and reuse digital solutions.

EIRA provides a common terminology that architects, portfolio managers, and business analysts can use when performing the following tasks:

1.   Design interoperable E-government solutions

2.   Assess solutions in different areas and identify focal points for convergence and reuse

3.   Document and Share prominent interoperability solutions

4.   Discover and reuse solutions through the European Interoperability Cartography

Developed through an open and inclusive change management process, the EIRA applies the principles of Service-Oriented Architecture (SOA) as an architectural style.

After a public consultation, EIRA version 1.0.0 was released in March 2016. Since then, it has been downloaded more than 2200 times.

In 2019 major new versions EIRA v3.0.0 and supporting tool Cartography Tool, CarTool, v3.0.0 were released. These versions are a breakthrough in supporting the creation of digital public services. They have been successfully deployed in Italy, Sweden and Norway deployments and several Webinars. There is an increasing demand for EIRA/CarTool from Italy, Finland, Sweden, Spain and Portugal.

In relation to EIRA v3.0.0 the quality of definitions has improved dramatically, the implementation of a **Persistent URI for each ABB**, the identification of the **key**

interoperability enablers in accordance to the ISA^2 decision[92] (this has decisive input for Legal/Organizational interoperability ISA^2 actions) and the GDPR compliance are features included in this new version.
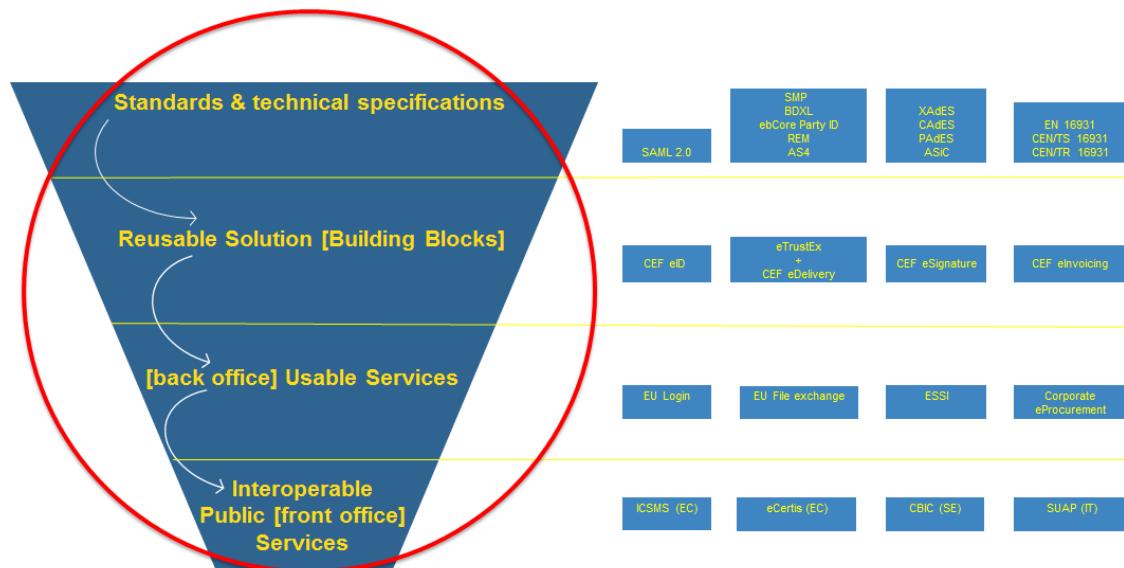
In relation to CarTool v3.0.0 it became an open platform to:

- Import other references architectures to be used w EIRA (i.e. the Open Group Cloud Computing Reference Architecture)
- Includes the EIRA Library of Interoperability Specifications
- Includes My Library

In 2020-2022 the focus will be in developing EIRA Library of Interoperability Specifications, in developing the eGoverment European Reference Architecture roadmap, in developing the and deploying the High-Level and Detail-Level European Data Exchange Gateway Solution Architecture Templates and in deploying all these solutions in the Member States.

EIA action has a key supporting the European Commission Digital Strategy and the upcoming Digital Europe Programme.

The below figure positions EIA within the ECDS ' steps for creating Reusable Solutions Platform

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[92] Decision (EU) 2015/2240 of 25.11.15 on establishing the ISA2 programme. "key interoperability enablers means interoperability solutions that are necessary to enable the efficient and effective delivery of public services across administrations"

8.1.3 OBJECTIVES

The objective of this action is to establish, operate, maintain, improve, apply and promote a European Interoperability Reference Architecture (EIRA) for the European digital transformation of Public services.

8.1.4 SCOPE

Any possible digital public service is in scope, as far as it concerns its representation of the EIRA action. This includes also Trans European Systems (TES) developed by the Commission and/or the Member States.

More particularly the following activities fall under the action in question:

- Ensure that a mature version of EIRA is well documented, linked with pertinent ISA^2 and other EU programme solutions (European Interoperability Catalogue, Joinup, Trans-European Systems, European Catalogue of Standards, etc.) and well communicated to its potential users;
- Support the use of EIRA, through pilots and an ad-hoc helpdesk, as an enterprise architecture paradigm for systems such as the TES, solutions developed by other Commission initiatives such as eSENS and CEF and other key digital solutions in the MS public sector;
- Improve the EIRA through planned enrichments (i.e. definition of specific interoperability specifications and methodology of applying them on the described solutions) and through feedback received from its application to tangible solutions;
- Ensure alignment between EIRA and other Reference Architectures applied in administrations throughout EU.

- Support the Single Digital Gateway regulation with deployments in the Member States.

8.1.5 ACTION PRIORITY

The action

a) will contribute to priority a) of the ISA^2 Decision. EIRA is considered as a cornerstone on the Communication on the EIF revision and it is mentioned in the ISA^2 Decision legal bases;

b) will contribute to priority b) of the ISA^2 Decision by the horizontal nature of the action;

c) will contribute to priority c) of the ISA^2 Decision by targeting a share of 50% of the number of Member States involved;

d) has no other funding sources;

e) will contribute to priority e) of the ISA^2 Decision by the re-usability of the EIRA;

f) will contribute to priority f) of the ISA^2 Decision by the synergies with the CAMSS action and IMM action;

g) will contribute to the Digital Europe Programme on the specific objective 5 on deployment, best use of digital capacity and interoperability by providing technical specifications to support cross-border once-only and the digital transformation of public services.

8.1.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),*	EIRA, one of the products of EIA is a cornerstone in the implementation of EIF as captured in the ISA2 Decision text and in the communication regarding EIF revision. • In relation to the support to the ISA^2 programme the EIA action is the endorsed approach to architect interoperable public services[93] • In relation to the support to the European Interoperability

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[93] Decision (EU) 2015/2240 of 25.11.15 on establishing the ISA^2 programme:"European Interoperability Reference Architecture or EIRA means a generic structure, comprising principles and guidelines applying to the implementation of interoperability solutions in the Union; ","European Interoperability Cartography ….means a repository of interoperability solutions for European public administrations ……that can be represented on the EIRA", " common frameworks' means **reference architectures**, …..","The ISA2 programme shall support and promote: (a) the assessment, improvement, operation and re-use of existing cross-border or cross-sector interoperability solutions and **common frameworks**; (b) the development, establishment, bringing to maturity, operation and re-use of new cross-border or cross-sector interoperability solutions and **common frameworks** f) the mapping and analysis of the overall interoperability landscape in the Union through the establishment, maintenance and improvement of **the EIRA** and the EIC as instruments to facilitate the re-use of existing interoperability solutions and to identify the areas where such solutions are still lacking; (g) the maintenance, updating, promotion and monitoring of the implementation of the EIS, the EIF and the **EIRA**"

Question	Answer
• *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	Framework the EIRA is mentioned and recognized as a cornerstone implementing the EIF[94] • In relation to the support to the Tallinn declaration the EIRA is instrumental in achieving the Interoperability by default principle[95] • In relation to the European Commission Digital Strategy the EIRA is a pillar supporting the Interoperability & Cross-border and the Openness & Transparency principles[96] • In relation to the upcoming Digital Europe Programme for the period 2021-2027 and taking into consideration the orientation for proposed activities for 2021-22 under consultation the EIRA action is essential supporting the specific objective 5 on deployment, best use of digital capacity and interoperability[97]

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[94] C(2017) 134 of 23.3.2017 Annex 2 on EIF "Standards and specifications can be mapped to **the EIRA** …", "….and the European interoperability architecture (EIRA) are important parts of interoperability governance at the EU level","Recommendation 12:Put in place mechanisms to involve users in analysis, **design,** assessment **and further development of European public services**","The **reusable building block approach** finds a suitable application by mapping solutions against the conceptual building blocks of a reference architecture [for example the European interoperability reference Architecture (EIRA)], that allows reusable components to be detected, which also promotes rationalisation"

[95] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the council of the EU on 6 October 2017. "**We will work in our countries on national interoperability frameworks based on the European Interoperability Framework","enhance the re-use of emerging joint solutions under** the Connecting Europe Facility programme or **other common frameworks [e.g. those implemented by ISA² and CEF programmes**]"

[96]C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy. "apply the European interoperability framework", **"DGs will design digital solutions to work seamlessly across organisations and respect interoperability** and data exchange requirements. **DGs responsible for implementing EU-wide policies will make digital public services available across borders**, supporting the free flow of data"

[97] COM(2018) 434 on 6.6.2018 proposal on Digital Europe programme subject to final adoption and Consultation 25 July 2019 to 25 October 2019 on the orientation of the first two years of its proposed DEP. " … shall achieve the following operational objectives:… support integration and use of trans-European Digital Service Infrastructures and of agreed European digital **standards** in the public sector and areas of public interests to facilitate cost-efficient implementation and interoperability", "citizen-centric digital public services

Question	Answer
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. There is no other European reference addressing architecture aspects of interoperability.

8.1.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes. EIRA and the CarTool are policy neutral.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Yes. EIRA v1.0.0 was released in March 2016. Since then, it has been used documenting +90 TES systems supporting Agriculture, Competition, Employment, Energy, Environment, Justice, Regio, Research and Move. Additionally, EIRA has been deployed in EE, NL, DK, ES, CZ and PL.

8.1.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of*	Yes.

…. targets the digital transformation of public services – increasing the efficiency of service delivery, the convenience of services for European businesses and citizens and the accessibility of public data – by providing: a **Digital Transformation Platform Ecosystem for interoperability of data and services across borders** and domains…..**technical specifications** and infrastructure **to support cross-border once-only principle**"

Question	Answer
view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Yes. EIRA has been deployed in EE, NL, DK, ES, CZ and PL

8.1.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. It is captured in the ISA² text
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	*The ISA² scope and financial capacity fit for the implementation of the EIRA since it is a cornerstone of ISA²*

8.1.5.5 Reusability of action's outputs

Name of reusable solution	EIRA
Description	European Interoperability Architecture
Reference	V3.1.0
Target release date / Status	June 2020
Critical part of target user base	Solution architects, business analysts, IT portfolio managers

For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	+2200 downloads since March 2016

Name of reusable solution	CarTool
Description	Carography Tool
Reference	V3.1.0
Target release date / Status	June 2020
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	eGovernment European Reference Architecture Roadmap
Description	Basic ICT architecture building blocks for a government covering the range from infrastructure, solution building blocks/services, base to the big domains like "Revenue Administration", "Case Management System to support the Courts", "Health Insurance Management"… Such SAT (and its potential variants) should offer a roadmap, considering the starting point of a Member State Public Administration, against which the digitisation efforts could be measured (and co-ordinated)
Reference	
Target release date / Status	March 2021
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.1.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	Yes. Synergies and reuse is expected with SEMIC (core vocabularies and interoperability specifications), TesBed, Base Registers, Joinup, ABCDE (case mgmt. SAT), CEF (eID SAT, eDelivery) and CEN e-Procurement SAT and TestBed
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	SEMIC (core vocabularies and interoperability specifications) TestBed for EIRA conformance

8.1.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	YES. Supporting cross-border public services is key for the once-only principle.

8.1.6 PROBLEM STATEMENT

This action addresses the lacking a coherent approach at EU level for elements such as:

- architectural guidelines for cross-border interoperability building blocks;
- concrete and reusable, use-case-based interoperability guidelines, rules and principles on standards, architecture, and specifications on how to develop information exchange between ICT systems;
- concrete implementation guidelines

This affects Member States and Commission responsible services (architects, portfolio managers, ICT decision makers, etc.) in their endeavour to put in place interoperable digital services.

The impact of the problem includes the duplication of effort in the development of solutions at EU and national level due to difficulties in identifying reusable elements and interfacing with existing solutions in an interoperable manner. This in turn results in higher cost and longer development time with no guarantee of openness and interoperability.

The problem of	lacking a coherent approach at EU level for elements such as: • architectural guidelines for cross-border interoperability building blocks; • concrete and reusable, use-case-based interoperability guidelines, rules and principles on standards, architecture, and specifications on how to develop information exchange between ICT systems; • concrete implementation guidelines
affects	Public administrations
the impact of which is	Difficulties eliminating barriers to interoperability of public services
a successful solution would be	To deploy EIRA

8.1.7 IMPACT OF THE ACTION

8.1.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	EIRA use cases: Solution design, creation of cartographies, portfolio mgmt. decision support,		European and Member States' Public

Impact	Why will this impact occur?	By when?	Beneficiaries
	policy making support		Administrations
(+) Savings in time	EIRA use cases: Solution design, creation of cartographies, portfolio mgmt. decision support, policy making support		European and Member States' Public Administrations
(+) Better interoperability and quality of digital public service	EIRA use cases: Solution design, creation of cartographies, portfolio mgmt. decision support, policy making support		European and Member States' Public Administration
(-) Integration or usage cost			

8.1.7.2 User-centricity

The EIRA change management process requires to gather the user needs and requirements in the form of tickets in order to improve the solution. In addition, the workshops performed in Member States have provided considerable feedback.

8.1.8 EXPECTED MAJOR OUTPUTS

All major outputs have been listed in section 8.1.5.5.

8.1.9 ORGANISATIONAL APPROACH

8.1.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
SRSS	Francisco Garcia Moran SRSS.02	Business need identification and promotion/deployment

Stakeholders	Representatives	Involvement in the action
Member States	The ISA² Committee/Coordination/working Groups	Providing input
European Commission Services	IT Governance of the Commission and a representative from each concerned Commission service	Providing input
ICT Industry	Representatives of ICT industry, SMEs, …	Providing input
Standardisation bodies	Representatives of ICT industry, SMEs, …	Providing input
Local and regional public administrations	Representatives from standardisation organisation for a and consortia	

8.1.9.2 Identified user groups

User group	Description	Usage
Portfolio managers	Responsible for the IT portfolio	EIRA use case: portfolio mgmt. decision support
Architects	Responsible for ensuring the created (IT) solution fits foreseen architecture and requirements of the organization	EIRA use cases: Solution design, creation of cartographies
Project Managers	Responsible for a delivering a cost effective public service with the help of a program / project	EIRA use cases: Solution design, creation of cartographies
Business Analysts	Responsible for gathering and managing the requirements of a public service	EIRA use cases: Solution design, creation of cartographies
Policy Makers	Responsible for setting and maintaining policies within the public domain	EIRA use case: policy making support

8.1.9.3   Communication and dissemination plan

The EIRA related solution together with the conclusions from workshops in Member States have been presented to Member State representatives during various meetings of the ISA and ISA² Coordination Group.

The main communication channel is the Joinup collaborative platform where all supporting EIRA documentation has been uploaded.

In the context of the overall ISA² communication activities, EIRA is and will be presented in several events and conferences.

8.1.9.4   Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Adoption by MS	50% of MS	mid 2021

8.1.9.5   Governance approach

The action will be managed by DIGIT with the support of the EIRA Informal Network of Experts launched in January 2019 and with the concerned Commission services.

8.1.10 TECHNICAL APPROACH AND CURRENT STATUS

In 2013 the EIRA described a common architectural view based on a service-oriented reference architecture to cover cross-border cross-sectorial interoperability needs at European level. This first beta version of the European Interoperability Reference Architecture (EIRA) was delivered along with the European Union Cartography (EUCart) which was the result of mapping existing Trans-European Solutions (TES) contained in the Commission's systems portfolio onto the EIRA. The mapping exercise was implemented in a proof-of-concept, the Cartography Tool (CarTool).

On the 12th of June 2014, the ISA coordination group endorsed the current versions of the EIRA and CarTool stating that they are mature enough to go to public consultation and to be used in pilots. In 2015, the EIRA action has produced a final beta version of the EIRA and validated it in pilots with some Members States and Commission DGs.

On the 2nd of June 2015 the results were presented to the ISA Coordination Group obtaining endorsement for i) a public consultation and, after implementing potential updates, ii) the release of version 1.0 by December 2015.

On 2016 were conducted pilots with the Members States (i.e. Czech Republic) and agencies (i.e. EFSA). EIRA v1.0.0 was release in March 2016 and presented to the ISA[2] in June. The CarTool v1.0.0 was released in September 2016. EIRA v2.0.0 and the CarTool v2.0.0 were release in July 2017.

The technical approach as from 2020-December 2021 includes:

Next steps include:

- Pilots with the Members States
- Intensive deployment in the Commission

1. The definition of precise interoperability specifications to facilitate solutions' mapping to EIRA building blocks and of an overall methodology of applying those specifications on mapped solutions;

2. Improvements to the EIRA and definition/follow-up of a change management process for the governance of new releases of EIRA.

3. Under the request of SRSS the creation of a eGovernment European Reference Architecture Roadmap SAT.. It would cover basic ICT architecture building blocks for a government covering the range from infrastructure (e.g. "government network", "data-centres" "gCloud",…), solution building blocks/services ("eID", "access to reference data", "email", "web presence", "HR Management", …), base registries ("civil", "company", "land",…) to the big domains (e.g. "Revenue Administration", "ERP", "Case Management System to support the Courts", "Health Insurance Management", "Health Record Management", …). Such an SAT (and its potential variants) should offer a roadmap, considering the starting point of a Member State Public Administration, against which the digitisation efforts could be measured (and co-ordinated). There could also be good practices as to priorities in building such ABBs (and hence can be used as an input in drafting national digital strategies). It is clear, that the usage/implementation of such SAT would greatly vary from MS to MS. The targeted users are national CIOs. It would be recommended:

    1. To get the feedback from the CIO Network about the usefulness of such reference architecture

    2. Involve them (or a group of volunteers) in the preparatory work and in the follow up of the project

3. Collect best practices (i.e. national reference architectures) existing in Members States or elsewhere around the world to avoid reinventing the wheel

This SAT will imply a considerable consumption of the budget.

8.1.11 COSTS AND MILESTONES

8.1.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	• EIRA pilots in the Member States and the Commission DGs • EIRA pilots on Solution Architecture Templates • Definition of interoperability specifications and of the accompanied methodology of applying them • Enhancements to the EIRA	300	ISA^2	Q2/2016	Q1/2017
Execution - Operation	• EIRA workshops in the Member States and the Commission DGs • EIRA workshops on Solution Architecture	570	ISA^2	Q4/2017	Q3/2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Templates • Definition of interoperability specifications and of the accompanied methodology of applying them • Enhancements to the EIRA.				
Execution - Operation	• EIRA workshops in the Member States and the Commission DGs • EIRA workshops on Solution Architecture Templates • Enhancements to the EIRA.	250	ISA^2	Q4/2018	Q2/2019
Execution - Operation	• EIRA workshops in the Member States and the Commission DGs • EIRA workshops on Solution Architecture Templates • Implementation of the EIRA library of	375	ISA^2	Q3/2019	Q3/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Interoperability specifications • Enhancements to the EIRA. • Gov ICT Roadmap High-Level Requirements SAT				
Execution - Operation	• Minor release of EIRA/CarTool • EIRA/ITB iclusion in the ePorcurement solution • EIRA workshops in the Member States and the Commission DGs • EIRA workshops on Solution Architecture Templates • Maintenance of the EIRA library of Interoperability specifications • Enhancements to the EIRA. • Release of eGovERA v1.0.0 • Deployment of	550	ISA^2	Q4/2020	Q1/2022

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	eGovERA v1.0.0 in Member States • Development of the European Data Exchange Gateway D-L interoperability requirements SAT • Deployment of the European Data Exchange Gateway H-L and D-L interoperability requirements SAT in Member States We will provide assets to the Interoperability Academy action				
	Total	2045			

8.1.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		300	200
2017		570	570
2018		250	250

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019		375	
2020		550	

8.2 INTEROPERABILITY MATURITY ASSESSMENT OF PUBLIC SERVICES (IMAPS)

8.2.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	DG GROW
Responsible Action manager name	RAUL MARIO ABRIL JIMENEZ
Responsible Action manager email	Raul-mario.abril-jimenez@ec.europa.eu

8.2.2 EXECUTIVE SUMMARY

The Digital Agenda for Europe has identified the lack of interoperable public services as a major obstacle for growth. Although Member States have accomplished significant work in this domain, it has proven difficult to assess the progress made so far by the different public administrations to reach greater Interoperability (IOP).

In an agreement with Member States as part of the European IOP Strategy (EIS) implementation review, it had been suggested to create an IOP Maturity Model (IMM) to help verify the level of implementation of the vision laid out in the EIS. The IOP Maturity Model would:

- Deliver a Self-Assessment IOP Maturity Tool;
- Provide peer reviews of IOP capabilities across Member States and Directorates General of the European Commission;
- Enable IOP audits.

In the first phase of the Action (2011-2013), an initial version of the IOP Maturity Model (covering a report documenting IMM method & process, an IMM questionnaire and guidelines to IMM users) was developed. Based on the definition of IOP in the European Interoperability Framework (EIF), the IMM measures how well a Public Service is able to interact with other organizations to realise mutually beneficial and agreed common goals.

Sixteen Pan-European Public Services, covering different public sector domains and Trans-European Systems, as well as four national public services were benchmarked using the IMM model. Based on the results gathered from these evaluations, important recurring IOP challenges and best practises in the provisioning of European Public Services were identified leading to a revision of the IMM.

In the period 2014-2015, the IMM was further fine-tuned through alignment of the model with nine other ISA² Actions and investigating its relationship vis-a-vis other international initiatives for measuring IOP maturity. Moreover, an interoperability checklist was published intended for those involved in designing a public service to raise awareness on how to do so in an interoperable way by default.

From the second half of 2015 until the first half of 2016, the IMM was revised once more with as focal point to simplify it so it could more easily be used as a self-assessment tool. A more concise version of the IMM model (the "IMM Lite") was developed (and implemented using EUSurvey) in complement to the full model. The "IMM Lite" was deployed by 11 EU and national level public administrations; in parallel, 9 assessments were conducted using the full version. Finally, the official professional training institution for the Greek Public Administration received support through the ISA² programme to develop an IMM-based IOP training module and run IMM assessments – an activity which has been ongoing since.

In the second half 2016 and until the first half 2017 the full version of the IMM was abandoned due to its user-reported complexity and the action focused exclusively on the IMM Lite, from then on the sole version of the model (the IMM). The action's main objective was to maximize the impact of the IMM by providing it as a fully-fledged, stand-alone self-assessment web survey to the widest possible audience, in Europe & beyond, and encouraging its usage in any context users deem appropriate (as an individual assessment or comparative benchmark within a specific country or public domain, for training purposes, for assessing progress with implementing the European Interoperability Framework EIF at EU level, and so forth).

In the period 2017-2018 the action managed to build a significant uptake and the IMAPS report 2018 edition was released. It repositioned its branding as Interoperability Maturity Assessment of Public Services (IMAPS).

In 2019, in parallel to increasing usage, the action successfully transfered IMAPS capabilities/knowledge to three Member States replicating the successful experience in Greece.
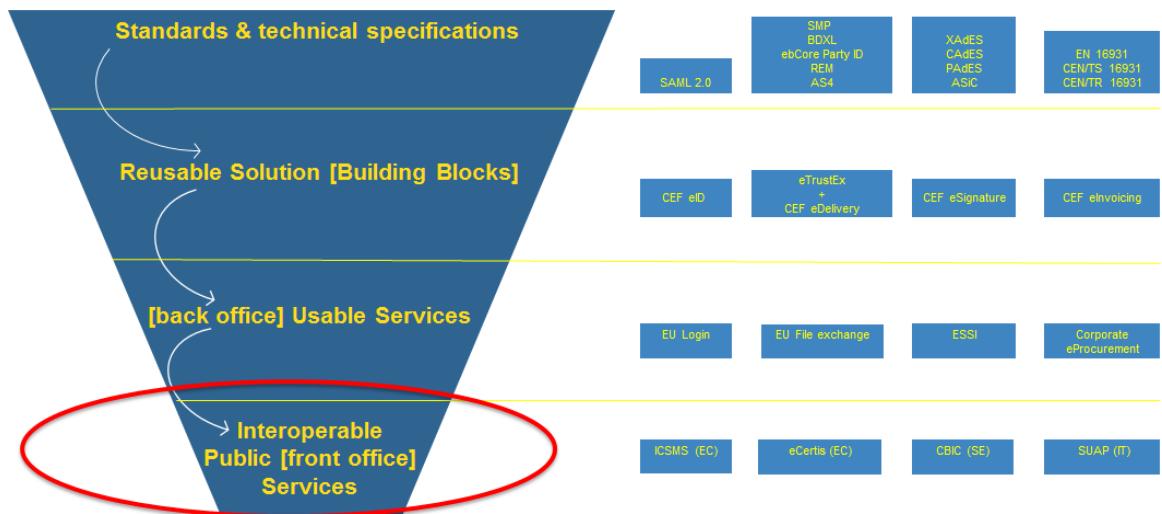
The *action* supports the European public administrations in implementing the Tallinn declaration[98] as well as in implementing the European Commission Digital Strategy[99] by informing and providing recommendations on the interoperability of public services. IMAPS

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[98] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the council of the EU on 6 October 2017.

[99] C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy.

action has a decisive role supporting the European Commission Digital Strategy, the Single Digital Gateway deployment in Member States and the upcoming Digital Europe Programme.
 The below figure positions IMAPS **within the ECDS and the steps for creating Reusable Solutions Platform**

This action has two main deliverables: Assessment tools of interoperability and the IMPAS report.

In relation to the assessment tools versions of the Interoperability Maturity Assessment Tool (IMAPS) and a proof-of-concept of the Semantic Interoperability Maturity Assessment Tool (SIMAPS) have been released.

The new version of the IMAPS (v1.1.1) is aligned with EIRA v3.0.0. This minor update assesses the EIF conformance (behavioural perspective) of an [back-office] application service and of an [front-office/public service. IMAPS follows a systematic approach providing scores and recommendations for improvement.

The new version, proof-of-concept, of the SIMAPS (v1.0.0) is aligned with EIRA v3.0.0. This minor update assesses the EIF conformance (behavioural perspective) of the semantic aspects of an [back-office] application service and of an [front-office/public service. Likewise, SIMAPS follows a systematic approach providing scores and recommendations for improvement.

DG GROW requested intensive/urgent support to Member States with IQAT/IMAPS in relation SDG. This proposal was presented in the June 2019 ISA[2] Committee

In relation to the IMAPS report, the aim is to transfer the capability to produce it to interested Member States.

8.2.3 OBJECTIVES

The objectives are:

- To maintain and revise the IMAPS toolkit. Focus will be in to allow benchmarking on demand on the same type of public service;
- To release a beta sematic specialization of IMAPS, SIMAPS, and test it;
- To release the Single Interoperability Assessment Gateway in Joinup implementing the vision for a common platform of interoperability assessments (deliverable produced in the last contract). Particular focus should be given to the narrative linking the diverse interoperability assessment tools and respective use cases;
- To deploy IMAPS capabilities in Member States;
- To perform IMAPS as a service on demand.
- To support the Single Digital Gateway (SDG)

8.2.4 SCOPE

Every European public service is in scope of this action. Nevertheless, given the interests displayed by Member States, the public services to be covered by SDG are of first priority.

8.2.5 ACTION PRIORITY

The action

h) will contribute to priority a) of the ISA^2 Decision by accelerating the completion of the interoperability landscape across the Union;

i) will contribute to priority b) of the ISA^2 Decision by the horizontal nature of the action;

j) will contribute to priority c) of the ISA^2 Decision by targeting a share of 50% of the number of Member States involved;

k) has no other funding sources and had to prove the value provided as it has been confirmed be the last assessments performed (+50);

l) will contribute to priority e) of the ISA^2 Decision by the re-usability of the IMM based solution;

m) will contribute to priority f) of the ISA^2 Decision by the synergies with the CAMSS action and EIA action;

n) will contribute to priority g) of the ISA^2 Decision by the link of the action with the Digital Agenda for Europe.

o) will contribute to the Digital Europe Programme on the specific objective 5 on deployment, best use of digital capacity and interoperability by supporting the digital transformation of public services

8.2.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	• In relation to the support to the ISA^2 programme the IMAPS action is specialized in assessments of public services in terms of interoperability from a behavioural (i.e. service) perspective. The criteria for assessing interoperability is of top interest in the ISA^2 programme[100] • In relation to the European Interoperability Framework the IMAPS action is supporting the implementation of the EIF in relation to reusable solutions[101] • In relation to the support to the Tallinn declaration the IMAPS action is instrumental in achieving the Interoperability by default and the Digital-by-default, inclusiveness and accessibility principles[102] • In relation to the support to the European Commission Digital Strategy the IMAPS action is a pillar supporting the

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[100] Decision (EU) 2015/2240 of 25.11.15 on establishing the ISA^2 programme: "European Interoperability Cartography… means a repository of interoperability solutions ……. complying with specific re-usability **and interoperability criteria** ….", "The ISA^2 programme shall support and promote: (a) the **assessment**, improvement, operation and re-use **of existing cross-border or cross-sector interoperability solutions** and common frameworks"

[101] C(2017) 134 of 23.3.2017 Annex 2 on EIF. "Recommendation 12: Put in place mechanisms to involve users in **analysis**, design**, assessment** and further development **of European public services**"

[102] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the council of the EU on 6 October 2017. "We will in our countries: take steps to **identify redundant administrative burden in public services** and introduce once only options for citizens and businesses in digital public services by collaboration and data exchange **across our administrations at national, regional and local level as well as with other countries for cross-border digital public services**"

Question	Answer
	Interoperability & Cross-border principle[103] • In relation to the upcoming Digital Europe Programme for the period 2021-2027 and taking into consideration the orientation for proposed activities for 2021-22 under consultation the IMAPS action is supports the specific objective 5 on deployment, best use of digital capacity and interoperability[104]
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. There is no published assessment methodology at European level for measuring the interoperability maturity of a public service. The IMAPS is the first instrument that assesses interoperability based on the principles and recommendations derived from the European Interoperability Strategy and European Interoperability Framework.

8.2.5.2 Cross-sector

Question	Answer
Will the proposal, once completed be useful, from the interoperability point of view and	Yes. The IMAPS is useful and can be utilised in any EU policy area.

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[103]C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy. **"Reusable solutions platform ..** will be built around a catalogue containing: **reusable building blocks and services**, …", "DGs will design digital solutions to work seamlessly across organisations and respect **interoperability** and data exchange requirements. DGs responsible for implementing EU-wide policies will make **digital public services available across borders**"

[104] COM(2018) 434 on 6.6.2018 proposal on Digital Europe programme subject to final adoption and Consultation 25 July 2019 to 25 October 2019 on the orientation of the first two years of its proposed DEP. " … shall achieve the following operational objectives:… (b) deploy, operate and maintain **trans-European interoperable Digital Service Infrastructures** ….(ba) support integration and use of **trans-European Digital Service Infrastructures** ….. to facilitate cost-efficient implementation and interoperability", "citizen-centric digital public services …targets the digital transformation of public services – by providing: ….. a **Digital Transformation Platform Ecosystem for interoperability of data and services across borders** and domains"

Question	Answer
utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.	The IMAPS is a generic and domain-agnostic instrument that allows public services of any type, domain or policy area to obtain insight into generically defined interoperability enablers, manifestations, opportunities for reusing or providing services and key improvement recommendations. Moreover, the IMAPS is accompanied with specific configuration guidelines that allow any EU policy area to obtain a more accurate and relevant interoperability assessment of policy-specific public services than with the generic version of the model.
For proposals completely or largely already in operational phase, indicate whether and how they have been utilised in two (2) or more EU policy sectors.	The IMAPS has been already utilised for the assessment of more than 150 operational public services at various levels (local, national, European) and from various policy areas such as (see the IMAPS report 2018 edition): • Procurement • Invoicing • Justice • Environment • Employment • Food safety • Taxation • Health • Transport

8.2.5.3 Cross-border

Question	Answer

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes. The IMAPS is useful and can be utilised by public administrations of any EU Member State. The IMAPS is a generic and institutional level-agnostic instrument that allows public services at any level (national, regional, provincial, municipal or national) to obtain insight into generically defined interoperability enablers, manifestations, opportunities for reusing or providing services and key improvement recommendations. Moreover, The IMAPS is accompanied with specific configuration guidelines that allow its configuration specifically to single country, region, province or municipality.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	The IMAPS has been already utilised for the assessment of more than 150 operational public services at various levels (local, national, European) and from EU Member States such as: • Netherlands • Greece • Spain • Sweden

8.2.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU	Yes. The revised European Interoperability

Question	Answer
legislation?	Framework refers to the Interoperability Maturity Model (now IMAPS) as an instrument that promotes the idea of interoperability-by-design, which means that for European public services to be interoperable, they should be designed in accordance with the proposed model and with certain interoperability and reusability requirements in mind. Moreover, it contributes in putting in place mechanisms for involving the users in the analysis, design, assessment and evolution of European public services (Recommendation no 12).
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA² scope and financial capacity fit for the implementation of the IMAPS since: • It contributes to a common understanding of interoperability through the European interoperability Framework and its implementation in Member States' administrations by providing an assessment methodology/model based on criteria derived from the interoperability layers, principles and recommendations of the European interoperability Framework and European Interoperability Strategy. • It can be utilised as an instrument to monitor at which level the principles and recommendations of the European Interoperability Framework are applied in designing and operating European Public Services. • It is an interoperability solution that supports the implementation of EU policies and activities such as: European

Question	Answer
	Interoperability Strategy, Digital Single Market Strategy and Digital Agenda for Europe.
	• Facilitates and promotes the re-use of interoperability solutions by European public administrations since the notion of reusability is at the heart of the model. The model assesses if and how a public services, operational or under design, automatically consumes other services and how efficiently it provides services to the external world.
	• It contributes to the development of a more effective, simplified and user-friendly e-administration at the national, regional and local levels of public administration.

8.2.5.5 Reusability of action's outputs

Name of reusable solution	IMAPS toolkit v1.1.1
Description	Self-assessment tool designed for public service owners to evaluate key interoperability aspects of their digital public service. IMAPS assesses the EIF conformance (behavioural perspective) of an [back-office] application service and of an [front-office/public service.
Reference	https://joinup.ec.europa.eu/release/imaps/v111
Target release date / Status	May 2019
Critical part of target user base	Professionals who have participated or are involved in the design and development of e-services, or support institutionally, operationally and/or technically, e-services provided by public bodies to citizens, businesses or other public bodies.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The IMAPS has been used for assessing approx. +150 public services (European, national and local ones).

Name of reusable solution	IMAPS – Assessment Service v1.0.0
Description	The Interoperability Maturity – Assessment Service is a reusable solution/service available to both EC-internal and external stakeholders upon request and depending on resource availability.
Reference	
Target release date / Status	June 2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	IMAPS – Benchmark Service

Description	The Interoperability Maturity – Benchmark Service is a reusable solution/service available to both EC-internal and external stakeholders upon request and depending on resource availability.
Reference	
Target release date / Status	June 2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	SIMAPS toolkit v1.2.0
Description	Self-assessment tool designed for public service owners to evaluate key semantic interoperability aspects of their digital public service. SIMAPS assesses the EIF conformance (behavioural perspective) of an [back-office] application service and of an [front-office/public service].
Reference	
Target release date / Status	March 2020
Critical part of target user base	Professionals who have participated or are involved in the design and development of e-services, or support institutionally, operationally and/or technically, e-services provided by public bodies to citizens, businesses or other public bodies.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The IMAPS has been used for assessing approx. +150 public services (European, national and local ones).

Name of reusable solution	LIMAPS toolkit v1.0.0 and/or OIMAPS toolkit v1.0.0
Description	Self-assessment tool designed for public service owners to evaluate key legal/organizational interoperability aspects of their digital public service. LIMAPS/OIMAPS assesses the EIF conformance (behavioural perspective) of an [back-office] application service and of an [front-office/public service.
Reference	
Target release date / Status	March 2022
Critical part of target user base	Professionals who have participated or are involved in the design and development of e-services, or support institutionally, operationally and/or technically, e-services provided by public bodies to citizens, businesses or other public bodies.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The IMAPS has been used for assessing approx. +150 public services (European, national and local ones).

8.2.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	The IMAPS constantly analyse interrelations with existing ISA & ISA2 Actions and other relevant solutions in order to incorporate and align with interoperability-related criteria, principles, outcomes and definitions derived and promoted by them.

Question	Answer
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	All IMAPS definitions and interoperability attributes were refined based on their interrelations with other ISA and ISA[2] Actions − including among others: 'Promoting semantic interoperability amongst European Public Administrations', 'Access to Base Registries', 'Catalogue of Services', 'European Interoperability Architecture', 'Common Assessment Method for Standards and Specifications', 'Assessment of Trans-European Systems supporting EU policies', 'National Interoperability Framework Observatory', 'Sharing and Reuse' 'Assessment of ICT implications of EU legislation'.

8.2.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	YES. The model contributes to the eProcurement implementing acts as an assessment method of every step in the eProcurement chain. The IMAPS contributes directly to the Digital Single Market Strategy since interoperability and standardisation are among its highest priorities. It can help EU Public Administrations to assess the progress made so far and support them in reaching higher levels of Interoperability.

8.2.6 PROBLEM STATEMENT

The Digital Single Market strategy sees interoperability as a basic enabler for the single market. Although Member States have significantly worked in this domain, it is difficult to assess the progress made so far by each public administration.

An interoperability maturity model helps towards both raising interoperability awareness and providing a tool for public administrations to assess their interoperability readiness. In turn, this action will be complemented, so as to provide public administrations a tool for gap analysis of dos/don'ts when creating or establishing a European Public Service.

The problem of	Lack of an awareness and understanding on the maturity level of public services
Affects	Public administrations
the impact of which is	Lack of focus on the required improvements to reach interoperability
a successful solution would be	To follow the recommendations delivered by IMAPS

8.2.7 IMPACT OF THE ACTION

8.2.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Avoiding wrong decisions in order to improve interoperability in public services		Member States' Public Administrations
(+) Savings in time	Following the recommendations of IMM to improve the maturity level of public services		European and Member States' Public Administrations
(+) Better interoperability and quality of digital	Following the recommendations of IMM to improve the maturity		European and Member States' Public

public service	level of public services		Administrations
(-) Integration or usage cost			

8.2.7.2 User-centricity

The IMM change management process requires to gather the user needs and requirements in the form of tickets in order to improve the solution.

8.2.8 EXPECTED MAJOR OUTPUTS

Outputs are described in section 8.2.5.5.

8.2.9 ORGANISATIONAL APPROACH

8.2.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States	ISA[2] Coordination Group or ISA CG equivalent	Providing input
Member States' public administrations	Providers of public services, who used or are willing to use IMM in order to assess the interoperability maturity of their services	Providing input
European Commission Services and MSs administrations	Providers of existing or new Trans-European services that are being used inside the Commission., who used or are willing to use IMM in order to assess the interoperability maturity of their services	Providing input
Member States' Vocational Training Services	Configure, use and promote the IMM training module and material.	Providing input

8.2.9.2 Identified user groups

User group	Description	Usage
Service Owners	Responsible for setting up and maintaining a public service	Usage the IMAPS toolkit to further improve the interoperability and quality aspects of public services delivered to administrations, businesses and citizens. For setting up a new public service, Service Owners can use the IMAPS survey to ensure they address the required interoperability aspects.
Architects	Responsible for ensuring the created (IT) solution fits foreseen architecture and requirements of the organization	Usage of the IMAPS to: a) further align technical / semantical standards with the internal and external environment of the organization and b) analyse the suitability of multiple technical solutions and/or business scenarios, including the value of reuse.
Project Managers	Responsible for a delivering a cost effective public service with the help of a program / project	Usage of the IMAPS to evaluate the costs and benefits of reusing existing services instead of developing new ones.
Business Analysts	Responsible for gathering and managing the requirements of a public service	Usage of the IMAPS toolkit to help in identifying requirements in the area of interoperability.
Academia	Responsible for the further development of knowledge and theories in the domain of Interoperability	Usage of the entire IMAPS toolkit to test hypothesis and further improve and expand knowledge in the area of Interoperability

User group	Description	Usage
Policy Makers	Responsible for setting and maintaining policies within the public domain	Usage of the IMAPS and described concepts in the IMAPS Guidelines to create new policies in the public domain to promote interoperability and general improvement of public services.

8.2.9.3 Communication and dissemination plan

The IMAPS structure together with the conclusions from real-life assessments have been presented to Member State representatives during various meetings of the ISA and ISA[2] Coordination Group.

The main communication channel is the Joinup collaborative platform where all supporting IMAPS documentation has been uploaded, including the IMAPS questionnaire, the IMAPS guidelines and the IMAPS recommendations for both versions of the model. A Joinup page was created with similar content and many relevant news items have been published on the ISA[2] website as well.

Due to the significant role that Member States' Training Centers could have in promoting and implementing training courses and material based on the IMAPS training module, the model will be presented in National Vocational Training Agencies aiming to use them as a channel to raise awareness about IMAPS. Also, using the network of National Vocational Training Agencies, we will facilitate our effort to reach all different types of professionals at Central or Local Administrations who are involved in the design and maintenance of public services (incl. service architects, developers, owners, sponsors, users etc.).

In the context of the overall ISA[2] communication activities, IMAPS is and will be presented in several events and conferences. The development of the web-based assessment tool and the analysis of the collected results are factors which allow putting emphasis on promotional activities. These activities can include organization of workshops and/or promotion of the IMAPS to European or national public service owners.

8.2.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Adoption by MS	1 star public service in 50% of MS	end 2020

8.2.9.5 Governance approach

The organisational approach includes:

a) The ISA2 Coordination Group which sets the general strategic directions of the Action and ensures that all initiatives are coordinated and aligned with relevant actions at European and /or national level; and

b) The ISA² Programme Management Team (DG DIGIT D2) that identifies the priorities, organises the activities and safeguards the proper execution of the IMAPS development and communication plan and reports the progress and the results of the Action to the ISA2 Coordination Group.

8.2.10 TECHNICAL APPROACH AND CURRENT STATUS

As the notion of subsidiary is important in this focus area, the role of the Commission is to coordinate efforts and to steer a possible common approach, taking also into consideration inputs from other stakeholders (industry and other organisations).

Under the ISA programme, a study has been conducted in the field of interoperability maturity models from national and international perspectives, focusing specially in those models that have been successfully applied in practice. While analysing a number of use cases and benchmarks, this action has validated the ease of use, relevance and completeness of a proposed maturity model.

This has led to the first version of the IMAPS that measures how well a public service is able to interact with other services to realise mutually beneficial and agreed common goals through the exchange of information and reuse of services. The proposed model, as a self-assessment method, has been made available after several refinements through a toolkit that is structured around: a) the IMAPS document explaining the methodology, how IMAPS was developed and how it can be used, b) the guidelines designed to help people filling in the questionnaire and c) an interoperability questionnaire.

A number of European Public Services, covering different domains and provided by different Trans European Systems, together with a significant number of national public services, were

assessed during the last two years using the IMM model and based on the results gathered from these evaluations important recurring interoperability challenges and best practises in the provisioning of European public services were identified and the proposed model was fine-tuned.

The IMAPS is being refined in an annual basis in order to align with results from other ISA and ISA[2] Actions and recommendations provided by users who have used the model to assess real-life public services. Briefly, in 2020-June2022 the action will:

- Release a new version of the IMAPS solution

- Release a new version of SIMAPS

- Release a version of Legal IMAPS (LIMAPS) and/or Organizational (OIMAPS)

- Support SDG in Member States

- Deploy IMAPS capabilities in Members States

8.2.11 COSTS AND MILESTONES

8.2.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	a) Development of an ecosystem for supporting the self-assessment nature of the model, b) alignment with the revised EIS and EIF, c) usage of the model in order to identify common patterns of interoperability-related problems and challenges among public services and, d) implementation of new IMM modules and/or configurations based on needs identified in all previous phases.	200	ISA[2]	Q2/2016	Q1/2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	a) Revision of the model based on the revised Europe Interoperability Framework and the performed assessments and the collected feedback, b) configuration of the published change & release management process, c) pilot and fine-tune the IMM configuration methodology in country and/or domain specific context, d) development and promotion of an EIF and IMM based training module and e) enhancement of the prescriptive nature of the model by producing guidance documents,	118	ISA[2]	Q2/2016	Q1/2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	examples, recommendations and configuration opportunities tailored to specific country/domain needs.				
Execution - Operation	a) Release of IMM Toolkit v1.1.0 b) Release of IMM-AS and IMM-BS c) Campaign promoting IMM performing IMM assessments and services d) Replication of the Greek government model in 3 Member States	175	ISA^2	Q3/2018	Q3/2019
Execution - Operation	a) Release of SIMAPS Toolkit v1.1.0 b) Deployment of IMAPS capabilities in two Member States c) Campaign promoting IMAPS	200	ISA^2	Q3/2019	Q4/2020
Execution -	a) Release of new	250	ISA^2	Q1/2020	Q1/2022

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Operation	version of SIMAPS b) Deployment of IMAPS capabilities in Member States supporting SDG c) Release of Legal and/or Organizational (TBD) specialization of IMAPS We will provide assets to the Interoperability Academy action				
	Total	923			

8.2.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		200	200
2017		118	
2018		175	175
2019		200	
2020		250	

8.3 NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY (2016.21)

8.3.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D2
Associated Services	CNECT

8.3.2 EXECUTIVE SUMMARY

Following the adoption of the EIF (European Interoperability Framework) in 2010, the Commission through the previous programme ISA has been supporting interoperability actions that contribute to the implementation of EIF recommendations and monitoring the State of Play of interoperability in the Member States through the establishment of mechanisms such as the National Interoperability Framework Observatory (NIFO).

Under the ISA and ISA² programmes, NIFO has achieved a regular monitoring of interoperability activities and of eGovernment state of play in Member States and associated countries.

In May 2015, the Digital Single Market (DSM) Strategy was launched and calls for boosting the competitiveness through interoperability and standards. As a result of this, the Commission revised the EIF and also European Interoperability Framework - Implementation Strategy (EIF-IS) and the Interoperability Action Plan (IAP). The new European Interoperability Framework was adopted on 23 March 2017 along with the Interoperability Action Plan (Communication (2017) 134). The framework gives specific guidance on how to set up interoperable digital public services.

From now on, the NIFO will be kept as the monitoring mechanism and expanded according to the revised version of the EIF, and the IAP.

Under the ISA² programme, NIFO has pursued and reinforced its support and monitoring by measuring the implementation in the Member States of the revised EIF recommendations and the achievement of the roadmap of actions proposed in the revised EIS at national level.

The baseline data collection for the EIF monitoring was finalised in early 2019. The monitoring mechanism has then been concluded by defining the scoreboards ant fine-tuning the individual indicators.

In 2018 and early 2019 NIFO has built the new EIF monitoring mechanism for the MS and the baseline data collection was carried out to define the composite indicators in collaboration with the Competence Centre on Composite Indicators and Scoreboards (COIN) of the JRC. The EIF and IAP monitoring mechanism for EC services were also defined.

NIFO will start the monitoring of the implementation of the new EIF at Member States and Commission level. Other efforts will be directed into capacity building when it comes to the implementation of the EIF at Member State level. And finally, reports and studies on digital government, state-of-play of digital government and interoperability will be produced. This is part of the mandate to NIFO to be an observatory on digital government and interoperability.

On the other hand, the observatory will also fulfil the needs to keep monitoring the level of progress on interoperability as part of specific objective 5 of the Digital Europe Programme on Deployment, best use of digital capacities and Interoperability. Therefore, some activities to ensure convergence on indicators in DEP will be carried out by NIFO.

To bridge the gap between ISA² programme and DEP and to bridge the gap, extra funding is foreseen to deal with the annual monitoring and reporting activities carried out by NIFO until DEP is in place. NIFO will provide the EIF monitoring indicators to SO5, interoperability strand of the DEP, and therefore this transition needs to be ensured.

Finally, based on the recommendations of the ISA² interim evaluation:

- to awareness-raising beyond national administrations on the EIF,
- act upon the synergies with other EU programmes to promote the EIF,

NIFO will keep promoting the EIF by producing and making available several training modules and the EIF toolbox for regional as local governments. NIFO will leverage from the Academy to achieve these goals. NIFO through the EU semester report is bringing the attention to the EIF and interoperability of other policy areas like DG REGIO, DG Emploi and the Structural Reform Support Service (SRSS). In fact, SRSS is interested in the KPIs and composite indicators defined by NIFO on the EIF monitoring, as part of an on-going joint effort to build an assessment framework for public administration and governance.

NIFO will also evolve the KPIs and indicators for the EIF monitoring, according to the output of the EIF evaluation.

