

ISA² WORK PROGRAMME

2018

DETAILED ACTION DESCRIPTIONS
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

Type of Activity	Reusable generic tools
Service in charge	DG MARE D1
Associated Services	JRC/IPSC G4 – 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 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.

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:

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.

⁵ <http://www.eucise2020.eu/>

- 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.
- 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 consolidate the CISE common interoperability components/specifications (tested in EUCISE2020 project) to be used in exchanges between national authorities, across sectors and borders.

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

⁶ ICT standardisation Regulation (EU) No 1025/2012

set up new man-to-machine interfaces, but to inter-connect existing systems to cater for a better flow of information.

7.1.4 SCOPE

There are over 300 public authorities at EU and national level, belonging to the seven maritime surveillance sectors (see footnote 3) in Europe today which need to exchange information relevant for the maritime domain, and thus relevant for the CISE process either as data providers or end-users (i.e. data consumers), or both. CISE supports the establishment of common specifications and generic reusable tools to achieve interoperability among these authorities' ICT systems, focussing on three complementary layers: at EU level, between Member States and the inter-connection between Member states and EU level systems.

The 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

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. 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.</p> <p>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. The seven user communities to be interconnected through an enhanced interoperability (CISE): maritime transport safety and security, marine environment preparedness and response to pollution, fisheries control, border control, general</p>

	<p>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. 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). 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; CISE process also fosters investment in 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. 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>7. The Connecting Europe Facility (CEF). The CEF building blocks are a set of highly reusable tools and services that have been mainly developed and piloted</p>
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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.

8. European e-Government Action Plan. The CISE process is in line with the principles and actions of the e-Government Action plan, which aims at helping national and European policy instruments to work together, supporting the transition of e-Government into a new generation of open, flexible and collaborative seamless services at local, regional, national and European level. CISE action supports the exchange of machine-readable information among the public maritime surveillance authorities across the EEA borders, following the “once only” principle. It promotes the use of secure digital services that enable interoperability among the IT systems. In addition, the CISE interoperability solutions are defined in the framework of the European Interoperability Framework and the reuse of the CEF building blocks are a priority for CISE.

9. EU Standardisation WP. CISE is part of the EU work programme for standardisation and closely follows the developments within the industrial standardisation domain, since the development of interoperability solutions may only benefit from the standardisation of certain components. In addition, CISE is included in the 2017 Rolling Plan for ICT Standardisation and the EUCISE2020 project through its partners will launch a coordinated standardisation initiative (possibly through ETSI).

<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 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 areas? Detail your answer for each of the concerned sectors.</i></p>	<p>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</p>

	solutions, we expect a high degree of uptake.
<i>For proposals or their parts 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? Detail your answer for each of the concerned Member State.</i>	Once completed the action will provide tailored solutions which could support an enhanced flow of information across sectors and between 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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<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 operational⁷.</p> <p>In addition, there are a number of initiatives ongoing and coming up at EU level which to which the CISE process will have to be synchronised.</p> <p>In particular, the planned revision of the EU Maritime Security Strategy (EUMSS) Action Plan, adopted by the Council in 2014, in 2018 will be an important event since CISE is being implemented through this strategy since its adoption.</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>In the EUMSS Action Plan, one of the action aims to “Develop measures to ensure the interoperability between sectoral information exchange systems at national and EU level (based upon the principles of collaboration and cooperation and by establishing protocols, authorizations and protections), in line with the European Interoperability Reference Architecture developed under the ISA programme of the Digital Agenda of Europe.”</p> <p>ISA² scope and financial capacity fits therefore perfectly the purpose of supporting the development of CISE, which seeks to improve cross sector and cross border interoperability.</p> <p>ISA funding will thus complement funding through the European Maritime and Fishery Fund, as highlighted above.</p>

⁷ See the Commission Communication of 8th July 2014, COM (2014)451 final and European Union Maritime Security Strategy (EUMSS) - Action Plan, 17002/14, 16 December 2014

7.1.5.5 Reusability of action outputs

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	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 mid-2018. Release of version 2: 2018. (proposal at the end of the EUCISE2020 project)
Critical part of target user base	The number of national authorities involved in the Maritime Surveillance across the EU is more than 300. It represents the maximum number of participants, as several authorities can also access CISE behind a single node. The 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 and 35 authorities and will run until mid-2018.
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

	<p>specifications of the services offered by an information provider, including the behaviour of the service and the input and output data expected by/from the service to ensure the expected behaviour</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 tested, fine-tuned and enriched by the CISE pre-operational validation project by mid-2018.</p> <p>Release of version 2: 2018. (proposal at the end of the EUCISE2020 project)</p>
Critical part of target user base	<p>The number of national authorities involved in the Maritime Surveillance across 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 mid-2018.</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)	Security model
Description	The CISE security model defines a framework for CISE security and describes the elements and concepts which apply at different layers of CISE security, ranging from security governance and management to service, data and infrastructure security.
Reference	

Target release date / Status	Initial version released in 2014 ⁸ . This version will be tested, fine-tuned and enriched by the CISE pre-operational validation project by mid-2018. Release of version 2: 2018.
Critical part of target user base	The number of national authorities involved in the Maritime Surveillance across the EU is more than 300. It represents the maximum number of participants, as several authorities can also access CISE behind a single node. The 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 security model 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)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Registry of authorities and services
Description	This registry is a software tool that will provide information about the participating authorities, their systems and the information they make available within CISE. Once fully implemented, the registry will support the governance, development and the operating phases of CISE fulfilling the operational (e.g., search for information, operational contacts, automatic service discovery) and the technical needs of the participants (e.g., technical IT support contacts).
Reference	
Target release date / Status	First specifications available end 2015 ⁹ First implementation by the CISE pre-operational validation project by mid-2018. Release of version 2 of the registry software: 2018 Release of version 3 of the registry software: before 2020

⁸ Deliverable of the MARE-JRC AA n. 32949-2012 NFP: "Concept Paper on Access Rights for CISE"

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

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>
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	n/a

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	CISE 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	<p>First specifications available: end 2015¹⁰</p> <p>Development of version 1 and testing by the CISE pre-operational validation project by end 2017</p> <p>Release of version 2: 2018</p> <p>Release of version 3: before 2020</p>
Critical part of target user base	<p>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.</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 gateway will be tested by authorities from 15 MS in the validation phase of the project.</p>
For solutions already in	

¹⁰ EUCISE2020 deliverable D4.3 Technical Specifications

operational phase - actual reuse level (as compared to the defined critical part)	
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7.1.5.6 Level of reuse by the proposal

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

Question	Answer
Does the proposal intend to make use of any ISA ² , ISA or other relevant interoperability solution(s)? Which ones?	CISE action in general, and the CISE pre-operational validation project ('EUCISE 2020') in particular, consider the reuse of the CEF solutions building blocks: e-Delivery, e-Signature, e-ID, e-Document, etc. 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)
For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones?	n/a

7.1.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	1. Integrated Maritime Policy and the Ocean Governance. JOIN(2016) 49 final 2. Communication on "A Digital Single Market Strategy for Europe"

	<p>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>
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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.

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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 with 2020	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 with 2020	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	Starting with 2020	MS' authorities & EU maritime agencies

	possibility to exchange information in an automatic and secure way.		
(-) Integration or usage cost	CISE interoperability solution will reduce the cost of integration of new authorities and systems and reduce the effort needed for information exchange by the EEA MS authorities.	Starting with 2020	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 will carry out a 6-month validation of the CISE concept using their current IT systems and data, from real operations.

There are also 10 ongoing projects in 7 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	https://ec.europa.eu/cise (in construction)
Target release date / Status	A first draft version of the website is planned to be ready end of 2018. The Handbook will be further drafted and updated with the results of the different actions related to CISE.

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. National authorities are providing advice to the Commission the CISE development in two ways: - 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. The CISE process is reviewed at policy level by the Council in the Friends of the Presidency Group monitoring the EU Maritime Security Strategy	Direct involvement in the EUCISE2020 POV project and in national projects (IT interoperability improvements).
Industry	Industrial developers in the area of maritime surveillance	Direct involvement in the EUCISE2020 POV project and in national projects (IT interoperability improvements).

7.1.9.2 Identified user groups

The stakeholders presented above will also be the possible users of the results of this action.

7.1.9.3 Communication and dissemination plan

The communication plan on CISE is threefold:

- 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.

- 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)

- 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	20	Q1 2019
Number of authorities connected to the CISE network	30	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	30	Q4/2020
Number of CISE solutions	2	Q1 2019

proposed for standardisation		
Number of ISA and CEF solutions re-used by CISE	2	Q1 2019

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. Six persons (3 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
- and
- (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

¹¹ <http://www.eucise2020.eu/>

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.
- 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/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution	Identify relevant IT interoperability endeavours/achievements enabling information sharing in third countries/ maritime regions to assess their potential to support CISE development.	200	ISA ²	Q4/2016	Q4/2017
Execution	Development and maintenance of a new version of CISE common technical specifications and components	950	ISA ²	Q3/2018	Q4/2020
Execution	Preparation of CISE interoperability models to be launched within the EU standardisation process. (Based on the standardisation plan developed by EUCISE2020)	200	ISA ²	Q2/2019	Q2/2020
Execution	Definition and refinement of the governance processes for CISE at technical and operational levels.	250	ISA ²	Q2/2019	Q2/2020
	Total	1600	ISA ²		

7.1.11.2 Breakdown of ISA funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Execution	200	n/a. the action has been

			initiated end of 2016
2017	Execution	0	
2018	Execution	950	
2019	Execution	450	
2020	Execution	0	

7.1.12 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	<u>n/a</u> ¹³	
CISE data model report (version 2015)	<u>n/a</u>	
Report on CISE service model report	<u>n/a</u>	
Concept Paper on Access Rights for CISE	<u>n/a</u>	

¹³ Most of the documents are for restricted distribution. They can be provided at all moments upon request.

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 C.4 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:

- The Online Collection Software (OCS) was developed. The tool helps the ECI organisers collect online statements of support necessary to submit the initiative to the European Commission.
- 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.
- 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
- A helpdesk for assisting the users of these tools was established.
- A beta release of a mobile version of the OCS was demonstrated in 2017 and should be deployed by end 2017.
- Study on how to use Electronic identification in the context of ECI & OCS.

In the scope of the ISA² programme, subject to the outcome of an ongoing study, in 2018 the action aims at enhancing the above tools in the following areas:

- Preparatory works for a possible adaptation of the ECI and OCS software in the context of the revision of the ECI regulation announced in 2017 (a regulation proposal is expected by the end of 2017)
- Improvements for European citizens, users of the Online Collection Software (e.g. integration of eID solutions based on the outcome of the 2017 study)
- Improvements for ECI Organisers (e.g. better User experience)
- Interoperability improvements (better interconnection between the ECI Register, OCS and the Validation Tool)
- Technical advice in relation to development of legislative framework (studies, risk analysis, impact assessment)

7.2.3 OBJECTIVES

The high level objective is to improve the ECI and EP elections processes by enhancing the already provided tools, research and develop new solutions.

As the ECI instrument is currently subject to a review, 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 and European Parliament Elections software (Online Collection 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.

This action does not cover the development of the ECI Register legal content and administration interface.

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

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? 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> 	<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): Article 6(2): <i>By 1 January 2012, the</i></p>

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

<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><i>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 cross border 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><i>EU initiative / policy:</i></u> EU Treaty – Elections to European parliament <u><i>Nature of the contribution:</i></u> Council Directive 93/109/EC of 6 December 1993 <i>Article 13</i> <i>Member States shall exchange information required for the implementation of Article 4 (...)</i></p> <p>3) <u><i>EU initiative / policy:</i></u> Recommendation on EP elections <u><i>Nature of the contribution:</i></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</i></p>
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	<i>Processing recommendation, [...]”</i>
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	No other alternatives have been identified

7.2.5.2 Cross-sector

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

Question	Answer
<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 the <u>ECI/OCS system</u>, 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> <i>For the <u>European Parliament crypto tool</u> 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.</i>
<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, same as above.

7.2.5.3 Cross-border

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

Question	Answer
<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 and this year announcement of the Commission First Vice-President Timmermans of a revision of the regulation reflected the urgency and priority of this action.</p> <p>The ECI/OCS is actively used by the European Citizens and the Crypto tool is critical for MS administrations and must be operational well in advance of the 2019 European Elections.</p> <p>Refer to 1.1.5.1 for the legislation from which these actions derive.</p> <p>As regards the ECI Online Collection Software the special urgency is required for the adaptations due to the modifications of the legal framework (especially annex III of the ECI Regulation), and the security related ones.</p>

	Refer to 1.1.5.1 for the legislation from which these actions derive.
<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>While the ECI Online Collection Software requires at this stage continuous update and improvement (because of changes on legislation and feedback received from citizens, organisations and other institutions), the ISA² Programme offers stability by the continuous financial framework therefore.</p> <p>Although in 2017 EU budget a separate budget line has been allocated to the implementation of the ECI, , it cannot be confirmed at this stage whether in 2018 it will be possible to obtain any financing from this source (the budgetary line at issue was created in 2016 as an empty "pro memoria" one and 2017 is the first year any appropriations have been received directly from this source).</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.

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 by the unlimited number of citizens' initiatives.
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	To date (since 2012) 38 initiatives out of 46 have collected the statements of support using this software

Name of reusable solution to be produced (for new proposals) or	Crypto Tool
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produced (for existing actions)	
Description	Tool to encrypt xml files exchanged by Member State at every European Parliament election.
Reference	
Target release date / Status	Q3 2018
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) The Online Collection Software and the Crypto Tool will be published on a Public platform (such as GitHub) with its source code and documentation freely available. b) If possible, a common solution will be defined between the OCS and EU Login software for the graphical and audio Captcha solutions. A separate ISA action related for the development of an open source and multilingual audio Captcha should be submitted. c) the crypto tool module will continue to be used in both areas: ECI Online Collection Software and EP elections
<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 year 2017 releases of the Collection Software and the Crypto Tool have been published on JoinUp. Moreover, the crypto tool module developed originally in the area of the ECI Online Collection Software is now being reused for the purpose of the EP elections.

7.2.5.7 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, refer to above chapter Contribution to the interoperability landscape

7.2.6 PROBLEM STATEMENT

7.2.6.1 European Citizens Initiatives

The European Citizens' Initiative 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 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 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 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 and OCS as set out in the Regulation (EU) No 211/2011 on the citizens' initiative

¹⁵ Regulation (EU) No 211/2011 of the European Parliament and of the Council on the citizens' initiative, OJ L 301/3, 18.11.2011

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 order to the preparation of the election of 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 statement of support for the initiative that reached 1 million signatures. The current OCS makes MS save quite some budget by allowing them to reuse the same mechanism to import Statement of support in their system.

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

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

¹⁷ COM(2015) 206 final.

Regarding the EP Crypto tool, it is the only current available software that Member States use to exchange file related to their mobile candidate or voters during the European Parliament Election. In case it would not be there, Member State would have to develop such a system or find an alternative solution at their own cost.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money ECI/OCS	Because OCS provides a standard interface for exporting the data that each MS can predict when importing the data	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Savings in time ECI/OCS	Because of the standard interface, MS do not have to rebuild the importing of data for every different initiative submitting their data	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Better interoperability and quality of digital public service ECI/OCS	Given that OCS offers a standard interface, it improves the interoperability and quality.	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(-) Integration or usage cost	Due to the OCS standard interface, the integration of OCS data output is easier for Member States.	Already and every time an initiative reach 1 million statements of support	Citizens. Member States
(+) Savings in money EP Crypto tool	The EP crypto tool saves Member States from having to build their own solution for exchanging EP elections data	For every European Parliament election	Member States
(+) Savings in time EP Crypto tool	The EP crypto tool offers a solution by which Member States can exchange data electronically rather than via paper 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	The EP crypto tools offers	For every	Member

usage cost EP Crypto tool	standards that ease the integration of data received from other Member States	European Parliament election	States
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Beneficiaries	Anticipated benefits
Signatories of citizens' initiatives	Improvements in the Commission provided software (OCS) will help the signatories supporting more easily the European Citizens' Initiatives.
Organisers of citizens' initiatives	The enhanced OCS will help organisers (users of the OCS) to build their online collection systems and ease the online collection system certification process. As the OCS is offered free of charge, they will financially benefit as they don't have to invest into an alternative, potentially costly, software (see also study on OCS).
Member States competent authorities	Easier and quicker processes for verifying Online Collection Software instances and validate the statements of support collected via the OCS
Member States' Electoral authorities	More efficient, standard and secure process to exchange data on EU voters and candidates participating in European Parliament elections.

7.2.7.2 User-centricity

At least two times a year in the context of the European Citizens' initiative and in the context of EP Crypto tool project, Expert group meetings are organized with Member States where progresses are 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 organized by the European Economic and Social Committee where citizens can test the existing and new releases of the software and provide their feedback.

Closer relationship is also happening with the ones of them that are more actively involved in the ECI/OCS operational activities (e.g. Luxembourg for certification of the Commission OCS)

Besides, this year, studies and implementation related to the improvement of the user experience of citizens using the ECI/OCS software have been conducted.

7.2.8 ORGANISATIONAL APPROACH

7.2.8.1 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.C.4. – Work Programme and Stakeholder Consultation
DIGIT – Directorate General of Informatics of the European Commission	DIGIT.B.2. – Solutions for Legislation, Policy & HR
JUST – Directorate Justice and Consumers	JUST D.3. – Union citizenship rights and Free movement
Member States' competent authorities	Expert group on electoral matters

7.2.8.2 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 are 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.

7.2.8.3 Communication and dissemination plan

European Citizens' Initiatives:

The representatives of SG and DIGIT will meet twice per year to agree on the mid- and long-term developments and, on working level, on a weekly basis to discuss short- and mid-term developments. The expert group on the citizens' initiative meets twice per year in the European Commission premises. The members of the expert group can also be contacted or discuss topics in an online forum.

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.

7.2.8.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of downloads of the OCS	3500	1 year
Number of organisers using the OCS already installed on the	40	1 year

Commission servers to collect statements of support online.		
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)	4 200 000	1 year

7.2.8.5 Governance approach

The project steering committee, comprised of the head of units 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 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 will cover and especially on questions of interoperability and concepts of e-identification and e-signatures, during the expert group meetings and online and, if appropriate, in workshops. With regard to EP elections, this will cover especially questions related to the management of electoral rolls by the national authorities.

7.2.9 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, DROOLS, Angular2) to empower the delivery of high quality and reusable software components.

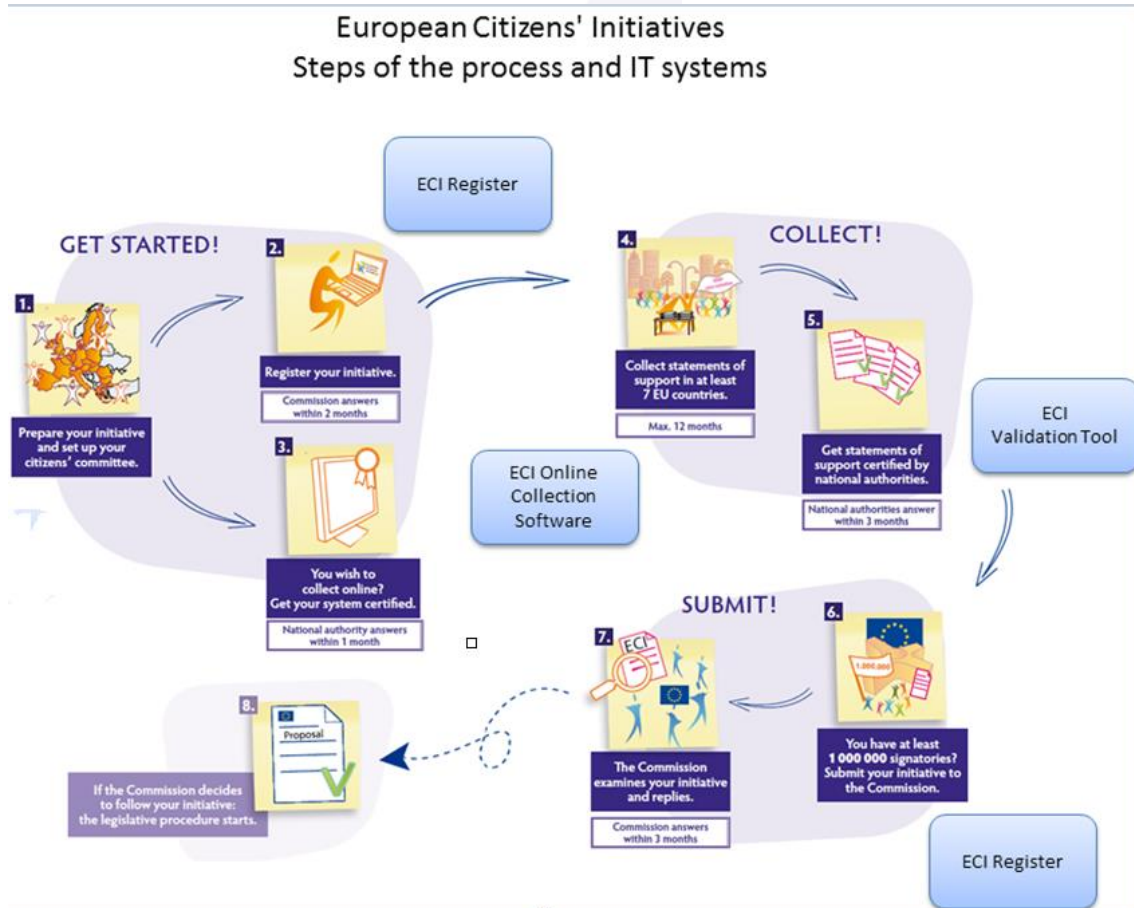
The delivery of the new or improved functionalities is grouped in bi-annual releases. The scope and timing of the releases will be defined based on the priority and value of the proposed implementations as agreed with the main stakeholders, and can evolve depending on the impact of possible legislative 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 2018 the priorities are the following:

- Improvements for European citizens, users of the Online Collection Software
 - Continuous improvement for the OCS for mobile (smartphone, tablets, ...) following the successful deployment in 2017 of the first release for mobile devices
 - OCS: Integration of the e-signature and/or e-ID solutions

- ECI Register: Potential implementation of the enhancements for the citizens following the Digital Transformation project.
 - Any potential changes that would be implied by the revision of the ECI regulation that has been triggered in April 2017 and ongoing.
- Improvements for ECI Organisers
 - Facilitate the OCS instance ISO 27K compliance
 - OCS Administration Interface improvements
 - User experience study
 - ECI Register: Improvements of the Organiser Account user interface following the 2017 User experience study that was conducted.
- 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 legislative framework (risk analysis, studies, ICT impacts assessment)
- 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.



