1.5   TRUSTED EXCHANGE PLATFORM (E-TRUSTEX) (2016.19)

1.5.1   IDENTIFICATION OF THE ACTION

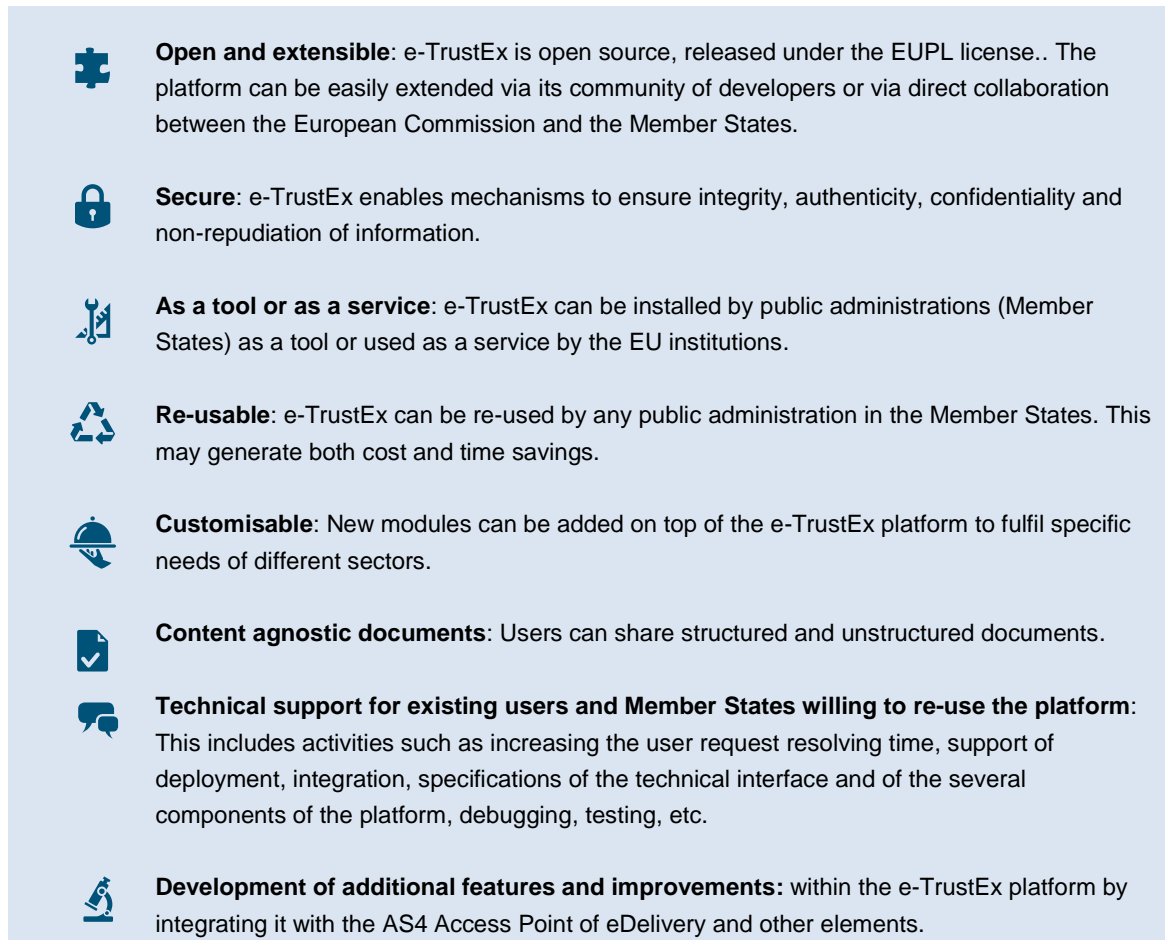| Type of Activity	Reusable generic tools
Service in charge	DG DIGIT D3
Associated Services	SG A.1, JUST B.4, COMP R.3, SANTE A.4, ESTAT.B.3, DIGIT.B.2, DIGIT.B.4, OP.A.2

1.5.2   EXECUTIVE SUMMARY

Advancements in technology are progressively replacing paper-based information flows with electronic transactions. As a result, public administrations are being pressed to adopt electronic means to exchange data and documents with other public administrations, businesses and citizens. This change is inevitable as legislation at all levels increasingly foresees the exchange of data electronically.