8.3.3 OBJECTIVES

-
- Data collection for the monitoring of the EIF and the IAP across 35 European States and Commission Services respectively.
- Provision to the Digital Europe Programme replacing ISA² the level of progress on interoperability under specific objective 5 of DEP, according to the EIF monitoring results. Coordination of activities to ensure a smooth transition and the reusability of the NIFO indicators.
- Works to ensure convergence on indicators in DEP

- Provide the monitoring results on the DEP SO5 on interoperability once the programme is place by continue monitoring the level of implementation of the EIF
- Adjustments to the EIF monitoring indicators and PKIs according to the EIF implementation evaluation results
- Deployment, configuration, integration and maintenance of a data visualisation and business intelligence tool into the observatory
- Creation of the dashboard, filters, and visualisation views for the EIF monitoring results
- Display of the results of the EIF monitoring by using a data visualisation tool, REDISSTAT created under the ISA² programme.
- Continue the monitoring of digital government, interoperability activities and state of play of Digital Government in Member States and associated countries.
- Creation of the digital government package and publication of Digital Government factsheets in electronic format (PDF), in html and linked open data
- Publication of the annual State-of-play of digital services and interoperability synthesis report covering 35 European States
- Capacity building policy and modernisation of public administrations: ad-hoc support, interoperability diagnose and analysis report of Member States' public administrations to ensure the EIF implementation across all levels of their national administrations.
- Analyse the way in which interoperability and eGovernment polices are being addressed by the Member States in national reforms and operational programmes in the context of the European Semester, in collaboration with SRSS, REGIO and EMPLOI
- Content update of the EIF toolbox and other supporting material for EIF implementation
- Raise awareness of the new EIF, the new NIFO observatory, and on the benefits of applying the EIF
- Manage the NIFO community and editorial work of Joinup NIFO collection

8.3.4 SCOPE

EU Institutions and all EU public administrations, EFTA countries and Candidate Countries with whom a Memorandum of Understanding or Agreement regarding their participation in the ISA² programme has entered into force, are in scope of the action.

The project will monitor the implementation of the revised version of the EIF and help building capacity building policy and modernisation of public administrations. Private sector is out of scope.

8.3.5   ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA² decision[105].

8.3.5.1   Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	Yes. This action fulfils objectives 4 and 5 of the Action Plan for interoperability. The observatory monitors the implementation of the EIF recommendations by Member States and the achievement of the roadmap of actions proposed in the EIF and the IAP. It will also provide ad hoc and support training to Member States' public administrations to ensure EIF implementation across all levels of their national administrations. The observatory will also fulfil the needs to keep monitoring the level of progress on interoperability as part of specific objective 5 of the Digital Europe Programme on Deployment, best use of digital capacities and Interoperability. The NIFO action contributes to all EU policies related to modernisation of public

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[105] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
	administration, as NIFO contributes to the fact that interoperability aspects are taken into account in the EU legislation.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes, EIF and the IAP foster interoperability. Monitoring their implementation is essential and contributes to the DSM. NIFO is the instrument used for this monitoring.

8.3.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Yes. The EIF is a key element of eGovernment strategies in many Member States, as well as in other policies on public administration

Question	Answer
	modernisation and Digital Services.

8.3.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes, by offering a comprehensive picture of the interoperability activities in the countries in scope. By assisting its stakeholders through the collection, analysis and dissemination of European-comparable interoperability indicators that inform policies and monitor their outcomes. All stakeholders in scope are expected to make usage of NIFO results
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Yes, the outputs of NIFO have already been reused by various Member States. The Digital Government factsheets are considered as a reference. The state of play reports on interoperability in Europe and the NIFO factsheets served as a source of input in the revision of the EIF and the IAP.

8.3.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	It aims to continue the efforts undertaken in the context of ISA² action 2016.21 in 2017. It should cover the needs of monitoring the revised EIF, EIF-IS and public administration modernisation. This action cannot be discontinued.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Yes, as there is no other instrument or funding mechanism that could support the observatory.

8.3.5.5   Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the proposal be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution	Digital factsheets and infographics
Description	Factsheets presenting the situation in the MS in relation to digital government and interoperability in 35 European States
Reference	https://joinup.ec.europa.eu/community/nifo/og_page/egovernment-factsheets
Target release date / Status	Available / Yearly update
Critical part of target user base	PAs
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	State of play of digital government and interoperability in Europe
Description	A yearly report that presents the state of play in the area of digital government interoperability at EU, along with main trends, main challenges and best practices.
Reference	https://joinup.ec.europa.eu/community/nifo/news/yearly-update-interoperability-state-play-report-now-public (2016 report)
Target release date / Status	Periodical update
Critical part of target user base	PAs
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	EU semester
Description	The main purpose of the study is to identify the role of digital Government and interoperability in the modernisation of public administration within the framework of the European Semester process. It aims also to identify potential actions and new activities within the scope of the ISA² programme.
Reference	https://joinup.ec.europa.eu/news/eu-semester
Target release date / Status	Available / Yearly update
Critical part of target user base	Public Administrations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.3.5.6 Level of reuse by the proposal

The re-use by the action of existing common frameworks and elements of interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	NIFO is a monitoring tool of interoperability. In that sense, it will monitor the results of all of them.
For proposals or their parts already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	The Joinup platform is used to host the community and NIFO outputs. CIRCABC is used to host the NIFO deliverables and as document exchange platform. EU survey is used for measuring the satisfaction of users

8.3.5.7 Interlinked

The link of the action with Union initiatives to be measured by the collaboration and contribution level of the action to Union initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The DSM roadmap makes a clear reference to the European Interoperability Framework (EIF). Following revision of the EIF and the IAP, the NIFO will remain the action to monitor their implementation in the MS and contribute to priority of DSM. NIFO results also contribute to other initiatives such as the eGovernment action plan, the European semester, etc. The observatory will also fulfil specific objective 5 of the Digital Europe Programme on Deployment,

Question	Answer
	best use of digital capacities and Interoperability, by providing the monitoring results of the level of implementation of the EIF .
	NIFO will contribute as input for the final evaluation for the EIF implementation evaluation

8.3.6 PROBLEM STATEMENT

The problem of	lack of a unique entry point to interoperability and public modernisation monitoring results
affects	public authorities
the impact of which is	not a single place where to find the results
a successful solution would be	an observatory where NIFO monitored the implementation of the *revised* European Interoperability Framework (EIF) and the IAP

8.3.7 IMPACT OF THE ACTION

8.3.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Implementing the EIF recommendations will make public services more interoperable, integrated and of higher quality	It is happening already	All EU public administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in time	Implementing the EIF recommendations will make public services more interoperable and of higher quality. The integration of the underlying IT systems will bring time savings to citizens and businesses	It is happening already	All EU public administrations
(+) Better interoperability and quality of digital public service	Interoperability in public services will improve by adopting the recommendations of the EIF and the Implementing Strategy	Started in 2019, once the revised version of the EIF and the IAP were adopted by the MS	All EU public administrations
(-) Integration or usage cost	Implementing the EIF recommendations will make public services more interoperable reducing the integration costs	It is happening already	All EU public administrations
[add other impacts as needed]	Having a monitoring mechanism will facilitate the monitoring of the implementation of the EIF and the IAP and a diagnosis to the Member States of potential areas of improvement of public service delivery.	Started in 2019, once the revised version of the EIF and the IAP were adopted by the MS	All EU public administrations

8.3.7.2 User-centricity

During 2018 and 2019, the functional design of the new observatory have drawn up and presented to the main stakeholders. In addition, the new features for the observatory have been built into Joinup.

In the design of the new observatory user centricity have been taken into account by getting valuable feedback from JRC (COIN unit working in composite indicators) and the JoinUP teams. Both teams have extensive experience in presenting information and data in a user friendly way.

Moreover, extensive feedback with be collected from the Member State representatives, some Academic institutions and other potential group of users. To that end, several design options (mock-up) of potential user´s interfaces and ways of searching/ displaying the info sources for the new observatory using a data visualisation tool (REDISSTAT), have been test to make sure that a user's friendly journey is implemented for the new observatory.

EXPECTED MAJOR OUTPUTS

Output name	EIF toolbox
Description	Implement the toolbox as an interactive portal, taking as a source of inspiration the OECD toolbox
Reference	
Target release date / Status	Q1 2020

Output name	First monitoring results of EIF-IS and IAP implementation
Description	First monitoring results of EIF-IS and IAP implementation across the MS and other associated ISA² countries will be displayed in the NIFO observatory
Reference	
Target release date / Status	Q1 2020/ Q1 2021

Output name	Digital factsheets and infographics
Description	Monitoring of digital government, interoperability activities and state of play of Digital Government in Member States and associated countries
Reference	
Target release date / Status	Q2 2020/ Q2 2021

Output name	State-of-play of digital services and interoperability synthesis report
Description	Synthesis report which summarises and highlights the main digital government trends (and interoperability trends based on the EIF monitoring results) in Europe, as identified in the Digital Government factsheets and the EIF monitoring results
Reference	
Target release date / Status	Q2 2020/ Q2 2021

Output name	Update of the report on public administration modernization
Description	Since 2014, NIFO analyses the way in which interoperability and digital polices are being addressed by the Member States in national reforms and operational programmes in the context of the European Semester. For these activities, the documents underpinning the European Semester are among others: Country Specific Recommendations (CSR), Partnership Agreements (PAs), National Reform Programmes (NRPs) and Operational Programmes (OPs), in relation to ESIF Thematic Objectives 2 and 11.
Reference	
Target release date / Status	Q2 2020/ Q2/ 2021

8.3.8 ORGANISATIONAL APPROACH

8.3.8.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States	• National experts and national policy officers • ISA² Committee • ISA² Coordination Group	Contact points for the EIF monitoring and the eGovernment factsheets
European Commission	DG officials and ISA² action owners DG Connect (DESI indicators), JRC (COIN unit working in composite indicators), other relevant EC policy DGs (DG Regio; DG Emploi, DG Grow, SRSS), Eurostats	Contact points for defining the new monitoring mechanism; also data sources for new observatory like public administration modernisation initiatives
EU Publications Office	The unit responsible for the EU Open Data portal	Data sources for new observatory and alignment with open data portal
Non-European public administrations	National representatives	
ICT Industry	Industry associations	

8.3.8.2 Identified user groups

List the main group of end-users of your solutions.

• Public Administrations in Member States, associated countries and non-European countries;

- European Commission;
- EU Publication Office;
- JRC (COIN unit working in composite indicators)
- Citizens and businesses;
- Academia

8.3.8.3   Communication and dissemination plan

Promote and share the results on NIFO community on Joinup. The communication strategy involves publishing of material, news, cases and promotional activities.

Present the proposal of the monitoring mechanism to selected stakeholders: to the Member States representatives (at the ISA² Committee/ Coordination Group meetings or in a dedicated workshop), as well as to other EU institutions like DG Connect (DESI), JRC (COIN unit working in composite indicators), other relevant EC policy DGs, Eurostats, eGovernment unit at the OECD.

Finally, user´s engagement will be targeted though the following activities:

- Creation of supporting material facilitating the new EIF implementation across all levels of Member States' public administrations.
- Provide also ad hoc and support training to Member States' public administrations to ensure EIF implementation across all levels of their national administrations. Training modules to the European countries for the implementation of the revised EIF, EIF-IS and IAP have been produced to that end.

8.3.8.4   Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[106] indicate the current values.

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[106] For examples see the ISA² dashboard https://ec.europa.eu/ISA²/dashboard/isadashboard, **effectiveness** tab.

Description of the KPI	Target to achieve	Expected time for target
Number of pilots to test the new monitoring mechanism	4	Q1 2019
Number of European States where the level of implementation of the EIF is monitored	35	Q1 2020
Number of digital factsheets and infographics updated containing also info on EIF level of implementation	36	Q2 2020

8.3.8.5 Governance approach

The action will be managed by DIGIT with the support of an external contractor.

The proposal of the monitoring mechanism and supporting material for the EIF implementation will be presented to selected stakeholders to collect feedback. In fact, the proposal will be presented to the Member States representatives (at the ISA² Committee/ Coordination Group meetings or in a dedicated workshop), as well as to other EU institutions like DG Connect (DESI), JRC (COIN unit working in composite indicators) and other relevant EC policy DGs.

8.3.9 TECHNICAL APPROACH AND CURRENT STATUS

The NIFO is presented in different sections of Joinup. The observatory has a continuous maintenance process which makes sure that information is timely and accurate.
Desk research is done prior to data collection from the Member States experts. The input is then processed and sent back to the respective country for validation before it is published. In the context of NIFO, the different outputs are prepared in collaboration with external consultancy companies.
As a result of the Commission Communication in March 2017 on the revised of EIF, the European Interoperability Framework - Implementation Strategy (EIF-IS), and the

Interoperability Action Plan (IAP) the NIFO monitoring mechanism will be expanded accordingly.

The monitoring mechanism was expanded by defining the whole list of questions and full set of indicators based on the indicators, sample questions, and data sources.

Pilots on the implementation of the new monitoring mechanism were launched with some MS and EC DGs, and final adjustments based on the piloting results will be performed.

NIFO will continue monitoring of the implementation of the new EIF at Member States and Commission level. The data will be accessible through a business intelligence/ data visualization tool connected to the NIFO collection in Joinup. NIFO will provide the EIF monitoring indicators to SO5 as well, and prepare the appropriate activities to ensure a smoth transition between ISA² and DEP.

The project will work on some preparatory activities prior showing the results of the EIF monitoring:

- Deployment, configuration, integration and maintenance of a data visualisation and business intelligence tool into the observatory
- Creation of the dashboard, filters, and visualisation views for the EIF monitoring results
- Display of the results of the EIF monitoring by using a data visualisation tool, REDISSTAT created under the ISA² programme

Also adjustments to the EIF monitoring indicators and PKIs according to the EIF evaluation results will be made.

Other efforts will be directed into capacity building when it comes to the implementation of the EIF at Member State level. And finally, some reports and studies on digital government will be produced:

- Continue the monitoring of interoperability activities and state of play of Digital Government in total 35 European States and associated countries plus the one on the European Union. Creation of the digital government package and publication of Digital Government factsheets electronic format (PDF), in html and linked open data
- Publication of the State-of-play of digital services and interoperability synthesis report covering 35 European States

Finally, since 2014, NIFO analyses the way in which interoperability and eGovernment polices are being addressed by the Member States in national reforms and operational programmes in the context of the European Semester. For these activities, the documents underpinning the European Semester are among others: Country Specific Recommendations (CSR), Partnership Agreements (PAs), National Reform Programmes (NRPs) and Operational Programmes (OPs), in relation to ESIF Thematic Objectives 2 and 11. To this end, the report on public administration modernization will be updated, containing a set of best practices and recommendations to improve capacity building and the modernization of public administrations

8.3.10 COSTS AND MILESTONES

8.3.10.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/ Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	Operational maintenance of the NIFO process including the update of the eGovernment and interoperability factsheets, the analysis for the state of play report and the EU Semester	693	ISA²	Q2/2016	Q3/2021
	Define and refine the method needed to provide an accurate monitoring of the implementation of the revised EIF and the action plan for interoperability. Creation of guideline and training material to support the implementation of the EIF	650	ISA²	Q1/2017	Q4/2020
	Formulate the functional and technical specifications for the design and implementation of the consolidated observatory	350	ISA²	Q2/2017	Q4/2019

Phase: Initiation Planning Execution Closing/ Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
	on Joinup Platform (including BI features)				
	Develop the new observatory	225	ISA²	Q3/2018	Q2/ 2020
	Data collection, analysis and display of new EIF and IAP monitoring	275	ISA²	Q1/ 2019	Q2/ 2021
	Total	2193			

8.3.10.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	450	450
2017	Execution	443	443
2018	Execution	500	500
2019	Execution	450	450
2020	Execution	800	

8.4 COMMON ASSESSMENT METHOD FOR STANDARDS AND TECHNICAL SPECIFICATIONS – CAMSS (2016.27)

8.4.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	DG GROW

8.4.2 EXECUTIVE SUMMARY

Standardisation is key to achieve interoperability and to avoid vendor lock-in when developing digital public services. Several Member States have published lists of recommended or mandatory standards. The Common Assessment Method for Standards and Specifications (CAMSS) was developed under the IDABC and ISA programmes, in order to ensure that public administrations can assess and select in a transparent and trusted manner the most relevant interoperability standards for their needs. It is based on the methods used in Member States, it provides neutrality and transparency for the assessment process and enables the reuse of assessments. CAMMS action has a decisive role supporting the European Commission Digital Strategy and the upcoming Digital Europe Programme.
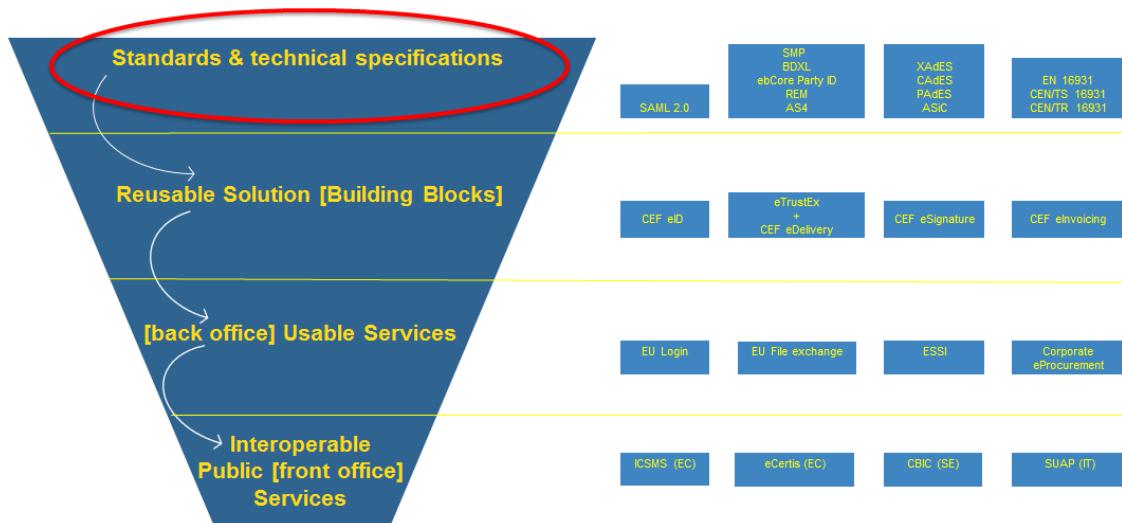
The main objectives of the CAMSS action are:

- To ensure that assessments of formal ICT specifications and interoperability profiles are performed to high and consistent standards;
- To ensure that assessments contribute to the interoperability of systems implementing these specifications and profiles;
- To enable the re-use, in whole or in part, of such assessments;
- To continuously improve the efficiency and effectiveness of the assessment process for ICT formal specifications and interoperability profiles.
- To increase the number of available assessments for reuse by the ICT Standardisation community.

In 2020, ISA² funding is foreseen for the maintenance and extension of the existing tools and the list of Standards as well as the provision of assessment services. This includes the massive application of the last year developed EIF scenario for the assessments of EIF conformance of standards, the creation of a robust ontology supporting a Core Standards and Specification Vocabulary, the deployment of CAMSS in Member States in support of the Single Digital Gatewy (SDG)and improvements in the user interface (adapting to the future Joinup).

For the standards list, it concerns both the update of the content and the functionalities; where the latter regards primarily the alignment with other Joinup catalogues (EIC catalogue, European Catalogue of Standards). For the provision of assessment services, this includes the definition and formalisation of the paradigm CAMSS-As-A-Service through which the CAMSS users are able to request the CAMSS team to perform assessments and reports on ICT specifications.

The below figure positions CAMSS within the ECDS ' steps for creating Reusable Solutions Platform

8.4.3 OBJECTIVES

The objectives are:

- To maintain and extend the method itself, the library of existing assessments, the tools and the list of standards selected in Member States;
- To support other standardisation-related commission activities such as i) the Multi-Stakeholder Platform on European Standardisation by assisting them on the identification (and evaluation) process of proposed technical specifications; ii) the European Catalogue of ICT-Standards, by providing detailed updates of the lists of standards published by the Member States; and iii) other relevant organisations, e.g. standardisation bodies;
- To create an active user community around the assessment and adoption as well as the development and maintenance of standards and/or liaise with existing standardisation fora, to raise awareness of the different methods used in Member States, aligning them where possible, and building upon existing knowledge about best practices.

- To offer assessment services to the natural clients of CAMSS (e.g. Multi-Stakeholder Platform on European Standardisation). This new paradigm is called "CAMSS-as-a-Service

8.4.4 SCOPE

The CAMSS action is meant to support public administrations in Member States that make standards decisions. Member States are free to use the method as-is or to build their own methods based on it; and they are encouraged to contribute requests to the development of CAMSS in order to make it suitable to their needs.

Primarily, the CAMSS action will secure the sustainability of the assessment method and the related components. Beyond the assessment and selection of existing standards, methods for the development and maintenance of standards are also within the scope of the CAMSS action.

Additionally, the CAMSS action will i) support the EIA action by the maintenance and deployment of the Library of Interoperability Specifications in full alignment with EIRA and ii) The SDG initiative with deployments in the Member States

8.4.5 ACTION PRIORITY

The CAMSS action

p) will contribute to priority a) of the ISA^2 Decision by accelerating the completion of the interoperability landscape across the Union;

q) will contribute to priority b) of the ISA^2 Decision by the horizontal nature of the action;

r) will contribute to priority c) of the ISA^2 Decision by targeting a share of 50% of the number of Member States involved;

s) has no other funding sources and had to prove the value provided as it has been confirmed by DG Grow and the MSP;

t) will contribute to priority e) of the ISA^2 Decision by the re-usability of the CAMSS method and the assessments performed;

u) will contribute to priority f) of the ISA^2 Decision by the synergies with IMAPS action and EIA action;

v) will contribute to priority g) of the ISA^2 Decision by the link of the action with the European Union Catalogue of Standards.

w) will contribute to the Digital Europe Programme on the specific objective 5 on deployment, best use of digital capacity and interoperability by providing technical specifications to support cross-border once-only

8.4.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having*	The CAMS action contributes to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe by supporting the identification and evaluation (i.e. fit for purpose) of standards. This is of particular interest in the development of European and national catalogue of standards. Likewise, CAMSS supports to the quality of public administrations by supporting better public procurement decisions and specifications. EIF and EIRA benefits of CAMSS outcomes by identifying interoperability specifications of the architectural building blocks of EIRA. The CAMSS action supports the Tallinn declaration as it concerns to Standards and as such it fully supports DIGIT's Digital Solutions for European Services strategy. • In relation to the support to the ISA^2 programme the CAMMS action is specialized in standards. Standards are of top interest in the ISA^2 programme[107] • In relation to the support to the European

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[107] Decision (EU) 2015/2240 of 25.11.15 on establishing the ISA^2 programme:"**Interoperability is directly connected with, and dependent on the use of, open specifications and standards**",,"The ISA^2 programme shall support and promote: (h) the **assessment, updating and promotion of existing common specifications and standards** (i) **the maintenance and publication of a platform** …. **encouraging the re-usability** of solutions and **standards**"

Question	Answer
interoperability requirements?	Interoperability Framework the CAMSS action action is mentioned and recognized as a cornerstone implementing the EIF in relation to standards[108] • In relation to the support to the Tallinn declaration the CAMSS action is instrumental in achieving the Interoperability by default principle[109] • In relation to the European Commission Digital Strategy the CAMSS action is a pillar supporting the Interoperability & Cross-border and the Openness & Transparency principles[110] • In relation to the upcoming Digital Europe Programme for the period 2021-2027 and taking into consideration the orientation for proposed activities for 2021-22 under consultation the CAMSS action is essential supporting the specific objective 5 on deployment, best use of digital capacity and interoperability[111]

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[108] C(2017) 134 of 23.3.2017 Annex 2 on EIF "The **level of openness of a specification/standard** is decisive for the reuse of software components implementing that specification", "Standards and specifications are fundamental to interoperability. There are six steps to managing them appropriately: **identifying…,assessing…**implementing**….monitoring…..**managing change**…..documenting standards** and specifications **in open catalogues, using a standardised description**","Recommendation 21: Put in place processes to select relevant **standards** and specifications**, evaluate them**, monitor their implementation, **check compliance and test their interoperability**", "Recommendation 22: Use a structured, transparent, objective and **common approach to assessing and selecting standards and specifications**. Take into account relevant EU recommendations and seek to make the approach **consistent across borders**", "Recommendation 23: Consult relevant **catalogues of standards, specifications** and guidelines at national and EU level, in accordance with your NIF and relevant DIFs, when procuring and developing ICT solutions"

[109] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the council of the EU on 6 October 2017. "We will in our countries: make more use of open source solutions and/or **open standards** when (re)building ICT systems and solutions (among else, to avoid vendor lock-ins), including those developed and/or promoted by EU programmes for interoperability and standardisation, such as ISA2"

[110]C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy. **"Reusable solutions platform ..** will be built around a catalogue containing: reusable building blocks and services, open-source solutions, a corporate architecture, **standards**…"

[111] COM(2018) 434 on 6.6.2018 proposal on Digital Europe programme subject to final adoption and Consultation 25 July 2019 to 25 October 2019 on the orientation of the first two years of its proposed DEP. " … shall achieve the following operational objectives:… support integration and use of trans-European Digital

Question	Answer
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes

8.4.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes. The CAMSS action is horizontal nature
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Assessment (identification and evaluation) of standards in the National Health Data Authority (DK), Ministry of the Interior (NL) and Ministry of Finance (ES) Support on the identification process of the Multi-Stakeholder Platform for Standardisation

8.4.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed, be useful*	Yes. We target a share of 50% of

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Service Infrastructures and of agreed European digital **standards** in the public sector and areas of public interests to facilitate cost-efficient implementation and interoperability", "citizen-centric digital public services …. targets the digital transformation of public services – increasing the efficiency of service delivery, the convenience of services for European businesses and citizens and the accessibility of public data – by providing: ….. **technical specifications** and infrastructure to support **cross-border** once-only principle"

Question	Answer
from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	the Member States
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Assessment (identification and evaluation) of standards

8.4.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. In re. Digital Agenda Action 21 & 22 & 23 CAMSS will support the assessment of new ICT standards in procurement. Regulation 1025/2012 on Standardisation establishes the rules for standards and specifications to be referenced in public procurement, and establishes the Multi-stakeholder Platform on European Standardisation. MSP has adopted CAMSS
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	*The CAMSS action will work better under a no grant program like ISA². Also, there are synergies with other ISA² actions like EIA, IMAPS,*

Question	Answer
	Interoperability TestBed and SEMIC

8.4.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CAMSS Assessments library
Description	The CAMSS library of existing assessments is available on Joinup and will be extended. Each assessment is reusable partially or as a whole.
Reference	https://joinup.ec.europa.eu/community/camss/og_page/camss-assessments
Target release date / Status	available on Joinup
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CAMSSaaS
Description	CAMSSaaS (CAMSS as a Service) builds on the MSP streamlined process to provide a User-neutral service whose aim is the assessment of technical specifications and standards on demand through the use of CAMSS Tools.
Reference	https://joinup.ec.europa.eu/solution/camss-service-camssaas
Target release date / Status	available on Joinup
Critical part of target user	

base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CAMSS List of Standards
Description	A catalogue of standards that are recommended or mandatory in Member States (on Joinup) that serves as input for the European Catalogue of ICT-Standards
Reference	https://joinup.ec.europa.eu/community/camss/og_page/list-standards
Target release date / Status	available on Joinup
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CAMSS Tools
Description	A collection of improved tools including new scenarios used by the CAMSS team and also by the CAMSS users
Reference	https://joinup.ec.europa.eu/community/camss/og_page/camss-tools
Target release date / Status	October 2018

Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	EIRA Library of Interoperability Specifications
Description	Recommended standards for EIRA Architecture Building Blocks. Supporting NATO's concepts of "standard profile" and "service interoperability point"
Reference	
Target release date / Status	April 2020
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.4.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	CAMSS will benefit from the TES action by adopting the lessons learned developing the Interoperability Quick Assessment Tool. CAMSS will benefit from the EIA action by focussing on the EIRA identified key interoperability enablers to assess their

Question	Answer
	interoperability specifications CAMSS will leverage on the lessons learned in NATO concerning the concepts of "standard profile" and "service interoperability point"
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

8.4.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	YES. In re. the Communication on "A Digital Single Market Strategy for Europe", COM(2015)192 the DSM strategy calls for more standardisation and in its roadmap the establishment of a European catalogue of ICT-standards is foreseen. The latter is closely interrelated with the CAMSS.

8.4.6 PROBLEM STATEMENT

Within the context of the elaboration of their National Interoperability Frameworks, Member States need to define interoperability architecture domains and standardised interfaces. The same is true when various Member States want to link up their systems in order to establish cross-border European public services.

Decisions and recommendations concerning formal specifications often call for resource intensive and time consuming assessments. By following a common assessment process and criteria, and by sharing and re-using assessments done in other Member States, the burden of assessment can be made easier.

CAMSS provides guidance on the assessment of ICT standards and specifications and ensures transparency and openness of the process

The problem of	Lack of a common assessment method for identifying and evaluating standards
Affects	Public administrations
the impact of which is	Interoperability barriers and vendor lock-in
a successful solution would be	The already adopted CAMSS by the MSP and CAMSSaaS are frequently used. The EIRA Library of Interoperability Specifications complements the EU Catalogue of ICT standards for e-procurement and it is systematically used in public tendering by European public administrations

The problem of	Lack of reusable assessments of standards and technical specifications
Affects	Public administrations
the impact of which is	Resource intensive and time consuming assessments
a successful solution would be	Sharing and reuse of assessments performed with CAMSS

8.4.7   IMPACT OF THE ACTION

8.4.7.1   Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Identifying standards to be used in public procurement		Member States' Public Administrations
(+) Savings in time	Reducing the burden of		European and

Impact	Why will this impact occur?	By when?	Beneficiaries
	assessments of standards		Member States' Public Administrations
(+) Better interoperability and quality of digital public service	Developing interfaces		European and Member States' Public Administrations
(-) Integration or usage cost			
[add other impacts as needed]	A commonly agreed assessment method, an improved assessment process and a customizable list of assessment attributes bring harmonisation, transparency and fit-for-purpose assurance to the selection of standards in the context of ICT strategies, architectures and interoperability frameworks. The re-use and sharing of completed assessments reduces resources and time needed, when establishing, maintaining and commenting on Interoperability Statements. Using CAMSS offers the following main benefits: • A clear guideline that allows the assessments of formalised specifications to be made consistently and in high quality by applying neutral, unbiased and transparent core criteria		European and Member States' Public Administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	fully aligned with the European regulation on Standardisation		
	• A customizable assessment method capable to be adapted to the users' needs (fit-for-purpose) through the creation of new scenarios		
	• Helps Member States to make interoperability agreements based on formal specifications, by providing a common assessment method for these needs and, to assess formalised specifications in public procurement.		
	• Re-use of assessments, in whole or in part. Avoids duplication of effort, for the already finalised assessments of formalised specifications can be shared via the library to be available on Joinup.		
	• The assessed formalised specifications will contribute to the interoperability of systems implementing these specifications.		

Impact	Why will this impact occur?	By when?	Beneficiaries
	• The possibility of more efficient use of public funds, because of easier and faster assessments and a CAMSS library to reuse formalised specifications meant for similar business needs. • Improvement of the expertise of civil servants working with formalised specifications. • Offers a complimentary tool to support the European Interoperability Framework (EIF) and the European Interoperability Reference Architecture (EIRA) in the evaluation of European or national interoperability standards and specifications. • Offers on-demand assessment services for CAMSS users (Multi-Stakeholder Platform on European Standardisation, European Catalogue of ICT-Standards, etc.)		

8.4.7.2 User-centricity

The application of CAMSS requires understanding the user's needs and requirements in order to assess the fit for purpose. CAMSS requires meeting with users to gather their needs and requirements.

8.4.8 EXPECTED MAJOR OUTPUTS

All major outputs were described in section 8.4.5.5

8.4.9 ORGANISATIONAL APPROACH

8.4.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Bodies in MS administrations that assess and select standards	ISA[2] Coordination Group or ISA CG equivalent	Providing input
Public procurers in Member States	ISA[2] Coordination Group or ISA CG equivalent	Providing input
Multistakeholder Platform on European Standardisation	DG GROW project officer	Providing input
Standardisation units in DG GROW and CNECT	Project officers	Providing input
Standardisation for a	Individual contacts, secretariats	Providing input

8.4.9.2 Identified user groups

Government officers dealing with standards and technical specifications

8.4.9.3 Communication and dissemination plan

The benefits resulting from a common method and from the reuse of assessments can only be realised when the method is widely used and, consulted and consumed by the user's community (see Stakeholders).

This requires a collection of high-quality assessments ready to be reused (as complete as possible) and an active community, which will be built starting with the known users of CAMSS, engaging them in a dialog with the goal to use CAMSS as a service. Duplication of fora will be avoided through a close liaison with other groups such as the Multistakeholder Platform on European Standardisation and the Commission services in charge of the European Catalogue of standards.

Further Member States (with a priority on those that already publish lists of recommended or mandatory standards) will be actively invited to participate in the governance of CAMSS.

The provision of assessment services and the improved CAMSS tools are expected to make the method more attractive to users, and result in a continuous contribution of assessments to the CAMSS library.

8.4.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Adoption by MS	20 requests by MS	mid 2020

8.4.9.5 Governance approach

The Commission coordinates consensus building around CAMSS, and all relevant stakeholders will be consulted. Alignment between CAMSS and related EU actions and policies will be ensured by close interdepartmental collaboration inside the Commission. The proposal for the governance of CAMSS that has been developed under the ISA² programme will be further refined, aligned with the governance mechanisms of other actions, and implemented. The action is managed by the DG DIGIT D2 unit and a contractor will help in the implementation of the action. The Commission will also assess cooperation opportunities with standardisation bodies.

Maintenance and sustainability of the CAMSS tools, the assessment library and the list of recommended or mandatory standards from Member States will be planned In the course of the action

8.4.10 TECHNICAL APPROACH AND CURRENT STATUS

The first version of CAMSS was developed by the Commission and Member States under the IDABC programme, the predecessor of the ISA and ISA² programmes. It revised in 2011-2013 in in 2014 aligned with the submission form of the Multi-Stakeholder Platform on European Standardisation. The documentation of the present CAMSS is publicly available online at the following address: https://joinup.ec.europa.eu/community/camss/home

The current version of CAMSS comprises 1) a process, 2) a set of criteria, 3) assessment tools 4) an enlarged assessment library and 5) a list of standards (recommended and/or mandatory in the Member States). The CAMSS process describes how to complete an assessment utilising the CAMSS criteria. Assessments from Member States have already been identified and published in the Joinup platform.

The technical approach as from 2020-June2022 includes:

- to continue populating the assessment library, supporting the Member States to run or map to CAMSS assessments of standards, and animate the Joinup CAMSS community;
- to maintain and update the CAMSS method and tools;
- to evaluate the gap and propose solutions for the usage of ISA² outputs/standards in public procurement procedures;
- to continue populating the EIRA Library of Interoperability Specifications
- To assess all standards and specifications with respect the EIF scenario
- To produce a CAMSS ontology
- to position CAMSS-EIRA along the EU Catalogue of ICT standards for procurement in public tendering in the European Public Administrations
- to support the deployment of CAMSS with pilots in MS and in events/conferences

8.4.11 COSTS AND MILESTONES

8.4.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	• Governance of the CAMSS action • Functional specification for extension of tools and standards-list, testing and Implementation on Joinup	175	ISA²	Q2/2016	Q1/2017
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list	175	ISA²	Q4/2017	Q4/2018
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list	320	ISA²	Q3/2019	Q3/2020
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list Support Member	530	ISA²	Q4/2020	Q1/2022

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	States with SDG We will provide assets to the Interoperability Academy action				
	Total	1200			

8.4.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		175	
2017		0	
2018		175	150
2019		320	
2020		530	

8.5 EIF IMPLEMENTATION AND GOVERNANCE MODELS (EX-EIS GOVERNANCE) (2016.33)

8.5.1 IDENTIFICATION OF THE ACTION

Service in charge	DG DIGIT.D2
Associated Services	All Commission services

8.5.2 EXECUTIVE SUMMARY

This action started under the previous European Interoperability Strategy (EIS) Governance support action. It has evolved as part of the Communication "European Interoperability Framework – Implementation Strategy"[112] was the 2017 revised European Interoperability Framework Action Plan [113] (EIF-AP). The revision was called by the Digital Single Market strategy[114] which identified interoperability a major enabler for digital integration in Europe. The EIF provides organisational, financial and operational directions to implement the revised recommendations. It defines a set of focus areas and an Interoperability Action Plan to guide Member States and European Institutions in the period until 2020. EIS is to serve as a practical tool where interoperability priorities are linked to a set of high added-value actions with measurable results in selected areas until 2020. Emphasis will be put on interoperability layers that can now be further developed such as organisational interoperability.

The study that was conducted in 2012 for the EIS revision, indicated that the great majority of interviewed EU Member States considered interoperability as a critical success factor for fulfilling the need to increase the efficiency and effectiveness in the delivery of public services, as well as to increase the transparency and quality of public administrations and that interoperability is an enabler of "cooperation improvement" among public administrations.

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[112] COM (2017) 134 final: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions: European Interoperability Framework – Implementation Strategy, Brussels, 23.03.2017.

[113] COM(2017) 134 final: Annex 1 to the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions: European Interoperability Framework – Implementation Strategy, Brussels, 23.03.2017

[114] COM(2015) 192: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions: A Digital Single Market Strategy for Europe https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0192

This cooperation will become even more critical with the possible adoption of the Single Digital Gateway[115] that will ensure that 13 key administrative procedures will be available online and will have to be cross-border under the once-only principle.

In 2018, the action has a focus on supporting further the interoperability action plan reusing the previous work done on interoperability governance, public service governance and organisational interoperability. There is an analysis on Interoperability governance models and common elements in the European Union (MS and EU and recommendations to implement organisational interoperability in EC and MS across public administrations.

The action has completed this work done 2019 by identifying further best practices in these domains in order to propose successful ways of implementing the EIF recommendations related to organisational interoperability, interoperability governance and public service governance. Particular attention will be in identifying possible gaps in the EU, in close collaboration with the NIFO action, in order to prepare the ground for the EIF implementation evaluation.

The action has focused particularly on supporting two specific actions of the Interoperability Action Plan (IAP)[116]: action 2 and action 6 on governance models and public administrations' organisational relationships.

8.5.3 OBJECTIVES

The EIF proposes an Interoperability Action Plan (IAP) for Member States and the Commission for them to increase their efforts to avoid market fragmentation achieve interoperability and promote commonly agreed ICT solutions, while ensuring the appropriate governance

The ISA^2 programme should support the IAP (based on the experience gained from the ISA, IDA and IDABC predecessor programmes) in particular:

1. Identify and describe governance structures and good practices for interoperability coordination (Action 2).

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[115] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on establishing a single digital gateway to provide information, procedures, assistance and problem solving services and amending Regulation (EU) No 1024/2012

[116] COM(2017) 134: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions: Annex I: European Interoperability Framework - Implementation Strategy-Interoperability Action Plan https://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_2&format=PDF

2. Clarify and propose ways to formalise public administrations' organisational relationships as part of the establishment of European public services. Identify and develop common process models to describe business processes and Identify best practices (Action 6).
3. Provide an evaluation the EIF implementation for a possible legislative follow-up. Initially foreseen by end of 2019, the evaluation will take place in 2020 to allow enough monitoring of the EIF and the IAP.

Building on the former EIS Governance actions, it will continue to seek for reference models for governance and organisational interoperability structures in accordance with the different structures and models within the EU supporting Member States in their national interoperability activities. The analysis of the Governance models and structures will be adapted and presented according to the EIF layers and recommendations. Also, a methodologies will be presented to the models and structures so as to identify good practices for public service interoperability coordination.

For the objective 2, although the monitoring itself will be done within the NIFO action, the action will build on the results obtained by the former EIS action, aligning the models to the EIF. This action will also identify and develop common process models to describe business processes and identify relevant enablers (e.g. Interoperability agreements).The conclusions drawn from the final evaluations of the ISA and IDABC programmes, the interim evaluation of the ISA² programme, which address aspects such as relevance, efficiency, effectiveness, utility and coherence, will also be taken into account.

Through this approach, the Commission will provide a reference model for governance and organisational interoperability structures that will be in accordance with the different structures and models within the EU and could aid the Member States in their national interoperability activities. Furthermore, the EIF implementation will stay aligned with the EU political agenda and with the priorities and initiatives of the Member States regarding European Public Services and interoperability activities.

8.5.4 SCOPE

The action has in its scope any interoperability initiative in the EU, in any policy domain.
This action will help instituting EIF governance, the related organisational models and the decision-making processes and activities for implementing, monitoring and keeping up to date the European Interoperability Framework (EIF).
Moreover, this action will investigate the direct relation between the EIF governance and the organisational structures that facilitate interoperability in the public administrations. The aim

in this respect will be the identification and assessment of the organisational interoperability models that exist at EU level and their evaluation.

The core organisational tasks of this EIF Governance action encompass the whole implementation of the EIF as well as ensuring the alignment of the long-term vision with short-term actions and their related objectives.

The action can have a permanent activity on screening which changes at EU and Member State level might have an impact on the EIF implementation and on the EIF itself.

8.5.5   ACTION PRIORITY

8.5.5.1   Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan (IAP) and/or* • *the Connecting European Facility (CEF) Telecom guidelines* *any other EU policy/initiative having interoperability requirements?*	The action support directly the EIF implementation and actions 2 and 6 of IAP. It will also spill-over with any initiative for which interoperability is critical such as the Single Digital Gateway regulation.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	

8.5.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	By definition, the action encompasses all sectors.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	

8.5.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	The objectives of the action are by definition cross-border.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	

8.5.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	The objectives are directly linked to the EIF implementation and actions 2 and 6 of the Interoperability AP.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	

8.5.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Output name	European Interoperability Strategy
Description	An overall strategy on Interoperability at EU level through a Commission communication.
Reference	
Target release date / Status	Q4/2016

Output name	Orientations for ISA^2 to implement new objectives
Description	Analysis of ISA^2 programme and establishment of future orientations to implement new EIS based objectives. Includes definition of new action on "user centricity/ engagement approaches"
Reference	
Target release date / Status	Q2/2017

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Organisational interoperability best practices
Description	Instrument to measure and increase organisational interoperability
Reference	
Target release date / Status	Q2/2019
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Interoperability Governance models
Description	The action will propose a number of models that could be used for organising interoperability in EU countries, regions or at EU level, according to immutable parameters such as the government structure.
Reference	
Target release date / Status	Q3/2019
Critical part of target user base	Public Administrations (e.g. National Ministries, National Agencies).
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.5.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	Many ISA² actions will be used by this action in particular the NIFO and eGov factsheets and EIRA. The action will also work in close relation with the Legal Interoperability action to ensure that in EU assessment strategy, governance aspects are correctly taken into account.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

8.5.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The EIF is part of the Digital Single Market Strategy.

8.5.6 PROBLEM STATEMENT

The problem of	Not having a common and constantly updated strategic approach to interoperability at European level
affects	the Members States and the EU bodies as well as the European citizens and businesses benefitting from European public services
the impact of which is	Strategic misalignment of interoperability actions amongst the MS, diverging approaches in the delivery of public services, possible duplication of effort, risk that interoperability is not seriously considered. All above entail the risk of creating new e-barriers in EU to the detriment of the DSM.
a successful solution would be	To define a high level strategy at EU level and have it apply through concrete interoperability actions.

8.5.7 IMPACT OF THE ACTION

8.5.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Better interoperability and quality of digital public service	By definition, the action intends to improve e the interoperability in any EU public services.		

8.5.8 ORGANISATIONAL APPROACH

8.5.8.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission services	The Secretary General and any Commission DG concerned about the update of the strategy.	
Member States	MS representations to the ISA^2 Committee and Coordination group (or its equivalent) and through them MS public administration authorities involved in interoperability initiatives.	
ICT Industry	Representatives of ICT industry, SMEs, …	
Standardisation bodies	Representatives from standardisation organisation fora and consortia	
Local and regional public administrations	Representatives from local and regional public administration European representative organisations such as Council of European Municipalities and Regions, Eurocities, …	
Academics	Academics working in the field of organisational interoperability and electronic governance.	

8.5.8.2 Identified user groups

- Member States' Public Administrations
- EU policy DGs
- EU agencies and Joint Undertakings.
- Regional and local authorities

8.5.8.3 Communication and dissemination plan

Several channels will be used to communication and dissemination as well as user engagement.

The ISA² website as well as the usual social media (twitter and LinkedIn) will be used to communication towards the general public. Joinup, through the NIFO collection, will be the main channel to publish the studies and main deliverables of the project as well as articles and news. It will be used as well to announce meetings and workshops that will be organised though the scope of this action and will try to engage users though discussions.

Dissemination will happen by presenting the results at identified conferences and publishing of academics articles in specialised reviews will also be considered.

As mentioned above, several workshops, involving experts, will be organised for gathering input, validating the methodology use as well as the final results of the studies and the ISA² Committee or Coordination Group will be used as vehicle to present the main results and engage with EU Member States.

Since Montenegro has joined the ISA² programme in 2018, some targeted dissemination might be organised also towards candidate countries.

8.5.8.4   Governance approach

The action will be managed by DIGIT with the support of an external contractor. Whenever major deliverables are to be published, the validation of the MS representatives will be sought. The action will also work in close relation with some actions in particular the NIFO action responsible of monitoring the implementation of the EIF and the Interoperability Action plan as well as the Legal Interoperability action for ensuring that governance and organisational aspects are taken into account when drafting EU legislation.

8.5.9   TECHNICAL APPROACH AND CURRENT STATUS

This action is a work in progress that started in 2012. In detail:
In 2012, the EIS implementation was reviewed. The review identified the barriers that still existed in implementing interoperability in the EU. It also laid down an overview of the interoperability landscape in Member States as well as in the Commission. Review findings revealed the need for more coordination, and that the lack of organisational interoperability is one of the major interoperability barriers throughout EU.
In 2013 work focused on understanding the critical success factors for proper governance of interoperability solutions at European level.

In 2014 the action performed evaluations on the interoperability governance of selected MS and other countries.

During 2013-2014, effort was put to achieving synergies with other EU initiatives in different policy areas, for example the European Semester.

During 2015, the new ISA^2 Programme was adopted and set the basis for the implementation of interoperability in the Union until 2020. Late 2015 and within 2016 the revision of EIS took place through a long consultation process with Commission services and Member States including an open public consultation. The final draft that will be annexed to the Commission Communication was made.

In 2016, the EIS governance action has identified the governance and organisation interoperability models in the Union and analysed them to investigate whether an overall European model can be proposed. This work has continued in 2017 aiming to an endorsement by stakeholders of the organisational interoperability model from the Union.

In 2017, the action is defining the mechanism to measure the EIF implementation into the NIFO action. In 2018 and 2019, the action had focused on interoperability governance at national and public services levels and organisational aspects in order to identify best practices aspects. These use cases has been selected to allow drawing some guidelines.

The action will not continue for the last year of the programme.

8.5.10 COSTS AND MILESTONES

8.5.10.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Update the EIS	308	ISA^2	Q2/2016	Q4/2017
	Identify Best Practices in Interoperability organisational and governance.	350	ISA^2	Q3/2018	Q3/2020
	EIF Evaluation	150	ISA^2	Q4/2019	Q3/2020
	Total	838			

8.5.10.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		210	210
2017		98	98
2018		230	230
2019		320	320

8.5.11 ANNEX AND REFERENCES

Description	Reference link	Attached document
The European Interoperability Framework	https://ec.europa.eu/isa2/eif_en	

8.6 CIRCABC (2016.34)

8.6.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT DDG D1
Associated Services	DIGIT C, DIGIT D

8.6.2 EXECUTIVE SUMMARY

The CIRCABC project delivers a web application and related services enabling the collaboration, communication and documents exchange between many types of European entities like Member States Administrations, Businesses, Citizens, European institutions, centralised or decentralised bodies…

The CIRCABC user's population (**239.000+ users as of 09/2019**) is in majority (80%) from member states.
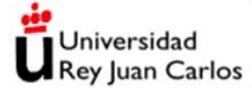
This document provides an overview of the current project situation and expresses needs for its evolution:

- Service sustainability
- Improving the User Interface and eXperience
- Increasing the interoperability capabilities

Key CIRCABC 2018 figures are (delta's versus 2017 figures are presented between quotes):

- **4.569+ active groups (+8%)**
- In 2018, around 2483 Service Help-Desk calls for CIRCABC, **+18%** vs 2017
- **225.000+ users** (+10%) and **4.000.000+** (+3%) published **documents** (6.2TB+ of data)

CIRCABC is used by:

Based on the execution of the ISA work Programme 2010-1015 (feedback of the CIRCABC Perceived Quality Survey and the evolution of document management systems/collaborative needs in general) the challenges of CIRCABC now are mostly building further upon the groundwork done so far:

- Using the new User Interface to develop new functionalities
- Using the new Architecture to improve the responsiveness and robustness of the service
- Taking advantage of the new technology to be more reactive in implementing user requests (Agile methodologies)
- Offering a professional, dynamic support with modern training materials

The yearly operational costs for CIRCABC remained constant despite an increase in activity.

8.6.3   OBJECTIVES

CIRCABC (Communication and Information Resource Centre for Administrations, Businesses and Citizens) is deployed both in Member States and as a central service, at the European Commission.
It allows easy cross-border and cross-sector interactions and is a heavily used reference in this context.

The objective of this submission is to:

- Enable the maintenance and service continuity

- Guarantee a reliable and effective service to the end-users, including support and documentation
- Treat current and future business needs (functional requests from external parties)
- Offer new services in the area of Interconnectivity, User eXperience, Reporting and Archiving

8.6.4 SCOPE

CIRCABC enables widespread collaborative groups to share information and resources in private workspaces.