7.2.10 COSTS AND MILESTONES

7.2.10.1 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)
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	300	ISA	Q3/2017	Q4/2017
Execution	Release June 2018	250	ISA	Q1/2018	Q2/2018
Execution	Release June 2018	175 ¹⁸	ECI Budget Line	Q1/2018	Q2/2018
Execution	Release December 2018	250	ISA	Q3/2018	Q4/2018
Execution	Release June 2019	250	ISA	Q1/2019	Q2/2019
Execution	Release December 2019	250	ISA	Q3/2019	Q4/2019
Operation	Support	360	ISA	Q3/2016	Q4/2019

7.2.10.2 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	
2018	Execution + support	570	
2019	Execution + support	620	

7.2.11 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	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:301:0003:0009:EN:PDF	

¹⁸ To be confirmed by Secretariat General

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		
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	
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 - ADMINISTRATIONS, BUSINESS AND CITIZENS' DATA EXCHANGES IN THE DOMAIN OF CASE MANAGEMENT (2016.24)

7.3.1 IDENTIFICATION OF THE ACTION

Type of Activity	Common Services
Service in charge	COMP.R3
Associated Services	DG DIGIT DG MARE DG AGRI

7.3.2 EXECUTIVE SUMMARY

The ISA² Action "**ABCDE - Administrations, 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 control¹⁹.

Data exchange processes in Case Management are cross-border: they rest upon intense co-operation between the European Commission and the Member States²⁰, where information systems are prone to reusability at European and national level²¹. Data exchanges cover various entities, such as European Institutions, Member States administrations (i.e. National Competition Authorities and Permanent Representations), EFTA countries, and undertakings (including law firms) located within the EU or even outside the EU.

Data exchange processes in Case Management are cross-sector, covering: Fisheries, Agriculture, Energy and Environment, Information, Communication and Media, Financial 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 services serving EU interests, namely:
 - a. GENIS (suite of common services for State aid).
 - b. ECN2.
 - c. COMP eTrustEx.

¹⁹ Potentially extensible to any sector and policy area carrying out dossier-centric and data exchange-intensive administrative services or investigations.

²⁰ 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.

²¹ 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.

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- d. eQuestionnaire.
- ii. **Development and operation of new ABCDE** cross-border and cross-sector common services serving EU interests, namely:
- a. eRFI²². Common e-service to support requests for information, sector inquiries and market investigations, to replace the ageing eQuestionnaire²³. 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 National Competition Authorities of the Member States to support confidentiality negotiations processes at national level.
- iii. **Establishment of a common ABCDE architectural framework**
- 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. CESA will as well define and implement security for ABCDE in a holistic and methodological way.

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.

²² 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').

²³ 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.

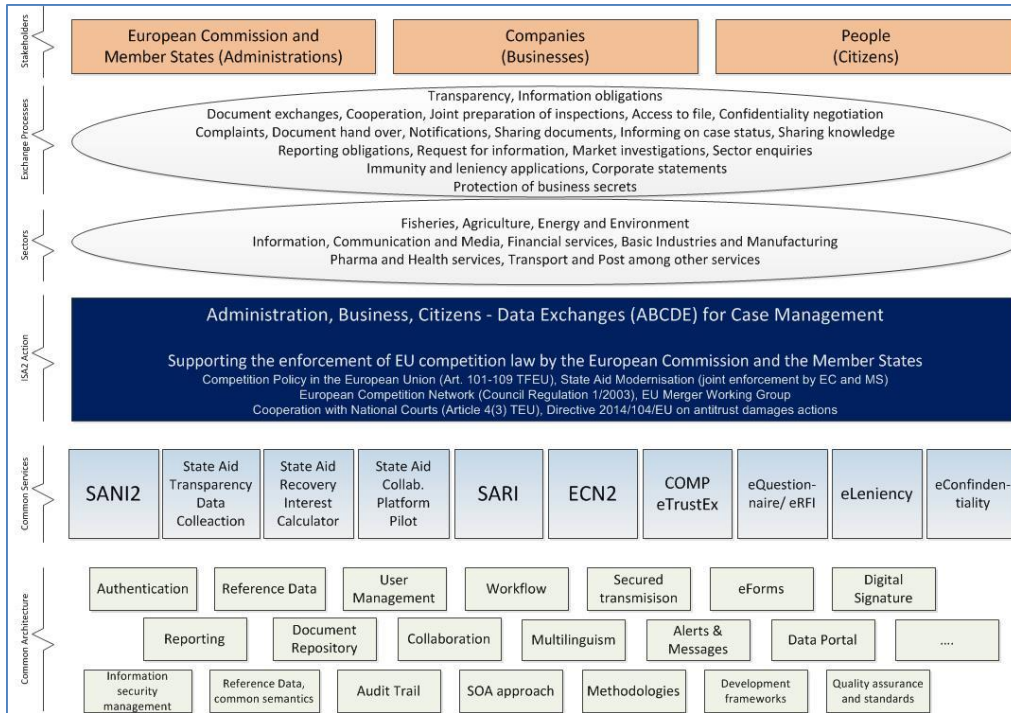
- ABCDE will enable the Member States administrations to save costs by implementing and offering free of cost e-services that can be reused by Member States' administrations (re-use of code) in order to support their own case management sub-processes such as requests for information, leniency applications 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:
<p>Operation and improvement of existing cross-border and cross-sector common e-services, serving EU interests, namely:</p> <p>GENIS: 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 to 109, 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>ECN2: 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 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 EFTA²⁴ countries. The main improvements foreseen for ECN2 will allow document sharing and collaboration between the European Commission and the National Courts of Member States, the implementation of the Damages Directive²⁵, 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 proposal²⁶ 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.</p> <p>COMP eTrustEx²⁷: common e-service used by DG COMP, businesses (companies and law firms) and Member States' administrations 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 control²⁸.</p>

²⁴ 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.

²⁵ Directive 2014/104/EU on antitrust damages actions.

²⁶ Proposal Directive of the European Parliament and the Council. http://ec.europa.eu/competition/antitrust/proposed_directive_en.pdf

²⁷ 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.

²⁸ File submissions in the context of Merger control can go as high as 250.000 files and up to 350 GB.

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.

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 also 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 also be reusable by National Competition Authorities on Member States to support their confidentiality negotiation processes.

Package III) Establishment of a common ABCDE architectural framework

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@EC²⁹.
- Common development frameworks and stacks.

The common ABCDE architecture 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 EICart³⁰.

7.3.5 ACTION PRIORITY

7.3.5.1 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>All common e-services provided by ABCDE facilitate the interoperability between the European Commission and Member States' administrations, and with business and citizens.</p> <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</p>

²⁹ 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.

³⁰ [European Interoperability Reference Architecture \(EIRA\) and European Interoperability Cartography \(EICart\)](#)

<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>mapped to the EICart.</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 Reporting; • State Aid Transparency obligations; • Merger Notification; • Coordination EC/MS in Antitrust enforcement and Merger control; • Requests for Information; • Applications for leniency; • Confidentiality negotiations.
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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>

	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).
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7.3.5.3 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. 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 several Member States have already manifested their interest in reusing some of these common e-services.
<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>	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. 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.

7.3.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	Yes. 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: <ul style="list-style-type: none"> • Antitrust/Cartels investigations (Art. 101 and 102 of the TFEU); • Council Regulation (EC) No 139/2004 on control of concentrations between undertakings (the EC Merger

	<p>Regulation);</p> <ul style="list-style-type: none"> • EU State Aid rules (Art.107 to 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+ proposal²⁶, 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 107-109 TFEU) and the State Aid Modernisation.</p>
References	<p>https://webgate.ec.europa.eu/competition/sani2</p>

	https://webgate.ec.europa.eu/competition/sani/sari https://webgate.ec.europa.eu/competition/transparency https://webgate.ec.europa.eu/competition/aidcalculator https://webgate.ec.europa.eu/fpfis/wikis/display/StateAid/Homepage
Target release date / Status	All State Aid common e-services are in production.
For solutions already in operational phase - actual reuse level	<p>SANI2: 3792 users. SARI: 3365 users. State Aid Transparency Award Module: 1141 users. State Aid Recovery Interest Calculator: 38 users. State Aid Collaboration Platform: 975 users.</p> <p>All users are from Member States administrations except 10 users per system from the European Commission</p>

Name of reusable solution	ECN2: common service developed under ISA Action 2.9 – DRS (ECN Pilot).
Description	<p>ECN2 is used by the European Competition Network (European Commission and the National Competition Authorities) to jointly implement Antitrust/Cartels rules (Articles 101-102 TFEU), inform each other about the status of Antitrust cases, share related documents and prepare inspections.</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 is used as secure document sharing platform between European Commission and Member States' administrations to support the application of Antitrust/Cartel law by National Courts as well as the Directive 2014/104/EU on antitrust damages actions.</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	<p>1695 active users. 1100 of these users are from Member States administrations while 595 are from the European Commission.</p>

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.
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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. Several 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 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.</p>
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 Q2 2019. • eLeniency target date for production is Q4 2018. • eConfidentiality target date for production is Q2 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) ³¹; • 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 consideration for system performance and reusability.

³¹ 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.

	<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. • Messaging: implements communications between tool users via messaging operations (send, reply, archiving and content encryption). <p>These modules are decoupled as generic building blocks and published in Join-up for re-use.</p>
Reference	https://joinup.ec.europa.eu/software/drs https://joinup.ec.europa.eu/asset/multilingual/home https://joinup.ec.europa.eu/asset/rd https://joinup.ec.europa.eu/asset/forms/home
Target release date / Status	All building blocks are in production and re-used by several common 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; • Enterprise Search for content search; • Corporate Notification Services (CNS) for notifications; • eTrustEx platform for file transmission. <p>For eRFI in particular, it is already planned to re-use several corporate building block as eUI, Legislative Text Editor (Leos), Machine Translation (MT@EC), Translation Services (Poetry) and Authentication Services (EU LOGIN).</p> <p>Moreover, GENIS common e-services will re-use and</p>

	interoperate with DG ESTAT's re-usable solution for dissemination of statistical data (ISA ² - Action 2016.06) in order to produce the State Aid Scoreboard.
<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. 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 ISA ² and ISA programs as eTrustEx (ISA ² 2016.19), GENIS building blocks (ISA 1.11) and Document Repository Services (ISA 2.9) as well as other interoperable solutions developed by the European Commission as EU LOGIN or MT@EC.

7.3.5.7 Interlinked

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	<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 Union³² 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>

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 one common service used by all. The first option would imply disparate expenditures by Member States multiplying IT solutions' developments and operations, as well as a

³² 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

number of disparate 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).

- Data exchanges – typically ruled by tight legal deadlines – are often carried out in a time-consuming way and with limited security measures (i.e. submission of documents by e-mail or delivery of DVDs or paper documents via mail service).
- Ongoing legislation changes requiring adaptations to underlying IT solutions.

Resulting needs:

- Need to operate existing cross-sector and cross-border interoperable common 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 unsecured, 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 this and other solutions to other National Competition Authorities.

**Problems and needs addressed by
Package III) Establishment of a common ABCDE architectural framework**

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 distinct 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	State-of-the-art common e-services for efficient data exchanges in Case Management will result in a more	Benefit already provided by	European Union as a whole: Institutions,

law (Art. 101-109 TFEU)	<p>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. 	Package I e-services. Will be increased with Package II e-services from Q4 2018.	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-services by Member States' administrations	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 Member States to support those processes translates in cost savings (i.e. re-using eRFI by National Competition Authorities).	From Q4 2018 (eLeniency) and Q2 2019 (eRFI and eConfidentiality).	European Commission and Member States' administrations.
Cost and time savings derived from automation of exchange processes	Several data and document exchange processes in Case Management still imply heavy manual intervention by European, National administrations and businesses' staff (foremost the negotiation of confidentiality and leniency applications) as well as high costs derived from the use of postal services (i.e. DHL) or staff displacement (i.e. delivery of leniency applications by lawyers). Automating these processes will reduce the cost, time and manpower required to carry them.	Benefit already provided by Package I e-services. Will be increased with Package II e-services from Q4 2018.	European Commission, Member States' administrations and business.
Enhanced security in the	The European Commission and Member States have an obligation of	Benefit already	European Commission,

manipulation, transmission and storage of sensitive information.	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.	provided by Package I e-services. Will be increased with Package II e-services from Q4 2018.	Member States' administrations and business.
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7.3.7.2 User-centricity

In line with the European Interoperability Framework principles, user-centricity recommendations are taken into account in the design of ABCDE solutions. ABCDE aims to deliver user-friendly and user ergonomic tools. 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, user representatives of the end-users (both internal and external) are involved from the early stages of the projects. Their collaboration and input are critical for identifying business needs and requirements, defining acceptance criteria and performing user acceptance tests (EIF's recommendation 12).
- 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 allows them to provide immediate feedback on the incremental versions of the systems developed, so the projects can be adjusted accordingly to their needs (EIF's recommendation 12).
- Performs User eXperience (UX) studies: for new common e-services (i.e. eRFI and eConfidentiality) we carry-out studies with user ergonomics specialists in order to design user-friendly tools. These studies help to tailor the tools to the main user profiles that will interact with them, define friendly user interfaces with intuitive navigation, and detect and correct "pain points" (EIF's recommendations 12 and 13).
- Designs the common e-services to request only relevant information and this to be input only-once by the users and then re-used across the different systems when possible (EIF's recommendations 13)

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	Gert-Jan Koopman (COMP Deputy DG for State Aid)
ECN2	
Project Owner	Anna Vernet (HoU COMP.A.4)
COMP eTrustEx	
Project Owner	Marc Ekelmans (HoU COMP.R.1)
eQuestionnaire	
Project Owner	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 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 and Project Manager, 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.
- **DIT³³ 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 & 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 – 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.

³³ DIT stands for Document handling and IT systems Group.

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 2017
Percentage of State Aid Notifications received via SANI2 common e-service	80%	98,6%
Number of State Aid Awards published via the Transparency Award Module common e-service	500 (per quarter)	N/A
Number of active users of the Transparency Award Module common e-service	1000	924
Number of documents downloaded via ECN2 common e-service	20 000 (per quarter)	40 951
Number of bundles transferred via COMP eTrustEx common e-service	600 (per quarter)	529
Availability of eQuestionnaire common e-service	95%	100%

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 legislation 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 in production.

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 will go hand-in-hand with the implementation of the ABCDE common architecture proposed by the CESA project. The executing phases will benefit 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

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 initiating and planning phases of the new common e-services under Package II. The ABCDE common architecture is coordinating the maintenance and evolution of the different common building blocks re-used by the common e-services (User Management, Reference Data, Multilingual, Audit Trail, etc.).

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: testing and support services are operational, providing services to all sub-projects in Package I and II. The setup of a Quality Management framework is ongoing.

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	Anticipa ted Allocati ons (KEUR)	Budget line ISA ² / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Package I - Operation and improvement of existing ABCDE common e-services					
GEN-Operation	GENIS	3040	ISA ²	Q2/2016	Q4/2020
ECN-Operation	ECN2	1395	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	760	ISA ²	Q2/2017	Q4/2018
ERF-Closing	eRFI	130	ISA ²	Q1/2019	Q2/2019
ERF-Operation	eRFI	390	ISA ²	Q3/2019	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	450	ISA ²	Q3/2017	Q2/2018
ELE-Closing	eLeniency	50	ISA ²	Q3/2018	Q4/2018
ELE-Operation	eLeniency	100	ISA ²	Q1/2019	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	450	ISA ²	Q3/2017	Q4/2018
ECO-Closing	eConfidentiality	50	ISA ²	Q1/2019	Q2/2019
ECO-Operation	eConfidentiality	150	ISA ²	Q3/2019	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	220	ISA ²	Q3/2017	Q2/2018
CES-Closing	CESA	60	ISA ²	Q3/2018	Q4/2018
CES-Operation	CESA	1595	ISA ²	Q2/2016	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	750	ISA ²	Q2/2016	Q4/2020
SUP-Operation	User support and IS testing	1439	ISA ²	Q2/2016	Q4/2020
HOS-Operation	Hosting DIGIT Data Center	840	ISA ²	Q2/2016	Q4/2020
	TOTAL	14054	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	
2019	Package I - Operation	1160	
2019	Package II - Development & Operation	410	
2019	Package III - Operation	560	
2019	Services - Operation	790	
2020	Package I - Operation	1020	
2020	Package II - Operation	410	
2020	Package III - Operation	560	
2020	Services - Operation	790	
	TOTAL	14054	

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 DGs and services, other European institutions, Member States.
Responsible Action manager name	Martin KRÖGER (Head of Unit, SG.B4)
Responsible Action manager email	Martin.Kroeger@ec.europa.eu

7.4.2 EXECUTIVE SUMMARY

The purpose of the action is to conduct a study to analyse and propose an efficient solution for the electronic access to the European Commission (EC) documents. The analysis will cover the entire flow from the EU citizens' or stakeholders' requests until the answer of the EC, providing access to the requested documents or (partially) refusing access to them. The study will also investigate the existing IT tools and identify components that could be reused in order to propose an integrated and fully electronic solution.

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 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.

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;
- 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 not among the beneficiaries of access to documents under [Regulation 1049/2001](#). Therefore, requests coming from Member States' national (or subnational) administrations are not dealt with under [Regulation 1049/2001](#), but according to the principle of sincere cooperation laid down in the Treaty (Article 4(3) [TEU](#)).

The third countries' authorities and international organisations are also not among the beneficiaries under Regulation 1049/2001. Their requests are handled via the diplomatic channels.

The study will only deal with requests which are in the scope of [Regulation 1049/2001](#).

The solution the study will propose should comply with the new General Data Protection Regulation (GDPR) and the new data protection rules for EU institutions and bodies which will apply simultaneously as of 25 May 2018. It should also comply with the corresponding new implementing rules that the Commission will put in place.

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 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 EC:
 - Secretary General;
 - Transparency Unit (SG.B4):
 - Head of Unit;
 - Case handlers;
 - Administrative assistants;
- Cabinet of the President of the EC;
- Directorates General and services, under the remit of which requested documents fall:
 - Administrative Coordinator;
 - Legal Coordinator;
 - 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 SG);
- 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 DG under the remit of which the document(s) fall(s). In case the applicant does not specify this information, the SG.B4 attributes the request to the responsible DG/service. The DG/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 SG.B4 Unit and the final answer is an EC decision (of the C series) adopted by the Secretary-General (by delegation from the College of Commissioners). The draft decisions in cases which are considered politically sensitive, are sent to the Cabinet of the President of the EC 24 hours before publication.

The adoption of the confirmatory decisions is processed via E-Grefte and the decisions are formally notified to the applicant through express mail (DHL) with acknowledgment of receipt.

Releasing a document to the applicant means, in legal terms, that the document in question becomes, in principle, publicly available for everybody (*erga omnes*). In practical terms, however, most of the documents disclosed to the applicants are currently not automatically made available to the public at large. The only documents automatically put into the public domain after full access to them is granted are those EC documents, which are available in [Vista IT application](#) and, upon disclosure, automatically uploaded into the Register of EC documents (RegDoc).

Some statistics concerning the current process

Annually, the EC 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 EC 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 EC 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 EC repositories such as ARES and other systems.

Purpose of the action

This action aims to investigate a faster and easier solution for EU citizens and other beneficiaries to request access to the documents in possession of the EC, 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 aim of the study is to analyse how to:

- make it easier for the EU citizens and other beneficiaries to file initial and confirmatory applications for access to documents;

-
- facilitate the communication between the applicant and the EC whenever additional information on the request is needed;
 - facilitate the consultations by the EC with Member States, other EU institutions or third parties in cases where the documents requested originate from, respectively, other EU institutions, the Member States or third parties;
 - facilitate the traceability of communication with the applicants, Member States and third parties and to provide for the required legal certainty in this area;
 - facilitate and decrease the delays in providing the EU citizens and other beneficiaries with the requested documents (or a reasoned refusal of access to (parts of) them);
 - increase the access to the documents in possession of the EC for the EU citizens and other beneficiaries;
 - publish the documents provided so other EU citizens and beneficiaries also have access to them;
 - facilitate the compilation of statistics on requests received, answers provided and documents identified to which access was given or (partially) refused;
 - provide all users with search functionalities in order to follow their requests and to easily find other relevant information.

To this end, the study 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 objective of the action is to analyse the existing processes and to propose an integrated solution enabling electronic workflows and fully electronic exchanges between all actors involved. The study will not cover the implementation of this solution, but 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.

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. appeals) .It will also propose a solution allowing the EU citizens and other beneficiaries to receive the requested documents solely by electronic means. At the same time, the proposed 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 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:

1. 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.
2. The NGO Access Info Europe, established in Madrid in 2006, provides a separate/private website, Ask the EU, 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 Ask the EU website, the answers to these requests and the disclosed documents are made public on that website.

The disadvantages are that:

- a. the personal data contained in the communication between the EC and the applicant are published automatically, and
 - b. 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 stipulated deadline.
3. Today, applicants have no electronic means at their disposal to file confirmatory applications ("appeals" when an initial application is rejected or partially rejected).
 4. 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:
 - a. the consultations concerning documents originating from third parties are conducted via registered mail / DHL and e-mail;
 - b. the consultations concerning documents originating from Member States are delivered by hand by drivers (SG.A) and e-mail.
 5. 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.
 6. 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.A and by e-mail.
 7. 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 what is 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 with Member States, other EU institutions and third-parties;
- answering the requests;
- making documents available for the 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 proposing a solution for:

- providing the applicants with an electronic overview of all their requests and all their communications with the EC regarding their requests;
- allowing the applicants to easily file their initial and confirmatory applications (i.e. "appeals");
- warning the applicants of the deadlines until which a confirmatory application can be filed;
- providing applicants and EC staff with a functionality allowing them to communicate electronically on all applications (e.g. allowing EC staff to request further information from the applicant and allowing applicants to provide further information);
- providing Member States, other EU institutions and third parties with an electronic overview of all consultations they were involved in;
- providing Member States, other EU institutions and third parties with a technical possibility to respond to consultations;
- publishing and making available (excl. storage) of documents, to which access was (partially) given,;
- facilitating the compilation of statistics on requests received, answers provided and documents identified to which access was given or (partially) refused.

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

(c) identify, 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 a technology which will no longer be supported by DIGIT as from 2021 and lead to a fragmented and cumbersome process. The analysis 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 explore solutions to provide applicants, Member States, other EU institutions and third parties with a user-friendly interface to the EC. The study will investigate the feasibility of integrating existing ISA² solutions such as Open e-TrustEx and e-Delivery with EC corporate solutions (such as CNS, EU Login and ERS) 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 analysis will also investigate how the proposed 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 are:

- analysis of the existing access to document processes and the needs for automation;
- analysis of the existing IT tools and reusable components;
- proposal of an integrated, generic and reusable solution which includes both the future business process and the technical platform and which is based on the identified business needs and the existing components.