The e-TrustEx action aims to support public administrations in this highly transformational process towards digital and electronic transactions by providing them with a service-oriented platform that helps automating the exchange of all type of documents and data.

E-TrustEx is a service-oriented platform that acts as a broker, in the exchange of data and documents, between a defined boundary (e.g. this may be a Member State, a Region, a Ministry or an organisation) and its outside world. To enable interoperability across organisational boundaries and borders, e-TrustEx uses the Internet and the secure message exchange protocol of the CEF eDelivery building block[4] (i.e. the AS4 messaging protocol). Thanks to its standardised interfaces, e-TrustEx is capable of interacting with many different heterogeneous information systems. For example, once a Member State deploys the platform, it can swiftly interlink its several national information systems, of any type and associated to any sector, with a single messaging platform. The e-TrustEx platform is operational, offered to the EU Institutions as a service and to the Member States as an open source software tool via Joinup. The table below summarizes key features of the e-TrustEx platform.

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[4] https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/eDelivery

Open and extensible: e-TrustEx is open source, released under the EUPL license.. The platform can be easily extended via its community of developers or via direct collaboration between the European Commission and the Member States.

Secure: e-TrustEx enables mechanisms to ensure integrity, authenticity, confidentiality and non-repudiation of information.

As a tool or as a service: e-TrustEx can be installed by public administrations (Member States) as a tool or used as a service by the EU institutions.

Re-usable: e-TrustEx can be re-used by any public administration in the Member States. This may generate both cost and time savings.

Customisable: New modules can be added on top of the e-TrustEx platform to fulfil specific needs of different sectors.

Content agnostic documents: Users can share structured and unstructured documents.

Technical support for existing users and Member States willing to re-use the platform: This includes activities such as increasing the user request resolving time, support of deployment, integration, specifications of the technical interface and of the several components of the platform, debugging, testing, etc.

Development of additional features and improvements: within the e-TrustEx platform by integrating it with the AS4 Access Point of eDelivery and other elements.

The continuation of the e-TrustEx action will ensure that the platform continues to be live and that support is available to its users. The diagram below summarizes the main concepts of the e-TrustEx action.
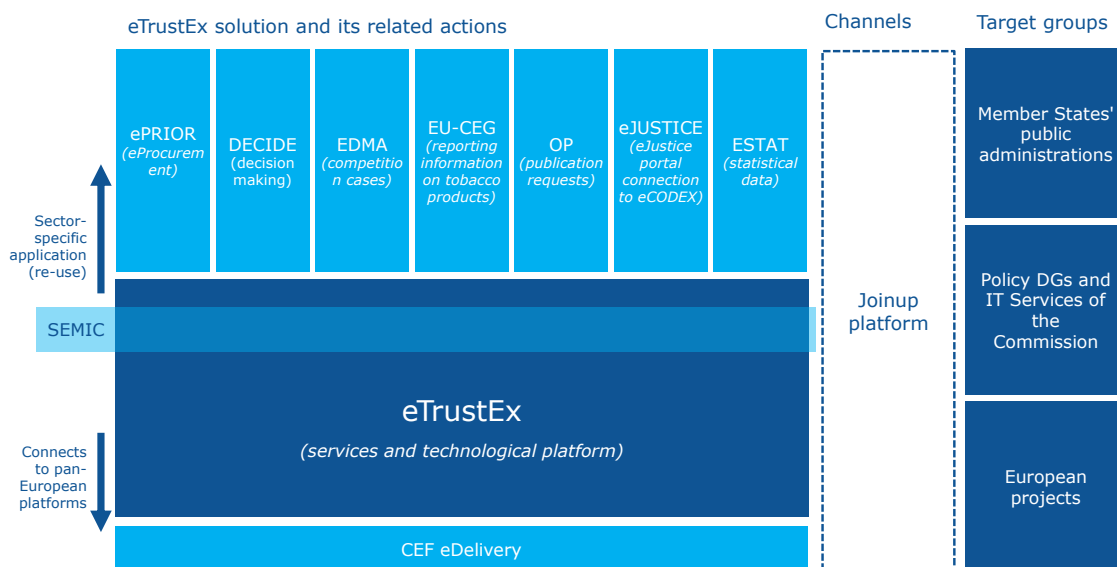

