

ISA² WORK PROGRAMME

2019

DETAILED DESCRIPTION OF ACTIONS PART 2/2

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FOREWORD

The structure of the ISA² 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 ISA² 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.

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 2009¹. It has been supported by several Commission Communications and Council Conclusions². Since 2014, it is implemented as a part of the EU Maritime Security strategy.

The last Commission Communication underlines that CISE³ 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 missions⁴. 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 interoperability between maritime authorities' systems, as well as by other organisational and legal barriers at national level.

¹ Commission Communication (2009)538 final

² 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

³ Commission Communication of 8th July 2014, COM (2014)451 final.

⁴ Maritime surveillance encompasses seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

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 are currently being tested in the FP7 pre-operational validation project (EUCISE2020)⁵ - 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.

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 current 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 process⁶ 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,
- 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.

⁵ <http://www.eucise2020.eu/>

⁶ ICT standardisation Regulation (EU) No 1025/2012

- Provide support for the definition and implementation of management processes facilitating the uptake of CISE interoperability solutions.

It should be noted that ISA² programme is one of the means employed to finance the CISE process, all intended to support complementary activities. The ongoing FP7 EUCISE 2020 project is mainly focusing on developing and testing common data and service protocols. The European Maritime and Fisheries Fund (EMFF) provides support to national authorities to update their ICT systems in order to enhance the information exchange and be ready to connect to the CISE. The EMFF is also envisaged to support the European Maritime Safety Agency (EMSA) – through a 3Mio grant - to develop interoperability solutions between EU levels systems and to better interface its systems with the Member States ones. The main focus of the ISA² contribution will be therefore to support MS 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.

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 sectors⁷ 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.

⁷ Maritime surveillance encompasses seven sectors: border control, maritime safety and security, fisheries control, customs, marine environment protection, general law enforcement and defence.

The ISA² programme is expected to further support the CISE process in further elaborating on a set of operational interoperability solutions currently 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 ISA² decision⁸.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>The action contributes to the implementation of following EU policies and initiatives:</p> <p>1. Integrated Maritime Policy.</p> <p>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.</p> <p>2. Maritime sectorial policies.</p> <p>The seven user communities to be interconnected through an enhanced interoperability (CISE): maritime</p>

⁸ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
	<p>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.</p> <p>3. Security related policies.</p> <p>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 Migration Policy, Common Security and Defence Policy (CSDP).</p> <p>4. Digital Single Market (DSM).</p> <p>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.</p> <p>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;</p> <p>CISE process also fosters investment in</p>

Question	Answer
	<p>R&D technologies for maritime surveillance and security.</p> <p>Moreover, the technical solutions developed under the CISE process will allow for the optimization of data exploitation.</p> <p>5. ISA2 actions.</p> <p>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.</p> <p>6. The Connecting Europe Facility (CEF).</p> <p>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.</p> <p>7. European e-Government Action Plan.</p> <p>The CISE process is in line with the principles and actions of the e-</p>

Question	Answer
	<p>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 solutions are defined in the framework of the European Interoperability Framework and the reuse of the CEF building blocks are a priority for CISE.</p> <p>8. EU Standardisation WP.</p> <p>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).</p>

Question	Answer
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Other interoperability solutions have been developed at the EU level through 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 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.</p>

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
<i>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.</i>	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.
<i>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.</i>	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
<i>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?</i>	Once completed the action will provide tailored solutions which could support an enhanced flow of information across sectors and between

Question	Answer
<i>Detail your answer for each of the concerned Member State.</i>	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.
<i>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.</i>	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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	<p>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.</p> <p>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.</p> <p>In particular, the revision of the EU</p>

Question	Answer
	Maritime Security Strategy (EUMSS) Action Plan, adopted by the Council in June 2018 renewed the MS commitment to implement CISE.
<i>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?</i>	ISA ² scope and financial capacity fits perfectly the purpose of supporting the development of CISE, which seeks to improve cross sector and cross border interoperability. ISA 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 currently under pre-operational validation 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	<p>An initial version has been released in 2015 (based upon the outcome of the Cooperation Project). This version will be now tested, fine-tuned and enriched by the CISE pre-operational validation project by end of 2018.</p> <p>The version 2 should go through the standardisation group setup by the EUCISE 2020 project and could be release after 2 years (end of 2020).</p>
Critical part of target user base	<p>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.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 10.</p> <p>The CISE pre-operational validation project involves 16 Member States and 35 authorities and will run until end of 2018.</p> <p>A transition phase of 2 years will be launched beginning of 2019 to maintain this network and prepare for a new version of CISE components.</p>
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)	Service model
Description	The CISE service model currently under pre-operational validation under the EUCISE2020 project defines the specifications of the services offered by

	<p>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</p> <p>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.</p>
Reference	
Target release date / Status	<p>An initial version has been released in 2015 (based upon the outcome of the Cooperation Project). This version will be now tested, fine-tuned and enriched by the CISE pre-operational validation project by end of 2018.</p> <p>The version 2 should go through the standardisation group setup by the EUCISE 2020 project and could be release after 2 years (end of 2020).</p>
Critical part of target user base	<p>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.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 10.</p> <p>The CISE pre-operational validation project involves 16 Member States and 35 authorities and will run until end of 2018.</p> <p>A transition phase of 2 years will be launched beginning of 2019 to maintain this network and prepare for a new version of CISE components.</p>
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	<p>This registry is a software tool that will provide information about the participating authorities, their systems and the information they make available within CISE.</p> <p>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).</p>
Reference	
Target release date / Status	<p>First specifications available end 2015⁹</p> <p>First implementation by the CISE pre-operational validation project by end-2018.</p> <p>Release of version 2 of the registry software: after the transition period (2021)</p>
Critical part of target user base	<p>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.</p> <p>The minimum number of participants to allow for significant results at the EU level should be 10.</p> <p>The CISE pre-operational validation project involves 16 Member States. The registry will be tested by authorities from 10 MS in the validation phase of the project.</p>

⁹ Deliverable of the MARE-JRC AA SI2.692869 “Specifications of the CISE Registry”, in line with the EUCISE2020 deliverable D4.3 Technical Specifications.

For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a
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Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CISE gateways
Description	Interface among the maritime surveillance IT systems enabling the exchange of information between national authorities, using the data and service model. The Gateway is also connected to the Registry to enable automatic discovery of services.
Reference	
Target release date / Status	First specifications available: end 2015 ¹⁰ Development of version 1 and testing by the CISE pre-operational validation project by end 2018 Release of version 2: 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 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 involves 16 Member States. The gateway will be 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)	

¹⁰ EUCISE2020 deliverable D4.3 Technical Specifications

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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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 version 2 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)
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<i>Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which</i>	1. Integrated Maritime Policy and the Ocean Governance. JOIN(2016) 49 final

Question	Answer
<i>ones? What is the level of contribution?</i>	<p>2. Communication on “A Digital Single Market Strategy for Europe” COM(2015)192 (DSM)</p> <p>3. European eGovernment Action Plan 2016-2020</p> <p>4. ICT standardisation Regulation (EU) No 1025/2012</p> <p>The level of contribution is described at points 1.1.5.1.</p>

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 an automatic and secure way.	Starting from 2021	MS' authorities & EU maritime agencies

Impact	Why will this impact occur?	By when?	Beneficiaries
(-) 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. At present, the FP7 Pre-Operational Validation Project EUCISE2020, involving over 30 authorities from 16 MS, is developing a test-bed for the CISE interoperability solutions. The project partners is carrying out a 6-month validation of the CISE concept using their current IT systems and data, from real operations.

There are also 13 ongoing projects in 9 MS which work 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 Handbook
Description	<p>The CISE handbook will provide concrete guidance to national authorities on how to participate and exchange information within the Maritime CISE in a secure and reliable way.</p> <p>It will be drafted and continuously reviewed with a support of a dedicated expert group using transparent collaborative tools. The site will be open to public (not the collaborative editing).</p>
Reference	http://cise.jrc.ec.europa.eu (in construction)
Target release date / Status	<p>A first draft version of the website is planned to be produced during the transition period.</p> <p>The Handbook will be further drafted and updated with the results of the different actions related to CISE.</p>

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 described above. The number of potential national authorities to be involved in CISE amounts to over 300.	Direct involvement in the EUCISE2020 POV project and in national projects

Stakeholders	Representatives	Involvement in the action
	<p>National authorities are providing advice to the Commission the CISE development in two ways:</p> <ul style="list-style-type: none"> - The technical advisory group (TAG) involves technical and operational experts representing the seven maritime surveillance sectors, together with EU agencies representatives; - 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. <p>The CISE process is reviewed at policy level by the Council in the Friends of the Presidency Group monitoring the EU Maritime Security Strategy</p>	<p>(IT interoperability improvements).</p>
Industry	Industrial developers in the area of maritime surveillance	<p>Direct involvement in the EUCISE2020 POV project and in national projects (IT interoperability improvements). The industry will also be involve in the standardisation process in 2019-2020.</p>

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:

- At policy level, the Friends of Presidency group of the Council managing the EU Maritime Security Strategy (meets minimum 2 times/year)
- At technical level, the Member States experts sub-group on maritime security and surveillance (MSEsG) with representatives from national maritime administrations (2-3 meetings/year)
- At technical level, the Technical Advisory Group (TAG) with technical and operational experts from national authorities and EU agencies (2 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

Description of the KPI	Target to achieve	Expected time for target
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 and JRC E5, under the provisions of the Administrative Arrangement (AA) n°SI2.691869 from 3rd December 2014 between the two Commission services or any amendment/extension thereof. Five persons (2 from DG MARE and 3 from the JRC) will be responsible for the implementation of the action.

Additionally, the Commission will be 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) the seven user communities, including the EU Agencies, participate to the Technical Advisory Group (TAG) bringing in the necessary expertise from their sectoral policy and related actions,
- (b) an Inter-service group consisting of representatives of all associated DGs ensures coordination at Commission level

(c) 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.

(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 are currently being tested in the FP7 pre-operational validation project (EUCISE2020)¹¹ - 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, will be tested and validated in the context of the FP7 project 'EUCISE 2020' until mid-2018. This project is led by a large group MS' authorities closely supported by the Commission. This testing phase will pave the way towards the establishment of full-fledged 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 current 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.

¹¹ <http://www.eucise2020.eu/>

- 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 process¹² 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 ISA² contribution is one of the means employed to finance the CISE process, all intended to support complementary activities. The ongoing FP7 EUCISE 2020 project is mainly focusing on developing and testing common data and service protocols, The European Maritime and Fisheries Fund (EMFF) provides support to national authorities to update their ICT systems in order to enhance the information exchange and be ready to connect to the CISE. The EMFF is also envisaged to support the European Maritime Safety Agency (EMSA) – through a 3Mio grant - to develop interoperability solutions between EU levels systems and to better interface its systems with the Member States ones. The main focus of the ISA² 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.

¹² ICT standardisation Regulation (EU) No 1025/2012

7.1.11 COSTS AND MILESTONES

7.1.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Fin l evaluation	Description of milestones reached or to be reached	Anticipate d Allocation s (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 and maintenance of a new version of CISE common technical specifications and components	950	ISA ²	Q3/2018	Q4/2020
Execution	Development of enhanced CISE security specifications for the operational phase	200	ISA ²	Q2/2019	Q2/2020
Execution	Feasibility assessment of the CEF interoperability solutions within the CISE operational phase	200	ISA ²	Q2/2019	Q2/2020
	Total	1550	ISA ²		

7.1.11.2 Breakdown of ISA² 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 and maintenance of a new version of the common components for CISE (950KEUR)	2 years	Q4/2018
Development of enhanced CISE security specifications for the operational phase (200KEUR)	1 year	Q3/2019
Feasibility assessment of the CEF interoperability solutions within the CISE operational phase (200KEUR)	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 ¹³	
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	

¹³ 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 have been 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 to 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 ISA² programme, and subject to the outcome of an ongoing study, the activities for the year 2019 aim at enhancing the above-mentioned tools in the following areas:

As regards the European Citizens' Initiative:

- Adaptation of the ECI Register and OCS software in the context of the reform of the ECI regulation; i.e. a Commission proposal was adopted in September 2017 and is currently in negotiation with the Council and the European Parliament (entry into application of the new regulation foreseen on 01/01/2020).
- New version of the Online collection system, including fixing the accessibility issues highlighted in the accessibility study carried out at the beginning of 2018; integrating the changes to ECI to take account of the consequences of the withdrawal of the United Kingdom from the EU, as well as to reflect the future distribution of seats per Member State in the European Parliament for the 2019-2024 parliamentary term which will be the basis for the required thresholds for statements of support collected per Member State as per Annex I to the ECI Regulation; ensuring compliance with DG COMM standards and improving the performance of the application.
- Preparation of the central platform for online collection of statements of support (as foreseen in the Commission proposal for a new ECI Regulation).
- Improvements of ECI admin.
- Improvements for ECI Organisers (e.g. better User experience).
- Technical advice in relation to development of legislative framework (studies, risk analysis, 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 in the context of the EP 2019 elections.
- Use of CircaBC in the context of the exchange of files between Member States for the European Parliament elections
- Technical advice in relation to development of the legislative framework (in the event that studies, risk analysis, impact assessments etc. are conducted)

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.

As the review of the ECI instrument that started in 2017 is still ongoing, the outcome of this process may require an adaptation of the objectives in the course of the action.

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 (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 ISA² decision¹⁴.

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

¹⁴ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>This proposal contributes via the following elements:</p> <p>1) <u>EU initiative / policy</u>: European Citizens' Initiative.</p> <p><u>Nature of the contribution</u>: Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative (ECI Regulation):</p> <p>Article 6(2): <i>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.</i></p> <p>The action will maintain and further develop OCS 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.</p> <p>2) <u>EU initiative / policy</u>: EU Treaty – Elections to European Parliament</p> <p><u>Nature of the contribution</u>: Council Directive 93/109/EC of 6 December 1993</p> <p>Article 13</p> <p><i>Member States shall exchange</i></p>

Question	Answer
	<p><i>information required for the implementation of Article 4 (...)</i></p> <p>3) <u>EU initiative / policy:</u> Recommendation on EP elections <u>Nature of the contribution:</u> Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament:</p> <p><i>“Technical means for safe and efficient transmission of data</i></p> <p><i>8. For exchanging the data as provided in Article 13 of Directive 93/109/EC the Member States should use a uniform and secure electronic means, as set out in the Annex ...”</i></p> <p><i>“ANNEX</i></p> <p><i>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. [...]</i></p> <p><i>3. The Member States should use the W3C XML Encryption Syntax and Processing recommendation, [...]”</i></p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>No other alternatives have been identified</p>

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
<p><i>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.</i></p>	<p>Yes: <i>For the ECI/OCS system</i>, Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative & ISA action 1.12 <i>For the European Parliament crypto tool</i> :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.</p>
<p><i>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.</i></p>	<p>Yes, same as above.</p>

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
<p><i>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.</i></p>	<p>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.</p> <p>Regarding the European Parliament Crypto tool, it is useful to the public administrations of all the Member States</p>
<p><i>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.</i></p>	<p>Yes, same as above</p>

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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>Yes. 2019 is a critical year for ECI as all activities will aim at implementing all required updates and novelties in line with the future ECI Regulation whose entry into application is foreseen on 01/01/2020.</p> <p>The ECI OCS is a key feature enabling the good functioning of the instrument and is actively used</p>

Question	Answer
	<p>by European citizens; and the Crypto tool is critical for MS administrations and must be operational well in advance of the 2019 European Elections. Refer to 1.1.5.1 for the legislation from which these actions derive.</p> <p>As regards the ECI Online Collection Software more specifically, the modifications of the legal framework (especially annex III of the ECI Regulation) require particularly urgent adaptations.</p>
<p><i>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?</i></p>	<p>While the ECI Online Collection Software requires at this stage continuous update and improvement (because of changes to the legal framework and feedback received from citizens, organisations and other institutions), the ISA² Programme offers stability by the continuous financial framework therefore.</p> <p>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.</p>

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	Twice per year approach(Q2 and Q4)
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 2012 until June2018 38 initiatives out of 48 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	Q3 2019
Critical part of target user base	The 28 Member States
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	28 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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	Yes, a) It is planned to reuse the ISA ² action related for the development of an open source and multilingual audio Captcha (EU CAPTCHA (2018.08)) b) It is planned to use the ISA ² action Circabc (2016.34) in the context of exchange of files with Member States
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<i>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?</i>	Yes, the OCS directly links to the 10 th 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 Regulation¹⁵ (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 Commission proposal for a new ECI Regulation (<http://ec.europa.eu/citizens-initiative/public/regulation-review>) 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 Regulations enters into application (foreseen on 01/01/2020).

¹⁵ Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative.

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 Regulation (EU) No 211/2011 on the citizens' initiative

The problem of	Setting up of a Central Platform in the context of the future ECI Regulation (based on the Commission Proposal adopted on 13 September 2017)
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 2013¹⁶, 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 elections¹⁷ 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.

This ISA² action will focus mainly in addressing the above needs, in the context of preparations for the election to the European Parliament for 2019.

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

¹⁶ Recommendation 2013/142/EU on enhancing the democratic and efficient conduct of the elections to the European Parliament.

¹⁷ COM(2015) 206 final.

makes MS save quite some budget by allowing them to reuse the same mechanism to import Statements of support in their system.

Finally, the current revision of the regulation may have significant impact on the current OCS and ECI website/register.

In 2019, specific development will occur due to the potential impact of the withdrawal of the UK from European Union, the allocation of seats for EP elections and the development of the Central platform and EU file exchange system in the context of the Commission proposal to reform the ECI.

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

Impact	Why will this impact occur?	By when?	Beneficiaries
(-) 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 via paper email.	For every European Parliament election	Member States
(-) 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)

Besides, in 2018, a special focus has been put on the accessibility of the Online Collection System and implementation of the findings is foreseen in 2019.

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	ISA ² 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

Stakeholders	Representatives
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 by expert groups on the Citizens' Initiative and Electoral Matters. As it 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, 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

Description of the KPI	Target to achieve	Expected time for target
Number of organisers using the OCS already installed on the Commission servers to collect statements of support online.	40	1 year
Number of organisers using the OCS	45	1 year
Percentage of organisers using the OCS	85%	1 year
Number of statements of support collected via the Online Collection Software (OCS)	5 000 000	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 is 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 will be 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:

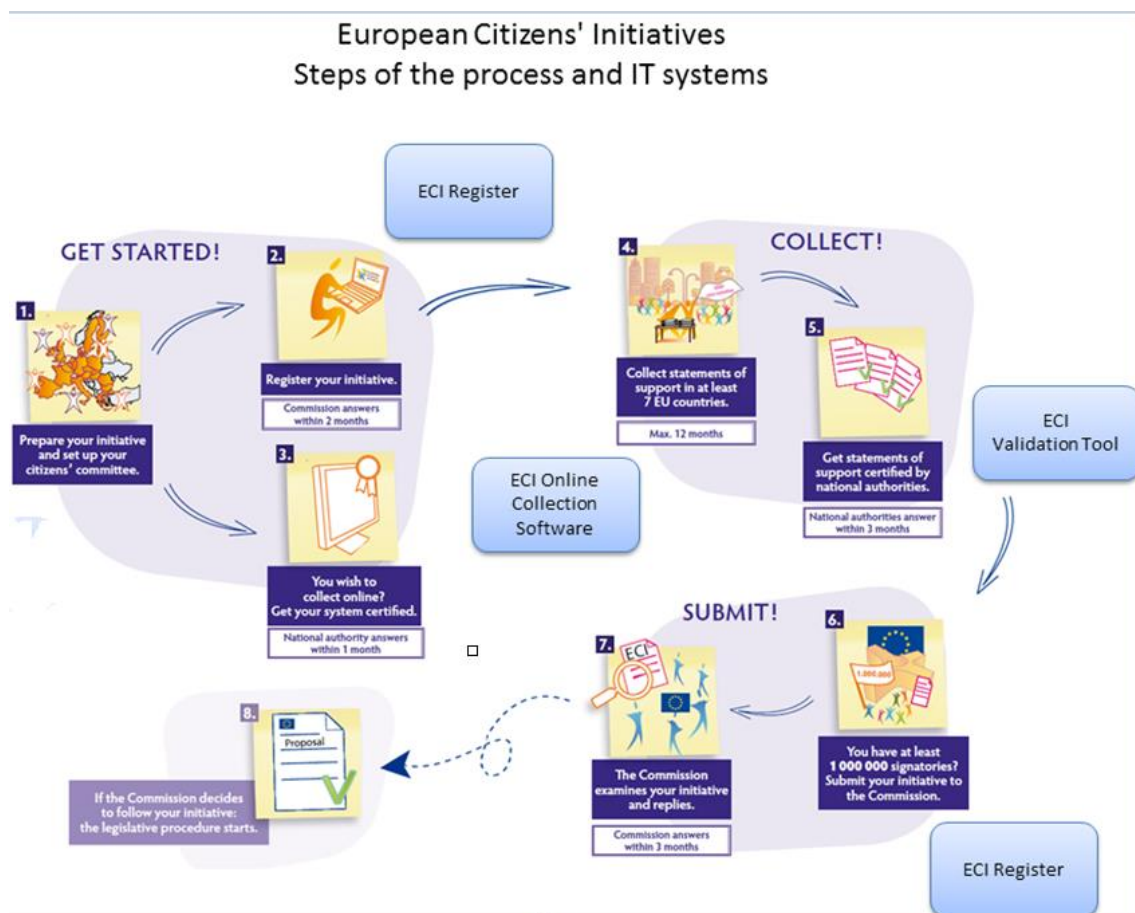
As regards the European Citizens' Initiative:

- Improvements for European citizens, users of the Online Collection Software
 - Continuous improvement for the OCS for mobile (smartphone, tablets, ...)
 - OCS: Integration of the e-ID solutions
 - Preparation of “Brexit” release reflecting the update of the ECI regulation related to the withdrawal of the UK from the EU
 - Any potential changes that would be implied by the reform of the ECI and the upcoming adoption of a new Regulation based on the Commission Proposal adopted in September 2017.
 - Improvement of the Accessibility.
- Improvements for ECI Register
 - Any potential changes that would be implied by the revision of the ECI regulation that has been triggered in April 2017 and ongoing.
 - Any changes implied by the change in the current regulation (e.g. in 2018, the new GDPR affected the ECI, ...)
 - ECI Register:-Improvements of the Organiser Account user interface following the User experience study that was conducted in 2017.
 - Upgrade of obsolete technical components.
- Interoperability improvements
 - More integration between the ECI Register, OCS and the Validation Tool
 - Enhancements of the Crypto Tool, Validation tool and the Live DVD
- Technical advice in relation to development of the legislative framework (risk analysis, studies, ICT impact assessment)

As regards European Parliament elections:

- Improvements of the tools for the national electoral authorities, to enhance the efficiency of the data exchange mechanism under Directive 93/109/EC – EP elections, and alleviate the burden on these authorities.
- Improvements of the tools on overall, and in particular, to cover candidates standing in EP elections, given that the tools currently only cover EU voters.
- Support on Member States test campaign to be readiness for the European Elections of 2019.
- 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.