Out of scope of the action are:

- the implementation of the solution proposed in the study;
- the repository where the documents are stored;
- requests for documents from Member States or 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 study how to eliminate this fragmentation and propose 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;
- answering the requests;
- making documents available for the public.

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

The action deals with 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 requests may be initiated by any EU citizen in any Member State and any other beneficiary, and can concern documents in possession of the EC which originate from any source, be it EC, another EU institution, a Member State or a third party.

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

The current tools supporting the public access to documents process are fragmented and are sustained by a technology (ColdFusion) which will no longer be supported by DIGIT 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, 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.

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

The action will propose 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 proposed 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](#).

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

The action will study the feasibility of reusing and integrating the following frameworks and components:

- existing ISA/ISA² solutions such as
 - o Open e-TrustEx for communication with and delivery of documents to applicants;
 - o e-Delivery for conducting consultations and exchange of documents, messages and information with Member States, other EU institutions and third parties;
- EC corporate solutions such as:
 - o CNS for sending notifications to applicants;
 - o EU Login for authentication;
 - o ERS (External Repository Service);
- other solutions such as:
 - o 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.

This action has a clear link with one of the ten priorities of the Juncker Commission, namely "Democratic Change". Increased transparency over the decision-making process and facilitating stakeholder participation in the policy-making process are elements of this strategic objective. The study will investigate how to increase transparency by making it easier for the public to request documents in the possession of the EC.

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? In particular, how does it contribute to the implementation of:</i></p> <ul style="list-style-type: none"> • <i>the new European Interoperability</i> 	<p>The current landscape of processes and tools supporting the public access to documents in possession of the EC is fragmented and many exchanges are not electronic.</p> <p>This action aims to examine how to eliminate this fragmentation and</p>

<p><i>Framework (EIF),</i></p> <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>propose a fully electronic, holistic solution for</p> <ul style="list-style-type: none"> - filing initial and confirmatory applications; - communicating with applicants throughout the application process; - consulting with Member States, other EU institutions and third-parties; - answering the requests; - making documents available for the public.
<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 document process. However, the action will strive to study the feasibility of reusing existing components as much as possible.</p>

7.4.5.2 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>Regulation 1049/2001 applies to all sectors. The number of initial applications for access to documents across all sectors is approximately 6000 per year. The number of confirmatory applications is approximately 300 per year.</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 current RegDoc web form and the external/private AsktheEU website are used for requests across all policy sectors.</p>

7.4.5.3 Cross-border

Question	Answer
<p><i>Will the proposal, once completed, be useful</i></p>	<p>The applicants can be citizens of any</p>

<p><i>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>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 EC, but originate from the administration of any Member State, in which case the EC consults the Member State before answering the applicant's request.</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>As explained above, the current access to document process already contains consultations with all Member States and the analysis and solution proposal will reflect this.</p>

7.4.5.4 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 implementation of the access to documents process is foreseen in Regulation 1049/2001 and EC Decision C(2001) 3714. The current IT solutions supporting this process are fragmented, incomplete and written in a technology (ColdFusion) which will no longer be supported by DIGIT as from 2021. The urgency of the proposal is also supported by the criticism by the European Ombudsman (see page 10)</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 fits better as the goal is to analyse how 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.</p>

7.4.5.5 Reusability of action's outputs

<p>Name of reusable solution to be produced (for new proposals) or produced (for existing actions)</p>	<p>Analysis of a solution automating the process to handle requests for public access to documents from the initial request to the final answer</p>
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Description	<p>The study will analyse how to:</p> <ul style="list-style-type: none"> - provide the EU citizens and other beneficiaries with an electronic overview of all their requests and all their communications with the EC regarding their requests; - allow the EU citizens and other beneficiaries to easily file their initial and confirmatory applications (i.e. "appeals"); - warn the EU citizens and other beneficiaries of the deadlines until which a confirmatory application can be filed; - provide the EU citizens and other beneficiaries, 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 the EU citizens and other beneficiaries to provide further information); - provide Member States, other EU institutions and third parties with an electronic overview of all consultations they were involved in; - provide Member States, other EU institutions and third parties with a technical possibility to respond to consultations; - publish and make available (excl. storage) the documents, to which access was (partially) given; - facilitate the compilation of statistics on requests received, answers provided and documents identified to which access was given or (partially) refused.
Reference	
Target release date / Status	Study to be delivered end of 2018
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
<p><i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i></p>	<p>Yes, the action intends to analyse the feasibility of making use of</p> <ul style="list-style-type: none"> - ISA² solutions such as: <ul style="list-style-type: none"> o Open e-TrustEx for communication with and delivery of documents to applicants; o e-Delivery for consultations and exchange of documents, messages and information with Member States, other EU institutions and third parties; - EC corporate solutions such as: <ul style="list-style-type: none"> o CNS for sending notifications to applicants; o EU Login for authentication; o ERS (External Repository Service); - other solutions such as: <ul style="list-style-type: none"> o the open source Alaveteli platform.
<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>	

7.4.5.7 Interlinked

Question	Answer
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<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 proposal contributes to the Juncker Commission priority of "Democratic Change" by proposing a solution for providing the public with an easier way to request access to documents in the possession of the EC. The aim is to greatly enhance the transparency of EU decision-making.</p>
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7.4.6 PROBLEM STATEMENT

The problem of	Outdated, paper-based communication process with applicants
Affects	The current web form for requesting access to documents
the impact of which is	<ul style="list-style-type: none"> - Difficulty for the EU citizens and other beneficiaries to file initial and confirmatory applications; - time needed to process applications, which means the deadline is not always respected; - costs for the EC (DHL, ...); - manual work for EC staff.
a successful solution would be	A comprehensive analysis and proposal for an efficient, holistic solution for all electronic workflows and exchanges of messages and documents concerning Regulation 1049/2001 requests

The problem of	Technology no longer supported as from 2021
Affects	The current web form for requesting access to documents
the impact of which is	Rising maintenance costs and risk of service discontinuity
a successful solution would be	A proposal for 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

7.4.7 IMPACT OF THE ACTION

7.4.7.1 Main impact list .

This section is not applicable as the objective of this action is a study. The intended savings in money and in time and the intended improvement in the interoperability and quality of digital public service can only be realised by the implementation of the solution the study will propose.

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money			
(+) Savings in time	-		
(+) Better interoperability and quality of digital public service			
(-) Integration or usage cost			
<i>[add other impacts as needed]</i>			

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.

Therefore, the analysis will focus on the user and propose a solution which will:

- show applicants an overview of their requests and all correspondence with the EC, receive notifications for deadlines and important events throughout the process and be able to easily file initial and confirmatory applications;
- provide different user communities within the EC (the Secretary-General, the different DGs, the Legal Service, ...) a user-friendly interface which will eliminate all double encoding in different systems;
- show other EU institutions, Member States and third parties an overview of all consultations they are involved in, and enable them to receive notifications and give their input to the process in a user-friendly way;
- make the documents to which access is granted available for the public at large and not just for the applicants.

The proposed solution will be user-centric and try to minimize manual data encodings throughout the business process.

7.4.8 EXPECTED MAJOR OUTPUTS

Output name	Assessment of security & confidentiality
Description	Examine how the personal data of the applicants, the staff of EU institutions, Member States and third parties can be kept confidential and protected in accordance with

	<ul style="list-style-type: none"> - the new General Data Protection Regulation (GDPR); - the new data protection rules for EU institutions and bodies; - and the corresponding new implementing rules that the Commission will put in place.
Reference	
Target release date / Status	Study to be delivered in Q4/2018

[please copy and use a separate table for each output foreseen.]

7.4.9 ORGANISATIONAL APPROACH

7.4.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
European Commission	SG.B.4	Business Owner/Business 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 proposed solution
AsktheEU.org	Access Info Europe	Business owners of one of the external/private systems in the current fragmented landscape
Member States	Permanent Representations	Involved in the consultation process prior to replying to some access to documents requests.
Other EU institutions	Access to documents units of other EU institutions	Involved in the consultation process prior to the EC replying to some access to documents requests.
Third parties		Involved in the consultation process prior to the EC replying to some access to documents requests.
mySociety	mySociety is a not-for-profit	Providers of Alaveteli , one of the

	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.	components that will be assessed during the study
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7.4.9.2 Identified user groups

Up to now, the following user groups have been identified:

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 DGs and Services, from the Secretary General and from the Cabinet of the President;
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.

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

7.4.9.5 Governance approach

The project will follow the standard PM2 governance structure:

- Project Owner: Mr KRÖGER Martin (SG.B.4)
- Study Supplier: Mr GRITSCH Martin (SG.R.3)

- Project Manager: Mr MATACHE Claudiu (SG.R.3)
- Business Managers: Ms MARTINČIČ Ruth (SG) (SG.B.4), Ms BLURIOT-PUEBLA Madeleine (SG.B.4)
- Business Implementation Group (BIG):
 - o Representatives from SG.B.4 unit (access to documents sector),
 - o Legal and administrative coordinators in other Commission departments,
 - o Representatives from other EU institutions,
 - o Representatives from the Member States,
 - o Representatives from civil society

7.4.10 TECHNICAL APPROACH AND CURRENT STATUS

This section is not applicable, as the action concerns a study.

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)
Execution		80		Q2/2018	Q4/2018
	Total	80			

7.4.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018	Execution	80	
2019			
2020			

1.1.1 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:</p> <p>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)

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 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.

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?</i>	This action will directly contribute to the objectives of the ISA ² programme by supporting interoperability between public administrations.
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</i>	The tools foreseen by the single digital gateway should be used in the internal market covering a wide range of activities analysis of the current situation, in order to be linked to, among others, education.
Question	Answer
<i>Will the interoperability requirements be useful? For proposals completely or largely already in operational phase, indicate whether and how</i>	Outcome of the action would apply to EU-level tools. Interoperability challenges with
Question	Answer
<i>Is your action urgent? Is its implementation for proposal an EU policy or priority already in operational phase, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.</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.

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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
<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 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</p>

	tools and building blocks.
<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
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.

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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
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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

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

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

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 metrics³⁴ indicate the current values.

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

³⁴ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard>, effectiveness tab.

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

N/A

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 2018
Execution	Identification of existing tools, building blocks and development needs	50	ISA ²	Q3 2018	Q4 2018
Execution	Options for implementation and estimation of costs	100	ISA ²	Q4 2018	Q4 2018
Closing / Final evaluation		10	ISA ²	Q4 2018	Q4 2018
	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	120
2018	Execution	210	310
2018	Closing / Final evaluation	10	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

Type of Activity	Common frameworks
Service in charge	DIGIT.D2
Associated Services	DG JRC, DG CONNECT, DG TAXUD, DG SANCO

8.1.2 EXECUTIVE SUMMARY

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 Czch 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 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? In particular, how does it contribute to the</i></p>	<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>implementation of:</p> <ul style="list-style-type: none"> • the new European Interoperability Framework (EIF), • the Interoperability Action Plan and/or • the Connecting European Facility (CEF) Telecom guidelines • any other EU policy/initiative having interoperability requirements? 	
<p>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</p>	<p>Yes. There is no other European reference addressing architecture aspects of interoperability.</p>

8.1.5.2 Cross-sector

Question	Answer
<p>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.</p>	<p>Yes. EIRA and the CarTool are policy neutral.</p>
<p>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.</p>	<p>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.</p>

8.1.5.3 Cross-border

Question	Answer
<p>Will the proposal, once completed, be useful from the interoperability point of view and used by public administrations of three (3) or more</p>	<p>Yes.</p>

<i>EU Members States? Detail your answer for each of the concerned Member State.</i>	
<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 2018
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
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Description	Carography Tool
Reference	V3.0.0
Target release date / Status	June 2018
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 for generic needs (e.g. case management)
Description	most salient building blocks of the EIRA and additional building blocks focusing on the needs to build an interoperable solution addressing a particular interoperability challenge.
Reference	
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)	

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 Registres, Joinup, ABCDE (case mgmt. SAT), CEF (eID SAT, eDelivery) and CEN e-Procurement SAT
<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)

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 quality of digital public service	EIRA use cases: Solution design, creation of cartographies, portfolio mgmt. decision support, policy making support		European and Member States' Public Administrations

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 described under section 8.1.5.5.

8.1.9 ORGANISATIONAL APPROACH

8.1.9.1 Expected stakeholders and their representatives

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

	Groups	
European Commission Services	IT Governance of the Commission and a representative from each concerned Commission service	Providing input
ICT Industry	Representatives of ICT industry, SMEs, ...	Providing input
Standardisation bodies	Representatives of ICT industry, SMEs, ...	Providing input
Local and regional public administrations	Representatives from standardisation organisation for a and consortia	
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 organisation	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 2019

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
- The creation of Solution Architecture Templates for generic needs like case management and eProcurement

- 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;
- Improvements to the EIRA and definition/follow-up of a change management process for the governance of new releases of EIRA.

8.1.11 COSTS AND MILESTONES

8.1.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Execution - Operation	<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 Templates • Definition of interoperability specifications and of the accompanied methodology of applying them • Enhancements to the 	570	ISA ²	Q4/2017	Q3/2018

	EIRA.				
	Total	1145			

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	
2019			
2020			

8.2 INTEROPERABILITY MATURITY MODEL (2016.37)

8.2.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT.D2
Associated Services	GROW

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 has 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 organisations 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).

Furthermore, it is the objective of the action to build on the significant uptake of the IMM in the first half of 2017, and capitalize on it by even more substantially increasing the demand for the IMM.

In parallel to increasing usage, the action shall investigate how to formalize the IMM's status as an ISA² artefact and professionally managed product.

The IMM should also increasingly become community-sustained with Member State representatives, public service owners, and other stakeholders who have an active interest in it actively contributing to its maintenance and deployment. The name of the action moving forward is Interoperability Maturity Assessment of Public Services (IMAPS)

8.2.3 OBJECTIVES

The objectives are:

- To maintain and revise the Interoperability Maturity Model (IMM) and the accompanying tools based on a stable change and release management process;
- To strengthen the self-assessment and prescriptive nature of the model;
- To create an IMM based solution for EC users and external users;
- To deploy IMM in the MSs achieving at least one "start" assessment by a MS and two additional MSs replicating the experience of the official professional training institution for the Greek Public Administration;
- To enrich the IMM assessment data base in order to support benchmark studies;
- To develop a configuration methodology for applying IMM in a country and/or domain specific context.

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 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. The revision process of the IMM will be based on the IMM change management process.

8.2.5 ACTION PRIORITY

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> • <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 Strategy, European Interoperability Framework, Digital Single Market Strategy and Digital Agenda for Europe.</p> <p>Interoperability Maturity Model is an instrument to assess the progress made so far by different public administrations to reach greater interoperability of their public services. Based on the IMM, public administrations can measure how well a public service is able to interact with other organisations 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 Interoperability Maturity Model 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. Interoperability Maturity Model 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. Interoperability Maturity Model is useful and can be utilised in any EU policy area.</p> <p>Interoperability Maturity Model is a generic and domain-agnostic instrument that allows public services of any type, domain or policy area to obtain insight into generically defined interoperability enablers, manifestations, opportunities for reusing or providing services and key improvement recommendations.</p> <p>Moreover, Interoperability Maturity Model 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>Interoperability Maturity Model has been already utilised for the assessment of more than 50 operational public services at various levels (local, national, European) and from various policy areas such as:</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
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<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. Interoperability Maturity Model is useful and can be utilised by public administrations of any EU Member State. Interoperability Maturity Model 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, Interoperability Maturity Model is accompanied with specific configuration guidelines that allow its configuration specifically to single country, region, province or municipality.</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>Interoperability Maturity Model has been already utilised for the assessment of more than 50 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
<p><i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>Yes.</p> <p>The revised European Interoperability Framework refers to the Interoperability Maturity Model as an instrument that promotes the idea of interoperability-by-design, which means that for European public services to be interoperable, they should be designed in accordance with the</p>

	<p>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><i>The ISA2 scope and financial capacity fit for the implementation of the Interoperability Maturity Model since:</i></p> <ul style="list-style-type: none"> • <i>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.</i> • <i>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.</i> • <i>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.</i> • <i>Facilitates and promotes the re-use of interoperability solutions by European public administrations since the notion of reusability is at the heart of the model. The model assesses if and how a public services, operational or under design, automatically consumes other services and how efficiently it provides services to the external world.</i> • <i>It contributes to the development of a more effective, simplified and user-friendly e-administration at the national, regional and local levels of public</i>

	<i>administration.</i>
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8.2.5.5 Reusability of action's outputs

Name of reusable solution	IMM toolkit v1.1.0
Description	Optimization of the IMM Lite packaged as a reusable highly user-friendly solution.
Reference	https://ec.europa.eu/eusurvey/runner/IMMSurvey
Target release date / Status	February 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)	Interoperability Maturity Model (Lite version) has been used for assessing approx. +50 public services (European, national and local ones).

Name of reusable solution	Interoperability Maturity – Assessment Service
Description	The Interoperability Maturity – Assessment Service will be a reusable solution/service available to both EC-internal and external stakeholders upon request and depending on resource availability.
Reference	
Target release date / Status	2016 (first release) / next revision /Feb 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	Interoperability Maturity – Benchmark Service
Description	The Interoperability Maturity – Benchmark Service will be a reusable solution/service available to both EC-internal and external stakeholders upon request and depending on resource availability.
Reference	
Target release date / Status	2016 (first release) / next revision Feb 2018
Critical part of target user base	
For solutions already in operational phase - actual reuse	

level (as compared to the defined critical part)	
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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>	Interoperability Maturity Model 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 IMM 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
<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 model contributes to the eProcurement implementing acts as an assessment method of every step in the eprocurement chain.

	Interoperability Maturity Model 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.
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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 an European Public Service.

The problem of	Lack of a 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 IMM

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		European and

	recommendations of IMM to improve the maturity level of public services		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

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

All major outputs have been described under 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 IMM as a tool 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 IMM Checklist to ensure they address the required interoperability aspects.
Architects	Responsible for ensuring the created (IT) solution fits foreseen architecture and requirements of the organisation	Usage of the IMM to: a) further align technical / semantical standards with the internal and external environment of the organisation and b) analyse the suitability of multiple technical solutions and/or business scenario's, 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 IMM 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 IMM and IMM Checklist 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 IMM 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 IMM and described concepts in the IMM 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 IMM 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 IMM documentation has been uploaded, including the IMM questionnaire, the IMM guidelines and the IMM recommendations for both versions of the model (Full and Lite). A Wikipedia 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 organisation 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 2019

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 B6) that identifies the priorities, organises the activities, safeguards the proper execution of the IMM 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 IMM 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 IMM report explaining the methodology, how IMM 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.

IMM 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. Currently, there are two IMM versions: a) IMM Full which provides deeper insight in the interoperability maturity of a public service by assessing each digitally consumed service on a case by case basis and b) IMM Lite, a more compact and highly user-friendly version of the model, offered as a service via an online tool. In addition, an interoperability checklist was published intended for those involved in designing a public service in order to raise awareness on how to design it by default in an interoperable way. A methodology for configuring the model to country and/or domain specific context is also available, allowing IMM users to obtain a more accurate and relevant assessment of their interoperability maturity.

Aiming to strengthen the self-assessment nature of the IMM, the development of a web-tool was initiated in order to a) facilitate the public service owners to apply the model and b) support the statistical analysis of the collected data.

The foreseen activities for the ISA² Work Programme 2018 include the full release of an IMM Toolkit solution and two services. The assessment service and the benchmark service available to both EC internal and external stakeholders.

8.2.11 COSTS AND MILESTONES

8.2.11.1 Breakdown of anticipated costs and related milestones

Phase:	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					
Planning					
Execution					

Closing/Final evaluation					
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
Execution - Operation	<p>a) Revision of the model based on the revised Europe Interoperability Framework and the performed assessments and the collected feedback,</p> <p>b) configuration of the published change & release management process,</p> <p>c) pilot and fine-tune the IMM configuration methodology in country and/or domain specific context, d)</p> <p>development and promotion of an EIF and IMM based training module and e)</p> <p>enhancement of the prescriptive nature of</p>	118	ISA ²	Q2/2016	Q1/2017

	the model by producing guidance documents, 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
	Total	473			

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	
2019			
2020			

8.2.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
IMM documentation	https://joinup.ec.europa.eu/elibrary/document/interoperability-maturity-model	

8.3 NATIONAL INTEROPERABILITY FRAMEWORK OBSERVATORY (2016.21)

8.3.1 IDENTIFICATION OF THE ACTION

Type of Activity	Common Framework
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). All of it was published in a Commission Communication in March 2017.

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.

Under the ISA² programme, NIFO will pursue and reinforce its support and monitoring by measuring the implementation in the Member States of the revised EIF recommendations and the achievement of the roadmap of actions proposed in the revised EIS at national level. Therefore, a new mechanism of data collection, analysis and delivery of information with the highest possible quality of data will be established over 2017 and early 2018. A pilot in the field with some Member States and EC DGs will be launched to refine and optimise the monitoring mechanism and get it ready for 2019 where there is the legal obligation of fully putting in place the monitoring across the Member States.

In parallel, NIFO will establish 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.

NIFO will also continue to provide an overview of the eGovernment activities in European countries.

Also, 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**. Therefore, during 2017 and early 2018 the functional design of the new consolidated observatory in Joinup will be drawn up and presented to the main stakeholders. And the new features will be built in coming months in Joinup. In parallel, the collection of data to feed the observatory will be carried out during 2017 and first months of 2018.

8.3.3 OBJECTIVES

- The maintenance, updating, promotion and monitoring of the implementation of the EIF and the EIF-IS and AP.
- Provide a consolidated observatory designed in a user-friendly way that will:
 - Gather all interoperability results contributing to the modernisation of European public administrations and to priority of the DSM and other initiatives such as the eGovernment action plan, the European semester, etc.
 - Serve the purpose of having a better understanding of the situation in each national public administration in terms of public sector modernisation; by giving insight into European countries' approach to interoperability and by maintaining a comprehensive snapshot of the eGovernment activities in the countries in scope.
 - Provide a useful input to the European Semester exercise in particular in what concerns the Administrative capacity building and the coherence of Member states programmes in this area with national strategies and European initiatives.
 - Act as the monitoring mechanism of the revised EIF, EIS implementation and Action Plan for Interoperability.
- Identify the links of the Action Plan for interoperability with the new EIF implementation monitoring method and ISA2 monitoring and evaluation action. As a result of this, define the data sources, sample questions and key indicators to be captured from the several data sources to perform the evaluation of the IAP accordingly.
- Implement the final adjustments of guidelines and monitoring mechanism for the revised EIF, the IAP, and the ISA² programme.
- Start the monitoring of the revised EIF according to the new monitoring mechanism by applying it to some pilots with selected countries and EC DGs. Provide also ad hoc and support training to Member States' public administrations to ensure EIF implementation across all levels of their national administrations.
- Help building capacity building policy and modernisation of public administrations and provide ad-hoc support and training to Member States' public administrations to ensure the new EIF implementation across all levels of their national administrations.