Figure 1 e-TrustEx Action at a glance

1.5.3 OBJECTIVES

The main objective of the e-TrustEx action is to support public administrations implementing EU policies that require the exchange of information across borders in an electronic format. This is why ISA² provides Member States with a service-oriented platform such as e-TrustEx. As the e-TrustEx platform can be used in virtually every sector (eJustice, eProcurement, etc.), once deployed for the purposes of one sector, it may support and consequently accelerate the automation of data exchange in other sectors.

The e-TrustEx platform offers services such as validation, transformation and routing of data and documents as well as the ability to send large messages. The platform uses a CEF eDelivery Access Point as its most important machine-to-machine interface. The platform also has a web application that makes a mailbox-type of service available to end-users. Thanks to the open source policy of ISA², the Member States will be able to re-use and extend all elements of e-TrustEx for their own specific needs.

Another objective of this action is to **lay the groundwork for the sustainability of the e-TrustEx action** within the EU institutions and in the Member States. As several of the projects using e-TrustEx reach operations, it comes the time to prepare their sustainability outside of the ISA² Programme. Having this objective in mind, the Commission is currently considering to create a corporate service dedicated to the secure exchange of information. Once available this service would be able to sustain the projects of the EU Institutions that current rely on e-TrustEx for secure exchange of information.

1.5.4 SCOPE

In Scope
The e-TrustEX action includes the following elements:
- Development of additional features and improvements within the e-TrustEx platform;
- Operations of the platform for the EU institutions that reuse it in service delivery mode. This includes maintenance of the platform, improvement of its governance, quality control and assurance processes and mechanisms in order to enhance the services provided to the project stakeholders; and
- Technical support to users and Member States willing to re-use the platform. This includes activities such as increasing the user request resolving time, support of deployment, integration, specifications of the technical interface and of the several components of the platform, debugging, testing, etc.

Out of scope
The e-TrustEX action does not cover the following elements:
- Hosting costs linked to the open source version of e-TrustEx;
- Implementation of back-office integration (to be complemented by implementers' own budget);
- Specific support to their sectorial systems;
- Development of specific functionality and extensions; and
- The exchange of classified documents.

1.5.5 ACTION PRIORITY

1.5.5.1 Contribution to the interoperability landscape

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

Question	Answer
How does the proposal contribute to improving interoperability among public administrations and with their citizens and businesses across borders or policy sectors in Europe? *In particular, how does it contribute to the implementation of:* • *the new European Interoperability Framework (EIF),* • *the Interoperability Action Plan and/or* • *the Connecting European Facility (CEF) Telecom guidelines* • *any other EU policy/initiative having interoperability requirements?*	e-TrustEx is a platform offered to public administrations at European, national and regional level to set up secure exchange of natively digital documents or scanned documents from system to system via standardised interfaces. e-TrustEx is a cross-sector, open-source, free-to-use tool that will help Member States to exchange structured and unstructured documents and to connect to pan-European messaging infrastructures with reduced investment. A significant number of them already use or will soon be implementing the CEF eDelivery messaging protocol (i.e. AS4). Experience shows that the use of common technical specifications promotes interoperability, facilitates the cross-border and cross-sector information exchange, taking into account legal, organisational, semantic and technical aspects.
Does the proposal fulfil an interoperability need for which no other alternative action/solution is available?	Yes. This proposal refers to an already existing Action, to which its relevance in terms of interoperability has been demonstrated, and recognized by the ISA[2] programme[5].