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
Execution	Release December 2017	301	ISA	Q3/2017	Q4/2017
Execution	Release December 2017	175	ECI Budget Line (2016 Commitments)	Q3/2017	Q4/2017
Execution	Release June 2018	250	ISA	Q1/2018	Q2/2018
Execution	Release December 2018	223	ECI Budget Line ECI Budget Line (2017 commitments)	Q3/2018	Q4/2018
Execution	Release December 2018	250	ISA	Q3/2018	Q4/2018
Execution	Release June 2019	175	ECI Budget Line (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

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 2019	330	ECI Budget Line (2019 commitments)	Q3/2019	Q4/2019
Execution	Central platform June 2020	110	ISA	Q1/2020	Q2/2020
Execution	Release December 2020	730	ECI Budget Line (2020 commitments)	Q3/2020	Q4/2020
Execution	Release December 2020	400	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 ISA² 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 Council of 16 February 2011 on the citizens' initiative	http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02011R0211-20131008&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 12 th 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 ISA² 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 ISA² Action comprises Competition policy in the European Union, namely the enforcement of the Antitrust / Cartel rules, Merger control and State aid control¹⁸.

Data exchange processes in Case Management are cross-border: they rest upon intense co-operation between the European Commission and the Member States¹⁹, where information systems are prone to reusability at European and national level²⁰. 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.

¹⁸ Potentially extensible to any sector and policy area carrying out dossier-centric and data exchange-intensive administrative services or investigations.

¹⁹ 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.

²⁰ 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.

Data exchange processes in Case Management are cross-sector, covering: Fisheries, Agriculture, Energy and Environment, Information, Communication and Media, Financial 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 e-services 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 e-services serving EU interests, namely:
 - a. eRFI²¹. Common e-service to support requests for information, sector inquiries and market investigations, to replace the ageing eQuestionnaire²². Several National Competition Authorities have already manifested their interest in reusing this common e-service. The European Competition Network could be used to promote its re-use among other authorities.
 - b. eLeniency. Common e-service to support the European Commission's immunity and leniency programme in Cartel investigations. eLeniency is potentially reusable by National Competition Authorities of the Member States to support their national immunity and leniency programmes.
 - c. eConfidentiality. Common e-service to support confidentiality negotiation of case files with the investigated undertakings. eConfidentiality is potentially reusable by

²¹ 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').

²² 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.

National Competition Authorities of the Member States to support confidentiality negotiations processes at national level.

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 e-services by maximising synergies and economies of scale, reducing operation, improvement, change and development costs.

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 e-services 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 e-services 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 costs. This will be done by implementing and operating

interoperable common e-services that will benefit the European Commission services, Member States' administrations, business and citizens.

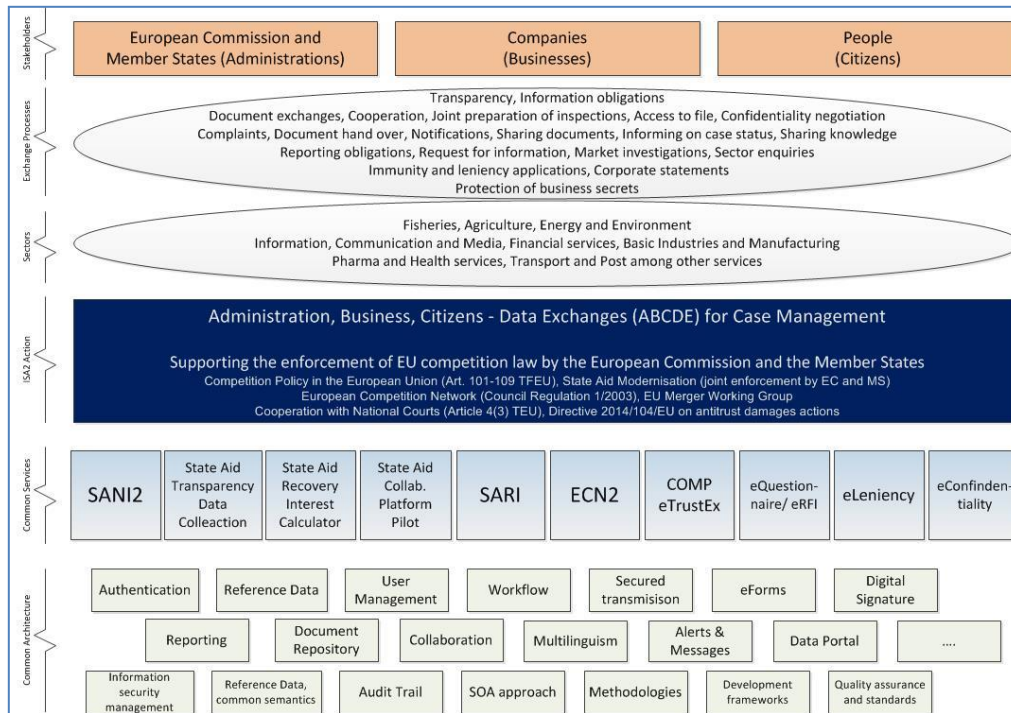
- ABCDE will promote the re-use and exchange of semantically consistent and highly qualitative data across European information systems in the Case Management domain, fostering cross-border and cross-sector interoperability and applying the 'Only once' principle when possible, thus eliminating unnecessary 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 e-services. 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 e-services.

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 ISA² 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 ISA² 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 e-services
In scope:
Operation and improvement of existing cross-border and cross-sector common e-services, serving EU interests, namely:
<p><u>GENIS</u>: State Aid common e-services: 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 GENIS common e-services will include the update of the State Aid Reporting tool (SARI) and the integration with DG ESTAT's re-usable solution for dissemination of statistical data (ISA² - Action 2016.06).</p> <p><u>ECN2</u>: common e-service 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</p>

Antitrust/Cartels investigations and Mergers control (Art. 101 to 106, TFEU and Merger Regulation 139/2004). ECN2 also supports exchanges between ECN and administrations of EFTA²³ 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 proposal²⁴ 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 eTrustEx²⁵: common e-service 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 control²⁶.

eQuestionnaire: common e-service 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.

²³ 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.

²⁴ Proposal Directive of the European Parliament and the Council.

http://ec.europa.eu/competition/antitrust/proposed_directive_en.pdf

²⁵ 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 ISA² action.

²⁶ 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 e-services

In scope:

Development and operation of cross-border and cross-sector common e-services serving EU interests, namely:

eRFI: common e-service 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 e-service.

eLeniency: common e-service 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 would be reusable by National Competition Authorities on Member States to support their national leniency programmes.

eConfidentiality: common e-service 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 PM², TOGAF and Agile@EC²⁷.
- 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 EICart²⁸.

7.3.5 ACTION PRIORITY

7.3.5.1 Contribution to the interoperability landscape

Question	Answer
<i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i>	All common e-services provided by ABCDE facilitate the interoperability between the European Commission and Member States' administrations, and with business and citizens.

²⁷ PM2 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.

²⁸ [European Interoperability Reference Architecture \(EIRA\) and European Interoperability Cartography \(EICart\)](#)

Question	Answer
<p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>Last, ABCDE aligns with the reference architecture proposed by EIRA from an Enterprise Architecture point of view. When possible ABCDE common e-services will be mapped to the EICart.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>Yes. ABCDE action implements common e-services 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 e-services are:</p> <ul style="list-style-type: none"> • 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
<p><i>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.</i></p>	<p>Yes. Additionally to the Package I e-services already operational described below, all new ABCDE common e-services 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.</p>
<p><i>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.</i></p>	<p>The explanation above applies in particular for all common e-services 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 and eQuestionnaire.</p> <p>Moreover, GENIS common e-services are used by three DGs, MARE, AGRI, COMP and the Single Resolution Board (SRB).</p> <p>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).</p>

7.3.5.3 Cross-border

Question	Answer
<p><i>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.</i></p>	<p>Yes. Additionally to the Package I e-services 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 e-services.</p>
<p><i>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.</i></p>	<p>Most ABCDE common e-services included in Package I, are already operational and being used by public administrations of all Member States, the EFTA countries and the European Commission.</p> <p>This is the case of the GENIS State Aid common e-services (SANI2, SARI, State Aid Transparency Award Module, State Aid Interest Recovery Calculator, etc.) and ECN2.</p>

7.3.5.4 Urgency

Question	Answer
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>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 e-services support the implementation of EU legislation such as:</p> <ul style="list-style-type: none"> • Antitrust/Cartels investigations (Art. 101 and 102 of the TFEU);

Question	Answer
	<ul style="list-style-type: none"> • 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 and immunity policy.
<p><i>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?</i></p>	<p>No other sources of financing are available to finance this action. According to the ECN+ proposal²⁴, the operation and improvement of ECN2 should be covered by the ISA² programme until 2020, subject to the programme's available resources, eligibility and prioritisation criteria.</p> <p>ABCDE action fits within the scope of the ISA² 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.</p> <p>Moreover, ABCDE complies with several ISA² activities by supporting and promoting the assessment, improvement, development, establishment, operation and re-use of existing and new interoperability solutions.</p> <p>ABCDE common services are developed in compliance with the ISA² general principles of re-usability, interoperability, multilingualism, administrative simplification and modernisation, transparency, effectiveness and efficiency, and user-centricity.</p>

7.3.5.5 Reusability of action outputs

Name of reusable solution	<p>State aid common e-services (developed under ISA Action 1.11 – GENIS):</p> <ul style="list-style-type: none"> • SANI2; • SARI; • State Aid Transparency Award Module; • State Aid Recovery Interest Calculator; • State Aid Collaboration Platform.
Description	<p>These common e-services 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.</p>
References	<p>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</p>
Target release date / Status	<p>All State Aid common e-services are in production.</p>
For solutions already in operational phase - actual reuse level	<p>SANI2: 4049 users. SARI: 3628 users. State Aid Transparency Award Module: 1402 users. State Aid Recovery Interest Calculator: 80 users. State Aid Collaboration Platform: 1054 users.</p>

Name of reusable solution	<p>ECN2: common service developed under ISA Action 2.9 – DRS (ECN Pilot).</p>
Description	<p>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</p>

	<p>other about the status of Antitrust cases, share related documents and prepare inspections.</p> <p>ECN2 is also used by the EU Merger Working Group as an efficient and secure mean to exchange documents in Merger cases.</p> <p>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.</p>
Reference	https://webgate.ec.europa.eu/ecn/
Target release date / Status	ECN2 is in production
For solutions already in operational phase - actual reuse level	952 active users.

Name of reusable solution	<p>New ABCDE common e-services with a potential of re-use by Member States administrations:</p> <ul style="list-style-type: none"> • eRFI; • eLeniency; • eConfidentiality.
Description	<p>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.</p> <p>eLeniency and eConfidentiality. Immunity/leniency programmes are effective weapons in the fight against Cartels. Confidentiality negotiations are mandatory process for</p>

	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 e-services by National Competition Authorities.
Reference	URLs will be made public when common e-services enter in production.
Target release date / Status	<ul style="list-style-type: none"> • eRFI target date for production is Q4 2019. • eLeniency target date for production is Q1 2019. • eConfidentiality target date for production is Q4 2019.
Critical part of target user base	To be defined during the Executing phases of the projects.

Name of reusable solution	<p>Building Blocks:</p> <ul style="list-style-type: none"> • Document Repository Services (DRS) ²⁹; • Multilingual; • eForms; • Reference Data; • Audit Trail; • Messaging.
Description	<ul style="list-style-type: none"> • 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

²⁹ 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.

	<p>consideration for system performance and reusability.</p> <ul style="list-style-type: none"> • eForms: generic forms easily defined and maintained. • Audit Trail: reusable building block to provide audit trail support of the operations carried out in a common service. <p>These modules are decoupled as generic building blocks and published in Join-up for re-use.</p>
Reference	<p>https://joinup.ec.europa.eu/software/drs</p> <p>https://joinup.ec.europa.eu/asset/multilingual/home</p> <p>https://joinup.ec.europa.eu/asset/rd</p> <p>https://joinup.ec.europa.eu/asset/forms/home</p>
Target release date / Status	All building blocks are in production and re-used by several common e-services 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
<p>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)?</p> <p>Which ones?</p>	<p>Yes. Additionally to the interoperability solutions already re-used by ABCDE that are described above, 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.</p> <p>Some candidate building blocks that will be evaluated are:</p> <ul style="list-style-type: none"> • Electronic Signatures Service (ESSI) for e-signature; • eUI for graphical user interface; • Activiti or Compass for workflow;

Question	Answer
	<ul style="list-style-type: none"> • Enterprise Search for content search; • Corporate Notification Services (CNS) for notifications; • eTrustExchange platform for file transmission. <p>For eRFI, eConfidentiality and eLeniency, it is already planned to re-use several corporate building block as eUI, eTrustExchange, 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.</p> <p>Moreover, GENIS common e-services will use DG ESTAT's re-usable solution for dissemination of statistical data (ISA² - Action 2016.06) in order to produce the State Aid Scoreboard.</p>
<p><i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	<p>Yes. ABCDE common e-services in production (SANI2, State Aid Transparency Award Module, State Aid Recovery Interest Calculator, ECN2, etc.) are already re-using solutions implemented by ISA² and ISA programs as eTrustEx (ISA² 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.</p>

7.3.5.7 Interlinked

Question	Answer
<p>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?</p>	<p>Yes. Competition policy tools are key contributors for the implementation and success of several of the EU high political priorities as, the Jobs, Growth and Investment agenda, the Digital Single Market (DSM) and the Energy Union³⁰ and key areas such as the Banking Union and the fight against tax evasion.</p> <p>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.</p>

³⁰ 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 e-services
<p>Problems:</p> <ul style="list-style-type: none">• IT solutions supporting EU legislation could be either implemented in each Member State or with common e-services 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 e-services 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.
<p>Resulting needs:</p> <ul style="list-style-type: none">• Need to operate existing cross-sector and cross-border interoperable common e-services 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 e-services 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 e-services in the interest of the EU upon legislation changes.

**Problems and needs addressed by
Package II) Development and operation of new ABCDE common e-services**

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 e-services 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 e-services 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 ISA² 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 e-services.
- 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)	<p>State-of-the-art common e-services 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:</p> <ul style="list-style-type: none"> • 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 e-services. Will be increased with Package II e-services from Q1 2019.	European Union as a whole: Institutions, Member States, businesses and citizens.
Cost savings derived from the common use of common ABCDE e-services	The provision and operation of central e-services 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 e-services.	European Commission and Member States' administrations.
Cost savings resulting from the re-use of ABCDE common e-	Similar exchange processes in the context of Competition policy take place both at European and national level. Implementing e-services that can be re-used by	From Q1 2019 (eLeniency) and Q4 2019 (eRFI and	European Commission and Member States' administratio

Impact	Why will this impact occur?	By when?	Beneficiaries
services by Member States' administrations	Member States to support those processes translates in cost savings (i.e. re-using eRFI by National Competition Authorities).	eConfidentiality).	ns.
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 e-services. Will be increased with Package II e-services from Q1 2019.	European Commission, Member States' administrations and business.
Enhanced security in the manipulation, transmission and storage of sensitive information.	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 substituting the use of non-automated means (fax, mail post, non-encrypted email, etc.) inadvertent document disclosures will be minimised.	Benefit already provided by Package I e-services. Will be increased with Package II e-services from Q1 2019.	European Commission, Member States' administrations and 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:

- **Identifies and involves user representatives.** 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, 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 them to provide immediate feedback on the incremental versions of the systems developed, so the projects can be adjusted accordingly to their needs.
- **Carry-out User eXperience (UX) studies:** for new common e-services (as eRFI and eConfidentiality) we are carrying-out studies with user experience specialists in order to design user-friendly 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 e-services	
Project Owner	Johannes Laitenberger (DG COMP Director General)

Stakeholders	Representatives
ECN2	
Project Owner	Anna Vernet (HoU COMP.A.4)
COMP eTrustEx	
Project Owner	Marc Ekelmans (HoU COMP.R.1)
eQuestionnaire	
Project Owner	Julia Brockhoff (DHoU COMP.A.2)
eRFI	
Project Owner	Julia Brockhoff (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	Manuel Pérez Espín (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 e-services under the ISA² Action ABCDE will implement their communication management processes following the PM² methodology and will participate to the different ISA² communication channels, 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.
- **DIT³¹ 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 e-services used by the Member States' administrations, the European Commission holds several meetings per year to ensure the alignment of the common e-services with Member States' needs. Often new versions of the tools are presented for feedback and overview of the forward planning is presented. IT trainings and Questions &

³¹ DIT stands for Document handling and IT systems Group.

Answers sessions are also organised in this context. 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). Additional KPIs will be defined in order to measure the achievement of the Package II services' success criteria.

Description of the KPI	Target to achieve	KPI values Q2 2018
Percentage of State Aid Notifications received via SANI2 common e-service	80%	99,36%
Number of State Aid Awards published via the Transparency Award Module common e-service	500 (per quarter)	10166
Number of active users of the Transparency Award Module common e-service	1000	1391
Number of documents downloaded via ECN2 common e-service	20 000 (per quarter)	51458
Number of bundles transferred via COMP eTrustEx common e-service	600 (per quarter)	749
Availability of eQuestionnaire common e-service	95%	99,99%

7.3.9.5 Governance approach

The governance of ISA² Action ABCDE can be seen from two perspectives: global governance of the action as a whole, and governance of each common e-service 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 ISA² governance structures and reporting as described in the ISA² legal basis.

From an individual project/service perspective, each ABCDE common e-service implements a governance model based on the PM² 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 e-services.

The common e-services under Package I are in operational phase throughout the duration of the ISA² programme. The operational phases comprise the improvements of these common e-services 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 e-services (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 e-services.

The common e-services under Package II will be implemented following PM² 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, eLeniency and eConfidentiality projects are currently in Executing phase.

Package III) Establishment of a common ABCDE architectural framework - CESA

The implementation of the ABCDE common architecture takes input from architectural analysis of the existing common e-services under Package I, and from the architectural analysis carried out during the initiating and planning phases of the new common e-services under Package II.

Current status: CESA project is currently in Executing phase.

Services – Quality management, quality assurance, testing, support and hosting

In order to gain efficiency and save costs, several non-development activities are centralised as a horizontal service supporting all the ABCDE common e-services. This service offers quality management, quality assurance and quality control capabilities, as well as it provides 2nd level user support to 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	Antici pated Allocat ions (KEU R)	Budget line ISA ² / others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
Package I - Operation and improvement of existing ABCDE common e-services					
GEN-Operation	GENIS	3200	ISA ²	Q2/2016	Q4/2020
ECN-Operation	ECN2	1355	ISA ²	Q2/2016	Q4/2020
ETX-Operation	COMP eTrustEx	500	ISA ²	Q2/2016	Q4/2020
EQU-Operation	eQuestionnaire	400	ISA ²	Q2/2016	Q3/2020
Package II – Development and operation of new ABCDE common e-services					
ERF-Initiating	eRFI	100	ISA ²	Q2/2016	Q4/2016
ERF-Planning	eRFI	60	ISA ²	Q1/2017	Q2/2017
ERF-Executing	eRFI	1180	ISA ²	Q2/2017	Q2/2019
ERF-Closing	eRFI	150	ISA ²	Q3/2019	Q4/2019
ERF-Operation	eRFI	260	ISA ²	Q1/2020	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	Q1/2019
ELE-Operation	eLeniency	150	ISA ²	Q2/2019	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	750	ISA ²	Q3/2017	Q2/2019
ECO-Closing	eConfidentiality	80	ISA ²	Q3/2019	Q4/2019
ECO-Operation	eConfidentiality	150	ISA ²	Q1/2020	Q4/2020
Package III – Establishment of a common ABCDE architectural framework					
CES-Initiating	CESA	70	ISA ²	Q3/2016	Q1/2017
CES-Planning	CESA	165	ISA ²	Q1/2017	Q2/2017
CES-Executing	CESA	280	ISA ²	Q3/2017	Q4/2018
CES-Closing	CESA	50	ISA ²	Q1/2019	Q2/2019

Phase: Initiating Planning Executing Closing/Final evaluation	Description of milestones reached or to be reached	Antici pated Allocat ions (KEU R)	Budget line ISA ² / others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
CES-Operation	CESA	1355	ISA ²	Q3/2019	Q4/2020
DRS-Operation	DRS operation	600	ISA ²	Q2/2016	Q4/2020
Services – Quality management, quality assurance, testing, support and hosting					
QMA- Operation	Quality Management	630	ISA ²	Q2/2016	Q4/2020
SUP-Operation	User support and IS testing	1369	ISA ²	Q2/2016	Q4/2020
HOS-Operation	Hosting DIGIT Data Center	760	ISA ²	Q2/2016	Q4/2020
	TOTAL	14504	ISA ²		

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
2017	Services - Operation	429	429
2018	Package I - Operation	1120	
2018	Package II - Development	920	
2018	Package III - Development & Operation	370	
2018	Services - Operation	590	

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019	Package I - Operation	1280	
2019	Package II - Development & Operation	1200	
2019	Package III - Operation	370	
2019	Services - Operation	520	
2020	Package I - Operation	1020	
2020	Package II - Operation	410	
2020	Package III - Operation	560	
2020	Services - Operation	790	
	TOTAL	14504	

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.