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 decision³⁵.

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? 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.</p> <p>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-IS and AP. 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 EIF-IS foster interoperability. Monitoring their implementation is essential and contributes to the DSM.</p>

³⁵ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

	NIFO is the instrument used for this monitoring.
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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>	Yes, by offering a comprehensive picture of the interoperability activities in the countries in scope. By assisting its stakeholders through the collection, analysis and dissemination of european-comparable interoperability indicators that inform policies and monitor their outcomes. All stakeholders in scope are expected to make usage of NIFO results
<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>	Yes, the outputs of NIFO have already been reused by various Member States. The eGovernment factsheets are considered as a reference. The state of

<i>Members States.</i>	play reports on interoperability in Europe and the NIFO factsheets served as a source of input in the revision of the EIF and EIF-IS.
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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.

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	PAs
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/community/nifo/og_page/egovernment-factsheets
Target release date / Status	Available / Yearly update
Critical part of target user base	PAs
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	State of play of 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	PAs
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
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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 EIF-IS, 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 EIF-IS and AP

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	It is happening	All EU public

	recommendations will make public services more interoperable, integrated and of higher quality	already	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	Stating in 2019, once the revised version of the EIF and the IS 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
	Having a monitoring mechanism will facilitate the monitoring of the implementation of the EIF and the EIF-IS and AP and a diagnosis to the Member States of potential areas of improvement of public service delivery.	Stating in 2019, once the revised version of the EIF and the IS are adopted by the MS	All EU public administrations

8.3.7.2 User-centricity

During 2017 and early 2018 the functional design of the new observatory will be drawn up and presented to the main stakeholders. And the new features will be built in coming months in Joinup.

In the design 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, will be presented to make sure that a user's friendly journey is implemented for the new

observatory. 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	Functional specifications of the interoperability observatory
Description	Comprehensive set of functional and design specifications in order to design and implement a consolidated observatory on Joinup
Reference	
Target release date / Status	Q4 2017

Output name	Consolidated monitoring mechanism for EIF-IS and IAP implementation
Description	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. Pilot the implementation with some MS and EC DGs and final adjustment based on the piloting results.
Reference	
Target release date / Status	Q3 2018

Output name	Update of the report on public administration modernization
Description	Since 2014, NIFO analyses the way in which interoperability and eGovernment policies 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 2018

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 Modelling, Indicators and Impact Evaluation Unit working in composite indicators, Digital economy Unit working on the ELISE Action), other relevant EC policy DGs (DG Regio; DG Emploi, DG Grow), Eurostats	Contact points for defining the new monitoring mechanism; also data sources for new observatory like public administration modernisation initiatives, location interoperability observatory
EU Publications Office	The unit responsible for the EU Open Data portal	Data sources for new observatory and alignment with open data portal
Non-European public administrations	National representatives	
ICT Industry	Industry associations	

8.3.9.2 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 metrics³⁶ 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	Q3 2018
Number of NIFO Factsheets updated according to the new monitoring mechanism	34	Q2 2019
Number of eGov factsheets updated	34	Q3 2018
Number of case studies published	9	Q2 2018

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 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.

³⁶ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard> , effectiveness tab.

8.3.10 TECHNICAL APPROACH AND CURRENT STATUS

The NIFO is presented in different sections of Joinup. The observatory has a continuous maintenance process which makes sure that information is timely and accurate.

Desk research is done prior to data collection from the Member States experts. The input is then processed and sent back to the respective country for validation before it is published. In the context of NIFO, the different outputs are prepared in collaboration with external consultancy companies.

As a result of the Commission Communication in March 2017 on the revised of EIF, the European Interoperability Framework - Implementation Strategy (EIF-IS), and the Interoperability Action Plan (IAP) the NIFO monitoring mechanism will be expanded accordingly.

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

The way to also monitor the action plan for interoperability will be defined by making the right links with the EIF implementation new monitoring mechanisms, as well as the ISA2 monitoring and evaluation action.

Pilots on the implementation of the new monitoring mechanism will be launched with some MS and EC DGs, and final adjustments based on the piloting results will be performed.

Under the ISA² programme, NIFO will pursue and reinforce its support and monitoring by measuring the implementation in the Member States of the revised EIF recommendations and the achievement of the roadmap of actions proposed in the revised EIF-IS and AP at national level. Therefore a new mechanism of data collection, analysis and delivery of information with the highest possible quality of data will be established over 2017 and early 2018. A pilot with some Member States and EC DGs will be launched to refine and optimise the monitoring mechanism.

Support training to Member States' public administrations to ensure EIF implementation across all levels of their national administrations will be provided.

NIFO will also continue to provide an overview of the eGovernment activities in European countries.

Also, 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**. This way, the observatory can be linked with initiatives contributing to the public sector modernisation like (not exhaustive) the DSM, the MS's national digital strategies, the European semester, the eGovernment action plan 2016-2020, etc. In this regard, a comprehensive blueprint was established in 2017 to describe the activities in order to design and implement the consolidated observatory on Joinup.

During 2017 and early 2018 the functional design of the new observatory will be drawn up and presented to the main stakeholders. And the new features will be built in coming months in Joinup. In

parallel, the collection of data to feed the observatory will be carried out during 2017 and first months of 2018.

Finally, since 2016, NIFO analyses the way in which interoperability and eGovernment policies are being addressed by the Member States in national reforms and operational programmes in the context of the European Semester. For these activities, the documents underpinning the European Semester are among others: Country Specific Recommendations (CSR), Partnership Agreements (PAs), National Reform Programmes (NRPs) and Operational Programmes (OPs), in relation to ESIF Thematic Objectives 2 and 11. To this end, the report on public administration modernization will be updated, containing a set of best practices and recommendations to improve capacity building and the modernization of public administrations

8.3.11 COSTS AND MILESTONES

8.3.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/F inal evaluatio n	Description of milestones reached or to be reached	Anticipa ted Allocati ons (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
	Operational maintenance of the NIFO process including the update of the eGovernment and interoperability factsheets and the analysis for the state of play report	443	ISA	Q2/2016	Q1/2019
	Implement/update/maintain the method needed to provide an accurate monitoring of the implementation of the <u>revised EIF</u> and the action plan for interoperability, and continue the operational monitoring of the factsheets on interoperability and	650	ISA ²	Q1/2017	Q1/2019

	eGovernment				
	Formulate the functional and technical specifications for the design and implementation of the consolidated observatory on Joinup Platform	220	ISA ²	Q2/2017	Q2/2018
	Total	1313			

8.3.11.2 Breakdown of ISA² funding per budget year

Breakdown of ISA funding per budget year

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

8.4 CAMSS - COMMON ASSESSMENT METHOD FOR STANDARDS AND SPECIFICATIONS (2016.27)

8.4.1 IDENTIFICATION OF THE ACTION

Service in charge	DIGIT D2
Associated Services	DG CONNECT, 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.

8.4.3 OBJECTIVES

The objectives are:

- To maintain and extend the method itself, the library of existing assessments, the tools and the list of standards selected in Member States;

- To support other standardisation-related commission activities such as i) the Multi-Stakeholder Platform on European Standardisation by assisting them on the identification (and evaluation) process of proposed technical specifications; ii) the European Catalogue of ICT-Standards , by providing detailed updates of the lists of standards published by the Member States; and iii) other relevant organisations, e.g. standardisation bodies;
- To create an active user community around the assessment and adoption as well as the development and maintenance of standards and/or liaise with existing standardisation fora, to raise awareness of the different methods used in Member States, aligning them where possible, and building upon existing knowledge about best practices.
- To offer assessment services to the natural clients of CAMSS (e.g Multi-Stakeholder Platform on European Standardisation). This new paradigm is called "CAMSS-as-a-Service"

8.4.4 SCOPE

The CAMSS action does not itself select or recommend standards; it is meant to support public administrations in Member States that make such selections. 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.

8.4.5 ACTION PRIORITY

The CAMSS 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 DG Grow and the MSP;
- l) will contribute to priority e) of the ISA² Decision by the re-usability of the CAMSS method and the assessments performed;
- m) will contribute to priority f) of the ISA² Decision by the synergies with IMM action and EIA action;
- n) 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? 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. EIF and EIRA will benefit of CAMSS outcomes by identifying interoperability specifications of the architectural building blocks of EIRA.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>Yes</p>

8.4.5.2 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 CAMSS action is horizontal nature</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>Assessment (identification and evaluation) of standards in the National Health Data Authority (DK), Ministry of the Interior (NL) and Ministry of Finance (ES)</p>

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
<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 expectedly will adopt 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, IMM 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 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)	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)	

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
<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.
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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	Adoption of CAMSS as it is expected by the MSP

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
(+) Better interoperability and quality of digital public service	Developing interfaces		European and Member States' Public Administrations
(-) Integration or usage cost			
[<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 • A customizable assessment method 		European and Member States' Public Administrations

	<p>capable to be adapted to the users' needs (fit-for-purpose) through the creation of new scenarios</p> <ul style="list-style-type: none">• 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 and a CAMSS library to reuse formalised specifications meant for similar business needs.• Improvement of the expertise of civil servants working with formalised specifications.• Offers a complimentary tool to support the European Interoperability Framework (EIF) and the European Interoperability Reference Architecture		
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	<p>(EIRA) in the evaluation of European or national interoperability standards and specifications.</p> <ul style="list-style-type: none"> Offers on-demand assessment services for CAMSS users (Multi-Stakeholder Platform on European Standardisation, European Catalogue of ICT-Standards, etc) 		
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8.4.7.2 User-centricity

The application of CAMSS requires to understand 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 have been described under section 8.4.5.5.

8.4.9 ORGANISATIONAL APPROACH

8.4.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
Bodies in MS administrations that assess and select standards	ISA ² Coordination Group or ISA CG equivalent	Providing input
Public procurers in Member States	ISA ² Coordination Group or ISA CG equivalent	Providing input
Multistakeholder Platform on European Standardisation	DG GROW project officer	Providing input
disation units in DG ECT	officers	Providing input

dissemination fora	national contacts, secretariats	Providing input
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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 an 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	50%	mid 2019
Adoption by MSP		January 2018

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 2018 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 establish CAMSS-as-a-Service
 - Direct assistance to the users (context and purpose of the assessment(s), creation of scenario(s), etc.
 - Provision of supporting tools for the assessment teams (either the CAMSS team or users' teams)
 - Provision of the assessments and CAMSS reports (either the CAMSS team or support to users' teams)
- To evolve the current CAMSS method, is able to exchange criteria, evidences and complete assessments in a structured way.

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 	175	ISA ²	Q2/2016	Q1/2017

	and standards-list, testing and Implementation on Joinup				
Execution - Operation	Maintenance and promotion of method, tools, assessment library and standards list	175	ISA ²	Q4/2017	Q4/2018
	Total	350			

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		150	
2019			
2020			

8.4.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Regulation 1025/2012 on standardisation	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:316:0012:0033:EN:PDF	
Rolling Plan on ICT Standardisation	http://ec.europa.eu/growth/single-market/european-standards/policy/benefits/index_en.htm http://ec.europa.eu/DocsRoom/documents/8972/attachments/1/translations/en/renditions/native	
Priority ICT Standardisation Plan	To be published end 2015	

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. Since a revised European Interoperability Framework Action Plan ³⁷ (EIF-AP) was adopted in 2017 as part of the Communication “European Interoperability Framework – Implementation Strategy”³⁸.

This revision was called by the Digital Single Market strategy which identified interoperability a a major enabler for digital integration in Europe.

This new 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. 2016-2020. 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 previously 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.

This cooperation will become even more critical with the possible adoption of the Single Digital Gateway³⁹ that will ensure that 13 key administrative procedures will be made available online and will have to be cross-border under the once-only principle.

³⁷ [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](#)

³⁸ [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.](#)

³⁹ [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](#)

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)
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. Identify best practices (Action 6)
3. Provide an evaluation the EIF implementation by end 2019

Building on the former EIS Governance action, it will continue to seek for reference model 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.

For the objective 2, although the monitoring itself will happen within the NIFO action, the action will build on the results obtained by the current EIS action. .

The conclusions drawn from the final evaluations of the ISA and IDABC programmes, which address aspects such as relevance, efficiency, effectiveness, utility and coherence, will also be taken into account.

Continue to identify models of coordination and collaboration within Member States on putting in place interoperability governance.

Provide Guidelines and models for the new concept of public service governance.

Action plan for the development of organisational interoperability

The objectives of this action are:

- To define a high-level strategy at EU level in the area of interoperability as well as an implementation roadmap of concrete actions to support the realisation of this strategy;
- to identify and assess relevant governance structures and organisational models in the Member States public administrations and evaluate their efficiency and effectiveness vis-à-vis the multi-layered interoperability model,
- to identify and assess the legal solutions used in the Member States and at EU level to ensure that EIS is in compliance with the EU context,
- to follow up on the implementation of the strategy and review it as needed

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, EIS stays 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

Any interoperability initiative in the EU, in any policy domain, is in scope of the action.

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 will 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? 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> 	<p>The action support directly the EIF implementation. It will also spill-over with any initiative for which interoperability is critical such as the Single Digital Gateway regulation.</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><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
<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>By definition the action encompasses all 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>	

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

<i>EU Members States? Detail your answer for each of the concerned Member State.</i>	
<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.
<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 orientations
Description	Instrument to measure and increase organisational interoperability
Reference	
Target release date / Status	Q4/2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	Organisational interoperability orientations
Description	Instrument to measure and increase organisational interoperability
Reference	
Target release date / Status	Q4/2018
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

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>	Many ISA ² actions will be used by this action.
<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>	The EIF is part one of the Digital Single Market strategy.

8.5.6 PROBLEM STATEMENT

The problem of	Not having a common and constantly updated strategic approach to interoperability at European level
affects	the Members States and the EU bodies as well as the European citizens and businesses benefitting from European public services
the impact of which is	Strategic misalignment of interoperability actions amongst the MS, diverging approaches in the delivery of public services, possible duplication of effort, risk that interoperability is not seriously considered. All above entail the risk of creating new e-barriers in EU to the detriment of the DSM.
a successful solution would be	To define a high level strategy at EU level and have it

	apply through concrete interoperability actions.
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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	The action by definition is meant to improve the interoperability in 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, ...	

8.5.8.2 Identified user groups

Member States' Public Administrations

8.5.8.3 Communication and dissemination plan

The communication plan includes:

- Promotion with stakeholders and users for the dissemination and take up and of the revised EIF;
- Communication with the MS representatives through the regular ISA² management meetings and through webinars and dedicated workshops

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.

8.5.9 TECHNICAL APPROACH AND CURRENT STATUS

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, the action will focus on interoperability governance and organisational aspects and will identify best practices as well as preparing the EIF implementation evaluation to be published in 2019.

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.	150	ISA ²	Q3/2018	Q1/2019
	EIF Evaluation	150	ISA ²	Q4/2018	Q4/2019
	Total	658			

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		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 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 (**200.000+ users as of 07/2017**) 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 2016 figures are (delta's versus 2015 figures are presented between quotes):

- **3915+ active groups (+13%)**
- In 2016, around 2292 Service Help-Desk calls for CIRCABC, **-4%** vs 2015
- **184.000+ users (+13%)** and **3.400.000+ (+43%) published documents** (4.5TB+ of data)

CIRCABC is used by:



Based on the execution of the ISA work Programme 2010-2015 (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 fine 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 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>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, 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</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>

<i>each of the concerned sectors.</i>	
<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>	CIRCABC is used in the majority of EU policy areas in order, for example for expert groups to collaborate on initial draft 'legislation' before it goes through the decisional process. CIRCABC covers from agriculture to statistics, trade, joint initiatives-researches, health, justice and many others.

8.6.5.3 Cross-border

Question	Answer
<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 & bodies are using CIRCABC. There are also a few public administrations, businesses and associations consuming CIRCABC either as a service or as a reused brick in their own Information System.
<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>	CIRCABC is used in most (if not all) Member States and beyond. Examples of CIRCABC Open Sources instances: - Germany : Bundesnetzagentur, Land Nordrhein-Westfalen, Bundesverwaltungsamt BVA, Brandenburgischer IT-Dienstleister ZIT-BB, Bundesagentur für Verbraucherschutz und Lebensmittelsicherheit, Land Sachsen. - Austria : Umweltbundesamt Österreich - Spain : Universidad Rey Juan Carlos, Generalitat Valenciana, Spanish Government. - Greece : Government: Inter-service Consultations - Finland : European Chemical Agency (ECHA) deployed Secure-CIRCABC Number of geographically spread users in the system: 200.000+ out of which 160.000+ are external.

8.6.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its</i>	CIRCABC fulfils each point mentioned as objective of the ISA ²

<p><i>implementation foreseen in an EU policy as priority, or in EU legislation?</i></p>	<p>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> <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 organisations 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>Released – v3.8.3 in 2017 v4.0 in 2017 v4.1 in 2018 v4.2 in 2018</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	The services offered by CIRCABC also allow its usage as a simple external repository. It features multiple ways of interacting with the repository through services: - Web Services - FTP – File Transfer Protocol - WebDAV - CMIS
Reference	https://joinup.ec.europa.eu/software/circabc/home
Target release date / Status	Released – Web Services/FTP/WebDAV since 2012 and in constant evolution (implementing more and more services/possibilities to ease and complete the offer CMIS in 2016. Integration possibilities with other repositories (Sharepoint and Documentum)
Critical part of target user base	Any entity in need of a document repository service
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Examples: Webservices: Integration with IAM – Manage memberships (RTD) ; Publish document in external repository (ARES, HERMES), Integration of automatic translation tools (MT@EC, Google Translate, Microsoft Translate) CMIS: Synchronization of a Sharepoint instance with a CIRCABC Interest Group FTP/WebDAV: A few groups manage their files via FTP (use of automatic uploads) or WebDAV

Name of reusable solution	CIRCABC as a service
Description	An instance of CIRCABC is hosted at the European Commission's Data Center and can be used by any European citizen or entity.
Reference	https://circabc.europa.eu
Target release date / Status	Released Constant upgrades (approx. each 6 months)
Critical part of target user base	Any entity in need of a document sharing and collaborating system hosted in a trusted EC environment.
For solutions already in operational phase - actual	The European Commission is also using it with 4.080 active groups (cross-sector and cross-border)

reuse level (as compared to the defined critical part)	<p>Figures from 2016:</p> <p>3.915 active groups (+6%)</p> <p>184.864 users (+13%)</p> <p>25.000+ different entities (administrations, companies, businesses)</p>
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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>
<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 (200.000+ 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. 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 organisations 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: 07-2017 – 50%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (200.000+ 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</p>

	service's performance
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The problem of	[Software] Regular software upgrades from the building blocks – Progress: 07-2017 – 50%
affects	All CIRCABC users. Many citizens, public institutions, administration and businesses (200.000+ 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) <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> • Alfresco upgrades <i>Follows our constant effort the keep the tool in sync with the latest features and security updates delivered by Alfresco.</i>

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: 07-2017 – 70%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (200.000+ 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 end of Q4/2017. 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: 07-2017 – 25%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (200.000+ 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 <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> <i>This package focuses on community & organisational features.</i> ○ Archiving <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>

The problem of	Mobile application – Progress: 07-2017 – 30%
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (200.000+ 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 <i>Access your documents; groups; make comments etc. from a mobile device.</i>

The problem of	Interoperability
affects	All CIRCABC users. Many citizens, public institutions, administrations and businesses (200.000+ 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 analyze and enable the integration possibilities with social networks (twitter, google, ...) <i>In order to improve the community aspect of CIRCABC, the major social network should be integrated within the application to extend its communication channels.</i> ○ '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). <i>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)</i>

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>

			Citizens
(+) 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 analyzed 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
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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
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 metrics⁴⁰ 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 **ISA² Coordination Group** assists the Commission in translating priorities into actions and ensures continuity and consistency in their implementation.
- The **Project Management Group** (DIGIT DDG D1) will be used to bridge the perspectives between the internal stakeholders.
Regular project review meetings (review of project progress), alternating with team meetings (review of the individual tasks) that will be held to ensure timely delivery of the project.
DIGIT DDG D1 contracts external resources for service management, development, maintenance, community management, trainings and help-desk support.
DIGIT DDG D1 provides a Service/Project and Communication Manager.
- The **'User Group'**: Based on actual needs and to bridge better the technical and the business aspects, a 'User Group' has been set up.
It is used to consult the users, when additional information and clarification is required, to provide the opportunity to submit **enhancement requests**, exchange opinions and best practices.
The frequency of the 'User Group' meetings will be based on their necessity in regard to the current planning and implementation phases.

⁴⁰ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard> , effectiveness tab.