It is an open-source multilingual application offering publication, distribution and management of documents in any format, with fined grained security. It includes version control, management of translations, multilingual search, forums and is widely accessible to users with disabilities.

CIRCABC contributes to the implementation of many EU cross border and cross sector priorities both inside Institutions and in Member States by providing them with a trustable and **easy to use collaboration, information and document exchange repository**.

As reported by the EIIS study, CIRCABC's architecture and its availability under the EUPL license **enables its reuse as an interoperable building block for other solutions. It can be deployed as a standalone alternative in Member States' administrations or businesses**.

8.6.5 ACTION PRIORITY

8.6.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the*	CIRCABC enables widespread collaborative groups to communicate, share information and resources in private workspaces. By design, CIRCABC is a real driver for communication, integration and interoperation between various,

Question	Answer
implementation of: • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	heterogeneous types of stakeholders like other IT tools/services, administrations, public services, businesses, citizens, associations, private initiatives etc. It offers the technical (Web Services, SOA architecture, Interfaces) and functional (organized in Building Blocks) means for all those entities to be able to interact. Additionally it includes a number of open/public services based on recognized IT standard protocols for communication and information exchange.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	CIRCABC contributes to the implementation of many EU cross-border and cross-sector priorities, both inside institutions and in member states by providing them with a trustable and easy to use collaboration, information and document exchange repository. The EUPL license enables its reuse as an interoperable building block for other solutions. It can be deployed as a standalone alternative or consumed as a service.

8.6.5.2   Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The collaborative nature of CIRCABC makes it cross-sector by definition. It is re-used in many sectors and its objectives are to facilitate the communication and integration of heterogeneous entities.

Question	Answer
For proposals completely or largely already in operational phase, indicate whether and how they have been utilised in two (2) or more EU policy sectors.	CIRCABC is used in the majority of EU policy areas in order, for example for expert groups to collaborate on initial draft 'legislation' before it goes through the decisional process. CIRCABC covers from agriculture to statistics, trade, joint initiatives-researches, health, justice and many others.

8.6.5.3 Cross-border

Question	Answer
Will the proposal, once completed, be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	Yes. A majority of the European Union institutions & bodies are using CIRCABC. There are also a few public administrations, businesses and associations consuming CIRCABC either as a service or as a reused brick in their own Information System.
For proposals completely or largely already in operational phase, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.	CIRCABC is used in most (if not all) Member States and beyond. Examples of CIRCABC Open Sources instances: - **Germany**: Bundesnetzagentur, Land Nordrhein-Westfalen, Bundesverwaltungsamt BVA, Brandenburgischer IT-Dienstleister ZIT-BB, Bundesagentur für Verbaucherschutz und Lebensmittelsicherheit, Land Sachsen. - **Austria**: Umweltbundesamt Österreich - **Spain**: Universidad Rey Juan Carlos, Generalitat Valenciana, Spanish Government.

Question	Answer
	- **Greece**: Government: Inter-service Consultations - **Finland**: European Chemical Agency (ECHA) deployed Secure-CIRCABC Number of geographically spread users in the system: 239.000+ out of which 180.000+ are external.

8.6.5.4   Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	CIRCABC fulfils each point mentioned as objective of the ISA² programme. It acts as a mean for modernising the public sector; it implements standards in terms of communication and information exchange protocols in order to be easily interoperable (integration capabilities/interfaces via web services); it facilitates cross-border and cross-sector collaboration amongst a large variety of stakeholders (including Member States); it is fully reusable as a complete standalone open source tool. Some building blocks of the tool could be reused (EUPL licensing model). CIRCABC can also be used as a service. It is widely used by the European Union institutions & bodies, administrations, businesses and policy makers who have to be more and more agile and responsive towards the collaboration with their stakeholders contributing from all around the world.

Question	Answer
	These contributors are in need of intuitive, reliable and modern tools suited to the fast pace they are confronted with: these automated productivity tools should enable them to concentrate on core business activities. CIRCABC is critical for these organizations to continue their mission to serve citizens from the member states, and it is therefore **critical to sustain this service** and continue to distribute up-to-date OSS versions.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA² programme fits this proposal perfectly, as the objective is to consolidate, promote and expand the previous activities performed on CIRCABC under the ISA programme.

8.6.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	**CIRCABC**
Description	CIRCABC is distributed as Open Source Software. It is reusable on its own as a full package. Building blocks inside CIRCABC may be re-used as well but first need to be isolated.
Reference	https://github.com/CIRCABC/CIRCABC
Target release date / Status	Releases: v3.8.3 in 2017 v4.0 in 09/2018 v4.1 in 2018 v4.2 in 2019 v4.3 in 2020 v4.4 in 2020
Critical part of target user base	Any entity in need of a document sharing and collaborating system

For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Number of open source instances in contact CIRCABC Support Team: 14

Name of reusable solution	**CIRCABC as an external repository**
Description	The services offered by CIRCABC also allow its usage as a simple external repository. It features multiple ways of interacting with the repository through services: - Web Services - FTP – File Transfer Protocol - WebDAV - CMIS
Reference	https://github.com/CIRCABC/CIRCABC
Target release date / Status	Released – Web Services/FTP/WebDAV since 2012 and in constant evolution (implementing more and more services/possibilities to ease and complete the offer CMIS in 2016. Integration possibilities with other repositories (Sharepoint and Documentum)
Critical part of target user base	Any entity in need of a document repository service
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Examples: Webservices: Integration with IAM – Manage memberships (RTD) ; Publish document in external repository (ARES, HERMES), Integration of automatic translation tools (MT@EC, Google Translate, Microsoft Translate) CMIS: Synchronization of a Sharepoint instance with a CIRCABC Interest Group FTP/WebDAV: A few groups manage their files via FTP (use of automatic uploads) or WebDAV

Name of reusable solution	**CIRCABC as a service**
Description	An instance of CIRCABC is hosted at the European Commission's Data Center and can be used by any European citizen or entity.
Reference	https://circabc.europa.eu
Target release date / Status	Released Constant upgrades (approx. each 6 months)
Critical part of target user base	Any entity in need of a document sharing and collaborating system hosted in a trusted EC environment.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The European Commission is also using it with 4.228 active groups (cross-sector and cross-border) Figures from 2018: 4.569 active groups (+8%) 225.664 users (+10%) 25.000+ different entities (administrations, companies, businesses)

8.6.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	ISA 1.4 ECAS-Stork integration used to provide another user authentication mechanism (national e-ID) ISA 2.8 Machine Translation: consumed to offer automatic machine translation of working documents ISA 2.9 Document Repository Services: Integration with the Hermes Repository Services in order to offer the possibility to publish directly from CIRCABC to another external repository. Here Hermes. ISA² 20 – Joinup – Sharing IT Solutions: Consumed to publish and communicate around the action. ISA² 35 - EUSurvey Online Consultations

Question	Answer
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Yes, all of the above

8.6.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	By offering a support of information and documentation exchanges between heterogeneous parties, the action facilitates considerably the communication of expert groups for any of the Union's priorities. For example, a Brexit Interest Group or one for the Greece Task Force were created.

8.6.6   PROBLEM STATEMENT

8.6.6.1   Service sustainability

The problem of	**Service Sustainability**
affects	**All CIRCABC users. Many citizens, public institutions, administrations** and businesses (**239.000+ CIRCABC Users**)
the impact of which is	Citizens, Businesses, Expert Groups, Public entities react in a more and more agile way and need to gather and share reliable information easily while their stakeholders are contributing from all over the world. These contributors require intuitive, reliable and modern tools suited to standards of document management systems and collaborative platforms. They need automated productivity tools enabling them effortlessly to collaborate around and share documents amongst groups of users. CIRCABC is critical for these organizations to continue their mission to serve citizens from the member states, and it is therefore critical to sustain this service and continue to distribute up-to-date OSS versions.
a successful solution would be	Sustain the CIRCABC service and continue to deliver updated OSS application code (under EUPL)

8.6.6.2 New challenges

Performance Pack

The problem of	**[Hardware] Regularly upgrading the architecture in order to cope with the increasing use** – Progress: 08-2019 – 85%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (**239.000+ CIRCABC Users**)
the impact of which is	The continuously growing number of users and groups demands a solidly built infrastructure to ensure a reliable service. Therefore, it is crucial to analyse and deploy an improved server-database and application-server infrastructure in order to cope with the increasing needs and requirements of our users.
a successful solution would be	• **Database clustering, Indexation, a separate Archiving & Business Intelligence/Monitoring server** The application usage is quite active and growing. In order to cope with the constant growth of the traffic and to provide a good quality of service, a new management tool has to be set up. This will help maintain a highly efficient service. • **Horizontal scaling** Adding new nodes to the current system to keep/increase the service's performance

The problem of	**[Software] Regular software upgrades from the building blocks** – Progress: 08-2019 – 100%
affects	All CIRCABC users. Many citizens, public institutions, administration and businesses (**239.000+ CIRCABC Users**)
the impact of which is	The continuously growing number of users and groups, demands a solidly built infrastructure to ensure a reliable service. Therefore, it is crucial to analyse and deploy an improved server-database and application-server infrastructure in order to cope with the increasing needs and requirements of our users.
a successful solution would be	• **Migrate to a better-performing search engine (SOLR instead of Lucene)** *A new index engine (vs Lucene) will be more accurate, efficient and flexible e.g. with regards to searches in an Interest Group.*

	• **Alfresco upgrades**
	Follows our constant effort the keep the tool in sync with the latest features and security updates delivered by Alfresco.

Based both on the operational feedback about CIRCABC, the results of the perceived quality survey and the evolution of data collection needs in general, the following high level requirements have emerged:

The problem of	**User Interface** – Progress: 08-2018 – 100%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (**239.000+ CIRCABC Users**)
the impact of which is	A complete new User Interface and User eXperience has been designed for CIRCABC. This new UI is currently being implemented and will be released in Q3/2018. This will require a lot of stabilization, debugging, optimization time and resources.
a successful solution would be	An easy to use, intuitive, collaborative and document sharing platform

The problem of	**User eXperience** – Progress: 08-2018 – 100%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (**239.000+ CIRCABC Users**)
the impact of which is	Take advantage of the new UI to provide new features and facilitate the use of CIRCABC. The priorities are defined according to user feedback.
a successful solution would be	• **A 'Smart CIRCABC' package** related to a notification mechanism, UI interactivity, Interest Groups customization and improvements in the activity reporting service. *Taking advantage of the fast evolution of web technologies, this package offers new practical features (ergonomical), as well as facilitating the work of the CIRCABC users.* • **New features**: **Workflows & tasks**, Access Control List, 'Rich' Interest Group templates, In-App Messaging, **Automatic Translation Module**

<table>
<tr><td></td><td>Our customers are regularly asking for new features. The CIRCABC's capabilities in term of document management are quite advanced, but some key features could help the users even more.
This package focuses on community & organisational features.

• Archiving

Some groups use the tool as an active publication system, whereas others are asking for an archiving system, to simply store and freeze document versions, Interest Groups Status.</td></tr>
</table>

The problem of	**Mobile application** – Progress: 08-2019 – 100%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (**239.000+ CIRCABC Users**)
the impact of which is	As mobile devices are taking a more and more important role in the digital world (~39% of all web traffic is caused by mobile devices), it will become inevitable to adapt and optimize our User Interface to interact with different mobile platforms.
a successful solution would be	• **Analyse the alternatives** o Responsive User Interface o Native application • **Implementation of the Responsive UI** Access your documents; groups; make comments etc. from a mobile device.

The problem of	**Interoperability**
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (**239.000+ CIRCABC Users**)
the impact of which is	Receiving more and more requests to integrate with CIRCABC through different means. It is needed to extend the overall interoperability level.
a successful solution would be	• **'Social' package** to analyse and enable the integration possibilities with social networks (twitter, google, …) In order to improve the community aspect of CIRCABC, the major social network should be integrated within the

	application to extend its communication channels.
	• **'EC applications',** to analyse the integration possibilities with the e-**Signature action** (1.9 Supporting tools for TSL (Trust-service Status Lists) and e-signature creation/verification), with printable document format generation, and with the EUSurvey tool (action 2016.35).
	Take advantage of the satellite services that the EC is currently offering. (CIRCABC could use the electronic signature system or another network tool already used by the EC staff)

8.6.7   IMPACT OF THE ACTION

8.6.7.1   Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	The common CIRCABC service is readily available to any European Union entity to ease the collaborative work around policy and projects along the lifecycle of documents. It is offered to the users as a service or can be reused by deploying it within another information system.	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations Citizens
(+) Savings in time	Improving the whole document sharing and collaboration around document of the previous version of the tool definitely helped saving a lot of time to all CIRCABC's users.	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) Better interoperability and quality of	CIRCABC is the one tool allowing the European Commission to dialog with external stakeholders and	Q1/2016	European Institutions & bodies Member States'

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Impact	Why will this impact occur?	By when?	Beneficiaries
digital public service	create efficient collaborative groups. It definitely impacts the perception of the digital public service.		public administrations and other, non EU administrations, Citizens
(-) Integration or usage cost	Infrastructure costs in case of reusing the OSS version.	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens

8.6.7.2 User-centricity.

The user satisfaction and to meet users' needs has always been the top priority. In order to do so a User Group (composed of key CIRCABC users) exists and is contacted on regular basis in order to get information about:

- Latest changes on the product
- The user's overall impression of the product
- Discuss planned system improvements
- Identify and discuss new business needs

Users' feedback and integration possibilities are also gathered through

- **the application directly:** the support team is constantly interacting with our users and gathering valuable information to improve the service. All problems, improvement or new feature requests are logged by the support team to be analysed and implemented (if it benefits all).
- **organisational means** due to specific needs of:
Institutions/Administrations/Agencies to collaborate. Their requests are passed on to the CIRCABC team and an integration/inter-operation solution can be discussed and implemented.

- **satisfaction surveys**: Yearly conducted survey sent to all active users of the respective year to gather information about their satisfaction with the work of the support team and of the service in general. It is also the occasion to present newly implemented features and have the users assesses them, as well as asking the users about what new features to implement.

8.6.8 EXPECTED MAJOR OUTPUTS

Output name	Updated CIRCABC
Description	CIRCABC is distributed as Open Source Software. It is reusable on its own as a full package. Building blocks inside CIRCABC may be re-used as well but first need to be isolated.
Reference	2016-2017-2018-2019-2020 https://github.com/CIRCABC/CIRCABC
Target release date / Status	Released

8.6.9 ORGANISATIONAL APPROACH

8.6.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA^2 programme management	Natalia ARISTIMUNO PEREZ	ISA^2 management committee,
European Institutions, Member State Administrations and businesses	ISA^2 management committee, dedicated ISA^2 working group	User Group
DIGIT D	DIGIT Data Services Unit (DIGIT D.1)	System Owner of EUSurvey Responsible for the support and development of the

Stakeholders	Representatives	Involvement in the action
		tool/service
DIGIT C	Director of DIGIT C	Responsible for the service infrastructure

8.6.9.2 Identified user groups

The main group of end-users is 'All European Commission General Directorate's' and indirectly all European Citizen.

CIRCABC serves a lot of different types of European entities like Member State administrations, Businesses, Citizens, European institutions, centralised or decentralised bodies.

8.6.9.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / absolute dates of meetings?
User Group Conference	DIGIT CIRCABC SUPPORT Team	Once a year
ISA events	DIGIT CIRCABC SUPPORT Team	Presentation to specific key stakeholders from Member States (dates to be determined)
Release Notes	DIGIT CIRCABC SUPPORT Team	Each 3-4 months
Joinup News	DIGIT CIRCABC SUPPORT Team	Each 3-4 months and when there are important news

8.6.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[117] indicate the current values.

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[117] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

Description of the KPI	Target to achieve	Expected time for target
Total number of downloads and uploads	20.000.000	Q4-2020
Opened ticket per user	0.01	Q4-2020
Number of users	500.000	Q4-2020

8.6.9.5 Governance approach

The approach and governance of the project is structured around 3 groups: the ISA Coordination Group, the Project Management Group and the User Group.

- The **ISA² Coordination Group** assists the Commission in translating priorities into actions and ensures continuity and consistency in their implementation.

- The **Project Management Group** (DIGIT DDG D1) will be used to bridge the perspectives between the internal stakeholders.
  Regular project review meetings (review of project progress), alternating with team meetings (review of the individual tasks) that will be held to ensure timely delivery of the project.
  DIGIT DDG D1 contracts external resources for service management, development, maintenance, community management, trainings and help-desk support.
  DIGIT DDG D1 provides a Service/Project and Communication Manager.

- The '**User Group**': Based on actual needs and to bridge better the technical and the business aspects, a 'User Group' has been set up.
  It is used to consult the users, when additional information and clarification is required, to provide the opportunity to submit **enhancement requests**, exchange opinions and best practices.
  The frequency of the 'User Group' meetings will be based on their necessity in regard to the current planning and implementation phases.

8.6.10 TECHNICAL APPROACH AND CURRENT STATUS

The technical approach is following an adapted **Agile version of the RUP@EC** methodology and is based on a three-step workflow: Inception, Execution and Operational. Those three steps are cycling as often as required to meet the expressed user needs.
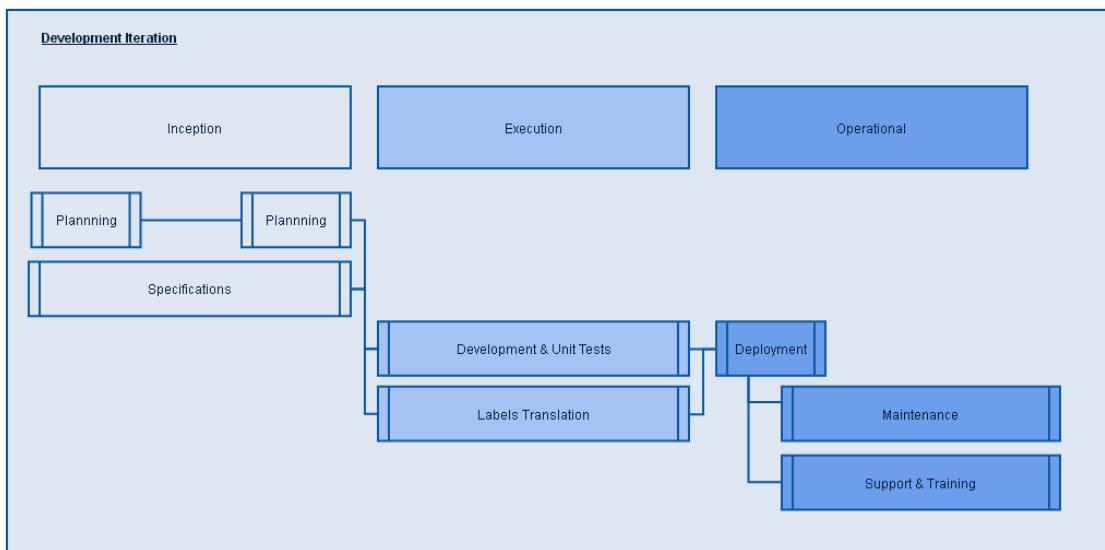
The primary concern of the team is the continuous improvement of the products maintained. The improvement of the products is done by deploying new revisions, called product versions, at regular intervals. Individual tasks, to be implemented within a product version, are combined into work packages called Sprints.

A Sprint usually takes 4 weeks and covers the time required to conduct the following tasks:

1. Implement specified behavior
2. Test the implementation
3. Deploy the result of the implementation.

The mentioned time is usually spent on the following tasks:

- Development of a set of tasks – 3 weeks, including :
    - o Requesting and integrating label translations
    - o Development of automated tests
- Functional and acceptance testing (Testing) – 1 week

Figure 2: Development cycle

CIRCABC is also delivered as an OSS package via Joinup, the Forge made available by ISA. The OSS community has the possibility to actively contribute to the source code.

8.6.11 COSTS AND MILESTONES

8.6.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Operational	Continuation of current CIRCABC Service	250	ISA[2]	Q1/2016	Q4/2016
Inception Execution	Service Pack	100	ISA²	Q1/2016	Q4/2016
Inception Execution	Performance Pack	50	ISA²	Q1/2016	Q4/2016
Execution	Communication & Trainings	50	ISA²	Q1/2016	Q4/2016
Operational	Continuation of current CIRCABC Service	250	ISA²	Q1/2017	Q4/2017
Inception Execution	Service Pack	100	ISA²	Q1/2017	Q4/2017
Inception Execution	Performance Pack	50	ISA²	Q1/2017	Q4/2017
Execution	Communication & Trainings	50	ISA²	Q1/2017	Q4/2017
Operational	Continuation of current CIRCABC Service	250	ISA²	Q1/2018	Q4/2018
Inception Execution	Service Pack	100	ISA²	Q1/2018	Q4/2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception Execution	Performance Pack	50	ISA²	Q1/2018	Q4/2018
Execution	Communication & Trainings	50	ISA²	Q1/2018	Q4/2018
Operational	Continuation of current CIRCABC Service	350	ISA²	Q1/2019	Q4/2019
Inception Execution	Service Pack	100	ISA²	Q1/2019	Q4/2019
Inception Execution	Performance Pack	50	ISA²	Q1/2019	Q4/2019
Execution	Communication & Trainings	50	ISA²	Q1/2019	Q4/2019
Operational	Continuation of current CIRCABC Service	250	ISA²	Q1/2020	Q4/2020
Inception Execution*	Service Pack	50	ISA²	Q1/2020	Q4/2020
Inception Execution	Performance Pack	50	ISA²	Q1/2020	Q4/2020
Execution	Communication & Trainings	50	ISA²	Q1/2020	Q4/2020
	Total	2.300			

8.6.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Inception	75	75
2016	Operational	250	250
2016	Execution	125	125
2017	Inception	75	295
2017	Operational	250	
2017	Execution	125	
2018	Inception	75	300
2018	Operational	250	
2018	Execution	125	
2019	Inception	75	550
2019	Operational	350	
2019	Execution	125	
2020	Inception	50	
2020	Operational	250	400
2020	Execution	100	

8.6.12 Planning for the tendering procedures to be launched for the action

N.A

8.6.13 ANNEX AND REFERENCES

Description	Reference link	Attached document
#1 CIRCABC Service	https://circabc.europa.eu/	
#2 CIRCABC OSS project on GitHUB	https://github.com/CIRCABC/CIRCABC	
#3 File Sharing (Wiki)	http://en.wikipedia.org/wiki/File_sharing	

8.7 EUSURVEY (2016.35)

8.7.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D1
Associated Services	DIGIT C, DIGIT D,

8.7.2 EXECUTIVE SUMMARY

EUSurvey is a multilingual online survey management system built for the creation and publication of surveys and public consultations.

It covers all steps of a survey life cycle, from the design and launch of the survey to the analysis and publication of results. It offers different types of multiple-choice questions, free text fields, as well as more complex elements like editable tables and gallery elements.

Results can be displayed as histograms, percentages or in full detail and can be exported to different formats.

All the submitted answers (or a sub-set) can be published automatically on a dedicated webpage within the application.

Access to EUSurvey is secured by EULogin, the European Commission's Authentication Service.

The tool offers a wide variety of features to meet different survey needs, including:
- Customisable forms
- Scheduled publishing
- High level security
- Customisable look and feel
- Offline answering
- Uploading of supporting files
- Result analysis & publication
- Invitations sent directly from the application
- Quiz oriented forms

The EUSurvey statistics count **9.215 surveys created in 2018 (**already 7.546+ in 08/2019), resulting in **more than 6.450.000 contributions**; **managed by 6.579 form managers**.

This document provides an overview of the current project situation and expresses the needs for its evolution:

- Service sustainability
- Provide new features and services
- Increase the interoperability capabilities
- Extend the service for mobile devices
- Integrate EU Survey with the Better Regulation Portal (Done)
- Increase EU Survey capacity to automatically analyse the content of numerous feedback – Integration with DORIS

Taking into account the feedback received during the ISA work Programme 2010-1015, the results of the EUSurvey Perceived Quality Survey and the evolution of 'form/survey' tools needs in general, the challenge for EUSurvey now lies in building further upon the 'ground work' done so far:

- Use the new User Interface to develop further additional functionality, suited for mobile access
- Use the new architecture to improve the responsiveness and robustness (horizontal scaling) of the solution
- Take advantage of the new technologies to be more agile in implementing user requests
- Offer professional, dynamic support with modern training materials

EUSurvey has quickly become an efficient and appreciated tool to conduct mixed types of survey activities.

The yearly operational costs for EUSurvey remained constant despite an increase in activity. The objective to go to the Cloud with EUSurvey is continuing and should be reached by the end of 2020.

As the tool, is becoming more mature and heavily used amongst the European Commission Institutions (4.360 institutional staffs survey creators), in the following years, the service sustainability will be ensured by a corporate budget. There are also some contracts (MoU) to put in place for General Directorates having increased their needs and expectations in order to cover some specific developments, maintenance and support level.

8.7.3 OBJECTIVES

The service, deployed by DIGIT, is widely used by the Institutions and in Member States. It enables to easily collect the opinion of citizens, key information for decision making processes and implementation of cross-border and cross-sector activities.

The objectives are:

- To sustain the service provision, guarantying a reliable and effective service including support to end-users.
- To analyse and treat the current business requests and coming needs.
- To offer new services in the area of Interconnectivity, User eXperience, Mobile, Reporting and Archiving.
- To integrate EUSurvey into the Better Regulation Portal, in order to achieve the Portal's objective to become the one-stop-shop for all Commission's consultations directed towards the citizens and other stakeholders.
- To become interoperable with other software enabling automatic translation of feedback, automatic content analysis or any other IT tool minimising human intervention when it comes to handling numerous feedback, as it is often the case for public consultations.

8.7.4 SCOPE

EUSurvey enables the creation of surveys amongst European businesses, administrations and citizens, and the collection of answers via a web based user interface. It is an open-source **multilingual** application which is widely accessible and provides support for either identification or anonymity, depending on the survey requirements.

EUSurvey is the ideal tool for quickly and reliably poll opinions from a widespread community, guiding them throughout the contribution process. It supports the implementation of many EU priority sectors and also various other types of surveys and forms.

EUSURVEY is used for very large scale consultations aimed at European populations down to citizens such as:

- Public consultation on summertime arrangements (4.706.294 contributions)

- Public consultation as part of the Fitness Check of the EU nature legislation (Birds and Habitats Directives) (550.000+ contributions)
- Modernising and Simplifying the Common Agricultural Policy (322.000+ contributions)
- Erasmus Programme - Student Mobility (220.000+ contributions)
- Participant Report Form – Learning Mobility of Individuals (215.000+ contributions)
- Survey by DG ENVIRONMENT on ivory trade in the European Union (89.813 contributions)
- A common approach to reducing the harm caused by criminal use of firearms in the EU (85.000+ contributions)
- Public consultation on the possible revision of the Tobacco Products Directive 2001/37/EC (70.000+ contributions)
- Consultation on the Future of Europe (41.500+ contributions)

Because EUSurvey is available, under the EUPL license, from an open source software forge (https://github.com/EUSurvey/EUSURVEY), it can also be installed anywhere as a standalone application or reused as a component of another Information System.

Some EUSURVEY key figures (in 2018):
- **9.200+ surveys**
- **6.579+ form managers**
- **2.769** Service Help-Desk calls
- **6.452.000+** survey contributions
- **Used by most of the Member States**

The scope of the project includes:
- Maintaining the quality of the current service and support
- Increasing the EUSurvey interoperability and reusability towards other national & EUI information systems
- Developing new features and improvements following users' requests
- Mobile access to EUSurvey (contribute to a survey via mobile devices)
- Develop back-end integration with Data Analysis Services (such as DORIS in the Commission)
- Make the application Cloud ready

8.7.5   ACTION PRIORITY

8.7.5.1   Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	EUSurvey is widely used by the European institutions and in Member States for consulting citizens and businesses and collecting key information needed amongst others for the European decision-making process. The integration of EUSurvey with the Better Regulation Portal is a real example of interoperability between existing systems across policy areas. The geographical reach of the action covers the whole Europe and beyond, as feedback are already received in the current Better regulation Portal from stakeholders outside of Europe.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	EUSurvey contributes to the implementation of many EU cross-border and cross-sector priorities both inside institutions and in member states by providing them with a trustable and easy to use data collection, opinion collection tool. A study conducted in 2014-2015 showed the clear advantages and financial benefits of having a customary developed tool to fulfil this need. The EUPL license enables its reuse as an interoperable building block for other solutions. It can be deployed as a standalone alternative or consumed as a service.

8.7.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The nature of EUSurvey, collecting opinions in order to help in the decision making process of the European Union clearly shows the cross-sector aspect of it. It is used and will be used in most of the EU policy areas and others.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	EUSurvey is used in the majority of EU policy areas. As an example, Education and Culture, in the scope of the Erasmus exchanges, uses it as a support tool for organizing Public Consultation on various topics, policy areas. The Better Regulation Portal has already been used for getting feedback on draft acts in domains as varied as Climate, Health, Internal Market, Agriculture, Migration and Home affairs, Taxation, Environment, etc..

8.7.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes. A majority of the European Union Institutions are using EUSurvey. There are also a few public administrations, businesses and associations consuming EUSurvey either as a service or as a reused brick in their own Information System.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU*	EUSurvey is used in most (if not all) European Union Countries and beyond. **In 2018** 9.215+ surveys

Question	Answer
Members States.	6.579+ form managers
	6.452.000+ survey contributions
	Examples of EUSurvey Open Source instances:
	- Belgium:
	Flemish Government
	- **France:**
	French Government and Administrations
	- **Germany:**
	DIaLOGIKa Gesellschaft für Informatik mbH
	- Netherlands:
	Europol
	- Sweden:
	Public Health Agency of Sweden

8.7.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	EUSurvey fulfils each point mentioned as objective of the ISA² programme. It acts as a mean for modernising the public sector; it considerably facilitates cross-border and cross-sector (not only policy making) data collection amongst a large variety of stakeholders (including Member States); It is fully reusable as a complete standalone open source tool or some building blocks of the tool could be reused (EUPL licensing model) or as a service.
	Businesses and policy makers react in a more and more agile way and need to gather

Question	Answer
	reliable information easily while their stakeholders are contributing from all over the world. These contributors require intuitive, reliable and modern tools suited to the strict data collection rules they are confronted with and need automated productivity tools enabling them effortlessly to answer surveys while concentrating on their core business activities. EUSurvey plays an important operational role for these bodies to support their mission and it is therefore **critical to sustain this service** and continue to deliver updated OSS application code.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA² programme fits this proposal perfectly, as the objective is to consolidate, promote and expand the previous activities performed on EUSurvey under the ISA² programme.

8.7.5.5 Reusability of action's outputs

Name of reusable solution	**EUSurvey**
Description	EUSurvey – as a flexible and widely accessible solution for: • Collecting the opinions of stakeholders on a specific issue, • Rapidly consulting businesses, citizens or other interested parties, • Conducting user satisfaction surveys, • Preparing conference registrations, • Creating multi-lingual surveys, • Publishing results over the web

	• Organizing quiz/tests
Reference	https://github.com/EUSurvey/EUSURVEY
Target release date / Status	Latest releases: 1.4.1 (19/11/2017) 1.4.2 (21/12/2017), 1.4.3 (06/06/2018), 1.4.4 (05/2019) Releases to come: 1.4.5 (09/2019), 1.5.0 (02/2020), 1.5.1 (05/2020) Each 3-4 months
Critical part of target user base	Any entity in need of a data/opinion collection tool
For solutions already in operational phase - actual reuse level	Number of open source instances in contact with EUSurvey Support Team: 5

Name of reusable solution	**EUSurvey as a service**
Description	An instance of EUSurvey is hosted at the European Commission Data Centre and can be used by any European Citizen or entity.
Reference	https://ec.europa.eu/eusurvey
Target release date / Status	Latest releases: 1.4.1 (19/11/2017) 1.4.2 (21/12/2017), 1.4.3 (06/06/2018), 1.4.4 (05/2019) Releases to come: 1.4.5 (09/2019), 1.5.0 (02/2020), 1.5.1 (05/2020) Each 3-4 months
Critical part of target user base	Any entity in need of a data/opinion collection tool without having to host it
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The European Commission is also using it with 4.300+ active form managers (cross-sector and cross-border) Figures of 2018: **9.215**+ surveys **6.579**+ form managers **6.452.000**+ survey contributions **Used by most of the Member States**

Name of reusable solution	**Better Regulation Portal**
Description	The action output will be its integration with EUSurvey in order to be able to manage surveys (current status, opening, closing, publication) and its answers (moderation for publication, automatic translation, data analytics, reporting, document management – archiving).
Reference	https://ec.europa.eu/info/law/law-making-process/better-regulation-why-and-how_en
Target release date / Status	Q4 2017 Updates Q1-Q2 2018 Release: 07/2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	**DORIS**
Description	Data Analytics components (dashboard, algorithms,…) to: • Cluster stakeholder feedback • Identify key topics, relevant sentences, named entities (people, organisations...), keywords, as well as stakeholder sentiment. • Summarise stakeholder contributions
Reference	This output shall be made available through the Joinup platform
Target release date / Status	Q3 2017/DORIS integrated within the back end of EUSurvey Q4 2019/DORIS 2 integration within EUSurvey for the form managers to be able to directly request an analysis from the User Interface
Critical part of target user base	Any entity in need of data/opinion collection tool
For solutions already in operational phase - actual reuse level	

8.7.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	ISA 1.4 ECAS-Stork integration used to provide another user authentication mechanism (national e-ID) ISA 2.8 Machine Translation: consumed to offer automatic machine translation of working documents ISA² 20 – Joinup – Sharing IT Solutions: Consumed to publish and communicate around the action. ISA² 36 – CIRCABC – Collaborative workspaces EAC programmes Mobility actions: At the end of Erasmus exchanges, students and other participants are asked to fill in a satisfaction questionnaire, designed with EUSurvey. A future web service integration, aiming at collecting and consolidating feedback on Erasmus+ Mobility actions, will store the data in a repository at DG EAC EUSurvey also integrates Data Analytics Service (such as DORIS the EC's one) as a backend analysis tool. ISA² (2018.08) EU CAPTCHA to distinguish human from machine input
has the action reused existing interoperability solutions? If yes, which ones and how?	Yes, all of the above

8.7.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at	The Better Regulation Portal implements one

Question	Answer
least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	of the ten priorities of the Juncker Commission, namely "democratic change". Increased transparency over the decision-making process and facilitating stakeholder participation in the policy-making process are elements of this strategic objective. The achievement of the overall objective of the Better Regulation Portal to become the one-stop-shop for all public consultations by the integration with EUSurvey greatly facilitates the participation of EU citizens and other stakeholders, including institutional ones. By offering an easy mean of collecting opinions and information between heterogeneous parties, EUSurvey facilitates considerably the organisation and consolidation of any types of 'feedback based' decision (Public Consultation included).

8.7.6 PROBLEM STATEMENT

8.7.6.1 Service sustainability

The problem of	**Service Sustainability**
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	Citizens, Businesses, Policy makers, Public entities react in a more and more agile way and to gather reliable information easily while their stakeholders are contributing from all over the world. These contributors require intuitive, reliable and modern tools suited to the strict data collection rules they are confronted with and need automated productivity tools enabling them effortlessly to answer surveys while concentrating on their core business activities.
a successful solution would be	Sustain the EUSurvey service and continue to deliver updated OSS application code (under EUPL)

Performance Pack

The problem of	**[Hardware] Scaling the infrastructure of EUSurvey** – Progress: 12-2018 – 100%
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	The continuously growing number of users and consultation audiences, demands a solidly built infrastructure to ensure a reliable service. Therefore, it is crucial to analyse and deploy an improved server-database and application-server infrastructure in order to cope with the increasing needs and requirements of our users.
a successful solution would be	Dedicated Reporting and Statistical server Upgrading the infrastructure (CPU & Memory) Upgrading underlying software and OS

Service Pack

Based both on the operational feedback about EUSurvey, the results of the perceived quality survey and the evolution of data collection needs in general, the following high level requirements have emerged:

The problem of	**Embedded surveys**
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	Not yet possible.
a successful solution would be	Allowing users to embed EUSurvey questionnaires within their own webpages in order to make our service more reusable and attractive to a larger peer group.

The problem of	**Extend the WebServices offer** – Progress: 08-2018 – 100%
affects	All systems/applications integrating EUSurvey in their workflow (BRP – DORIS – Mobility Tool)
the impact of which is	Not yet possible
a successful solution would be	Auto-filling of surveys, compatibility with automatic translation information systems.

	Possibility to automatically pre-fill surveys with information and an improved compatibility with Poetry translation management tool.

The problem of	**Statistical tools export format** – Progress: 08-2018 – 75%
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	To ease an extended exploration of answer contributions for end-users, i.e. adapting the exports to be compatible with professional Analytics tools
a successful solution would be	Analyse and offer standard exporting formats, compatible with statistical analytics tools.

The problem of	**Rich typed surveys** – Progress: 08-2019 – 90%
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	Ease the creation and organisation of specific survey types such as, voting, tests-competition, quiz, events organisation
a successful solution would be	• **e-Voting** With a possible re-use of the e-Signature tool from ISA Action 1.9. • **Quiz-Surveys** – Progress: 08/2018 – 100% In order to increase the **applicability** of EUSurvey; this will require the analysis and development of **new question types** and an **improved user feedback** within the User Interface. • **Events-Oriented** Surveys A significant part of our users, use EUSurvey to **plan events** and **organize the registration** of their participants. To completely fit their requirements, additional analysis and development of **new features** will be **necessary**.

The problem of	**Mobile application** – Progress: 08-2018 – 100%
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	As mobile devices are taking a more and more important role in the digital world (~39% of all web traffic is caused by mobile devices), it will become inevitable to adapt and optimize our User Interface to interact with different mobile platforms. The idea is to give the possibility to our users to contribute to any consultation via mobile devices.
a successful solution would be	- Analyse the alternatives - Responsive User Interface - Native application - Implementation of the Responsive UI - Analyse the possibility of using 'voice based' contributions, i.e. 'dictating' and 'recording' features, thus improving the accessibility compliancy.

The problem of	**Better Regulation Portal** – Progress: 08-2018 – 100%
affects	The Better Regulation Portal will become the one-stop-shop for all Commission's consultations. Stakeholders of the consultations and General Public
the impact of which is	Following the adoption of the Better Regulation communication on 19 May 2015, the Commission has established a Better Regulation Portal to offer an easy access to EU law-making and to facilitate consultation and dialogue with both the stakeholders and the general public. As EUSurvey offers services to prepare, execute and exploit public consultations, bridges must be built between the two applications. Therefore, developments must be done to integrate the EUSurvey system (e.g. through webservices) with the Better Regulation Portal, backend for its administration and frontend for the publication of the consultations and their results.
a successful solution would be	A set of WS covering the needs of the Better Regulation Portal to organize and collect the results of the public consultations

8.7.7 IMPACT OF THE ACTION

8.7.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	The common EUSurvey service is readily available to any European Union entity for the creation of surveys, forms and the management, collection and publication of answers in policy making or any other context. It is offered to the users as a service or can be reused by deploying it within another information system.	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) Savings in time	Improving the whole opinion collection, analyses and publication workflow of the previous version of the tool definitely helped saving a lot of time to all EUSurvey's users	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) Better interoperability and quality of digital public service	Commission services will use the Better Regulation Portal to manage the consultations in EUSurvey and the publication of the answers received, as well as better analyse the resulting data to enrich the decision-making process of the Commission.	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens

Impact	Why will this impact occur?	By when?	Beneficiaries
(-) Integration or usage cost	Infrastructure costs in case of reusing the OSS version	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) *Increased Transparency*	The integration of public consultations into BRP into EUSurvey and further replacing the current 'Your Voice in Europe' page ensuring a better visibility to the consultations conducted by the Commission	Q4/2017	Public Consultations Stakeholders and General Public, European Institutions, Citizens

8.7.7.2 User-centricity

The user satisfaction and meeting users' needs have always been the top priority. In order to do so, a User Group (composed of key EUSurvey users) exists and is contacted on a regular basis in order to get feedback about:

- Latest changes on the product
- The user's overall impression of the product
- Discuss planned system improvements
- Identify and discuss new business needs

User feedback and integration possibilities are also gathered through

- **the application directly**, the support team is constantly interacting with our users and gathering valuable information to improve the service. All problems, improvement or new features request are logged by the support team to be analysed and implemented (if it benefits all).

- **organisational means** due to specific needs of institutions/administrations/agencies to collaborate, the request is passed over to the EUSurvey team and an integration/inter-operation solution can be discussed and implemented.
- **satisfaction surveys**: Yearly conducted survey sent to all active users of the respective year to gather information about their satisfaction with the work of the support team and of the service in general. It is also the occasion to present newly implemented features and have the users assesses them, as well as asking the users about what new features to implement.

8.7.8 EXPECTED MAJOR OUTPUTS

Output name	Updated EUSurvey
Description	See section "New challenges" for a complete lists of new features
Reference	https://github.com/EUSurvey/EUSURVEY
Target release date / Status	Each 3-4 months approximately

8.7.9 ORGANISATIONAL APPROACH

8.7.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA^2 programme management	Natalia ARISTIMUNO PEREZ	ISA^2 management committee,
European Institutions, Member State Administrations and businesses	ISA^2 committee, dedicated ISA^2 working group	User's Group
DIGIT D	Mario CAMPOLARGO, Roberto BARCELLAN, Benoît ORIGAS	System Owner of EUSurvey Responsible for the support and development of the tool/service

Stakeholders	Representatives	Involvement in the action
DIGIT C	Philippe VAN DAMME	Responsible for the service infrastructure
SG B4	Martine DEPREZ	System Owner of the Better Regulation Portal representing the various stakeholders for the BRP-EUSurvey integration

8.7.9.2 Identified user groups

The main group of end-users is 'All European Commission General Directorate's' and indirectly all European Citizen.

8.7.9.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / absolute dates of meetings?
User Group Conference	Benoît ORIGAS, Margot FASSIAN	Once a year
ISA Events	Benoît ORIGAS, Margot FASSIAN	TBD
Launch BRP/EUSurvey Integration	Martine DEPREZ	TBD
Release Notes	Margot FASSIAN	Each 3-4 months
Joinup News	Margot FASSIAN	Each 3-4 months and when there are important news

8.7.9.4   Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[118] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of surveys	10000/an	Dec-20
Opened tickets per user	0.2	Dec-20
Number of Form Managers	10000	Dec-20

8.7.9.5   Governance approach

The approach and governance of the project is structured around 3 groups: the ISA^2 Coordination Group (or ISA CG equivalent), the Project Management Group and the Users Group.

The **ISA^2 Coordination Group** assists the Commission in translating priorities into actions and ensures continuity and consistency in their implementation.

The **Project Management Group** (DIGIT DDG D1) will be used to bridge the perspectives among the internal stakeholders.

>   Regular project review meetings (review of project progress), alternating with team meetings (review of the individual tasks) will be held inside each of the involved entities to ensure timely delivery of the project.
>   DIGIT DDG D contracts external resources for service management, development, maintenance, community management, trainings and help-desk support.
>   DIGIT DDG D provides a Service/Project and Communication Manager.

The '**Users Group':** Based on actual needs and to bridge better bridge technical and business aspects, a 'Users Group' has been set up.

>   It is used to consult the users, when additional information and clarification is required, to provide the opportunity to submit **enhancement requests** and to exchange opinions and best practices.
>   Meetings of the 'Users Group' will take place only when needed.

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[118] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

8.7.10 TECHNICAL APPROACH AND CURRENT STATUS

The technical approach is following an adapted **agile version of RUP@EC** methodology and is based on a three steps workflow: Inception, Execution and Operational. Those three steps are cycling as often as needed by the expressed user's needs.
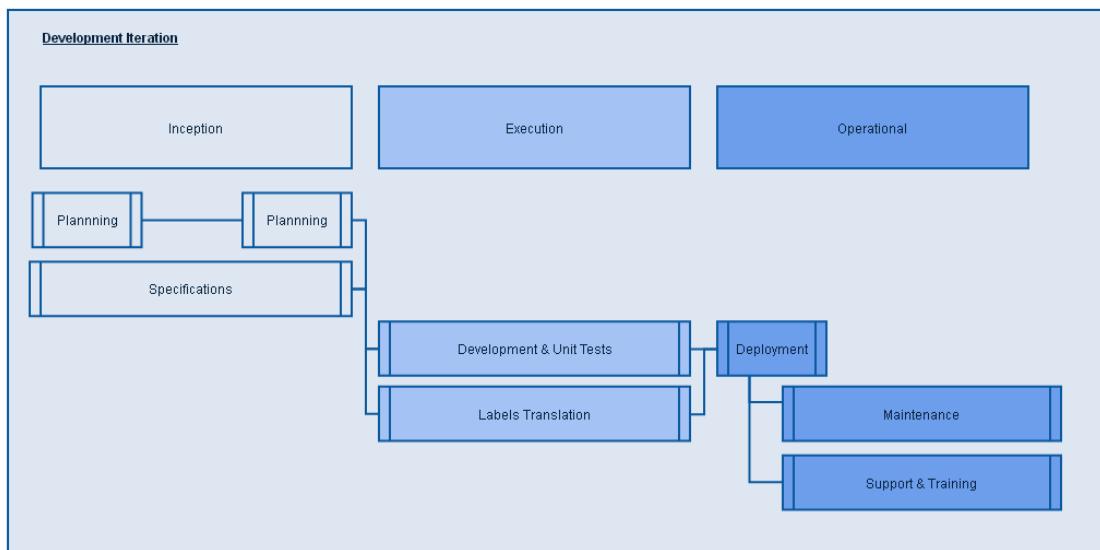
The primary concern is the continuous improvement of the maintained products which is done by deploying new revisions in regular intervals, called product versions.

Individual tasks, to be implemented within a product version, are combined into work packages called sprints. A sprint usually takes 4 weeks and covers the time required to conduct the following tasks:

Implement specified behavior

Test the implementation

Deploy the result of the implementation.

Figure 1: Development cycle

EUSurvey is delivered as an OSS project via [GitHUB](https://github.com/EUSurvey/EUSURVEY) (https://github.com/EUSurvey/EUSURVEY).

The OSS community will have the possibility to actively contribute at the source code level. Support is also provided to the community.

8.7.11 COSTS AND MILESTONES

8.7.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception	Performance Pack	25	ISA²	Q1/2016	Q4/2016
Inception	Service Pack	25	ISA²	Q1/2016	Q4/2016
Operational	EUSurvey Service	250	ISA²	Q1/2016	Q4/2016
Operational	Training – e-learning	50	ISA²	Q1/2016	Q4/2016
Execution	Service Pack	100	ISA²	Q1/2016	Q4/2016
Inception	Service Pack	25	ISA2	Q1/2017	Q4/2017
Operational	EUSurvey Service	250	ISA2	Q1/2017	Q4/2017
Operational	Training – e-learning	50	ISA2	Q1/2017	Q4/2017
Execution	Performance Pack	50	ISA2	Q1/2017	Q4/2017
Execution	Service Pack	50	ISA2	Q1/2017	Q4/2017
Inception	Service Pack	25	ISA2	Q1/2018	Q4/2018
Operational	EUSurvey Service	300	ISA2	Q1/2018	Q4/2018
Operational	Training – e-learning	50	ISA2	Q1/2018	Q4/2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Service Pack	100	ISA2	Q1/2018	Q4/2018
Inception	Service Pack	25	ISA^2	Q1/2019	Q4/2019
Operational	EUSurvey Service	300	ISA^2	Q1/2019	Q4/2019
Operational	Training – e-learning	50	ISA^2	Q1/2019	Q4/2019
Execution	Service Pack	100	ISA^2	Q1/2019	Q4/2019
Inception	Service Pack	25	ISA^2	Q1/2020	Q4/2020
Operational	EUSurvey Service	250	ISA^2	Q1/2020	Q4/2020
Operational	Training – e-learning	50	ISA^2	Q1/2020	Q4/2020
Execution	Service Pack	75	ISA^2	Q1/2020	Q4/2020
	Total	2.225			

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception	MoU – Project Charter	25	ISA2	Q2/2017	Q2/2017
Operational	All project plans	50	ISA2	Q2/2017	Q3/2017
Operational	EU Survey Integration implemented	150	ISA2	Q3/2017	Q4/2017
Execution	Project end report	22	ISA2	Q4/2017	Q4/2017
	Total	247			

8.7.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Inception	50	50
2016	Operational	300	300
2016	Execution	100	100
2017	Inception	297	295
2017	Operational		
2017	Execution		
2017	Initiation (Better Regulation Portal)	247	247
2017	Initiation (Better Regulation Portal)		
2017	Initiation (Better Regulation Portal)		
2017	Initiation (Better Regulation Portal)		

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018	Inception	25	25
2018	Operational	325	325
2018	Execution	100	100
2019	Inception	25	25
2019	Operational	350	350
2019	Execution	100	100
2020	Inception	25	
2020	Operational	300	
2020	Execution	75	

8.7.12 Planning for the tendering procedures to be launched for the action

N.A.

8.7.13 ANNEX AND REFERENCES

Description	Reference link	Attached document
EUSURVEY OSS project on GitHUB.com	https://github.com/EUSurvey/EUSURVEY	
What is EUSURVEY on Europa	https://ec.europa.eu/info/law/contribute-law-making_en	
EUSURVEY service	https://ec.europa.eu/eusurvey/	
Joinup.eu	http://joinup.ec.europa.eu/	

8.8 INTEROPERABILITY TEST BED (ITB) (2016.25)

8.8.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	

8.8.2 EXECUTIVE SUMMARY

The ISA/ISA[2] programmes and other EU initiatives fund the development of IT solutions that are meant to be interoperable with other systems. Before connecting new components to these systems (e.g. new partners to a communication network or new clients to a service), extensive testing is necessary, to avoid compromising an already operational system. Usually these tests require connecting the component to an instance of the service or the communication partner; this is often done by using a *reference implementation* of this service that is separate from the production instance. In a situation where the compatibility of different systems relies on conformance to a standard or specification, this conformance can also be assured through testing – either simply by connecting to the reference implementation (which is assumed to implement the specification correctly) or, more reliably, through the execution of detailed test cases to separately test each clause of the specification, or both.