1.5.5.2 Cross-sector

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

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[5] https://ec.europa.eu/isa2/actions/permitting-secure-document-workflows-between-eu-and-national-institutions_en

Question	Answer
*Will the proposal, **once completed** be useful, from the interoperability point of view and utilised in two (2) or more EU policy sectors? Detail your answer for each of the concerned sectors.*	See below.
*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.*	e-TrustEx is used in the following policy areas: *Business*: • e-Procurement[6] (DIGIT) *Justice, home affairs and citizens' rights*: • eJustice portal[7] (DG JUST) *Environment, consumers and health*: • EU-CEG[8] tobacco reporting (DG SANTE) *Economy, finance and tax*: • EDMA[9] competition cases (DG COMP) *Cross-cutting policies*: • DECIDE[10] decision making process (SG) • Official Journal (OP) • ESDEN[11] collection of statistical data (ESTAT)

1.5.5.3 Cross-border

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

Question	Answer
*Will the proposal, **once completed,** be useful from the interoperability point of view and used by public administrations of three (3) or more EU Members States? Detail your answer for*	See below.

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[6] ePRIOR https://ec.europa.eu/isa2/solutions/open-e-prior_en

[7] European e-Justice Portal https://e-justice.europa.eu/home.do?action=home

[8] EU Common Entry Gate (EU-CEG) https://ec.europa.eu/health/euceg/introduction_en

[9] Electronic Document Management Agent (EDMA) http://ec.europa.eu/dpo-register/details.htm?id=26771

[10] Decide https://ec.europa.eu/info/sites/info/files/activity-report-2015-dg-sg_june2016_en.pdf

[11] European statistical data exchange network (ESDEN) http://ec.europa.eu/eurostat/web/ess/about-us/ess-vision-2020/implementation-portfolio#ESDEN

each of the concerned Member State.	
*For proposals completely or largely **already in operational phase**, indicate whether and how they have been utilised by public administrations of three (3) or more EU Members States.*	For example, the e-TrustEx platform is currently used as a key element of pan-European messaging infrastructures by the following projects: • e-PRIOR (DIGIT) • DECIDE (SG) • EDMA (DG COMP) • eJustice portal (DG JUST) • OPOCE (OP) • EU-CEG (DG SANTE) • ESDEN (ESTAT) – currently in implementation, estimated to be in production by the end of 2017. Around 200 public institutions across the 28 Member States are in scope of these projects (such as national parliaments and permanent representations). Around 1 million documents have been exchanged between the European Commission, the EU Council and the Member States since its go live until July 2017. In addition, over 3 700 private companies have exchanged around 4.5 million documents with the EC and other EU institutions in the scope of the e-PRIOR and EU-CEG projects.

1.5.5.4 Urgency

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

Question	Answer

Is your action urgent? Is its implementation foreseen in an EU policy as priority, or in EU legislation?	This proposal refers to an already on-going action. Its urgency has already been assessed by ISA^2.[12]
How does the ISA^2 scope and financial capacity better fit for the implementation of the proposal as opposed to other identified and currently available sources?	This proposal refers to an action already under the ISA^2 scope. The action includes a mix of experimentation and production and therefore fitting ISA^2's scope and objectives.

1.5.5.5 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?

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	e-TrustEx open source software package
Description	The e-TrustEx open-source software package is offered to public administrations at European, national and regional level to set up secure exchange of digital structured and unstructured documents from system to system via standardised interfaces.
Reference	https://joinup.ec.europa.eu/software/openetrustex/description
Target release date / Status	Released
Critical part of target user base	Target level: continuous monitoring of reuse cases
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	EU-CEG (DG SANTE) has adopted the e-TrustEx solution to interconnect CEF eDelivery with the EU-CEG back-office. DG SANTE hosts and manages it in a secure environment.