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

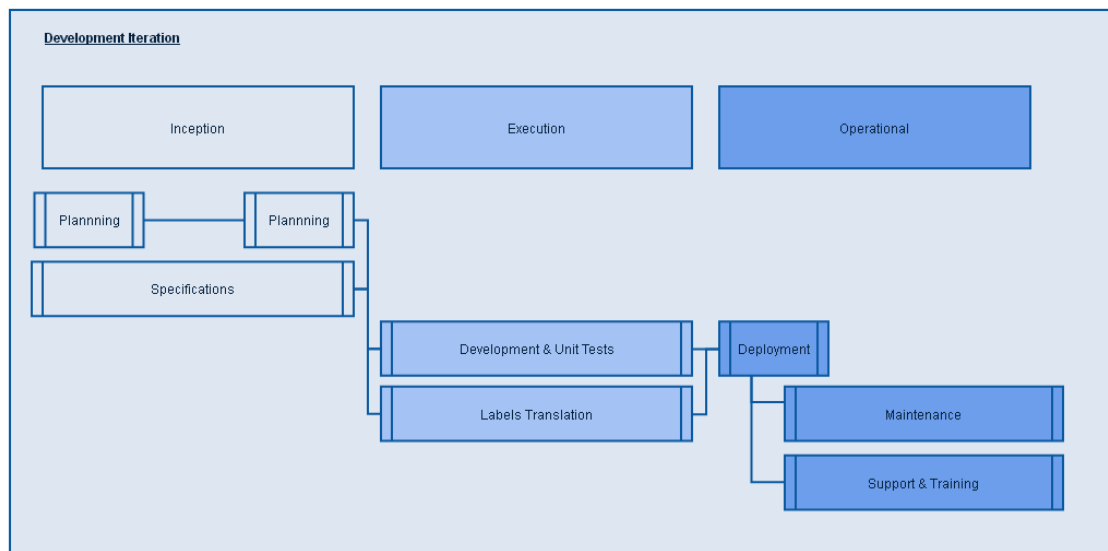


Figure 2: Development cycle

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
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	50	ISA ²	Q1/2019	Q4/2019
Inception	Performance Pack	50	ISA ²	Q1/2019	Q4/2019

Execution					
Execution	Communication & Trainings	50	ISA ²	Q1/2019	Q4/2019
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	Operational	200	
2018	Execution	100	
2019	Inception	75	
2019	Operational	350	
2019	Execution	125	
2020	Inception	75	
2020	Operational	350	
2020	Execution	125	

8.7 EUSURVEY (2016.35)

8.7.1 IDENTIFICATION OF THE ACTION

Type of Activity	Common Services – Communication with citizens Reusable Generic Tool
Service in charge	DIGIT.D1
Associated Services	DIGIT.C, DGT.R3, DG EAC, EUROSTAT.B5, SG.A1, SG.R3

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 **5.453 surveys created in 2016** (already 4.000+ in 07/2017), resulting in **more than 1.700.000+ contributions** (1.500.000+ as of 07/2017); **managed by 4.300+ 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 (75%)
 - Extend the service for mobile devices (75%)
 - Integrate EU Survey with the Better Regulation Portal (Done)
 - Increase EU Survey capacity to automatically analyse the content of numerous feedback (Done)

Taking into account the feedback received during the ISA work Programme 2010-2015, 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.

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 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 (240.000+ contributions)
- Participant Report Form – Learning Mobility of Individuals (126.000+ 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)

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 2016):

- **5.400+ surveys (+22% vs 2015)**
- **4.300+ form managers (+51% vs 2015)**
- **1.920 Service Help-Desk calls (+1% vs 2015)**
- **A1.700..000+ survey contributions (+6% vs 2015)**
- **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)

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? 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
<p><i>Will the proposal, once completed be useful, from the interoperability point of</i></p>	<p>The nature of EUSurvey, collecting opinions in order to help in the decision making process of the European Union</p>

<i>view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.</i>	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 Members States.</i>	EUSurvey is used in most (if not all) European Union Countries and beyond. In 2016 5.400+ (+22% vs 2015) surveys 4.300+ form managers (+51% vs 2015) 1.700.000+ survey contributions (+6% vs 2015) Examples of EUSurvey Open Source instances: - Belgium: Flemish Government - France: French Government and Administrations - Germany: DlaLOGIKa Gesellschaft für Informatik mbH - Netherlands: Europol - Sweden: Public Health Agency of Sweden

8.7.5.4 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>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 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>
<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 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,

	<ul style="list-style-type: none"> • 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	Released – v1.4.0 – 26/07/2017 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	Released – v1.4.0 – 26/07/2017 Approximately 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)	<p>The European Commission is also using it with 4.300+ active form managers (cross-sector and cross-border)</p> <p>Figures of 2016:</p> <p>5.400+ surveys (+22% vs 2015)</p> <p>4.300+ form managers (+51% vs 2015)</p> <p>1.700.000+ survey contributions (+6% vs 2015)</p> <p>Used by most of the Member States</p>

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

the defined critical part)	
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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 en 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) ISA 2.8 Machine Translation: consumed to offer automatic machine translation of working documents ISA ² 20 – Joinup – Sharing IT Solutions: Consumed to publish and communicate around the action. ISA ² 36 – CIRCABC – Collaborative workspaces EAC programmes Mobility actions: At the end of Erasmus exchanges, students and other participants are asked to fill in a satisfaction questionnaire, designed with EUSurvey. A future web service integration, aiming at collecting and consolidating feedback on Erasmus+ Mobility actions, will store the data in a repository at DG EAC EUSurvey also integrates Data Analytics Service (such as DORIS the EC's one) as a backend analysis tool.
<i>has the action reused existing interoperability solutions? If yes, which ones and how?</i>	Yes, all of the above

8.7.5.7 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 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 participation in the policy-making process are elements of this strategic objective. The achievement of the overall objective of the Better Regulation Portal to become the one-stop-shop for all public consultations by the integration with EUSurvey greatly facilitates the participation of EU citizens and other stakeholders, including institutional ones. By offering an easy mean of collecting opinions and information between heterogeneous parties, EUSurvey facilitates considerably the organisation and consolidation of any types of 'feedback based' decision (Public Consultation included).

8.7.6 PROBLEM STATEMENT

8.7.6.1 Service sustainability

The problem of	Service Sustainability
affects	All EUSurvey users: Many Citizens, Public institutions, Administration and Businesses
the impact of which is	Citizens, Businesses, Policy makers, Public entities react in a more and more agile way and to gather reliable information easily while their stakeholders are contributing from all over the world. These contributors require intuitive, reliable and modern tools suited to the strict data collection rules they are confronted with and need automated productivity tools enabling them effortlessly to answer surveys while concentrating on their core business activities.
a successful solution would be	Sustain the EUSurvey service and continue to deliver updated OSS application code (under EUPL)

8.7.6.2 New challenges

Performance Pack

The problem of	[Hardware] Scaling the infrastructure of EUSurvey – Progress: 07-2017 – 50%
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: 07-2017 – 75%
affects	All systems/applications integrating EUSurvey in their workflow (BRP – DORIS – Mobility Tool)
the impact of which is	Not yet possible
a successful solution would be	Auto-filling of surveys, compatibility with automatic translation information systems. Possibility to automatically pre-fill surveys with information and an improved compatibility with Poetry translation management tool.

The problem of	Statistical tools export format – Progress: 07-2017 – 50%
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	Analyse and offer standard exporting formats, compatible with statistical

would be	analytics tools.
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The problem of	Rich typed surveys – Progress: 07-2017 – 30%
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: 07/2017 – 80% 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: 07-2017 – 60%
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: 07-2017 – 60%
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	<p>European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens</p>
(+) 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	<p>European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens</p>
(+) 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	<p>European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens</p>
(-) Integration or usage cost	<p>Infrastructure costs in case of reusing the OSS version</p>	Q1/2016	<p>European Institutions & bodies Member States' public administrations and other, non EU administrations, Citizens</p>
(+) <i>Increased Transparency</i>	<p>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</p>	Q4/2017	<p>Public Consultations Stakeholders and General Public, European Institutions, Citizens</p>

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
DIGIT C	Philippe VAN DAMME	Responsible for the service infrastructure
SG R3	Martin GRITSCH and Frederic GUIOT	System Supplier and Project Manager of the Better Regulation Portal (BRP), responsible for the BRP-EUSurvey integration
SG A1	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 metrics⁴¹ 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.

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.

⁴¹ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard> , effectiveness tab.

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.

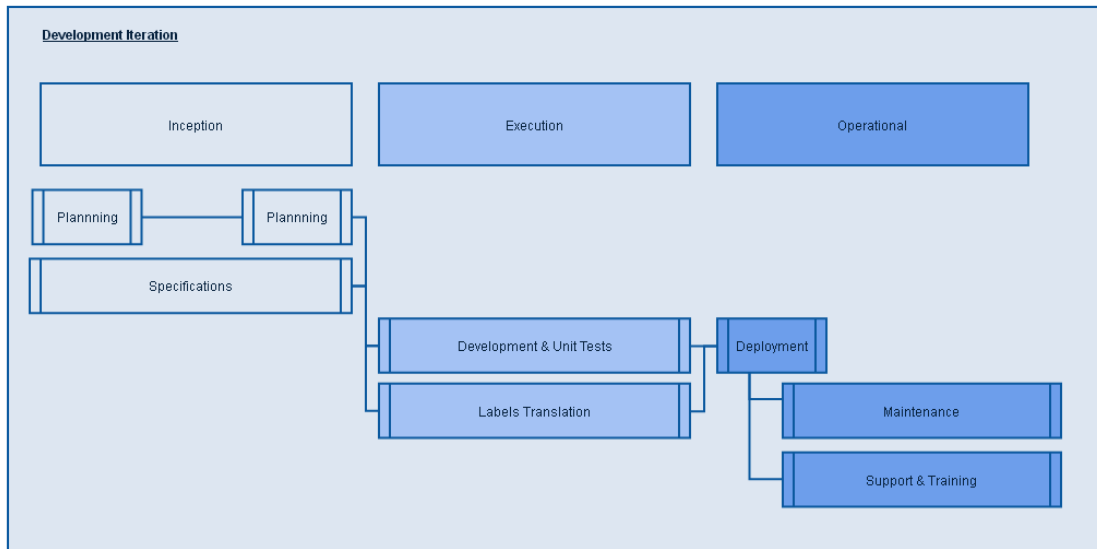


Figure 1: Development cycle

EUSurvey is delivered as an OSS project via Joinup.eu, 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
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)
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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)		
2018	Inception	25	
2018	Operational	325	
2018	Execution	100	
2019	Inception	25	
2019	Operational	350	
2019	Execution	100	
2020	Inception	25	
2020	Operational	350	
2020	Execution	100	

8.7.12 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. Under the ISA programme 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 workshop⁴².

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 Repository on Joinup, and a community of test bed owners and testers).

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.

⁴²

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

8.8.3 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.

8.8.4 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.

8.8.5 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 decision⁴³.

8.8.5.1 Contribution to the interoperability landscape

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

Question	Answer
<i>How does the proposal contribute to improving interoperability among public administrations and</i>	The action offers testing services to various policy domains; and more general work is

⁴³

<p><i>with their citizens and businesses across borders or policy sectors in Europe?</i> <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>being undertaken to explore the testability of interoperability specifications.</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>

8.8.5.2 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>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.</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>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 implemented for the BRIS (Business Register Interconnection) project in the domain of justice, which are currently</p>

	<p>under evaluation.</p> <p>A demo test case was developed for the 'Catalogue of Services' ISA action, which is linked to the Services Directive.</p>
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8.8.5.3 Cross-border

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

Question	Answer
<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>By its very nature, the test bed is meant to serve the requirements of cross-border projects. All of its present user groups are initiatives operate in a cross-border context, and individual users come from all the MS participating in the respective project:</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 project • The 'Catalogue of Services' ISA action
<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>	

8.8.5.4 Urgency

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

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	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 anticipated. Passing the tests will be a prerequisite for funding under the CEF e-Invoicing building block
<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>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 choose between using the ISA² test bed instance or running their own instance.</p> <p>Example: Consistent with the agreement between ISA and the CEF programme, some of the testing services are developed by ISA and later handed over to CEF for operations.</p>

8.8.5.5 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)	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://isaitb.northeurope.cloudapp.azure.com:9000/
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 2017 is 6.</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	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. Under the ISA ² programme it is being maintained, promoted and new test artefacts continuously added to it.
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
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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)	

8.8.5.6 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>	Test bed software is coming from the CEN GITB workshop agreement. Current test cases are based on validation schemas, schematron rules and process descriptions developed by PEPPOL, CEN and e-SENS.
<i>For proposals completely or largely already in operational phase: has the action reused existing interoperability solutions? If yes, which ones and how?</i>	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.

8.8.5.7 Interlinked

Question	Answer
<i>Does the proposal directly contribute to at least one of the Union's high political priorities such</i>	This action is a supporting instrument – its contribution is therefore indirect.

<i>as the DSM? If yes, which ones? What is the level of contribution?</i>	
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8.8.6 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.

8.8.7 IMPACT OF THE ACTION

8.8.7.1 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 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-	Immediately for new IT projects	Member States' Public Administrations
(+) Savings in time			
(+) Better interoperability and quality of digital public service			
(-) Integration or usage cost			

	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

8.8.7.2 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 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

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.

8.8.8 EXPECTED MAJOR OUTPUTS

All major outputs have been described under section 8.5.5.

8.8.9 ORGANISATIONAL APPROACH

8.8.9.1 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, facilitated through the ISA Coordination group	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, Catalogue of Services action)	Project officers	users of the test bed
Member States' public administrations	ISA Coordination Group	users of the test bed

8.8.9.2 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.

8.8.9.3 Communication and dissemination plan

Already under the ISA programme, contacts have been established with a number of system owners that might want to test their products/services. These contacts 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.

In 2017, a communication plan is being developed as an explicit deliverable 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.

8.8.9.4 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 metrics⁴⁴ indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of communities	8	1 year
Number of validators	12	1 year
Number of news items	20	1 year
Number of Joinup members	6	1 year

⁴⁴

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

8.8.9.5 Governance approach

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

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 rough framework for this has already been established in deliverables produced under the ISA programme (e.g. hosting requirements, eligibility criteria for users of testing services – see documents referenced below) and will be further refined.

8.8.10 TECHNICAL APPROACH AND CURRENT STATUS

The approach that was originally proposed would consist of the establishment of a Framework contract under which particular requirements to provide a test bed for a specific system would be covered by the corresponding specific contracts.

Under the ISA programme, testing requirements of existing systems have been analysed, showing that there is a need for hosting facilities to run test systems on demand, but that it would also be beneficial to provide additional functionalities through a test bed (see figure below). Under the ISA² programme, the action presently provides such hosting, as a cloud service, with the proof-of-concept software from the CEN GITB WS being used for the test bed implementation and further improved by the ITB team.

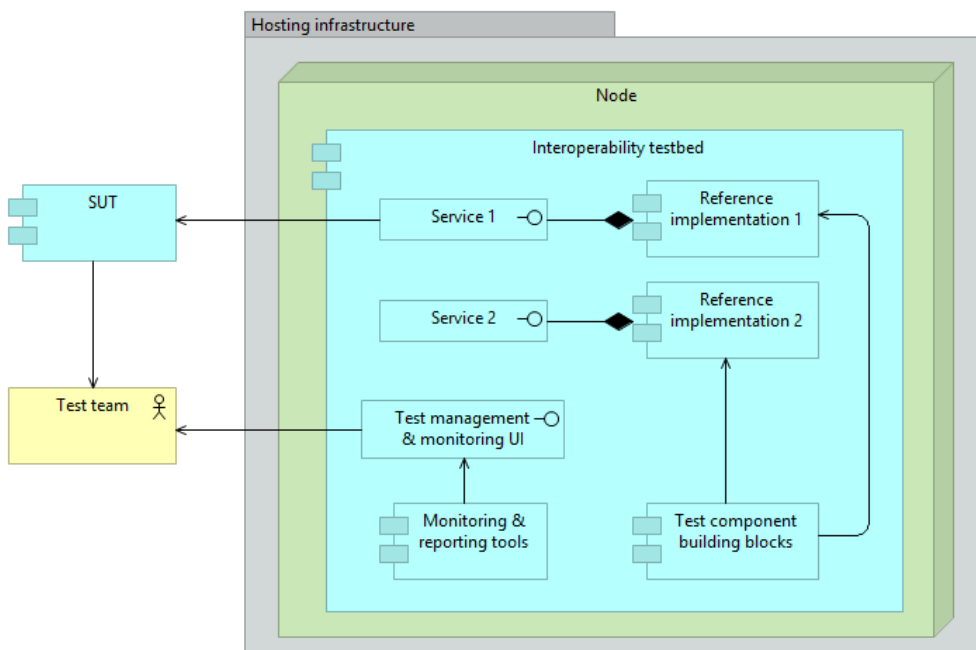


Figure Testing using a test bed

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.

8.8.11 COSTS AND MILESTONES



8.8.11.1 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 (continuing from ISA programme)	<ul style="list-style-type: none"> Establish hosting of test bed 	150	ISA ²	Q2/2016	Q3/2016
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 software User acquisition 	200	ISA ²	Q1 2018	Q4 2018
	Total	596			

8.8.11.2 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	
2019			
2020			

8.8.12 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" (project deliverable to be published)	

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.H3 CONNECT.F2 DIGIT.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 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, 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.

Joinup has been available since 2012, 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 2018, the action will focus on the following areas:

- Focus on the user engagement of existing users and also on attracting more engaged users.

- Maintain 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.
- Maintain and promote the European Interoperability Cartography 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.

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 on Joinup.
4. To host and promote the European Interoperability Catalogue (EIC)
5. To host the European Catalogue of ICT Standards for Public Procurement
6. Increase awareness about the new platform and gather user feedback
7. Increase user engagement by actively promoting the platform

The catalogue (3) documents and makes available 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, 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.

Out of scope:

- Content creation is not in scope for the Joinup action, but is managed by other actions (mainly the Community building action).

- Governance of the European Catalogue of ICT Standards for Public Procurement.

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 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? 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</i> 	<p>Yes, it facilitates the sharing and re-use of solutions for public administrations and provides the stakeholders with the means to collaborate.</p>

<i>interoperability requirements?</i>	
<i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i>	Yes, the observatory functionalities provide a unique access to interoperability information across the EU

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>	Geospatial, ehealth, eProcurement, eGovernment,...

8.9.5.3 Cross-border

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

Question	Answer
<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 (USA, Canada, New-Zeeland)
<i>For proposals completely or largely already in</i>	Yes, several national repositories (NL,

operational phase , indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.	Spain, Greece, Slovenia, Belgium,...) are federated on Joinup, making their national solutions available for re-use.
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8.9.5.4 Urgency

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

Question	Answer
<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

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)	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)	For old Joinup (Drupal6 based) was re-used by New Zealand and Vietnam, for new version no re-use yet. But with the source code now shared via gitub, it is more easy to re-use than previous Joinup.

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). • ADMS, ADMS.AP: this semantic specification was developed under the ISA action 1.1. to describe 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. • 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>
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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>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.</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 and legal regulations and formal specifications. The more members states re-use common building blocks, the larger the impact on interoperability between the different member states	ongoing	Member states
(-) Integration or	Reduced communication and	Ongoing	Member

usage cost	development costs for projects, resulting from not having to set up individual websites and repositories to publish their solutions to the public.		States public administrations and their IT providers
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8.9.7.2 User-centricity

Before the creation of the new Joinup we have reached out to our different stakeholders and users of the platform to collect feedback. Both positive and negative feedback has shown clearly the weak and strong, points of the platform. This feedback has been used to re-designing the Joinup platform to its new form.

It is planned to put a high focus on user engagement from the start of the new platform. We will have different user communities (collections) where trainings and webinar sessions will be organised to receive more direct feedback on the use of the new platform, and where we can communicate more directly with the end-users of the platform.

Additionally, we will also publish the roadmap online, so that users of the platform can see, but also join in the discussions for new features. We hope that by engaging the users in the future developments of the platform, they will be more engaged and contribute much more than before.

8.9.8 EXPECTED MAJOR OUTPUTS

Output name	European Interoperability Catalogue
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 2017

Output name	European Catalogue of ICT Standards for Public Procurement
Description	The aim of the European Catalogue initiative is to foster the referencing of existing ICT standards and technical specifications by public procurers through

	<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 vendors on the public procurement market needs, requirements, and opportunities.</p>
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/hoste/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 ELISA action	
European Commission CNECT	Owner of the CEF programme.	

European Commission GROW	Owner of the European Catalogue of ICT Standards for Public Procurement project.	
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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	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

8.9.9.4 Key Performance indicators

Provide a list of KPIs allowing the measurement of the progress and completions of milestones and the action. In case of an on-going action with already identified metrics⁴⁵ indicate the current values.

A subset of the following list will be implemented in the new Joinup. Since the Piwik implementation is under development, we still need to select a subset of the KPI's to report to Monitoring and evaluation action.

⁴⁵ 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
1.1.1 Cumulative number of interoperability solutions	Will be defined during setup	
1.1.2 Number of new interoperability solutions added for the current month		
1.1.3 Number of downloads of interoperability solutions for the current month		
1.1.4 Number of distinct downloaded interoperability solutions for the current month		
1.1.5 Quality of the metadata describing interoperability solutions ⁴⁶		
1.1.6 Relevance of the proposed interoperability solutions (Conversion rate) ⁴⁷		
1.1.7 Number of Interoperability solutions never downloaded during a defined period ⁴⁶		
1.2.1 Cumulative number of collections federated on Joinup		
1.2.2 Number of views for each federated collection pages		
1.2.3 Number of clicks on outbound links in federated collection pages		
1.2.4 The most searched interoperability solutions for the current month		
1.2.5 Distribution of views within a collection		
2.1.1 Number of news published for the current month		
2.1.2 Number of distinct news read for the current month		
2.1.3 Number of news read for the current month ⁴⁸		
2.1.4 Number of page views related to news for the current month		
2.1.5 Number of news not consulted during a defined period ⁴⁶		
2.2.1 Number of events published for the current month		
2.2.2 Number of distinct events read for the current month		
2.2.3 Number of events read for the current month ⁴⁹		
2.2.4 Number of page views related to events for the current month		
2.2.5 Number of events not consulted during a defined period		
2.3.1 Number of Newsletters published for the current month		
2.3.2 Number of Newsletters read for the current month ⁵⁰		
2.3.3 Number of page views related to Newsletters for the current month		
2.3.4 Cumulative number of new subscriptions for each Newsletter		
2.3.5 Number of new subscriptions for each Newsletter for the current month		
2.3.6 Number of visits originated from Newsletters for the current month		

⁴⁶ Out of the scope of the Piwik dashboard.

⁴⁷ The ratio "Number of downloads / Number of page views" can be used as a proxy indicator in that regard.

⁴⁸ A news is considered as "read" when a visitor spends a defined amount of time on the page containing the news.

⁴⁹ An event is considered as "read" when a visitor spends a defined amount of time on the page containing the event.

⁵⁰ A newsletter is considered as "read" when a visitor spends a defined amount of time on the page containing the newsletter.

2.4.1 Cumulative number of uploaded Documents	
2.4.2 Number of uploaded Documents for the current month	
2.4.3 Number of page views related to Documents for the current month	
2.4.4 Number of downloaded Documents for the current month	
2.4.5 Number of distinct downloaded Documents for the current month	
2.4.6 Number of Documents not downloaded for a specific period ⁴⁶	
2.5.1 Number of custom pages published for the current month	
2.5.2 Number of custom pages read for the current month ⁵¹	
2.5.3 Number of distinct custom pages read for the current month	
2.5.4 Number of custom page views for the current month	
2.5.5 Number of custom pages not consulted during a specific period	
2.6.1 Number of discussions published for the current month	
2.6.2 Number of discussions read for the current month ⁵²	
2.6.3 Number of distinct discussions read for the current month	
2.6.4 Number of page views related to discussions for the current month	
2.6.5 Number of discussions not read during a specific period ⁴⁶	
3.1.1 Number of new collections (communities) created for the current month ⁵³	
3.1.2 Cumulative number of collections (communities) ⁵³	
3.1.3 Number of collections (communities) with more than 5 contributions for the current month ⁵³	
3.1.4 Cumulative number of collections (communities) members ⁵³	
3.2.1 Number of new technical or business related tickets for the current month	
3.2.2 Number of closed technical or business related tickets for the current month	
3.2.3 Percentage of first-level-of-support requests answered within one working day out of all the received requests for the current month	
3.2.4 Percentage of first-level-of-support requests resolved within one working day out of all the received requests for the current month	
3.2.5 Percentage of first-level-of-support requests resolved within two working days out of all the received requests for the current month	
3.2.6 Percentage of technical or business requests forwarded/assigned within one working day out of all the received requests for the current month	

⁵¹ A custom page is considered as "read" when a visitor spends a defined amount of time on the custom page.