The "Interoperability test bed" action was conceived under the ISA programme to provide an environment where reference implementations of different systems/services could be hosted – studies conducted during previous phases showed that a dedicated test bed software can support this by providing a user interface, a standardised way to execute tests and access test results, and some test automation. In addition, the use of a test bed also enables formal conformance testing against a specification.

The scope of the action has therefore been enlarged to encompass both hosting of reference implementations and provision of a test bed. Some case studies / pilots were executed to demonstrate this with the help of a test bed software that was developed in the context of the CEN GITB workshop[119].

Under the ISA[2] programme, this has been extended into an operational service. While options for the sustainability of testbed operations are being explored, the action continues to acquire new users and implements test cases for them. There are several options for further sustainability of the Action under the Digital Europe Programme. The Interoperability Testbed is becoming a key interoperability and conformance testing tool for many projects

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[119] http://www.cen.eu/news/workshops/Pages/WS-2015-008.aspx, accessed on 31/08/2015

done under SEMIC, Catalogue of Services, Base Registries, CEF, but also other European Commission services such as DG MARE. In the future, this could be one of the go-to solutions for this need and thus will be continuously maintained as part of the DEP.

In view of the existing notion of Interoperability Agreements in the European Interoperability Framework (EIF), and the long-term perspective for the European Interoperability Reference Architecture (EIRA) to put forward interoperability specifications for all building blocks, testing the conformance of systems to such interoperability agreements and interoperability specifications will become crucial.

7.1.1 OBJECTIVES

Interoperable Test Bed (ITB)'s primary objective is to provide a test bed that offers a user interface and some degree of automation, as well as a platform for hosting reference implementations of cross-border services which can be made accessible through the test bed.

This platform enables Member States' public administrations and their potential vendors to test their systems or products against a neutral, reliable and responsive test environment of reference.

The long-term vision is for ITB to become a test centre that deploys testing services and reference implementations on demand, cooperating with other test centres. Previous studies have shown that using a test bed conforming to the GITB specifications supports this cooperation well, both for the exchange of test artefacts and for the joint execution of tests.

8.8.3 SCOPE

ITB addresses both interoperability and conformance testing. Systems connecting to it demonstrate their interoperability with the test bed and with each other as well as with other systems of different type connected to the test bed. At the same time they deliver proof of their conformance to underlying standards (IOP agreements). The test bed that exposes these services can execute additional tests for more detailed conformance statements.

8.8.4 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[120].

8.8.4.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The action offers testing services to various policy domains; and more general work has been undertaken to explore the testability of interoperability specifications. Specifically, a service for testing of conformance to EIRA has been implemented, which helps improve the data quality for the cartography of trans-European systems and directly contributes to EIF implementation.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Some other initiatives run their own testing services, but there is no other **generic** test bed available for interoperability initiatives.

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[120] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

8.8.4.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.* *For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The test bed can be used in any policy area – it is itself domain-neutral, though individual testing services are domain-specific. GITB-compliance and interoperability between different test beds can play an important role in cross-domain testing – a pilot was executed with the Gazelle test bed used in eHealth. In 2019, the test bed has user communities or is in the process of developing proof-of-concept testing services in the domains of e-procurement, e-justice, the maritime domain, e-archiving and various cross-domain initiatives.

8.8.4.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.* *For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	By its very nature, the test bed is meant to serve the requirements of cross-border projects. All of its present user groups relate to initiatives that operate in a cross-border context, and individual users come from all the MS participating in the respective project, e.g.: • The European Single Procurement Document (ESPD) • The e-SENS e-Tendering pilot • e-Invoicing (CEF DSI and CEN) • The BRIS, Interconnection of insolvency registers (IRI), Land Registers Interconnection (LRI) and e-Evidence projects • The 'Catalogue of Services' ISA^2 action • The 'EIRA' ISA^2 action • The 'SEMIC' ISA^2 action • DG MARE • Publications Office (TED) • UBL 2.3 development • The CISE project • IMOLA project (ELRD) Member States have also expressed interest in using the test bed for their own digital services.

8.8.4.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Not directly, but users groups often come from projects linked to EU policy – for example the e-Invoicing directive requires Member States to have technical solutions in place, an urgent need for testing these solutions is perceived. Passing the tests will be a prerequisite for funding under the CEF e-Invoicing building block.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Instead of various Commission Services, Member States and funded projects developing their own testing infrastructure, it is more economic for ISA^2 to develop test artefacts centrally. For the hosting, user communities can still chose between using the ISA^2 test bed instance and running their own instance. Example: Consistent with the agreement between ISA and the CEF programme, some of the testing services were developed by ISA and later handed over to CEF for operations.

8.8.4.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Operational test bed service
Description	The test bed and some related applications (e.g. reference implementations of specifications/services or simulators) have been deployed in the DIGIT could infrastructure. Testing services are available to service owners and users (public administrations and other stakeholders) - subject to conditions that will be laid down based on a preliminary examination conducted under the ISA programme.
Reference	*http://www.itb.ec.europa.eu*
Target release date / Status	available
Critical part of target user base	The original ambition was to have 10 different user communities end of 2020. Level in Q3 2019 is already 16.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Number of individual users is difficult to measure since in many communities tests can be exexuted anonymously.

Output name	Test Registry and Repository (TRR)
Description	The Test Registry and Repository was created, based on specifications coming from the CEN GITB project, and integrated into Joinup under the ISA programme. It is a repository that can hold various types of assets related to testing, e.g. test beds, test cases, assertions, validation schemas etc.
Reference	*https://joinup.ec.europa.eu/catalogue/repository/gitb-trr*

Target release date / Status	October 2015
Critical part of target user base	N.A.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Unknown – the number of downloads on Joinup could be measured but is of little value since it is not known whether the assets are actually used and how.

Name of reusable solution	Test bed installation package
Description	The test bed software used by ISA[2], which was originally developed by the GITB project, with all additions and improvements developed by the ISA[2] team, is made available as an easy-to-install Docker image.
Reference	Instructions on how to install using Docker can be found here: https://joinup.ec.europa.eu/catalogue/distribution/introduction-isa-test-bed
Target release date / Status	First version released in 2016, continuously updated
Critical part of target user base	Since the test bed is also made available as a service (see section, the majority of users are using this service instead of installing the software. However, the ease of deployment in a virtual machine becomes crucial when testing services are handed over to the respective communities to be operated by themselves.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The testbed running the CEF e-Invoicing tests is the first independent instance of the test bed software. The BRIS project is running its own instance for experimentation, but offering ISA[2]'s service to its users in Member States.

Name of reusable solution	Various test cases
Description	All test cases developed in the context of the action, with their related test artefacts (e.g. assertions, validation schemas etc.) are made available for reuse in the test registry and repository (TRR) on Joinup
Reference	*https://joinup.ec.europa.eu/catalogue/repository/gitb-trr*
Target release date / Status	continuously released since Q2 2016
Critical part of target user base	Presently test cases are mainly used inside ISA[2]'s test bed instance, or in the instance of the user community for whom they were prepared. Actual reuse outside the action is not known.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.8.4.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones? *For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Test bed software is coming from the CEN GITB workshop agreement. Current test cases are based on validation schemas, schematron rules and process descriptions developed by PEPPOL, CEN and e-SENS. CEF e-Delivery software is being used as a reference implementation of the AS4 protocol. The Test Registry and Repository has been implemented on Joinup.

8.8.4.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	This action is a supporting instrument – its contribution is therefore indirect.

8.8.5 PROBLEM STATEMENT

The problem of	Publicly (EU and MS) funded projects with a limited time duration, which create interoperability solutions for which no testing facilities are available after the end of the project
affects	public administrations that want to reuse these solutions at a later point in time
the impact of which is	that these new users have no way of testing their systems before connecting to partners that are already productively running. This absence of test facilities can impede technical implementation and adoption of solutions by Member States.
A successful solution would be	to provide testing facilities on-demand, possibly through reference implementations of the interoperability solution, which are hosted centrally, embedded into a generic test bed with additional automation functionalities.

8.8.6 IMPACT OF THE ACTION

8.8.6.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money (+) Savings in time (+) Better interoperability and quality of digital public service (-) Integration or usage cost	ITB provides the means to test and verify the requirements and to do this repeatedly without threatening fragile and safety-critical production systems. Testing can be greatly simplified and cost	Immediately for new IT projects	Member States' Public Administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	savings achieved because Member States can test one-to-one against the test-bed as opposed to far more complex and time-consuming one-to-many tests		
Increased trust in IT applications	Citizens may have difficulties in trusting the security of their personal data in their own country's public communication systems. A truly neutral, resourceful and trusted test-bed service may alleviate such concerns. The test-bed will also be able to progress the introduction of new cross-border, cross-domain applications which may benefit citizens.	Increasingly over time	Citizens
Market transparency, protection of investment	ITB will give vendors (in particular SMEs) early access to requirements and standards relevant for the implementation of new cross-border and cross-domain communication. In addition, it provides an opportunity to test and eventually certify products against the requirements.	over time, as more user communities use the test bed	Industry

8.8.6.2   User-centricity

While it should be noted that ITB's users are the owners and implementers of IT systems, not the typical "end-users", the action has made a systematic effort to establish how to best capture users' requirements, through several levels of engagement:

- The process usually starts with some informal talks.
- Through a series of presentations and workshops, the team then gathers the users' requirements and implements some simple demo or proof-of-concept test case.
- Based on the proof-of-concept, the users are afterwards better enabled to describe in sufficient level of detail their requirement, which are then negotiated (regarding timelines and prioritization against other users' requests)
- If users choose to implement their own test cases, the team organises one or more sessions to explain the architecture, scripting language and other features.
- If users choose to run their own test bed instance, one or more hand-over sessions are organised to enable the users' support team to maintain the application
- Feedback tools (through either a simple web form or a more complete survey) have been implemented to systematically gather users' feedback.

Even though end-user support is usually done by a team provided through the user community, the ITB team remains available for second level support. A service delivery model has been elaborated to describe these processes.

8.8.7   EXPECTED MAJOR OUTPUTS

All major outputs have been described under section 8.7.5.5.

8.8.8 ORGANISATIONAL APPROACH

8.8.8.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
CEN GITB Workshop and potential successors	Project officer in DG GROW, CEN secretariat	original creator of the test bed software
DIGIT data centre	Cloud hosting services	hosting the test bed
Test centres in Member states	Various contact persons	exchange of experience, best practices, potential users of test bed software and developed test cases, potential cooperation on executing test cases
Service owners, e.g. European Commission Services, ISA action owners or other funded projects	Project officers	users of the test bed (community leaders), request new test scenarios to be implemented
Member States' public administrations	ISA Coordination Group	users of the test bed as part of a project community

8.8.8.2 Identified user groups

- Users of the test bed service are the owners of systems to be tested. Typically, they are the members of a community where new digitized processes are introduced (centralized or peer-to-peer). For example the e-Invoicing/e-Procurement test cases are being used by the owners of e-Procurement systems (public administrations and private companies/service providers).
- Users of the test bed software and other deliverables from the action (requirements, service delivery model etc.) can also be other test centres that want to provide similar services to their customers.

8.8.8.3 Communication and dissemination plan

Existing contacts with a number of system owners will be maintained and extended mainly through the respective project officers in the Commission. Demos and presentations to these and other potential users are foreseen.

The contact with several open source test bed software providers (including GITB) will be maintained through participation in their events and web meetings and through reviews of software and specifications.

The action has contracted with the DIGIT data centre for cloud hosting space, being one of the earliest users. At the same time, contacts with test centres in the Member States will be maintained.

A communication plan has been developed as an explicit deliverable in a previous phase of the action, which identifies communication methods per target audience and establishes a timeline for communication activities. Specifically, a community on Joinup has been created where the project team publishes regular news items about the action.

8.8.8.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[121] indicate the current values.

Description of the KPI	Target set in 2017	Expected time for target	Value Q1 2018	Value Q2 2019
Number of communities	8	1 year	7	13
Number of validators	12	1 year	9	16
Number of news items	20	1 year	16	43
Number of Joinup members	6	1 year	6	6

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[121] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.
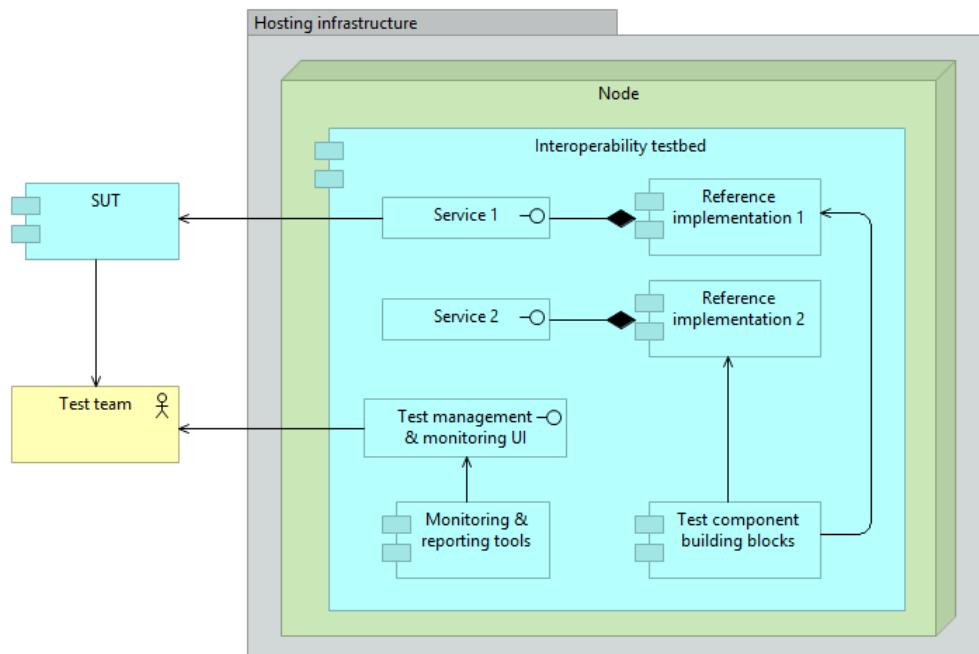
8.8.8.5 Governance approach

The action will be managed by DIGIT with the support of an external contractor. New features are introduced into the software in response to user requests.

While the test bed is being physically run in the DIGIT could service, the development of test cases and other artefacts, the deployment of new reference implementations, message adapters, simulators etc., the management of user demands for testing facilities (both from owners of specifications and services and from owners of systems claiming conformance to these specifications and from users of the service) will remain in the hands of the ITB action.

A framework for this has already been established in deliverables from previous phases (e.g. hosting requirements, eligibility criteria for users of testing services – see documents referenced below). This is being used to make decisions e.g. about prioritisation of requirements and resource allocation.

8.8.9 TECHNICAL APPROACH AND CURRENT STATUS

The action presently provides hosting for testing services and reference implementations, as a cloud service, with the software from the CEN GITB WS being used for the test bed implementation and further improved by the ITB team.


Figure: Testing using a test bed

Over time, new reference implementations, simulators, messaging adapters and other components are being added to provide additional test services, and test cases developed for the automation of simple interconnection tests as well as conformance tests against standards and specifications.

The ISA2 Interoperability Test Bed supports the interoperability and conformance testing of many ISA2, CEF, other EC, as well as cross-border solutions, and thus its future sustainability is crucial for the future of these projects. The solution will need to be maintained under the future Digital Europe Programme in order to assure a continuous service.

8.8.10 COSTS AND MILESTONES

8.8.10.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution (continuing from ISA programme)	Establish hosting of test bed	150	ISA²	Q2/2016	Q3/2016
Execution	Set up governance Deploy reference implementations Develop conformance tests	200	ISA²	Q3/2016	Q2/2017
Operation	Governance of Operation Operational Hosting Test development	246	ISA²	Q1 2017	Q4 2017
Operation	Governance of Operation Operational Hosting Test development and improvements	200	ISA²	Q1 2018	Q4 2018
		200	ISA²	Q1 2019	Q4 2019
		200	ISA²	Q1 2020	Q2 2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	to the test bed software User acquisition				
	Total	**1196**			

7.1.1.1 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution /Operation	250	250
2017	Execution /Operation	246	246
2018	Operation	200	200
2019	Operation	200	200
2020	Operation	200	

8.8.11 ANNEX AND REFERENCES

Description	Reference link /Attached document
CEN GITB specification	Global eBusiness Interoperability Test Bed (GITB) Phase 3: Implementation Specifications and Proof-of-Concept
Hosting requirements, deliverable from previous contract under the ISA programme	D02.02_Hosting requirements - v1.03.
Eligibility criteria for test services, deliverable from previous contract under the ISA programme	D02.01.01_Eligibility criteria for systems to

Description	Reference link /Attached document
Communication plan	Available upon request
The Test Bed's user guide.	https://www.itb.ec.europa.eu/docs/itb-oa/latest/
The GITB Test Description Language (TDL) documentation.	https://www.itb.ec.europa.eu/docs/tdl/latest/
The GITB test services documentation.	https://www.itb.ec.europa.eu/docs/services/latest/
The Test Bed guides.	https://www.itb.ec.europa.eu/docs/guides/latest/

8.9   JOINUP – EUROPEAN COLLABORATIVE PLATFORM AND CATALOGUE (2016.20)

8.9.1   IDENTIFICATION OF THE ACTION

Type of Activity	Common services
Service in charge	DIGIT.D2
Associated Services	DIGIT.D1.D3.B1.B2.B3.B4, GROW.F3, CONNECT.H4.F2, JRC.B6, OP.A1,B1,C3, RTD.B2

8.9.2   EXECUTIVE SUMMARY

Information related to interoperability solutions and initiatives were scattered across Europe in numerous public repositories and governmental websites making it hard for policy makers, IT experts and other interested parties to get information on the current status of interoperability in Europe, or to re-use already available solutions in the public sector.

Joinup addresses these problems, by establishing a common platform, which combines information in the form of structured data with three major services in order to reach the objectives stated above:

1. Observatory functionalities enable different communities, such as NIFO, OSOR and SEMIC, to inform their respective users of new events, news, best practices related to a specific domain;
2. Collaborative features allow setting up separate spaces for different communities to cooperatively develop their solutions, or to exchange best practices about a specific sector or domain;
3. Finally, the Joinup catalogue provides a unique federated one-stop shop for interoperability solutions which are effectively used and which can thus easily be re-used in the public sector across Europe and beyond.

The above features allow different initiatives to focus on their core objectives without having to deal with setting up individual websites with similar functionalities to communicate to the public. Joinup not only saves considerable resources compared to setting up individual spaces for specific projects, but also helps these projects to gain more visibility and reach their target audience more easily. The Joinup catalogue helps public administrations to search for, find and re-use proven solutions from a ''one stop shop''. The platform also is a common place for digital government professionals to extend their network and exchange best practices.

Joinup has been initiated in 2011 (funded under the ISA programme), while the catalogue of interoperability solutions has been launched in 2013.

Based on the usage experience and users feedback, the Commission has launched a major revamping exercise, which included both the update of the Joinup platform and also the re-scoping of the catalogue of solutions.

The Joinup platform has been migrated on 4 October 2017 from version 6 to version 8 of the Drupal open source Content Management System. The migration, in addition to improving user-friendliness and making the platform more intuitive, brought major improvements such as an optimised use on smartphones and other mobile computing devices, a new content structure, a better way of creating/editing content, simplifying the creation of solutions, as well as improved search functionalities, allowing multi-criteria search, etc.

Following the migration, huge efforts have been made in order to better engage users to contribute to the improvement of the platform, not only from a technical (identification and development of new features) but also from a content perspective (provision of content such as news, events, comments into the platform).

In 2019, a successful federation of 2 European Union Member States repositories has been accomplished: the Spanish CTT and the Slovenian NIO.

Other important achievements were the introduction of persistent URIs (PURI) in Joinup for the Architectural Building Blocks of EIRA, so that each user can navigate through the entire EIRA definitions in Joinup without opening a session in CarTool; and the development of the Joinup Licensing Assistant, a unique tool allowing everyone to compare and select open licences based on their content.

The development team of Joinup also did many contributions to the open source community of Drupal reaching more than 15.000 commits in features that can be reused.

In 2020 the action will continue to focus on the following areas:

- Continue to enhance the platform to provide better usability, better support for mobile devices, integration of third-party services, easier navigation, and new features answering to the main needs of stakeholders.
- Further enhancing the catalogue of solutions by federating new repositories managed by public administrations in EU Member States as well as standardisation bodies while removing low quality solutions (e.g. based on consultation and download statistics). Joinup will focus on promoting the highest quality and most documented solutions, while also allowing other high quality, and well documented ones to become part of the catalogue.
- Focusing on the user engagement of existing users and also on attracting more active users.

- Further promoting the Joinup platform as an authoritative source of information around eGovernment and ICT in the public sector in the EU, and as a one-stop shop for sharing and re-using IT solutions for EU public administrations.
- Fostering the reuse and co-development of the platform.
- Ensuring a high level of user support by treating the submitted support requests in a timely and correct way using adequate communication channels.
- Increase the visibility and trust in existing IT solutions made available on Joinup while promoting their sharing and reuse.
- Enabling EU Member States to expose Joinup solutions from their local repositories.
- Further contribute to the Drupal open source community.
- Maintain and update the Joinup Licencing Assistant.

Joinup will help meeting the Specific Objective 5 (Deployment, best use of digital capacity and interoperability) of the upcoming Digital Europe Programme for the period 2021-2027 and more particularly the realisation of the operational objective (c): "facilitate the development, update and use of solutions and frameworks by European public administrations, businesses and citizens, including the re-use of interoperability solutions and frameworks".

In order to provide sustainability of the Joinup platform ,to facilitate the transition to the DEP Programme and the integration of Joinup in the future Digital Transformation Platform, the budget requested for 2020 will cover the operations, support, maintenance and evolutions of the platform up to end of 2021.

8.9.3 OBJECTIVES

The objective of the action is to help public administrations to deliver high quality, interoperable services faster and cheaper by providing them with a platform, where they can exchange good practices and high quality interoperability solutions in a constructive way in the context of digitalising and improving public services.

8.9.4 SCOPE

To develop and provide an interoperable platform that acts as one stop shop and offers a set of services supporting public administrations to exchange interoperability solutions and good practices. The scope encompasses the following activites:

1. To develop and maintain the technical Joinup platform.

2. To operate the Joinup platform and to provide technical and user helpdesk services.
3. To further develop and manage the catalogue of interoperability solutions available on Joinup
4. To establish and maintain (new) federations with existing repositories.
5. Promoting Joinup as a reusable solution itself to be reused by other public administrations.
6. Increasing awareness about the platform and gather user feedback.
7. Increasing user engagement by actively promoting the functionalities and content of the platform
8. To maintain and update the Joinup Licencing Assistant
9. Ensure the integration of Joinup in Digital Europe.

Out of scope:

- Content creation is not in scope for the Joinup action, except for the Joinup collection and solutions, content creation is the responsibility of the Collection and Solution Owners

8.9.5 ACTION PRIORITY

Information related to interoperability solutions and initiatives were scattered across Europe in numerous public repositories and governmental websites making it hard for policy makers, IT experts and other interested parties to get information on the current status of interoperability in Europe, or to re-use already available solutions in the public sector.

Joinup addresses these problems, by establishing a common platform, which combines information in the form of structured data with three major services in order to reach the objectives stated above:

1. Observatory functionalities enable different communities, such as NIFO, OSOR and SEMIC, to inform their respective users of new events, news, best practices related to a specific domain;
2. Collaborative features allow setting up separate spaces for different communities to cooperatively develop their solutions, or to exchange best practices about a specific sector or domain;
3. Finally, the Joinup catalogue provides a unique federated one-stop shop for interoperability solutions which are effectively used and which can thus easily be re-used in the public sector across Europe and beyond.

The above features allow different initiatives to focus on their core objectives without having to deal with setting up individual websites with similar functionalities to communicate to the public. Joinup not only saves considerable resources compared to setting up individual spaces for specific projects, but also helps these projects to gain more visibility and reach their target audience more easily. The Joinup catalogue helps public administrations to search for, find and re-use proven solutions from a ''one stop shop''. The platform also is a common place for digital government professionals to extend their network and exchange best practices.

8.9.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The Joinup action facilitates the sharing and re-use of solutions for public administrations and provides the stakeholders with the means to collaborate. . By interoperability solutions, we mean methods, techniques, guidelines, standards, specifications, service descriptions and software artefacts. The listed solutions are organised in multiple dimensions including the four levels of EIF, including technical and semantic interoperability solutions (e.g. standards, metadata schemata), organisational interoperability solutions (e.g. business processes) and legal interoperability solutions (e.g. guidelines on how to achieve legal interoperability, decisions, laws). The Joinup includes also collections and solutions with policy/initiative with interoperability requirements and

Question	Answer
	referring Interoperability Action plan (e.g. EIRA, IMAPS, NIFO, CEF, SEMIC, Tallinn Ministerial Declaration Collection including also the monitoring dashboard, ARE3NA, Sharing and Reuse of IT Solutions, INSPIRE, CAMSS, Innovative Public Services, Digital Skills In Public Sector).
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes, the observatory functionalities provide a unique access to interoperability information across the EU. It offers also the unique possibility to federate any solutions repository using ADMS v2 and link solutions with the ABBs of EIRA.

8.9.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The collections on Joinup (can) cover different sectors and policy areas.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	The collections and solutions provide a multi sector approach for instance there are communities on Geospatial, eHealth, eProcurement, eGovernment, e-Justice, etc.

8.9.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Our end-users are indeed from all EU Member States and also outside EU and in addition to this, joinup has collections that outside EU MS (e.g. Uruguay).
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Yes, several EU Member States such as Spain, Greece, Slovenia and Belgium, and other initiatives such as W3C have created collections in Joinup, making their national solutions available for re-use. . In 2019 the Spanish CTT Repository and the Slovenian NIO repository have

Question	Answer
	been federated in Joinup using ADMS v2 and their solutions are thus automatically available on Joinup.

8.9.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	In DECISION (EU) 2015/2240 Article 3 (i) it is listed as one of the activities the ISA^2 programme should focus on: the maintenance and publication of a platform allowing access to, and collaboration with regard to, best practices, functioning as a means of raising awareness and disseminating available solutions, including security and safety frameworks, and helping to avoid duplication of efforts while encouraging the re-usability of solutions and standards
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	As this activity is part of the legal base, it is considered crucial for the success of the ISA² programme.

8.9.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Joinup reusable platform
Description	The Joinup platform souce code is available for reuse under an open source licence (EUPL) on Joinup and on Github.
Reference	https://github.com/ec-europa/joinup-dev https://joinup.ec.europa.eu/solution/joinup-source-code
Target release date / Status	Available

Critical part of target user base	Joinup targets users that can reuse the content (re-usable solutions) the platform provides. So re-use of the content is the biggest focus, reuse of the platform itself (for example to setup a central national federated repository) is secondary.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	• The previous version of Joinup (based on Drupal 6) has been re-used by New Zealand and Vietnam. There is no re-use yet ofthe new version. The source code (Drupal 8) is now shared on Gitbub, making it more easy to re-use than the previous. The architecture of the Joinup platform has also been reviewed making possible to reuse some components. • Joinup. Further to this, the platform's repository can be reinstalled and reused for the creation of similar linked data portals.

8.9.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	• Technical platform: the Joinup platform is based on open source, highly re-usable components (Drupal 8, Virtuoso, with some customisation for specific features). • The ISA[2] semantic specification ADMS.AP describes in a standardised manner any interoperability solution. All interoperability solutions in the catalogue of solutions are

Question	Answer
	described using this specification. In addition, the specification is also used to federate interoperability solutions from other national and international repositories. • EIRA: the European Interoperability Architecture will be used to organise solutions which are part of the future European Interoperability Cartography (a subset of Joinup catalogue) on Joinup. • Sharing & Reuse: Development of the Joinup Licensing Assistant based in collaboration with the EUPL and OSOR communities.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	See above

8.9.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Yes, in the DSM priorities, the Commission has communicated it will concentrate on standards and interoperability, critical areas to the Digital Single Market. With the implementation of the European

Question	Answer
	Catalogue of ICT Standards for Public Procurement and the interoperability catalogue of re-usable solutions in Joinup, we are at the heart of the DSM priority to help governments, business and citizens have access to free digital tools.

8.9.6 PROBLEM STATEMENT

The problem of	Scattered and Insufficient information concerning reusable, interoperable solutions for public administrations and know-how about implementing and operating public services
affects	European public administrations
the impact of which is	Inefficient use of taxpayers money, non-interoperable services, slow introduction and reuse of new technologies
a successful solution would be	A central and highly interconnected platform offering richly described, structured information about: 1) interoperable and re-usable solutions (services and tools) for public administrations; 2) studies, cases, guidelines and other content to support the development and operation of efficient public services; 3) best practices published by communities of interests.

8.9.7 IMPACT OF THE ACTION

8.9.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Reduced costs through the re-use of common packages integrated into a single hardware/software infrastructure and operated by a single technical service team.	ongoing	European Commission services
(+) Savings in time	As mentioned in the sharing and re-use	ongoing	Member States

Impact	Why will this impact occur?	By when?	Beneficiaries
	framework: Applying business models that facilitate the co-creation, sharing and reuse of IT solutions can also generate efficiency and financial gains		public administrations and their IT providers Other non-EU public administrations
(+) Better interoperability and quality of digital public service	Member states obtain access to a set of interoperability solutions that can be re-used in their NIF. They could also obtain access to an overview of the different TES that exists to support EU policies. Solutions which could be re-used are not only software systems or parts thereof but also guidelines, methods and techniques, organisational and legal regulations and formal specifications. The more members states re-use common building blocks, the larger the impact on interoperability between the different member states	ongoing	Member states
(-) Integration or usage cost	Reduced communication and development costs for projects, resulting from not having to set up individual websites and repositories	Ongoing	Member States public administrations and their IT providers

Impact	Why will this impact occur?	By when?	Beneficiaries
	to publish their solutions to the public.		

8.9.7.2 User-centricity

Before the revamp of the new Joinup different stakeholders and users of the platform were reached out to collect feedback and involve them to redesign the Joinup platform to its new form. Both positive and negative feedback has shown clearly the weak and strong, points of the platform.

Focus on user engagement is a continuous action since the launch of the new platform. It includes organising meetings, trainings and webinars for the different user communities (collections) to receive and give direct feedback on the use of the new platform.

There is an online and direct communication with the most active collections owners/ facilitators that leads to a closer relationship and to better understanding and improvement of the features of the platform.

Additionally, the roadmap and the updated versions, and guidelines, videos and all relevant documentation are published online, so that users of the platform can see, but also join in the discussions for new features and learn about the implementations.

8.9.8 EXPECTED MAJOR OUTPUTS

Output name	Direct code repository federation
Description	Joinup Solutions can be either federated or hosted directly on Joinup. Hosted solutions must be up-to-date by the solution owner, which requires an action on Joinup after every new release of these solutions. Open Source solutions are often maintained on source code management platforms such as GitHub, the integration with these platforms will increase both the available solutions of Joinup, and the overall data quality of the platform (more up-to-date releases).
Reference	
Target release date / Status	Q4 2020

Output name	European Interoperability Cartography
Description	The 'European Interoperability Cartography (EIC) is a repository of interoperability solutions for European public administrations provided by Union institutions and Member States, presented in a common format and complying with specific reusability and interoperability criteria that can be represented on the European Interoperability Reference Architecture (EIRA). The EIC contains interoperability solutions that have been identified to be reusable and interoperable in the context of the implementing an EU public policy.
Reference	
Target release date / Status	Q4 2018

Output name	European Catalogue of ICT Standards for Public Procurement
Description	The aim of the European Catalogue initiative is to foster the referencing of existing ICT standards and technical specifications by public procurers through • The creation of a centralised repository of reference standards and technical specifications • a coordination and convergence process for the development of MS' strategies to adopt ICT standards (including national catalogues when they exist). • better information on existing standards and technical specifications • guidance on the way to use them • an adequate policy to encourage their use • the adoption of best practices It also intends to increase transparency for the vendors on the public procurement market needs, requirements, and opportunities.
Reference	
Target release date / Status	Q 2017

8.9.9   ORGANISATIONAL APPROACH

8.9.9.1   Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States' public administrations	o ISA^2 Committee o ISA^2 Coordination Group o Representatives of national repositories or other repositories being federated.	
European	Service provider for hosting/support/Cloud	

Stakeholders	Representatives	Involvement in the action
Commission DIGIT	services and project evolution	
European Commission DIGIT	Action owners of several actions such as: National Interoperability Framework Observatory (NIFO) action, Promoting semantic interoperability (SEMIC), Innovative Public Service, Interoperability Maturity Assessment of a Public Service (IMAPS), Access to Base Registries (ABR), Open PM^2 Project Management Methodology, Sharing and Reuse of IT solutions, EUPL, OSOR, EU-FOSSA 2, EIRA, CEF, CAMSS, e-TrustEx, INSPIRE	
European Commission JRC	Action owner of the ELISE action Owner of the collection ARE3NA.	
European Commission CNECT	Owner of the CEF programme and CEF collection Owner of the Tallinn Ministerial Declaration Collection	
European Commission GROW	Owner of the European Catalogue of ICT Standards for Public Procurement project and Rolling Plan on ICT standardisation collection	
European Commission Publication Office	Owners of ELI	
International Organisations	Representatives of the repositories (etc W3C, ETSI, CEN)	

8.9.9.2 Identified user groups

There are 3 main groups:

- Standard end-users, using the platform to share or reuse information
- Owners and facilitators that hold some administrative role on the platform (for example the publication of solutions or the creation of discussions) and that want to engage their members
- Owners of national or international organisations repositories that want to share their solutions via Joinup

8.9.9.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / Absolute dates of meetings?
Survey on future improvements	Users of the platform, national repositories	Once per year and continuous feedback via a dedicated link to be provided
Workshops-Webinars-Dedicated meetings	Owners of national, international federated repositories and owners/facilitators of Joinup collections	Several times per year
Joinup website Polls	End-users of the platform	Quarterly or ad-hoc
Promotion of collections and solutions (via articles and social media, presentation in events)	All joinup stakeholders	Daily

8.9.9.4 Key Performance indicators

The KPIs are still under review and some are under definition at the level of Collection. The list has been reduced compared to previous years. This will be the basis for the KPIs to report and to be linked with Monitoring and evaluation action.

Description of the KPI	Target to achieve	Expected time for target
Percentage of first-level-of-support incidents resolved within 2 working days	100%	Quarterly
Number of new valid registered members	250	Quarterly
Number of new Interoperability solutions made available via Joinup	100	Yearly
Number of new content items available on the platform (e.g. news, events, discussions)	75	Quarterly
Number of new solutions repositories federated within Joinup	3	Yearly
Percentage of visits increase on Joinup pages compared to previous years	5%	Yearly

8.9.9.5 Governance approach

The project is managed by the Commission (DIGIT.D.2, DIGIT.D.1).

The strategic decisions with regards to the direction of further developments are influenced by evaluating the use of the platform (statistics, helpdesk tickets) and by surveying the end-users and other stakeholders of the platform. A Joinup Steering Committee (quarterly meetings) has been set up (consisting representatives of the above stakeholders in 7.1.9.1) to support the decision making process.

8.9.10 TECHNICAL APPROACH AND CURRENT STATUS

The development of Joinup started in 2010, while the platform was launched in 2011. In 2013, Joinup launched an integrated repository of interoperability solutions, which included not only open source software, but also technical and semantic specifications aimed at increasing interoperability among public services. Over the last years, Joinup has become collaborative home to hundreds of Commission and other EU software initiatives and provides a catalogue of thousands of federated interoperability solutions, guidelines, documents and frameworks.

It also provides the technical means to publish several ISA and ISA^2 initiatives, such as the National Interoperability Framework Observatory (NIFO), CAMSS, IMAPS, ePrior, eTrustex, etc. Being such a rich and diverse information source has had its challenges. Users found it hard to find relevant information among the plethora of content Joinup provides and to navigate through the dozens of different services. To address these issues, the Commission has launched 2 parallel projects. One aims at updating the platform itself using modern technologies (full support of mobile devices, better user interface, streamlined workflows), while the other is working on streamlining the catalogue of interoperability solutions.

In October 2017, the first version of the new Joinup platform has been launched and large part of the activities concerned the proper migration of the content an ensuring support to collection owners. During 2018, there has been substantial effort also to support the monitoring of the Tallinn declaration for which Joinup has been chosen as the platform to support it and it required some specific developments.

In 2019, a successful federation of 2 European Union Member States repositories has been accomplished: the Spanish CTT and the Slovenian NIO.

Other important achievements were the introduction of persistent URIs (PURI) in Joinup for the Architectural Building Blocks of EIRA, so that each user can navigate through the entire EIRA definitions in Joinup without opening a session in CarTool; and the development of the Joinup Licensing Assistant, a unique tool allowing everyone to compare and select open licences based on their content.

The development team of Joinup also did many contributions to the open source community of Drupal reaching more than 15.000 commits in features that can be reused.

Some modifications were also implemented to ensure compliance with the new GDPR.

In 2020, focus will still continue on user engagement and promotion of the platform and further improving the user experience as well as federating more repositories and promote the Joinup as an installable platform. User access management will also be improved by using EU Login as identification and access management system.

Work on the catalogue has already started in 2015. First, a new scoping criteria along with a stricter quality check have been defined, which will result in a significant reduction of the catalogue. This will make it easier to promote high quality, well documented solutions and important specifications for public administrations. This work is planned to continue in 2019, so that the catalogue becomes a collection of (only) high quality really reusable solutions.

In summary, the following activities are planned for 2020 and 2021:

- Operation of the new Joinup platform, which includes hosting, technical maintenance, the provision of technical and user helpdesk.

- Implementation of additional features in the new Joinup platform based on user demand/needs.
- Integration with EU Login.
- Operating the catalogue of interoperability solutions on Joinup, which includes the federation of new repositories, the assessment of federated and hosted solutions against the new scope and eligibility criteria, the promotion of high quality solutions and other promotion activities.
- Maintaining the EIC
- Supporting the monitoring of the Tallinn declaration
- High Focus on user engagement via dedicated user communities (collections) on the platform
- Organisation of webinars an trainings on use of the platform
- Prepare the transition to Digital Europe platform and prepare the integration of Joinup

8.9.11 COSTS AND MILESTONES

8.9.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Joinup2 hosting,technical maintenance and provision of technical 2nd line helpdesk. Moderation of user content and editorial work	477	ISA2	Q3 2016	Q2 2018
Execution	Joinup 2 improvements and new developments	400	ISA2	Q2 2016	Q2 2018
Execution	Provision of the common service, catalogue of solutions, EIC and the	1000	ISA2	Q2 2016	Q2 2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	CAMSS catalogue on Joinup				
Execution	Cloud infrastructure + DEVOPS	360	ISA²	Q2/2018	Q4/2021
Execution	Joinup Service management (Governance, user engagement, Change management, Catalogue management 1st line support) (ABC IV)	1600	ISA²	Q2/2018	Q4/2021
Execution	Joinup improvements, new developments and 2nd level support (Digit.D.1)	1720	ISA²	Q2/2018	Q4/2021
	Total	5557			

8.9.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Inception, operational, Execution	1060	
2017	Inception, operational, execution	817	
2018	Execution	990	990

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019	Execution	1090	1.010
2020	Execution	1600	

8.10 COMMUNITY BUILDING AND EFFECTIVE USE OF COLLABORATIVE PLATFORMS (2016.22) – FUNDING CONCLUDED

8.10.1 IDENTIFICATION OF THE ACTION

Type of Activity	Accompanying measure
Service in charge	DG DIGIT.D2
Associated Services	DG CNECT

8.10.2 EXECUTIVE SUMMARY

Funding for this action has been concluded.

Task related to creation of original content and promotional, disseminational activities will be uptaken by ISA2 action 2016.30 "Raising interoperability awareness".

Tasks related to the operation of the Open Source Observatory and facilitating the use of open source software among public administrations are overtaken by ISA2 action 2016.31 Sharing and reuse.

Tasks related to the supporting of different communities which use the Joinup platform are overtaken by ISA2 action 2016.20 Joinup.

The Community Building action is at the core of the Joinup platform. It facilitates collaboration through the platform, supporting and enhancing the activities of hosted communities. Community-building activities will continue under ISA² programme.

Promoting the exchange of good practices is a good way to ensure spreading them across Europe. Member States can replicate useful approaches and solutions to deliver electronic services minimising effort and time.

In this context, the implementation and promotion of best practice online as well as the facilitation of offline sharing are key. They help to ensure a wider deployment across the EU to the benefit of Public Administrations, businesses and citizens.

The ISA² communication strategy to be developed in 2016 will consider also the activities performed under the Community building action.

8.10.3 OBJECTIVES

The main objective of this action is to facilitate the exchange of best practises in the area of interoperability and e-Government, notably by the set-up and operation of pertinent user communities.

8.10.4 SCOPE

Any community interested in interoperability and e-Government is in scope of the action. These communities are open to all stakeholders as long as they are not used for commercial purposes and clearly demonstrate that they represent the interest of the public service.

This action covers one of the priority areas of the European Interoperability Strategy which is the sharing of best practices and common solutions among public administrations. It covers also some priorities of the Digital Single Market. As a result, it will continue building new and maintaining existing communities (within and outside the EU borders).

8.10.5 PROBLEM STATEMENT

European public administrations, who are the main target group of this ISA[2] action, have progressed a lot in the area of interoperability and most of them already have advanced national portals/platforms as repositories for the sharing of their common solutions. These reside within the national borders, and therefore are often more appealing to national users than the pan-European ones. However, national platforms are not always known or accessible (e.g. due to linguistic issues) to all EU citizens and concerned communities are in national isolation without the broadest possible visibility.

The creation of a single place, i.e. Joinup, where relevant communities can be hosted, supported and maintained is a solution to the above problem. It should be noted that Joinup should not be perceived as a competitor to other local sites but rather as their complement at EU level. Joinup software itself can be downloadable by stakeholders wishing to have their own collaborative space.

Joinup.eu covers content from all across the EU and beyond and therefore it can also support public administrations when adopting a European perspective in interoperability rather than focusing at national level only. The full re-use and benefits of best practices and solutions is not possible without providing European level visibility to such practices. This is exactly what

Joinup.eu is committed to do and will be achieved by supporting the building and maintenance of online communities.

8.10.6 EXPECTED BENEFICIARIES AND ANTICIPATED BENEFITS

Beneficiaries	Anticipated benefits
European Public administrations, business and citizens	• Knowledge/solutions sharing and reuse; • Co-working on issues of common interest; • Better, more effective and efficient public services via sharing, re-use and collaboration.

8.10.7 EXPECTED RE-USABLE OUTPUTS (solutions and instruments)

Output name	news items, cases studies around eGovernment and OSS in public sector
Description	A set of news items, case studies around eGovernment and OSS in the public sector.
Reference	http://joinup.ec.europa.eu
Target release date / Status	regularly published throughout 2016,

Output name	OSS highlights
Description	A publication highlighting the most important initiatives, good practices around using OSS in the public sector in 2016
Reference	http://joinup.ec.europa.eu
Target release date / Status	Q1 2017

8.10.8 RELATED EU ACTIONS / POLICIES

Action / Policy	Description of relation, inputs / outputs
ISA Action 1.1 – Methodologies	ISA Action 4.2.2 hosts and manages the SEMIC and CESAR communities of the ISA Action 1.1.

Action / Policy	Description of relation, inputs / outputs
for the development of semantic assets	
ISA Action 1.12 – European Citizen's Initiative	ISA Action 4.2.2 hosts and manages communities.
ISA Action 4.2.1 – ISA Integrated collaboration platform	Joinup offers the technical place to host the activities of the Community Building action.
ISA Action 1.6 – PEPPOL Sustainability (CIPA)	ISA Action 4.2.2 hosts the user community around CIPA e-Delivery building block.
ISA Action 1.7 – e-Prior action	ISA Action 4.2.2 hosts the user community around the e-Prior tool.
ISA Action 4.2.3 NIFO	ISA Action 4.2.2 hosts the user community of NIFO. NIFO through the delivery of factsheets and interoperability reports at EU level can be a reference point for many of the communities.

8.10.9 ORGANISATIONAL APPROACH

8.10.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives
Member States	Member State Experts
Communities of Practice	ELANET
European Public Administrations	Public Administrations from National, Regional and Local levels together with all EU Institutions and Agencies.

8.10.9.2 Communication plan

Communication activities are ensures through constant contacts with the existing and potential stakeholders and through presentations to the ISA² management bodies.

8.10.9.3 Governance approach

The action will be managed by DIGIT with the support of an external contractor.

8.10.10 TECHNICAL APPROACH

The action consists of two parts:

- Community building

The Commission provides answers to all questions, comments and suggestions community members might have, be it on open source, interoperability or of technical nature.
The Commission will ensure that communities are active and will support their facilitator to create content and stipulate discussions between the members.

In 2016, the service will continue and further enriched as Joinup functionalities will be extended due to migration to a newer Drupal version. Support to communities will be intensified, also through providing better content, statistics to facilitators so as to identify new trends needing discussion, running awareness campaigns, etc.

- Sharing of best practice

The Commission will be responsible for the content generation on Interoperability and eGovernment and also support users to submit their own content in terms of news, events, cases and documents.
This action sustains most of the actions within the ISA^2 programme, as it is able to support their communities on Joinup.eu.

In 2016, social media will be better integrated to allow for success stories and best practises to be easily captured and communicated. Real-life events (workshops, conferences) will be organised to support communities in a variety of themes.

Generally, through this action the Commission is taking a pro-active role in the area of collaboration. Also, he Commission shall search for similar initiatives in the EU public administrations and identify possibilities for collaboration.

8.10.11 COSTS AND MILESTONES

8.10.11.1 Breakdown of anticipated costs and related milestones

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA²/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Operational	Content provision, moderation of online discussions, support to online communities, showcasing of best practices organising workshops.	500	ISA^2	Q2/2016	Q1/2107
	Total	**500**			

8.10.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Operational	500	
2017	Operational		
2018	Operational		
2019	Operational		
2020	Operational		

8.11 ASSESSMENT OF TRANS-EUROPEAN SYSTEMS SUPPORTING EU POLICIES (2016.36)

8.11.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	DIGIT D3, TAXUD

8.11.2 EXECUTIVE SUMMARY

The European Commission is determined to improve the efficiency on its ICT portfolio management, especially for solutions of trans-European nature having direct impact on the implementation of EU policies.

On the one hand, the Commission IT Governance should rationalise existing IT systems by identifying and eliminating overlaps through reusability.

On the other hand, the policy makers i.e. in the context of the recently launched Digital Single Market strategy should make good use of technology in EU legislation, by referring to an updated repository of IT solutions linked with legal and business needs and technically sound. For the above to happen, the identification, collection, documentation and assessment of Trans European Systems (TES) managed by the Commission on behalf of/jointly with the Member States is needed. TES should be put into a Cartography (TESCart) which means that they all have to be described in a common way using a reference architecture. This reference architecture has been chosen to be the EIRA. The scope of this action includes:

The TESCart based on EIRA allows the identification of reusable and interoperable IT solutions to the benefit of the ICT portfolio management of the Commission and in support to the EU policy-makers and the assessment of the reusability and interoperability levels of the building blocks of each TES.
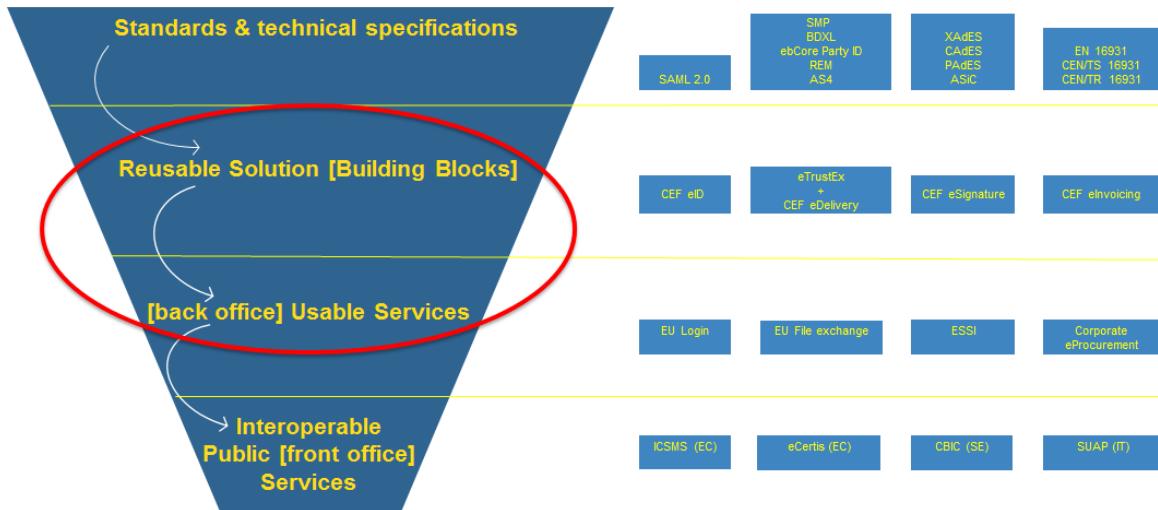
The *action* supports the European Commission in implementing an overall strategy to streamline TES as well as in implementing the European Commission Digital Strategy[122] by informing and providing recommendations to the IT governance bodies of the European Commission in the Trans-European Solutions domain. It identifies highly reusable[123] **business agnostic solution building blocks and services (i.e. basic digital services and networking services) which can support the provision of common services and the**

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[122] C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy.