7.4.2 EXECUTIVE SUMMARY

The purpose of the action is propose an efficient solution for setting up an electronic system for handling applications for access to documents held by the European Commission documents based on Regulation 1049/2001. The proposed solution will cover the entire flow from the EU citizens' or stakeholders' requests until the answer of the European Commission, providing access to the requested documents or (partially) refusing access to them. The proposal lists possibly relevant existing IT tools and identifies components that could be reused in order to propose an integrated and fully electronic solution.

Based on the results of the study conducted in 2018, including a stakeholder analysis, and a technical analysis of possible solutions, the final purpose of the action is to implement an online platform for submitting and handling requests for public access to documents held by the Commission. This solution will cover all workflows for the exchanges on the online platform, as well as for the management system to handle the requests for access to 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.

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.

Process and actors

The access to document process comprises the following actors:

- 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 (an application owned by Secretariat-General of the European Commission). 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 Transparency unit in the Secretariat-General 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 Case handlers of the Transparency Unit and the final answer is a European Commission 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 European Commission 24 hours before publication.

The adoption of the confirmatory decisions is processed via Decide Decision 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, validated by the Commission including documents with references COM, C, SEC, OJ, PV, SWD and JOIN, produced since 1 January 2001. They are automatically drawn from internal Commission applications (e.g. VISTA) and, upon disclosure, automatically uploaded into the Register of EC documents (RegDoc).

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.

Purpose of the action

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. 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.

In particular, the action will propose:

- an online portal for citizens and businesses to:
 - easier file initial and confirmatory applications for access to documents;
 - provide step-by-step guidance on how best to identify, in their requests, the documents they want;
 - provide an electronic overview of all their requests and all their communications with the Commission regarding their requests;
 - facilitate the communication with the Commission whenever additional information on the request is needed;
 - provide access through the platform to the (fully or partially) released documents;
 - 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;
 - facilitate electronic consultations of third parties in cases where the documents requested originate from them;
 - 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).

- a management system to handle the requests, that provides:
 - a workflow system for an efficient management of the request;
 - an easy and integrated way of requesting translations when necessary;
 - guidance and templates for generating the documents corresponding to each step of the handling of the request;
 - statistics and reports on requests received, answers provided and documents identified;
 - where possible, automatic publication of documents to which access is granted in the relevant registers;
 - ‘data protection by design’, including the upfront identification of personal data and their easy extraction, and their deletion after expiry of the retention period.

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.

7.4.3 OBJECTIVES

The main objectives of the action are, based on the stakeholder analysis conducted in 2018 and a technical study of existing processes, 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.

The action will investigate 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 study will investigate 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 EC (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.

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 requests;
- making documents available to the wider public.

(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 applicants with an electronic overview of all their requests and all their communications with the EC regarding their requests;
- 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;
- Facilitating the identification, retrieval and deletion of applicants’ personal data, based on the principles established by Regulation 2018/1725 of ‘data protection by design’, ‘data protection by default’ and ‘data minimisation’.

The technical solution should be generic in order to be reusable by any transnational, national or subnational authority dealing with access to document requests.

(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 is 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 ISA² 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 implement a solution to provide applicants, Member States, other EU institutions and third parties with a user-friendly interface to the EC. It will be based on an investigation of the feasibility of integrating existing ISA² solutions such as Open e-TrustEx, e-Delivery and EUSurvey with EC corporate solutions (such as CNS, EU Login, ERS 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 requests from the public for access to documents.

In addition, the action will also investigate how the implemented solution 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:

- a proposed solution:
 - o based on the study of possible solutions conducted in 2018, including a stakeholder survey: proposal for 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 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;
 - o training material and communication to the users.

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.

7.4.5 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. (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.

(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. Annually, the EC receives approximately 6000 initial applications and 300 confirmatory applications for access to documents under Regulation 1049/2001.

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

The 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.

(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.

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”.

Moreover, the current system has triggered criticism by the European Ombudsman and civil society, 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 ISA² 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;

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, EU competition rules on the market or EU rights.

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

The implemented solution will be based on the results of the study conducted in 2018 with a view to identifying which ISA² actions can be re-used within the scope. The action will study 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;
 - ERS (External Repository Services) for the storage of documents;
 - eTranslation services;
- 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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>See answer to 1.1.5 Action priority – criteria (a).</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes. No other alternative action or solution is available for a fully electronic ‘access to documents’ handling process. However, the action strives to reuse existing components as much as possible.</p>

7.4.5.2 Cross-sector

Question	Answer
<i>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.</i>	See answer to 1.1.5 Action priority – criteria (b).
<i>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.</i>	The current RegDoc web form and the external/private AsktheEU website are used for requests across all policy sectors, with several important flaws.

7.4.5.3 Cross-border

Question	Answer
<i>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.</i>	See answer to 1.1.5 Action priority – criteria (c).
<i>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.</i>	As explained above, the current ‘access to documents’ process already covers (currently paper-based) consultations with all Member States and the analysis and solution implementation will reflect this.

7.4.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	See answer to 1.1.5 Action priority – criteria (d).
<i>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?</i>	The ISA ² 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.

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 full electronic solution (online platform, requests management system version 1 and version 2) will be delivered in Q2/2020.
Critical part of target user base	<ul style="list-style-type: none"> - 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)	

7.4.5.6 Level of reuse of existing solutions

Question	Answer
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	See answer to 1.1.5 Action priority – criteria (f).
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	

7.4.5.7 Interlinked

Question	Answer
<i>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?</i>	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	<ul style="list-style-type: none"> - 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	<p>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.</p> <p>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.</p>

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	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - 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 is based will not be supported by that time.
a successful solution would be	<p>A modern, interoperable, secure and reliable IT system supporting the full process for handling requests for access to documents.</p> <p>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.</p>

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). It would also improve the Commission's image as a modern and transparent public administration	Q2/2020	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.	Q2/2020	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.	Q4/2019	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, citizens, businesses and Member States.	Q2/2020	Citizens / businesses / EU and national administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Increased transparency	An online platform will make it easier to introduce and follow-up requests for public access to documents.	Q2/2020	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 have taken place, are ongoing or planned:

- a consultation was conducted via EUSurvey to gather feedback from the external stakeholders (citizens, private organisations and/or any other potential applicant). This public consultation ran from 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 took place in October 2018 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.

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 will be user-centric and try to minimize manual data encodings throughout the business process. The online portal will also be designed from a user-centricity perspective, in order to provide to 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	<p>Examine how the personal data of the applicants, the staff of EU institutions, Member States and third parties can be kept confidential and protected, and easily retrieved in case of a request for access by the data subjects concerned, in accordance with</p> <ul style="list-style-type: none"> - the new General Data Protection Regulation (GDPR); - the Data Protection Regulation 2018/1725; - and the corresponding new implementing rules that the Commission will put in place.
Reference	
Target release date / Status	<p>Study to be delivered in Q4/2018.</p> <p>The full electronic solution (online platform, requests management system version 1 and version 2) will be delivered in Q2/2020.</p>

Output name	Requests Management system (Version 1)
Description	<p>Management system to handle the access to requests, including:</p> <ul style="list-style-type: none"> - 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.
Reference	
Target release date / Status	Q4/2019

Output name	Requests Management system (Version 2)
Description	<ul style="list-style-type: none"> - Creation of additional features to translate documents; - Creation of the online platform allowing to communicate with third parties; - Possibility to launch an Ares workflow through the online platform; - Possibility to automatically publish released documents.
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
Applicants (European citizens, as well as other natural and legal persons, irrespective of the place of their residence or registered office)		End users of the online platform. Consulted as part of the study public consultation from 29 June to 21 September 2018.
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

Stakeholders	Representatives	Involvement in the action
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. Applicants, which may be EU citizens, or other natural or legal persons, irrespective of the place of their residence or registered office;
2. NGOs defending the rights of applicants;
3. 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);

4. Other EU institutions' staff;
5. Member States' administration or Permanent Representation staff;
6. Third parties.

7.4.9.3 Communication and dissemination plan

The study will be nourished through dialogue with the stakeholders. Once the study is 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 project. This has already been done during the study phase. Trainings will also be organised once the system is mature enough for all end users (coordinators and case handlers).

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 ISA² communication team, as well as by all means that the Communication Unit in SG can provide.

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	100%	Q4/2018
Comprehensive proposal of a generic technical solution	100%	Q4/2018
% of requests through the web portal answered electronically	100%	Q3/2020
# of replies by manually written email outside of the web portal	0%	Q3/2020
Number of initial and confirmatory applications answered outside of deadline	0%	Q4/2020

7.4.9.5 Governance approach

The project 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. IVAN Laur (SG.C5)
- Business Managers: Ms FOUWELS Martine until 16 January 2019, and from 16 January 2019 Mr Dejan BRKIC (SG.C1)
- Project Support Team (PST): Business Managers and Project Managers
- Project Core Team (PCT): To be appointed
- Business Implementation Group (BIG):
 - o Representatives from Transparency unit in the Secretariat-General(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 – 31/10/2018 (using the ‘Registries and Publications’ administrative budget line of the Secretariat-General) are as follows:

- The team progressed with the analysis of the requirements 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).

In the second part of 2018, the team will analyse the results of the stakeholders' consultations and assess the feasibility of reusing and integrating the existing IT frameworks and components in order to propose an improved, electronic business process.

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/YYYY)	End date (QX/YYYY)
Planning, Execution	Study to analyse and propose an efficient solution for the electronic access to EC documents	140	80 : ISA ² 60 : SG administrative budget line 'Registries and publications'	Q2/2018	Q4/2018
Initiation, Planning	Project Charter	60	ISA ²	Q1/2019	Q1/2019
Execution	Technical analysis, architecture design	200	ISA ²	Q1/2019	Q2/2019
Execution	Development of the Management system Version 1	300	200 : ISA ² 100 : SG administrative budget line 'Registries and publications'	Q2/2019	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)
Execution	Development of the Public Portal	340	ISA ²	Q3/2019	Q2/2020
Execution	Development of the Management system Version 2	320	220 : ISA ² 100 : SG administrative budget line 'Registries and publications'	Q1/2020	Q4/2020
Closing	Project closure and Final evaluation	80	ISA ²	Q4/2020	Q4/2020
	Total	1 440 (ISA²: 1 180)			

7.4.11.2 Breakdown of ISA² 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	600	
2020	Execution, Closing	500	
	Total	1 180	

7.4.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
<p>Treaty on European Union:</p> <ul style="list-style-type: none"> - Article 1 states that “decisions are taken <i>as openly as possible</i> and as closely as possible to the citizens”; - Article 4(3) enshrines the duty of sincere cooperation between EU institutions and Member States. 	<p>TEU</p>	
<p>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.</p>	<p>TFEU</p>	
<p>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</p>	<p>Regulation 1049/2001</p>	
<p>2001/937/EC, ECSC, Euratom: Commission Decision of 5 December 2001 amending its rules of procedure (notified under document number C(2001) 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.</p>	<p>EC Decision C(2001) 3714</p>	

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:
 - assessing the current situation and identifying interoperability challenges,
 - assessing the target situation,
 - 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
<i>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:</i>	This action will directly contribute to the objectives of the ISA ² 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
<ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>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.</p>

7.5.5.2 Cross-sector

Question	Answer
<p><i>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.</i></p>	<p>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.</p>
<p><i>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.</i></p>	<p>N/A</p>

7.5.5.3 Cross-border

Question	Answer
<i>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.</i>	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).
<i>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.</i>	N/A

7.5.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	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.
<i>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?</i>	Supporting interoperability between public administrations at the heart of this action. The ISA ² 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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	<p>The proposal will contribute to the implementation of the overall EIF principles and recommendations.</p> <p>The possibility to use the CPSV-AP and the ISA core vocabularies like the persons and location vocabularies in this frame will be assessed.</p> <p>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.</p>

Question	Answer
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	N/A

7.5.5.7 Interlinked

Question	Answer
<i>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?</i>	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 metrics³² indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Degree of completeness of the IT architecture	100%	2018

³² 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	ISA ²	Q4 2017	Q1 2018
Planning	IT architecture	90	ISA ²	Q4 2017	Q1 2018
Planning	Technical and functional requirements overview	100	ISA ²	Q4 2017	Q2 2018
Execution	Assessment of the current situation and identification of interoperability problems	60	ISA ²	Q2 2018	Q2 2019
Execution	Identification of existing tools, building blocks and development needs	50	ISA ²	Q3 2018	Q2 2019
Execution	Options for implementation and estimation of costs	100	ISA ²	Q4 2018	Q2 2019
Closing / Final evaluation		10	ISA ²	Q4 2018	Q2 2019
	Total	420			

7.5.11.2 Breakdown of ISA² 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 1100 times. The cartography tool, CarTool v1.0.0, based in EIRA v1.0.0, it is expected to be released in September 2016 along several Solution Architecture Templates. In 2016 there have been pilots in Czech Republic, EFSA and it is expected a pilot in Spain. In 2017, the focus was to enrich EIRA with interoperability specifications. EIRA 2.0.0 was release in July 2017. In 2018, EIRA 2.1.0 was also released. In 2019 the focus will be in developing further alignment with EIF revision (i.e. key interoperability enablers), synergies with NATO reference architecture and learning materials.

Additionally, intensive efforts will be deployed promoting adoption of EIRA in the Member States, including the implementation of pilot applications, and the Commission.

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 European 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 ISA² 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.

8.1.5 ACTION PRIORITY

The action

- a) will contribute to priority a) of the ISA² Decision. EIRA is considered as a cornerstone on the Communication on the EIF revision and it is mentioned in the ISA² Decision legal bases;
- b) will contribute to priority b) of the ISA² Decision by the horizontal nature of the action;

- c) will contribute to priority c) of the ISA² 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 ISA² Decision by the re-usability of the EIRA;
- f) will contribute to priority f) of the ISA² Decision by the synergies with the CAMSS action and IMM action;
- g) will contribute to priority g) of the ISA² Decision by the link of the action with the Digital Agenda for Europe.

8.1.5.1 Contribution to the interoperability landscape

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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 EIFrevision</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes. There is no other European reference addressing architecture aspects of interoperability.</p>

8.1.5.2 Cross-sector

Question	Answer
<i>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.</i>	Yes. EIRA and the CarTool are policy neutral.
<i>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.</i>	Yes. EIRA v1.0.0 was released in March 2016. Since then, it has been used documenting +100 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
<i>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.</i>	Yes.
<i>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.</i>	Yes. EIRA has been deployed in EE, NL, DK, ES, CZ and PL

8.1.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	Yes. It is captured in the ISA2 text
<i>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?</i>	<i>The ISA2 scope and financial capacity fit for the implementation of the EIRA since it is a cornerstone of ISA²</i>

8.1.5.5 Reusability of action's outputs

Name of reusable solution	EIRA
Description	European Interoperability Architecture
Reference	V3.0.0
Target release date / Status	June 2019
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)	+1100 downloads since March 2016

Name of reusable solution	CarTool
Description	Carography Tool
Reference	V3.0.0
Target release date / Status	June 2019
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	Government ICT Roadmap High-Level Requirements Solution Architecture Template
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 2020
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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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

Question	Answer
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	SEMIC (core vocabularies and interoperability specifications) TestBed for EIRA conformance

8.1.5.7 Interlinked

Question	Answer
<i>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?</i>	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: <ul style="list-style-type: none"> • 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, policy making support		European and Member States' Public 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	EIRA use cases: Solution design, creation of cartographies,		European and Member

Impact	Why will this impact occur?	By when?	Beneficiaries
quality of digital public service	portfolio mgmt. decision support, policy making support		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 7.1.5.5.

8.1.9 ORGANISATIONAL APPROACH

8.1.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
SRSS	Francisco Garcia Moran and Konstantinos Dryllerakis	Business need identification and promotion/deployment
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

Stakeholders	Representatives	Involvement in the action
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	
Member States	The ISA2 Committee/Coordination/working Groups	

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 an external contractor and in close collaboration with the EIRA Specialist Working Group 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 ISA² 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.

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 Solution Architecture Template for a Government ICT Roadmap High-Level Requirements. This SAT 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 for 2019

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	Anticipat ed Allocatio ns (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	<ul style="list-style-type: none"> • 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 	595	ISA ²	Q2/2016	Q1/2017
Execution - Operation	<ul style="list-style-type: none"> • 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	Anticipat ed Allocatio ns (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Templates <ul style="list-style-type: none"> • Definition of interoperability specifications and of the accompanied methodology of applying them • Enhancements to the EIRA. 				
Execution - Operation	<ul style="list-style-type: none"> • EIRA workshops in the Member States and the Commission DGs • EIRA workshops on Solution Architecture Templates • Implementation of the EIRA library of Interoperability specifications • Enhancements to the EIRA. • Gov ICT Roadmap High-Level Requirements SAT 	375	ISA ²	Q3/2019	Q3/2020
	Total	1520			

8.1.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		300	200
2017		570	
2018		250	250
2019		375	
2020			

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.

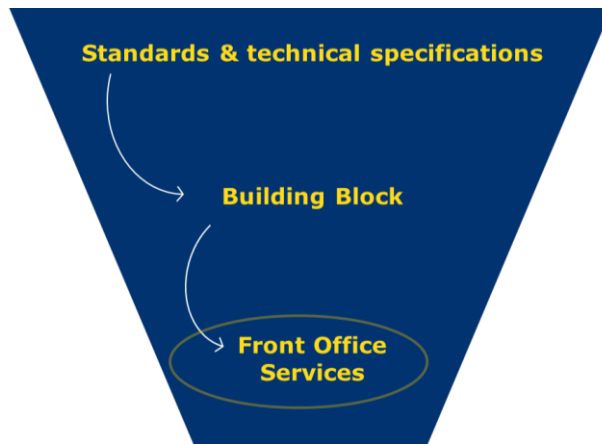
In the second half 2016 and until the first half 2017 the full version of the IMM was abandoned due to its user-reported complexity and the action focused exclusively on the IMM Lite, from then on the sole version of the model (the IMM). The action’s main objective was to maximize the impact of the IMM 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 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 shall investigate how to transfer IMAPS capabilities/knowledge to Member States replicating the successful experience in Greece.

The *action* supports the European public administrations in implementing the Tallinn declaration in the domain of delivered public services as well as in implementing the EC

‘Digital Solutions for European Services strategy’³³ The below figure positions IMAPS within the ‘Digital Solutions for European Services strategy’ steps for creating Reusable Solutions Platform and Digital Infrastructure



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 semantic 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.

8.2.4 SCOPE

Every European public service is in scope of this action. More precisely, the action will examine possible updates and extensions of the model to cover additional requirements, coming from different sources such as: a) the performed assessments and the received

³³ The “STRATEGIC REFRESH: Common Services for Trans-European Systems within the EU Institutions” referred to the “plan to deliver a common digital platform that will help policy DGs to modernise existing TES and will serve as a foundation for future TES”. This notion has been developed in the 2018 TES report in Annex 1.

feedback, b) progress in other ISA2 Actions (e.g. EIRA, CAMSS, NIFO, etc.), c) relationship with other similar models developed elsewhere and d) the revised European Interoperability Framework. Revisions of the IMAPS will be based on the IMAPS change management process.

8.2.5 ACTION PRIORITY

The action

- h) will contribute to priority a) of the ISA² Decision by accelerating the completion of the interoperability landscape across the Union;
- i) will contribute to priority b) of the ISA² Decision by the horizontal nature of the action;
- j) will contribute to priority c) of the ISA² 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 by the last assessments performed (+50);
- l) will contribute to priority e) of the ISA² Decision by the re-usability of the IMM based solution;
- m) will contribute to priority f) of the ISA² Decision by the synergies with the CAMSS action and EIA action;
- n) will contribute to priority g) of the ISA² Decision by the link of the action with the Digital Agenda for Europe.

8.2.5.1 Contribution to the interoperability landscape

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> 	<p>The proposal contributes directly to the implementation of the European Interoperability Strategy, European Interoperability Framework, Digital Single Market Strategy and Digital Agenda for Europe.</p> <p>Interoperability Maturity Assessment of Public Services is an instrument to assess the progress made so far by different public</p>

Question	Answer
<ul style="list-style-type: none"> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>administrations to reach greater interoperability of their public services.</p> <p>Based on the IMAPS, public administrations can measure how well a public service is able to interact with other organizations to realise mutually beneficial and agreed common goals through the exchange of information and reuse of services.</p> <p>In addition to its descriptive nature, the IMAPS provides guidance through recommendations to public service owners to improve the interoperability maturity of their services and also can be used as a benchmarking tool that allows a quantitative and qualitative comparison amongst peers.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>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.</p>

8.2.5.2 Cross-sector

Question	Answer
<p><i>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.</i></p>	<p>Yes. The IMAPS is useful and can be utilised in any EU policy area.</p> <p>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</p>

Question	Answer
	<p>enablers, manifestations, opportunities for reusing or providing services and key improvement recommendations.</p> <p>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.</p>
<p><i>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.</i></p>	<p>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):</p> <ul style="list-style-type: none"> • Procurement • Invoicing • Justice • Environment • Employment • Food safety • Taxation • Health • Transport

8.2.5.3 Cross-border

Question	Answer
<p><i>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</i></p>	<p>Yes. The IMAPS is useful and can be utilised by public administrations of any EU Member State.</p>

Question	Answer
<i>answer for each of the concerned Member State.</i>	<p>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.</p> <p>Moreover, The IMAPS is accompanied with specific configuration guidelines that allow its configuration specifically to single country, region, province or municipality.</p>
<i>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.</i>	<p>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:</p> <ul style="list-style-type: none"> • Netherlands • Greece • Spain • Sweden

8.2.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	<p>Yes.</p> <p>The revised European Interoperability Framework refers to the Interoperability Maturity Model (now IMAPS) as an instrument that promotes the idea of interoperability-by-design, which means that</p>

Question	Answer
	<p>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).</p>
<p><i>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?</i></p>	<p>The ISA2 scope and financial capacity fit for the implementation of the IMAPS since:</p> <ul style="list-style-type: none"> • 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 Interoperability Strategy, Digital Single Market Strategy and Digital Agenda for Europe. • Facilitates and promotes the re-use of

Question	Answer
	<p>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.</p> <ul style="list-style-type: none"> • 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.
Reference	https://joinup.ec.europa.eu/release/imaps/v111
Target release date / Status	January 2018
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)	

8.2.5.6 Level of reuse of existing solutions

Question	Answer
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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.
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<p><i>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?</i></p>	<p>YES. The model contributes to the eProcurement implementing acts as an assessment method of every step in the eProcurement chain.</p> <p>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.</p>

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 public service	Following the recommendations of IMM to improve the maturity level of public services		European and Member States' Public 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.