⁵² A discussion is considered as "read" when a visitor spends a defined amount of time on the page containing the discussion.

⁵³ This indicator considers only collections linked to a "community" but not to a "federated repository".

3.2.7 Percentage of re-opened technical or business related tickets out of closed tickets for the current month	
4.1.1 Number of visits for the current month	
4.1.2 Average visit duration for the current month	
4.1.3 Number of actions for the current month	
4.1.4 Average actions per visit for the current month	
4.1.5 Number of page views for the current month	
4.1.6 Number of unique page views for the current month	
4.1.7 Number of entrances on specific pages for the current month	
4.1.8 Average time on page for the current month	
4.1.9 Bounce rate for the current month	
4.1.10 Percentage of exit from a specific page for the current month	
4.1.11 Number of new registered users for the current month	
4.1.12 Cumulative number of registered users	
4.1.13 Number of new visitors for the current month ⁵⁴	
4.1.14 Number of new visitors from Europe for the current month ⁵⁴	
4.1.15 Number of new visitors from outside of Europe for the current month ⁵⁴	
4.1.16 Distribution by type of registered users ⁴⁶	
4.2.1 Number of users having contributed for the current month	
4.2.2 Number of users having posted for the first time a comment for the current month	
4.2.3 Number of users having uploaded for the first time a document for the current month	
4.2.4 Number of users having published for the first time an event for the current month	
4.2.5 Number of users having published for the first time a news for the current month	
4.2.6 Number of users having initiated for the first time a discussion for the current month	
4.2.7 Number of users having created for the first time a custom page for the current month	
4.2.8 Number of users having proposed for the first time an interoperability solution for the current month	
4.3.1 Cumulative number of users in at least one Collection/Interoperability solution	
4.3.2 Number of new users in at least one Collection/Interoperability solution for the current month	
4.3.3 Cumulative number of comments	
4.3.4 Number of new comments related to news for the current month	
4.3.5 Number of new comments related to events for the current month	
4.3.6 Number of new comments related to interoperability solutions for the current month	

⁵⁴ A new visitor is a visitor who has never accessed Joinup before.

4.3.7 Number of new comments related to documents for the current month	
4.3.8 Number of new comments related to discussions for the current month	
4.3.9 Number of new comments related to customs pages for the current month	
4.3.10 Number of new comments related to newsletters for the current month	

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 September 2017, the first version of the new Joinup platform will be launched, and in 2018, focus will be put on increasing the user engagement and promotion of the platform and further improving the user experience.

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 2018, 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 2018:

- 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
- 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	Q2/2018	Q1/2019
Execution	Joinup Service management (Governance, user engagement, Change management, Catalogue management (EFIR), 1st line support) (ABC IV)	500K	ISA ²	Q2/2018	Q1/2019
Execution	Joinup improvements, new developments and 2 nd level support (Digit.D.1)	400K	ISA ²	Q2/2018	Q1/2019
	Total	990K			

8.9.11.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		1060	
2017		817	
2018		990	

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
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8.10.8 RELATED EU ACTIONS / POLICIES

Action / Policy	Description of relation, inputs / outputs
ISA Action 1.1 – Methodologies for the development of semantic assets	ISA Action 4.2.2 hosts and manages the SEMIC and CESAR communities of the ISA Action 1.1.
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, he Commission shall search for similar initiatives in the EU public administrations and identify possibilities for collaboration.

8.10.11 COSTS AND MILESTONES

8.10.11.1 Breakdown of anticipated costs and related milestones

Phase: Inception Execution Operational	Description of milestones reached or to be reached	Anticipated Allocations (KEUR)	Budget line ISA ² / others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Operational	Content provision, moderation of online discussions, support to	500	ISA ²	Q2/2016	Q1/2107

	online communities, showcasing of best practices organising workshops.				
	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

Type of Activity	Common frameworks
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.
- The assessment of the reusability and interoperability levels of the building blocks of each TES. So far, around 100 TES have been put into the current version of the TESCart and can be easily queried and organised via the CarTool.
- 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;

- To allow policy-makers benefit from reusing TES or their parts when preparing EU legislation.
- To support the creation of the EIC.
- To scope in the first Technical Annex the feasibility of linking a semantic wiki suggested by NL to the CarTool.

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
- Publish a first version of the EIC
- Explore the improvement of the EIC from a semantic perspective (i.e. persistent URLs, semantic Wiki)

Feed back to the Commission's IT Governance to ensure proper decision making in relation to (on-going) rationalisation.

8.11.5 ACTION PRIORITY

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> 	<p>The proposal contributes directly to the implementation of the European Interoperability Framework in relation the legal obligation to release the EIC.</p> <p>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>

<ul style="list-style-type: none"> any other EU policy/initiative having interoperability requirements? 	
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. There is no other action supporting the EIC release.

8.11.5.2 Cross-sector

Question	Answer
Will the proposal, once completed be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.	Yes. The TESCart is policy neutral.
For proposals completely or largely already in operational phase , indicate whether and how they have been utilised in two (2) or more EU policy sectors.	

8.11.5.3 Cross-border

Question	Answer
Will the proposal, once completed , be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	Yes.
For proposals completely or largely already in operational phase , indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.	

8.11.5.4 Urgency

Question	Answer
<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 v1.0.0
Description	European Interoperability Cartography v1.0.0
Reference	
Target release date / Status	April 2018
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
Description	TES cartography in the EC
Reference	
Target release date / Status	November 2017
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	Rationalization proposals
Description	Study
Reference	
Target release date / Status	September 2017
Critical part of target user base	Solution architects, business analysts, IT portfolio managers
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

Name of reusable solution	Reusability Assessment Toolkit
Description	Common guidelines, tool, methodology and criteria for solution owners to assess the level of interoperability of a solution
Reference	
Target release date / Status	March 2018
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	RUS&IOP service published in DIGIT catalogue of services
Description	The Reusability and interoperability assessment service will target one solution in production or a solution proposal. The outcomes will be documented in a service report including 1) recommendations to increase the RUS level of the solution, 2) recommendations to increase the IOP level of the solution and 3) identify its full potential for reuse by creating a map of the complete addressable target of policy areas of the Commission where it could be reused. This service will be delivered/tested with IMI and two other solutions and up to two Member states
Reference	

Target release date / Status	March 2018
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	DOC service published in DIGIT catalogue of services
Description	The documentation service will target one solution in production, development or proposal phase. The outcomes will be documented in a service report including 1) the EIRA conformance documentation of the solution using the CarTool 2) The assessments of DQ, RUS and IOP, 3) the inclusion of the documentation on the cartography and 4) map of the full addressable target of policy areas where the solution could potentially be reused. This service will be delivered/tested with 2 selected out of the 53 TES in task 4 and in three member states. These tests in three Member States will overlap the up to two tests of the RUS&IOP service in Member States
Reference	
Target release date / Status	March 2018
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 service published in DIGIT catalogue of services
Description	The TESCart access service will target any ad-hoc request concerning solutions that could be (partially) answered via queries to the TESCart. The outcomes will be documented in a service report including 1) the formulated queries and their answers using the CarTool 2) An interpretation of the results including references to the observed DQ, RUS and IOP levels, 3) findings/conclusions and 4) recommendations. This service will be delivered/tested with the deliverables of task 5 and, if they arrive, up to 3 ad-hoc requests.

Reference	
Target release date / Status	January 2018
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	Rationalisation benchmarking service published in DIGIT catalogue of services
Description	The rationalisation benchmarking service will target two solutions in production. The outcomes will be documented in a service report including 1) benchmark analysis from the rationalisation perspective including DQ, RUS and IOP assessments 2) rationalisation scenarios and 3) recommendations. This service will be delivered/tested with two solutions
Reference	
Target release date / Status	September 2018
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 Registries 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
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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

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 ORGANISATIONAL APPROACH

8.11.8.1 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 	Providing input

		areas; • Better quality due to reusing existing (proved) solutions and/or their modules.	
(Indirectly) citizens businesses	EU and	• Better digital services delivered by public authorities	Providing input

8.11.8.2 Identified user groups

User group	Description	Usage
Architects	Responsible for ensuring the created (IT) solution fits foreseen architecture and requirements of the organisation	Reusing and sharing solutions
Project Managers	Responsible for a delivering a cost effective public service with the help of a program / project	Reusing and sharing solutions.
Member States	It is expected a close relationship with Member States gathering requirements on the improvement of the EIC from a semantic perspective (i.e. semantic Wiki)	

8.11.8.3 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.

8.11.8.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of solution accesses	10 per MS	mid 2019
Number of reused solutions	25% of solutions in the EIC in each MS	mid 2019

8.11.8.5 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.

8.11.9 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 2018 the action will:

- Implement the EIC v1.0.0
- Assess the RUS and IOP levels of all TES and their components
- 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.
- Explore the improvement of the EIC from a semantic perspective (i.e. persistent URLs, semantic Wiki)

8.11.10 COSTS AND MILESTONES

8.11.10.1 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 - 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 	240	ISA ²	Q4/2017	Q3/2018
	Total	637			

8.11.10.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016		200	200
2017		118	
2018		240	

8.12 SHARING AND RE-USE (2016.31)

8.12.1 IDENTIFICATION OF THE ACTION

Type of Activity	Common Frameworks
Service in charge	DIGIT.D2
Associated Services	DIGIT.B3, DIGIT.B4, JRC.I4

8.12.2 EXECUTIVE SUMMARY

Sharing and reuse of IT solutions enables public administrations to develop services more quickly and at a reduced cost. Additionally, it 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. Having more modern, innovative and efficient public administrations will help Europe's growth potential and competitiveness and establish a Digital Single Market.

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.

As of 2017, the following sub-actions have been included in the Sharing and Reuse action:

- Open Source community building which aims at facilitating the use of open source solutions in the public sector and maintaining the Open Source Observatory (OSOR) on Joinup.
- Open PM², an initiative taken by the Commission to bring the PM² Methodology and its benefits closer to stakeholders and user groups beyond the original target group of European Commission Project Managers. These user groups include all European Institutions, Public Administrations of Member States, Contractors and EU Citizens.

In 2018, the following activities are planned:

- Support the uptake of the SRF by promoting it and conducting workshops in Member States as well as by facilitating the Sharing and Reuse community on Joinup
- Measure the uptake of the Sharing and Reuse Framework for IT Solutions by the public administrations in cooperation with NIFO action
- The change management process for the Sharing and Reuse Framework of IT Solutions will be launched
- Launch of the 2nd edition of the Sharing & Reuse Awards contest and preparation of the Sharing and Reuse Conference 2019

-
- Support to national and regional projects with the potential for cross-border reuse (in cooperation with the European Committee of Regions)
 - Promote the use of open source solutions in the public sector by maintaining the OSS community and EUPL community on Joinup
 - Landscape of OS Strategies in Members States (use of OS, disseminating in Open Source,...)
 - Pilot study on the current situation as regards the existence/integration of the SRF's recommendations in other EU programmes.
 - Study on organisation of hackathons and app challenges
 - Open PM² awareness raising will continue with post conference activities and mechanism in place to measure the adoption.

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 user communities on Joinup: Sharing and Reuse of IT Solutions, Open Source Observatory, and EUPL.

8.12.4 SCOPE

All EU, EFTA and candidate countries' public administrations providing public services are within the scope of the action which aims to develop and promote instruments to help administrations develop together, share, and reuse their IT solutions. To this end, in 2018 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 and on how to implement the SRF's recommendations will be conducted for civil servants in the Member States (following 3 pilot sessions that took place in 2017). The related online Knowledge Sharing Modules, made available on Joinup in Q3 2017, will be further developed based on the feedback from the Member States participating in the workshops. Also, an interactive online version of the Sharing and Reuse Framework for IT solutions will be created using new functionalities of the migrated Joinup Platform including a separate section for new supporting instrument related to the Sharing and Reuse that can be added by members of the Sharing and Reuse Community on Joinup.

In cooperation with NIFO action, indicators to measure the uptake of the Sharing and Reuse Framework for IT Solutions by the public administrations will be developed. The indicators are to be used by a new monitoring mechanism of data collection, analysis and delivery of information that is being currently developed by the NIFO action.

The next edition of the Sharing and Reuse Awards contest will be launched in Q2 2018 to promote and enhance a wider cross-border reuse of open source software and shared services among public administrations and to disseminate information on best practises. The Awards ceremony will take

place during the Sharing and Reuse Conference planned for 2019. Award categories as well as eligibility and selection criteria are described in section 1.1.10 of this entry.

The action will continue to facilitate the Open Source Observatory (OSOR) and the European Public Licences (EURL) communities on Joinup. A set of guidelines and recommendations on the use of the open source licence EURL v1.2 published by the Commission on 19 May 2017 will be developed, and the existing licence wizard will be updated. New ways of promoting public administrations' use of open source will be investigated and planned (such as hackathons or app challenges on open source software)

As new features become available on the Joinup platform in the coming months, a new design of 3 communities maintained under the action will be proposed in early 2018 to enhance user experience.

In addition, the action will continue to support the Open.PM² initiative that is to provide open access to the PM² Project Management Methodology to all European Union Institutions, Contractors and the broader EU stakeholder groups. This will enable increased effectiveness in the management and communication of project work serving the objectives of the European Union and needs of Member States and EU citizens.).

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 decision⁵⁵.

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? 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> 	<p>The proposal meets the recommendations and principles of the European Interoperability Framework (EIF), in particular as regards <i>Reusability principle</i> and recommendations 6 and 7.</p> <p>This action will help achieve Objectives set in Focus Area 5 of the Action Plan for interoperability ("To define, develop, improve, operationalise, maintain and promote instruments that support the implementation, assessment and monitoring of interoperability activities") as</p>

⁵⁵ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

<ul style="list-style-type: none"> • <i>any other EU policy/initiative having interoperability requirements?</i> 	<p>it will maintain and promote the Sharing and Reuse Framework for IT Solutions. 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>	<ul style="list-style-type: none"> • EU and MS procurement • EU and MS Grants Management • Management of Information Systems development • Open Government Policies
<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</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</p>

<i>each of the concerned Member State.</i>	solutions useful to all Members States, EFTA and candidate countries.
<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>	

8.12.5.4 Urgency

Question	Answer
<i>Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?</i>	The action is to continue the efforts undertaken in 2016 and in 2017 to promote the recommendations of the Sharing and Reuse Framework for IT Solutions published in Q1 2017 and to build a strong community around it.
<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 23 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,

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; online interactive version to be launched on the new Joinup platform
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)	

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	
Target release date / Status	Published on Joinup in August 2017; to be updated by June 2018 on the basis of feedback received during future information sessions in MS
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 3 pilot information sessions conducted in Portugal, Poland and Ireland.

Name of reusable solution	Open PM ² - Open Project Management Methodology
Description	PM ² is a Project Management Methodology developed and sponsored by the EU Commission. PM ² is a light, easy to implement methodology suitable for any type of project. It incorporates elements from a wide range of globally accepted best practices as well as operational experience from various EU Institutions.
Reference	-

<p>Target release date / Status</p>	<p>2016</p> <ul style="list-style-type: none"> • <u>M1 - 9/2016</u>: Achieved agreement with EPSO to make the PM² Certification Exam available to EU Institutions via the PROMETRIC exam centres. • <u>M2 - 11/2016</u>: Produced an updated version of the PM² Guide free from the European Commission specificities (PM² Guide - Open Edition, 130 pages). • <u>M3 -11/2016</u>: Published PM² Guide - Open Edition, v0.9 (final public draft) on the EU Bookshop. Available for free (PDF download). • <u>M4 - 12/2016</u>: Created the Open PM² Community on the ISA Joinup platform and the Open PM² Twitter account. <p>2017</p> <ul style="list-style-type: none"> • <u>M5 - 2/2017</u>: Published the Open PM² Wiki (accessible to the general public via EU login). This online wiki provides information about the Open PM² initiative as well as electronic versions of the PM² Methodology. • <u>M6 - 3/2017</u>: Produced an updated version of the PM² Artefacts templates (free from the European Commission specificities) and published on the Open PM² Wiki. • <u>M7 - 5/2017</u>: Organised the first OPM²-PSN meeting in Brussels on May 23/2017. Next meeting to be organised in November 2017. • <u>M8 - 6/2017</u>: Produced the PM² Methodology Overview document: a 35 page overview of the PM² Model (available in PDF on the Open PM² Wiki); the translation of the Overview into all EU 24 languages is currently ongoing. • <u>M9 - 7/2017</u>: Announcement of the 1st Open PM² Conference - 2018, to be held in Brussels Organised by the CoEPM² and sponsored by 6 major EU Institutions (EC, EU Council, ECB, EEAS, CoR, EIB). <ul style="list-style-type: none"> a. Conference website available 9/2017 b. Registrations open 10/2017 (~500 seats open to Member States and general public). c. Conference taking place on 1/2/2018, and a free/open training day on 2/2/2018. • <u>Ongoing</u>: Publication (release to the public via EU Bookshop) of other existing PM² publications: Agile PM², PM² Tools & Techniques, PM² Portfolio Guidelines) • <u>Ongoing</u>: Community building via managing the Join-up OPM² community. • <u>Ongoing</u>: Coordination of the Open PM² Project Support Network (OPM²-PSN): a network of "local" PM² Project Support Offices (PSOs) and PM² Champions in Member States and other organisations outside the European Commission coordinated and
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	<p>supported by the CoEPM².</p> <ul style="list-style-type: none"> • <u>Ongoing</u>: Coordinating the Open PM² Work Groups (collaborative evolution of the PM² Methodology engaging with the Open PM² Community. • <u>Ongoing</u>: Production of Open PM² promotional material (leaflets, posters, infographics, animations, etc.). • <u>Ongoing</u>: Meetings and PM² awareness presentations with Member States' representatives directly (e.g. contact made with Ministries from Greece, Romanian, Finland, Ireland), and via 3rd party Organisations (e.g. EU-SRSS, EU Representations).
Critical part of target user base	
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	

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).

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</i>	The Sharing and Reuse action by contributing to digitalisation and modernisation of public administration –

<i>level of contribution?</i>	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. .
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8.12.6 PROBLEM STATEMENT

The problem of	various barriers prevent administrations from working together to provide shared IT solutions.
affects	the ability of public administrations to deliver state-of-the-art public services efficiently by leveraging already available interoperable solutions
the impact of which is	inefficient use of public resources as well as digital isolation within the national borders, moderate ICT implementation quality, higher cost, lack of interoperability, and lack of coherence in the implementation of EU law
a successful solution would be	increase awareness and use of existing instruments and framework, in particular the Sharing and Reuse Framework for IT Solutions, and develop new ones in order to overcome barriers and facilitate sharing and reuse at different levels of public administrations

The problem of	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

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 services	Sharing and reuse of IT solutions promotes greater interoperability, standardisation and cooperation among public administrations, which eventually results in more simplified and more efficient digital services.		All MSs public administrations at all levels: European, national, regional, local. Citizens, Business

8.12.7.2 User-centricity

Future target users were involved in the consultation process at various stages of developing the Sharing and Reuse Framework for IT Solutions. Their feedback 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
Description	Set of guidelines on the use of the European Public Licence EUPL v1.2, including a modified licence wizard

Reference	
Target release date / Status	2Q 2018
Output name	Open PM² Conference
Description	First Open PM ² Conference co-organised by 6 major EU institutions and Open to the EU.
Reference	
Target release date / Status	February 2018

Output name	Post-Conference Business Implementation Actions
Description	<ul style="list-style-type: none"> • Follow-up activities to harness the benefits of the conference. • Follow-up awareness actions. • Publication of Articles • Surveys • Reinforcement and activation of the PM² Community for volunteer work and involvement in the PM² Project Support Network (PM²-PSN).
Reference	
Target release date / Status	December 2018

Output name	PM² Surveys
Description	<ul style="list-style-type: none"> • Measurement of awareness • Acceptance and appreciation • Use/adoption
Reference	
Target release date / Status	December 2018 (phase A surveys) and December 2019 (phase B surveys)

Output name	All PM² Publications
Description	<p>Publication on the EU bookshop of all PM² publications</p> <ul style="list-style-type: none"> • Agile PM² • PM² Portfolio Management • PM² Tools & Techniques • Translation of the PM² Overview in all EU Official Languages
Reference	
Target release date / Status	Q2-2018

Output name	Meetings with Member States
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Description	Organise onsite, offsite and virtual meetings with representatives from Member States, Public Administrations, Regional Administrations, SRSS, etc.
Reference	
Target release date / Status	2018-2020

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; Promotion of the 2 nd edition of the Sharing and Reuse Awards
<ul style="list-style-type: none"> European Commission 	<ul style="list-style-type: none"> DIGIT B3 and JRC I4 officials ISA² action owners (NIFO, Joinup, EIRA, Catalogue of Services) 	Development of the EUPL guidelines
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
Open PM²		
European Commission	<ul style="list-style-type: none"> DIGIT.B.4 and Ddirectors. 	Open PM ² Initiative Governance (Directing and Managing Layers)
EU Institutions	<ul style="list-style-type: none"> Members of the OpenPM² Community 	User and Business

		representatives
European Central Bank (ECB)	<ul style="list-style-type: none"> IT Department 	Promotion to National Central Banks (NCBs)
EU Institutions – DG COMM	<ul style="list-style-type: none"> EU Representations in Member States 	Communication and dissemination enabler
EU Committee of the Regions (CoR)	Department of Administration -	Promotion to EU Regional Administrations
European External Action Services (EEAS)	<ul style="list-style-type: none"> IT Unit 	Promotion to EU Delegations
Member States	<ul style="list-style-type: none"> European Association for Public Administration Accreditation 	User and Business representatives
Member States	<ul style="list-style-type: none"> European Group for Public Administration 	User and Business representatives

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)
- For Open PM²: any Project manager (EU institution, private and public sector)

8.12.9.3 Communication and dissemination plan

The communication plan includes publishing of various material such as news, case studies 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). Also, 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. The 2nd edition of the Sharing & Reuse Awards Contest is to be launched in Q2 2018 with the Awards Ceremony at the next Sharing & Reuse Conference planned for 2019. Other ways of promoting the sharing and reuse of IT solutions will be investigated and prepared to be launched in the following years (e.g. hackathons to promote the development/use of open source software by public administrations). 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.