Name of reusable solution to be produced (for new proposals) or produced (for existing actions)	e-TrustEx instance hosted at the EC
Description	e-TrustEx can be reused in a service delivery mode within the EU Institutions.
Reference	DIGIT-eTrustEx-Support@ec.europa.eu

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[12] https://ec.europa.eu/isa2/actions/permitting-secure-document-workflows-between-eu-and-national-institutions_en

Target release date / Status	Released
Critical part of target user base	Target level: 5
For solutions already in operational phase - actual reuse level (as compared to the defined critical part)	The following projects are reusing, or considering reusing the solution: • e-PRIOR (DIGIT) – In production • DECIDE (SG) – In production • EDMA (DG COMP) – In production • OJ (OP) – In production • eJustice portal (DG JUST) – In production • ESDEN (ESTAT) – In implementation, estimated to be in production by the end of 2017 • ECI[13] (DIGIT) – Considering reusing the solution Around 200 public institutions across the 28 Member States are in scope of these projects (such as national parliaments and permanent representations). Around 1 million documents have been exchanged between the European Commission, the EU Council and the Member States since its go live until July 2017. In addition, over 3 700 private companies have exchanged around 4.5 million documents with the EC and other EU institutions in the scope of the e-PRIOR and EU-CEG projects.

1.5.5.6 Level of reuse of existing solutions

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

Question	Answer
Does the proposal intend to make use of any ISA², ISA or other relevant interoperability solution(s)? Which ones?	See below.
*For proposals completely or largely **already in operational phase**: has the action reused existing interoperability solutions? If yes, which*	ISA² Action 1.7 - ePRIOR: the e-TrustEx platform was originally built on the basis of the ePRIOR platform and is now used by

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[13] European Citizens Initiative (ECI) https://ec.europa.eu/isa2/actions/reusable-tools-information-collection_en

ones and how?	ePRIOR.
	ISA² Action 4.2.4 - Joinup: the e-TrustEx platform is made available via the ISA Collaborative Platform (Joinup).
	ISA² Action 1.1 - SEMIC: IMMC Metadata (Interinstitutional standard metadata defined in the context of the decision making process) files are transferred to EU stakeholders and Members States through e-TrustEx.
	CEF eDelivery DSI: the eTrustEx uses the Access Point and other elements of the CEF eDelivery Building Block.

1.5.5.7 Interlinked

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

Question	Answer
Does the proposal directly contribute to at least one of the Union's high political priorities such as the DSM? If yes, which ones? What is the level of contribution?	**DSM strategy** In 2015, the digital single market strategy was released. The e-TrustEx action contributes to boosting competiveness through interoperability and standardisation, which is explicitly mentioned in the communication. **Juncker's political guidelines** As e-TrustEx creates technical interoperability cross borders, it supports Priority n°2: A Connected Digital Single Market of the Political Guidelines for the next European Commission – A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change (15 July 2014). **eGovernment Action Plan 2016-2020** In Action 6 of the eGovernment action plan, the Commission commits to reusing

	operational building blocks (such as e-TrustEx) in view of its own digital transformation.
	eIDAS Regulation
	The regulation on electronic identification and trust services for electronic transactions was adopted at end of 2014. It will further foster interoperability and reduce barriers in the internal market, supported by solutions such as e-TrustEx.
	Connecting Europe Facility (CEF)
	The e-TrustEx platform reuses the CEF eDelivery building block and is analyzing the reuse of CEF eID in its web application.

1.5.6 PROBLEM STATEMENT

The problem of	According to the eIDAS Regulation[14] "*electronic documents are important for further development of cross-border electronic transactions in the internal market*" and therefore "*an electronic document should not be denied legal effect on the grounds that it is in an electronic form in order to ensure that an electronic transaction will not be rejected only on the grounds that a document is in electronic form.*"
affects	Public administrations that will be required to replace information flows based on paper with electronic transactions.
the impact of which is	Public administrations are being pressed to adopt electronic means to exchange data and documents. This change is inevitable as legislation at all levels increasingly foresees the exchange of data electronically with other public administrations, businesses and citizens.
a successful solution would be	To support public administrations implementing EU policies requiring the exchange of information across borders in electronic format by providing them with a service-oriented platform that can be used in every sector. As the e-TrustEx platform is multi-sector (eJustice, eProcurement, etc.), once deployed for one of them, it accelerates the automation of data and documents exchange

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[14] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2014.257.01.0073.01.ENG

	in the other sectors. The platform implements several services such as validation, transformation and routing of data and documents as well as the ability to send large messages. The platform uses a CEF eDelivery Access Point as its most important API. The platform also has a web application that makes available mailbox-type services to its end-users.