User group	Description	Usage
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
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 ISA² 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 ISA² 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 IMM training module, the model will be presented in National Vocational Training Agencies aiming to use them as a channel to raise awareness about IMM. 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 ISA² communication activities, IMM 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 IMM 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	mid 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, 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 ISA² Actions and recommendations provided by users who have used the model to assess real-life public services.

The foreseen activities for the ISA² Work Programme 2019 include the sematic specialization of IMAPS and the deployment of IMPAS capabilities in two Member 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	<p>a) Development of an ecosystem for supporting the self-assessment nature of the model,</p> <p>b) alignment with the revised EIS and EIF,</p> <p>c) usage of the model in order to identify common patterns of interoperability-related problems and challenges among public services and,</p> <p>d) implementation of new IMM modules and/or configurations based on needs identified in all previous phases.</p>	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
	Total	673			

8.2.11.2 Breakdown of ISA² 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			

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. The observatory needs also to be strengthened in its role of a respected and authoritative source of information **on the state of play of interoperability and digital public services in Europe**. In parallel, NIFO is establishing the formal links between the Action Plan for interoperability (IAP) and, on one hand the new EIF monitoring mechanism, and on the other hand the current ISA2 monitoring and evaluation process in order to establish the data sources, sample questions and key indicators to be captured to perform the evaluation of the IAP accordingly.

In fact, NIFO will

- Define the monitoring mechanism of the EIF and the IAP (primary/ secondary indicators; sample questions; composite questions)
- Start in 2019 the data collection for the monitoring of the EIF and the IAP
- Provide the first results of the EIF and IAP monitoring
- Create guidelines, training modules, a toolbox of solutions and other material to support the implementation and the monitoring mechanism of the EIF and IAP
- Develop the concept of EIF ambassadors to support the MS in the efforts to implement the EIF
- Continue to provide an overview of the eGovernment activities in European countries and publish the information as linked open data.
- Animate and manage the NIFO community and editorial work of Joinup NIFO collection by creating for example new study cases and exchange of best practices.
- A Proof of concept of Business Intelligence service for the display of the EIF monitoring indicators (composite indicators) as a dashboard in the new observatory will be run in coming months.
- A pilot to develop a taxonomy for the automation of the data collection for the monitoring of the EIF to ease the efforts from the MS side.

8.3.3 OBJECTIVES

- Implement the final adjustments to the monitoring mechanism of the revised EIF
- Define the monitoring of the Interoperability Action Plan
- Act as the monitoring mechanism of the revised EIF and the Action Plan for Interoperability.
- Start the data collection for the monitoring of the EIF in MS. Run a proof of concept on how to automate the data collection.
- Creation of MS factsheets and analytical models presenting the degree of alignment/implementation/monitoring of NIFs or similar instruments with the EIF
- Start the data collection for the monitoring of the IAP
- Implement the new functionalities of the NIF Observatory in JoinUp; carry out configuration work the NIFO collection, introduce the contents and do the editorial work

- Proof of concept on a Business Intelligence functionalities of NIFO in a specific platform embedded in Joinup environment
- Create guidelines, training modules, a toolbox of solutions and other material to support the implementation and the monitoring mechanism of the revised EIF and IAP
- Continue the monitoring of interoperability activities and state of play of eGovernment in Member States and associated countries. Publication of eGovernment factsheets electronic format (PDF), in html and linked open data
- Help building capacity building policy and modernisation of public administrations and provide ad-hoc support and on the spot training to Member States' public administrations to ensure the new EIF implementation across all levels of their national administrations.
- Raise awareness of the new EIF, the new NIFO observatory, and of 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 decision³⁴.

³⁴ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>Yes. This action will fulfil objectives 4 and 5 of the Action Plan for interoperability. The observatory will monitor 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.</p> <p>The NIFO action contributes to all EU policies related to modernisation of public administration, as NIFO contributes to the fact that interoperability aspects are taken into account in the EU legislation.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>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.</p>

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
<i>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.</i>	Yes
<i>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.</i>	Yes. The EIF is a key element of eGovernment strategies in many Member States, as well as in other policies on public administration 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
<i>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.</i>	<p>Yes, by offering a comprehensive picture of the interoperability activities in the countries in scope.</p> <p>By assisting its stakeholders through the collection, analysis and dissemination of European-comparable interoperability indicators that inform policies and monitor their outcomes.</p> <p>All stakeholders in scope are expected to make usage of NIFO results</p>
<i>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.</i>	<p>Yes, the outputs of NIFO have already been reused by various Member States.</p> <p>The eGovernment factsheets are considered as a reference. The state of play reports on interoperability in</p>

Question	Answer
	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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	It aims to continue the efforts undertaken in the context of ISA ² 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.
<i>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?</i>	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	NIFO factsheets
Description	Factsheets presenting the degree of alignment/implementation/monitoring of NIFs or similar instruments/initiatives/approaches in the MS with the EIF

Reference	https://joinup.ec.europa.eu/community/nifo/og_page/nifo-factsheets
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)	

Name of reusable solution	eGovernment factsheets
Description	Factsheets presenting the situation in the MS in relation to eGovernment
Reference	https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo
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)	

Name of reusable solution	EU semester
Description	The main purpose of the study is to identify the role of eGovernment 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)	
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Name of reusable solution	State of play of interoperability in Europe
Description	A yearly report that presents the state of play in the area of 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	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 ISA ² , 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.

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 <i>revised</i> 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
(+) 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	Starting in 2019, once the revised version of the EIF and the IAP are 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
<i>[add other impacts as needed]</i>	Having a monitoring mechanism will facilitate the monitoring of the implementation of the EIF and the IAP and a diagnosis to the Member	Starting in 2019, once the revised version of the EIF and the IAP are adopted by the MS	All EU public administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	States of potential areas of improvement of public service delivery.		

8.3.7.2 User-centricity

The new features of NIFO will be built in coming months in Joinup.

In the design and implementation of the new observatory user centricity will be 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 will 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, and the dashboard for the monitoring of the EIF /IAP. Input will be collected from the NIFO community. Once the solution is implemented, a mechanism to continuously monitor and improve the user's experience will be implemented in the observatory based on real life feedback.

8.3.8 EXPECTED MAJOR OUTPUTS

Output name	New observatory
Description	Consolidated observatory on Joinup to display the monitoring results of the EIF, the IAP the supporting material and other relevant data/ info on interoperability
Reference	
Target release date / Status	Q2 2019

Output name	Consolidated monitoring mechanism for EIF and IAP implementation
Description	<p>Complete the monitoring mechanism by defining the whole list of questions and full set of indicators based on the indicators, sample questions, and data sources.</p> <p>Pilot the implementation with some MS and EC DGs and final adjustment based on the piloting results.</p> <p>Start the data collection for the monitoring and for the definition of composite indicators</p>
Reference	
Target release date / Status	Q1/ Q2 2019

Output name	eGovernment factsheets
Description	Overview of the eGovernment activities in European countries published also as linked open data
Reference	
Target release date / Status	Q3 2019

Output name	Guidelines, training modules, a toolbox of solutions and other material to support the implementation of the EIF
Description	Material to support the implementation and the monitoring mechanism of the revised EIF and IAP
Reference	
Target release date / Status	Q1 and Q2 2019

Output name	Update of the report on public administration modernization
Description	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.
Reference	
Target release date / Status	Q2 2019

8.3.9 ORGANISATIONAL APPROACH

8.3.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States	<ul style="list-style-type: none"> • 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 Empl, DG Grow), 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

Stakeholders	Representatives	Involvement in the action
Non-European public administrations	National representatives	
ICT Industry	Industry associations	

8.3.9.2 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

8.3.9.3 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 through 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 will be created to that end.

8.3.9.4 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 metrics³⁵ indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of pilots to test the new monitoring mechanism	6	Q1 2019
Number of NIFO Factsheets updated according to the new monitoring mechanism	34	Q2 2019
Number of eGov factsheets updated	35	Q3 2019
Number of case studies published	9	Q2 2019

8.3.9.5 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.

³⁵ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, effectiveness tab.

8.3.10 TECHNICAL APPROACH AND CURRENT STATUS

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 will be expanded by defining the whole list of questions and full set of indicators based on the indicators, sample questions, and data sources.

From now on, the NIFO will be kept as the monitoring mechanism and expanded according to the revised version of the EIF, the EIF-IS and the IAP. In fact, NIFO will

- Start in 2019 the monitoring of the EIF by measuring the implementation in the Member States of the revised EIF recommendations and the achievement of the roadmap of actions proposed in the IAP.
- Provide the first results of the EIF and IAP monitoring in order to assess what is the current state of affairs and provide some guidance to the MS on areas of improvement.
- Create also guidelines, training modules, a toolbox of solutions and other material to support the implementation and the monitoring mechanism of the revised EIF and IAP.
- Continue to provide an overview of the eGovernment activities in European countries. The eGovernment factsheets will be revamped to provide new information like the progress of the Member States in relation to the interconnection and access to Base Registries and to expose this information as linked open data. NIFO will also produce a detailed report on the role of eGovernment and Interoperability in the European Semester process.
- The observatory needs to be strengthened in its role of a respected and authoritative source of information **on the state of play of interoperability and digital public services in Europe**. The functionalities of the new observatory based on the functional requirements identified and discussed the NIFO representatives during the first part of 2018, will be built during 2018 and early in Joinup.
- Animate and manage the NIFO community and editorial work of Joinup NIFO collection by creating for example new study cases.

- A Proof of concept of BI service and the automation of the data collection and display of the EIF monitoring in the new observatory will run in coming months. In parallel, the collection of data to feed the observatory will be carried out during the first months of 2019.
- A pilot to develop a taxonomy for the automation of the data collection for the monitoring of the EIF to ease the efforts from the MS side.

8.3.11 COSTS AND MILESTONES

8.3.11.1 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/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	543	ISA ²	Q2/2016	Q3/2019
	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	ISA ²	Q1/2017	Q1/2019
	Formulate the functional and technical specifications for the design and implementation of the consolidated observatory	300	ISA ²	Q2/2017	Q1/2019

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	150	ISA ²	Q3/2018	Q2/ 2019
	Data collection, analysis and display of new EIF and IAP monitoring	150	ISA ²	Q1/ 2019	Q4/ 2019
	Total	1793			

8.3.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		450	450
2017	Execution	443	443
2018	Execution	500	500
2019	Execution	450	
2020	Execution	400	

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.

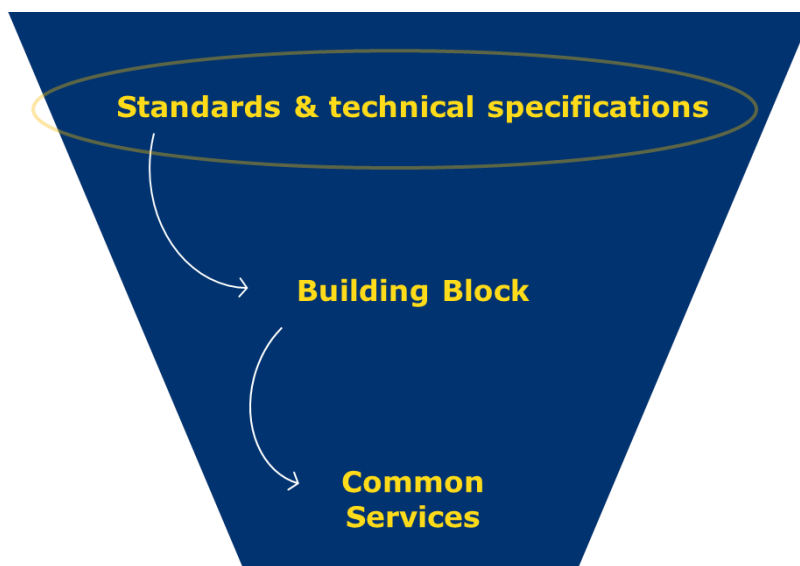
The main objectives of the CAMSS action are:

- 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 2018, 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. For the tools, this includes the creation of user-defined scenarios (e.g. European Catalogue of ICT-Standards) 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 will be able to request the CAMSS team to perform assessments and reports on ICT specifications.

The *action* supports the European Commission in implementing the Tallinn declaration in the domain of standards as well as in implementing the ‘**Digital Solutions for European Services strategy**’³⁶ the below figure positions CAMSS within the ‘**Digital Solutions for European Services strategy**’ steps for creating Reusable Solutions Platform and Digital Infrastructure



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

³⁶ The “STRATEGIC REFRESH: Common Services for Trans-European Systems within the EU Institutions” referred to the “plan to deliver a common digital platform that will help policy DGs to modernise existing TES and will serve as a foundation for future TES”. This notion has been developed in the 2018 TES report in Annex 1.

- (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 support the EIA action by the maintenance and deployment of the Library of Interoperability Specifications in full alignment with EIRA.

8.4.5 ACTION PRIORITY

The CAMSS action

- o) will contribute to priority a) of the ISA² Decision by accelerating the completion of the interoperability landscape across the Union;
- p) will contribute to priority b) of the ISA² Decision by the horizontal nature of the action;
- q) will contribute to priority c) of the ISA² Decision by targeting a share of 50% of the number of Member States involved;
- r) has no other funding sources and had to prove the value provided as it has been confirmed by DG Grow and the MSP;

- s) will contribute to priority e) of the ISA² Decision by the re-usability of the CAMSS method and the assessments performed;
- t) will contribute to priority f) of the ISA² Decision by the synergies with IMM action and EIA action;
- u) will contribute to priority g) of the ISA² Decision by the link of the action with the European Union Catalogue of Standards.

8.4.5.1 Contribution to the interoperability landscape

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>EIF and EIRA will benefit of CAMSS outcomes by identifying interoperability specifications of the architectural building blocks of EIRA.</p> <p>The CAMSS action supports the Tallinn declaration as it concerns to Standards</p> <p>The CAMSS action is the only ISA² action focussing on standards and as such it fully supports DIGIT's Digital Solutions for European Services strategy</p>

Question	Answer
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	Yes

8.4.5.2 Cross-sector

Question	Answer
<i>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.</i>	Yes. The CAMSS action is horizontal nature
<i>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.</i>	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
<i>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.</i>	Yes. We target a share of 50% of the Member States

Question	Answer
<i>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.</i>	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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	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
<i>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?</i>	<i>The CAMSS action will work better under a no grant program like ISA². Also, there are synergies with other ISA² actions like EIA, IMAPS, Interoperability TestBed and SEMIC</i>

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 in 2017 and 2018. 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 2019
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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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 interoperability specifications CAMSS will leverage on the lessons learned in NATO concerning the concepts of “standard profile” and “service interoperability point”

Question	Answer
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	

8.4.5.7 Interlinked

Question	Answer
<i>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?</i>	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 assessments of standards		European and Member States' Public Administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Better interoperability and quality of digital public service	Developing interfaces		European and Member States' Public Administrations
(-) Integration or usage cost			
<i>[add other impacts as needed]</i>	<p>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.</p> <p>Using CAMSS offers the following main benefits:</p> <ul style="list-style-type: none"> • 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 fully aligned with the European regulation on Standardisation 		European and Member States' Public Administrations

Impact	Why will this impact occur?	By when?	Beneficiaries
	<ul style="list-style-type: none"> • 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. • The possibility of more efficient use of public funds, because of easier and faster assessments 		

Impact	Why will this impact occur?	By when?	Beneficiaries
	<p>and a CAMSS library to reuse formalised specifications meant for similar business needs.</p> <ul style="list-style-type: none"> • 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 to meet with users to gather their needs and requirements.

8.4.8 EXPECTED MAJOR OUTPUTS

All major outputs were described in section 7.1.5.5

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 2019 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 increase the value of EIRA by providing a library of interoperability specifications for the EIRA architecture building blocks based on standards who support EIF
- 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	<ul style="list-style-type: none"> • Governance of the CAMSS action • Functional specification for extension of tools and standards-list, testing and Implementation on Joinup 	175	ISA ²	Q2/2016	Q1/2017
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list	175	ISA ²	Q4/2017	Q4/2018
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list	320	ISA ²	Q3/2019	Q3/2020
	Total	670			

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			

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 builds on the previous European Interoperability Strategy (EIS) Governance support action. Part of the Communication “European Interoperability Framework – Implementation Strategy”³⁷ was the 2017 revised European Interoperability Framework Action Plan³⁸ (EIF-AP). The revision was called by the Digital Single Market strategy³⁹ 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.

³⁷[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.](#)

³⁸[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](#)

³⁹ 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 Gateway⁴⁰ 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 will complete this work done in 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 will further support two specific actions of the Interoperability Action Plan (IAP)⁴¹: 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 ISA² 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).

⁴⁰ [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](#)

⁴¹ 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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan (IAP) and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> <p><i>any other EU policy/initiative having interoperability requirements?</i></p>	<p>The action support directly the EIF implementation and actions 2 and 6 of IAP.</p> <p>It will also spill-over with any initiative for which interoperability is critical such as the Single Digital Gateway regulation.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	

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
<i>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.</i>	By definition, the action encompasses all sectors.
<i>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.</i>	

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
<i>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.</i>	The objectives of the action are by definition cross-border.
<i>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.</i>	

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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	The objectives are directly linked to the EIF implementation and actions 2 and 6 of the Interoperability AP.
<i>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?</i>	

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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	<p>Many ISA² actions will be used by this action in particular the NIFO and eGov factsheets and EIRA.</p> <p>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.</p>
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	

8.5.5.7 Interlinked

Question	Answer
<i>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?</i>	<p>The EIF is part of the Digital Single Market Strategy.</p>

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 through the scope of this action and will try to engage users through 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 ISA² 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 focuses on interoperability governance at national and public services levels and organisational aspects in order to identify best practices aspects. In coordination with the NIFO action, this will prepare the ground for the EIF implementation evaluation to come after 2020.

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

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)
	EIF Evaluation	150	ISA ²	Q4/2019	Q3/2020
	Total	838			

8.5.10.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		210	210
2017		98	98
2018		230	
2019		300	

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 (**217.000+ users as of 08/2018**) 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 2017 figures are (delta's versus 2016 figures are presented between quotes):

- **4228+ active groups (+8%)**
- In 2017, around 2100 Service Help-Desk calls for CIRCABC, **-9%** vs 2016
- **205.000+ users (+11%)** and **3.878.000+ (+11%) published documents** (5.2TB+ 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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the</i></p>	<p>CIRCABC enables widespread collaborative groups to communicate, share information and resources in private workspaces.</p> <p>By design, CIRCABC is a real driver for communication, integration and interoperation between various,</p>

Question	Answer
<p><i>implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>Additionally it includes a number of open/public services based on recognized IT standard protocols for communication and information exchange.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>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.</p> <p>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.</p>

8.6.5.2 Cross-sector

Question	Answer
<p><i>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.</i></p>	<p>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.</p>

Question	Answer
<p><i>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.</i></p>	<p>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.</p> <p>CIRCABC covers from agriculture to statistics, trade, joint initiatives-researches, health, justice and many others.</p>

8.6.5.3 Cross-border

Question	Answer
<p><i>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.</i></p>	<p>Yes. A majority of the European Union institutions & bodies are using CIRCABC.</p> <p>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.</p>
<p><i>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.</i></p>	<p>CIRCABC is used in most (if not all) Member States and beyond.</p> <p>Examples of CIRCABC Open Sources instances:</p> <ul style="list-style-type: none"> - Germany: Bundesnetzagentur, Land Nordrhein-Westfalen, Bundesverwaltungsamt BVA, Brandenburgischer IT-Dienstleister ZIT-BB, Bundesagentur für Verbraucherschutz und Lebensmittelsicherheit, Land Sachsen. - Austria: Umweltbundesamt Österreich - Spain: Universidad Rey Juan Carlos, Generalitat Valenciana, Spanish Government.