Open PM²:

Activities for scaling the communication at the EU level include:

- Community building via setting up and managing the Join-up OPM² community
- Open PM² Website creation, management and animation of discussion groups
- OpenPM² presence in the social media (tweeter, Linked-in, etc.)
- Coordination of Open PM² Work-Groups for the participatory evolution of the PM² Methodology
- Coordination of the Open PM² PSN (Project Support Network – distributed and local support of Open PM² users).
- Publication the Open PM² Guide and Open PM² Artefact Templates via EU Book Shop (PDF & hard copy)
- Open PM² Info-sessions & meetings (with EU Institutions, Member States, EU Associations)
- Development and distribution of promotional materials (print, animation/video, infographics)
- Surveys and other usage assessments
- Organisation of the Open PM² Conference on EU Project Management
- Participation to conferences, fairs and events linked to project management and public administrations modernisation.

8.12.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of recommendations published by public authorities based on the Sharing and Reuse Framework	3	- December 2018
Number of workshops/info sessions on the Sharing and Reuse Framework in Member States	10	December 2018
Number of eligible entries in the 2 nd edition of Sharing & Reuse Awards	80	November 2018
Number of new registered users of the Sharing and Reuse Community on Joinup	200	December 2018
Number of new published content items on 3 Joinup communities (S&R, OSOR, EUPL)	400	December 2018

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 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 (based on the methodology developed in 2017).

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)].

Sharing and Reuse Awards – approach and criteria

The contest will accept submissions from public bodies of two types of IT solutions in 2 separate categories: Open Source Software and Shared Service. In each category, first and second prizes of €15,000 and €10,000 will be granted to the winning teams in each of the following sub-categories:

- Commonly developed or shared IT solution with the biggest impact on citizens and business
- Most innovative IT solution commonly developed or shared

In order to be eligible, a solution needs to meet the following criteria:

- Developed by or for public administration(s) from a EU Member State, EFTA country or candidate country, EU Institutions and agencies are excluded;
- Has been reused by other public administrations;
- Is either an open source software or a shared service;
- Its description is published on Joinup in English.

Solutions will be assessed according the following Evaluation Criteria:

1. Solution design and governance:
2. Impact/Extent of reuse
3. Sustainability
4. User Centricity/innovativeness

The solutions will be evaluated by a team of independent experts and the EU Institutions representatives. The detailed evaluation guidelines will be published together with the award opening publication.

8.12.11 COSTS AND MILESTONES

8.12.11.1 Breakdown of anticipated costs and related milestones

Phase:	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 Planning Execution					

Closing/Final evaluation					
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	ISA ²	Q2/2016	Q2/2019
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	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
	Total (2016-2019)	1245			

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	
	Execution – OSS	200	

	community building		
	Execution – OPM2	80	80
2018	Initiation/Planning/ Execution – Sharing and Reuse	310	
2018	Initiation/Planning/ Execution – Sharing and Reuse Awards (prizes)	100	
2018	Execution – OSS & EUPL	280	
2018	Execution – OPM2	60	

8.12.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Sharing and Reuse Framework for IT Solutions	https://joinup.ec.europa.eu/sites/default/files/sharing_and_reuse_of_it_solutions_framework_final.pdf	
Sharing and Reuse 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 STANDARD-BASED ARCHIVAL DATA MANAGEMENT, EXCHANGE AND PUBLICATION (2017.01)

8.13.1 IDENTIFICATION OF THE ACTION

Service in charge	OIB.OS.1.002
Associated Services	DIGIT.B2, SG.B1, OP

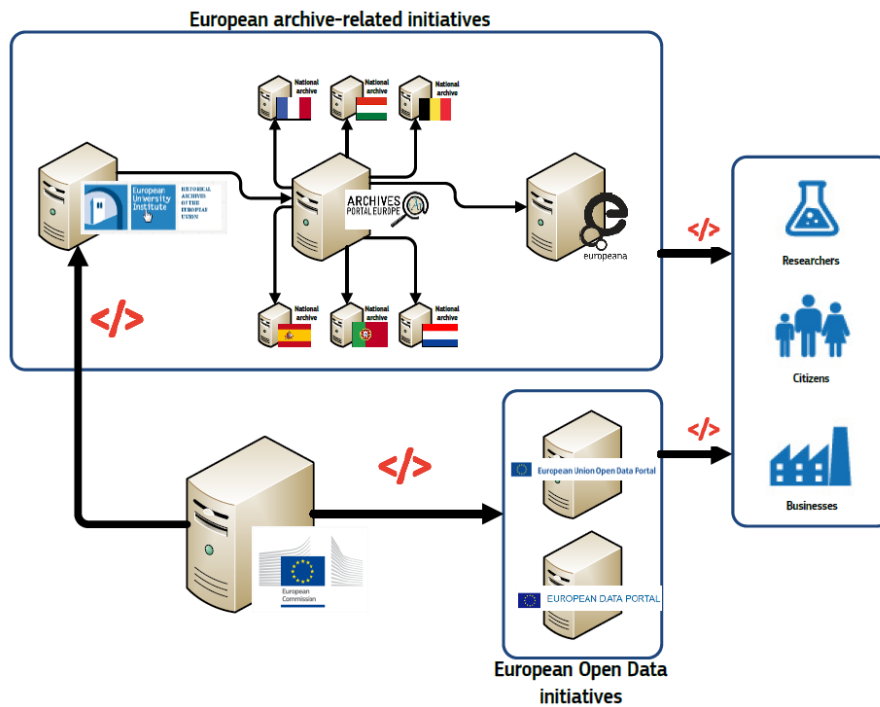
8.13.2 EXECUTIVE SUMMARY

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 on which internationally accepted specific business domain standards exist in the area of management of archives and whether IT services and tools, be they open source, commercial or developed by public administrations, already exist at regional, national or European level that support these standards and could be re-used.

Based on the foregoing, the business case for this action will start with a study aiming at identifying existing data standards that are relevant to 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 researches 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

8.13.5 ACTION PRIORITY

8.13.5.1 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 memory of any organisation consists in its archives. The way the archival information is represented, stored and managed influences the capacity of an organisation to share archival information with other organisations and to expose its archives to the external world. This is of utmost importance when it comes to public administrations for whom 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 so it facilitates 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>

<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 in digital archival information management. The clarification of 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 to what extent the different IT tools and services available in the market support the standards, 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 trust of citizens in their administration will increase. 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 their access to historical information, it will increase the quality of their research.
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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 for at least 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

	<p>of the modernisation of public administrations).</p> <ul style="list-style-type: none"> • 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 Right to access to documents): In particular ePrivacy domain, the protection of the confidentiality and the security of communications, rooted in the fundamental right to the respect of private and family life (including communications). • Institutional affairs policy: (EU treaty art 15 on the Functioning of the European Union and art 16 on Transparency and data protection), like for instance Regulation 1049/2001, and the new regulation on Data protection. • Transparency and data openness: (Directive 2013/37/EU of the European Parliament and of the Council) by making government archives available to the general public in Open Data formats, as stated by the directive, 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</i></p>	<p>Not yet applicable</p>

sectors.	
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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 Members 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 electronic archives (electronic records/files description, electronic exchange of these metadata...), by means of the identification of existing standards for digital 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 born-digital files. • Also the market survey on IT tools supporting the identified standards will be re-usable, as it tackles the already mentioned technical interoperability issue and it intends to analyse the many existing solutions on 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 being able to apply its conclusions directly to their own projects, thus implementing robust, standards-based and cost-efficient interoperable archive management solutions. • As the proposed action will study current interoperability requirements between the different European archive-related initiatives (like Archives Portal Europe, Europeana, the Historical Archives of the European Union), for the management and accessibility of born-digital archives it will support potentially any of the (national) public archives and archives of other organisations of all the 28 EU Member States
<p><i>For proposals completely or largely already in operational phase,</i></p>	<p>Not yet applicable</p>

<p><i>indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.</i></p>	
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8.13.5.4 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, 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 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>In addition to the legal requirements, the quick obsolescence of electronic data affecting the capacity of European administrations to keep information related to their business continuity and memory in good order also needs 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</p>

	<p>interoperability and foster data openness and reuse. 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. ○ 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 digital archive 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>
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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 identify existing standards for born-digital archive management.</p> <p>As an initial task, the analysis will identify business requirements for digital archival data management, defining a set of high level business needs and requirements.</p> <p>Based on the identified business requirements, the analysis will select existing standards supporting the</p>

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

	<p>analyse existing Open Data initiatives at EU level and describe how they should be applied to publish digital records. It will also relate with the conclusions of the analysis on interoperability requirements, exploring ways to reuse already existing archival data exchange standards. It will pay special attention and try to reuse SEMIC conclusions, especially those related to DCAT-AP (application profile for data portals in Europe).</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
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

8.13.5.6 Level of reuse of existing solutions

Question	Answer
<i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability</i>	Regarding ISA/ISA2 solutions, in the framework of standards assessments, our proposal plans to reuse CAMSS (Common Assessment Method for Standard and

<p><i>solution(s)? Which ones?</i></p>	<p>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.

	<ul style="list-style-type: none"> • 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.
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8.13.6 PROBLEM STATEMENT

The problem of	properly managing born-digital 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 organisations
a successful solution would be	<ul style="list-style-type: none"> • a set of recommendations based on standards allowing public administrations as well as any other interested organisation to organize the management of their born-digital archives; • an evaluation framework based on standards allowing public administrations as well as any other interested organisations to effectively evaluate information systems for archive management for easy integration with archival services of other European public organisations;

The problem of	making the archival information of the European public administrations available to the public
affects	citizens, researchers and business
the impact of which is	difficult access and limited reuse of the archival information of the European public administrations
a successful solution would be	a set of recommendations based on open standards to make archival information of European public administrations available to the public in order to enhance transparency and accountability of the public institutions and to allow the re-use of the information

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 archival data into linked open data will prevent users for investing additional money to analyse similar activities. 	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 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 	Idem	Idem

	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.		
(+) Better interoperability and quality of digital public service	The provided solutions for exchange of archival data will help EU institutions in cooperating with the Historical Archives of the European Union (Florence). The ideas and proof of concepts related to (linked) open data will help other archives services to implement similar initiatives. In a broader sense, archives services of all kind will be able to pick up ideas in order to advance towards more cooperation in the field of data exchange e.g. in the light of duties in relation to their respective national archives or towards the Archives Portal Europe.	Idem	Idem

8.13.7.2 User-centricity

Several elements listed in section “1.1.5.5 Reusability of action’s outputs”

The action’s output will mainly impact two types of users: institutional users and end users. The output of the studies and the solutions put in place (Proofs of Concept and beyond) will facilitate:

- the selection of IT tools,
- the launching of initiatives for data exchange and open data
- the re-use of archives
- the consumption of archives by end users

Overview of beneficiaries and anticipated benefits

Beneficiaries	Anticipated benefits
European citizens	The assessment on the feasibility of creating an Open Data based catalogue of Commission digital archives will increase the involvement of European citizens having as a benefit: <ul style="list-style-type: none"> • Increase of Institutions accountability, allowing

	<p>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 digital 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 different archives. • Ensure a coherent way to evaluate standards and archive management tools. • Foster modernization of archive services to better address the expectations of their stakeholders.

8.13.8 EXPECTED MAJOR OUTPUTS

Output name	Analysis of the interoperability requirements to exchange Commission archival management data with the European archiving
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	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 digital-born 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 digital 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	Pilot on archive management data exchange and Open Data publication
Description	The pilot (or a proof of concept) will apply the results of the study carried out in the first phase of the action to the Historical Archives of the European Commission in order to validate the conclusions of the study.
Reference	
Target release date / Status	2018Q4

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
Secretariat General of the European Commission	Annemieke Vanlaer	Associated services

(SG)		
Directorate General for Informatics (DIGIT)	Béla HARSANYI, Razvan IONESCU	Associated service

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 of 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 asses 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

8.13.9.4 Key Performance indicators

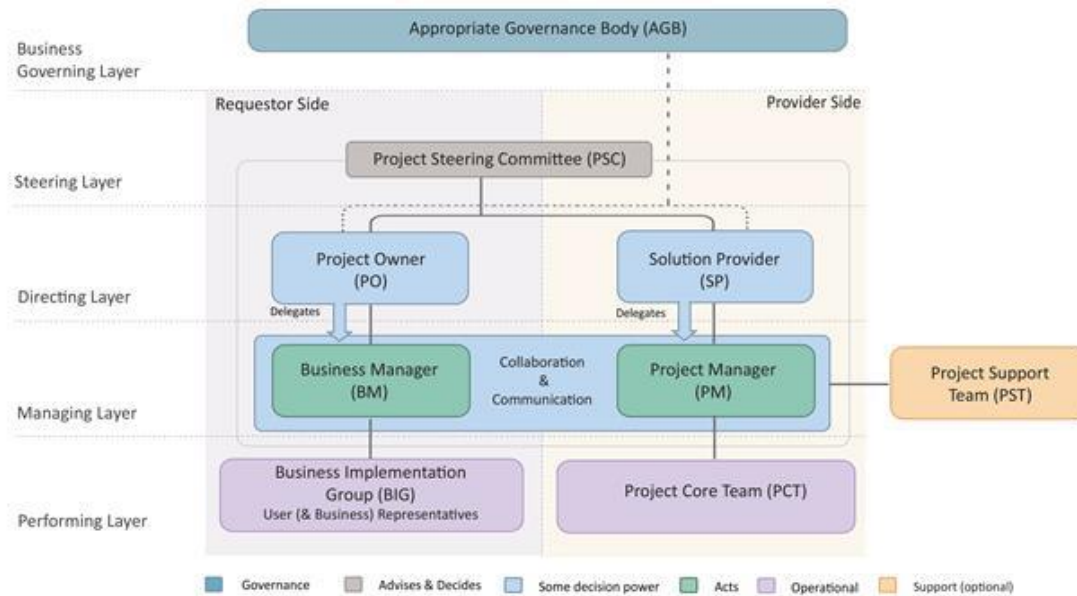
The list of KPIs relates to the first phase of the project.

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	2	Q4 2017 – Q1 2018

recommendations for proofs of concept		
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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 Harsanyi 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)
 - Eventually 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 mgt tool and metadata exchange (content format))
 - Members from OP, COMM, CNECT (to deliver feedback on interoperability requirements (metadata formats- technical requirements) (eg. 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 the 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	100	ISA ²	Q3 2017	Q1 2018

	supporting IT tools				
Execution	Analysis on interoperability requirements and Open Data publication feasibility	100		Q3 2017	Q1 2018
Execution	Pilot on Open Data publication	150		Q2 2018	Q4 2018
Execution	Pilot on archive management data exchange	250		Q2 2018	Q4 2018
Execution	Implementation of Open Data publication based on pilot results	300		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	ongoing
2018	Execution: <ul style="list-style-type: none"> Pilot on Open Data publication Pilot on archive management data exchange 	400	
2019	Execution: <ul style="list-style-type: none"> Implementation of Open Data 	300	

	publication based on pilot results		
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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) as a standard to register archival documents produced by corporations, persons and families	ISAD(G): General International Standard Archival Description (PDF) (2 ed.) , International Council on Archives Committee on Descriptive Standards, 2000	
ISAAR (CPF) International Standard Archival Authority Record	ISAAR (CPF): International Standard Archival Authority Record For Corporate Bodies, Persons and Families" (PDF) .	

for Corporate Bodies, Persons and Families	<i>International Council on Archives. October 2003. Retrieved 2012-07-06.</i>	
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.A6
Associated Services	CONNECT, OP

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. Beyond proper collection, annotation and archival, good data management and stewardship include the notion of long-term care of valuable digital assets, either alone or in combination with newly generated data. Good data management and stewardship is not a goal in itself but rather is a key conduit leading to easier and simpler data and knowledge discovery and evaluation, and to subsequent data and knowledge sharing, integration and reuse.

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 enable both machines and humans to Find (F), Access (A), Interoperate (I) and Re-use (R) data and metadata. The FAIR principles were initially focused on research data but their coverage has been extended to data produced or managed by the public sector as well. The FAIR principles apply to data in the conventional sense as well as to data-related algorithms, tools, workflows, protocols and other data-related services.

The FAIR Data Maturity Model will help public sector and research organisations to assess their maturity level in the implementation of the FAIR data 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 principles (aka 'FAIRness') through recommendations; and

- c. Comparative, i.e. to allow a benchmark based comparison amongst peers.

The Action on FAIR Data Maturity Model will deliver a self-assessment toolset that will enable organisations to evaluate the readiness and implementation level of their datasets, projects and data infrastructures vis-à-vis the FAIR data principles, along with the guidelines necessary to climb up the ladder of FAIR. At a later stage, the Model will provide estimations about the costs and benefits for organisations, both in economic and non-economic terms, for moving to a higher maturity level. That will allow the FAIR Data Maturity Model to become an instrument for providing evidence to decision makers on setting up short and long-term actions pertinent to the practical implementation of FAIR principles.

The Action will systematically coordinate all existing efforts at national and/or sectorial level to develop evaluation criteria for the FAIR Data principles, aiming to create a solution for broader adoption that will combine the most salient of their characteristics. In addition, it will align 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 Digital Single Market Strategy [2] and the European Cloud Initiative [3] 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 will facilitate and promote a cross-border and cross-sector data sharing and reuse and will contribute to growth and accelerate innovation in a global digital economy.

8.14.3 OBJECTIVES

The main objective of this action is to develop a self-assessment methodology that any public sector or research organisation can use in order to measure its maturity level from the following perspectives:

- a. Data findability, i.e. how well an organisation describes the data it produces or manages with rich metadata, assigns to data/metadata a globally unique persistent identifier and registers or indexes them in a searchable resource;
- b. Data accessibility, i.e. how well an organisation allows 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 an organisation ensures that the precise format and meaning of exchanged and shared data/metadata is preserved and understood;
- d. Data reusability, i.e. how well an organisation releases data/metadata with a clear and accessible data usage license, associated with detailed provenance and follows 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 self-assessment methodology for measuring the readiness and implementation level of a dataset, project or data infrastructure of any public sector or research organisation vis-à-vis the FAIR principles (Findability, Accessibility, Interoperability and Reusability). 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 decision⁵⁶.

1.1.1.1 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. 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 organisations to publish data and users to enjoy access to an open-by-default, efficient and cross-sector data environment supported by FAIR data principles. • Transparency: the FAIR Data Maturity Model will increase the internal visibility inside public sector or research organisations, allowing other actors to view the datasets, data infrastructures and projects they

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

	<p>produce or manage. Especially for research organisations, it can have a positive impact for the scientific principle of credibility, replication and further research.</p> <ul style="list-style-type: none">• 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 pertinent capacity and develop the necessary policies and mechanisms to ensure long-term accessibility, including preservation of their data and metadata.• Assessment of effectiveness and efficiency: the FAIR Data Maturity Model is an instrument that can assess and improve the readiness, effectiveness and efficiency of public sector and research organisations in the implementation of the FAIR principles. <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>
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<p><i>Does the proposal fulfil an interoperability need for which no other alternative solution is available?</i></p>	<p>There is no published assessment methodology at European level for measuring the maturity of an organisation regarding its readiness and implementation level of the FAIR principles. The FAIR Data Maturity Model is the first instrument that assesses in a combined way the findability, accessibility, interoperability and reusability of data produced or managed by organisations.</p>
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1.1.1.2 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 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.</p> <p>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.</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>Not applicable</p>

1.1.1.3 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. 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 key improvement recommendations., 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>

1.1.1.4 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-</p>

	à-vis the FAIR data principles and provides concrete improvement recommendations.
<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 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.

1.1.1.5 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	Organisations and 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).
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	Not applicable

1.1.1.6 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 proposed action will make extensive use of the Interoperability Maturity Model (IMM). The IMM is an operational solution used for assessing and improving the interoperability maturity of a Public Service. Also, it will identify FAIR-related enablers and manifestations taking into account interoperability solutions produced by other ISA ² Actions including: 'Promoting semantic interoperability amongst European Public Administrations', 'Access to Base Registries', 'Catalogue of Services', 'Common assessment Method for Standards and Specifications' and 'Sharing and Reuse'.
<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

1.1.1.7 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 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 (published end 2017). The FAIR Data Maturity Model is an important instrument towards the implementation of the FAIR Data Action Plan, as it measures the readiness and implementation level of organisations vis-à-vis the FAIR data principles and provides concrete improvement recommendations. The 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

The problem of	The lack of a methodology that allows organisations to evaluate the readiness and implementation level of their datasets, projects and data infrastructures vis-à-vis the FAIR data principles (Findability, Accessibility, Interoperability and Reusability) and provides concrete recommendations on how to improve it.
affects	The potential of public administrations, researchers, businesses and citizens to share and reuse data in a cross-border and cross-sector way.
the impact of which is	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.
a successful solution would be	A maturity model 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

1.1.1.8 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	2019	Public administration s, research organisations, businesses

	Commission's investment plan for Europe. A specific example of the economic impact of opening up data is the Copernicus earth observation system.		
(+) Savings in money	The proposed action will ensure money savings to organisations as it will deliver a reusable solution for measuring the FAIRness of their data. Also, it will contribute to the improvement of organisations in their readiness and implementation level of the FAIR principles, which will lead to money savings from the reuse of high-quality data, the combination of data sets across borders or disciplines and the avoidance of duplication.	2019	Public administrations, research organisations, businesses, universities, researchers
(+) Savings in time	The proposed action will ensure time savings to organisations aiming to implement the DAIR principles. Also, it will accelerate the achievement of the objectives of the Digital Single Market Strategy and European Cloud initiative of the EU.	2019	Public administrations, research organisations, businesses, universities, researchers
(+) Better interoperability and quality of digital public service	The readiness of organisations to implement the FAIR principles is related with their capability to produce / maintain / reuse more interoperable and of high quality public services.	2019	Public administrations, research organisations, businesses, universities, researchers
Increased transparency	The FAIR Data Maturity Model increases the internal visibility inside public sector or research organisations,	2019	Public administrations, research organisations,

	<p>allowing other actors to view the data they produce or manage.</p> <p>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>		<p>businesses, universities, researchers</p>
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1.1.1.9 User-centricity

The FAIR Data Maturity Model will be created in an open and iterative way, with the active and continuous engagement of its potential users in all development phases. This engagement will be supported by the organisation of interactive sessions where all potential types of users will contribute to the definition of the exact scope and functioning of the model. It will include their involvement to the review and the evaluation phases of the model by providing their feedback and it will also cover the collection of their preferences regarding the delivery and maintenance of the 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 a self-assessment toolset that enables organisations to evaluate the readiness and implementation level of their datasets, data infrastructures and projects 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

1.1.1.10 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 GO-FAIR initiative: community-driven initiative focusing on the FAIR-related implementation needs of existing research networks and consortia Community-driven initiatives at international, European and Member States level (e.g. GO-FAIR, Research Data Alliance, CODATA etc.)	