[123] The term Reusability is used for both solution building blocks and services although in the literature Service Reusability is also referred to as Service Consumption or simply Service Use.

establishment of a Reusable Solutions Platform. TES action has a decisive role supporting the European Commission Digital Strategy and the upcoming Digital Europe Programme. The below figure shows the focus of the action related to the ECDS and the steps for creating a Reusable Solutions Platform.

This action has three main deliverables:

1. Assessment tools of reusability and interoperability,
2. the TES Cartography including the EIC and
3. the TES report including solutions' dashboards.

Reuse should be understood as an EU initiative trying or willing to benefit from a solution building block or a common service provided by other EU initiative that would answer specific business needs, with which they are confronted. Reuse would therefore result in cost savings and effective and efficient delivery of digital public services.

In relation to the assessment tools new versions of the Reusability Quick Assessment Tool (RQAT) and Interoperability Quick Assessment Tool, IQAT have been released.

The new version of the RQAT (v1.1.0) is aligned with EIRA v3.0.0. This minor update stresses the robustness of the reusability assessment of a SW component (code) and/or the usability of a [front-office/back-office] service. RQAT follows a systematic approach providing scores and recommendations for improvement. RQAT should be a cornerstone for the Reusable Solutions Platform

The new version of the IQAT (v1.1.0) is aligned with EIRA v3.0.0. This minor update stresses the robustness of the EIF conformance assessment (structural perspective) of a SW component supporting a public service, for SW components. IQAT follows a systematic approach providing scores and recommendations for improvement.

DG GROW requested intensive/urgent support to Member States with IQAT/IMAPS in relation Single Digital Gateway. This proposal was presented in the ISA[2] Committee on 21 June 2019.

In relation to the TES Cartography, to date, the Commission's TES portfolio is composed of 137 TES[124], 91[125] of which are documented and made available in the TES Cartography (TESCart). Focus in this last release   has been the upgrade to EIRA v3.0.0 and to improve the quality of the contents. Remarkably, in parallel to the quality improvement effort, a knowledge/ownership transfer process that has been successfully tested with DG GROW. This means that DG GROW is now responsible of the maintenance of the information of TES's DG GROW in the TESCart

A new version of the European Interoperability Cartography, EIC (v1.1.0) has been released. Reminder: The EIC is accessible to EC external users via Joinup. This version has two remarkable differences with respect the previous version:

- Only TES EC solutions are considered in the EIC[126]
- The EIRA library of interoperability specifications (ELIS) is considered in the EIC[127].

The EIC is a contribution to the implementations of the Reusable Solutions Platform in the ECDS.

In relation to the TES report (2019 edition) it presents findings valid for the sample of 91 analysed solutions and might evolve in the continuation of this action.

This last edition of the report introduces remarkable new features with respect to the previous editions. These are:

- an alignment with the last release v3.0.0 of EIRA;

- an update of key findings based on the overall TESCart data quality improvement.

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[124] This number corresponds to the number of solution in GovIS2 with TES as rationalisation domain plus the number of solutions in the TESCart, which are classified under different rationalisation domain in GovIS2. The solutions include only those with 'IS Status' Operational (122) and Study (15), and exclude the systems under development. These 137 represent around 17% of the EC population of solutions (748 Operational + 70 Studies) and it accounts to a third of the overall IT budget. Most of the TES not covered in the TESCart are TAXUD solutions.

[125] In TESCart v3.00 three solutions were removed – MT@EC, which will be substituted soon by eTranslation, CEF eSignature (DSSTSL-Manager), as when updating it the solution was split in two separate solutions with distinct function and eQuestionnaire, as it is being decommissioned and replaced by eRFI.

[126] COM (2017) 134 Annex 2 on the European Interoperability Framework where the EIC is defined as "repository of interoperability solutions for European public administrations…… **and complying with specific re-usability and interoperability criteria that can be represented on the EIRA**"

[127] COM (2017) 134 Annex 2 on the EIF "**Standards and specifications** can be …..**catalogued in the EIC"**

- systematic reference to the Persistent URI of EIRA's ABBs to consult online documentation of EIRA building blocks. In the entire report, all the mentioned EIRA building blocks follow the following pattern <u>text</u> (i.e., [Public Service Catalogue](#)) containing a clickable hyperlink to the EIRA definition of the specific building block in Joinup;

- Importantly, an introduction of the "Solution Dashboard" to selected TES. The TES solution dashboard is a user-friendly and business-oriented representation of the TES data in the TESCart including scores in terms of data quality, reusability and interoperability assessments using in existing ISA2 solutions (**)

In essence, this 2019 Edition is a breakthrough in understanding the EC TES portfolio and provides substantial value added supporting the implementation of the ECDS.

The focus of the next steps will be on improving the data quality of the TESCart, on the analyses and assessment using the solution dashboards and supporting MS with the SDG.

8.11.3 OBJECTIVES

The objectives of this action are:

- To rationalise the portfolio of the Trans European Systems managed by the Commission, through the identification and elimination of overlaps and through maximizing reusability to the benefit of those using these systems, public administrations included;
- To assess/produce/validate reusability and interoperability guidelines that could be used to allow solutions entering the European Interoperability Cartography;
- To allow policy-makers benefit from reusing TES or their parts when preparing EU legislation.
- To support the identification and documentation of requirements for TES in alignment with the Tallinn declaration
- To support the creation of the EIC.
- To support SDG

8.11.4 SCOPE

All Trans European Systems developed by the Commission on behalf of/jointly with the Member States and contained in the ICT portfolio of the Commission are in scope. In 2016,

the TES base in the EC has been sized in 141 solutions. Member State systems identified by NIFO are also potential targets for inclusion in the Cartography.

More particularly, the following activities fall under the action in question:

- Identify, collect and document using EIRA all concerned TES in a Cartography (TESCart);
- Analyse and assess data quality, reusability and interoperability of TES;
- Identify TES that could be included into the European Interoperability Cartography (EIC) when this is ready and/or on the Joinup, as needed
- Maintain the EIC

Feed back to the Commission's IT Governance to ensure proper decision making in relation to new TES project charters.

8.11.5 ACTION PRIORITY

The action

x) will contribute to priority a) of the ISA^2 Decision by implementing the EIC which is mentioned in the legal bases;

y) will contribute to priority b) of the ISA^2 Decision by the horizontal nature of the action;

z) will contribute to priority c) of the ISA^2 Decision because the action is trans-European in nature;

aa) has no other funding sources;

bb) will contribute to priority e) of the ISA^2 Decision by the re-usability of the solutions published in the EIC;

cc) will contribute to priority f) of the ISA^2 Decision by the synergies with the Joinup action and EIA action;

dd) will contribute to priority g) of the ISA^2 Decision by the link of the action with the Digital Agenda for Europe.

ee) will contribute to the Digital Europe Programme on the specific objective 5 on deployment, best use of digital capacity and interoperability by deploying and maintaining the trans-European interoperable cartography TESCart and the EIC

8.11.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative*	• In relation to the support to the ISA^2 programme the TES action is specialized in analyses and assessments of cross-border solution in terms of reusability and interoperability. Reusable solutions and the criteria for analysing and assessing reusability and interoperability are of top interest in the ISA^2 programme[128] • In relation to the European Interoperability Framework the TES action is supporting the implementation of the EIF in relation to reusable solutions[129] • In relation to the support to the Tallinn declaration the TES action is instrumental in achieving the Interoperability by default and the

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[128] Decision (EU) 2015/2240 of 25.11.15 on establishing the ISA^2 programme: "Interoperability solutions and updates thereof shall, where appropriate, be included in the **EIC** and be made available **for re-use** by European public administrations", "The ISA^2 programme shall support and promote: (a) the assessment, improvement, operation **and re-use of existing cross-border or cross-sector interoperability solutions** and common frameworks; f) the mapping and **analysis** of the overall interoperability landscape in the Union through the establishment, maintenance and improvement of the EIRA and **the EIC** as instruments **to facilitate the re-use** of existing interoperability solutions and to identify the areas where such solutions are still lacking"

[129] C(2017) 134 of 23.3.2017 Annex 2 on EIF. "Standards and specifications can be mapped to the EIRA and catalogued in the European interoperability cartography (**EIC**)", "Recommendation 12: Put in place mechanisms to involve users in **analysis**, desig**n, assessment** and further development **of European public services**", "*Recommendation 36:***Develop a shared infrastructure of reusable** services **and information sources that can be used by all public administrations**", "The **reusable building block approach** finds a suitable application by mapping solutions against the conceptual building blocks of a reference architecture [for example the European interoperability reference Architecture (EIRA)], that allows reusable components to be detected, which also promotes rationalisation. The result of this mapping is a cartography [at European level, **the European interoperability cartography (EIC)**, available via the Joinup platform, is a valuable tool for identifying reusable interoperability solutions] of solutions, including their building blocks, that can be reused to serve common business needs and ensure interoperability"

Question	Answer
having interoperability requirements?	Digital-by-default, inclusiveness and accessibility principles[130]
	• In relation to the support to the European Commission Digital Strategy the TES action is a pillar supporting the Interoperability & Cross-border principle[131]
	• In relation to the upcoming Digital Europe Programme for the period 2021-2027 and taking into consideration the orientation for proposed activities for 2021-22 under consultation the TES action is supports the specific objective 5 on deployment, best use of digital capacity and interoperability[132]
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. There is no other action supporting the EIC release.

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[130] Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the council of the EU on 6 October 2017. "We will in our countries: take steps to **identify redundant administrative burden in public services** and introduce once only options for citizens and businesses in digital public services by collaboration and data exchange **across our administrations at national, regional and local level as well as with other countries for cross-border digital public services**"

[131]C(2018) 7118 of 21.11.2018 on the European Commission Digital Strategy. **"Reusable solutions platform ..** will be built around a catalogue containing: **reusable building blocks and services**, …"

[132] COM(2018) 434 on 6.6.2018 proposal on Digital Europe programme subject to final adoption and Consultation 25 July 2019 to 25 October 2019 on the orientation of the first two years of its proposed DEP. " … shall achieve the following operational objectives:… (b) deploy, operate and maintain **trans-European interoperable Digital Service Infrastructures** ….(ba) support integration and use of **trans-European Digital Service Infrastructures** ….. to facilitate cost-efficient implementation and interoperability", "citizen-centric digital public services …targets the digital transformation of public services – by providing: ….. a **Digital Transformation Platform Ecosystem for interoperability of data and services across borders** and domains"

8.11.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes. The TESCart is policy neutral. The assessment tools are cross-sector.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	

8.11.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	

8.11.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. It is captured in the ISA[2] Decision text
How does the ISA[2] scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA[2] scope and financial capacity fit for the implementation of the EIC since it is explicitly mentioned in the ISA[2] Decision text

8.11.5.5 Reusability of action's outputs

Name of reusable solution	EIC v1.2.0
Description	European Interoperability Cartography v1.1.0
Reference	
Target release date / Status	April 2020
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	TESCart v3.1.0
Description	TES cartography in the EC
Reference	
Target release date / Status	June 2020

Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	TES report 2020 Edition
Description	Study
Reference	
Target release date / Status	December 2020
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Solution Architecture Templates (on demand)
Description	High-Level or Detail-Level requirements for target TES
Reference	
Target release date / Status	during 2019-2022
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Reusability Quick Assessment Tool (RQAT) v1.2.0
Description	It assesses the reusability of a business agnostic SW component, the usability of an [back-office] application service exposed by a business agnostic SW component and the usability of a [front-office] public service provided by a domain specific SW component.
Reference	
Target release date / Status	Q12022
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Interoperability Quick Assessment Tool (IQAT) v2.0.0
Description	It assesses the EIF conformance (structural perspective) of a SW component. This new version will be implemented using EU survey
Reference	
Target release date / Status	Q12020
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.11.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Yes. Synergies and reuse is expected with EIA (EIRA), Base Registers and Joinup
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	+90 TES has been already documented in the TESCart The new project proposals take the TESCart as a source of input for evaluation

8.11.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	YES. Supporting cross-border public services is key for the once-only principle.

8.11.6 PROBLEM STATEMENT

This action addresses the lacking of a cartography in the EC and therefore the risk of development roadmaps in silos. This affects the Commission responsible services (policy-makers, ICT decision-makers, portfolio managers, etc.) in their endeavour to rationalise its ICT portfolio and properly reuse ICT solutions in the preparation of EU legislation.

The impact of the problem includes inefficient decision-making and possible duplication of effort in the development of ICT solutions due to difficulties in identifying reusable elements. This in turn results into higher cost and longer development time with no guarantee of openness and interoperability.

The problem of	Lack of the European Interoperability Cartography
affects	Public administrations
the impact of which is	Lack of a single repository for reusing solutions assessed as reusable and interoperable
a successful solution would be	To implement the EIC

8.11.7 IMPACT OF THE ACTION

8.11.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Reusing solutions in the EIC		European and Member States' Public Administrations
(+) Savings in time	Reusing solutions in the EIC		European and Member States' Public Administrations
(+) Better interoperability and quality of digital public service	Reusing solutions in the EIC		European and Member States' Public Administrations
(-) Integration or usage cost			

8.11.7.2 User-centricity

The EIC will be implemented following a bottom-up approach by publishing solutions that have been assessed as reusable and interoperable. The used needs and requirements have been already assessed in the source repositories like the TESCart for the EC. It is expected that user centricity has been considered in the national cartographies.

8.11.8 EXPECTED MAJOR OUTPUTS

Outputs are described in section 8.11.5.5.

8.11.9 ORGANISATIONAL APPROACH

8.11.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States' Public Administrations	• More streamlined interfacing/integration with less EU systems; • Reduced training efforts as a fewer IT tools are used; • Shorter time to obtain IT tools for new areas; • Boost for e-government policies.	Providing input
Commission Services	• Reduced IT development and maintenance costs; • Reduced training, helpdesk and awareness raising costs ; • Shorter time to deliver IT solutions for new areas; • Better quality due to reusing existing (proved) solutions and/or their modules.	Providing input
(Indirectly) EU citizens and businesses	• Better digital services delivered by public authorities	Providing input

8.11.9.2 Identified user groups

User group	Description	Usage
Architects	Responsible for ensuring the created (IT) solution fits foreseen	Reusing and sharing solutions

User group	Description	Usage
	architecture and requirements of the organization	
Project Managers	Responsible for a delivering a cost effective public service with the help of a program / project	Reusing and sharing solutions.

8.11.9.3 Communication and dissemination plan

The TESCart has been presented to Member State representatives during various meetings of the ISA and ISA[2] Coordination Group.

The main communication channel is the Joinup collaborative platform where all supporting documentation has been uploaded.

The experience with the TESCart will be disseminated in the Member States in order to promote the creation of national cartographies as sources of the EIC.

In the context of the overall ISA[2] communication activities, TES is and will be presented in several events and conferences.

8.11.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of solution accesses	10 per MS	end 2020
Number of reused solutions	25% of solutions in the EIC in each MS	end 2020

8.11.9.5 Governance approach

The action will be managed by DIGIT as well as CONNECT, GROW and SANCO as associated DGs with the support of an external contractor and in close collaboration with the Commission DGs owners of the concerned TES.

8.11.10 TECHNICAL APPROACH AND CURRENT STATUS

Briefly, in 2020-June2022 the action will:

- Release a new version of the TEsCart improving the data quality of the content. The identification of them would be done on the bases of the information in GovIS2 and upon requests of stakeholders
- Perform the graphical modelling (reverse engineering) of selected TES in the TESCart who only have tabular information
- Provide help-desk support to stakeholders developing High-Level or Detail-Level requirements SATs upon requests of stakeholders
- Implement the EIC v1.2.0
- Develop in EU survey the version 2.0.0 of IQAT
- Deelop RQAT v1.2.0
- Assess all TES using RQAT and IQAT
- Support SDG in Member States with RQAT & IQAT
- Promote the EIC as part of the Reusable Solutions
- Release a new edition of the TES Report
- Provide assistance to the EC governance assessing project charters of new TES

8.11.11 COSTS AND MILESTONES

8.11.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	- Constantly maintain/extend the TESCart - Test reusability and interoperability criteria on TES - Rationalization reports	397	ISA[2]	Q2/2016	Q3/2017
Execution - Operation	- Release EIC v1.0.0 - Deploy RUS and	200	ISA[2]	Q4/2017	Q3/2018

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	IOP services				
Execution - Operation	• Release EIC v1.0.0 • New release TEsCart • New edition TES report • Support the development of targeted TES with the identification and documentation of requirements	240	ISA[2]	Q2/2019	Q2/2020
Execution - Operation	• Focus on assessments of [TES] solutions using the developed solution dashboards • Maintenance of developed assessment solutions for reusability (RQAT) and interoperability (IQAT) • Release EIC v1.1.0 • New release TEsCart • New edition TES report • Support the development of	320	ISA[2]	Q3/2020	Q4/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	targeted TES with the identification and documentation of requirements using EIRA's Solution Architecture Templates • We will provide assets to the Interoperability Academy action				
	Total	1.157			

8.11.11.2 Breakdown of ISA[2] funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		200	200
2017		118	118
2018		200	200
2019		240	
2020		320	

8.12 SHARING AND RE-USE (2016.31)

8.12.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D2, DIGIT.B3,
Associated Services	JRC.I4

8.12.2 EXECUTIVE SUMMARY

Sharing and reuse of IT solutions action promotes greater interoperability, standardisation and cooperation among public administrations, which eventually will result in more simplified, faster and more efficient administrative procedures while reducing public expenditure and saving time and effort. Member States and the Commission have already taken various steps towards greater harmonisation and improved coherence of services across the EU. Under the ISA and ISA[2] programmes, the "Sharing and Reuse" action has already produced a number of tools that can help public administrations to develop common and reusable solutions. Most notably, the Sharing and Reuse Framework for IT Solutions (SRF) has been published as a core reference for EU and national sharing and reuse initiatives. Currently the Framework is undergoing a critical review. Its updated version will address, among others, issues such as security and privacy by design. 3 Knowledge Sharing Modules providing additional info and practical guidance to the SRF have been made available on Joinup, and a number of training sessions has been provided for the officials in the European public administrations. Two editions of the Sharing and Reuse Awards were organised to promote reuse of IT solutions at different levels of European public administrations, and two Sharing and Reuse Conference were organised (Lisbon, March 2017 and Bucharest, June 2019). As of 2017, Open Source Observatory (OSOR) on Joinup has been maintained under the Sharing and Reuse action. Also, the action promotes the use of the European Union Public Licence and maintains the related collection on Joinup.

The following activities are to be funded by 2020 WP:

- Consultation of the updated Sharing and Reuse Framework with the Members States and its translation to 4 languages. Provision of translation to more languages, budget permitting.

- Extension of the study on Member States' policies on OSS – all 35 countries monitored by NIFO and several other on-European countries will be included

- Methodology, tools, and services to identify and secure the most critical open source software used across European Public Services

- Study on feasible funding mechanisms related to the sustainability of existing and new open source projects. The study will also define the key functionality components of an IT system to receive and asses sustainability funding applications from open source projects

- Promotion of the use of open source solutions in the public sector by maintaining the OSOR collection on Joinup and organising webinars and workshops

- Hackathon and bug bounty programmes to solve issues of most critical OSS in public sector, in particular targeting software representing an asset for interoperable public services as well as solving interoperability issues

- Maintaining the EUPL collection on Joinup and providing legal support for licencing issues

- Translation of the EUPL guidelines to 23 languages

With the ISA² programme funding coming to an end in 2020, certain activities of the Sharing & Reuse action can be continued under the future Digital Europe Programme133; 3 collections in particular (Sharing and Reuse, OSOR and EUPL) may continue to operate on Joinup integrated with the future Digital Transformation Platform134 supporting the transformation of user-centric digital public services. Potential further updates of the "Sharing & Reuse Framework for IT solutions" (due to fast changing digital ecosystem) and modification of the related Knowledge Sharing Modules can be financed by the Interoperability Academy or communication funds of the Digital Europe Programme if necessary.

Proposed bug bounty programmes contribute to enhancing advanced digital skills, especially those of cybersecurity practitioners and cyber fighters (penetration testers), linking to the future Digital Europe Programme's objectives in the areas of cybersecurity and advanced digital skills, which should make these actions sustainable in the future.

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[133] See https://ec.europa.eu/digital-single-market/en/news/digital-europe-programme-proposed-eu92-billion-funding-2021-2027

[134] As proposed in the Draft Strategic Orientation for the first 2 years of the programme

8.12.3 OBJECTIVES

In line with ISA^2 objectives, the action shall support public administrations in sharing collaborative development and reuse of IT solutions, and it will promote best practices in order to facilitate and contribute to the development of high-quality, efficient digital public services at the cross-border, national, regional, and local levels for the benefit of the European public administrations, business, and citizens. It will also provide a common set of tools and solutions to pan-European Public Services to help identify, secure, and sustain their most critical open source software. Furthermore, this action is to facilitate 3 existing collections on Joinup and manage communities around them: Sharing and Reuse of IT Solutions, Open Source Observatory, and EUPL.

8.12.4 SCOPE

- All EU, EFTA and candidate countries' public administrations providing public services are within the scope of the action that aims to develop and promote instruments to help administrations develop together, share, and reuse their IT solutions. To this end, in 2020 the action will further promote the Sharing and Reuse Framework for IT Solutions (SRF). To increase the take-up of the SRF, especially in the regional and local administrations, it will be translated to 4 languages. The series of workshops and trainings to raise awareness of the issues related to sharing and reuse, on how to implement the SRF's recommendations, will be conducted for civil servants in the Member States.

- In 2020, the action will also focus on factors that hinder the use of open source software in public administration such as sustainability and security of OSS. Building on the work done in the existing projects (e.g. EU-FOSSA 2 and OSOR) and stakeholder consultations, it will deliver a methodology to establish a Europe-wide list of "the most critical open source software" in use by public administrations. This will be the target list of software that needs a special focus on security and sustainability. Furthermore, the action aims to assess, establish, define and develop a funding mechanism to sustain critical open source in public sector. Leveraging existing initiatives on OSS security (e.g. EU-FOSSA 2), a federated, pan-European bug bounty programme on a subset of the most critical software will be organised, targeting software representing an asset for interoperable public services. A second subset will be used to organise a hackathon programme to solve specific issues, in particular related to interoperability, strengthen the community, and bring into focus security-related software development best practices.

- The action will continue to facilitate 3 collections on Joinup: Sharing & Reuse; the Open Source Observatory (OSOR) that will be expanded with the OSS Knowledge Center, and the European Public Licences (EUPL) collection

Beyond the scope:

- The technical support and generic user management of 3 collections on the Joinup platform.

8.12.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[135].

8.12.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* - *the new European Interoperability Framework (EIF),* - *the Interoperability Action Plan and/or* - *the Connecting European Facility (CEF) Telecom guidelines* - *any other EU policy/initiative having interoperability*	The proposal addresses the principles and recommendations and of the EIF, in particular as regards principle 4 *Reusability* and recommendations 6 and 7. This action will help achieve Objectives set in Focus Area 5 of the Interoperability Action Plan for interoperability ("To define, develop, improve, operationalise, maintain and promote instruments that support the implementation, assessment and monitoring of interoperability activities") as it will maintain and promote the Sharing and Reuse Framework for IT Solutions.

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[135] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
requirements?	Also, it will contribute to the achievement of the objectives set in Focus area 3 "Engage stakeholders and raise awareness on interoperability" by maintaining three communities (OSOR EUPL, Sharing and Reuse) on the Joinup platform, which will improve and animate Joinup for better user engagement and community building.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes, no other programme is addressing aspects of sharing & reuse of IT solutions or the specific needs of sustainability and security of critical open source software.

8.12.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed**, be useful from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The following policy sectors are addressed by this proposal : Digital economy and society, in particular Digital Single Market and Open Government Policies
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	

8.12.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes. The Sharing & Reuse awards have demonstrated that public administrations can develop cross-border applications. Promoting such examples and the recommendations of the Sharing and Reuse Framework fosters the development of such interoperable solutions useful to all Members States, EFTA and candidate countries. All countries participating in the programme will benefit from the methodology to establish the most critical open source in use as well as from the creation of such a list. Pan-European bug bounty and hackathon programmes will contribute to the security of open source in PAs and in turn to its increased take-up and interoperability.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	The EUPL as a legal interoperability tool has been included in some MS frameworks or policies: European Interoperability Framework (EIF) •Spain (Royal Decree 4/2010 of 8 January 2010) •Estonia (government software production) •Austria (i.e. Modular Open Citizen Card Architecture - Mocca) •Malta (government software production)

Question	Answer
	•Bulgaria (2017 decision for government software production)

8.12.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation envisaged in an EU policy as priority, or in EU legislation?	The action is to continue the efforts undertaken in in years 2016-2019 to promote the recommendations of the Sharing and Reuse Framework for IT Solutions as well as raise awareness about the EUPL as an important instrument increasing legal interoperability.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	There is no other EU or national common framework on sharing and reuse of IT solutions. Also, as the action promotes the reuse of existing interoperability solutions and enhances sharing of experience and the exchange of best practices, it constitutes the important accompanying measures of the ISA^2 programme.

8.12.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	The Sharing and Reuse Framework for IT Solutions (SRF) – translated to 4 languages
Description	The framework provides a set of 10 generic and 28 detailed recommendations for European public administrations to support them in sharing, collaborative development and reuse of IT solutions (including open source). It also describes supporting measures which can be taken on board by 'central bodies' to support their administrations in better sharing and reusing each other's solutions. Finally, it

	describes a number of supporting instruments, i.e. services, templates, business models. Translation of the SRF planned for 2020 follows multilingualism principle and request of Member States.
Reference	https://joinup.ec.europa.eu/sites/default/files/sharing _and_reuse_of_it_solutions_framework_final.pdf
Target release date / Status	Published in March 2017; an online version launched on the new Joinup platform in May 2018. New release planed for Q4 2019 following change management process It will be made available on the Interoperability Academy e-Learning platform.
Critical part of target user base	• European Institutions • Member States Public Administrations • Contractors (Providers of IT solutions for public administrations)
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	3 Knowledge Sharing Modules on Sharing and Reuse Framework for IT Solutions
Description	The training materials provide practical guidance to using the recommendations of the Framework and present examples of best practises within Member States. The modules are aimed at public administrations, policymakers, central body representatives, and IT service providers.
Reference	https://joinup.ec.europa.eu/collection/sharing-and-reuse-it-solutions/sr-knowledge-sharing-modules
Target release date / Status	Published on Joinup in August 2017; updated in 2018 and 2019 on the basis of feedback received during the information sessions in MS. To be further updated in the course of 2020 and made available on the Interoperability Academy e-Learning platform.

Critical part of target user base	• European Institutions • Member States Public Administrations • Contractors (providers of IT solutions for public administrations)
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The knowledge sharing modules were presented at information sessions conducted in several countries and they are available on Joinup

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	The European Union Public Licence v1.2
Description	The first European Free/Open Source Software (F/OSS) license with a working value in all EU official languages
Reference	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.128.01.0059.01.ENG
Target release date / Status	Published 18 May 2017
Critical part of target user base	• Member States Public Administrations • European Institutions • Software developers • Providers of IT solutions for public administrations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	There is no tool to monitor the actual number of source codes, projects etc. published under the EUPL, but it is constantly growing. What is important, the EUPL as a legal interoperability tool has been included in some MS frameworks or policies, e.g. European Interoperability Framework (EIF), Spanish Royal Decree 4/2010 of 8 January 2010 and Bulgarian decision of 2017 on open source use in public sector

8.12.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	The action will continue to use the Joinup platform as the central platform to share and communicate the activities and results, and as a focal point to work together with the target government
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	The action uses Joinup platform to host its 3 users communities. The action used many sources to develop the Sharing and Reuse Framework, such as the sharing and reuse framework developed by DG TAXUD (for the taxation domain) and a study on the identified barriers to sharing (developed by DG DIGIT). The action uses Joinup platform to host its 3 users communities, to promote the SRF and EUPL.

8.12.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The Sharing and Reuse action by contributing to digitalisation and modernisation of public administration – makes it a direct contributor to DSM priorities in pillar III, namely the definition of priorities for standards and interoperability and support to an inclusive digital society. Furthermore, the proposal is directly linked to two goals of the Digital Single Market (DSM): a) improving

Question	Answer
	cybersecurity and b) increasing digital skills in large and small companies, researchers, citizens and public services.
	The proposal contributes to a wide dissemination of the know-how and expertise in using open source solutions related to cybersecurity, and helps to create new areas for IT-security research and new markets for companies to offer services based on these solutions.
	In addition, the proposal contributes to the sustainability of projects that focus on open source security – this will improve long-term access to digital goods and services across Europe, another goal of the DSM.

8.12.6 PROBLEM STATEMENT

The problem of	lack of awareness on the EUPL existence and its features
affects	European public administrations, IT developers
the impact of which is	limited or inadequate use of licence (e.g. for works other than a software)
a successful solution would be	development of guidelines on how to use the EUPL and their publication in 23 languages.

The problem of	insufficient information concerning cases of successful OSS implementations in the public sector, lack of knowledge on OSS policies established by Member States
affects	European public administrations
the impact of which is	inefficient use of taxpayers money, non-interoperable services, slow introduction of new technologies
a successful solution would be	central observatory and OSS knowledge centre providing high-quality, up-to-date information on useful OSS solutions for public administrations, OSS policies and their successful implementations, lessons learnt around using OSS and guidelines, and best practices

The problem of	various barriers prevent administrations from working together to provide shared IT solutions
affects	the ability of public administrations to deliver state-of-the-art public services efficiently by leveraging already available interoperable solutions
the impact of which is	inefficient use of public resources as well as digital isolation within the national borders, moderate ICT implementation quality, higher cost, lack of interoperability, and lack of coherence in the implementation of EU law
a successful solution would be	increase awareness and use of existing instruments and framework, in particular the Sharing and Reuse Framework for IT Solutions, and develop new ones in order to overcome barriers and facilitate sharing and reuse at different levels of public administrations

The problem of	Lack of technological know-how and insufficient budget to properly address critical security issues in the open source components of the IT infrastructure and eGovernment services
affects	eGovernment services at all levels
the impact of which is	lower trust in open source solutions in PAs, and in turn their low take-up, inefficient use of taxpayers money, non-interoperable services, slow introduction of new technologies
a successful solution would be	Pan-European hackathon and bug bounty programme to improve security of key open source software components and make public services aware of how to organise activities to improve security in the future.

8.12.7 IMPACT OF THE ACTION

8.12.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money (+) Savings in time	Following the recommendations of the SRF; knowledge/solutions sharing and reuse; collaborating on issues of common interest enables administrations to develop services more quickly and at a reduced cost.		All MSs public administrations at all levels: European, national, regional, local. Citizens, business
(+) Better interoperability and quality of digital public service	Using the EUPL increases the compatibility of software components. Sharing and reuse of IT solutions promotes greater interoperability,		All MSs public administrations at all levels: European,

Impact	Why will this impact occur?	By when?	Beneficiaries
	standardisation and cooperation among public administrations, which eventually results in more simplified and more efficient digital services.		national, regional, local. Citizens, Business

8.12.7.2 User-centricity

Future target users were involved in the consultation process at various stages of developing the Sharing and Reuse Framework for IT Solutions. Their feedback has been taken into account in the final version of the Framework and in its update. Similarly, the users will be involved in the Framework's change management process as they will be allowed to submit change requests via Joinup and add new supporting instruments to the Framework's online version. Also, user feedback has been sought to improve the three knowledge sharing modules. These have been created as self-instruction material or training material for group information sessions and workshops for public administrations on sharing and reuse of IT solutions. The modules are aimed at various user groups in public administrations: central body representatives, policymakers, legal and communication officers, IT managers and IT service providers.

Potential users of the EUPL are in the focus of the EUPL guidelines to be translated into 23 languages. 2 separate versions take into account need of different type of stakeholders.

The hackathons and bug bounty programmes are to be organised on a selection of solutions used by the participating public services (especially at the regional and local level) – this guarantees their involvement and that the action addresses their needs. The studies and workshops on key issues related to sustainability and security of the software will take into account current and future needs of any other public service in this respect.

8.12.8 EXPECTED MAJOR OUTPUTS

Output name	EUPL guidelines in 23 languages
Description	2 sets of guidelines on the use of the European Public Licence EUPL v1.2 (1 set targeting IT managers and policy makers and 2nd for software developers)

Reference	
Target release date / Status	Q3 2021.To be made available on Interoperability Academy eLearning platform.

Output name	Updated Sharing and Reuse Framework in 5 languages
Description	Translation of the updated version of Sharing and Reuse Framework for IT solutions to 4 languages to increase its uptake.
Reference	
Target release date / Status	Q3 2021

Output name	Reusable methodology to identify the most critical open source software used by European Pas and a first list of such critical software
Description	General methodology to determine the most critical open source components used by public services, to be derived from the results of the European Commission's internal open source criticality audits in 2016 – 2019
Reference	
Target release date / Status	Q3 2021

Output name	Proposal of a funding mechanism for sustaining critical open source software and the key functionality components of an IT system to receive and asses sustainability funding applications from open source projects
Description	A properly organised funding mechanism will allow public services to pool funds to remedy cybersecurity issues in their most-critical open source components.
Reference	
Target release date / Status	Q3 2021

8.12.9 ORGANISATIONAL APPROACH

8.12.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States	- ISA^2 Committee and ISA^2 Coordination Group - National policy officers - contact points for Sharing and Reuse - Members of the Steering Committee for the SRF Change Management process Representative of public bodies at different levels of administrations - IT Functions responsible for open source software	Contact points for promoting the SRF and monitoring its uptake; approval of the SRF' updates; needs, expertise and knowledge sharing
European Commission	- JRC I4 officials - DGT - ISA^2 action owners (NIFO, Joinup, EIRA, Catalogue of Services)	Development of the EUPL guidelines and their translation
EC, EP, Council	Representatives of the 3 European Institutions	Sharing & Reuse Awards - participation in the Evaluation Committee
European Committee of the Regions (CoR)	Directorate D - Communication	Promotion to EU regional and local public administrations

8.12.9.2 Identified user groups

The main group of end-users of the Sharing and Reuse Framework, Knowledge Sharing Modules, the EUPL licence 3 communities maintained by the action as well as participants of hackathons and bug bounty programmes are the following:

- Public Administrations of all levels in Member States, associated countries and non-European countries;
- European Institutions Open source development communities
- Academia
- NGOs
- Citizens
- Businesses (in particular IT solutions' providers for public administrations)

8.12.9.3 Communication and dissemination plan

The communication plan comprises activities such as workshops and webinars on the Sharing and Reuse Framework, sustainability of open source communities, and the EUPL in individual Members States as well as presentations during larger international events. In 2020, the action will focus on open source sustainability and security issues.

The information sessions on the SRF, hackathons and bug bounty programmes as well as the above-mentioned workshops and webinars target bigger direct user involvement. The online interactive version of the Sharing and Reuse Framework that will allow users to add new supporting instruments will have the same aim.

The communication plan includes publishing of various material such as news, case studies, "success stories" and reports on events via two main dissemination channels: Joinup (3 relevant communities) and ISA[2] website. It will be supported by communication via social media (Twitter and LinkedIn).

8.12.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of webinars	5	March 2021
Number of workshops in Member States and during the opens source events	4	March 2021
Number of workshops/info sessions on the Sharing and Reuse Framework	10	March 2021
Number of new published content items on 3 Joinup communities (S&R, OSOR, EUPL)	150	March 2021
Number of hackathon participants	30-50 from a minimum	Per hackathon

Description of the KPI	Target to achieve	Expected time for target
	of 10 PAs	
Number of vulnerabilities found and awarded through bug bounty programmes	30 findings	For the entire bug bounty programme

8.12.9.5 Governance approach

The action will be co-managed by DIGIT.D2 and DIGIT. B3 with the support of external contractors. Cooperation with JRC I.4 is envisaged for the further development and verification of translation of the EUPL guidelines. Whenever major deliverables or an updated version of the Sharing and Reuse Framework for IT Solutions are to be published, the validation of the MS representatives will be sought. Also, the officials of the European Commission services, members of the other European Institutions, and representatives of the Member States will be involved in the governance structure of the change management process for Sharing and Reuse Framework.

For the bug bounty and hackathon programmes a Steering Committee will be set up. Its main role will be to: adopt the project charter, set priorities, guide and promotes the successful execution of the project at a strategic and European Public Services level; provide high level monitoring and control of the project.

8.12.10 TECHNICAL APPROACH AND CURRENT STATUS

For the aspects of the inventory methodology of most critical open source software, bug bounty programmes and hackathons the actions aims to re-use much of the technical work already used successfully in the EU-FOSSA 2 project. For other aspects such as creation of a sustainability model and assessment tool, the project will use trusted suppliers with a mandate to use open source software to build the final solution. Key stakeholders and suppliers will meet during a hackathon to arrive with technical foundations and an initial version of the planned assessment tool.

Organisation of bug bounty programmes contributes to enhancing advanced digital skills, in particular those of cybersecurity practitioners and cyber fighters (penetration testers), linking to the future Digital Europe Programme's objectives in the area of cybersecurity, which should make these actions sustainable in the future. Actively stimulating development of

cybersecurity skills by offering attractive prizes in the bug bounty programmes contributes to increasing interest in this type of work and creation of highly skilled workforce At the same time, vulnerabilities found and fixed in key software components, subject of the bug bounty programmes, help avoiding major security breaches and make the solutions built on top of them safer for everyone.

Other parts of the action do not target ICT development. It aims at further development and improvement of the Sharing and Reuse Framework for IT Solutions which is a common framework in the meaning of Article 2 (3) of the ISA^2 Decision. Promoting the sharing and reuse of IT solutions and facilitating 3 related communities on Joinup constitute important accompanying measures of the ISA^2 Programme [Article 2 (10)].

Different language version of the Sharing & Reuse Framework for It Solutions and EUPL guidelines will be made available in the catalogue of educational resources on e-Learning platform (within the scope of action Interoperability academy). They will constitute supporting material for the online course on Sharing & Reuse principles based on the existing 3 Knowledge Sharing Modules.

8.12.11 COSTS AND MILESTONES

8.12.11.1   Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Closing	Sharing and reuse conference and award event	50	ISA²	Q2/2016	Q1/2017
Execution	Promotion of the SRF including workshops for MS and conference preparation	295 ~~195~~	ISA²	Q2/2016	Q2/2019
Closing	Funds for financial awards 2017	100	ISA²	Q2/2016	Q2/2017

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Publish the OPM2 methodology and supporting measures	320	ISA²	Q4/2016	Q4/2020
Execution	OSS and EUPL Community building	450 200	ISA²	Q2/2017	Q2/2019
Execution	S&R Community building	100	ISA²	Q2/2018	Q2/2019
Initiation/planning/ execution	Publish the EUPL guidelines and EUPL promotion	30	ISA²	Q2/2018	Q2/2019
Initiation/planning/ execution	Sharing and Reuse Awards	80	ISA²	Q2/2018	Q2/2019
Initiation	Funds for financial awards 2019	100	ISA²	Q2/2018	Q4/2019
Initiation/planning/ execution	Study on hackathon organisation.	30	ISA²	Q2/2018	Q2/2019
Initiation/planning/ execution	OSS and EUPL Community building	180	ISA²	Q2/2019	Q2/2020
Initiation/planning/ Execution	OSOR Report 2016-2020	60	ISA²	Q2/2019	Q2/2020
Execution	Extension and translation of the EUPL guidelines and EUPL promotion	40	ISA²	Q2/2019	Q2/2020
Initiation/planning/ execution	Guidelines for creating OSS	30	ISA²	Q2/2019	Q2/2020

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	communities				
Execution	Legal support for OSS licencing on Joinup	20	ISA²	Q2/2019	Q2/2020
Initiation/planning/ execution	State of Play – MS's policies on OSS (study)	80	ISA²	Q2/2019	Q2/2020
execution	S&R Community building	120	ISA²	Q2/2019	Q2/2020
execution	Promotion of the SRF – including trainings in MSs	50	ISA²	Q2/2019	Q2/2020
Initiation/planning/ execution	Identification of solutions suitable for reuse and corresponding MS needs - report	50	ISA²	Q2/2019	Q2/2020
Initiation/planning/ Execution	Funding mechanism study & key functionalities for assessment tool	185	ISA²	Q2/2020	Q4/2020
Initiation/planning/ Execution	Software Criticality methodology and first list of Europe's most critical OSS	100	ISA²	Q3/2020	Q4/2020
Execution	Bug Bounty programmes	150	ISA²	Q2/2020	Q3/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Hackathons	150	ISA²	Q2/2020	Q3/2021
Execution	Workshops and webinars on sustainability of OSS communities funding , mechanism and SRF consultation	100	ISA²	Q2/2020	Q3/2021
Initiation/planning/ execution	Extension of the study on OSS policy (35+ countries)	50	ISA²	Q2/2020	Q4/2020
Execution	OSOR collection and OSS Knowledge Center	90	ISA²	Q2/2020	Q3/2021
Initiation/planning/ execution	Translation of the SRF	90	ISA²	Q2/2020	Q3/2021
Execution	Promotion of the SRF – including trainings in MSs and S&R community building	120	ISA²	Q3/2020	Q3/2021
Execution	Translation of the EUPL guidelines and its verification	160	ISA²	Q3/2020	Q3/2021
Execution	Legal support for OSS licencing on Joinup and JLA improvement	40	ISA²	Q3/2020	Q3/2021
	Total (2016-	**3150**			

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	2020)				

8.12.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution – Sharing and Reuse	180	210
	Execution - OPM2	80	80
	Execution – S&R Awards (prizes)	100	100
2017	Execution – Sharing and Reuse	65	65
	Execution – OSS community building	200	200
	Execution – OPM2	80	80
2018	Initiation/Planning/ Execution – Sharing and Reuse	310	310
2018	Initiation/Planning/ Execution – Sharing and Reuse Awards (prizes)	100	100
2018	Execution – OSS & EUPL	280	280
2018	Execution – OPM2	60	60
2019	Execution – Sharing and Reuse	220	
2019	Execution – OSS & EUPL	450	
2020	Execution – Sharing and Reuse	210	
2020	Execution – OSOR & EUPL	450	
2020	Execution – OSS security, funding	575	

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
	mechanism and assessment tool		

8.12.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Sharing and Reuse Framework for IT Solutions	https://joinup.ec.europa.eu/sites/default/files/sharing_and_reuse_of_it_solutions_framework_final.pdf	
Sharing and Reuse Collection on Joinup	https://joinup.ec.europa.eu/community/srs/home	
OSOR on Joinup	https://joinup.ec.europa.eu/community/osor/description	
EUPL on Joinup	https://joinup.ec.europa.eu/community/eupl/description	

8.13 STANDARDS-BASED ARCHIVAL DATA MANAGEMENT, EXCHANGE AND PUBLICATION (2017.01)

8.13.1 IDENTIFICATION OF THE ACTION

| Service in charge	OIB.OS.1.002, DIGIT.B2.004
Associated Services	SG.C1, Publications Office of the EU
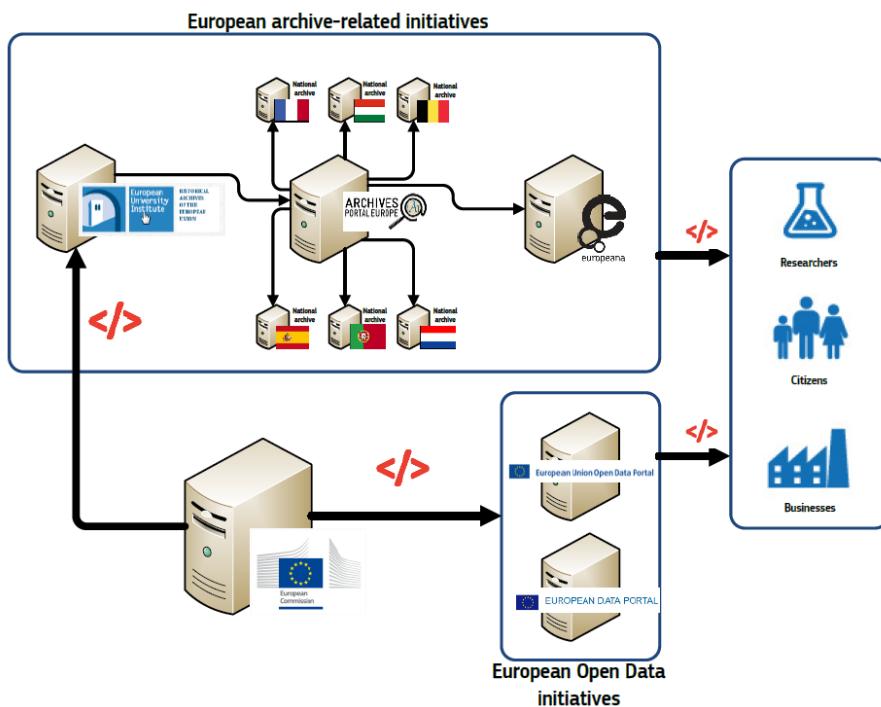
8.13.2 EXECUTIVE SUMMARY

Open Data (making available machine-readable information, especially by governments to third parties) is expected to increase economic growth and enhance both collaboration between administrations and citizen participation and engagement. In line with the revised Archives Regulation, the European Commission, like the other institutions of the European Union has to offer, via the European University Institute (EUI) located in Florence, a single, authoritative, multilingual, accessible "go-to" online platform for exploring the archives of the Institutions, thus stimulating research into the history of European integration and the European Institutions. This online platform should offer access to both digitised and born-digital content, as well as information regarding the paper holdings and contextual background material. Ideally the archives should be made available to the public in a way that fits the public of the 21st century, namely following Open Data principles.This way they can be re-used by other administrations, business and citizens and/or exchanged with other existing platforms and initiatives that make documents and archives of the institutions available. Examples of these are Europeana, Archives Portal Europe (the hub grouping the European national, regional and local archives), the European Union Open Data portal that provides access to data from the European Institutions and other bodies of the EU, the European Data portal, which harvests metadata of Public Sector Information across European countries, and the Public Register of Commission documents.

To achieve this main goal, the European Commission has to implement services and tools that will enable the multilingual description of its archives content and the exchange of multilingual content and metadata with European archive-related initiatives (like the European University Institute and other initiatives that enhance transparency and accountability of the Institutions). These services and tools should follow best practices and established standards in the domain of archives management. Therefore, there is a need of information on which internationally accepted specific business domain standards exist in the area of management of archives and whether IT services and tools, be they open source,

commercial or developed by public administrations, already exist at regional, national or European level that support these standards and could be re-used.

Based on the foregoing, the business case for this action will start with a study aiming at identifying existing data standards in archival information management and exploring IT tools and services supporting those. The results of this analysis will also allow determining how these standards are applied in different national and European contexts and how they can be used in the context of born-digital files. The second part of the business case will deal with the analysis of the interoperability requirements among Archives Portal Europe, Europeana, and the Historical Archives of the European Union (run by European University Institute), on one hand, and the Historical Archives of the European Commission on the other. Finally, the business case will analyse available options to publish the relevant part of the content of EU archives in an Open Data format, following LODLAM (Linked Open Data in Libraries, Archives and Museums) recommendations, through the different available platforms (like the Open Data and the European Data portals) allowing Member States, citizens and researchers to interoperate with them and reuse them in different contexts. The following picture tries to depict the interoperability scenario to be covered by this action:

As a final remark, it is important to stress that all elements of the below described proposal that might not be directly related to the resolution of cross-border or cross-sector issues will be funded by European Commission's own budget and not by ISA2 budget.

8.13.3 OBJECTIVES

This action has the goal of identifying standards to ensure that the archived born-digital public documents and files are properly managed, exchanged and opened to the public, with the following detailed objectives:.

- Facilitate cross-border interactions related to archival data by identifying standards regarding description of information on records/archives, including its multilingual aspect, and eliciting the requirements related to their exchange.
- Enhance cross-sector and cross-border interactions between Commission archives and businesses and citizens, by providing the grounds to develop a multilingual catalogue allowing to access and re-use the records of the European Institutions based on Open Data principles and LODLAM recommendations.