Question	Answer
	<p>- Greece: Government: Inter-service Consultations</p> <p>- Finland: European Chemical Agency (ECHA) deployed Secure-CIRCABC</p> <p>Number of geographically spread users in the system: 217.000+ out of which 170.000+ are external.</p>

8.6.5.4 Urgency

Question	Answer
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>CIRCABC fulfils each point mentioned as objective of the ISA² programme.</p> <p>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.</p> <p>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.</p>

Question	Answer
	<p>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.</p> <p>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.</p>
<p><i>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?</i></p>	<p>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.</p>

8.6.5.5 Reusability of action's outputs

<p>Name of reusable solution to be produced (for new proposals) or produced (for existing actions)</p>	<p>CIRCABC</p>
<p>Description</p>	<p>CIRCABC is distributed as Open Source Software. It is reusable on its own as a full package.</p> <p>Building blocks inside CIRCABC may be re-used as well but first need to be isolated.</p>
<p>Reference</p>	<p>https://joinup.ec.europa.eu/software/circabc/home</p>
<p>Target release date / Status</p>	<p>Releases: v3.8.3 in 2017 v4.0 in 09/2018 v4.1 in 2018 v4.2 in 2019</p>
<p>Critical part of target user base</p>	<p>Any entity in need of a document sharing and collaborating system</p>

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
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Name of reusable solution	CIRCABC as an external repository
Description	<p>The services offered by CIRCABC also allow its usage as a simple external repository.</p> <p>It features multiple ways of interacting with the repository through services:</p> <ul style="list-style-type: none"> - Web Services - FTP – File Transfer Protocol - WebDAV - CMIS
Reference	https://joinup.ec.europa.eu/software/circabc/home
Target release date / Status	<p>Released –</p> <p>Web Services/FTP/WebDAV since 2012 and in constant evolution (implementing more and more services/possibilities to ease and complete the offer</p> <p>CMIS in 2016. Integration possibilities with other repositories (Sharepoint and Documentum)</p>
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)	<p>Examples:</p> <p>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)</p> <p>CMIS: Synchronization of a Sharepoint instance with a CIRCABC Interest Group</p> <p>FTP/WebDAV: A few groups manage their files via FTP (use of automatic uploads) or WebDAV</p>

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 2017: 4.228 active groups (+11%) 205.580 users (+11%) 25.000+ different entities (administrations, companies, businesses)

8.6.5.6 Level of reuse of existing solutions

Question	Answer
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	<p>ISA 1.4 ECAS-Stork integration used to provide another user authentication mechanism (national e-ID)</p> <p>ISA 2.8 Machine Translation: consumed to offer automatic machine translation of working documents</p> <p>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.</p> <p>ISA² 20 – Joinup – Sharing IT Solutions: Consumed to publish and communicate around the action.</p> <p>ISA² 35 - EUSurvey Online Consultations</p>

Question	Answer
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	Yes, all of the above

8.6.5.7 Interlinked

Question	Answer
<i>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?</i>	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 (217.000+ CIRCABC Users)
the impact of which is	<p>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.</p> <p>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.</p> <p>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.</p>
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: 08-2018 – 70%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (217.000+ 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	<ul style="list-style-type: none"> • Database clustering, Indexation, a separate Archiving & Business Intelligence/Monitoring server <p>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.</p> <ul style="list-style-type: none"> • Horizontal scaling <p>Adding new nodes to the current system to keep/increase the service's performance</p>

The problem of	[Software] Regular software upgrades from the building blocks – Progress: 08-2018 – 80%
affects	All CIRCABC users. Many citizens, public institutions, administration and businesses (217.000+ 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	<ul style="list-style-type: none"> • Migrate to a better-performing search engine (SOLR instead of Lucene) <p><i>A new index engine (vs Lucene) will be more accurate, efficient and flexible e.g. with regards to searches in an Interest Group.</i></p>

	<ul style="list-style-type: none"> • Alfresco upgrades <i>Follows our constant effort the keep the tool in sync with the latest features and security updates delivered by Alfresco.</i>
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Service Pack

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 (217.000+ 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 – 90%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (217.000+ 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	<ul style="list-style-type: none"> • A 'Smart CIRCABC' package related to a notification mechanism, UI interactivity, Interest Groups customization and improvements in the activity reporting service. <i>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.</i> • New features: Workflows & tasks, Access Control List, 'Rich' Interest Group templates, In-App Messaging, Automatic Translation Module

	<p><i>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.</i></p> <p><i>This package focuses on community & organisational features.</i></p> <ul style="list-style-type: none"> • Archiving <p><i>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.</i></p>
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The problem of	Mobile application – Progress: 08-2018 – 60%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (217.000+ 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	<ul style="list-style-type: none"> • Analyse the alternatives <ul style="list-style-type: none"> ○ Responsive User Interface ○ Native application • Implementation of the Responsive UI <p><i>Access your documents; groups; make comments etc. from a mobile device.</i></p>

The problem of	Interoperability
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (217.000+ 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	<ul style="list-style-type: none"> • '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	<p>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.</p> <p>It is offered to the users as a service or can be reused by deploying it within another information system.</p>	Q1/2016	<p>European Institutions & bodies</p> <p>Member States' public administrations and other, non EU administrations</p> <p>Citizens</p>
(+) Savings in time	<p>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.</p>	Q1/2016	<p>European Institutions & bodies</p> <p>Member States' public administrations and other, non EU administrations,</p> <p>Citizens</p>

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Better interoperability and quality of digital public service	CIRCABC is the one tool allowing the European Commission to dialog with external stakeholders and create efficient collaborative groups. It definitely impacts the perception of the digital public service.	Q1/2016	European Institutions & bodies Member States' 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
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

Stakeholders	Representatives	Involvement in the action
DIGIT D	Mario CAMPOLARGO, Roberto BARCELLAN, Benoît ORIGAS	System Owner of EUSurvey Responsible for the support and development of the tool/service
DIGIT C	Philippe VAN DAMME	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	Benoît ORIGAS, Margot FASSIAN	Once a year
ISA events	Benoît ORIGAS, Margot FASSIAN	Presentation to specific key stakeholders from Member States (dates to be determined)
Release Notes	Margot FASSIAN	Each 3-4 months
Joinup News	Margot FASSIAN	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 metrics⁴² indicate the current values.

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 **ISA 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.

⁴² For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, **effectiveness** tab.

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 :
 - Requesting and integrating label translations
 - Development of automated tests
- Functional and acceptance testing (Testing) – 1 week

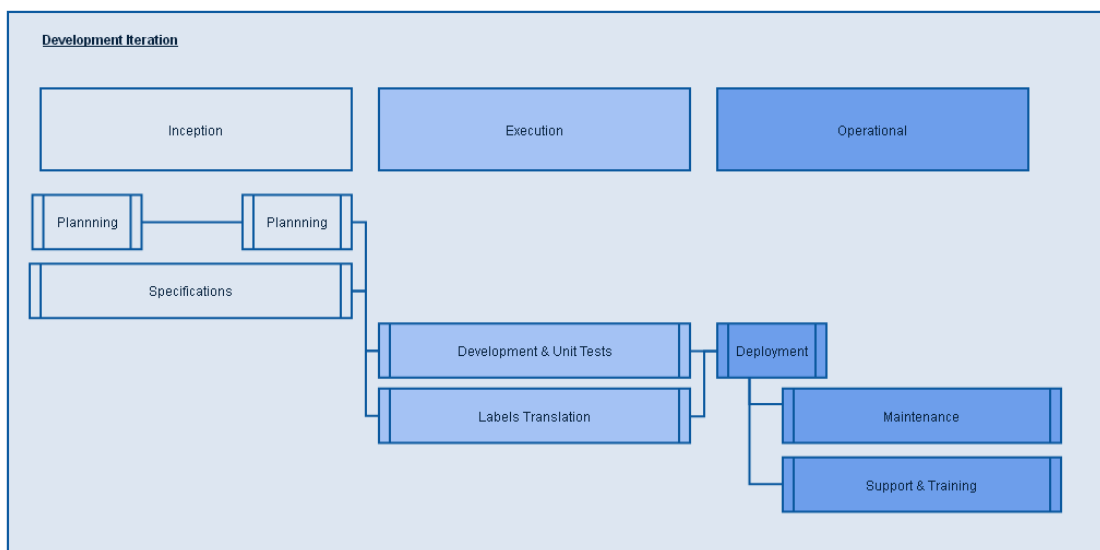


Figure 2: Development cycle

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	ISA ²	Q1/2016	Q4/2016
Inception Execution	Performance Pack	50	ISA ²	Q1/2016	Q4/2016

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	Communication & Trainings	50	ISA ²	Q1/2016	Q4/2016
Operational	Continuation of current CIRCABC Service	250	ISA ²	Q1/2017	Q4/2017
Inception Execution	Service Pack	100	ISA ²	Q1/2017	Q4/2017
Inception Execution	Performance Pack	50	ISA ²	Q1/2017	Q4/2017
Execution	Communication & Trainings	50	ISA ²	Q1/2017	Q4/2017
Operational	Continuation of current CIRCABC Service	250	ISA ²	Q1/2018	Q4/2018
Inception Execution	Service Pack	100	ISA ²	Q1/2018	Q4/2018
Inception Execution	Performance Pack	50	ISA ²	Q1/2018	Q4/2018
Execution	Communication & Trainings	50	ISA ²	Q1/2018	Q4/2018
Operational	Continuation of current CIRCABC Service	350	ISA ²	Q1/2019	Q4/2019
Inception Execution	Service Pack	100	ISA ²	Q1/2019	Q4/2019
Inception Execution	Performance Pack	50	ISA ²	Q1/2019	Q4/2019
Execution	Communication & Trainings	50	ISA ²	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)
Operational	Continuation of current CIRCABC Service	350	ISA ²	Q1/2020	Q4/2020
Inception Execution*	Service Pack	50	ISA ²	Q1/2020	Q4/2020
Inception Execution	Performance Pack	50	ISA ²	Q1/2020	Q4/2020
Execution	Communication & Trainings	50	ISA ²	Q1/2020	Q4/2020
	Total	2.350			

8.6.11.2 Breakdown of ISA² 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	75	
2020	Operational	350	
2020	Execution	125	

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 joinup.eu	https://joinup.ec.europa.eu/software/circabc/home	
#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,
Responsible Action manager name	Benoît ORIGAS
Responsible Action manager email	Benoit.ORIGAS@ec.europa.eu

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 **8.446 surveys created in 2017** (already 7.510+ in 08/2018), resulting in **more than 1.600.000 contributions (8.000.000+ as of 08/2018)**; **managed by 3.806 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, but due to its success, there is now a need to reinforce the team and further develop the service to make it compatible with Cloud infrastructure.

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 (joinup.eu), it can also be installed anywhere as a standalone application or reused as a component of another Information System.

Some EUSURVEY key figures (in 2017):

- **5.400+ surveys**
- **4.300+ form managers**
- **1.920** Service Help-Desk calls
- **1.600.000+** survey contributions (already **8.000.000+** as of 08/2018)
- **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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>The integration of EUSurvey with the Better Regulation Portal is a real example of interoperability between existing systems across policy areas.</p> <p>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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>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.</p> <p>A study conducted in 2014-2015 showed the clear advantages and financial benefits of having a customary developed tool to fulfil this need.</p> <p>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.</p>

8.7.5.2 Cross-sector

Question	Answer
<i>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.</i>	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.
<i>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.</i>	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
<i>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.</i>	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.
<i>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</i>	EUSurvey is used in most (if not all) European Union Countries and beyond. In 2017 8.400+ surveys 3.800+ form managers

Question	Answer
<i>Members States.</i>	<p>1.600.000+ survey contributions</p> <p>Examples of EUSurvey Open Source instances:</p> <ul style="list-style-type: none"> - 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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	<p>EUSurvey fulfils each point mentioned as objective of the ISA² programme.</p> <p>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);</p> <p>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.</p> <p>Businesses and policy makers react in a more and more agile way and need to gather reliable information easily while their</p>

Question	Answer
	<p>stakeholders are contributing from all over the world.</p> <p>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.</p> <p>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.</p>
<i>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?</i>	<p>The ISA² programme fits this proposal perfectly, as the objective is to consolidate, promote and expand the previous activities performed on EUSurvey under the ISA programme.</p>

8.7.5.5 Reusability of action's outputs

Name of reusable solution	EUSurvey
Description	<p>EUSurvey – as a flexible and widely accessible solution for:</p> <ul style="list-style-type: none"> • 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://joinup.ec.europa.eu/software/eusurvey/description
Target release date / Status	Latest releases: 1.4.1 (19/11/2017) 1.4.2 (21/12/2017), 1.4.3 (06/06/2018) Releases to come: 1.4.4 (09/2018), 1.5.0 (12/2018) 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) Releases to come: 1.4.4 (09/2018), 1.5.0 (12/2018) 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 2016: 8.400+ surveys 3.800+ form managers 1.600.000+ 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: <ul style="list-style-type: none"> • 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
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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	ISA 1.4 ECAS-Stork integration used to provide another user authentication mechanism (national e-ID)

Question	Answer
	<p>ISA 2.8 Machine Translation: consumed to offer automatic machine translation of working documents</p> <p>ISA² 20 – Joinup – Sharing IT Solutions: Consumed to publish and communicate around the action.</p> <p>ISA² 36 – CIRCABC – Collaborative workspaces</p> <p>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</p> <p>EUSurvey also integrates Data Analytics Service (such as DORIS the EC’s one) as a backend analysis tool.</p> <p>ISA² (2018.08) EU CAPTCHA to distinguish human from machine input</p>
<p><i>has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	<p>Yes, all of the above</p>

8.7.5.7 Interlinked

Question	Answer
<p><i>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?</i></p>	<p>The Better Regulation Portal implements one of the ten priorities of the Juncker Commission, namely “democratic change”. Increased transparency over the decision-making process and facilitating stakeholder</p>

Question	Answer
	<p>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).</p>

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	<p>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.</p> <p>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.</p>
a successful solution would be	Sustain the EUSurvey service and continue to deliver updated OSS application code (under EUPL)

8.7.6.2 New challenges

Performance Pack

The problem of	[Hardware] Scaling the infrastructure of EUSurvey – Progress: 08-2018 – 80%
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.
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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: 08-2018 – 60%
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	<ul style="list-style-type: none"> • 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 – 75%
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	<ul style="list-style-type: none"> • Analyse the alternatives <ul style="list-style-type: none"> ○ 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 webservice) 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	<p>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.</p> <p>It is offered to the users as a service or can be reused by deploying it within another information system.</p>	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) Savings in time	<p>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</p>	Q1/2016	European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens
(+) Better interoperability and quality of digital public service	<p>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.</p>	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
(+) <i>Increased Transparency</i>	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://joinup.ec.europa.eu/software/eusurvey/description
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 management 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 metrics⁴³ 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 ISA² Coordination Group (or ISA CG equivalent), the Project Management Group and the Users 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 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.

⁴³ 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.

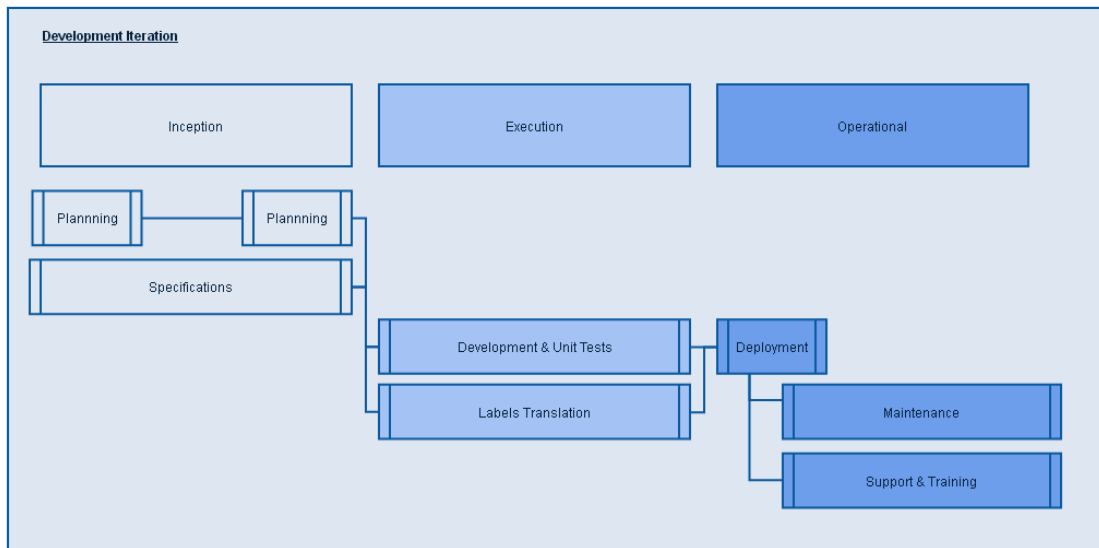


Figure 1: Development cycle

EUSurvey is delivered as an OSS project via [Joinup.eu](https://joinup.eu), the Forge made available by ISA.

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 ISA ² / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Inception	Performance Pack	25	ISA ²	Q1/2016	Q4/2016
Inception	Service Pack	25	ISA ²	Q1/2016	Q4/2016
Operational	EUSurvey Service	250	ISA ²	Q1/2016	Q4/2016
Operational	Training – e-learning	50	ISA ²	Q1/2016	Q4/2016
Execution	Service Pack	100	ISA ²	Q1/2016	Q4/2016
Inception	Service Pack	25	ISA ²	Q1/2017	Q4/2017
Operational	EUSurvey Service	250	ISA ²	Q1/2017	Q4/2017
Operational	Training – e-learning	50	ISA ²	Q1/2017	Q4/2017
Execution	Performance Pack	50	ISA ²	Q1/2017	Q4/2017
Execution	Service Pack	50	ISA ²	Q1/2017	Q4/2017
Inception	Service Pack	25	ISA ²	Q1/2018	Q4/2018
Operational	EUSurvey Service	300	ISA ²	Q1/2018	Q4/2018
Operational	Training – e-learning	50	ISA ²	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 ² / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Service Pack	100	ISA ²	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	300	ISA ²	Q1/2020	Q4/2020
Operational	Training – e- learning	50	ISA ²	Q1/2020	Q4/2020
Execution	Service Pack	100	ISA ²	Q1/2020	Q4/2020
	Total	2.300			

Phase: Initiation Planning Execution 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)
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 ISA² 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	
2019	Operational	350	
2019	Execution	100	
2020	Inception	25	
2020	Operational	350	
2020	Execution	100	

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 joinup.eu	https://joinup.ec.europa.eu/software/eusurvey/home	
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/ISA² 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 workshop⁴⁴.

Under the ISA² programme, this has been extended into an operational service. In addition, the action works on the sharing and reuse of test assets (through a dedicated Test Registry and

⁴⁴ <http://www.cen.eu/news/workshops/Pages/WS-2015-008.aspx>, accessed on 31/08/2015

Repository on Joinup, and a community of test bed **owners** and testers). While options for the sustainability of testbed operations are being explored, the action continues to acquire new users and implements test cases for them.

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.

In addition to the testing service, the action will also facilitate the maintenance and operation of the test registry and repository (TRR) on Joinup, which was conceived by the GITB workshop and realised on the Joinup platform under the ISA programme.

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 ISA² decision⁴⁵.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>The action offers testing services to various policy domains; and more general work is being undertaken to explore the testability of interoperability specifications.</p> <p>Specifically, a first proof-of-concept version 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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Some other initiatives run their own testing services, but there is no other generic test bed available for interoperability initiatives.</p>

⁴⁵ 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
<p><i>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.</i></p>	<p>The test bed can be used in any policy area – it is itself domain-neutral, though individual testing services are domain-specific. Which domains will request testing services is not known at this time. 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.</p> <p>Though the operational phase started only in 2017, the test bed has in 2016 already been used by two different initiatives in e-procurement. In 2017, test cases were successfully implemented for the BRIS (Business Register Interconnection) project. In 2018, another use case in the domain of justice have been added.</p> <p>A demo test case was developed for the 'Catalogue of Services' ISA² action, which is linked to the Services Directive.</p>
<p><i>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.</i></p>	

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
<p><i>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.</i></p>	<p>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,</p>
<p><i>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.</i></p>	<p>e.g.:</p> <ul style="list-style-type: none"> • 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 action

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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>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.</p>
<p><i>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?</i></p>	<p>Instead of various Commission Services, Member States and funded projects developing their own testing infrastructure, it is more economic for ISA² to develop test artefacts centrally. For the hosting, user communities can still chose between using the ISA² test bed instance and running their own instance.</p> <p>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.</p>

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	<p>The test bed and some related applications (e.g. reference implementations of specifications/services or simulators) have been deployed in the DIGIT cloud infrastructure.</p> <p>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.</p>
Reference	http://www.itb.ec.europa.eu
Target release date / Status	available
Critical part of target user base	Ambition is to have 10 different user communities end of 2020.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	<p>Level in Q3 2018 is 9.</p> <p>Number of individual users it at present difficult to measure but will in the future be included in the indicators</p>

Output name	Test Registry and Repository (TRR)
Description	<p>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.</p> <p>Under the ISA² programme it is being maintained, promoted and new test artefacts continuously added to it.</p>

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, will be 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 will be 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 still evaluating whether to use ISA ² 's service.

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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	Test bed software is coming from the CEN GITB workshop agreement. Current test cases are based on
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<i>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?</i>	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	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
(+) Savings in time			
(+) Better interoperability and quality of digital public service			
(-) Integration or usage cost			

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 and optionally a simple form that can usually be filled in from existing documentation of the system to be tested.
- 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 then 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 (at present CEF e-Invoicing, CEN , DG GROW, e-SENS, BRIS, IRI, LRI, e-Evidence, Catalogue of Services and EIRA actions)	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.
- Users of the Test Registry and repository are, again, other test centres and communities, or test bed owners, that want to either retrieve reusable testing assets (test beds, test assertions/test cases, validation artefacts) or publish and distribute their own resources.

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 (established through the ISA coordination group) will be maintained and extended, through targeted phone calls, web meetings and potentially face-to-face meetings.

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 metrics⁴⁶ indicate the current values.

Description of the KPI	Target set in 2017	Expected time for target	Value Q1 2018
------------------------	--------------------	--------------------------	---------------

⁴⁶ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, effectiveness tab.

Number of communities	8	1 year	7
Number of validators	12	1 year	9
Number of news items	20	1 year	16
Number of Joinup members	6	1 year	6

8.8.8.5 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 may be sought.

While the test bed is being physically run in the DIGIT cloud 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.

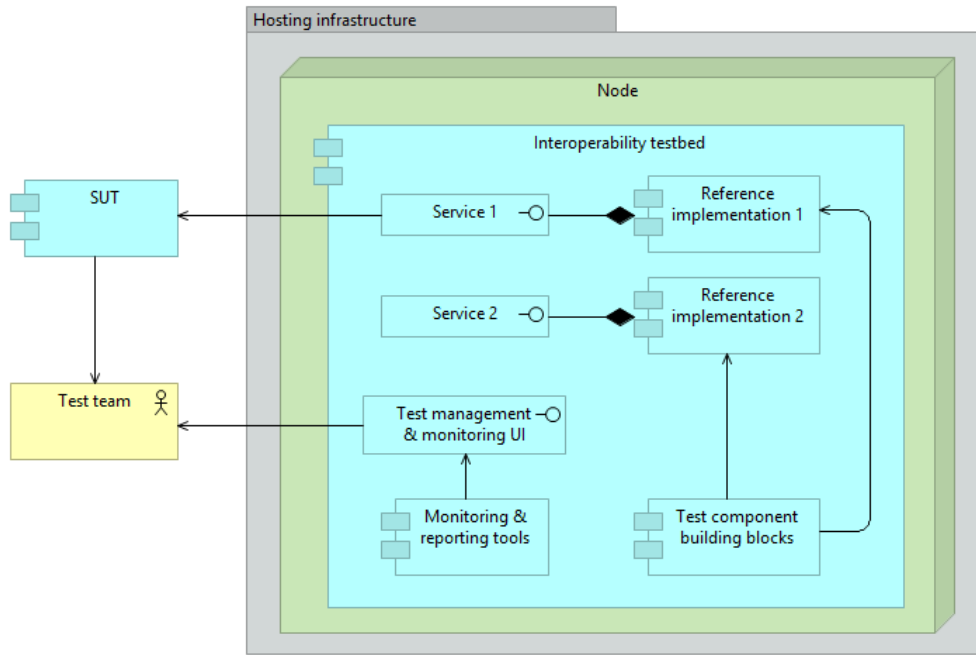


Figure Testing using a test bed

Over time, new reference implementations, simulators, messaging adapters and other components will be 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.