1.1.1.11 Identified user groups

User Group	Description
Service Owners	Responsible for setting up and maintaining a public service
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

1.1.1.12 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 DG DIGIT and DG RTD. 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.

1.1.1.13 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 metrics⁵⁷ 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

1.1.1.14 Governance approach

The ISA² Coordination Group will set the general strategic directions of the Action and will ensure that it will be aligned with all relevant actions at European and /or national level.

DG RTD A6, which is responsible for the European Open Science Cloud and the creation of the FAIR Data Action Plan, will identify the priorities, organise the activities and safeguard the proper execution of the FAIR Data Maturity Model development and communication plan.

In coordination with the ISA² Programme Management Team (DG DIGIT D2), it will report the progress and the results of the Action to the ISA² Coordination Group.

8.14.10 TECHNICAL APPROACH AND CURRENT STATUS

The FAIR Data Maturity Model will be a generic-purpose model (i.e. not specific to a certain discipline or type of data), which will be developed following a progressive approach via a number of iterations. In each iteration, the current structure and content of the model will be examined and validated in order the model to evolve to a revised version.

The FAIR Data Maturity Model will be built on top of existing efforts at national and/or sectorial level to develop evaluation criteria for the FAIR Data principles (e.g. FAIRmetrics.org, DANS, DTL, Springer Nature etc), aiming to create a solution for broader adoption that will combine the most salient of their characteristics. In addition, it will align with community-driven initiatives at international, European and Member States level (e.g. GO-FAIR, Research Data Alliance, CODATA etc.) and complement other

⁵⁷ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard> , effectiveness tab.

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 development process will consist of the following phases:

- a. Scoping: during the first phase, the exact scope of the model will be defined including the objectives, the usage and the purpose of the model. Similar models will be 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 will be 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 and 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?
- d. Testing: the model will be verified and validated following a well-defined evaluation methodology.
- e. 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

1.1.1.15 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipa ted Allocati ons (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Scoping	10K		Q2/2018	Q2/2018
	Stakeholders identification	20K		Q3/2018	Q3/2018
Planning	Design process definition	20K		Q3/2018	Q4/2019
Execution	Design (phase 1)	70K		Q1/2019	Q3/2019
	Testing (phase 1)	15K		Q3/2019	Q3/2019
	Distribution (phase 1)	15K		Q4/2019	Q4/2019

Execution	Design (phase 2)	100K		Q1/2020	Q3/2020
	Testing (phase 2)	25K		Q3/2020	Q3/2020
	Distribution (phase 2)	25K		Q4/2020	Q4/2020
	Total	300K			

1.1.1.16 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2018		150	
2019		150	
2020			

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)
250	1	Q2/2018

8.14.13 ANNEX AND REFERENCES

Description	Reference link	Attached document
[1] FAIR Data principles	http://www.force11.org/group/fairgroup/fairprinciples	
[2] Digital Single Market Strategy	http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1447773803386&uri=CELEX:52015DC0192	
[3] European Cloud Initiative	http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016DC0178&from=EN	

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 released under the EUPL (European Union Public License) 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 GitHub so that it can be reviewed and maintained by the open source community.

In addition, the action will conduct a study investigating how 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.). The intention will be to implement the conclusions of the study in the following years.

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. released under the EUPL (European Union Public License);
2. available as a component and operable as a service;
3. secure;
4. user friendly;
5. multilingual with support for all official languages from the European Union;
6. accessible by users with disabilities;
7. compliant with data protection rules and best practices;
8. 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 GitHub so that it can be reviewed and maintained by the open source community.

The second objective of the action is to conduct a study investigating how 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.). The intention will be to implement the conclusions of the study in the following years.

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.

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 decision⁵⁸.

⁵⁸ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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

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? 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>
<p><i>For proposals completely or largely already in</i></p>	

operational phase , indicate whether and how they have been utilised in two (2) or more EU policy sectors.	
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8.15.5.3 Cross-border

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

Question	Answer
Will the proposal, once completed , be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for each of the concerned Member State.	Having to distinguish human from non-human users is a common problem that is not related to any particular EU Member State.
For proposals completely or largely already in operational phase , indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.	

8.15.5.4 Urgency

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

Question	Answer
Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	A CAPTCHA is a component that is consistently and repeatedly required. As long as a common open source CAPTCHA is not available, suboptimal existing solutions will have to be used and paid for.
How does the ISA ² scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently	ISA allows constraining the implemented CAPTCHA to run on any platform instead of focusing on a specific one.

available sources?	
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8.15.5.5 Reusability of action's outputs

The re-usability of the action, measured by the extent to which its results can be re-used.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	EU CAPTCHA
Description	A CAPTCHA is a technical component that is used whenever a user submits data to an information system if there is a need to assert that the user is human. It is commonly used in registration workflows, particularly when creating accounts for personalisation or security. EU CAPTCHA will be reused in EU Login - the authentication service for information systems of European institutions and bodies - and in ECI/OCS - a system funded by ISA that allows citizens to support initiatives as per Regulation (EU) No 211/2011 of the European Parliament and of the Council of 16 February 2011 on the citizens' initiative (ECI Regulation).
Reference	
Target release date / Status	Q4/2018
Critical part of target user base	EU CAPTCHA will be delivered as open source under the EUPL and 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
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<p><i>Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?</i></p>	<p>This is not applicable. A CAPTCHA is a standalone technical component that does not implement any business.</p> <p>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 GitHub with its source code and documentation freely available.</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>	

8.15.5.7 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>A CAPTCHA is a building block used in many information systems. Having to implement or acquire a CAPTCHA represents a cost and a technical challenge that can become a barrier for digitalisation. In addition, a common CAPTCHA helps homogenising the user experience and therefore removes technical barriers for non-digital natives. The CAPTCHA aims at being secure and will not store personal data. It therefore contributes to Pillar 2 (reinforcing trust and security in digital services and in the handling of personal data).</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.	2018	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.	2018	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.	2018	Users
(+) Remove Digital Barriers	Implementing or acquiring a CAPTCHA incurs a costs and technical difficulties. Removing these barriers will promote digitalisation.	2018	Member States European Bodies Private Sector Everyone
(+) Market	CAPTCHA providers might not	2018	Everyone

	appreciate competition with an open source product provided by the European Union but it would stimulate them to propose better offerings.		
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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 GitHub and via CAPTCHA itself that will advertise its own existence and provide a link to GitHub 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	2019

The study to further extend the CAPTCHA will be published in GitHub.

8.15.9.5 Governance approach

The action is mostly technical as it consists in implementing a CAPTCHA based on distorted letters and numbers 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.

A study will further explore alternatives to using distorted letters and numbers in order to improve the user experience. The list of options to evaluate and the list of interested parties will be established with the ISA² Coordination Group. DIGIT.D.3 will then perform an analysis and iteratively share results with interested parties during two or three webinars. Final conclusions will be presented to the ISA² Coordination Group.

8.15.10 TECHNICAL APPROACH AND CURRENT STATUS

The CAPTCHA will be based on distorted letters and number for the visual side and on letters and numbers spelled in different languages for the audio side. It will be implemented in Java and will be usable as a component via an API or operable as a service and accessible via a protocol. Recent versions of most JEE application servers will be supported, such as Tomcat, Weblogic, JBoss and Websphere. Most recent browsers, such as Internet Explorer, Edge, Firefox, Chrome and Safari will be supported on the client side.

8.15.11 COSTS AND MILESTONES

8.15.11.1 Breakdown of anticipated costs and related milestones

Phase: Initiation Planning Execution Closing/Final evaluation	Description of milestones reached or to be reached	Anticipat ed Allocatio ns (KEUR)	Budget line ISA/ others (specify)	Start date (QX/YYYY)	End date (QX/YYYY)
Initiation	Requirements	10	ISA	Q1/2018	Q1/2018
Execution	Implemented CAPTCHA	150	ISA	Q2/2018	Q4/2018
Execution	Study for alternatives	50	ISA	Q2/2018	Q4/2018
	Total	210	ISA	Q1/2018	Q4/2018

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	210

2019			
2020			

8.16 GOVSEC - SECURE GOVERNANCE (2018.09)

8.16.1 IDENTIFICATION OF THE ACTION

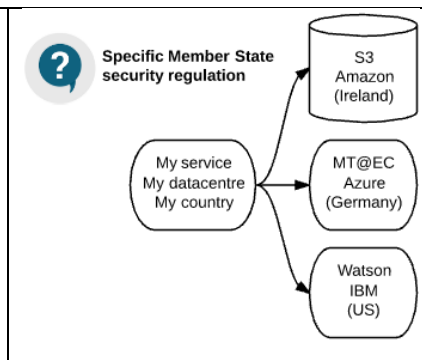
Service in charge	DIGIT
Associated Services	EU Institutions, Member States

8.16.2 EXECUTIVE SUMMARY

With the emergence of the micro-services paradigms and Cloud technologies, information system are 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 varies 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.

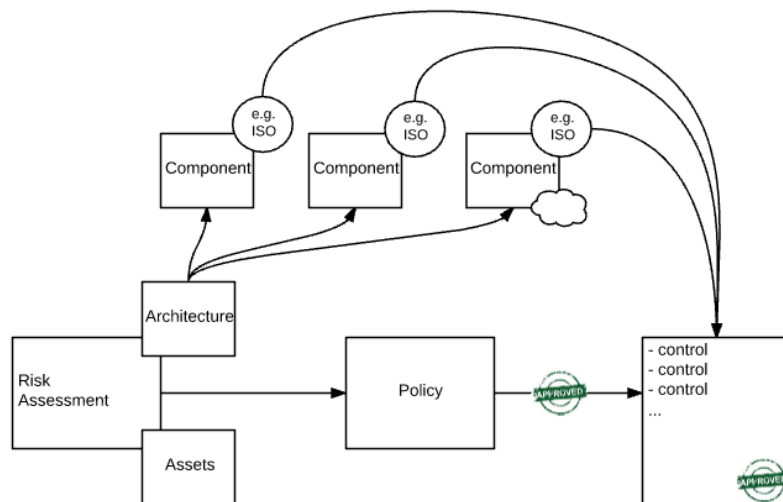
To circumvent this problem we propose in the present action to develop a **methodology, sustained by the appropriate IT tooling**, which will:

- 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 themselves 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 Metaframework⁵⁹, 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.

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

⁵⁹ Commission is already using these frameworks as reference framework for security certification.

business impact analysis process as one of the corner stone within decision process of each public service and develop common semantics around them, the present action aims at facilitating the dissemination of these components and breaks the regulatory barriers between member states, while respecting their specificities and therefore support interaction between European public administrations and/or between Administrations Citizens and Businesses. European public services using this framework will be able to exchange security definition of their respective components to prove their compliance towards their respective regulations. This is a key enabler to develop, maintain, facilitate and even share registries of inter-operable solutions.

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 decision⁶⁰.

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>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>No similar approach identified; usually implemented by ad'hoc expensive consulting.</p>

8.16.5.2 Cross-sector

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

⁶⁰ DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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>By nature, the action is being purely horizontal, the action is an enabler for any EU policy sector which involves inter-operability.</p> <p>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.</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>Not applicable</p>

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
<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 nature, the action being purely horizontal represents an enabler for any Member State wishing to use it. Provided Member States adopt the framework described in the action they will be able to share definition of components in terms of security. EU institutions are already interested in the methodology which represents a first set of users of the framework.</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>

8.16.5.4 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 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)
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Description	The proposal delivers a methodology (Business Impact Assessment, Risk management, Policy and Implementation...) and anIT 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

[copy and use a separate table for each output foreseen]

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
<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>We are following the DSM on the intersection of two main areas (2) to protect Europe's assets by tackling cybersecurity challenges, and (3) to promote the online platforms (such as joinup) as responsible players of a fair internet ecosystem and help building common cyber-secure infrastructure across all parts of the EU so that EU governments can use same approaches in respect to IT security topics. ICTs are already widely used by government bodies, as it happens in enterprises, but eGovernment involves much more than just the tools. It also involves 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 (CloudWatch⁶¹, CloudForEurope⁶²), 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

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)

⁶¹ http://www.cloudwatchhub.eu/sites/default/files/D3.2_Risk-Based-Decision-Making-Mechanisms-For-Cloud-Service-In-The-Public-Sector.pdf

⁶² <http://www.cloudforeurope.eu/documents/10179/51418/Public+administration+requirements+and+vendor+offering/045deb19-744f-4ff4-9c4d-a2e4fa1f0e29?version=1.0>

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

[Maximum 200 words].

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

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Yes, no need for expensive security compliance analysis (~100K€/service)	End of 2018 2019	EU Institutions Other adopters
(+) Savings in time	Yes, no need for expensive security compliance analysis (~100K€/service)	End of 2018 2019	EU Institutions Other adopters
(+) Better interoperability and quality of digital public service	Yes, by ensuring usage of Cloud technologies is safe	End of 2018 2019	EU Institutions Other adopters
(-) Integration or usage cost	No, very small system to operate		
(+) Security	Yes, ensure security at a very low level (up to security controls implementation)	End of 2018 2019	EU Institutions Other adopters
(+) End-user adoption	Yes, security drives to confidence of end users	2020	EU citizens

8.16.7.2 User-centricity

An important part of the action is called Dissemination: it consists in disseminating the principle of the present Framework to its actual users:

- The first set of users are the EU Institutions which already raise interest in the approach; this group of interest will be engaged through the various channel already available but they are a de-facto participant of the action.
- The second action will consist in disseminating the concept to other Public Services in Europe using regular dissemination channel for reusable components. The dissemination will be performed to the authorities responsible for security compliance among the Member States; the Commission and DG CONNECT and ENISA will help on that matter.
- If the interest is rising among the mentioned authorities, they will be able to be engaged from 2019: they will be able to use the framework, and a specific structure to take their feedback into account will be put in place. This structure, depending on the involvement of the pilots, can go from the active integration of requirements to the development of an open-source community.

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 metrics⁶³ indicate the current values.

Description of the KPI	Target to achieve	Expected time for target
Number of organisations using the framework	4 Institutions	End 2018
	10 Institutions	End 2019
Number of building block described and reusable	20 building blocks	End 2018
	50 building blocks	End 2019
Number of organisation 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.

⁶³ For examples see the ISA2 dashboard <https://ec.europa.eu/isa2/dashboard/isadashboard> , effectiveness tab.

- 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 sufficient in terms of efficiency.

Technically speaking the IS does not represent a challenge in terms of architecture, since it basically consists in managing a database of information provided by the various stakeholders, a database of building blocks, and workflows to manage the transitions.

Therefore this information will be perfectly served using a MDM⁶⁴/BPM⁶⁵ approach. The information system will therefore need a database technology as repository, a workflow engine to manage transition, and a decent presentation layer for a decent usability of the IS. The IS itself must be interoperable, so it will expose its key interfaces through Web Services.

Additional requirements to take into account are: 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.

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. So it is important that the IS is modular to allow such integration, or can obviously reuse an existing contribution if applicable.

Taken in consideration all these requirements, but having as target a functioning and proven methodology, the action will follow the following staged approach:

<p>Stage 1: Drafting and Designing (year 1)</p>	<p>- Drafting the methodology, using a prototype of the application developed with a RAD⁶⁶, such as Grails, using open source databases as repository and Activity as workflow engine</p> <p>- While engaging the Member States and other stakeholders, designing the future application architecture</p>
<p>Stage 2: Implementing</p>	<p>- Once the methodology is proven enough, and the candidate testers (e.g. Member States engaged), implementing the final version of the system</p>

⁶⁴ MDM: Master Data Management

⁶⁵ BPM: Business Process Management

⁶⁶ RAD: Rapid Application Development tool

and Testing (year 2)	(building blocks listed below) - Testing each building blocks as the arrive, on the basis of the priority of the stakeholder
Stage 3: Packaging and Deploying (year 3)	- 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

During the *Drafting and Designing* phase, only a partial implementation of the building will be achieved, following Agile practices to best fit the need of drafting the methodology and performing presentation to the stakeholders.

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 (EUIs)	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)	

9 ACCOMPANYING MEASURES

9.1 RAISING INTEROPERABILITY AWARENESS – COMMUNICATION ACTIVITIES (2016.30) – UPDATE PENDING

9.1.1 IDENTIFICATION OF THE ACTION

Type of Activity	Accompanying measure
Service in charge	DIGIT.D2
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 2018, 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 ISA² solutions. A framework of principles and recommendations on users' centrality will be developed. Moreover, a stronger focus will be placed on increasing the take up of ISA² solutions on regional level.

In 2018, as in the preceding years, the programme will organise the annual SEMIC 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. The re-launch of a campaign for the Sharing and Reuse awards 2019 will be also part of the activities.

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? In particular, how does it contribute to the</i></p>	<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>implementation of:</p> <ul style="list-style-type: none"> • the new European Interoperability Framework (EIF), • the Interoperability Action Plan and/or • the Connecting European Facility (CEF) Telecom guidelines • any other EU policy/initiative having interoperability requirements? 	
<p>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</p>	<p>Yes. Communication is irreplaceable.</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
<p>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.</p>	<p>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.</p>
<p>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.</p>	<p>ISA² solutions, developed in a generic way with the aim to be reusable for different policy areas, are currently used in the areas of the Digital Single market, Growth and Jobs, Fisheries, Open Data Policy and many others. For further detail, please consult the ISA² solutions pages.</p>

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>	Member States and beyond, at International, European, National and regional level. ISA ² has numerous use cases by Member States indicated on its solutions pages (See section: Who is already using this solution? in the individual solution descriptions)
<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>	See above

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.

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>	NA

9.1.5.7 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>	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 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 solutions saves time	From the moment of implementation on	All intermediate 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. In order to elaborate more on this subject a framework of principles and recommendations on users' centricity will be developed and promoted. 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 2018/2019

Output name	SEMIC conference 2019
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Description	Organisation of the annual SEMIC conference, potentially with a workshop for targeted, specialised stakeholders the next date
Reference	
Target release date / Status	First 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 institutions, the European Regions.
Description	Workshops based in format and content on specific user needs
Reference	
Target release date / Status	throughout 2018/2019

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 2018/2019

Output name	Users' centricity framework
Description	A framework of principles and recommendations on how user centric approach should be applied in the new solutions.
Reference	
Target release date / Status	Throughout 2018/2019

9.1.9 ORGANISATIONAL APPROACH

9.1.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives
ISA ² actions	Action owners
Public administrations on European level	Various committees inside the European Institutions
Public administrations on national, regional and local level	Representatives in the ISA ² bodies (Committee, coordination group or equivalent, etc.)
Businesses	Business organisations
Citizens	NGOs, Consumer protection organisations
Suppliers	Supplier organisations

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
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"
Suppliers	Supplier organisations	Communicating business opportunities arising under the programme to their members

9.1.9.2 Identified user groups

Businesses and citizens

9.1.9.3 Communication and dissemination plan

A detailed ISA² communication strategy has been drafted on which all communication is based.

9.1.9.4 Key Performance indicators

Description of the KPI	Target to achieve	Expected time for target
Number of events in which ISA² actively participates (by speech, presentation, moderation and/or ISA ² stand)	to be increased by 10% in comparison to year before	Throughout the reporting period
Number of unique website visitors	to be increased by 10% 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 connections	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 10% 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/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)
	Ongoing communication actions for the communication of the programme as a whole	350K	ISA ²	Throughout the period	
	SEMIC conference 2019	120K	ISA ²	Q3/2018	2019
	Sharing & reuse conference	100K	ISA ²	Q3/2018	2019
	Community building	100K	ISA ²	Q3/2018	2019
	Users' centricity framework	100K	ISA ²	Q1/2018	2019
	Other ISA ² specific actions	20K	ISA ²	Q2/2018	2019
	Support of all activities through Intramuros contractors	164K	ISA ²	Q4/2018	Q2/2019
	Total	840K			

9.1.11.2 Breakdown of ISA² funding per budget year

Minimum to be allocated for 2018: 990.000€

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Implementation	680	
2017	Execution	1030	
2018	Execution	840	
2019			
2020			

9.1.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
ISA website	http://ec.europa.eu/isa2/	

9.2 MONITORING AND EVALUATION (2016.39)

9.2.1 IDENTIFICATION OF THE ACTION

Type of Activity	Monitoring and Evaluation (according to ISA ² decision)
Service in charge	DIGIT.D2

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 2018, the action will apply the method and instruments to monitor the actions funded by ISA² and to disseminate information. It will also launch the interim evaluation of the ISA² programme to ensure its delivery by September 2019.

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.

In addition it will be used as well for evaluating the ISA² programme in the middle of its implementation.

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>Yes, as this action is there to monitor and assess the implementation and impact of the different actions, and to determine if they continue to meet the identified needs. So indirectly, it contributes as it will keep the programme focussed.</p>
<p><i>Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?</i></p>	<p>no</p>

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
<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>Not applicable</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>Not applicable</p>

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
<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.

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)	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)	Under assessment

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>	The 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>	The ISA ² Dashboard

9.2.5.7 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 action shall examine the benefits of the 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 EXPECTED MAJOR OUTPUTS

Output name	ISA ² programme interim evaluation
Description	
Reference	
Target release date / Status	September 2019

9.2.8 ORGANISATIONAL APPROACH

9.2.8.1 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.)	

9.2.8.2 Identified user groups

Action owners
Representatives in the ISA ² bodies (Committee, coordination group or equivalent, etc.)

9.2.8.3 Communication and dissemination plan

Event	Representatives	Frequency of meetings / Absolute dates of meetings?
ISA Governance Meetings	ISA Coordination Group Members	Twice a year

9.2.8.4 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.

9.2.9 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.

9.2.10 COSTS AND MILESTONES

9.2.10.1 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	ISA ² Dashboard Operations, maintenance and technical support	50	ISA ²	Q2/2018	Q1/2019
	2018 WP monitoring 3 quarters for ISA ²	200	ISA ²	Q3/2018	Q1/2019
Execution	ISA ² Programme Interim Evaluation	200	ISA ²	Q3/2018	Q2/2019
	Total	450			

9.2.10.2 Breakdown of ISA² funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Operational	680	
2017	Operational	100 (200 kEUR from administrative budget)	
2018	Execution	450	