8.13.4 SCOPE

It includes the study of digital archive management standards and IT solutions supporting them, with the goal of allowing standards-based archival information management. It will also analyse the interoperability requirements to exchange information between Commission archives and European archiving initiatives, and will study how this information can be made available to the public in Open Data formats, focusing on user-centric solutions. Detailed activities are:

- Assessment of standards relevant to digital and mixed archives management and identification of IT solutions supporting them.
- Assessment on making available Commission archives to the public using Open Data.
- Assessment of interoperability requirements to exchange Commission archival information with EUI and Archives Portal Europe.
- Implementation of a pilot / proof of concept for archival data exchange
- Implementation of a pilot / proof of concept for publishing archival information as Open Data
- Implementation of an interoperability solution for archival data exchange between the Historical Archives Service of the European Commission and the Historical Archives of the European Union
- Implementation of a solution for the publication of European Commission's archives as Open Data

- Assessment of the most appropriate Archival Management Solution in the market, candidate to replace the existing long term Archival solution in the European Commission

8.13.5 ACTION PRIORITY

8.13.5.1 Contribution to the interoperability landscape

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* - *the new European Interoperability Framework (EIF),* - *the Interoperability Action Plan and/or* - *the Connecting European Facility (CEF) Telecom guidelines* - *any other EU*	The memory of any organization consists in its archives. The way the archival information is represented, stored and managed influence the capacity of an organization to share archival information with other organizations and to expose its archives to the external world. This is of an utmost importance where it comes to public administrations where the founding principles of openness and transparency are at stake. A set of principles and guidelines based on standards can greatly facilitate the exchange of archival information not only amongst public administrations but also between public administrations and the business and citizens. In line with the twelve principles of the European Interoperability Framework this action aims at creating a set of recommendations and guiding principles for an effective description and management of archives in order to facilitate the exchange of archival information amongst public administrations and between public administrations and the business and citizens. The action follows the line of the second pillar of EIF (Core interoperability principles: Openness, Transparency, Reusability, Technological neutrality and data portability) and of the fourth pillar of EIF (Foundation principles for cooperation amongst public administrations: Preservation of information,

Question	Answer
policy/initiative having interoperability requirements?	Effectiveness and Efficiency) by proposing the creation of a standard-based approach for facilitating the preservation and the exchange of archival information of the public administrations in an open, transparent and reusable way. It also aims at creating a set of recommendations for the publication of archival information as open data mainly for the usage of citizens focusing thus on the principles of the third pillar of EIF (Principles related to generic user needs and expectation: User-centricity, Inclusion and accessibility, Multilingualism).
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes, in the following ways: • As mentioned, the proposal tries to tackle a semantic interoperability issue, by clarifying the standards landscape on digital archival information management. The clarification on standards will help Member States administrations to use them, improving archival data management and archival data exchange between the different actors at European and national level. • It also addresses a technical interoperability issue, by identifying the standards support level of the different IT tools and services available in the market, and by defining an assessment model for the national administrations to evaluate them by themselves. • Finally, as the proposal intends to define the best way to offer the Commission archival information to the general public in an Open Data format, it will support an interoperability need of: o Citizens, by increasing transparency on how the policy making process of the Institutions works the level of trustworthiness of citizens on their administration will be increased. It will

Question	Answer
	also enhance accountability and prestige of the institutions. o Business, by making available the data on historical archives, the information can be reused by business in new and creative ways. o Researchers, by facilitating them the access to historical information, it will increase the quality of their research.

8.13.5.2 Cross-sector

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Yes, our proposal will be useful at least for the implementation of the following EU policy areas: • Digital economy and society policy: (Digital Single Market strategy) by supporting technical standards and their implementation, and better access to digital goods and services. In particular we can mention the new eGovernment Action Plan 2016-2020 foreseen by the Digital Single Market Strategy, aiming to remove existing digital barriers to the Digital Single Market and to prevent further fragmentation arising in the context of the modernisation of public administrations). • Culture policy: (art. 3 of EU treaty) by ensuring the long term preservation and safeguard of the European cultural heritage, making it also accessible to the general public and allowing its reuse by creative industries and the digital industry. An example is the Digital Agenda addressing digitisation and preservation of Europe's cultural memory and the Commission recommendation (2011/71/EU) of 27/10/2011 on

Question	Answer
	digitisation and online accessibility of cultural material and digital preservation.
	• Human rights policy: (art. 6 of EU treaty) by fostering openness and transparency towards citizens. Some examples are the open government and the Cloud of Public Services; CIP/PSP Projects as Immigration Policy 2.0 and PARTERRE.
	• EU citizenship policy: (EU treaty, part II, art. 20 and Charter of fundamental rights of the European Union art. 41 Right to good administration, art. 42 Right to access to documents): In particular ePrivacy domain, the protection of the confidentiality and the security of communications, rooted in the fundamental right to the respect of private and family life (including communications).
	• Institutional affairs policy: (EU treaty art 15 on the Functioning of the European Union and art 16 on Transparency and data protection), like for instance Regulation 1049/2001, and new regulation on Data protection.
	• Transparency and data openness: (Directive 2013/37/EU of the European Parliament and of the Council) by making available government archives to the general public in Open Data formats, as stated by the, which stresses that public sector bodies should, where possible and appropriate, make documents available through open and machine-readable formats, together with their metadata, at the best level of precision and granularity, in a format that ensures interoperability, re-use and accessibility

Question	Answer
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Not yet applicable

8.13.5.3 Cross-border

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Yes, in three main ways: • As the proposed action will allow tackling the semantic interoperability issue of how to describe archives (records/files description, electronic exchange of these metadata…), by means of the identification of existing standards for archives description and management (like CEN/CENELEC standards, ISO standards or the ones of the International Council for Archives (ICA)) and clarify its application and use, it will be useful for any of the (also regional and local) public archives of all the 28 EU Member States, as they will be able to re-use the conclusions of the study and apply them for the management of their own archives. • Also the market survey on IT tools supporting the identified standards will be re-usable, as it tackles the already mentioned technical interoperability issue, it intends to analyse the many existing solutions in the market (commercial, open source and custom-developed by public administrations).

Question	Answer
	The different archives of the 28 Member States will benefit from the results of this survey by applying its conclusions directly to their own projects thus implementing robust, standards-based and cost-efficient interoperable archive management solutions. • As the proposed action will study current interoperability requirements between the different European archive-related initiatives (like Archives Portal Europe, Europeana, the Historical Archives of the European Union), for the management and accessibility of archives it will support potentially any of the (national) public archives and archives of other organisations of all the 28 EU Member States
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Not yet applicable

8.13.5.4 Urgency

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU	Yes, as the EU legislation foresees provisions on preservation, management and distribution of archival information, in particular the one of the European institutions, more precisely by its regulations related to

Question	Answer
legislation?	archives:
	- Council Regulation (EEC, Euratom) 354/83: Whereas the processing and critical analysis of Community archives is not only of value to historical research in general but can at the same time facilitate the activities of bodies involved in Community affairs and thereby contribute to the better attainment of all the Communities' objectives. - Council Regulation (EU) 2015/496 Wherever possible, the institutions shall make their archives available to the public by electronic means, including digitised and born-digital archives, and facilitate their consultation on the internet. They shall also conserve documents which are available in forms meeting special needs.
	In addition to the legal requirements, the quick obsolescence of electronic data affects to the capacity of European administration to keep in good order information related to their business continuity and memory needs also to be taken into account. The analysis of the current existing standards on electronic archive management and how to implement them will help them to tackle this problem.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The proposed action tries to solve semantic and technical interoperability issues at European level, as currently historical information regarding the policy making process is scattered between national and European archives. Citizens and researchers that would like to know how a particular European policy was decided, designed and implemented have to visit and contact several archives (at regional and national levels and also the EU historical archives). The identification and promotion of standards, and the definition of an assessment model for

Question	Answer
	the related tools supporting them will help interoperability and foster data openness and reuse.
	Based on the foregoing, our proposal fulfils all the ISA2 eligibility criteria:
	• Its objectives are within the ISA2 objectives, in particular:
	o Facilitate cross-border interaction between European public administrations, which will be done by solving the semantic interoperability issue related to archival data management.
	o Facilitate cross-border and cross-sector interactions between European public administrations and business and citizens, by analysing ways of offering the Commission archival information to the public in Open Data formats
	• Its activities fall under the ISA2 activities, in particular:
	o The assessment, updating and promotion of existing common specification and standards, by analysing the current "state-of-play" in the archives management domain and by identifying tools supporting them.
	• Its principles accord to the ISA2 general principles, in particular:
	o User-centricity, multilingualism, transparency, preservation of information, openness and reusability
	Related to the proposal funding, it is important to note that all its elements not directly related to cross-border and cross-sector interoperability issues will be funded by the EC own budget.

8.13.5.5 Reusability of action's outputs

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Analysis of current standards for management of archival data and its application and use.
Description	This analysis will try to identify existing standards for archives management. As an initial task, the analysis will identify business requirements for archival data management, defining a set of high level business needs and requirements. Based on the identified business requirements, the analysis will select existing standards supporting the different business needs, with recommendations on applying them. It will also identify how the different standards are used and applied, in order to understand how they can be utilized in the particular scope of the action. For the standards assessment, the CAMSS method (Common Assessment Method for Standards and Specifications) will be used, in order to ensure selected standards are supporting interoperability and avoiding lock-in situations. This analysis can be reused by any of the existing public and private archives in the different Member States, and also be a basis to promote standardisation in the archive management domain.
Reference	
Target release date / Status	2018Q1 / Released (June 2018)
Critical part of target user base	• Public and private archives from Member States, as they will be able to reuse the results of the study to identify which standards are supporting the different business needs related to management of digital-born archives. • Archives of the EU institutions, as the

	historical archives of other Institutions, like the European Parliament or the Council of the EU can also reuse the study the same way than national archives.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Technical solution not yet applicable. The study itself has been consulted/re-used by various archives services.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Market study on IT tools for archives management supporting the relevant business domain standards
Description	Based on the results of the previous analysis of the "state-of-play" regarding standards (including the definition of business needs and the identification of applicable standards) a market analysis will be performed evaluating existing tools (either commercial, open source or developed "in-house" by public administrations). The analysis should assess the support to the different recommended archive management standards, archive management tasks and be based on a comparative assessment template. The result of the work should enable the target user base to define minimal requirements for archive management systems, identify the possible implementation alternatives and tools and estimate the associated costs. To do so, among the deliverables will be a template that includes: • definition of an assessment model, • list of business needs, • assessment criteria with weighting of each criterion • a "checklist" to help archives with setting up

	a "Proof of Concept" (PoC) system in order to assess in practice solution alternatives, covering business and user needs, objectives, conditions and expected deliverables of this PoC. This output will be of interest to all Member States public archives, as they can reuse it to set up their own PoC based on one of the proposed IT solutions.
Reference	
Target release date / Status	2018Q1 / Released (June 2018)
Critical part of target user base	• Public archives from Member States, as they will be able to reuse the results of the study to perform their own analysis based on the assessment model and choose the solution better suiting their needs. • Archives of the EU institutions, as the historical archives of other Institutions, like the European Parliament or the Council of the EU can also reuse the assessment model in the same way than the public archives from the Member States.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Technical solution not yet applicable. The study itself has been consulted/re-used by various archives services.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Study on options to develop a multilingual Open Data catalogue providing access to EU archives
Description	This study will analyse, based on the identified standards and tools, how the archived digital records of the Commission can be made available to the general public using Open Data formats. It will analyse in details the feasibility of this task,

	will recommend technical standards and implementations, will analyse existing Open Data initiatives at EU level and describe how they should be applied to publish digital records. It will also relate with the conclusions of the analysis on interoperability requirements, exploring ways to reuse already existing archival data exchange standards. It will pay special attention and try to reuse SEMIC conclusions, especially those related to DCAT-AP (application profile for data portals in Europe). The results of the study can be seen as an example for other public archives when launching similar initiatives, with the Commission taking the lead in the openness and transparency field. Also the results will be of the general interest, as the publication of the historical information in Open Data format will allow researchers, citizens and business to reuse it in different and creative ways.
Reference	
Target release date / Status	2018Q1 / Released (June 2018)
Critical part of target user base	- European citizens, as by providing access to historical information of the Institutions their transparency and accountability increases, increasing also EU prestige among citizens. - Business, as by providing access to historical information, it can be reused by companies processing historical data in new and creative ways. - Researchers, as by facilitating on-line access to historical information, barriers are removed, increasing the number and quality of the research results.
For solutions already in operational phase - actual reuse level (as compared to	Technical solution not yet applicable. The study itself has been consulted/re-used by various archives services.

the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Proofs of Concept on archives management systems and exchange of archival data
Description	Proposed pilots (or proofs of concept) will put into practice the results obtained in the first (study) phase of this action. To this extent, the specific situation of the Historical Archives Service of the European Commission will have to be taken into account on mainly two levels: - standards used, business domains covered and technical constraints of the EC's IT environment; - direct relationships with other archives services (of other EU institutions and the HAEU in Florence) and related legal obligations for exchanging archival data (archival description, producers, etc…). The way the Historical Archives Service of the European Commission is organised and interacts with other archive services is not a unique situation (European level) as similar needs exist on local, regional and member states level (e.g. between regional and national archives) or even amongst other (international) organisations when it comes to interoperability on the level of archival data exchange. The work to be carried out will be organised in relation to the following possible deliverables: - Based on the results of the first phase, detailed identification of criteria specific for the Historical Archives Service of the

	European Commission: standards to be used, business domains to be covered and technical issues to be taken into account. Current practices existing on the level of archival data exchange need to be taken into account and if necessary new approaches need to be identified and proposed.
	- Following a phased approach (translation of needs, installation, configuration, data migration, customization, testing and approval) and, using the assessment tool created in the first phase of the action, systems need to be selected and deployed in order to proof the feasibility of the selected solution.
	- Define reference architecture for the solution emphasising especially on data exchange re-useable for other stakeholders.
Reference	
Target release date / Status	2019Q1/Concluded Q3 - Q4 2019
Critical part of target user base	The results of the proofs of concepts could be used by archive services in: • Member states at local, regional and national level • European Institutions • International organizations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not yet applicable

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Proofs of Concept for solutions for turning archival data into (linked) open data

Description	The pilot (or proofs of concept) will put into practice the results obtained in the first (study) phase of this action. To this extent, the specificities of the archival data managed by the Historical Archives Service of the European Commission and its direct stakeholders will have to be taken into account: - Levels of archival description (in accordance with the ISAD standard): fonds groups, fonds, sub-fonds, series, files; - Description of identified producers (in accordance with the ISAAR standard); - Business specific metadata existing on several levels like files and documents; - Currently used keywords and several kinds of named entities; - Full text indexes. The archival data being managed at European level are not necessarily unique as on local, regional and member states level similar information exists. The work to be carried out will be organised in relation to the following possible deliverables: - Detailed identification of archival data relevant for being enriched turned into linked open data and identification of datasets relevant for being published on the European Open Data portal; - Following a phased approach (translation of needs, development and configuration, data cleaning and manipulation, testing and approval), mechanisms need to be deployed in order to produce linked data and dataset to be published in order to proof feasibility; Define reference architecture for the proposed solution.
Reference	
Target release date / Status	2019Q1/ To be concluded in Q3 - Q4 2019

	The results of the proofs of concepts could be used by archive services in:
Critical part of target user base	- Member states at local, regional and national level - European Institutions - International organizations
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not yet applicable

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	An interoperability solution for archival data exchange
Description	Based on the conclusions of the proofs of concept, a standards-based solution for the exchange of archival information (relating to archival descriptions and data enriching by making use of controlled vocabularies), between the Historical Archives Service of the European Commission and the Historical Archives of the European Union will be put in place. The solution will take into account the gaps identified during the proofs of concept phase between the requirements and the functionalities offered by the existing tools and will define strategies to fill these gaps either by custom development, adaptation of business processes or both. The need for interoperability regarding the exchange of archival information between archival services exists at local, regional or member states level but also amongst international organizations so that a solution based on standards aims at fulfilling this need and can be extended to any interested organization.

Reference	
Target release date / Status	2020 Q2 / to start Q4 2019
Critical part of target user base	The solution could be re-used by archival organizations of the European Institutions.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not yet applicable

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	A solution for the publication of archival descriptions and digital-born/digitised archives of the European public administration
Description	Following the conclusions and the recommendations of the proofs of concept, a solution for the publication of archival descriptions and digital-born/digitised archives of the European Commission will be put in place so that the archives are accessible to the public in various forms (from traditional forms of publication to open data publication). The publication of the archives will bring benefits to a large population of interested parties: - European citizens, as by providing access to the historical information of the Institutions their transparency and accountability increases, increasing also EU prestige among citizens. - Business, as by providing access to historical information, this can be reused by companies processing historical data in new and creative ways. - Researchers, as by facilitating their on-line access to historical information, the geographical barriers are removed increasing the interest in European History.

Reference	
Target release date / Status	2020 Q2 / to start Q4 2019
Critical part of target user base	The solution could be re-used by archival organizations of the European Institutions to make their archival date accessible to the public.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not yet applicable

8.13.5.6 Level of reuse of existing solutions

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	Regarding ISA/ISA2 solutions, in the framework of standards assessments, our proposal plans to reuse CAMSS (Common Assessment Method for Standard and Specifications), which is a comprehensive method to select standards with the main goal of avoiding vendor lock-in situations. Also the study on Open Data will take into account and try to align its proposal to the main European Open Data initiatives, especially the European Union Open Data portal and the European Data portal, by reusing as much as possible the DCAT application profile for data portals in Europe. Finally, the works to be done within the scope of this action will be aligned and take into account the conclusions and recommendations of the E-ARK project which is a multinational big data research project that aims to improve the methods and technologies of digital archiving, in order to achieve consistency on a Europe-wide scale. E-ARK is co-funded by the European Commission under its ICT Policy Support Programme (PSP) within its Competitiveness and Innovation Framework

Question	Answer
	Programme (CIP).
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Not yet applicable

8.13.5.7 Interlinked

Question	Answer

Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	From the 10 high-level political priorities, it will contribute to the following ones:
	• Democratic change, in the following way:
	   o One of the goals of this priority has to do with bringing the EU closer to its citizens. One way of doing so is providing better access to the Institutions history and memory by facilitating the access to its historical archives.
	   o Digital Single Market, in two ways:
	• By clarifying and supporting technical standards for archival management, it will ensure better access to digital goods and services.
	• By providing access to Commission archives in Open Data format it will generate value, allowing the reuse of this information producing new products and services.

8.13.6 PROBLEM STATEMENT

The problem of	Properly managing archives and related archival activities
affects	European public administrations as well as public administrations in the member states
the impact of which is	difficulties in exchanging archival information between different European public organizations
a successful solution would be	• a set of recommendations based on standards allowing public administrations as well as any other interested organization to organize the management of their archives; • an evaluation framework based on standards allowing public administrations as well as any other interested organization to effectively evaluate information systems for archive management for easy integration with archival services of other European public organizations; • a pilot implementation in form of proofs of concept applied to the specific case of the Historical Archives Service of the European Commission in order to validate the recommendations and proof their utility in selecting and adopting good practices in archival data management, exchange and publication. • implementation of an interoperability solution for archival data exchange between the Historical Archives Service of the European Commission and the Historical Archives of the European Union

The problem of	making the archival information of the European public administrations available to the public
affects	citizens, researchers and business
the impact of which is	difficult access and limited reuse of the archival information of the European public administrations
a successful solution would be	• a set of recommendation based on open standards for making archival information of European public administrations available to the public in order to enhance transparency and accountability of the public institutions and to allow the re-use of the information • implementation of a solution for the publication of the European Commission's archives as Open Data

8.13.7 IMPACT OF THE ACTION

8.13.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	• The results related to "archives management systems and data exchange" will allow the target user base to define minimal requirements for archive management systems, identify the possible implementation alternatives and tools and estimate the associated costs. This means	Partially after the study phase when reports will be delivered (2017Q4-2018Q1) and after the setup of proofs of concept by	Archives services in general (national or regional archives) and of (international) organisations. Archives

Impact	Why will this impact occur?	By when?	Beneficiaries
	an easier in depth product analysis when tools have to be assessed and hence less money to be invested. • The results related to "linked open data" can be seen as an example for other public archives when launching similar initiatives. The overview provided including best practices for turning archival data into linked open data will prevent users for investing additional money to analyse similar activities.	2018Q4.	services of EU institutions. Historical Archives of the European Union of Florence. Open data community. Archives users (as end users).
(+) Savings in time	• The results related to "archives management systems and data exchange" will allow the target user base to define minimal requirements for archive management systems, identify the possible implementation alternatives and tools and estimate the associated costs. This means an easier in depth product analysis when tools have to be assessed and hence less time to be dedicated. • The results related to "linked open data" can be seen as an example for other public archives when launching	Idem	Idem

Impact	Why will this impact occur?	By when?	Beneficiaries
	similar initiatives. The overview provided including best practices for turning archival data into linked open data will prevent users spending time to analyse similar activities.		
(+) Better interoperability and quality of digital public service	The provided solutions for exchange of archival data will help EU institutions in cooperating with the Historical Archives of the European Union (Florence). The ideas and proof of concepts related to (linked) open data will help other archives services to implement similar initiatives. In a broader sense, archives services of all kind will be able to pick up ideas in order to advance towards more cooperation in the field of data exchange e.g. in the light of duties in relation to their respective national archives or towards the Archives Portal Europe.	Idem	Idem

8.13.7.2 User-centricity

Several elements listed in section "1.1.5.5 Reusability of action's outputs"
The action's output will mainly impact two types of users: institutional users and end users.
The output of the studies and the solutions put in place (Proofs of Concept and beyond) will facilitate:

- the selection of IT tools,
- the launching of initiatives for data exchange and open data
- the re-use of archives
- the consumption of archives by end users

Overview of beneficiaries and anticipated benefits

Beneficiaries	Anticipated benefits
European citizens	The assessment on the feasibility of creating an Open Data based catalogue of Commission digital archives will increase the involvement of European citizens having as a benefit: • Increase of Institutions accountability, allowing taxpayers to have a better view on how policies where designed, developed and implemented. • Increase of Institutions transparency and prestige, reducing the "legitimacy gap" that some European citizens feel.
European business	The assessment on the feasibility of creating an Open Data based catalogue of Commission archives will help European business, resulting in: • Maximum re-use of the information, including new business opportunities based on the historical data re-use. • Sharing of knowledge and possibility to network. • Easy clustering of the expertise of different businesses.
Researchers	In the particular case of researchers, the Open Data catalogue of Commission digital archives will also allow them to better perform their work, by: • Providing a better view on the history and memory of the Institutions, resulting on increased and improved research results. • Easy access
EU institutions and Member States archives (national, regional, local levels)	The review on digital archival data management standards and the market analysis of the existing IT tools providing support to them will:

Beneficiaries	Anticipated benefits
	• Save resources to the different archives by providing a benchmarking of the available standards and IT solutions. • Promote the reuse of standards and standards-based existing solutions, guaranteeing interoperability between different archives. • Ensure a coherent way to evaluate standards and archive management tools. • Foster modernization of archive services to better address the expectations of their stakeholders.

8.13.8 EXPECTED MAJOR OUTPUTS

Output name	Analysis of the interoperability requirements to exchange Commission archival management data with the European archiving initiatives
Description	This analysis will identify the current semantic and technical interoperability requirements established by the different European archiving institutions (Historical Archives of the European Union) and initiatives (Archives Portal Europe, Europeana) for archives data exchange, and what the possible options are to technically implement them. The analysis will include assessment of elements like the used and required standards; required metadata and existing gaps; metadata transformation, etc. It will also provide conclusions on recommended options to implement those requirements, taking into account the conclusions of the market survey on standards-based IT tools and services for archives management. As the study will help making archives of the Commission available to the public, it will also be of the general interest for

	European businesses and citizens.
Reference	
Target release date / Status	2018Q1/ Released (June 2018)

Output name	Proofs of Concept on archives management systems and exchange of archival data
Description	Proposed pilots (or proofs of concept) will put into practice the results obtained in the first (study) phase of this action. To this extent, the specific situation of the Historical Archives Service of the European Commission will have to be taken into account on mainly two levels: - standards used, business domains covered and technical constraints of the EC's IT environment; - direct relationships with other archives services (of other EU institutions and the HAEU in Florence) and related legal obligations for exchanging archival data (archival description, producers, etc…). The way the Historical Archives Service of the European Commission is organised and interacts with other archive services is not a unique situation (European level) as similar needs exist on local, regional and member states level (e.g. between regional and national archives) or even amongst other (international) organisations when it comes to interoperability on the level of archival data exchange. The work to be carried out will be organised in relation to the following possible deliverables: - Based on the results of the first phase, detailed identification of criteria specific for the Historical Archives Service of the European Commission: standards to be used, business domains to be covered and technical issues to be taken into account. Current

	practices existing on the level of archival data exchange need to be taken into account and if necessary new approaches need to be identified and proposed.
	- Following a phased approach (translation of needs, installation, configuration, data migration, customization, testing and approval) and, using the assessment tool created in the first phase of the action, systems need to be selected and deployed in order to proof the feasibility of the selected solution.
	- Define reference architecture for the solution emphasising especially on data exchange re-useable for other stakeholders.
Reference	
Target release date / Status	2019Q1 / Concluded Q2-Q3 2019

Output name	Proofs of Concept for solutions for turning archival data into (linked) open data
Description	The pilot (or proofs of concept) will put into practice the results obtained in the first (study) phase of this action. To this extent, the specificities of the archival data managed by the Historical Archives Service of the European Commission and its direct stakeholders will have to be taken into account:
	- Levels of archival description (in accordance with the ISAD standard): fonds groups, fonds, sub-fonds, series, files;
	- Description of identified producers (in accordance with the ISAAR standard);
	- Business specific metadata existing on several levels like files and documents;
	- Currently used keywords and several kinds of named entities;
	- Full text indexes.
	The archival data being managed at European level are not

	necessarily unique as on local, regional and member states level similar information exists.
	The work to be carried out will be organised in relation to the following possible deliverables:
	- Detailed identification of archival data relevant for being enriched turned into linked open data and identification of datasets relevant for being published on the European Open Data portal;
	- Following a phased approach (translation of needs, development and configuration, data cleaning and manipulation, testing and approval), mechanisms need to be deployed in order to produce linked data and dataset to be published in order to proof feasibility;
	- Define a reference architecture for the proposed solution.
Reference	
Target release date / Status	2019Q1/ To be concluded in Q3/Q4 2019

Output name	Implementation of a standard-based solution for archival data management, exchange and publication
Description	The solution implementation will put into practice the results and lessons learned during the proofs of concepts phase of the action. At the core of the solution, a new archives management system (AMS) will be put in place able to manage and coordinate the activities covering a maximum of business processes and ultimately leading to the publication and exchange of archival data in various ways. At EC level, the AMS will need to be integrated with different existing (corporate) information systems: a-REP and HAN (digital preservation repository), ARCHIS-Scanning (digitisation system), HistOrga (application managing organisational reference data). At EU institutional level, integration will be needed towards a

	new module allowing data exchange between EU institutions archives services and the Historical Archives of the European Union (Florence). In addition to this, integration will be needed with the solution (Vocbench) allowing the various stakeholders to manage in a shared way selected controlled vocabularies. Finally, solutions are to be implemented allowing not only the traditional ways of archival data publication but also via open data taking into account open data standards for archival data currently being developed.
Reference	
Target release date / Status	2020 Q2 / to start Q4 2019

8.13.9 ORGANISATIONAL APPROACH

8.13.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Historical Archives Service of the European Commission (OIB)	Sven CARNEL, Julie URBAIN, Lieven BAERT	Service in charge
Directorate General for Informatics (DIGIT)	Béla HARSANYI, Sorin BOBEICĂ	Service in charge
Secretariat General of the European Commission (SG)	Annemieke VANLAER, Antonio PALMA GOMEZ	Associated services

8.13.9.2 Identified user groups

- Institutional:
  - Archives services in general (national or regional archives) and of (international) organisations.
  - Archives services of EU institutions.

- o Historical Archives of the European Union (European University Institute in Florence).
- o Open data community.
- End users – consumers of archives
  - o European citizens
  - o Business
  - o Researchers (students, legal advisors, academic community)

8.13.9.3 Communication and dissemination plan

Currently the following is foreseen for the first phase (2017-2018) of the action:

- A project wiki (Confluence) in order to allow the stakeholders to interact
- Interactions with various stakeholder for data collection either directly (phone, video conferencing, email) or by making use of survey tools
- Reflection committee to assess results intermediary

For the pilot phase (2018-2019):
- a common project space will be set up in order to facilitate communication between the main stakeholders
- Regular meetings with the main stakeholders for the project progress will be organised

For the implementation phase (2019-2020)

- Interactions with vendors, EC IT teams, and other EC stakeholders offering re-usable tools
- Extensions of the pilot for the data exchange in LOD format in order to cover the entire data model and all eligible archival content
- Interactions with other EU institutions archives services and the HAEU in Florence
- A common project space will be set up in order to facilitate communication between the main stakeholders
- Regular meetings with the main stakeholders for the project progress will be organised
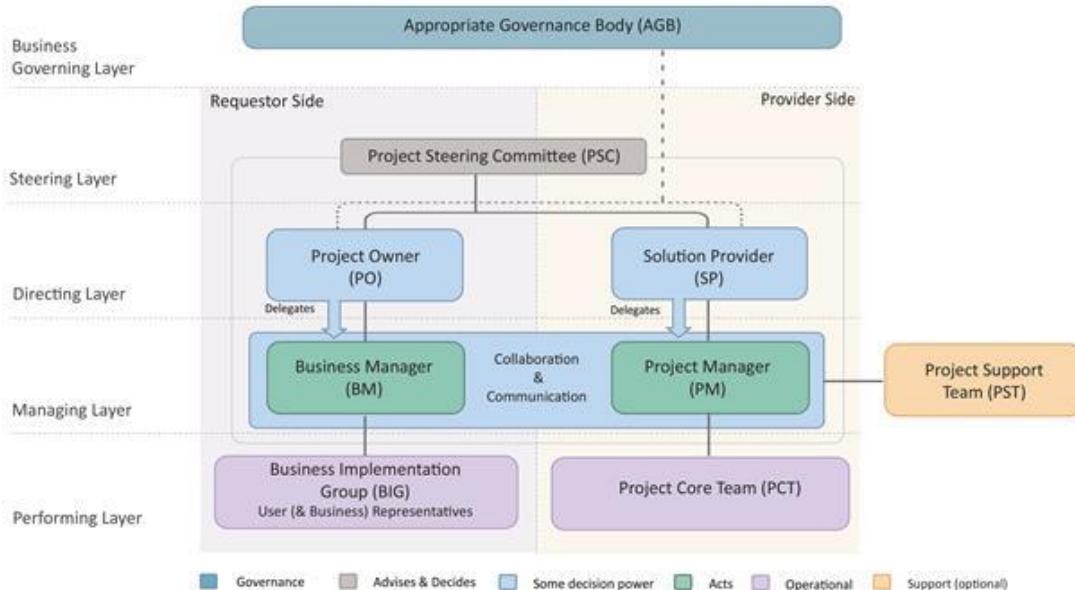
8.13.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Phase 1: Definition of templates for description of 4 specific deliverables	4	Q4 2017
Phase 1: Collect, analyse and report on information collected for 4 specific deliverables	4	Q4 2017
Phase 1: Design and test assessment tool	1	Q4 2017 – Q1 2018
Phase 1: Conclusions and recommendations for proofs of concept	2	Q4 2017 – Q1 2018
Phase 2: The various stakeholders are contacted and practices are taken into account into the PoC's needs specifications	3	Q4 2018
Phase 2: A report is made available setting out the boundaries of the specific situation of the Historical Archives Service of the European Commission	1	Q4 2018
Phase 2: At least 3 Proofs of Concept (or variants) must be set up.	3	Q1 Phase 1: 2019
Phase 2: In order to assess the proposed solutions, test scenario's and evaluation criteria must be proposed.	1	Q1 2019
Phase 2: Results should be delivered in line with the proposed calendar (to be defined at the start of the PoC-phase).	1	Q1 2019
Phase 2: A report describing the PoCs methodology and lessons learned is published for re-use by the archival community	1	Q4 2019
Phase 2 : Based on the PoCs, solution(s) for the next	1	Q4 2019

Description of the KPI	Target to achieve	Expected time for target
phase is(are) selected.		
Phase 3: A project plan is defined with the various stakeholders	1	Q4 2019
Phase 3: A new AMS enabling the EC Historical Archives Service publish and exchanged archival data in an interoperable and standard way is put in place	1	Q2 2020
Phase 3 :A module allowing efficient data exchange between EU institutions archives services and the Historical Archives of the European Union (Florence) is developed.	1	Q2 2020
Phase 3: The AMS and the new module are integrated with VocBench allowing the various stakeholders to manage in a shared way selected controlled vocabularies	1	Q2 2020
Phase 3: The EC Historical Archives Service is able to publish archival data as open data to be re-used by the archival community as well as citizens	1	Q4 2020

8.13.9.5 Governance approach

The action governance will be based on what PM^2 methodology proposes, as displayed in the following picture:

The proposed governance approach might be adapted depending on the project evolution.

The Steering Committee is composed by the following persons (for the content of the roles see attached document):

- Directing layer
  - Project Owner: OIB.OS.1 represented by Sven Carnel as HoS of the HAS
  - Solution Provider: DIGIT.B.2 represented by Willy Van Puymbroeck as HoU and Béla Harsányi as HoS

The PSC will be chaired by OIB.OIS.1 and will meet on a regular basis (every three months approximately) to ensure the project is progressing satisfactorily and to take strategic decisions. In case any critical risk or issue is raised, the PSC may also meet, in order to decide on actions to be launched.

- Execution layer
  - Business Manager (on the Project Owner side): the persons delegated by OIB.OS.1 to follow-up the project on a daily basis: Lieven Baert,Julie Urbain and Emmanuel Dervaux
  - Project Manager (on the Solution Provider side): Sorin Bobeica

- o Associated service (SG) : Annemieke Vanlaer, Antonio Palma Gomez
- o Other contractors: Numen, Infeurope
- o The Project Support Team
  - The members of the current HPS III working party (OIB, DIGIT + SG)
  - Possibly, extension by "ad hoc members" (called upon for "peer" related activities)
    - Members coming from EBNA (European Board of National archives), EAG (European Archives Group) , IIAG (Inter Institutional Archives Group), DLM (Document Life cycle management), HAEU (Historical archives of the European union) (to deliver feedback on archives management tool and metadata exchange (content format))
    - Members from OP, COMM, CNECT (to deliver feedback on interoperability requirements (metadata formats- technical requirements) (e.g. Cordis, Horizon 2020) and effects for Open Data)

8.13.10 TECHNICAL APPROACH AND CURRENT STATUS

The identified deliverables, will be prepared in collaboration with external consultancy companies. Existing framework contracts will be used as much as possible to speed up procurement. The definition of the technical architecture of the future solutions will be done later, once the conclusions of the study are available.

The scope of the project will be divided in two work packages: one dealing with standards clarification and IT tools assessment and the second one tackling the identification of interoperability requirements and Open Data. The two work packages can run in parallel and produce their results independently of each other.

Details about deliverables can be found in document with reference Ares(2017)2610424.

As an updated status (September 2019), a high level Technical Architecture document was drafted, that identifies all the integrations that need to be taken into consideration for the implementation project. The approach can be slightly different, depending on the selected AMS solution, but the main goal is to use REST webservices for most of the communication exchange.

8.13.11 COSTS AND MILESTONES

8.13.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Planning	Definition of work packages and procurement procedure	n/a	n/a	Q2 2017	Q3 2017
Execution	Study on archive management standards and supporting IT tools	100	ISA²	Q3 2017	Q1 2018
Execution	Analysis on interoperability requirements and Open Data publication feasibility	100	ISA²	Q3 2017	Q1 2018
Execution	Pilot on Open Data publication	150	ISA²	Q3 2018	Q3 2019
Execution	Pilot on archival t data exchange	300	ISA²	Q3 2018	Q4 2019
Execution	Implementation of a solution for archival date exchange and publication	300	ISA²	Q3 2019	Q2 2020
	Total	950			

8.13.11.2   Breakdown of ISA[2] funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Execution: • Study on archive management standards and supporting IT tools • Analysis on interoperability requirements and Open Data publication feasibility	200	157
2018	Execution: • Pilot on Open Data publication • Pilot on archive management data exchange	450	
2019	Execution: • Implementation of a solution for archival date exchange and publication	300	

8.13.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Framework Contract ABC III / Lot 2 – fixed price. Technical annex (Description of the work for the first phase).	Ares(2017)2610424 23/05/2017	
Hermes Preservation Services (HPS) Vision document	Ares(2009)270285 8/10/2009	Ares(2009)270285
Business case HPS II-HPS III	Ares(2013)69564 21/01/2013	
Reg 2015/496 + Dec 47/2002 and 563/2004	http://eur-lex.europa.eu/eli/reg/2015/496/oj	
ISO OAIS Reference Model for an OAIS (Open Archival Information System). This reference model is defined by recommendation CCSDS 650.0-B-1 of the Consultative Committee for Space Data Systems (2012)	ISO 14721:2003 which is superseded by ISO 14721:2012. http://public.ccsds.org/publications/archive/650x0m2.pdf	
ISAD(G) General International Standard Archival Description approved by the International Council on Archives (ICA/CIA)	ISAD(G): General International Standard Archival Description *(PDF) (2 ed.),* International Council on Archives Committee on Descriptive Standards, *2000*	

Description	Reference link	Attached document
as a standard to register archival documents produced by corporations, persons and families		
ISAAR (CPF) International Standard Archival Authority Record for Corporate Bodies, Persons and Families	ISAAR (CPF): International Standard Archival Authority Record For Corporate Bodies, Persons and Families" *(PDF). International Council on Archives. October 2003*. Retrieved 2012-07-06.	
e-ARK	http://www.eark-project.com/	
Data, information and Knowledge management	COMMUNICATION TO THE COMMISSION Data, information and knowledge management at the European Commission	
European Union Open Data Portal	https://data.europa.eu/euodp/en/data	
European Data Portal	https://www.europeandataportal.eu/	

8.14 FAIR DATA MATURITY MODEL (2018.06)

8.14.1 IDENTIFICATION OF THE ACTION

Service in charge	RTD.G4
Associated Services	CONNECT, Publications Office of the EU

8.14.2 EXECUTIVE SUMMARY

Technological advancements have made all the sectors of the EU economy more data intensive and interconnected, with public administrations, research organisations and businesses producing and sharing increasing volumes of data. In their effort to produce high quality data, data professionals have to follow good data management and data stewardship practises, which apart proper collection, annotation and archival, they include the notion of long-term care of valuable digital assets, either alone or in combination with newly generated data.

To maximise the value of data, data (sets) should have four foundational characteristics; they should be:

- 'Findable', i.e. discoverable with machine readable metadata, identifiable and locatable by means of a standard identification mechanism;
- 'Accessible', i.e. available and obtainable;
- 'Interoperable', i.e. both syntactically parseable and semantically understandable, allowing data exchange and reuse among scientific disciplines, researchers, institutions, organisations and countries; and
- 'Reusable', i.e. sufficiently described and shared with the least restrictive licences, allowing the widest reuse possible across scientific disciplines and borders, and the least cumbersome integration with other data sources.

Findability, Accessibility, Interoperability and Reusability – the FAIR principles [1] – were first introduced in 2014 and intend to define a minimal set of community-agreed guiding principles and practices that allow both machines and humans to find, access, interoperate and re-use data.

Although the FAIR principles were initially applied to research data, their coverage has been extended to data produced or managed by the public sector. According to the Expert Group

"Turning FAIR data into reality" established by the European Commission [2], FAIR should not be limited to its four constituent elements but it should also comprise appropriate openness, the assessability of data, long term stewardship and other relevant features, which are needed to be incorporated to the definition of FAIR in order data to have the greatest value and usability, for humans and machines.

The Digital Single Market Strategy [3] and the European Cloud Initiative [4] have recognised the importance of a FAIR-enabled data ecosystem and the European Commission has proposed the creation of a FAIR Data Action Plan which will facilitate and promote a cross-border and cross-sector data sharing and reuse and will contribute to growth and accelerate innovation in a global digital economy. In addition, the Implementation Roadmap for the European Open Science Cloud (EOSC, SWD2018 (83) final) [5] states that the FAIR Data Action Plan is meant to set out the actions needed to develop the EOSC shared resources and define the operational guidance and methodologies for applying the FAIR principles within these shared resources.

As a result, the concept and principles of FAIR need a robust set of metrics to assess and validate that data is FAIR. The FAIR Data Maturity Model will consist of a common set of core assessment criteria for FAIRness and will provide public sector and research organisations with a self-assessment methodology to measure their maturity level from the following perspectives:

- Data findability, i.e. how well they describe the data they produce or manage with rich metadata, assign to data/metadata a globally unique persistent identifier and register or index them in a searchable resource;
- Data accessibility, i.e. how well they allow the retrieval of their data/metadata by their identifier using a standardized communications protocol that is open, free and universally implementable;
- Data interoperability, i.e. how well they ensure that the precise format and meaning of exchanged and shared data/metadata is preserved and understood;
- Data reusability, i.e. how well they release data/metadata with a clear and accessible data usage license, associated with detailed provenance and follow practices that promote the reuse and share of data, unless certain privacy or confidentiality restrictions apply.

The Action shall build upon all existing efforts at European, national and/or sectorial level and complements other endeavours (e.g. funded by the H2020 Work Programme 2018-20) that support the FAIR data uptake and compliance across borders/disciplines.

The development process shall leverage the experience and knowledge gained by community-driven organisations such as the Research Data Alliance (RDA), since they can provide the space and the means for the bottom-up creation of sustainable solutions. The development follows a holistic and systemic approach (i.e. by not necessarily examining slavishly each one of the FAIR data principles) aiming to deliver a core FAIR data maturity model with a three-fold nature:

a. descriptive, i.e. to describe the as-is FAIR-related maturity level of an organisation,
b. prescriptive, i.e. to provide guidance to improve the implementation of the FAIR data principles (aka 'FAIRness') through recommendations, and
c. comparative, i.e. to allow a benchmark based comparison amongst peers.

8.14.3 OBJECTIVES

The main objective of this action is to develop a common set of core assessment criteria for FAIRness and a self-assessment methodology that public sector or research organisations can use in order to measure its maturity level from the following perspectives:

a. Data findability, i.e. how well they describe the data they produces or manage with rich metadata, assign to data/metadata a globally unique persistent identifier and register or index them in a searchable resource;
b. Data accessibility, i.e. how well they allow the retrieval of its data/metadata by their identifier using a standardized communications protocol that is open, free and universally implementable;
c. Data interoperability, i.e. how well they ensure that the precise format and meaning of exchanged and shared data/metadata is preserved and understood;
d. Data reusability, i.e. how well they release data/metadata with a clear and accessible data usage license, associated with detailed provenance and follow practices that promote the reuse and share of data, unless certain privacy or confidentiality restrictions apply.

8.14.4 SCOPE

The action will deliver a generic and expandable self-assessment methodology for measuring the readiness and implementation level of a dataset of public sector or research organisations vis-à-vis the FAIR principles. The FAIR Data Maturity Model will have three purposes: a.) descriptive, i.e. to describe the as-is FAIR-related maturity level of an organisation, b)

prescriptive, i.e. to provide guidance to improve the implementation of the FAIR data principles (aka 'FAIRness') through recommendations, and c) comparative, i.e. to allow a benchmark based comparison amongst peers. The Model will apply to data in the conventional sense as well as to data-related algorithms, tools, workflows, protocols and other data-related services produced or managed by the assessed organisation.

8.14.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[136].

8.14.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability*	The action contributes directly to the implementation of the European Interoperability Framework (EIF), the Digital Single Market Strategy and European Cloud initiative of the EU. Even though the FAIR principles were initially focused on research data, their coverage has been extended to data produced or managed by the public sector as well. The action that contributes to all interoperability principles set out in the EIF and notably to the principles of: • Openness: the FAIR Data Maturity Model will enable organizations to publish data and users to enjoy

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[136] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
requirements?	access to an open-by-default, efficient and cross-sector data environment supported by FAIR data principles.
	• Transparency: the FAIR Data Maturity Model will increase the internal visibility inside public sector or research organisations, allowing other actors to view the datasets, data infrastructures and projects they produce or manage. Especially for research organisations, it can have a positive impact for the scientific principle of credibility, replication and further research.
	• Reusability: one of the main focus areas of the FAIR Data Maturity Model is reusability.
	• Technological neutrality and data portability: the FAIR principles are neither standards nor practices; they are pragmatic and technology neutral. The FAIR Data Maturity Model will allow organisations to avoid lock-in, move and reuse data easily and support the free movement of data between countries and/ sectors.
	• Preservation of information: the FAIR principles are targeted to the long-term preservation of data produced or managed by public sector or research organisations.

Question	Answer
	The FAIR Data Maturity Model allows organisations to build their pertinent capacity and develop the necessary policies and mechanisms to ensure long-term accessibility, including preservation of their data and metadata. • Assessment of effectiveness and efficiency: the FAIR Data Maturity Model is an instrument that can assess and improve the readiness, effectiveness and efficiency of public sector and research organisations in the implementation of the FAIR principles. In addition, the FAIR Data Maturity Model provides an assessment and improvement framework which covers multiple interoperability related aspects such as: data standards, persistent unique identifiers, legal clarity and harmonisation of the legal framework, catalogues of data, services and standards, capacity building, security and privacy etc.
Does the proposal fulfil an interoperability need for which no other alternative solution is available?	There is no published core and generic assessment methodology at European level for measuring the maturity of a dataset regarding its readiness and implementation level of the FAIR principles. The FAIR Data Maturity Model is the first instrument that assesses in a combined and domain-

Question	Answer
	agnostic way the findability, accessibility, interoperability and reusability of data produced or managed by organisations. It is the first tool that allows the creation, in an aligned way, of specific-purpose FAIR assessment methodologies that produce comparable and combinable results.

8.14.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The FAIR data principles are domain neutral and the FAIR Data Maturity Model is by-design useful and can be utilised in any EU policy area. The FAIR Data Maturity Model is a generic and domain-agnostic instrument that allows organisations of any type, domain or policy area to obtain insight into generically defined findability, accessibility, interoperability and reusability enablers and manifestations. In addition, organisations can get key improvement recommendations.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or*	Not applicable

Question	Answer
more EU policy sectors.	

8.14.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	The FAIR Data Maturity Model is useful and can be utilised by public administrations, research organisations and businesses of any EU Member State. The FAIR Data Maturity Model is a generic and institutional level-agnostic instrument that allows organisations at any level (national, regional, provincial, municipal or national) to obtain insight into generically defined findability, accessibility, interoperability and reusability enablers, and manifestations. In addition, organisations can get opportunities for reusing or providing services and key improvement recommendations.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Not applicable

8.14.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	The Digital Single Market Strategy and the European Cloud Initiative have recognised the importance of a FAIR-enabled data ecosystem by putting forward an FAIR Data Action Plan (published end 2017). The FAIR Data Maturity Model is an important instrument towards the implementation of the FAIR Data Action Plan, as it measures the readiness and implementation level of organisations vis-à-vis the FAIR data principles and provides concrete improvement recommendations. The Implementation Roadmap for the European Open Science Cloud (SWD2018 (83) final), adopted by the Commission on 14 March 2018, mentions the need to develop FAIR maturity models as part of the EOSC shared resources that will define the operational guidance and methodologies for applying the FAIR principles. Furthermore, the draft proposal for the FAIR data action plan [6], presented by the FAIR data Expert Group on 11 June 2018, proposes the design of an agreed set of core FAIR metrics, which will be "standardised" and extendible in order to cover the needs and practises of different communities.

Question	Answer
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The ISA^2 scope and financial capacity fit for the implementation of the FAIR Data Maturity Model since: • It contributes to a common understanding of the FAIR principles, (including interoperability) by providing an assessment methodology/model in line with the interoperability layers, principles and recommendations of the European interoperability Framework and European Interoperability Strategy. • It can be utilised as an instrument to monitor the implementation of the FAIR principles. • It is an interoperability solution that supports the implementation of EU policies and activities such as: Digital Single Market Strategy, European Cloud Initiative and European Interoperability Strategy. • Facilitates and promotes reusability since it is at the heart of the FAIR principles and of the Model in general.

8.14.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	FAIR Data Maturity Model (in electronic format) – Questionnaire and Recommendations
Description	The FAIR Data Maturity Model a self-assessment toolset that enables organisations to evaluate their readiness and implementation level vis-à-vis the FAIR data principles, along with the guidelines necessary to climb up the ladder of FAIR.
Reference	Not applicable
Target release date / Status	2019
Critical part of target user base	- Data stewards and other data professionals who are involved in the production and management of public sector or research data and have to follow good data management and data stewardship practises (which include the notions of data collection, annotation, archival and long-term care, either alone or in combination with newly generated data). - Data services owners (data infrastructures, data repositories, owners of commercial and open-source tools). - Policymakers at European and national level defining data policies.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not applicable

8.14.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA^2, ISA or other relevant interoperability solution(s)? Which ones?	The proposed action will make extensive use of the Interoperability Maturity Assessment of Public Services Model (IMAPS). The IMAPS is an operational solution used for assessing and improving the interoperability maturity of a Public Service. Also, it will identify FAIR-related enablers and manifestations taking into account interoperability solutions produced by other ISA^2 Actions including: 'Promoting semantic interoperability amongst European Public Administrations', 'Access to Base Registries', 'Catalogue of Services', Common assessment Method for Standards and Specifications' and 'Sharing and Reuse'.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Not applicable

8.14.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The action contributes significantly to the Digital Single Market Strategy and European Cloud initiative of the EU. The Digital Single Market Strategy and the European Cloud Initiative have recognised the importance of a FAIR-enabled data ecosystem by putting forward an FAIR Data Action Plan (draft proposal presented in June 2018). According to the Implementation Roadmap for the European Open Science Cloud (SWD2018 (83) final), adopted by the Commission on 14 March 2018, the FAIR Data Maturity Model is an important instrument towards the implementation of the FAIR Data Action Plan, as it measures the readiness and implementation level of organisations vis-à-vis the FAIR data principles and provides concrete improvement recommendations. The FAIR Data Maturity Model will facilitate and promote a cross-border and cross-sector data sharing and reuse and will contribute to growth and accelerate innovation in a global digital economy.