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)	<ul style="list-style-type: none"> Establish hosting of test bed 	150	ISA ²	Q2/2016	Q3/2016

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	<ul style="list-style-type: none"> • Set up governance • Deploy reference implementations • Develop conformance tests 	200	ISA ²	Q3/2016	Q2/2017
Operation	<ul style="list-style-type: none"> • Governance of Operation • Operational Hosting • Test development 	246	ISA ²	Q1 2017	Q4 2017
Operation	<ul style="list-style-type: none"> • Governance of Operation • Operational Hosting • Test development and improvements to the test bed 	200	ISA ²	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)
	software • User acquisition				
Operation	<ul style="list-style-type: none"> • Governance of Operation • Operational Hosting • Test development and improvements to the test bed software • User acquisition 	200	ISA ²	Q1 2019	Q4 2019
	Total	796			

7.1.1.1 Breakdown of ISA² 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

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019	Operation	200	
2020			

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	“Hosting requirements”	 D02.02_Hosting requirements - v1.03.
Eligibility criteria for test services, deliverable from previous contract under the ISA programme	“Eligibility criteria for systems to request testing facilities”	 D02.01.01_Eligibility criteria for systems tc
“Communication plan”	“Communication plan”	Available upon request

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	GROW.F3, CONNECT.H4 CONNECT.F2 DIGIT.D1,B1

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 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 three 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 collections to cooperatively develop their solutions, or to exchange best practice of a specific sector or domain;
3. Finally, the Joinup catalogue provides a central, federated place for interoperability solutions, which are used and which can be re-used in the public sector across Europe.

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 gain more visibility and reach their target audience more easily. The Catalogue helps public administrations search for, find and re-use

proven solutions from a central place. The platform also is a common place for digital government professionals to extend the network and best practices.

Joinup has been available since 2011, while the catalogue of interoperability solutions have been launched in 2013. Based on the experience with their usage, the Commission already has launched a major revamping exercise (funded under the ISA programme, which includes both the update of the Joinup platform and also the re-scoping of the catalogue of solutions.

In October 2017, the new Joinup platform went live and from then and in 2018 efforts have been made in order to engage users to participate again, many efforts have been put into migrating existing content and developing new features and functionalities.

In 2019, the action will continue to focus on the following areas:

- Engaging with users, existing ones and attracting more users.
- Increase the visibility and trust in existing IT software and solutions that are on joinup while promoting their share and reuse.
- Maintain and promote the catalogue of solutions –Joinup will further focus on promoting the highest quality, most documented solutions, while also allowing other high quality, and well documented ones to be part of the catalogue.
- Establish federation with existing repository in order to make Joinup as the EU portal for looking interoperable solutions in the area of eGovernment.
- Maintain and promote the European Interoperability Cartography (EIC) within Joinup, which aims at providing a highly structured (according to the EIRA) set of building blocks and solutions to support administrations in providing interoperable public services.
- Further, promote the Joinup platform as authentic source of information around eGovernment and ICT in the public sector in the EU, and a one stop shop for sharing and re-using IT solutions for public administrations in EU.
- Promoting Joinup as a solution itself to be reused by other institutions.

8.9.3 OBJECTIVES

The objective of the action is to help public administrations deliver high quality, interoperable services faster and cheaper by providing them a platform, where they can exchange good practices, and high quality interoperability solutions in the context of public services.

8.9.4 SCOPE

To develop and provide a common technical platform offering a set of services supporting public administrations exchange interoperability solutions and good practices:

1. To develop and maintain the technical Joinup platform
2. To operate the Joinup platform and to provide technical and user helpdesk
3. To further develop and manage the catalogue of interoperability solutions and the European Interoperability Cartography (EIC) on Joinup
4. Establish federation with existing repositories
5. To host the European Catalogue of ICT Standards for Public Procurement.
6. Promoting Joinup as a solution itself to be reused by other institutions
7. Increase awareness about the new platform and gather user feedback
8. Increase user engagement by actively promoting the functionalities of the platform

Out of scope:

- Content creation is not in scope for the Joinup action, except for the Joinup collection, content creation is the responsibility of the Collection Owners

8.9.5 ACTION PRIORITY

Information related to interoperability solutions, interoperability 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 be informed on the current status of interoperability in Europe, or to re-use already available solutions in the public sector.

Joinup answers to these problems, by establishing a common platform which combines three services in order to reach the objectives stated above:

1. Observatory functionalities enable different communities, such as NIFO, Sharing and Reuse, OSOR 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 practice of a specific sector.

3. Finally, the catalogue provides a central, federated place for interoperability -usable solutions, which are used and which can be re-used in the public sector across Europe.

The above features allow different initiatives to focus on their core objectives and not having to deal with setting up individual websites with the above functionalities to communicate with their public. Joinup not only saves considerable re-sources compared to setting up individual spaces for specific projects, but also helps these projects gain more visibility and reach their target audience more easily.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>The Joinup action facilitates the sharing and re-use of solutions for public administrations and provides the stakeholders with the means to collaborate.</p> <p>The EIC catalogue documents and publishes information about interoperability solutions related to EU policies of the Member States and the European Commission, with the possibility to host relevant information from other International Organisations, including standardisation activities and bodies. 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,</p>

Question	Answer
	<p>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 catalogue will also include a subset of solutions, which meet certain criteria to be included in the European Interoperability Cartography.</p> <p>The Joinup includes also collections and solutions with policy/initiative with interoperability requirements and referring Interoperability Action plan (e.g. EIRA, IMAPS, NIFO, CEF, SEMIC, Tallinn Ministerial Declaration Collection, ARE3NA, Sharing and Reuse of IT Solutions, INSPIRE)</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes, the observatory functionalities provide a unique access to interoperability information across the EU. It offers also the unique possibility to federate any solution repository using ADMS.</p>

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
<i>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.</i>	The collections on Joinup (can) cover different sectors and policy areas.
<i>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.</i>	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
<i>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.</i>	Our end-users are indeed from different EU member states and also outside EU (e.g. Uruguay)
<i>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.</i>	Yes, several national repositories (NL, Spain, Greece, Slovenia, Belgium) are federated on Joinup, making their national solutions available for re-use.

8.9.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	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
<i>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?</i>	As this activity is part of the legal base, it is considered crucial for the success of the ISA ² 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 is available for re-use under an open source licence (EUPL) on Github.
Reference	https://github.com/ec-europa/joinup-dev
Target release date / Status	Available
Critical part of target user base	Joinup targets users that can re-use the content (re-usable solutions) the platform provides. So re-use of the content is the biggest focus, re-use 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)	<ul style="list-style-type: none"> • For old Joinup (Drupal6) was re-used by New Zealand and Vietnam, for new version no re-use yet. The source code (Drupal 8) is now shared via gitbub, it is more easy to re-use than previous 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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	<ul style="list-style-type: none"> • Technical platform: the Joinup platform is based on open source, highly re-usable components (Drupal 8.0, Mailman, Virtuoso, with some customisation for specific features). • The ISA semantic specification ADMS, ADMS.AP describes in a standardised manner any interoperability solution. All interoperability solutions in the catalogue of solutions are described using this specification. In addition, the specification is also used to federate interoperability solutions from other national and international repositories.

Question	Answer
	<ul style="list-style-type: none"> • 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.
<p><i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	<p>See above</p>

8.9.5.7 Interlinked

Question	Answer
<p><i>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?</i></p>	<p>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 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.</p>

8.9.6 PROBLEM STATEMENT

The problem of	Information related to interoperability solutions, interoperability 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 be informed on the current status of interoperability in Europe, or to re-use already available solutions in the public sector.
affects	policy makers, IT experts working in or for European public administrations
the impact of which is	The Joinup features allow different initiatives to focus on their core objectives and not having to deal with setting up individual websites with the required functionalities to communicate with their public. Joinup not only saves considerable resources compared to setting up individual spaces for specific projects, but also helps these projects gain more visibility and reach their target audience more easily.
a successful solution would be	<p>Joinup answers to these problems, by establishing a common platform which combines three services in order to reach the objectives stated above:</p> <ol style="list-style-type: none"> 1. Observatory functionalities enable different communities (collections), such as NIFO 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 (collections) to cooperatively develop their solutions, or to exchange best practice of a specific sector. 3. Finally the catalogue provides a central, federated place for interoperable re-usable solutions, which are used and which can be re-used in the public sector across Europe.

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 framework: Applying business models that facilitate the co-creation, sharing and reuse of IT solutions can also generate efficiency and financial gains	ongoing	Member States 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	ongoing	Member states

Impact	Why will this impact occur?	By when?	Beneficiaries
	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		
(-) Integration or usage cost	Reduced communication and development costs for projects, resulting from not having to set up individual websites and repositories to publish their solutions to the public.	Ongoing	Member States public administrations and their IT providers

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 from the start of the new platform. There are organised 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 are published online, so that users of the platform can see, but also join in the discussions for new features.

8.9.8 EXPECTED MAJOR OUTPUTS

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	<p>The aim of the European Catalogue initiative is to foster the referencing of existing ICT standards and technical specifications by public procurers through</p> <ul style="list-style-type: none"> • 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 <p>It also intends to increase transparency for the</p>

	vendors on the public procurement market needs, requirements, and opportunities.
Reference	
Target release date / Status	Q3 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	<ul style="list-style-type: none"> ○ ISA² Committee ○ ISA² Coordination Group (or ISA CG equivalent) ○ Representatives of national repositories 	
European Commission DIGIT	Service provider for hosting/house/Cloud services and project evolution	
European Commission DIGIT	Action owner of “Community building” action	
European Commission DIGIT	Action owner of National Interoperability Framework Observatory (NIFO) action	
European Commission DIGIT	Action owner of “Promoting semantic interoperability” action	
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 Tallinn0 Ministerial Declaration Collection	

Stakeholders	Representatives	Involvement in the action
European Commission GROW	Owner of the European Catalogue of ICT Standards for Public Procurement project and Rolling Plan on ICT standardisation collection	

8.9.9.2 Identified user groups

We consider 3 main groups:

- The normal end-users, using the platform to share or re-use 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 repositories that want to share their solutions with 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.
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

Event	Representatives	Frequency of meetings / Absolute dates of meetings?
Promotion of collections and solutions (via articles and social media, presentation in events)	All joinup stakeholders	Daily, weekly and upon occasion

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 active registered members	100	Yearly
Number of new Interoperability solutions made available via Joinup	10	Quarterly
Number of new content items available on the platform (e.g. news, events, discussions)	1000	Quarterly
Number of new solutions repositories federated within Joinup	4	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 8.9.9.1) 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 ISA² initiatives, such as the National Interoperability Framework Observatory (NIFO), CAMSS, IMM, 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, 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.

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.

The action will implement and operate of the EIC (European Union Interoperability Cartography) in cooperation with the ISA² action EIA.

In summary, the following activities are planned for 2019:

- 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
- 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.
- Implementation and operating the EIC
- Supporting the Implementation and operation of the European Catalogue of ICT Standards for Public Procurement on Joinup
- Supporting the monitoring of the Tallinn declaration
- High Focus on user engagement via dedicated user communities (collections) on the platform
- Organisation of webinars and trainings on use of the platform

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	Cloud infra + DEVOPS	90K	ISA ²	Q2/2019	Q1/2020
Execution	Joinup Service management (Governance, user engagement, Change management, Catalogue)	400K	ISA ²	Q2/2019	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/YYYY)	End date (QX/YYYY)
	management (EFIR), 1st line support) (ABC IV)				
Execution	Joinup improvements, new developments and 2 nd level support (Digit.D.1)	400K	ISA ²	Q2/2019	Q1/2020
	Total	890K			

8.9.11.2 Breakdown of ISA² 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	
2019	Execution	890	
2020	Execution	800	

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, dissemination 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 ISA² 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	<ul style="list-style-type: none"> • 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 ensured 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 ISA² 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, the 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 ISA ² / 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 ISA² 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.

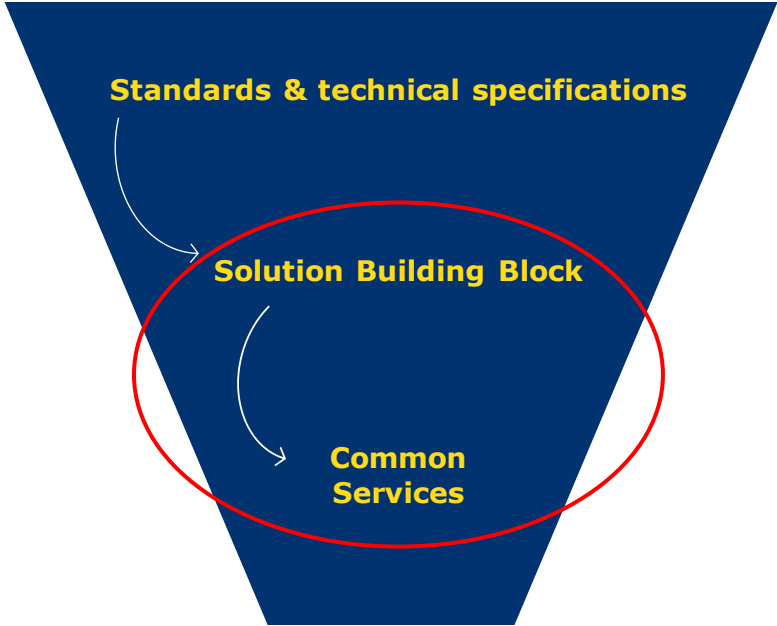
For the above to happen, the identification, collection, documentation and assessment of Trans European Systems (TES) managed by the Commission on behalf of/jointly with the Member States is needed. TES should be put into a Cartography (TESCart) which means that they all have to be described in a common way using a reference architecture. This reference architecture has been chosen to be the EIRA. The scope of this action includes:

The creation of a TESCart based on EIRA that will allow the identification of reusable and interoperable IT solutions to the benefit of the ICT portfolio management of the Commission and in support of the makers of 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 rationalise and streamline TES as well as in implementing the ‘**Digital Solutions for European Services strategy**’⁴⁷ by informing and providing rationalisation recommendations

⁴⁷ The “STRATEGIC REFRESH: Common Services for Trans-European Systems within the EU Institutions” referred to the “plan to deliver a common digital platform that will help policy DGs to modernise existing TES and will serve as a foundation for future TES”. This notion has been developed in the 2018 TES report in Annex 1.

to the IT governance bodies of the European Commission in the Trans-European Solutions domain. It identifies highly reusable⁴⁸ (i.e. best-in-class) **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 establishment of a Reusable Solutions Platform and Digital Infrastructure.** This action has two main deliverables: The TES Cartography and the TES report. The below figure shows the focus of the action related to the ‘Digital Solutions for European Services strategy’ and the steps for creating a Reusable Solutions Platform and Digital Infrastructure.



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.

To date, the Commission’s TES portfolio is composed of 137 TES⁴⁹, 91⁵⁰ of which are documented and made available in the TES Cartography (TESCart). The TES report (2018

⁴⁸ 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.

⁴⁹ 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.

edition) is internal to the EC and it presents findings valid only for the sample of 91 analysed solutions and might evolve in the continuation of this action.

This last edition of the report introduces couple of new features with respect to the previous ones in 2015⁵¹, 2016⁵² and 2017⁵³. These are:

- Alignment between this report and the ‘Digital Solutions for European Services strategy’, produced in 2017/2018.
- Alignment with the objectives of the Tallinn declaration⁵⁴.
- Discontinuation of the solutions' overlapping analysis following stakeholders feedback;

Update of the findings and recommendations based on the new TES in the TESCart v3.0.0⁵⁵; The focus of the next steps will provide support to the release of the European Interoperability Cartography, EIC.

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;

⁵⁰ 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.

⁵¹ Final report on the proposal for possible areas of rationalisation, SC73 Assessment of Trans-European Solutions supporting EU policies, Under Framework Contract: DI/07172 – ABCIII, DIGIT, October 2015.

⁵² D05.04 Updated Rationalisation Recommendations, SC278 Assessment of Trans-European Solutions supporting EU policies, Under Framework Contract: DI/07172 – ABCIII, DIGIT, April 2017

⁵³ D03.01 TESCart Proposal update of rationalisation, SC444 Assessment of Trans-European Solutions supporting EU policies, Under Framework Contract: DI/07172 – ABCIII, DIGIT, December 2017.

⁵⁴ Tallinn Declaration on eGovernment at the ministerial meeting during Estonian Presidency of the Council of the EU on 6 October 2017. Available here: <https://ec.europa.eu/digital-single-market/en/news/ministerial-declaration-egovernment-tallinn-declaration>

⁵⁵ TESCart 3.0.0 is available under: <https://joinup.ec.europa.eu/solution/tes-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.

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 identify overlaps, missing modules and reusability possibilities;
- 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 (on-going) rationalisation.

8.11.5 ACTION PRIORITY

The action

- v) will contribute to priority a) of the ISA² Decision by implementing the EIC which is mentioned in the legal bases;
- w) will contribute to priority b) of the ISA² Decision by the horizontal nature of the action;
- x) will contribute to priority c) of the ISA² Decision because the action is trans-European in nature;
- y) has no other funding sources;
- z) will contribute to priority e) of the ISA² Decision by the re-usability of the solutions published in the EIC;

- aa) will contribute to priority f) of the ISA² Decision by the synergies with the Joinup action and EIA action;
- bb) will contribute to priority g) of the ISA² Decision by the link of the action with the Digital Agenda for Europe.

8.11.5.1 Contribution to the interoperability landscape

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>The proposal contributes directly to the implementation of the European Interoperability Framework in relation the legal obligation to release the EIC. Furthermore the TESCART, one of the products of this action is a cornerstone in the implementation of EIF as captured in the ISA² Decision text and in the communication on the EIF revision</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes. There is no other action supporting the EIC release.</p>

8.11.5.2 Cross-sector

Question	Answer
<i>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.</i>	Yes. The TESCart is policy neutral
<i>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.</i>	

8.11.5.3 Cross-border

Question	Answer
<i>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.</i>	Yes.
<i>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.</i>	

8.11.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	Yes. It is captured in the ISA ² Decision text
<i>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?</i>	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 v1.1.0
Description	European Interoperability Cartography v1.1.0
Reference	
Target release date / Status	April 2019
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 v3.0.0
Description	TES cartography in the EC
Reference	
Target release date / Status	June 2019
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)	
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Name of reusable solution	TES report
Description	Study
Reference	
Target release date / Status	June 2019
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 2019-2020
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)	

8.11.5.6 Level of reuse of existing solutions

Question	Answer
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	Yes. Synergies and reuse is expected with EIA (EIRA), Base Registers and Joinup
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	+100 TES has been already documented in the TESCart The rationalisations proposals produced had taken the TESCart as the main source of input

8.11.5.7 Interlinked

Question	Answer
<i>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?</i>	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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 ISA² 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 ISA² 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	mid 2020
Number of reused solutions	25% of solutions in the EIC in each MS	mid 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

Up until 2013 the TESCART included 58 TES and provided a set of rationalization recommendations to the IT Governance of the Commission.

In 2015 the EUCART was updated with the latest version of the EIRA, started using the CarTool as the technical means for its organisation/presentation and extended to more than 75 solutions including 9 base registries. The EUCART is meant to feed into the European Interoperability Cartography (EIC). It is the playground to practise/validate outputs coming from relevant action, i.e. reusability criteria, EIRA, base registers, etc.

In 2016 The TESCART was migrated from the PoC to a free of charge solution accessible via the CarTool. Additionally, an Interoperability Quick Assessment Toolkit was released in 2017 allowing solution owners to perform a quick assessment of the interoperability level of their solutions.

Briefly, in 2019 the action will:

- Release a new version of the TESCART including at least 15 new TES in production. 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 5 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 v1.1.0
- Assess the data quality and improve of the TES in the TESCART. This would imply to engage with the TES solution owners.
- Assess the RUS level using the RQAT and the IOP level using the IQAT of all TES and their components. This would imply to engage with the TES solution owners.
- Promote user awareness of the TESCART in the EC
- Develop and publish service in the DIGIT catalogue of services to promote the exploitation on demand of the TESCART
- Start promoting the EC lessons learned on the TESCART in the Members States supporting their implementation of national cartographies via pilots.
- Release a new edition of the TES Report

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	Anticipate d Allocatio ns (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	<ul style="list-style-type: none"> • Constantly maintain/extend the TESCart • Test reusability and interoperability criteria on TES • Rationalization reports 	397	ISA ²	Q2/2016	Q3/2017
Execution - Operation	<ul style="list-style-type: none"> • Release EIC v1.0.0 • Deploy RUS and IOP services 	200	ISA ²	Q4/2017	Q3/2018
Execution - Operation	<ul style="list-style-type: none"> • 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
	Total	837			

8.11.11.2 Breakdown of ISA² 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			

8.12 SHARING AND RE-USE (2016.31)

8.12.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D2
Associated Services	DIGIT.B3, JRC.I4

8.12.2 EXECUTIVE SUMMARY

Sharing and reuse of IT solutions promotes greater interoperability, standardisation and cooperation among public administrations, which eventually results 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 ISA² 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. 3 Knowledge Sharing Modules providing additional info and practical guidance to the SRF have been made available on Joinup. In 2016 the first edition of the Sharing and Reuse Awards was organised to promote reuse of IT solutions at different levels of European public administrations, and the first Sharing and Reuse Conference was organised in Lisbon in March 2017. The second edition of the Sharing and Reuse Awards will be launched in November 2018. 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.