1.5.7 IMPACT OF THE ACTION

1.5.7.1 Main impact list

Impact	Why will this impact occur?	By when?	Beneficiaries
(+) Savings in money	Switching from registered post to digital exchange of information reduces the cost of these exchanges (as an example, public administrations in France exchange millions of letters with delivery receipt – each one of them costing around €4 to €5 each).	Once sectors start switching to digital exchanges of information instead of paper-based means.	• European Projects • Member States • Public Administratio ns • EU Institutions.
	Cost savings and improved efficiency by enabling interoperability within and across sectors.		
	Cost savings to connect to pan-European messaging infrastructures.		
(+) Savings in time	Time savings to connect to pan-European messaging infrastructures.		
	Creation of a 'deploy once, use multiple times' platforming approach. This will create economies of scale avoiding that each sector develops their own specific solution.	Once critical mass has been reached.	
	Full automation of message exchanges among several parties in different sectors.		

(+) Better interoperability and quality of digital public service	Increase the security and reliability of information exchange and at the same time reduce the effort that usually needs to be dedicated to this type of process.	Once implemented	
	Provide free-to-use open source tools for national parliaments and permanent representations to send and receive electronic legal documents and metadata.		
	Sharing of experiences, lessons learnt, specifications, tools and components published as open source reusable by any Member State or EU Institution on Joiunup.		

1.5.7.2 User-centricity

In the context of e-TrustEx, user-centricity has different meanings. On one hand, the governance model facilitates stakeholders' involvement in the process by enabling them to exchange views and voice specific needs. On the other hand, e-TrustEx also has end-users, the people using the e-TrustEx Graphical User Interface (GUI). They expect a clean, intuitive interface that helps them get work done. Both dimensions of user centricity in the context of e-TrustEx are explained in the sections below.

Governance as a means to listen to the stakeholders' voice

As detailed in section 1.1.9.5 "Governance approach", the users form part of the governance of e-TrustEx. There are regular management board meetings, enabling the users to steer the direction of the action within the scope and guidelines set by the ISA[2] Programme. The governance process is based on open government principles and collaborative practices. Consultations and discussions, encouraging users' feedback, are therefore an integral part of the governance structure.

Improving the user experience of the e-TrustEx GUI: a journey, not a destination

A recent UX redesign study[15] has been carried out in view of better meeting the users' needs and improving their experience using the GUI. The study assessed the users' needs, including expanding

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[15] Study completed as part of WP5 of ISA[2] Work Programmes 2016-2017, available on request.

the GUI to mobile users, complemented by UX concepts drawn from the theory behind the Magnus Revang's UX Wheel[16].

- DESIRABILITY (colour scheme, contrast, graphic elements and placement of elements);
- USABILITY (navigation, intuitiveness, structure, naming, categorisation and consistency);
- CREDIBILITY (expected information and tone of voice);
- USEFULNESS (expected functionality, satisfaction and differentiation);
- FINDABILITY (user guidance and process guidance);
- ACCESSIBILITY (response time).

A first phase of the findings and recommendations of the study are already in implementation. The remaining phases will be planned together with the users through the governance structure.

1.5.8 EXPECTED MAJOR OUTPUTS

Major outputs are presented in section 1.1.5.5. "Reusability of action's outputs".