8.14.6 PROBLEM STATEMENT

The problem of	The lack of a common core methodology that would allow organisations to evaluate the readiness and implementation level of their datasets vis-à-vis the FAIR data principles and would provide concrete recommendations on how to improve it. The aspirational nature of the FAIR data principles and their rapid adoption has led to an ambiguity and a wide range of interpretations of FAIRness since the principles do not strictly define how to achieve a state of FAIRness but rather they describe a continuum of features, attributes and behaviours that move a dataset closer to that goal. As a result, a number of incompatible methodologies to assess FAIRness have been developed already and relevant work is in under way by various groups.
affects	a) The potential of public administrations, researchers, businesses and citizens to share and reuse data in a cross-border and cross-sector way. b) The possibility to combine or compare results from existing FAIR-related assessment methodologies due to their incompatibility.
the impact of which is	a) Limited ability of humans and machines to automatically find and use cross-border and cross-sector data, which is a prerequisite for harnessing the high quantity of data produced at EU level and for improving the reusability of this data in the public sector, science and industry.

	b) Lack of a minimum set of shared guidelines for research performing organisations, data infrastructures and public data-related entities on to how to climb up the ladder of FAIR.
a successful solution would be	A generic and expandable maturity model, consisting of a common set of core assessment criteria, that measures the readiness and implementation level of organisations concerning the FAIR data principles, having a nature which is at the same time descriptive, prescriptive and comparative.

8.14.7 IMPACT OF THE ACTION

8.14.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
Contribute to growth and accelerate innovation in a global digital economy	Data is becoming increasingly important for all aspects of the European economy. The FAIR Data Maturity Model improves the readiness and capability of public sector and research organisations to open up their data in a way that creates potential benefits which are clearly recognised in the European Commission's investment plan for Europe. A specific example of the economic impact of opening up data is the Copernicus earth observation system.	2019	Public administrations, research organisations, businesses

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	The proposed action will ensure money savings to organisations as it will deliver a reusable solution for measuring the FAIRness of their data. Also, it will contribute to the improvement of organisations in their readiness and implementation level of the FAIR principles, which will lead to money savings from the reuse of high-quality data, the combination of data sets across borders or disciplines and the avoidance of duplication.	2019	Public administrations, research organisations, businesses, universities, researchers
(+) Savings in time	The proposed action will ensure time savings to organisations aiming to implement the FAIR principles. Also, it will accelerate the achievement of the objectives of the Digital Single Market Strategy and European Cloud initiative of the EU.	2019	Public administrations, research organisations, businesses, universities, researchers
(+) Better interoperability and quality of digital public service	The readiness of organisations to implement the FAIR principles is related with their capability to produce / maintain / reuse more interoperable and of high quality public services.	2019	Public administrations, research organisations, businesses, universities, researchers

Impact	Why will this impact occur?	By when?	Beneficiaries
Increased transparency	The FAIR Data Maturity Model increases the internal visibility inside public sector or research organisations, allowing other actors to view the data they produce or manage. Especially for research organisations, it can have a positive impact for the scientific principle of credibility, replication and further research. The FAIR Data Maturity Model can help to increase the reproducibility of research, which currently can be as low as 10-30% in key areas, such as cancer research. The scientific community has repeatedly experienced instances of misconduct and erroneous analyses, which may endanger whole scientific fields.	2019	Public administrations, research organisations, businesses, universities, researchers

8.14.7.2 User-centricity

The FAIR Data Maturity Model will be created in an open, interactive and iterative way, with the active and continuous engagement of its potential users in all development phases. The development process will leverage techniques such as interviews with experts, brainstorming sessions, focus groups and workshops where all potential types of users will contribute to the definition of the exact scope and functioning of the model, including their involvement to the review/evaluation phase and the selection of the preferable delivery and maintenance channels of the model. A special role will be foreseen to community-driven initiatives such as Research Data Alliance (RDA), since they can provide the space and the means (e.g. via the establishment of a working group) for the bottom-up creation of a sustainable model. All

types of users (from all public/private sector and research domain disciplines) are equally foreseen to be engaged.

8.14.8 EXPECTED MAJOR OUTPUTS

Output name	FAIR Data Maturity Model (in electronic format) – Questionnaire and Recommendations
Description	The FAIR Data Maturity Model and a self-assessment toolset that enables organisations to evaluate the readiness and implementation level of their datasets vis-à-vis the FAIR data principles, along with the guidelines necessary to climb up the ladder of FAIR.
Reference	
Target release date / Status	2019

Output name	FAIR Data Checklist
Description	The FAIR Data Checklist will be a lightweight version of the FAIR Data Maturity Model, aiming to raise awareness on the main aspects related with the FAIR principles.
Reference	
Target release date / Status	2019

8.14.9 ORGANISATIONAL APPROACH

8.14.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Public administrations	ISA[2] Coordination Group	
Research community	FAIR Data Expert Group: established and managed by DG RTD	

Stakeholders	Representatives	Involvement in the action
	GO-FAIR initiative: community-driven initiative focusing on the FAIR-related implementation needs of existing research networks and consortia FAIR Metrics group, working groups of RDA, Force11, CODATA and other entities working on horizontal or discipline specific initiatives to measure FAIRness EOSC pilot, EOSC hub, Open AIRE Advanced and any Horizon 2020 project that supports the first phase in the development of the EOSC and the uptake and implementation of the FAIR data principles	

8.14.9.2 Identified user groups

User Group	Description
Service Owners	Responsible for setting up and maintaining a data-related services and tools
Public sector and research organisations	Organisations that capture, generate, manage, share, protect and preserve public sector and/or research data
Data experts	Data professionals that ensure the proper capturing, generation, management, sharing, protection and preservation of public sector and/or research data
Researchers	They generate, process, make accessible, curate and store data, according to the data management plans and supported by data experts
Policymakers	Responsible for defining data policies at European and/or national level

8.14.9.3 Communication and dissemination plan

The main communication channel for all activities related with the FAIR Data Maturity Model will be the collaborative platform Joinup. Joinup will host the model and all supporting documentation.

For ensuring the user engagement, from both the public sector and research domain, during the development phases, the FAIR Data Maturity Model will be presented to workshops, conferences and other events organised by the Commission (e.g. DG DIGIT, DG RTD) and community-driven initiatives such as RDA. The exact communication plan will be defined during the initiation phase of the proposed action.

In addition, the model will be presented to the ISA^2 Coordination Group and its members will be used as proxy for disseminating it further to the Member States.

8.14.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[137] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Conduction of assessments using the FAIR Data Maturity Model	30	2019

8.14.9.5 Governance approach

The ISA^2 Coordination Group sets the general strategic directions of the Action and ensures that it is aligned with all relevant actions at European and /or national level.

DG RTD G.4, responsible for the European Open Science Cloud and the creation of the FAIR Data Action Plan, identifies the priorities, organises the activities and safeguards the proper execution of the FAIR Data Maturity Model development and communication plan.

In coordination with the ISA^2 Programme Management Team (DG DIGIT D2), DG RTD.G4 reports the progress and the results of the Action to the ISA^2 Coordination Group.

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[137] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

8.14.10TECHNICAL APPROACH AND CURRENT STATUS

The FAIR data maturity model is built on top and combines the most salient characteristics of existing efforts for measuring the readiness and implementation level of a dataset vis-à-vis the FAIR data principles (e.g. fairmetrics.org, DANS, DTL, Springer Nature etc.). The model will be aligned with community-driven initiatives at international, European and Member States level (e.g. GO-FAIR, Research Data Alliance, CODATA etc.) and complement other endeavours (e.g. funded by the H2020 work Programme 2018-2020) that support the FAIR Data uptake and compliance across borders and across sectors/disciplines.

The FAIR data maturity model will be generic - and not specific to a certain discipline or country – and apply to any type of data in the conventional sense as well as to data-related algorithms, tools, workflows, protocols and other data-related services. It will be based on a core set of mutually exclusive and collectively exhaustive assessment criteria and be populated in a way that allows its extension in order to meet specific FAIR-related assessment needs, at national and/or discipline level (for example, for providing additional layers of detail for a number of discreet areas). Furthermore, the design of the model will allow the provision of estimations about the costs and benefits for organisations, both in economic and non-economic terms, for moving their datasets to a higher FAIR maturity level.

The FAIR data maturity model is developed following a progressive approach via a number of iterations. In each iteration, the current structure and content of the model is examined and validated in order the model to evolve to a revised version. The development process is open, ensuring an active and continuous engagement of user communities and stakeholders from research and public sector in all development phases (including scoping, construction and testing). For that purpose, a working group (for example, under RDA) is under establishment, based on well-defined working and decision-making mechanisms.

The development process consists of the following phases:

a. Scoping: during the first phase, the exact scope of the model is defined including the objectives, the usage and the purpose of the model. Similar models are systematically analysed in order to identify components that could be reused either as they are or after applying some improvements, aiming to avoid the duplication of efforts.

b. Stakeholders identification: the definition of the scope is followed by the identification of the main actors who will be related with the model from three perspectives: development process, execution and interest in the results.

c. Design: this phase will define all aspects with regard to the architecture, the structure and the body of a model. The design phase will answer questions such as:

- How many different maturity stages will be foreseen?
- How many dimensions or layers will the model assess?
- Will be any documented maturation paths?
- How many questions will be included in the model?
- What will be the type of dependencies in the implementation of the foreseen model's capabilities or attributes (implicit / explicit)?
- Which techniques will be used for the population of the model (e.g. literature review, case study interviews, focus groups etc.)?
- Will be the measurement of the maturity quantitative and/or qualitative?

a. Testing: the model will be verified and validated following a well-defined evaluation methodology.

b. Delivery: when the main building blocks of the model will be constructed, various characteristics regarding its distribution will be decided such as: what kinds of materials will be publicly available, in what format etc.

Update 17/09/2019

The work has been progressing according to plan and two main deliverables have been presented. Namely the "Literature review and design methodology" as well as the "FAIR data maturity model (paper & online version) - early version". The RDA group was established in January 2019 and so far we have had four online meetings and one face-to face meeting at the 13th RDA plenary in Philadelphia, USA. All group activities can be found online at: https://www.rd-alliance.org/groups/fair-data-maturity-model-wg

The next face-to-face meeting of the group is foreseen to take place at the 14th RDA plenary happening in Helsinki, Finland. Our approach has been open and inclusive, and the group has been working online using collaborative documents and discussions on Github in order to ensure that various stakeholders and communities can have a chance to express their opinions and shape the results. The resulting indicators proposed to be included in the FAIR data maturity model are close to be finalised and accepted by the RDA group. Even though our results are preliminary, they have already been adopted by others, e.g. H2020/IMI JU project FAIRplus used the FAIR indicators resulting from this action to map them on their own capability maturity model of FAIRness and to be used by pharma companies and SMEs.

8.14.11 COSTS AND MILESTONES

8.14.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Scoping	10K		Q2/2018	Q2/2018
	Stakeholders identification	20K		Q3/2018	Q3/2018
Planning	Design process definition	20K		Q3/2018	Q4/2019
Execution	Design (phase 1)	70K		Q1/2019	Q3/2019
	Testing (phase 1)	15K		Q3/2019	Q3/2019
	Distribution (phase 1)	15K		Q4/2019	Q4/2019
Execution	Design (phase 2)	100K		Q1/2020	Q3/2020
	Testing (phase 2)	25K		Q3/2020	Q3/2020
	Distribution (phase 2)	25K		Q4/2020	Q4/2020
	Total	300K			

8.14.11.2 Breakdown of ISA[2] funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018	Initiation, Planning, Execution	150	
2019	Execution	150	

8.14.12 Planning for the tendering procedures to be launched for the action

Call for tenders foreseen Global amount in KEUR	Call for Tenders Duration in years	Indicative planning of publication (QX/YYYY)
150	1	Q3/2018
150	1	Q2/2019

8.14.13 ANNEX AND REFERENCES

Description	Reference link
[1] FAIR Data principles	http://www.force11.org/group/fairgroup/fairprinciples
[2] Commission Expert Group on "Turning FAIR data into reality"	http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3464
[3] Digital Single Market Strategy	http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1447773803386&uri=CELEX:52015DC0192
[4] European Cloud Initiative	http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0178&from=EN
[5] Implementation roadmap for the European Open Science Cloud (SWD2018 (83) final)	https://ec.europa.eu/research/openscience/pdf/swd_2018_83_f1_staff_working_paper_en.pdf
[6] Draft proposal for the FAIR data action plan	https://zenodo.org/record/1285290#.W03ief5lKUl

8.15 EU CAPTCHA (2018.08)

8.15.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D.3
Associated Services	DIGIT.B.2, DIGIT.B.3

8.15.2 EXECUTIVE SUMMARY

A CAPTCHA is a test intended to distinguish human from machine input. The objective of this action is to offer to the Member States an open source CAPTCHA that is maintained, secure, user friendly and multilingual. It will be delivered as a component that can be operated as a service. A CAPTCHA with such characteristics does not exist on the market. The delivered solution will be published on JoinUp so that it can be reviewed and maintained by the open source community.

The 1st phase of this ISA action resulted in the implementation of a first version of the component described here above. It also resulted in a study describing some paths to improve the initial solution by extending the CAPTCHA with features improving the user experience by replacing scrambled letters and numbers with more innovative and less intrusive approaches (e.g. gesture analysis, animations, images, etc.). The 2nd phase of this ISA action aims at implementing the conclusions of the study.

8.15.3 OBJECTIVES

A CAPTCHA is a test intended to distinguish human from machine input in order to thwart spam and automatic submission or extraction of data. The user is typically challenged to solve a puzzle that relies on expected capacities of the human brains but whose resolution is complex to automate.

Users and, in particular, disabled people are known to dislike CAPTCHAs that are perceived as hindrances. However, no better solution was found so far to protect information systems against malicious automated processes.

The characteristics of a good CAPTCHA are:

- Security – The number of non-human users able to solve the puzzle and therefore wrongly identified as being human must be minimised, which implies that the puzzle should be highly complex to automate;
- User friendliness – The number of human users unable to solve the puzzle and therefore wrongly identified as being non-human must be minimised, which implies that the puzzle should be very easy to solve in a short timeframe by any human being.

Several CAPTCHA solutions exist on the market, either provided as components or as services. Unfortunately, they all have one or more of the following shortcomings:
- They provide an insufficient level of security with a high rate of false positives;
- They provide an insufficient level of user friendliness with a high rate of false negatives;
- They are not or insufficiently maintained;
- They do not support internationalisation or multilingualism and, in particular, they do not support all official languages of the European Union;
- They do not support users with disabilities;
- They do not have a licensing model that is compatible with EUPL and, in particular, they cannot be distributed as part of systems provided by public administrations;
- They raise ethical concerns because they collect private data or provide puzzles whose resolution creates commercial value.

The first objective of the action is to provide an open source CAPTCHA that is:
1. available as a component and operable as a service;
2. secure;
3. user friendly;
4. multilingual with support for all official languages from the European Union;
5. accessible by users with disabilities;
6. compliant with data protection rules and best practices;
7. maintained with continuous support for subsequent versions of the Java Virtual Machine.

The CAPTCHA could be based on existing open source initiatives that do not fulfil all requirements. It could either extend them or fork a new solution. The delivered solution will be published on JoinUp so that it can be reviewed and maintained by the open source community.

The objective of the 2nd phase of this action is to further extend the CAPTCHA with features improving the user experience by replacing scrambled letters and numbers with more innovative and less intrusive approaches (e.g. gesture analysis, animations, images, etc.).

8.15.4 SCOPE

The CAPTCHA will be based on distorted letters and numbers displayed in an image and spelled in audio files in all supported languages. It will be usable as a component through an API in a JEE application. It will be operable as a service in a JEE application server and will expose a protocol that can be invoked from any programming language.

It is acknowledged that a CAPTCHA based on distorted letters and numbers is sub-optimal in terms of user friendliness. However, it is relatively simple to implement and it allows quickly delivering a working solution. A study will be delivered to explore alternatives.

The extension of the existing solution will be based on the results from the study included in the 1st phase of the ISA action. Aside the extension, the new version of the CAPTCHA, as the 1st version, will be usable as a component through an API in a JEE application. It may be operable as a service in a JEE application server and will expose a protocol that can be invoked from any programming language.

8.15.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[138].

8.15.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

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[138] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	A CAPTCHA is an essential component of information systems dealing specifically with human users, such as citizens. Having an open source secure and user friendly CAPTCHA prevents from having to acquire or implement a specific one in several information systems. It allows offering a consistent user experience throughout public services in Europe for a step in administrative processes that is perceived as complicated by many users.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	The delivered CAPTCHA would solve a common problem in a consistent and cost effective way.

8.15.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Having to distinguish human from non-human users is a common problem that is not related to any particular sector.

Question	Answer
For proposals completely or largely already in operational phase, indicate whether and how they have been utilised in two (2) or more EU policy sectors.	

8.15.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
Will the proposal, once completed, be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	Having to distinguish human from non-human users is a common problem that is not related to any particular EU Member State.
For proposals completely or largely already in operational phase, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.	

8.15.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in	A CAPTCHA is a component that is consistently and repeatedly required.

Question	Answer
EU legislation?	As long as a common open source CAPTCHA is not available, suboptimal existing solutions will have to be used and paid for.
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	ISA allows constraining the implemented CAPTCHA to run on any platform instead of focusing on a specific one.

8.15.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	EU CAPTCHA
Description	A CAPTCHA is a technical component that is used whenever a user submits data to an information system if there is a need to assert that the user is human. It is commonly used in registration workflows, particularly when creating accounts for personalisation or security. EU CAPTCHA will be reused in EU Login - the authentication service for information systems of European institutions and bodies - and in ECI/OCS - a system funded by ISA that allows citizens to support initiatives as per Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative (ECI Regulation).
Reference	
Target release date / Status	Q4/2019
Critical part of target user	EU CAPTCHA will be delivered as open source and

base	usable by any information system. In particular, it will be available to public administrations (Member States and European institutions and bodies), non-governmental organisations, etc.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.15.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	This is not applicable. A CAPTCHA is a standalone technical component that does not implement any business. However, from a technical perspective, the CAPTCHA could be based on existing open source initiatives that do not fulfil all requirements. It could either extend them or fork a new solution. The delivered CAPTCHA will be published on JoinUp with its source code and documentation freely available.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

8.15.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	A CAPTCHA is a building block used in many information systems. Having to implement or acquire a CAPTCHA represents a cost and a technical challenge that can become a barrier for digitalisation. In addition, a common CAPTCHA helps homogenising the user experience and therefore removes technical barriers for non-digital natives. The CAPTCHA aims at being secure and will not store personal data. It therefore contributes to Pillar 2 (reinforcing trust and security in digital services and in the handling of personal data). The CAPTCHA will provide support for users with disabilities and therefore contributes to Pillar 3 (support an inclusive digital society).

8.15.6 PROBLEM STATEMENT

The problem of	discriminating non-human users from human users
affects	many information systems provided by public administrations in Europe
the impact of which is	the multiplication of ad-hoc costly or suboptimal local solutions
a successful solution would be	to share a common CAPTCHA implementation.

8.15.7 IMPACT OF THE ACTION

8.15.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Cost savings	The cost of implementing or acquiring a CAPTCHA will be eliminated.	2019	Member States European Bodies Private Sector Everyone
(+) Security	Implementing a secure CAPTCHA is technically challenging. Mutualising the effort will yield better results than multiplying ad-hoc custom solutions.	2019	Member States European Bodies Private Sector Everyone
(+) User experience	CAPTCHAs are disliked by many users who find them complicated. With a unified experience, users will only have to learn once how to use it. In addition, the CAPTCHA will be provided in all official languages of the European Union and users with disabilities will be supported.	2019	Users

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Remove Digital Barriers	Implementing or acquiring a CAPTCHA incurs a costs and technical difficulties. Removing these barriers will promote digitalisation.	2019	Member States European Bodies Private Sector Everyone
(+) Market	CAPTCHA providers might not appreciate competition with an open source product provided by the European Union but it would stimulate them to propose better offerings.	2019	Everyone

8.15.7.2 User-centricity

The implemented CAPTCHA will aim at providing a unified user experience in all languages supported by the European Union. It will support users with disabilities. The intent is to minimise the number of human users failing to solve the puzzle and therefore wrongly identified as non-humans. This allows information systems to trust that users are human and users to trust that information systems are properly protected against hacking attempts.

8.15.8 EXPECTED MAJOR OUTPUTS

Output name	Impact on the market
Description	A maintained, secure, user friendly and multilingual open source CAPTCHA would likely impact the market. Existing CAPTCHA providers will have to improve their offering.
Reference	
Target release date / Status	

Output name	Improved support for user with disabilities and for multiligualism
Description	The existence of EU CAPTCHA will guarantee that a solution supporting users with disabilities and supporting all languages from the European Union exists on the market.
Reference	
Target release date / Status	

8.15.9 ORGANISATIONAL APPROACH

8.15.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Bodies	CII	Provide requirements
Member States	ISA[2] Coordination Group	Provide requirements

8.15.9.2 Identified user groups

The CAPTCHA would be delivered as an open source component and will be operable as a service. Any party implementing an information system that needs to discriminate humans from non-humans is a potential user: European institutions and bodies, Member States, private companies, open source community, etc.

8.15.9.3 Communication and dissemination plan

Dissemination will happen via Joinup and via CAPTCHA itself that will advertise its own existence and provide a link to Joinup where it will be available for download.

8.15.9.4 Key Performance indicators

KPI are hard to obtain for an open source component that is freely available. A single download by an entity that operates the CAPTCHA as a service for a big user population would demonstrate more success than several downloads for having a look at the code. It will

unfortunately not be possible to count the number of information systems using the implemented CAPTCHA.

Description of the KPI	Target to achieve	Expected time for target
Number of downloads of the package	50	2020

8.15.9.5 Governance approach

The action is mostly technical as it consists in implementing a CAPTCHA that fulfils the following requirements:

- It can be used as a component or operated as a service;
- It is secure;
- It is user friendly;
- It supports all official languages from the European Union;
- It supports users with disabilities;
- It does not collect private data.

Additional requirements will be collected via the CII and the ISA[2] Coordination Group. The technical project will be managed by DIGIT.D.3.

8.15.10 TECHNICAL APPROACH AND CURRENT STATUS

The CAPTCHA will be implemented in Java and will be usable as a component via an API or operable as a service and accessible via a protocol. Recent versions of most JEE application servers will be supported, such as Tomcat, Weblogic, JBoss and Websphere. Most recent browsers, such as Internet Explorer, Edge, Firefox, Chrome and Safari will be supported on the client side.

8.15.11 COSTS AND MILESTONES

8.15.11.1   Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Identify the improvement to be implemented amongst those proposed in the study resulting from the 1st phase	10	ISA	Q2/2019	Q2/2019
Execution	Implemented CAPTCHA	150	ISA	Q3/2019	Q4/2019
	Total	160	ISA	Q2/2019	Q4/2019

8.15.11.2   Breakdown of ISA[2] funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016			
2017			
2018	All	210	
2019	All	160	
2020			

8.16 GOVSEC - SECURE GOVERNANCE (2018.09)

### 8.16.1 IDENTIFICATION OF THE ACTION
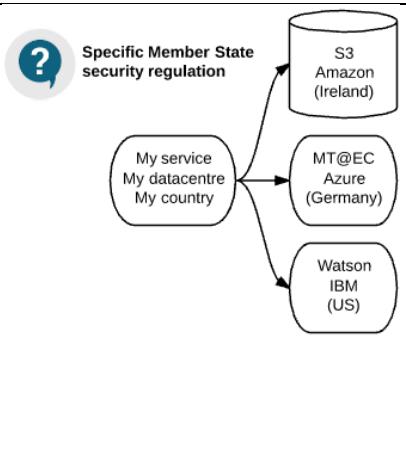
Service in charge	DIGIT
Associated Services	EU Institutions, Member States

8.16.2 EXECUTIVE SUMMARY

With the emergence of the micro-services paradigms and Cloud technologies, information system is becoming more and more independent bricks put together to deliver high value services, geographically dispatched, and implemented by various service providers at all levels.

Moreover, the security regulations which apply to these various systems are not harmonised, policies vary from organisations to organisation, even within a member state. So, a key disabler for inter-operable services mays in the difficulty to answer a simple question: "**Is it safe to use this service?**"

Imagine a service is using Amazon S3, Watson from IBM for sentiment analysis, and the translation system provided by Commission; hosted in Azure. The service itself has to prove compliance in terms of security of all the technical components, against a specific Member State security regulation. In this context it becomes very difficult for business stakeholder in a member state to manage the risk related to all the individual bricks which compose a service and prove compliance afterwards.

The solution today is writing specific security compliance document, expensive to write, not reusable, and impossible to maintain. The technical security controls are usually not aligned towards these documentations.
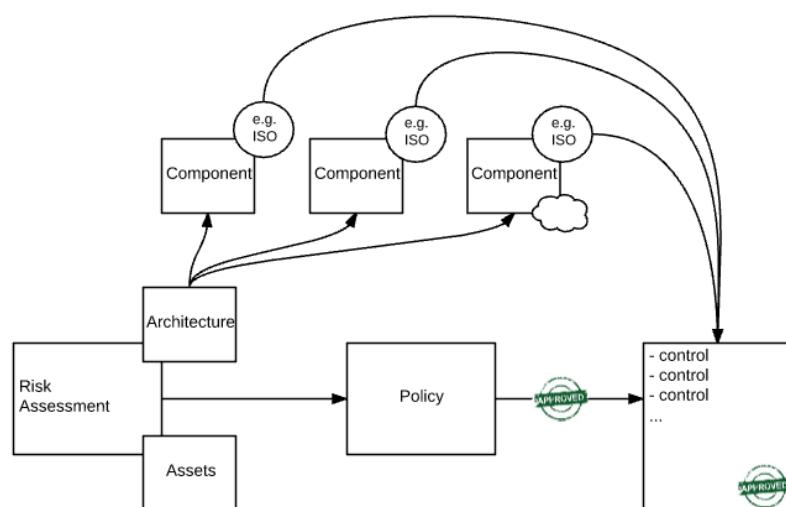
To circumvent this problem, we propose in the present action to develop a **methodology**, **sustained by the appropriate IT tooling**, which will:

- Guide business stakeholders in assessing the risk in relation to their service
- Implement the governance policy of an organisation, such as a Member State, to ensure that the service

- Provide a check-list of controls and measure to be taken by the technical services to ensure that the proper security level is implemented
- Using the same check-list, help auditors to ensure that the controls are properly implemented.

The idea of the methodology is simple:
- A stage where the risk in relation to the service is analysed, to help the business stakeholder
- A stage where the risk analysis is proven against the policy of the organisation against the criteria decided by the organisation (political criticality, data sensitiveness…)
- A stage where the service is described in terms of technical bricks which are them-self interoperable components or building blocks (i.e. databases, storage…); each building block describes how they implement security against commonly admitted frameworks such as the one provider by ENISA or ISO.

If the approach is successful, it can open the door to a common repository of component usable by the public sector which would adhere to it and would allow aligning security policies. It would also allow sharing definition of common components such as the one of Public Cloud providers and could be used in the scope of public Call for tenders.

The action is not overlapping other initiatives of Commission and specifically DG CONNECT in terms of certifications and code of conducts; but is complementary to them. The security assurance for the customer is coming from one hand from the fact that the Cloud provider covers most of controls (usually at infrastructure level), in a secure way, validated by certification and code of conduct. However crucial, this does not cover the controls that the customer still has to implement, with the pitfall that the border between customer and

providers vary depending on the provider. The methodology allows precisely defining the border and giving assurance that either the Cloud provider or the customer covers all the controls, at a low operational level. In order to achieve this objective, the methodology will use a state of the art family of controls compatible with the standard ISO/IEC 27001, such as the ENISA Cloud Certification Schemes Metaframework[139], which is compliant with COMMISSION IMPLEMENTING REGULATION (EU) 2015/1501 of 8 September 2015 on the interoperability framework and will ensure easier portability with the member state.

A key aspect of the action is dissemination and engagement of Member States towards this methodology. The methodology had already been identified as beneficial by EU Institutions (EU Agencies, Commission) which will by default part of first pilots, but engagement of Member States and the opportunity to align Member States around security requirements, without forcing them will already be a real achievement.

As of July 2018, the project delivered the Risk management methodology and is developing the Risk Assessment module of the information system which is going to sustain this methodology. The methodology proposes a catalogue of several dozens of high-level building blocks (e.g. IT services) and around 10 building blocks modelling actual Cloud services from the market have been added to the catalogue of the service. The methodology and the system have already been introduced to a various list of stakeholders in the EU Institutions and few member states. The first active phase of dissemination is planned for Q4 2018.

As of July 2019, the system is used in pilot by the Commission not only for Cloud but also for traditional IT infrastructure services, is requested by other EU Institutions and a new important need in relation with management of Personal Data Protection Risk Assessment have been raised in the context of GDPR and Regulation (EU) 2018/1725. These change of scope and interest lead to consider accelerating the delivery of GovSec not only as an open platform, but also as an open community to which all interested parties could contribute, and reinforce the service offer during the timeframe of the project. Another aspect is the reinforcement of the reporting capability since GovSec appeared in the piloting phase as a perfect spot to build the IT Security profile of an organisation (i.e. centralise precise information regarding security practices among an organisation.

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[139] Commission is already using these frameworks as reference framework for security certification.

8.16.3 OBJECTIVES

By providing public services with a holistic but customisable approach to manage the question of compliance of interoperable components in terms of security by putting risk assessment process and business impact analysis process as one of the corner stone within decision process of each public service and develop common semantics around them, the present action aims at facilitating the dissemination of these components and breaks the regulatory barriers between member states, while respecting their specificities and therefore support interaction between European public administrations and/or between Administrations Citizens and Businesses. European public services using this framework will be able to exchange security definition of their respective components to prove their compliance towards their respective regulations. This is a key enabler to develop, maintain, facilitate and even share registries of inter-operable solutions. A new objective is to build an active community around the GovSec to as for 2020 so all interested parties could participate to its evolution: an open platform sustained already in 2020 by an open community.

The work needs to continue to support cross-border digital transformation and the move towards building a common European approach to safe cloud adoption. The Digital Europe Programme (DEP) would be the natural choice to continue the successful activities, specifically after European commission adopted new European Commission Cloud Strategy in May 2019[140], positioning cloud as key enabler for the European Commission Digital Strategy.

At the same time, this action enables several opportunities for generating even better alignments between governmental institutions on safe cloud adoption, within priorities of new European commission to establish fully operational Digital Single Market.

As of end of 2019, we will establish closer collaboration with the new action called the Interoperability Academy which is producing will produce a catalogue of all educational resources and later an eLearning platform. This is ideal opportunity to share the material and training we are developing for EU commission staff. This way, GovSec system will also be supported through knowledge sharing platform, which is today enabled via EU Learn platform.

Our planning is also to ensure smooth transition of GovSec to the phase coming after the end of ISA2 programme.

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[140] The European Commission adopts a new Cloud Strategy, 28th of May, 2019

8.16.4 SCOPE

Large organisations, like banks, hospitals, or public sector organisation, have mature IT security governance processes aligned with the ISO27K1 standard, which require due-diligence and detailed IT security risk management, for each component in the IT infrastructure as well as the IT infrastructure as a whole.

In the past a lot of the IT components were custom-built for that organisation, but increasingly an organisation's IT is composed of standard COTS products, services, micro-services and standard components, which are then integrated and interconnected.

This means that many organisations are, independently, doing the same IT security risk assessment for the same standard COTS ICT products and components. This is inefficient and time-consuming. Sharing and re-using each other's past risk management work would save a lot of time and money. And it would allow organisations to focus on the aspects that differentiate their organisation from others. This is especially important considering the threat landscape and the shortage of IT security experts. GovSec will deliver to organisations strong reporting abilities optimising the risk management governance within the organisation, and even proposing risk management blueprints for specific types of information systems.

This action aims to develop an open platform for organisations and experts, in the public and private sector, to share and exchange IT risk management work they have done in the past about specific ICT products and/or components, using a common structure and format. The platform becomes not only an information source for risk management professionals, but it directly helps participants by allowing them to re-use each other's work. The platform will support the practice of sharing risk assessment and secure architecture between organisations. It will allow the establishment of a shared database of cloud services of the main cloud provider (i.e. Amazon, Microsoft, OVH, Google, IBM…) that public sector users of cloud services have to perform usually in a repeated a similar way [the establishment of such a database is not part of the present project, but is enabled by it].

The action will deliver a documented methodology and sustaining IT platform and the supporting actions (like training material, common repositories for key stakeholders), which will be both made available on open-source platform repositories (such as Join-up or similar). From 2019, the GovSec project raised sufficient interest to justify the creation of an Open Community, which can already drive the development of an Open version and an Open community of the system within the Institutions. Therefore, the objective will not only be to

deliver an open platform, but to animate an Open community around the platform itself. The IT platform will allow the Public administration to customise the various components to their needs. Part of the scope of the action is the engagement of Public administrations towards the methodology and tooling, which should be adapted depending on the feedback of the various interested stakeholders. During the period of the action we will provide support to the Public services deploying the methodology and tooling. It is in scope that Public services using the framework will be able to share components managed by the framework: the framework is itself inter-operable. The tool will also support security auditors: security auditors will be able to perform audits based on the output of the system, closing the security loop from risk assessment to audited implementation.

Additional, we are adding to the tool maturity assessment capabilities, to be able to follow security life cycle being able to monitor performance of a security controls. We will also integrate EDPS cloud computing guidelines, which are aiming at the DPOs, IT and IT security staff and other administrative services of EU institutions involved in designing, planning and procuring cloud computing services, so other organisations interested in data protection and cloud computing might find them useful, too.

We will do this, following EDPS guidelines on the use of cloud computing services, published in 2018[141].

We will also complement the Security Risk Assessment module with a Personal Data Protection Impact and Risk Assessment module that will allow users of the system to perform Personal Data Protection IT Security Risk Assessment at the same time they deliver IT Security Risk Assessment. This module will not only users of the system to be more efficient, but that will also help them users to share assessment performed on similar systems. This practice has proven itself very effective in the scope of assessments of services widely used such as Microsoft products, and may support common EU approaches towards the cloud market.

8.16.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA[2] decision[142].

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[141] Guidelines on the use of cloud computing services by the European institutions and bodies, EDPS, 16th of March 2018

[142] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

8.16.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The adoption of Cloud services and distributed systems systematically raise the question of how secured are these services in terms of IT security and data protection within EU public administration, using any kind of public cloud provider. It is <u>urgent</u> that public services get support to ensure compliance of their services towards one-another, but also that provider and user will be able to use same semantics. The current proposal contributes to help public administration to have a common ground in an open and transparent way, to easily solve this question, at low cost. It is fully horizontal, potentially reusable all among EU, and will help feed catalogues of interoperable solution. It will reuse with benefits all the frameworks defined by ENISA in terms of security. *(introduced in 2019)* As a return of experience, GovSec will include the capacity to perform Risk Management Intelligence, i.e. develop the capability to integrate return of experience of European CERT entities

Question	Answer
	in terms of security incidents in the catalogue of threats, in an automated and inter-operable way (i.e. though APIs). Another return of experience is the fact that Risk Assessment are widely reusable between organisations since all organisations use the same type of IT services. GovSec allows by nature such reusability.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	No similar approach identified; usually implemented by ad-hoc expensive consulting.

8.16.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	By nature, the action is being purely horizontal, the action is an enabler for any EU policy sector which involves inter-operability. Specifically the action is an enabler in the field of adoption of Cloud technologies, which multiplies the number of building blocks involved in an inter-operable service. *(introduced in 2019)* Following return of experience In 2018, the project raise enough interest to justify the creation of an Open

Question	Answer
	Community within the Institutions (more than a dozen of agencies interested) to guide the development of the Open platform. This collaboration is the assurance of sharing best practices in terms of security and risk assessment in the Cloud. Following EDPS cloud computing guidelines on the use of cloud computing services, published in 2018, specific data-protections catalogue will be integrated in risk assessment module.
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Not applicable

8.16.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	By nature, the action being purely horizontal represents an enabler for any Member State wishing to use it. Provided Member States adopt the framework described in the action they will be able to share definition of components in terms of security. EU institutions are already interested in the methodology which represents a first

Question	Answer
	set of users of the framework.
	(introduced in 2019) Following the interest of member states such as Romania, Germany, France, Belgium, Norway, it is justify launching an Open Community around the project to share best practices in terms of security and risk assessment. Sharing a common methodology and catalogues, the system can enable sharing of information between all users of the system.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Not applicable.

8.16.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Compared to the private sector, or other Public Services in the world, Europe has difficulties to embrace Cloud services, which are an inevitable enabler for inter-operable solutions. The cause mainly lies in the security aspect, since Cloud is outsourcing, performed at a massive level.

Question	Answer
	Therefore it becomes urgent to provide a solution to this problem, while not making compromise in security. The present action is a solution to that problem. EU has adopted cloud strategy already 2012, but currently on the market US providers prevail, therefore we believe EU governmental cloud adoption could be wider, if supported through common approach by EU institutions. *(introduced in 2019)* Return of experience in 2018 shows that the risk perception of using Cloud services is generally linked to the perception of risk management. Potential customers asked for the product even before it was actually ready, which justify to speed-up the development and integration within member states cloud deployment within public bodies.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	By nature ISA² focuses on inter-operable solutions for Public administration, which is precisely the scope of the proposed action.

8.16.5.5 Reusability of action's outputs

The re-usability of the action measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	GOVSEC (Governance for Security)
Description	The proposal delivers a methodology (Business Impact Assessment, Risk management, Policy and Implementation…) and an IT supporting tool for the methodology on Information system security. It targets specifically security in the Cloud.
Reference	Return of experience of European Commission in the field of IT security, ENISA research on Cloud Security, CONNECT funded project: CloudForEurope, CloudWatch
Target release date / Status	First version and initial dissemination – 2018 Final version and end of dissemination - 2019 Documented methodology and framework – 2020
Critical part of target user base	Core users - EU Institutions and agencies Dissemination – All EU member states
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not applicable

8.16.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability	The action will use Join-up for dissemination. The action, since it aims at providing an inter-operable

	open-source platform, will use of support the inter-operable components necessary for its architecture such as identity and exchange of data. (proposed addition from 2019) The Joinup platform will not only be used for publication of the platform but also for animation of the user community of the risk assessment methodology (ITSRM²), but also of the system.
solution(s)? Which ones?	
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Not applicable

8.16.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	We are following the DSM on the intersection of two main areas (2) to protect Europe's assets by tackling **cybersecurity challenges**, and (3) to promote the **online platforms (such as joinup)** as responsible players of a fair internet ecosystem and help building common cyber-secure infrastructure across all parts of the EU so that EU governments can use same approaches in respect to IT security topics. ICTs are already widely used by government bodies, as it happens in enterprises, but eGovernment involves much more than just the tools. It also involves

Question	Answer
	rethinking organisations and processes, and changing behaviour so that public services are delivered more efficiently to people. Also, when implemented well, eGovernment enables citizens, enterprises and organisations to carry out their business with government more easily, more quickly and at lower cost.
	How do we plan to contribute: By developing common semantics on security risk assessment by public authorities EU wide, our project will enable European usage of public clouds in more transparent way-from technical perspective open source approach will be taken and from the content perspective common semantics will be developed on security risks introduces in public authorities by using public cloud services

8.16.6 PROBLEM STATEMENT

Current state-of the-art on this field is that there exist research of this field, done by some EU funded projects (CloudWatch[143], CloudForEurope[144]), but there is no common infrastructure in place, which would enable interoperability between EU institutions and member countries,

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[143] http://www.cloudwatchhub.eu/sites/default/files/D3.2_Risk-Based-Decision-Making-Mechanisms-For-Cloud-Service-In-The-Public-Sector.pdf

[144]

http://www.cloudforeurope.eu/documents/10179/51418/Public+administration+requirements+and+vendor+offering/045deb19-744f-4ff4-9c4d-a2e4fa1f0e29?version=1.0

with common semantics in place for security risk analysis of public cloud offering for public authorities.

The problem of	Proving security compliance of an inter-operable service
affects	The adoption of inter-operable services
the impact of which is	Not using inter-operable service for security reason
a successful solution would be	Proving a service is compliant with a specific Member State security policy

The problem of	Adopting Cloud based services for security reasons
affects	The efficiency and costs of inter-operable services
the impact of which is	Poor adaption of inter-operable service for technical or cost reasons
a successful solution would be	Ensure compliance of these Cloud services towards a specific Member State security policy

The problem of	Cost of compliancy security analysis, which has to be made for each individual service
affects	The capacity of public services to produce new services, for budget reasons
the impact of which is	Abandoning deployment of services, for budget reasons
a successful solution would be	Minimizing the cost of security compliance analysis (one benefit of the action)

The problem of	Having a global view of security measures in a large organisation
affects	The coherence of the security measures and prevent rationalising costs of the measures
the impact of which is	Running unsecured services, without even knowing it, at high cost
a successful solution would be	To have a global view on the IT Security landscape and maturity

The problem of	Coherence between a personal data protection impact and risk assessment and a security risk assessment
affects	Efficiency and security of the services running these assessments
the impact of which is	Run several assessment incoherent exercises, at high costs, driving to incoherent security measures
a successful solution would be	Performing personal data and security risk assessment with the same methodology and tools

The problem of	Services evolve on a constant basis
affects	The security of the whole chain, in case a change impact a security element
the impact of which is	Running unsecured services, without even knowing it
a successful solution would be	Being able to react to a change

8.16.7 IMPACT OF THE ACTION

8.16.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Yes, no need for expensive security compliance analysis (~100K€/service)	End of 2018 2019	EU Institutions Other adopters
(+) Savings in time	Yes, no need for expensive security compliance analysis (~100K€/service)	End of 2018 2019	EU Institutions Other adopters
(+) Better interoperability and quality of digital public service	Yes, by ensuring usage of Cloud technologies is safe	End of 2018 2019	EU Institutions Other adopters
(-) Integration or usage cost	No, very small system to operate		
(+) Security	Yes, ensure security at a very low level (up to security controls implementation)	End of 2018 2019	EU Institutions Other adopters
(+) End-user adoption	Yes, security drives to confidence of end users	2020	EU citizens

8.16.7.2 User-centricity

An important part of the action is called Dissemination: it consists in disseminating the principle of the present Framework to its actual users:

- The first set of users are the EU Institutions which already raise interest in the approach; this group of interest will be engaged through the various channel already available but they are a de-facto participant of the action.
- The second action will consist in disseminating the concept to other Public Services in Europe using regular dissemination channel for reusable components. The dissemination will be performed to the authorities responsible for security compliance

among the Member States; the Commission and DG CONNECT and ENISA will help on that matter.

- If the interest is rising among the mentioned authorities, they will be able to be engaged from 2019: they will be able to use the framework, and a specific structure to take their feedback into account will be put in place. This structure, depending on the involvement of the pilots, can go from the active integration of requirements to the development of an open-source community.

First consequence in 2019 of user centricity approach are:

- The request to integrate Personal Data Impact and Risk Assessment in GovSec to cover these aspects at the same time as IT Security Risk Assessment.

- The request of users to contribute already to the system itself (as an open community from the EU Agencies ICT Advisory Committee (ICTAC) meeting in oct. 2018), that we cannot satisfy before end of 2020 if we follow the initial planning.

8.16.8 EXPECTED MAJOR OUTPUTS

Output name	Methodology for Security Governance
Description	Documented generic methodology to ensure compliance of an inter-operable service using other inter-operable components such as Cloud services
Reference	Return of experience of European Commission in the field of IT security, ENISA research on Cloud Security, CONNECT funded project: CloudForEurope, CloudWatch
Target release date / Status	End 2018

Output name	Impact assessment of the methodology in MS
Description	As a result of dissemination activities among the member states, a report of the potential impact of the methodology among the Member states
Reference	Usage of an Open Source model ensures reusability of the methodology and tooling and is part of the dissemination strategy. The security controls used in the last module are by nature reusable by all users of the methodology (e.g. a description of Amazon S3 could be reused by all member states).
Target release date / Status	End 2019

Output name	Platform for Security Governance
Description	An open-source platform available on join-up, which can be deployed, installed and customised to its business need by a Public Service, sustaining the flow of the methodology
Reference	Return of experience of European Commission in the field of IT security governance
Target release date / Status	2020

(Introduced in 2018)

Output name	Personal Data Impact Assessment
Description	Ability to perform Personal Data Impact Assessment and Personal Data Security Assessment: GovSec allows defining specific measures in relation to Personal Data management, sustained by a standard Risk Management methodology driving adoption of regulations on Personal Data Management.
Reference	Return of experience of European Commission in the field of Personal Data Protection.
Target release date / Status	2019

Output name	Security Auditability & Maturity Capabilities
Description	Ability to perform security audits consistent with Risk Assessments and security measures available in an organisation; GovSec allows defining measures, but auditors will also be able to track the implementation of the measures from within the same system. Ability to follow security life cycle being able to monitor performance of a security controls and their maturity.
Reference	Return of experience of European Commission in the field of IT security.
Target release date / Status	2020

8.16.9 ORGANISATIONAL APPROACH

8.16.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Commission	- DIGIT	- Provider
EU Institutions	- Staff in charge of security and	- Pilots

	compliance - EU Cloud Virtual Task Force (Working Group for security), which comprises all the Institutions and agencies (Council, Parliament…); 3 to 5 Institutions as pilots	- Pilots, Contributions
Member States	- Staff in charge of security and compliance (between 5 to 7 Member States)	Dissemination, Pilots if interested

8.16.9.2 Identified user groups

It is reminded that the action aims at:

1. Providing a supporting tool for the security policies defined by a certain organisation (e.g. Member State)
2. Helping entity which plan to develop an information system to understand the security aspects of the services he plans (e.g. business stakeholders)
3. Producing for technical services the list of controls (in a form of a check-list) that he has to implement to ensure the proper level of security, and therefore:
4. Be able to give evidence that the service he run is compliant with the security requirements established by (1) (e.g. answering to auditors)

Therefore, the main group of end-users of your solutions are:

- Staff in charge of the security policies and compliance: they get support through a platform which allow them to implement their policies and expose it to the business stakeholders
- Business stakeholder of a system: they are helped to be explained which security rules have to be put in place, which hosting solution is valid, etc.…
- IT Technicians: they are provided with a checklist of security controls to implement
- Security auditors: they have a checklist to which they can refer in case of audits

8.16.9.3 Communication and dissemination plan

The dissemination is a formal work package of the action; the draft action plan is:
An important part of the action is called Dissemination: it consists in disseminating the principle of the present Framework to its actual users:

- The first set of users are the EU Institutions which already raise interest in the approach; this group of interest will be engaged through the various channel already available, but they are a de-facto participant of the action.
- The second action will consist in disseminating the concept to other Public Services in Europe using regular dissemination channel for reusable components. The dissemination will be performed to the authorities responsible for security compliance among the Member States; the Commission and DG CONNECT and ENISA will help on that matter.
- If the interest is rising among the mentioned authorities, they will be able to be engaged from 2019: they will be able to use the framework, and a specific structure to take their feedback into account will be put in place. This structure, depending on the involvement of the pilots, can go from the active integration of requirements to the development of an open-source community.

8.16.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[145] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of organisations using the framework	4 Institutions	End 2018
	10 Institutions	End 2019
Number of building block described and reusable	20 building blocks	End 2018
	50 building blocks	End 2019
Number of organisations participating to dissemination	20 public services	End 2018
		2019
Number of PDA[146] performed	10 assessments	End 2020
Draft Security profile of an organisation	1 organisation (Commission)	End 2020

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[145] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

[146] DPIA: Personal Data Assessment, composed of Personal Data Impact Assessment and the corresponding IT Security Assessment

8.16.9.5 Governance approach

The action will be organised as follows:

- The supplier team: document the methodology, develop the platform and organise dissemination activities. The supplier team will work in agile mode using the SCRUM methodology. It is reminded that this methodology divides the time in fixed period of activities called sprint (few weeks). Deliverables are defined at the beginning of the sprint, and delivered at the end of the sprint.
- The project will be steered by a Project Management Board, which will be involved in:
    - Definition of the content of a sprint
    - Debriefed systematically at the end of the sprint; opportunity will be taken at the end of each sprint to list risks and issues related to the project
    - At any moment the Project Management Board will have access to the progresses of the project, through a public SCRUM board which shows the progress in real time
- End-users of the platform will be involved though a collaborative platform, where they will be able to exchange with the Provider and the PMB. Escalation of end-users will be organised through this channel.
- The governance will be shared between several entities, leader each in their domain of competences:
    - Risk Assessment and Personal Data topics will be led by the Commission Directorate for IT specialised in Security (i.e. DIGIT.S)
    - The Governance module will be led by the IT department of European Centre for Disease Prevention and Control (ECDC))
    - The Module in charge of management of technical security controls will be led by the Commission Directorate for IT specialised in Infrastructure and in charge of cloud procurement (i.e. DIGIT.C)
- The open community, once launched will be hosted by the Commission (DG DIGIT) which will organise the change management.

8.16.10 TECHNICAL APPROACH AND CURRENT STATUS

The action relies on the development of an information system (IS). Today a very early version approach and methodology is being prototyping using office automation tools, proven promising but not enough in terms of efficiency.

Technically speaking the IS architecture is defined: it is will use a graph database in order to support easily the management of catalogues, and a technology which will make easy the deployment in controlled environment such as an Institutional datacentre but also Cloud environment in order to facilitate the creation of sandboxes or playground, and therefore ease the dissemination. The initial technology chosen of a state-of-the-art Web-based technology (i.e. Serverless development, one-page application, strict separation between presentation and backend layers to ease integration with 3rd party tools).

As the project goes, in 2019, the lesson learnt is that the option of choosing hybrid technologies facilitating deployment in traditional datacenters within cloud is sub-optimal and the technical team has chosen to run cloud native technologies for efficiency and cost reasons. Today operational costs of the service are today around 75K€ per year (service included for an instance of the system), which team trust to be able to cut by 50% at least. Today all the development chain follows DEVSECOPS[147] principles, its deployment is following Infrastructure as Code[148] principle, on an infrastructure highly secured in the cloud which have been assess by GovSec and ITSRM² itself.