In 2019, the following activities are planned:

- New release of the Sharing and Reuse Framework for IT Solutions following the change management process and based on the feedback received in the period 2016-2018
- Evaluation of the IT solutions submitted the Sharing & Reuse Awards contest
- Organisation of the Sharing and Reuse Conference 2019 and the Awarding Ceremony in Romania

- Identification of solutions suitable for reuse and corresponding Member States' needs - report
- Draft OSOR report 2016-2020 (a final report to be published in 2020)
- Guidelines for creating OSS communities
- Member States' policies on OSS – State of Play (based on the pilot study on the Landscape of OS Strategies in Members States)
- Promote the use of open source solutions in the public sector by maintaining the OSOR collection on Joinup
- Maintaining the EUPL collection on Joinup and providing legal support for licencing issues
- Expanding the EUPL community by organising workshops on the EUPL and by developing specific guidelines for software developers.

8.12.3 OBJECTIVES

In line with ISA² 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. Also, 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

In scope:

- All EU, EFTA and candidate countries' public administrations providing public services are within the scope of the action which aims to develop and promote instruments to help administrations develop together, share, and reuse their IT solutions. To this end, in 2019 the action will further promote the Sharing and Reuse Framework for IT Solutions (SRF). 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, and on the European Public License (based on the EUPL

Guidelines) will be conducted for civil servants in the Member States. Also, an interactive online version of the Sharing and Reuse Framework for IT solutions on Joinup will be further developed.

- The next edition of the Sharing & Reuse Awards contest will be concluded in 2019. The Awards ceremony will take place during the Sharing and Reuse Conference in June 2019.
- The action will continue to facilitate the Open Source Observatory (OSOR) and the European Public Licences (EURL) collection on Joinup implementing the new strategy developed in 2018.

Out of 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 ISA² decision⁵⁶.

8.12.5.1 Contribution to the interoperability landscape

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan</i> 	<p>The proposal addresses the principles and recommendations and of the EIF, in particular as regards principle 4 <i>Reusability</i> and recommendations 6 and 7.</p> <p>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</p>

⁵⁶ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
<p><i>and/or</i></p> <ul style="list-style-type: none"> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>implementation, assessment and monitoring of interoperability activities”) as it will maintain and promote the Sharing and Reuse Framework for IT Solutions.</p> <p>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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	

8.12.5.2 Cross-sector

Question	Answer
<p><i>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.</i></p>	<p>The following policy sectors are addressed by this proposal :</p> <p>Digital economy and society, in particular Digital Single Market and Open Government Policies</p>
<p><i>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.</i></p>	

8.12.5.3 Cross-border

Question	Answer
<p><i>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.</i></p>	<p>Yes. The Sharing&Reuse awards have demonstrated that public administrations can develop cross-border applications. Promoting such examples will foster the development of such interoperable solutions useful to all Members States, EFTA and candidate countries.</p>
<p><i>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.</i></p>	<p>The EUPL as a legal interoperability tool has been included in some MS frameworks or policies: European Interoperability Framework (EIF)</p> <ul style="list-style-type: none"> •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) •Bulgaria (2017 decision for government software production)

8.12.5.4 Urgency

Question	Answer
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>The action is to continue the efforts undertaken in in years 2016-2018 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.</p>

Question	Answer
<i>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?</i>	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)
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.
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 Q3 2019 following change management process.
Critical part of target user base	<ul style="list-style-type: none"> • 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)	
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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 on the basis of feedback received during the information sessions in MS. To be further updated in the course of 2019.
Critical part of target user base	<ul style="list-style-type: none"> • 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 Portugal, Poland Ireland, and Montenegro (with the participation of Western Balkan countries)

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	<ul style="list-style-type: none"> • 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)	It is not possible to monitor the actual number of source codes, projects etc. published under the EUPL. 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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<i>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?</i>	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.

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
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 providing high-quality, up-to-date information on useful OSS solutions for public administrations, 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

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		All MSs public administrations at all levels:

Impact	Why will this impact occur?	By when?	Beneficiaries
	interoperability, standardisation and cooperation among public administrations, which eventually results in more simplified and more efficient digital services.		European, national, regional, local. Citizens, Business

8.12.7.2 User-centricity

Potential users of the EUPL are in the focus of the EUPL guidelines to be further developed in 2019 and translated into 23 languages. 2 separate versions will be developed for different type of stakeholders.

Future target users were involved in the consultation process at various stages of developing the Sharing and Reuse Framework for IT Solutions. Their feedback was taken into account in the final version of the Framework. 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 will be 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.

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 2 nd for software developers)
Reference	
Target release date / Status	Q2 2020

8.12.9 ORGANISATIONAL APPROACH

8.12.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Member States	<ul style="list-style-type: none"> • ISA² Committee and ISA² 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	Contact points for promoting the SRF and monitoring its uptake; approval of the SRF' updates;
<ul style="list-style-type: none"> • European Commission 	<ul style="list-style-type: none"> • DIGIT B3 and JRC I4 officials • DGT • ISA² action owners (NIFO, Joinup, EIRA, Catalogue of Services) 	Development of the EUPL guidelines and their translation
EC, EP, Council	<ul style="list-style-type: none"> • Representatives of the 3 European Institutions 	Sharing & Reuse Awards - participation in the Evaluation Committee
European Committee of the Regions (CoR)	<ul style="list-style-type: none"> • 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 and 3 communities maintained by the action are the following:

- Public Administrations of all levels in Member States, associated countries and non-European countries;
- European Institutions

- Academia
- NGOs
- Citizens
- Businesses (in particular IT solutions' providers for public administrations)

8.12.9.3 Communication and dissemination plan

The communication plan comprises promotional activities such as workshops and webinars on the Sharing and Reuse Framework and the EUPL in individual Members States as well as presentations during larger international events. In 2019 the action will focus on promoting the EUPL as an important interoperability tool; series of workshop concentrating on the EUPL use will be organised in 2019.

The 2nd edition of the Sharing & Reuse Awards Contest will be launched in Q4 2018. It will be concluded with the Awards Ceremony at the next Sharing & Reuse Conference planned for June 2019 in Romania. The events described above and trainings in the Member States target bigger 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. Also, user involvement and feedback will be sought in the change management process for the Sharing and Reuse Framework.

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 ISA² 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 eligible entries in the 2 nd edition of Sharing & Reuse Awards	80	April 2019
Number of workshops on the EUPL in Member States and during the opens source events	10	March 2020
Number of workshops/info sessions on the Sharing and Reuse Framework	15	March 2020
Number of new published content items on 3 Joinup communities (S&R, OSOR, EUPL)	150	March 2020

8.12.9.5 Governance approach

The action will be managed by DIGIT.D2 with the support of external contractors. Cooperation with DIGIT B.3 and JRC I.4 is envisaged for the further development 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.

8.12.10 TECHNICAL APPROACH AND CURRENT STATUS

Not applicable as the action does 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 ISA² Decision. Promoting the sharing and reuse of IT solutions and facilitating 3 related communities on Joinup constitute important accompanying measures of the ISA² Programme [Article 2 (10)].

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	ISA ²	Q2/2016	Q1/2017
Execution	Promotion of the SRF including workshops for MS and conference preparation	295-495	ISA ²	Q2/2016	Q2/2019

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)
Closing	Funds for financial awards 2017	100	ISA ²	Q2/2016	Q2/2017
	Publish the OPM2 methodology and supporting measures	320	ISA ²	Q4/2016	Q4/2020
Execution	OSS and EUPL Community building	450-200	ISA ²	Q2/2017	Q2/2019
Execution	S&R Community building	100	ISA ²	Q2/2018	Q2/2019
Initiation/planning/ execution	Publish the EUPL guidelines and EUPL promotion	30	ISA ²	Q2/2018	Q2/2019
Initiation/planning/ execution	Sharing and Reuse Awards	80	ISA ²	Q2/2018	Q2/2019
Initiation	Funds for financial awards 2019	100	ISA ²	Q2/2018	Q4/2019
Initiation/planning/ execution	Study on hackathon organisation.	30	ISA ²	Q2/2018	Q2/2019
Initiation/planning/ execution	OSS and EUPL Community building	180	ISA ²	Q2/2019	Q2/2020
Initiation/planning/ Execution	OSOR Report 2016-2020	60	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)
Execution	Extension and translation of the EUPL guidelines and EUPL promotion	40	ISA ²	Q2/2019	Q2/2020
Initiation/planning/ execution	Guidelines for creating OSS communities	30	ISA ²	Q2/2019	Q2/2020
Execution	Legal support for OSS licencing on Joinup	20	ISA ²	Q2/2019	Q2/2020
Initiation/planning/ execution	State of Play – MS's policies on OSS (study)	80	ISA ²	Q2/2019	Q2/2020
execution	S&R Community building	120	ISA ²	Q2/2019	Q2/2020
execution	Promotion of the SRF – including trainings in MSs	50	ISA ²	Q2/2019	Q2/2020
Initiation/planning/ execution	Identification of solutions suitable for reuse and corresponding MS needs - report	50	ISA ²	Q2/2019	Q2/2020
	Total (2016-2019)	1915			

8.12.11.2 Breakdown of ISA² 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	

8.12.12ANNEX 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 Community 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

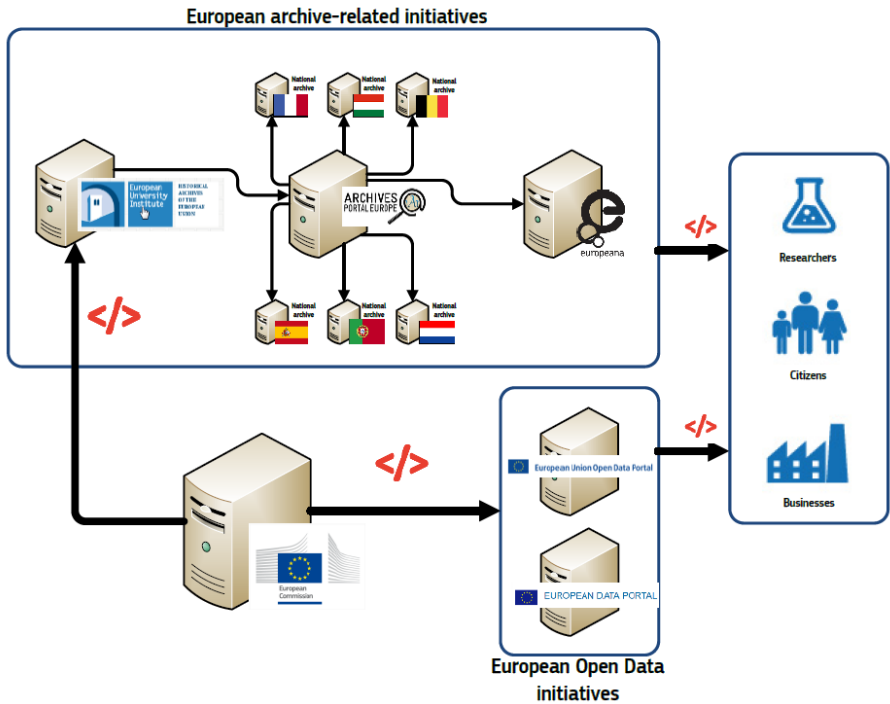
8.13.2 EXECUTIVE SUMMARY

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 (Regulation (EEC, Euratom) No 354/83, as amended by Council Regulation 1700/2003 and Regulation 496/2015), the European Commission, as well as the other institutions of the European Union have 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, following Open Data principles, so 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, such as Europeana, Archives Portal Europe (the hub grouping the European national, regional and local archives), the European Union Open Data portal giving access to data from the European Institutions and other bodies of the EU, the European Data portal, which harvest metadata of Public Sector Information across European countries, and the Public Register of Commission documents, among others.

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 which internationally accepted specific business domain standards exist in the

area of management of archives and whether IT services and tools, being them 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

8.13.5 ACTION PRIORITY

8.13.5.1 Contribution to the interoperability landscape

Question	Answer
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Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>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.</p> <p>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.</p> <p>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, 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.</p> <p>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).</p>

Question	Answer
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes, in the following ways:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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 also enhance accountability and prestige of the institutions. ○ Business, by making available the data on historical archives, the information can be reused by business in new and creative ways. ○ 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
<p><i>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.</i></p>	<p>Yes, our proposal will be useful at least for the implementation of the following EU policy areas:</p> <ul style="list-style-type: none"> • 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 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

Question	Answer
	<p>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).</p> <ul style="list-style-type: none"> • 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
<p><i>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.</i></p>	<p>Not yet applicable</p>

8.13.5.3 Cross-border

Question	Answer
<p><i>Will the proposal, once completed, be useful from the interoperability point of view and used by public administrations of three (3) or more EU Member States? Detail your answer for each of the concerned Member State.</i></p>	<p>Yes, in three main ways:</p> <ul style="list-style-type: none"> • 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). 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

Question	Answer
	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
<i>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.</i>	Not yet applicable

8.13.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	<p>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 archives:</p> <ul style="list-style-type: none"> • 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

Question	Answer
	<p>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.</p> <p>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.</p>
<p><i>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?</i></p>	<p>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 the related tools supporting them will help interoperability and foster data openness and reuse.</p> <p>Based on the foregoing, our proposal fulfils all the ISA2 eligibility criteria:</p> <ul style="list-style-type: none"> • Its objectives are within the ISA2 objectives, in particular: <ul style="list-style-type: none"> ○ Facilitate cross-border interaction between European public administrations, which will be done by solving the semantic interoperability issue related to archival data management.

Question	Answer
	<ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ User-centricity, multilingualism, transparency, preservation of information, openness and reusability <p>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.</p>

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	<p>This analysis will try to identify existing standards for archives management.</p> <p>As an initial task, the analysis will identify business requirements for archival data management, defining</p>

	<p>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.</p> <p>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.</p> <p>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.</p>
Reference	
Target release date / Status	2018Q1 / Released (June 2018)
Critical part of target user base	<ul style="list-style-type: none"> 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)	Not yet applicable

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	<p>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).</p> <p>The analysis should assess the support to the different recommended archive management standards, archive management tasks and be based on a comparative assessment template.</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>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.</p>
Reference	
Target release date / Status	2018Q1 / Released (June 2018)

Critical part of target user base	<ul style="list-style-type: none"> 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)	Not yet applicable

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	<p>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.</p> <p>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</p>

	<p>Europe).</p> <p>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.</p> <p>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.</p>
Reference	
Target release date / Status	2018Q1 / Released (June 2018)
Critical part of target user base	<ul style="list-style-type: none"> • 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 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 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

	<p>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.</p> <ul style="list-style-type: none"> - Define reference architecture for the solution emphasising especially on data exchange re-useable for other stakeholders.
Reference	
Target release date / Status	2019Q1
Critical part of target user base	<p>The results of the proofs of concepts could be used by archive services in:</p> <ul style="list-style-type: none"> • 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	<p>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:</p> <ul style="list-style-type: none"> - Levels of archival description (in accordance with the ISAD standard): fonds groups, fonds, sub-fonds, series, files; - Description of identified producers (in

	<p>accordance with the ISAAR standard);</p> <ul style="list-style-type: none"> - Business specific metadata existing on several levels like files and documents; - Currently used keywords and several kinds of named entities; - Full text indexes. <p>The archival data being managed at European level are not necessarily unique as on local, regional and member states level similar information exists.</p> <p>The work to be carried out will be organised in relation to the following possible deliverables:</p> <ul style="list-style-type: none"> - 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; <p>Define reference architecture for the proposed solution.</p>
Reference	
Target release date / Status	2019Q1
Critical part of target user base	<p>The results of the proofs of concepts could be used by archive services in:</p> <ul style="list-style-type: none"> • 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	<p>Based on the conclusions of the proofs of concept, a standards-based solution for the exchange of archival information 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.</p> <p>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.</p>
Reference	
Target release date / Status	2019Q4
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)	

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	<p>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.</p> <p>The publication of the archives will bring benefits to a large population of interested parties:</p> <ul style="list-style-type: none"> • 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	2019Q4
Critical part of target user base	The solution could be re-used by archival organizations of the European Institutions to make their archival data accessible to the public.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

8.13.5.6 Level of reuse of existing solutions

Question	Answer
<p><i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i></p>	<p>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.</p> <p>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 Programme (CIP).</p>
<p><i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	<p>Not yet applicable</p>

8.13.5.7 Interlinked

Question	Answer
<p><i>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?</i></p>	<p>From the 10 high-level political priorities, it will contribute to the following ones:</p> <ul style="list-style-type: none"> • Democratic change, in the following way: <ul style="list-style-type: none"> ○ 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. ○ 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	<ul style="list-style-type: none"> • a set of recommendations based on standards allowing public administrations as

	<p>well as any other interested organization to organize the management of their archives;</p> <ul style="list-style-type: none"> • 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
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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	<ul style="list-style-type: none"> • a set of recommendation based on open standards for making archival information of European public administrations available to the public in order to enhance

	<p>transparency and accountability of the public institutions and to allow the re-use of the information</p> <ul style="list-style-type: none"> • implementation of a solution for the publication of the European Commission's archives as Open Data
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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	<ul style="list-style-type: none"> • 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 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 	Partially after the study phase when reports will be delivered (2017Q4-2018Q1) and after the setup of proofs of concept by 2018Q4.	Archives services in general (national or regional archives) and of (international) organisations. Archives services of EU institutions. Historical Archives of the European Union of Florence. Open data community. Archives

Impact	Why will this impact occur?	By when?	Beneficiaries
	archival data into linked open data will prevent users for investing additional money to analyse similar activities.		users (as end users).
(+) Savings in time	<ul style="list-style-type: none"> • 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 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. 	Idem	Idem
(+) Better interoperability and quality of	The provided solutions for exchange of archival data will help EU institutions in cooperating with the Historical Archives of the European	Idem	Idem

Impact	Why will this impact occur?	By when?	Beneficiaries
digital public service	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.		

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: <ul style="list-style-type: none"> • Increase of Institutions accountability,

Beneficiaries	Anticipated benefits
	<p>allowing taxpayers to have a better view on how policies were designed, developed and implemented.</p> <ul style="list-style-type: none"> • Increase of Institutions transparency and prestige, reducing the “legitimacy gap” that some European citizens feel.
European business	<p>The assessment on the feasibility of creating an Open Data based catalogue of Commission archives will help European business, resulting in:</p> <ul style="list-style-type: none"> • 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	<p>In the particular case of researchers, the Open Data catalogue of Commission digital archives will also allow them to better perform their work, by:</p> <ul style="list-style-type: none"> • 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)	<p>The review on digital archival data management standards and the market analysis of the existing IT tools providing support to them will:</p> <ul style="list-style-type: none"> • 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

Beneficiaries	Anticipated benefits
	<p>different archives.</p> <ul style="list-style-type: none"> • 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	<p>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.</p> <p>The analysis will include assessment of elements like the used and required standards; required metadata and existing gaps; metadata transformation, etc.</p> <p>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.</p> <p>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.</p>
Reference	
Target release date / Status	2018Q1

Output name	Proofs of Concept on archives management systems and exchange of archival data
Description	<p>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:</p> <ul style="list-style-type: none"> - 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...). <p>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.</p> <p>The work to be carried out will be organised in relation to the following possible deliverables:</p> <ul style="list-style-type: none"> - 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,

	<p>systems need to be selected and deployed in order to proof the feasibility of the selected solution.</p> <ul style="list-style-type: none"> - Define reference architecture for the solution emphasising especially on data exchange re-useable for other stakeholders.
Reference	
Target release date / Status	2019Q1

Output name	Proofs of Concept for solutions for turning archival data into (linked) open data
Description	<p>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:</p> <ul style="list-style-type: none"> - 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. <p>The archival data being managed at European level are not necessarily unique as on local, regional and member states level similar information exists.</p> <p>The work to be carried out will be organised in relation to the following possible deliverables:</p> <ul style="list-style-type: none"> - Detailed identification of archival data relevant for being enriched turned into linked open data and identification of datasets relevant for being published

	<p>on the European Open Data portal;</p> <ul style="list-style-type: none"> - 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

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, Razvan IONESCU	Service in charge
Secretariat General of the European Commission (SG)	Annemieke Vanlaer	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.
 - Historical Archives of the European Union (European University Institute in Florence).

- Open data community.
- End users – consumers of archives
 - European citizens
 - Business
 - Researchers (students, legal advisors, academic community)

8.13.9.3 Communication and dissemination plan

Currently the following is foreseen for the first phase (2017) 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):

- 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

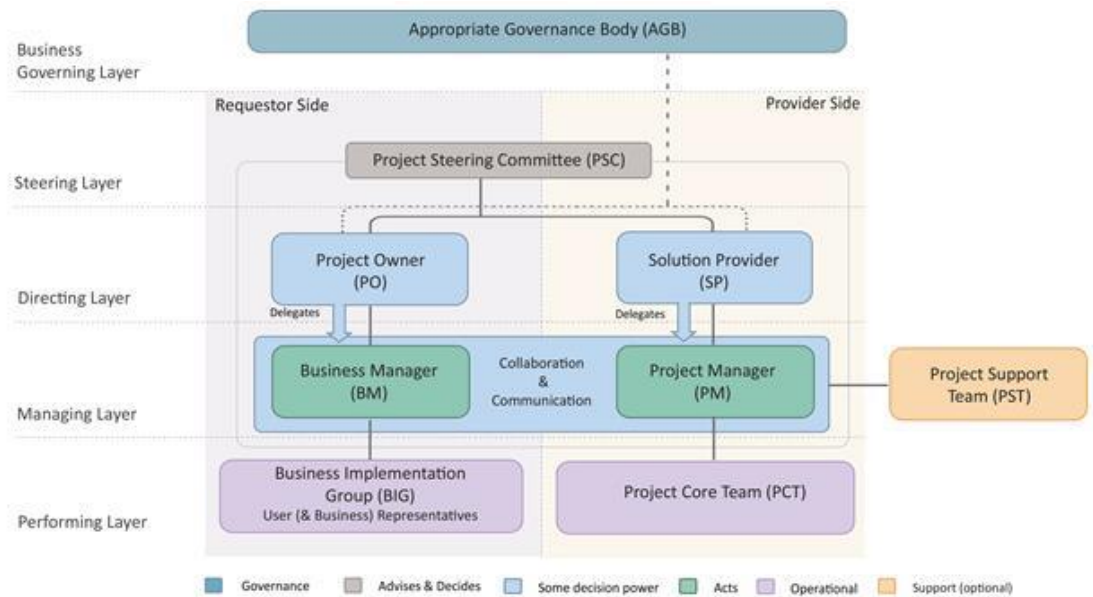
8.13.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Definition of templates for description of 4 specific deliverables	4	Q4 2017
Collect, analyse and report on information collected for 4 specific deliverables	4	Q4 2017
Design and test assessment tool	1	Q4 2017 – Q1 2018
Conclusions and recommendations for proofs of concept	2	Q4 2017 – Q1 2018

Description of the KPI	Target to achieve	Expected time for target
The various stakeholders are contacted and practices are taken into account into the PoC's needs specifications	TBD	Q4 2018
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
At least 2 Proofs of Concept (or variants) must be set up.	2	Q4 2018
In order to assess the proposed solutions, test scenario's and evaluation criteria must be proposed.	1	Q1 2019
Results should be delivered in line with the proposed calendar (to be defined at the start of the PoC-phase).	1	Q1 2019
Exchange of data is possible in an efficient way between HAS and EUI	Y/N	Q4 2019
Citizens can easily access the archival records of HAS open to public on-line	Y/N	Q4 2019

8.13.9.5 Governance approach

The action governance will be based on what PM² 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 K. Konstantinou as HoU or Sven Carnel as HoS
 - 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 person delegated by OIB.OS.1 to follow-up the project on a daily basis: Lieven Baert and Julie Urbain
 - Project Manager (on the Solution Provider side): Razvan Ionescu
 - Associated service (SG) : Annemieke Vanlaer
 - Project Core Team: contracted organisation
 - 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

Regarding the identified deliverables, they will be prepared in collaboration with external consultancy companies. In order to speed up the procurements, existing framework contracts will be used as much as possible. The definition of the technical architecture of the future solutions will be done later on, once the conclusions of the study are available.

The scope of the project will be divided in two different 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, producing their results independently.

Details about deliverables can be found in document with reference Ares(2017)2610424.

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	ISA ²	Q3 2017	Q1 2018
Execution	Analysis on interoperability requirements and Open Data publication feasibility	100	ISA ²	Q3 2017	Q1 2018
Execution	Pilot on Open Data publication	150	ISA ²	Q3 2018	Q1 2019
Execution	Pilot on archival t data exchange	300	ISA ²	Q3 2018	Q1 2019
Execution	Implementation of a solution for archival date exchange and publication	300	ISA ²	Q2 2019	Q4 2019
	Total	950			

8.13.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2017	Execution: <ul style="list-style-type: none"> • Study on archive management standards and supporting IT tools • Analysis on interoperability requirements and Open Data publication feasibility 	200	157
2018	Execution: <ul style="list-style-type: none"> • Pilot on Open Data publication • Pilot on archive management data exchange 	450	
2019	Execution: <ul style="list-style-type: none"> • Implementation of a solution for archival data 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) . <i>International Council on Archives. October 2003</i> . 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.A2
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 ISA² decision⁵⁷.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>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.</p> <p>The action that contributes to all interoperability principles set out in the EIF and notably to the principles of:</p> <ul style="list-style-type: none"> • Openness: the FAIR Data Maturity Model will enable organizations to publish data and users to enjoy access to an open-by-default, efficient and cross-sector data

⁵⁷ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
	<p>environment supported by FAIR data principles.</p> <ul style="list-style-type: none"> • 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. The FAIR Data Maturity Model allows organisations to build their

Question	Answer
	<p>pertinent capacity and develop the necessary policies and mechanisms to ensure long-term accessibility, including preservation of their data and metadata.</p> <ul style="list-style-type: none"> • 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. <p>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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>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-agnostic way the findability, accessibility, interoperability and</p>

Question	Answer
	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
<i>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.</i>	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.
<i>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.</i>	Not applicable

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
<p><i>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.</i></p>	<p>The FAIR Data Maturity Model is useful and can be utilised by public administrations, research organisations and businesses of any EU Member State.</p> <p>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.</p>
<p><i>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.</i></p>	<p>Not applicable</p>

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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>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.</p> <p>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.</p>

Question	Answer
<p><i>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?</i></p>	<p>The ISA² scope and financial capacity fit for the implementation of the FAIR Data Maturity Model since:</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> - 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
<p><i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i></p>	<p>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.</p> <p>Also, it will identify FAIR-related enablers and manifestations taking into account interoperability solutions produced by other ISA² 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'.</p>
<p><i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	<p>Not applicable</p>

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
<p><i>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?</i></p>	<p>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.</p>

8.14.6 PROBLEM STATEMENT

<p>The problem of</p>	<p>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.</p>
<p>affects</p>	<p>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.</p>
<p>the impact of which is</p>	<p>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.</p>

	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
<p>(+) Savings in money</p>	<p>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.</p>	<p>2019</p>	<p>Public administrations, research organisations, businesses, universities, researchers</p>
<p>(+) Savings in time</p>	<p>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.</p>	<p>2019</p>	<p>Public administrations, research organisations, businesses, universities, researchers</p>
<p>(+) Better interoperability and quality of digital public service</p>	<p>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.</p>	<p>2019</p>	<p>Public administrations, research organisations, businesses, universities, researchers</p>

Impact	Why will this impact occur?	By when?	Beneficiaries
Increased transparency	<p>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.</p>	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
	<p>GO-FAIR initiative: community-driven initiative focusing on the FAIR-related implementation needs of existing research networks and consortia</p> <p>FAIR Metrics group, working groups of RDA, Force11, CODATA and other entities working on horizontal or discipline specific initiatives to measure FAIRness</p> <p>EOSC pilot, EOSC hub, Open AIRE</p> <p>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</p>	

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 ISA² 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 metrics⁵⁸ 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 ISA² 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 A2, 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 ISA² Programme Management Team (DG DIGIT D2), DG RTD.A2 reports the progress and the results of the Action to the ISA² Coordination Group.

⁵⁸ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, effectiveness tab.

8.14.10 TECHNICAL 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.

8.14.11 COSTS AND MILESTONES

8.14.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Fin al evaluation	Description of milestones reached or to be reached	Antici pated Allocat ions (KEU R)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
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
Closure	Closure	100K		Q1/2021	Q3/2021
	Total	400K			

8.14.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018	Initiation, Planning, Execution	150	
2019	Execution	150	
2020	Closure	100	

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
100	1	Q2/2020

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#.W03ief5IKU1

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 ISA² decision⁵⁹.

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

⁵⁹ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>The delivered CAPTCHA would solve a common problem in a consistent and cost effective way.</p>

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
<p><i>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.</i></p>	<p>Having to distinguish human from non-human users is a common problem that is not related to any particular sector.</p>

Question	Answer
<i>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.</i>	

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
<i>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.</i>	Having to distinguish human from non-human users is a common problem that is not related to any particular EU Member State.
<i>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.</i>	

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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in</i>	A CAPTCHA is a component that is consistently and repeatedly required.

Question	Answer
<i>EU legislation?</i>	As long as a common open source CAPTCHA is not available, suboptimal existing solutions will have to be used and paid for.
<i>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?</i>	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	<p>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.</p> <p>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).</p>
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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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.
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	

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
<p><i>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?</i></p>	<p>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.</p> <p>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).</p> <p>The CAPTCHA will provide support for users with disabilities and therefore contributes to Pillar 3 (support an inclusive digital society).</p>

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 multilingualism
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 ISA² 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/Fin al evaluation	Description of milestones reached or to be reached	Anticipa ted Allocati ons (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YY YY)	End date (QX/YY YY)
Initiation	Identify the improvement to be implemented amongst those proposed in the study resulting from the 1 st 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 ISA² 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

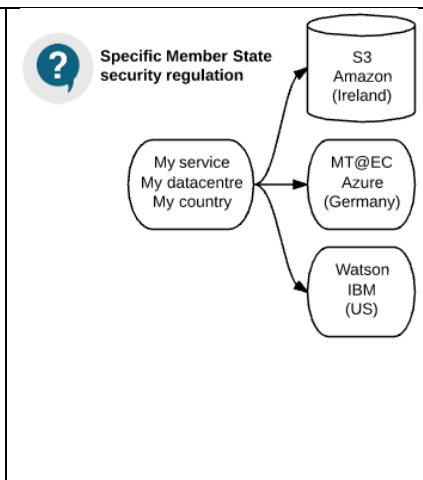
Service in charge	DIGIT
Associated Services	EU Institutions, Member States

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 may be 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.

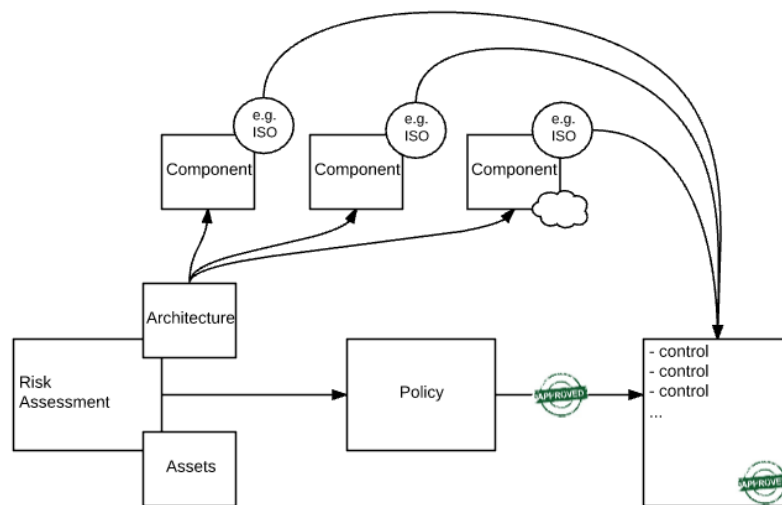
To circumvent this problem, we propose in the present action to develop a **methodology, sustained by the appropriate IT tooling**, which will:

- 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 provided 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 Metaframework⁶⁰, 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.

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

⁶⁰ Commission is already using these frameworks as reference framework for security certification.

towards their respective regulations. This is a key enabler to develop, maintain, facilitate and even share registries of inter-operable solutions.

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.

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 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). 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.

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 ISA² decision⁶¹.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>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.</p>

⁶¹ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	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
<i>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.</i>	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.
<i>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.</i>	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
<i>Will the proposal, once completed, be useful from the interoperability point of</i>	By nature, the action being purely horizontal represents an enabler for

Question	Answer
<i>view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.</i>	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 set of users of the framework.
<i>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.</i>	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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	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. 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

Question	Answer
	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.
<i>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?</i>	By nature ISA ² 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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	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.
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	Not applicable

8.16.5.7 Interlinked

Question	Answer
<i>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?</i>	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

Question	Answer
	<p>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 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.</p> <p>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</p>

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 (CloudWatch⁶², CloudForEurope⁶³), but there is no common infrastructure in place, which would enable interoperability between EU institutions and member countries, 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

⁶² http://www.cloudwatchhub.eu/sites/default/files/D3.2_Risk-Based-Decision-Making-Mechanisms-For-Cloud-Service-In-The-Public-Sector.pdf

⁶³

<http://www.cloudforeurope.eu/documents/10179/51418/Public+administration+requirements+and+vendor+offering/045deb19-744f-4ff4-9c4d-a2e4fa1f0e29?version=1.0>

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	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

Impact	Why will this impact occur?	By when?	Beneficiaries
(-) 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.

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

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 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 - 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 metrics⁶⁴ 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

⁶⁴ 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 organisations participating to dissemination	20 public services	End 2018 2019

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 through 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.

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 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 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).

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.

At 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):

<p>Stage 1: Drafting and Designing (<i>on-going</i>)</p>	<ul style="list-style-type: none"> - 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
<p>Stage 2: Implementing and Testing (2019)</p>	<ul style="list-style-type: none"> - 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 they arrive, on the basis of the priority of the stakeholder
<p>Stage 3: Packaging and Deploying (2020)</p>	<ul style="list-style-type: none"> - Packaging the IS in a form deployable by potential users, and deploy it in an open source repository - 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.

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
Execution	Implementing	450 k€	150 k€	Q4/2018	Q2/2020
Execution	Dissemination	50 k€	50 k€	Q4/2018	Q2/2019
Execution	Pilot Testing	50 k€	0 k€	Q2/2018	Q3/2020
Execution	Pilot Testing (others)	150 k€	150 k€	Q3/2019	Q3/2019
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	1.650 k€	650 k€		

8.16.11.2 Breakdown of ISA² 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 Initial dissemination	400 k€ (100 k€ ISA) 50 k€ (50 k€ ISA)	
2019	Implementing and Testing Dissemination Pilot Testing	500 k€ (150 k€ ISA) 50 k€ (50 k€ ISA) 100 k€ (100 k€ ISA)	
2020	Packaging and Deploying Pilot Testing (continuation) Publication of methodology	400 k€ (100 k€ ISA) 50 k€ (50 k€ ISA) 150 k€ (50 k€ ISA)	

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 Economy⁶⁵. 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**⁶⁶. 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 framework⁶⁷ 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 alliances⁶⁸ 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”⁶⁹.

⁶⁵ <http://ec.europa.eu/social/BlobServlet?docId=15617&langId=en>

⁶⁶ <https://ec.europa.eu/digital-single-market/en/digital-skills-jobs-coalition>

⁶⁷ <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>

⁶⁸ http://eacea.ec.europa.eu/erasmus-plus/actions/key-action-2-cooperation-for-innovation-and-exchange-good-practices/sector-skills-alliances_en

⁶⁹ http://ec.europa.eu/regional_policy/en/policy/themes/better-public-administration/

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 actions would in large part reuse whatever material has been produced as a resource the training curriculum will be developed under specific training targets and educational activities.

Thus, the action will be an e-learning programme and will mostly rely on the existing e-Learning resources 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.

8.17.3 OBJECTIVES

The present action proposes to

- Increase the awareness on interoperability (EIF) and ISA² solutions focusing on educational approaches
- 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 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.
- The courses would be designed in a way that the user feedback (rating) would be requested so as to sustain and improve the platform.

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.

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.

General education around the topic of eGovernment and/or Digital Government is out of scope.

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 ISA² decision⁷⁰.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>By having the focus on Interoperability it will contribute to the subject of interoperability and help to the implementation of the Interoperability Action Plan.</p>

⁷⁰ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Question	Answer
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	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
<i>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.</i>	<p>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.</p> <p>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.</p>
<i>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.</i>	

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
<p><i>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.</i></p>	<p>The proposal does not have a particular national perspective and is pan-European by essence.</p>
<p><i>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.</i></p>	

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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>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.</p>

Question	Answer
<i>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?</i>	The focus of this proposal is on interoperability and solutions proposed in the scope of the ISA/ISA ² programme. Although, the action might link to a number of similar initiatives in the area of Digital Skills on eGovernment. As there is a strong focus in the next MFF around Digital Skills, focus will be put to enhance.

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 ISA ² 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 Q3/2019
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	Q4/2019
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)	

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
<p><i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i></p>	<p>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.</p> <p>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.</p> <p>Currently other identified actions are: EIRA, CAMSS, SEMIC.</p>
<p><i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i></p>	

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
<p><i>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?</i></p>	<p>Improvement of Digital Skills is essential for the completion of the Digital Single Market. The mid-term review of the Digital Single Market strategy⁷¹, 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.</p>

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 ISA ² solutions and limited EIF Implementation in EU
a successful solution would be	offering structural educational activities and resources

⁷¹ <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 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 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.

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.

8.17.9 ORGANISATIONAL APPROACH

8.17.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission	ISA ² 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 initiatives
European Commission	Training services	Integration of the learning offer into the EU-Learn Catalogue.
Member States	ISA ² 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
- EIF ambassadors
- 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

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.

The action will also rely on Joinup platform to engage with a community and gather and organise new courses.

8.17.9.4 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 metrics⁷² indicate the current values.

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 defining 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 workflow will be put in place allowing for proposal of new courses, in addition to a change management process coupled with an annual review.

⁷² For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, effectiveness tab.

8.17.10 TECHNICAL APPROACH AND CURRENT STATUS

The proposal will start by developing a basic learning strategy and an identify existing educational resources that have been developed along the years in the ISA/ISA² programmes and identify possible gaps in the offer.

From the existing offer, the action will build a roadmap, and a programme for the last 2 years of the ISA² programme.

All these activities will be overseen and validated by the Steering Committee.

Grants

The action might experiment grants for developing new courses. 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 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	100	ISA ²	Q2/2019	Q3/2019
Initiation	Architecture and design of the eLearning Platform	100	ISA ²	Q4/2019	Q3/2020
Execution	Cursus development	100	ISA ²	Q2/2019	Q4/2019
Execution	Organisation of ISA ² Winter/Summer School	50	ISA ²	Q3/2019	Q4/2019
Execution	5 Grants for the production eLearning courses.	50	ISA ²	Q4/2019	Q2/2020
Execution	Development and maintenance of the MOOC platform.	300	ISA ²	Q4/2019	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)
Execution	Organisation of Webinars/Seminars	100	ISA ²	Q4/2019	Q2/2021
	Total	800			

8.17.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2019		500	
2020		300	

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 2019, 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, but also to members of the European Parliament and to the other European institutions and agencies, and also to suppliers. In addition a greater emphasis will be put on possible users of ISA³ solutions. Moreover, a stronger focus will be placed on increasing the take up of ISA² solutions on regional level.

In 2019, as in the preceding years, the programme will organise the annual SEMIC conference and the 2nd Sharing and Reuse conference. The action will continue to organise its

successful tailor-made workshops for the Member States on demand, but in addition also workshops for MEPs, members of the European institutions and the European regions, to be organised in Brussels. 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 ISA² 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 ISA and ISA² committee meetings and ISA and ISA² coordination group meetings, as well as in

the Intermediate and Final Evaluation report 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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes.</p>

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
<i>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.</i>	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.
<i>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.</i>	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
<i>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.</i>	Not applicable
<i>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.</i>	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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	Yes. The need for communication is documented in the ISA ² decision itself (see article 3 of the decision), this upon strong request from the Member States during the legislative procedure.
<i>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?</i>	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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	The whole purpose of the communication action is to encourage the take-up and re-use of all ISA ² interoperability solutions. For surveys, the EUSurvey tool is used.
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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
<i>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?</i>	Communicating the ISA ² 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 ISA ²
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 ISA ² 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 ISA ² 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 ISA ² 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 ISA ² 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 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 into events, communicating over the ISA ² 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 2019/2020

Output name	SEMIC conference 2019
Description	Organisation of the annual SEMIC conference, potentially with a workshop for targeted, specialised stakeholders the next date
Reference	
Target release date / Status	Second half of 2019

Output name	Sharing and Reuse conference 2019
Description	Organisation and communication of the Sharing and reuse conference 2019
Reference	
Target release date / Status	First half of 2019

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 2019/2020

Output name	Communication campaigns for specific ISA² actions with major impact
Description	Communication targeted to the wider ISA ² stakeholder group, to ensure take-up across policy areas
Reference	
Target release date / Status	Throughout 2019/2020

9.1.9 ORGANISATIONAL APPROACH

9.1.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA2 actions	ISA ² programme managers	Providing input on the solutions developed and the results generated
Public administrations from the Member States	Representatives in the ISA ² 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 metrics⁷³ 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

⁷³ 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 ISA ² 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 ISA² 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/Fin al evaluation	Description of milestones reached or to be reached	Anticipat ed Allocatio ns (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY Y)	End date (QX/YY YY)
Execution	Ongoing communication actions for the communication of the programme as a whole	350K	ISA ²	Througho ut the period	
	Sharing & reuse conference 2019	150K	ISA ²	Q2/2019	Q2/2019
	SEMIC conference 2019	150K	ISA ²	Q3/2019	Q3/2019
	Support of all activities through Intramuros contractors	170K	ISA ²	Q2/2019	Q1/2020
	Other ISA ² specific actions	100K	ISA ²	Q2/2019	Q4/2019
	Total	920K			

9.1.11.2 Breakdown of ISA² 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			

9.1.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
ISA ² 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	

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;
- 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, semester 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, semester 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 2019, the action will apply the method and instruments to monitor the actions funded by ISA² and to disseminate information.

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
<p><i>How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe?</i></p> <p><i>In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability Framework (EIF),</i> • <i>the Interoperability Action Plan and/or</i> • <i>the Connecting European Facility (CEF) Telecom guidelines</i> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>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.</p> <p>So indirectly, it contributes as it will keep the programme focussed.</p>

Question	Answer
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	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
<i>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.</i>	Not applicable
<i>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.</i>	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
<i>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.</i>	The ISA ² dashboard is the web portal where all results of the ISA ² programme will be published and will be made available to all Member States.

Question	Answer
<i>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.</i>	

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
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	Yes, article 13 of the ISA ² decision (EU) 2015/2240
<i>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?</i>	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.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	The ISA ² Dashboard
Description	The dashboard used to monitor the performance of actions is available under an open source licence for re-use.
Reference	https://ec.europa.eu/isa2/dashboard/
Target release date / Status	Live already

Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

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
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i>	ISA ² dashboard
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	

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
<i>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?</i>	The action examines the benefits of the ISA ² 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
ISA ² 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 ISA ² bodies (Committee, coordination group or equivalent, etc.)

9.2.7.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / Absolute dates of meetings?
ISA ² Governance Meetings	ISA ² 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 ISA² Committee Members follow closely the progress of the programme. Measurements collected in the frame of this action will be made publicly available on the ISA² dashboard on a, quarterly, semester and 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, semester 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 (ISA² Programme management, ISA² project officers, Member States, citizens, etc.) on the ISA² dashboard <https://ec.europa.eu/isa2/dashboard/>.

The use of this tool helps in decision making and ensures transparency towards all the ISA² programme stakeholders.

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	ISA ² Dashboard Operations, maintenance and technical support	50K	ISA ²	Q2/2019	Q1/2020
	2019 WP monitoring 3 quarters for ISA ²	400K	ISA ²	Q2/2019	Q1/2020
	Total	450K			

9.2.9.2 Breakdown of ISA² 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			