Other requirements are already integrated: respect the principle of open source development for its publication, and easiness of deployment in constraint environments of users of the platform (e.g. Member states and Institutions); therefore, attention should be given not to give technical constraints or 3rd parties dependencies. However, the publication of the platform and call for contribution is planned at a later stage.

Al last it is also more than likely that parts of the methodology are already covered in the Member States or Institutions: this will be visible only after the phase of engagement of the other Member States or group of interest. As of today, the IS is modular to allow such integration or can obviously reuse an existing contribution if applicable.

The action is implemented according to the following staged approach (a brief status is provided in the table):

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[147] https://www.devsecops.org/

[148] The infrastructure is defined as source code, and is deployed on demand when a change needs to apply; this speedup productivity, ease deployment and improve the level of security.

Stage 1: **Drafting** <u>and</u> **Designing** *(done)*	- The methodology has been delivered (named ITSM²); various re-usable building blocks in the catalogues of the systems are already defined. - First iteration of the information for Risk assessment on-going, with first workshop planned early September 2018; the architecture allows a ubiquitous deployment in a datacentre or in a Cloud environment to ease the generation of sandboxes. - Engaging the Member States and other stakeholders, designing the future application architecture planned for Q4 2018
Stage 2: **Implementing** and **Testing** *(on-going)*	- Once the methodology is proven enough, and the candidate testers (e.g. Member States engaged), implementing the final version of the system (building blocks listed below) - Testing each building blocks as the arrive, on the basis of the priority of the stakeholder - Adaptation of the design of the exiting modules on the basis of user's feedback (Audit and Maturity modules, Personal Data Protection) - Deployment of a platform for non-executive Agencies - Launch of an Open Community around the project
Stage 3: **Packaging** and **Deploying** *(2020)*	- Adaptation of the design of the exiting modules on the basis of user's feedback (continuous work) - Packaging the IS in a form deployable by potential users, and deploy it in an open source repository; prepare the take-over by the community as a scenario of continuity of the action - Deploying the IS at customer's site where they will be operated in production

The building blocks of the IS are:

BIA (optional)	Flow managing the Business Impact Assessment of similar process
Risk Assessment	Flow managing the Risk Assessment methodology
Policy/Governance	Flow managing the Governance process, implementing the policy rules
Controls Generator	Modules generating the security controls

The data assets managed are:

BIA, Risk Assessment	Information, Questionnaires filled by stakeholders, brick's

	database
Policy/Governance	Rules of Governance, Decisions
Control Generator	Database of controls per bricks, Check-lists

As of July 2018, the project delivered the Risk management methodology, and is developing the BIA and Risk Assessment modules of the information system which are sustaining this methodology. The methodology proposes already a catalogue of several dozens of high-level building blocks (e.g. IT services) and around 10 building blocks modelling actual Cloud services from the market have been added to the catalogue of the service. The methodology and the system have already been introduced to a various list of stakeholders in the EU Institutions and few member states. The first active phase of dissemination is planned for Q4 2018.

As of August 2019, the methodology (i.e. ITSRM²) is established, widely used at European Commission and used by some agencies to share risk assessments. The methodology is being adapted to allow Personal Data Impact and Risk Assessment on actual cases, in the context of the deployment of the regulation (EU) 2018/1725, which impose similar constraints as GDPR to the EU Institutions, and therefore make it a relevant tool to work on GDPR as well.

The Business Impact Assessment and Risk Assessment module of the GovSec is developed and under piloting in the Institution, subject to pilots in the Commission and tests in other Institutions and Agencies. Management of a shared platform for all the non-executive agencies is being discussed now (Aug. 2019). This platform will give access to GovSec capabilities to 60 agencies.

The Risk Assessment module, and its first pilots, has raised so much interest that it is integrally part of the European Commission IT Cloud Strategy[149] published in May 2019, section 5.2. Moreover, the approach proposed for cloud in GovSec has also been proven valid for traditional datacenter services: all Commission datacentre services are today been assessment using the GovSec tool and the ITSRM² methodology, which allowed to very quickly (couple of month) to assess risks of a majority of Commission IT Infrastructure services, at low costs. This exercise proves the validity of the concepts exposed, but have significantly increase the criticality of this information system, and justified supplementary investment on the project from the Commission.

This success also create a feeling of urgency and frustration for organisation outside Commission to participate to the project: they claim for participation and would welcome to contribute to it. This drives to the idea that the publishing of an open platform at the end of

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[149] https://ec.europa.eu/info/sites/info/files/ec_cloud_strategy.pdf

the project is not sufficient, but that a community of users could be established and advertised already in the scope of the ISA² action.

The Governance module has been designed but its development has not started. The Control management module is been designed as return of experience of the future users of the system: its implementation is tightly linked to the establishment of the security controls coming from the Risk Assessment module, so its development have been postponed to avoid design flaws.

8.16.11 COSTS AND MILESTONES

8.16.11.1 Breakdown of anticipated costs and related milestones

Only activities directly in relation with Member States are requested for funding by ISA (e.g. dissemination, publication of the methodology, and customisation capabilities of the information system); specific tasks that would be in the interest of the EU Institutions are funded directly by DIGIT.

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Drafting	200 k€	0 k€	Q1/2018	Q3/2018
Initiation	Initial Dissemination	50 k€	50 k€	Q1/2018	Q2/2018
Planning	Designing	150 k€	100 k€	Q3/2018	Q3/2018
Planning	Designing #2[150]	80 k€	0 k€	Q4/2019	Q2/2020
Execution	Implementing	920 k€	300 k€	Q4/2018	Q3/2020
Execution	Dissemination	50 k€	50 k€	Q4/2018	Q2/2019
Execution	Pilot Testing (EUIs)	50 k€	0 k€	Q2/2018	Q3/2020
Execution	Pilot Testing (others)	150 k€	100 k€	Q3/2019	Q3/2019
Execution	Community Management	450 k€	100 k€	Q3/2019	Q4/2020
Execution	Packaging	300 k€	50 k€	Q3/2020	Q4/2020
Closing	Methodology (final)	150 k€	50 k€	Q3/2020	Q4/2020
Closing	Deploying	100 k€	50 k€	Q3/2020	Q4/2020
	Total	2.650 k€	850 k€		

The changes requested in 2019 is detailed in the next section. Considering the interest raised by the system the implementation phase will not stopped before Q3/2020 (evolution will be taken on board).

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[150] Design of *Personal Data Protection* and *Audit & Maturity* modules proposed for addition

8.16.11.2   Breakdown of ISA[2] funding per budget year

Only activities directly in relation with Member States are requested for funding by ISA (e.g. dissemination, publication of the methodology, and customisation capabilities of the information system); specific tasks that would be in the interest of the EU Institutions are funded directly by DIGIT.

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018	Drafting and Designing	400 k€ (100 k€ ISA)	100 k€ ISA
	Initial dissemination	50 k€ (50 k€ ISA)	50 k€ ISA
2019	Implementing and Testing	650 k€ (250 k€ ISA)	150 k€ ISA
	Dissemination	50 k€ (50 k€ ISA)	50 k€ ISA
	Pilot Testing	100 k€ (100 k€ ISA)	100 k€ ISA
	Community Management	)	--
2020	Implementing and Testing	150 k€ (0 k€ ISA)	
	Packaging and Deploying	400 k€ (0 k€ ISA)	
	Pilot Testing (continuation)	50 k€ (50 k€ ISA)	
	Publication (ITSRM², GovSec)	200 k€ (100 k€ ISA)	
	Community Management	300 k€ (150 k€ ISA)	

Outside ISA², DIGIT has reinforced its investment in 2019 by 150k€ in implementation and testing,   that   will   be   renewed   in   2020.

8.17 INTEROPERABILITY ACADEMY (2019.01)

8.17.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2.
Associated Services	Publications Office of the EU, DG GROW, DG CNECT, DG DEVCO

8.17.2 EXECUTIVE SUMMARY

Nowadays the majority of the jobs are or will be requiring some level of digital skills and the Digital Single Market could contribute €415 billion per year to the EU Economy[151]. To address this challenge the European Commission has brought Member States and education, employment and industry stakeholders together in a **Digital Skills and Job Coalition[152]**. The objective is to develop a large digital talent pool and ensure that individuals and the labour force in Europe are equipped with adequate digital skills.

Civil servants also need to have nowadays a basic level of ICT skills to carry their daily tasks. In addition, some of them need more advanced skills for data analytics and data mining to support policy, service delivery and impact evaluation.

A number of initiatives from the Commission are supporting it, such as the competence framework[153] applied to sectors such as customs officers and towards consumers, offering the basis for curricula to train people. Furthermore the ERASMUS+ programme provides funding for sector skills alliances[154] and the European Investment Funds supports provides support through the thematic objective 11: "Enhancing institutional capacity of public authorities and stakeholders and efficient public administration"[155].

More recently the Connect Europe Facility Telecom work programme or 2019, proposed the development of an **European Platform for Digital Skills and Jobs[156]** aiming at supporting

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[151] http://ec.europa.eu/social/BlobServlet?docId=15617&langId=en

[152] https://ec.europa.eu/digital-single-market/en/digital-skills-jobs-coalition

[153] https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/digcomp-20-digital-competence-framework-citizens-update-phase-1-conceptual-reference-model

[154] http://eacea.ec.europa.eu/erasmus-plus/actions/key-action-2-cooperation-for-innovation-and-exchange-good-practices/sector-skills-alliances_en

[155] http://ec.europa.eu/regional_policy/en/policy/themes/better-public-administration/

[156] https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2019-digital-skills-jobs

digital skills for ICT professionals. The initiative will bring around a Core Service Platform and call for grants for providing generic services.

A successful implementation of the EIF in Europe, including the reuse of solutions developed within ISA/ISA² rely on people having the rights skills and competences to understand and implement them. For this reason, education is essential, and a lot of education and workshops and user engagement activities have been produced supporting it, within individual actions or via the programme communication and as part of the ISA² legal obligation. These activities mainly took place in the form of videos, webinars, workshops, leaflets. To make all of these activities sustainable, this proposal intends to organise an educational activity with pedagogical approaches around interoperability and the ISA² programme and its possible successor. As an example, the NIFO action is developing the concept of EIF ambassadors to empower officials from the MS to raise awareness and support national and regional/ local administrations in their endeavours towards implementing and monitoring the EIF. Training modules and other supporting material are being created to that end. Also a toolbox of reusable solutions to support the implementation of the EIF. The EIF training material can be customised to reach a broader audience and to be updated in future releases.

The Interoperability Academy will start by reusing whatever material has been produced as a resource from which a training curriculum will be developed under specific training targets and educational activities.

This material will then be assessed and transposed to an eLearning platform and propose a distance educational platform, to deliver the courses online. The form of e-Learning will be blended learning as it will further include educational face-to- face activities in forms of seminars, workshops or/and 2-3 days training in the form of summer/winter schools to ensure practical learning. A certificate of attendance/or participation can be included to qualify attract more professionals.

In 2019, the action has created a first catalogue of educational resources produced by ISA/ISA² that have been properly categorised and assessed. Also a first proof of concept using an ad-hoc instance of Moodle will deploy first on-line eLearning on the EIF. The action has also started engage with stakeholders involved in educational activities targeting the public sector in order to reuse some possible material but also to use competent professionals to gather requirements. This activity takes place on Joinup. In addition, in collaboration with the Public Governance Institute of University KU Leuven, the Erasmus Mundus MsC PIONEER (Public Sector Innovation and eGovernance) a first Interoperability Academy Winter School took place on the 11-13 December 2019 in Leuven with about 150 participants.

In 2020 and 2021, the core activities will consist in the deployment of the eLearning platform and courses. The recipient platform will either be the EU Academy or the CEF DSI Digital Skills platform. In order to support the transformation of existing courses into eLearning or

creation of new ones, a support service will be set-up in order to transform existing courses into eLearning courses.

The Winter School experience will be repeated either with the same or with other partners.

The Interoperability Academy should also be used for any educational activity planned in ISA² and possible interactions with CEF Building Blocks could be envisaged.

User engagements activities will continue in order to ensure the Academy is fit to the needs of the EU public administrations but also to foster collaborative activities such as courses exchanges, translations, etc.

With the ISA² programme coming to an end, it is foreseen to continue these activities with the proposed [Digital Europe](#)[157] programme and support training activities related to the Digital Transformation Platform [158]supporting the transformation of Public Services and in collaboration with the Digital Skills CEF platform.

As of 2020 the action will also support Open PM² related activities which were initially in the Sharing & Reuse action (2016.31) and are based on the European Institutions project Management Methodology PM² and making it available to Public Administrations of Member States, Contractors, EU Citizens, etc.

However implementing a methodology requires more than making available the methodology guides, artefacts, etc. When using any project management methodology, support is needed to implement and adapt the methodology, translate it, train and certify personnel, etc.

The PM² team will focus during at least the next two years - on public authorities, especially on Member States administrations following some interest from some Member States (e.g. Italy who requested support to train 3000 public officials). Among the activities supporting Member States administrations the following activities are foreseen: translation of PM² documentation, improve the online resources available to the PM² community, improving access to the PM² certification and set up a scalable support structure for Member States adopting PM².

8.17.3 OBJECTIVES

The present action proposes to

- Increase the awareness on interoperability (EIF) and ISA² solutions focusing on educational approaches

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[157] See https://ec.europa.eu/digital-single-market/en/news/digital-europe-programme-proposed-eu92-billion-funding-2021-2027

[158] As proposed in the Draft Strategic Orientation for the first 2 years of the programme

- Bring learning opportunities to all groups since users are able to access content from anywhere and at any time thus increase users awareness .
- Support regional and local governments in the implementation of interoperability and more specifically on getting alignment with the EIF
- Develop digital skills in the area of interoperability
- Propose a comprehensive cursus and different learning paths according to the user status (include a broad range of professions and backgrounds e.g. IT background, legal, policy)
- Propose a platform to be used also as a Massive Open Online Courses (MOOC) MOOC.
- To include and LMS (learning Management System) that is SCORM- compliant or any other open standard so that users can track their courses and progress and review material upon their need (24/7).
- Present in a coherent way, the material which is already available and that will be produced.
- Ensure the transition in the Digital Europe by including the extending to CEF DSIs solutions and any other solutions that might be relevant.
- Organise regular courses online or classrooms, exchange on best practices, explore novel ways of teaching.
- Organise on a yearly basis a school (Summer or Winter School).

And specifically on Open PM²:

- **Making the methodology more accessible** by making the PM² documentation available in all EU languages, improving the online web presence for PM².

- **Improving access to quality training and certification** for people outside the EU institutions – including potentially e-learning trainings and conversion trainings (from other project management methodologies).

- **Support Member States with the adoption of PM²**. Initially we will focus on 2 Member States so we can apply the lessons-learned to other Member States in a subsequent phase. A 'train-the-trainer' programme is envisaged to assure the sustainability of the initiative.

8.17.4 SCOPE

This proposal intends to develop eLearning resources around Interoperability and more specifically the EIF as well as training on any action/solutions proposed by the ISA² programme and CEF.

The project will provide:

- A catalogue of educational resources
- E-learning courses with a variety of techniques, including audio and video recordings, presentations, videos, documents, webinars, quizzes, surveys, games, discussion groups etc.), like the one produced by NIFO for the monitoring and implementation of the EIF
- A Learning Management System platform based on Open Source and based on open standards.
- Organisation of schools, seminars, training sessions.
- A certificate of attendance to the successful participants.

Basic computer literacy training is out of scope of this action.
The project does not intend either to institute an actual academy with formal recognised certification, except for European Interoperability Framework or a specific ISA² Solution if relevant.

8.17.5 ACTION PRIORITY

This section is used to assess the priority of the proposal to become a programme's action according to Art. 7 of the ISA^2 decision[159].

8.17.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer

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[159] DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The action will directly contribute to the EIF Implementation not only by raising awareness but by enhancing the skills in the area of Interoperability and should cover some gaps not currently covered. By having the focus on Interoperability it will contribute to the subject of interoperability and help to the implementation of the Interoperability Action Plan. Open PM² contributes to the Interoperability Action Plan by: • Helping saving users and operational cost, being a free, easy-to-adopt and reusable project management instrument; • Implementing a standardised and transparent approach to project management and information/lessons learned exchanges; • Setting a common language and way of working overcoming countries and sectors boundaries, as well as removing operational barriers; • Offering a certification with grant same rights and reputation wherever in EU.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Currently, the training, educational material offered is somewhat fragmented and not organised under specific pedagogic methods to ensure learning. This proposal will provide a source for training and improving skills at EU level.

8.17.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The academy will not be focusing on a specific sector. The training offer will have a focus on the generic solutions and addressing Interoperability at large scale. The tools proposed by the action will also be able to cover particular sector. Some material will in particular focus on the cross-sector perspective. PM² currently represents the only open source and free project management methodology on the market, and the Open PM² initiative helped in releasing to the public a version of the methodology which is suitable to be used cross-sector to manage any kind of projects (from policy, to IT, to communication, etc.). The ability to receive a PM² certification, to have access to fully localized (i.e. translated) material and to have a single communication channel for the entire PM² community will contribute to the efficiency of project management within the MS administrations, the public and private organisations of the EU, including SMEs.

Question	Answer
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	PM² is currently adopted by all European Institutions (European Commission and Executive Agencies, decentralised /agencies, the European Council, EIB, ECB, CoR, EEAS, SRB, etc.) They all use PM² in a variety of projects and business sectors (Communication, Taxation & Customs, management of Grants Programmes, IT development, real estate management, etc).

8.17.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	The proposal does not have a particular national perspective and is pan-European by essence. By establishing a close collaboration with international, national or regional initiatives, the action intends to help MS to integrate in their programme the importance of Interoperability. The PM² Guide is already accessible to all MS, business and EU Citizens. New releases and new publications under the PM² family will be released progressively to the public. An overview of the methodology (a summary of the PM² Guide) is available in all 24 EU official languages to facilitate the geographical reach of the initiative.
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Contacts with several MS administrations have been established after the Open PM² Conference in 2018. Italy, through its public digital agency (Agid) has requested support from DIGIT to train 3000 project managers to support the public administration digitization in Italy. In the same manner, Germany expressed its interest to use PM² for all federal IT projects related to public

Question	Answer
	administration. This also makes the case for post-ISA² topic and the **Digital Europe Programme.**

8.17.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	The digital skills gaps are seen in many areas and at many levels, in user level for adopting digital solutions but also at the level of the public administration, delaying the adoption of electronic solutions. This was pointed out by the Digital Market Strategy and is an essential part of the Grand coalition for jobs and skills.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	The focus of this proposal is on interoperability and solutions proposed in the scope of the ISA/ISA² programme. Although, the action might link to a number of similar initiatives in the area of Digital Skills on eGovernment.

8.17.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	eLearning platform
Description	An eLearning platform that will support the action but also any action of the ISA² programme eager to propose material and/or wanting to propose some cursus.
Reference	
Target release date / Status	2020
Critical part of target user base	Public Servant in Member States, EU Institutions, citizens and businesses.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	A catalogue of Learning Resources and reusable solutions for Interoperability
Description	The proposal will gather, organise and create if necessary eLearning resources in the area.
Reference	
Target release date / Status	First catalogue in Q4/2019
Critical part of target user base	Any public servant.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Comprehensive cursus on Interoperability and the EIF according to the user learning profile.
Description	Different cursus, or training paths will be propose. These could lead to a later certification.
Reference	
Target release date / Status	Q1/2020
Critical part of target user base	Any Public Administration personnel
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Open PM² - Open Project Management Methodology
Description	PM² is a Project Management Methodology developed and sponsored by the EU Commission. PM² is a light, easy to implement methodology suitable for any type of project. It incorporates elements from a wide range of globally accepted best practices as well as operational experience from various EU Institutions.
Reference	
Target release date / Status	• Ongoing: Publication (release to the public via EU Bookshop) of other existing PM² publications: Agile PM², PM² Tools & Techniques, PM² Portfolio Guidelines) • Planned: Community building via new PM² web presence open to Member States and other EU institutions.

	• Planned: Setting up scalable support structure to assist Member States in adopting PM² • Ongoing: Opening PM² trainings and Certifications to Member States and other external stakeholders • Ongoing: Coordinating the Open PM² Work Groups (collaborative evolution of the PM² Methodology engaging with the Open PM² Community. • Ongoing: Meetings and PM² awareness presentations with Member States' representatives directly (e.g. contact made with Ministries from Greece, Romanian, Finland, Ireland), and via 3rd party Organisations (e.g. EU-SRSS, EU Representations).
Critical part of target user base	• Public Administrations of Member States • Contractors and • EU Citizens
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The project is progressing well, with several major milestones already achieved while many of the strategic ongoing actions are on track. A governance body for PM² is being created and will be attached to CII and inter-institutional body, marking the real EU-wide scope of PM². • Since its publication on the EU Bookshop in November 2017, PM² Guide has been in the TOP10 most downloaded publications shortlist for several months. • The Open PM² conference, held in February 2018 has been a huge success with nearly 800 participants (onsite and online), creating great demands and expectations from all stakeholders. • The latest release of PM² (v3 – December 2018) marked the merge of the open and internal versions so that EU servants and citizen alike share the same methods.

8.17.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA[2], ISA or other relevant interoperability solution(s)? Which ones?	The proposal will reuse material already produced by existing actions (videos, eLearning, presentations, webinars, toolbox of reusable solutions…) and present them in an organised and logical manner. In addition, the eLearning platform will be linked with Joinup where individual solutions could refer to it. In particular for the EIF, the action will reuse the content of the e-Learning section created in Joinup by the NIFO collection. If needed, the latter will be migrated to the eLearning platform that will be created by the present action. Currently other identified actions are: EIRA, CAMSS, SEMIC.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

8.17.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Improvement of Digital Skills is essential for the completion of the Digital Single Market. The mid-term review of the Digital Single Market strategy[160], published in May 2017, focuses on digital skills oriented actions, aiming to manage digital transformation of our society and economy. The proposal will complement the initiatives by focusing on Interoperability and Public Administrations.

8.17.6 PROBLEM STATEMENT

The problem of	The lack of training offer on Interoperability and Interoperability solutions
affects	the adoption of interoperable solutions
the impact of which is	poor adoption of ISA² solutions and limited EIF Implementation in EU
a successful solution would be	offering structural educational activities and resources

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[160] https://ec.europa.eu/digital-single-market/en/news/digital-single-market-commission-calls-swift-adoption-key-proposals-and-maps-out-challenges

8.17.7 IMPACT OF THE ACTION

8.17.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	By providing Learning resources for free, it will limit the need for investments in constructing resources.	By 2020 once the platform is ready	Any EU Public Administration.
(+) Savings in money	PM² is the only open source and free and ready-to-use PM Methodology.	Already available	European Institutions, Public Administrations of Member States, Contractors involved in projects with the Public Sector or EU Institutions, EU Citizens
(+) Savings in time	The provision of Learning Resources, will limit the time necessary to develop them.		
(+) Better interoperability and quality of digital public service	By offering training on Interoperability we will increase the necessary digital skills for the people provisioning public services.	By 2019	Anybody but EU Public Servants in particular.
(-) Integration or usage cost	The eLearning platform will be Open Source and will be open to other topics on the same subject.		

8.17.7.2 User-centricity

One of the conditions for maximizing the impact of the ISA^2 actions is by ensuring that they meet users' needs. For this to happen, users' engagement and involvement is needed before and during solutions' implementation, and users' feedback is sought after solutions are in operation.

The action will identify a number of profiles using personas and will propose cursus according to their need. To do so, feedback from already existing platforms at international, national and regional level will be sought.

The PM² methodology is by design a user-centric methodology, with the Project Managers and project teams being the users of the methodology (while the organisations adopting the methodology being the client of the methodology). It was developed by the European Commission, incorporating elements from a wide range of globally accepted best practices as well as operational experience from various EU Institutions, presented in a way (the PM² Guide) that accommodates the user's perspective.

PM² is a light and easy to implement methodology suitable for any type of project. PM² has grown and expanded its offering during the years because of the feedback and active participation of the EU Institutions PM's community. The PM² Methodology if free and provides both PM guidelines and ready-to-use project templates in the most common digital format. PM² explicitly encourages tailoring and customisation of its processes and templates, so to ensure that the Methodology serves the project's user needs the best way.

8.17.8 EXPECTED MAJOR OUTPUTS

Output name	Set of curricula around Interoperability
Description	The proposal will develop a set of curricula according to the learner objective, profile, difficulty.
Reference	
Target release date / Status	End 2019.

Output name	1st Interoperability Academy Winter School
Description	A Winter School that will gather students, academics and practitioners around Interoperability, ISA² and the long-term of the Digital Transformation of Public Administration .
Reference	
Target release date / Status	December 2019.

Output name	**PM² Web presence**
Description	New, single entry point for all stakeholders for PM² information with three key stakeholders in focus: EU citizens, Member States administrations, businesses and EU Institutions. This new website will be easily reachable at the url europa.eu/pm2. It will allow the dissemination of information related to PM², the download of all PM² publications, community management tools like forums and collaboration platforms etc. It will allow key stakeholders and MS to have their own PM² presence on the web.
Target release date / Status	February 2020**.**

Output name	**PM² Community management**
Description	• Coordinate the PM² (contribution to PM² development, translations, FAQs, moderation…) • Communicate and measure qualitative impact of PM² on the community • Organisation of events, meetings, lectures and 2nd Open PM² Conference in late 2020.

	• Surveys
Target release date / Status	December 2020

Output name	**All PM² Publications translated**
Description	Translation and sharing of publication on the EU bookshop of all PM² publications • Agile for PM² • PM² Portfolio Management • PM² Tools & Techniques
Target release date / Status	Q3-2020;

Output name	**PM² Certification – available outside the EU Institutions**
Description	• Make the PM² Certification available outside the EU institutions to Member States officials as well as to citizens. • Ensure a level of quality equivalent to the internal certification scheme. • Prevent the dilution of PM² certification quality in uncontrolled market offering for certification.
Target release date / Status	Q1 2020;

8.17.9 ORGANISATIONAL APPROACH

8.17.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission	ISA² Action owners	Proposals of courses, course creation, participation in the definition of the cursus.
European Commission	DG CONNECT/DG EAC, DG EMPL	for synergies with other digital skills

Stakeholders	Representatives	Involvement in the action
		initiatives
European Commission	Training services	Integration of the learning offer into the EU-Learn Catalogue.
Member States	ISA² Committee/Designated representatives in skills.	For synergies with national/regional actions and evaluation of the needs at Member State level.
United Nation University	UNU-eGOV	Ensure synergies and possible collaborations for certain aspects.

8.17.9.2 Identified user groups

Like many MOOCs, the eLearning platform can be accessible to anyone, some specific resources will target eGovernment professionals, in particular webinars and courses that will be organised with presence. These professionals can work at different levels of the organisations and intervening at different layers of the Interoperability Model.
In summary:

- Policy developers
- Legal services
- Officials from regional and local governments working on interoperability and public administration modernisation
- Solutions Architects
- Technical staff responsible involved in the development
- etc.

8.17.9.3 Communication and dissemination plan

One of the main channel used for dissemination and communication will be Joinup, through a collection "Digital Skills in the Public Sector" aiming at engaging with similar initiatives at national or international level in order to identify synergies and also gather requirements for the Academy. The collection will host the "Interoperability Academy solution" which will be used to host the catalogue of educational resources and later the link. It will also be used to promote any training activity (webinars, workshops,..) organised by actions from the ISA² programme.

The Academy will ultimately be supported on an eLearning platform, in addition it will rely on existing actions already proposing training activities which will ultimately be hosted on the academy eLearning platform.

Communication will rely on the usual ISA² communication channels (website and social media) as well as through targeted channels involved in the eGovernment educational domain, inside the European Commission.

The creation of specific channels will be evaluated after a year in order to increase the enrolment.

8.17.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of resources/ training material proposed	20	2020
Number of courses proposed in the catalogue	4	2020
Number of courses provided	20	2020
Number of enrolled "students"	100	2020

8.17.9.5 Governance approach

The governance of the project will be under the responsibility of the Interoperability Unit or the Director of DIGIT Digital Services.

A committee composed of major actions owners (e.g. Legal Interoperability, NIFO, SEMIC, Communication, Sharing & Reuse, EIRA) will be responsible of finalising the contents of the course and act as steering board and defining the curricula.

External advice will be sought from international organisations (OECD, UN), national representatives and other EC services involved in digital skills development in the area of Government. ISA² committee members will have the possibility to designate representatives to participate to the governance. To that purpose an Advisory board might be put in place.

A support service will be put in place allowing for proposal of new courses, in addition to a change management process coupled with an annual review.

8.17.10 TECHNICAL APPROACH AND CURRENT STATUS

The action has started by developing a basic learning strategy and identified existing educational resources that have been developed along the years in the ISA/ISA² programmes and identify possible gaps in the offer. This will be ready by Q4/2019.

From this cursus, the action will build a roadmap, and a programme for the last 2 years of the ISA² programme and ensuring the transition for the Digital Europe Programme In order to ensure a smooth transition, inclusion of eLearning on CEF DSIs will be foreseen.

A first Winter School is organised in collaboration with KU Leuven early December 2019, if successful, the exercise will be repeated with a similar or other configuration.

Grants

The action might experiment grants for developing new courses or for translations. The grants should be selected following a call for proposal and the topic will be defined following the assessment of the catalogue.

Grants will be of 10 to 20 K€ per course and will be selected by evaluating proposals sent by the proposers. The areas to be covered will follow the analysis performed in the first phase of the project.

The eligibility for the proposals are:

- Related to one of the domain contained in the call for proposals
- Easily integrated into an eLearning platform.
- Submitted by a maximum of 2 proposers
- Proposers must be any legal entity established in a country member of the ISA² programme.

The evaluation will be performed by independent experts in the area of eGovernment and eLearning and will consist of three evaluation criteria as defined below:

Each criterion will have a score from 1 to 5.

- Quality of the proposal: Addressing the subject, Operational Capacity: capacity of the proposer(s) to perform the work proposed
- Pedagogical assessment.

The template for proposals will be made available at the date of the publication of the call.
It will contain:

- The outline of the course
- The questions allowing the assessment of the acquired knowledge.
- A Project Management section
- A section demonstrating the capacity of the proposer(s) to carry-out the work, including the CVs of the people involved.

8.17.11 COSTS AND MILESTONES

8.17.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Comprehensive list of all existing material and e-learning strategy and extension to CEF	100	ISA²	Q2/2019	Q4/2021
Initiation	Architecture and design of the eLearning Platform	50	ISA²	Q4/2019	Q3/2020
Execution	Cursus development	100	ISA²	Q2/2019	Q4/2021
Execution	Organisation of ISA²	100	ISA²	Q3/2019	Q4/2021

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Winter/Summer Schools and support to organisation of webinars, seminars.				
Execution	Grants for the production eLearning courses.	50	ISA²	Q4/2019	Q2/2020
Execution	Development and maintenance of the MOOC platform and eLearning support	600	ISA²	Q4/2019	Q4/2021
	Total	**1500**			

8.17.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019	Initiation Interoperability Academy	400	150
2019	Execution Open PM²	250	
2020	Execution	500	
2020	Execution Open PM²	500	

8.17.11.3 Planning for the tendering procedures to be launched for the action

Call for tenders foreseen Global amount in KEUR	Call for Tenders Duration in years	Indicative planning of publication (QX/YYYY)
Open Certification	5	Q1/2020

8.17.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Digital Skills in Public Sector	https://joinup.ec.europa.eu/collection/digital-skills-public-sector	
Interoperability Academy	https://joinup.ec.europa.eu/solution/interoperability-academy	
Open PM² wiki	https://webgate.ec.europa.eu/fpfis/wikis/display/PM2	
OpenPM² in JoinUp	https://joinup.ec.europa.eu/community/opm2/description	
Open PM² Guide in EU Bookshop	https://publications.europa.eu/en/publication-detail/-/publication/0e3b4e84-b6cc-11e6-9e3c-01aa75ed71a1	

9 ACCOMPANYING MEASURES

9.1 RAISING INTEROPERABILITY AWARENESS – COMMUNICATION ACTIVITIES (2016.30)

9.1.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D.2
Associated Services	

9.1.2 EXECUTIVE SUMMARY

The Digitizing Public administration across all services is currently a high priority for Public administrations all across Europe. Shrinking public budgets require a greater efficiency and effectiveness of administrations. Digital technologies can increasingly help in this respect. However, in a connected world, it is getting of paramount importance that public administrations can exchange data between each other smoothly, seamlessly and securely through solutions that are interoperable with each other, both from a semantic, organisational, legal and technological point of view.

The ISA² programme of the European Commission supports public administrations in their efforts for modernisation through the development of interoperable solutions that fulfil the above requirements, thus contributing to the completion of the Digital Single Market in Europe.

Communicating the solutions developed under ISA² is a prerequisite for achieving their widespread take-up and use. To this end, a comprehensive communication strategy has been drafted and implemented.

Under the new programme, in 2020, communication activities will continue to implement the communication strategy and plan. Activities will include the increase of tailor-made communication to specific target groups (user centric approach), in particular the broadening of communication to the new ISA² target groups, businesses and citizens. In addition a greater emphasis will be put on possible users of ISA² solutions. Moreover, a stronger focus will be placed on increasing the take up of ISA² solutions on regional level.

In 2020, as in the preceding years, the programme will organise the annual SEMIC conference and will strate the preparation for the closing ISA² conference in early 2021. The action will continue to organise its tailor-made workshops for the Member States on demand.In addition a possibility to use grants/ awards for co-organisation of the events promoting interoperability will be explored. Based on the positive experience in the past, direct communication with stakeholders will also continue through the active participation in conferences in the Member States to inform stakeholders about the importance of

interoperability, and the role that the New European Interoperability Framework, the European Interoperability Reference architecture and the re-usable solutions developed under the ISA^2 programme can play in this respect.

9.1.3   OBJECTIVES

The communication action has the following objectives:

(a) develop, maintain and promote **a holistic approach to interoperability in the Union in order to eliminate fragmentation in the interoperability landscape** in the Union;

(b) facilitate efficient and effective electronic cross-border and/or cross-sector interaction between European public administrations on the one hand, and **between European public administrations and businesses and citizens** on the other, and to contribute to the development of a **more effective, simplified and user-friendly e-administration at the national, regional and local** level of public administration;

(c) to raise awareness about existing and operational interoperability solutions supporting the implementation of Union policies and activities;

(d) **Facilitate the reuse of** interoperability solutions by European public administrations.

9.1.4   SCOPE

The action spans the whole communication process which is being derived from the global ISA² communication strategy to maximise the "Interoperability Awareness" of the whole programme. Activities will be organised in different forms from digital to face-to-face communication in hosting of and actively participating in conferences and workshops to the publication of printed material.

9.1.5   ACTION PRIORITY

The priority of communicating the programme, its achievements and the need for interoperability in general has been stressed by the Member States many times during ISA² committee meetings and ISA² coordination group meetings, as well as in the Final Evaluation report of the ISA programme and in the Interim evaluation of the ISA² programme. **Without widespread communication of the results achieved and effective encouragement of take-up of the solutions developed, the whole programme will become obsolete.**

9.1.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	The action will communicate the messages of the mentioned key papers and initiatives as well as the results of the actions that are based on said strategies and initiatives
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes.

9.1.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	The need for interoperability is a cross-cutting topic that applies for all policy domains and sectors, e.g. the Digital Single market, Growth and Jobs but also the sectors of Justice, Health, Fisheries, Space and Transport and others.
*For proposals completely or largely already **in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Not applicable

9.1.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Not applicable
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	Not applicable

9.1.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes. The need for communication is documented in the ISA² decision itself (see article 3 of the decision), this upon strong request from the Member States during the legislative procedure.
How does the ISA² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Yes. The programme needs tailor-made communication, following a user-centric approach, based on close interaction with all relevant, very specific stakeholder groups. This need cannot be fulfilled by a central communication programme/unit/DG, which is not familiar with the rather specialised content of the programme.

9.1.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Can the results of the action (following this proposal) be re-used by a critical part of their target user base, as identified by the proposal maker? For proposals or their parts already in operational phase: have they been re-used by a critical part of their target user base?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Not applicable
Description	
Reference	

Target release date / Status	
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

9.1.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA^2, ISA or other relevant interoperability solution(s)? Which ones?	The whole purpose of the communication action is to encourage the take-up and re-use of all ISA² interoperability solutions. For surveys, the EUSurvey tool is used.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	Not applicable

9.1.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	Communicating the ISA² programme and its results contributes to the DSM, the e-government action plan, the EIS and the New EIF, but also the Open

Question	Answer
	Data Initiative of the European Union and INSPIRE, among other. Communicating is based on the above priorities.

9.1.6 PROBLEM STATEMENT

The problem of	lack of awareness about the availability of operational proven solutions, such as those developed under ISA²
affects	the take-up of these solutions
the impact of which is	a programme that does not fully fulfil its goals.
a successful solution would be	A user-centric communication to the individual, quite different stake-holder groups of the programme, to convince them on the benefits of interoperability in general and on the use of the solutions developed in particular.

9.1.7 IMPACT OF THE ACTION

9.1.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Interoperable systems save money. Re-use of existing solutions saves money.	From the moment of implementation on	All intermediate and end-users of the ISA² solutions
(+) Savings in time	Interoperable systems save time. Re-use of existing	From the moment of	All intermediate

Impact	Why will this impact occur?	By when?	Beneficiaries
	solutions saves time	implementation on	and end-users of the ISA² solutions
(+) Better interoperability and quality of digital public service	Because administrations can work quicker and smoother. Data are available 24/7. Services can be made available electronically 24/7. Error checks can be done automated.	From the moment of implementation on	All intermediate and end-users of the ISA² solutions
(-) Integration or usage cost	Implementing new systems has start-up and maintenance costs.	Well before the implementation, i.e. from the moment on that the decision to implement a solution is taken. Maintenance costs will occur during the whole time that the solutions are in place.	All intermediate users of the ISA² solutions

9.1.7.2 User-centricity

The ISA² strategy and all resulting communication actions are based on a user-centric approach. For further details on this approach, please consult the ISA² communication strategy.

9.1.8 EXPECTED MAJOR OUTPUTS

Output name	**Communicating the results of the programme at programme level** and ensuring appropriate take-up
Description	The programme delivers numerous results, which are communicated at programme level through active participation and co-organisation of events (in forms of grants and or awards/prizes), communicating over the ISA² website and Social Media channels (Twitter and LinkedIn), through direct stakeholder mailings, and face-to-face meetings with stakeholders.
Reference	
Target release date / Status	throughout 2020/2021

Output name	**SEMIC conference 2020**
Description	Organisation of the annual SEMIC conference, potentially with a workshop for targeted, specialised stakeholders.
Reference	
Target release date / Status	Second half of 2020

Output name	**Final ISA² conference**
Description	Organisation of the final ISA² conference, potentially with targeted workshops/hackathons.
Reference	
Target release date / Status	First half of 2021

Output name	**Tailor-made workshops** to specific target groups (e.g. **the Member States, Members of the European Parliament, the European Regions.**
Description	Workshops based in format and content on specific user needs
Reference	
Target release date / Status	throughout 2020

Output name	**Communication campaigns for specific ISA² actions with major impact**
Description	Communication targeted to the wider ISA² stakeholder group, to ensure take-up across policy areas
Reference	
Target release date / Status	Throughout 2020

9.1.9　ORGANISATIONAL APPROACH

9.1.9.1　Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA2 actions	ISA² programme managers	Providing input on the solutions developed and the results generated
Public administrations from the Member States	Representatives in the ISA² bodies (Committee, coordination group or equivalent, etc.)	Communicating the results in-country, organisation of events in-country
Public administrations in Europe at all levels: European, national, regional,		Taking up of the results and solutions developed
Members of the European Parliament		Communicating the results in-country, organisation of events in Brussels or in-country

Stakeholders	Representatives	Involvement in the action
Members of the European regions	Representatives of the Committee of the Regions	Communicating the results in-region organisation of events in Brussels or in-region
Businesses	Business organisations	Communicating the results among their stakeholders
Citizens	NGOs	Communicating the benefits of the solutions to their "clients"

9.1.9.2 Identified user groups

Public administrations, businesses, citizens

9.1.9.3 Communication and dissemination plan

All communication is based on a detailed ISA² communication strategy.

9.1.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics[161] indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of events in which ISA² actively participates (by	to be increased by 10% in comparison to year before	Throughout the reporting period

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[161] For examples see the ISA2 dashboard https://ec.europa.eu/isa2/dashboard/isadashboard, **effectiveness** tab.

Description of the KPI	Target to achieve	Expected time for target
speech, presentation, moderation and/or ISA² stand)		
Number of unique **website visitors**	to be increased by 20% in comparison to year before	Throughout the reporting period
Number of Twitter followers	to be increased by 20% in comparison to year before	Throughout the reporting period
Number of LinkedIn followers	to be increased by 20% in comparison to year before	Throughout the reporting period
Number of User Testimonials and quotes published	to be increased by 20% in comparison to year before	Throughout the reporting period

9.1.9.5 Governance approach

This action is managed by DIGIT D.2 with the support of external contractors. In order to allow the ISA^2 Committee Members follow closely the progress of the programme, measurements collected in the frame of this action will be made publicly available on a regular basis.

9.1.10 TECHNICAL APPROACH AND CURRENT STATUS

Results of the impact of communication action are measured, like for all other actions, under the monitoring and evaluation action of the programme. The results of this exercise will be publicly available in the ISA² dashboard and in the upcoming ISA² interim evaluation report

9.1.11 COSTS AND MILESTONES

9.1.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Ongoing communication actions for the communication of the programme as a whole	500K	ISA²	Throughout the period	
	Final ISA² conference	200K	ISA²	Q1/2021	Q1/2021
	SEMIC conference 2020	150K	ISA²	Q3/2020	Q3/2020
	Support of all activities through Intramuros contractors	2300K	ISA²	Q2/2019	Q1/2020
	Other ISA² specific actions	100K	ISA²	Q2/2019	Q4/2019
	Total	1180K			

9.1.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	680	
2017	Execution	930	
2018	Execution	940	
2019	Execution	920	
2020	Execution/closing	980	
2020	Execution (Administrative Budget)	200	

9.1.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
ISA² website	http://ec.europa.eu/isa2/	

9.2 MONITORING AND EVALUATION (2016.39)

9.2.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D.2
Associated Services	Commission departments responsible for ISA² funded actions

9.2.2 EXECUTIVE SUMMARY

The Monitoring and Evaluation action needs to ensure administrative support for the following (but not limited to) legal and internal obligations:

- The Commission monitors and evaluates (M&E) the progress and in particular the relevance, effectiveness, efficiency, utility, sustainability and coherence of the actions of the programme to ensure that the requirements of the ISA² decisions are met;
- The Commission needs to report annually to the ISA² Committee on the implementation of the programme;
- The ISA² programme is subject to an interim and a final evaluation;
- The ISA^2 programme will start monitoring the implementation of the new European Interoperability Framework (EIF) according to Communication (COM(2017)134) from the European Commission ;
- One of the key outputs of the rolling work program is the monitoring activities.

In order to allow the ISA² Committee Members and the ISA² programme management to take decisions, measurements collected in the frame of this action will be communicated on a quarterly and yearly basis.

This action will follow three main phases in which project officers will be actively involved supported by an external contractor:

- Definition of indicators and related management processes for each new action;
- Provide training and support to the project officers;
- Measurement and communication of the indicators on a regular basis (quarterly and yearly);
- Inform the communication action about upcoming milestones for possible news flashes;

In each quarter the relevant metrics are gathered, grouped, analysed and communicated to all stakeholders (including EU citizens when privacy and business secrecy concerns are met). The metrics are grouped in 3 categories:

- process metrics (e.g. cost, risk, time) – specifically related to efficiency;
- generic metrics (that will be the same for each type of action, including policy impact metrics);
- action specific metrics (that will vary amongst actions) – specifically related to effectiveness.

In 2020, the action will apply the method and instruments to monitor the actions funded by ISA² and to disseminate information. It will also launch the final evaluation of the ISA² programme and start evaluating the implementation of the new EIF.

9.2.3 OBJECTIVES

The objective of the action is to contribute to the efficient and effective use of ISA² funds by providing relevant, reliable and up-to-date information about all funded actions.

To achieve this, the action will monitor and evaluate, on regular basis, five main criteria at action and when relevant programme level:

- Relevance: extent to which the action/the programme meets the objectives stated in the ISA² legal Decision and of the EIS;
- Effectiveness: extent to which the action is meeting the strategic objectives of the ISA² programme by reaching the expected outcome;
- Efficiency: extent to which the outputs planned to be produced in the frame of the action/the programme are produced within the time and budget given;
- Perceived Quality: extent to which the targeted users of the action/programme are satisfied of what has been developed and their expectations are met (potential improvements are also gathered in that frame);
- Perceived Utility: extent to which the action/programme answers the business needs defined upfront by its stakeholders.

9.2.4 SCOPE

The scope of the action is to gather, analyse and publish relevant information on all actions funded by the ISA² programme.

The lack of continuous measurement severely limits the ability to achieve the intended results or even to identify if they were achieved. Therefore a system needs to be set up that is able to provide both quantitative and qualitative metrics, thus providing guidance on both ISA² and EIS objectives. The supporting system will also act as an effective communication tool for decision-making.

9.2.5 ACTION PRIORITY

In order to satisfy the requirements of article 13 in the ISA² decision, namely that the Commission shall regularly monitor the implementation and impact of the ISA² programme for the purpose of assessing whether its actions continue to meet the identified needs, this action is a continuous activity throughout the programme.

9.2.5.1 Contribution to the interoperability landscape

The contribution of the action to the interoperability landscape, measured by the importance and necessity of the action to complete the interoperability landscape across the Union

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility*	This action is there to monitor and assess the implementation and impact of the different actions, and to determine if they continue to meet the identified needs. So indirectly, it contributes as it will keep the programme focussed. In addition, the action will start evaluating the implementation of the new EIF.

Question	Answer
(CEF) Telecom guidelines • *any other EU policy/initiative having interoperability requirements?*	
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Not applicable

9.2.5.2 Cross-sector

The scope of the action, measured by its horizontal impact, once completed, across the policy sectors concerned.

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	Not applicable
*For proposals completely or largely **already in operational phase,** indicate whether and how they have been utilised in two (2) or more EU policy sectors.*	Not applicable

9.2.5.3 Cross-border

The geographical reach of the action, measured by the number of Member States and of European public administrations involved.

Question	Answer

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.*	Not applicable
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	

9.2.5.4 Urgency

The urgency of the action, measured by its potential impact, taking into account the lack of other funding sources

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	Yes, article 13 of the ISA² decision (EU) 2015/2240
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	Not applicable

9.2.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Not applicable

9.2.5.6 Level of reuse of existing solutions

The re-use by the action (following this proposal) of existing common frameworks and interoperability solutions.

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	Not applicable
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which ones and how?*	

9.2.5.7 Interlinked

The extent to which the action (following this proposal) contributes to Union's initiatives such as the DSM.

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	The action examines the benefits of the ISA² actions to the Union for the advancement of common policies, identify potential overlaps and examine coherence with areas for improvement and verify synergies with other Union initiatives, in particular with the CEF.

9.2.6 PROBLEM STATEMENT

The lack of continuous measurement severely limits the ability to achieve the intended results or even to identify if they were achieved. Therefore a system needs to be set up that is able to provide both quantitative and qualitative metrics, thus providing guidance on both ISA² and

EIF objectives. The supporting system will also act as an effective communication tool for decision-making.

9.2.7 ORGANISATIONAL APPROACH

9.2.7.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA² actions	Action owners	
Member States	Representatives in the ISA^2 bodies (Committee, coordination group or equivalent, etc.)	

9.2.7.2 Identified user groups

Action owners
Representatives in the ISA² bodies (Committee, coordination group or equivalent, etc.)

9.2.7.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / Absolute dates of meetings?
ISA² Governance Meetings	ISA² Coordination Group Members	Twice a year

9.2.7.4 Governance approach

This action is managed by DIGIT D.2 with the support of external contractors. In order to allow the ISA^2 Committee Members follow closely the progress of the programme, measurements collected in the frame of this action will be made publicly available on the ISA^2 dashboard on a, quarterlyand yearly basis.

This action has 4 main phases during which project officers are actively involved supported by the external contractor:

1) Definition of indicators and related management processes for new actions;
2) Provide training and support to the project officers;
3) Measurement and communication of the indicators on a regular basis (quarterly and yearly) via conference calls with the action responsible;
4) Inform the communication action about upcoming milestones for possible news flashes.

9.2.8 TECHNICAL APPROACH AND CURRENT STATUS

The measurements gathered in the frame of this action are available to all stakeholders (ISA^2 Programme management, ISA^2 project officers, Member States, citizens, etc.) on the ISA^2 dashboard https://ec.europa.eu/isa2/dashboard/ .

The use of this tool helps in decision making and ensures transparency towards all the ISA^2 programme stakeholders.

In 2018/2019, the action financed the interim evaluation of the ISA^2 programme.

In 2020/2021, the action will cater for the final evaluation of the ISA^2 programme and for the evaluation of the new EIF implementation.

9.2.9 COSTS AND MILESTONES

9.2.9.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution/Closing	ISA^2 Dashboard Operations, maintenance and technical support	100K	ISA^2	Q2/2020	Q4/2021

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Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution/Closing	2020 WP monitoring for ISA^2	150K	ISA^2	Q2/2020	Q4/2021
Execution	Final evaluation of the ISA^2 programme and evaluation of the new EIF implementation	300K	ISA²	Q4/2020	Q4/2021
	Total	**550K**			

9.2.9.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	680K	
2017	Execution	300K	
2018	Execution	450K	
2019	Execution	450K	
2020	Execution/Closing	550K	