1.5.9 ORGANISATIONAL APPROACH

1.5.9.1 Expected stakeholders and their representatives

Stakeholders	Representatives	Involvement in the action
ISA[2] Coordination Committee	Appointed ISA[2] Coordination committee members	Assists the European Commission in translating priorities into actions and to ensure continuity and consistency in their implementation.
Secretariat General (SG)	SG.A.1 (Advice and Development)	This unit is the system owner and business project manager of DECIDE and represents the interests of DECIDE's users.
Directorate General for Informatics (DIGIT)	Unit DIGIT.D.3 (Trans-European Services)	This unit is the service in charge of this action and responsible for the development coordination and maintenance of e-TrustEx.
	Unit DIGIT.B.2 (Solutions for Legislation, Policy & HR)	This unit is in charge of the ISA action 'Reusable tools for EU public participation' that includes the European Citizens Initiative (ECI). This unit is also in charge of developing the DECIDE system for the

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[16] http://userexperienceproject.blogspot.be/2007/04/user-experience-wheel.html

		SG.
	Unit DIGIT.B.4 (Software Engineering Capabilities)	This unit coordinates the development of the eProcurement modules within the European Commission.
Directorate General for Communication Networks, Content and Technology (DG CONNECT)	Unit CONNECT.H4 (Trust and Public Services)	The cooperation with DG CONNECT is key given its role in the provision of the building blocks via the CEF programme.
Directorate General Competition (DG COMP)	Unit COMP.R.3. (Information Technology)	This unit is in charge of the EDMA project.
The statistical office of the European Union (DG EUROSTAT)	ESTAT.B.3 (IT for statistical production).	This unit is responsible for the ESDEN project that involves the exchange of statistical information between Member States and the EU institutions.
Directorate General for Health and Food Safety (DG SANTE)	Unit SANTE.A.4 (Information Systems)	This unit is the system owner of the EU-CEG project on Tobacco Reporting.
Organisations in the Member States	Members States representatives of administrations either working on similar initiatives or interested in reusing e-TrustEx.	As required
Other DGs of the European Commission (as required)	Representatives of other DGs / EU Institutions either working on similar initiatives or interested in reusing e-TrustEx.	As required

1.5.9.2 Identified user groups

The e-TrustEx action targets Member States' public administrations, policy DGs and IT services of the European Commission and various European projects. The following projects are identified as user groups:
- e-PRIOR (DIGIT)
- DECIDE (SG)
- EDMA (DG COMP)
- OJ (OP)
- eJustice portal (DG JUST)
- EU-CEG Project (DG SANTE)
- CEF eDelivery (DG CONNECT)
- ESDEN (ESTAT)

- ECI (DIGIT), currently considering reuse

1.5.9.3 Communication and dissemination plan

The e-TrustEx action uses Joinup to publicly disseminate information and is also invited to participate in Joinup's governance meetings. The e-TrustEx action further uses an intranet wiki to collaborate and engage with its users. The table below presents an overview of the foreseen events.

Event	Representatives	Frequency of meetings / absolute dates of meetings?
ISA^2 Coordination Committee	Appointed ISA^2 Coordination committee members	Quarterly
Operational Management Board Meetings	Representatives of the system suppliers or owners connected to eTrustEx or in the process of being connected to eTrustEx	Regular basis (specific periodicity as defined together with the stakeholders).
Bilateral meetings with Member States	DIGIT representatives and Member States representatives	These meetings are arranged by DIGIT on an ad-hoc basis.
Bilateral meetings with EU-wide initiatives	DIGIT representatives and representatives of EU-wide initiatives	These meetings are arranged by DIGIT on an ad-hoc basis.
Bilateral meetings with policy DGs	DIGIT representatives and policy DGs representatives	These meetings are arranged by DIGIT on an ad-hoc basis.
Relevant conferences and events	DIGIT with any other project stakeholder	On invitation to participate in relevant meetings or events organised by Member States or other stakeholders.

1.5.9.4 Key Performance indicators

The table below presents key traffic figures extracted from the e-TrustEx platform operated by the European Commission and of the software package that is made available to the Member States.

Description of the KPI	Target to achieve	Values
Number of documents exchanged via the GUI	**150 000** (Per quarter, cumulative)	Q3-2016: 55 767 Q4-2016: 250 499 Q1-2017: 129 920 Q2-2017: 98 399
Number of projects using the e-TrustEx infrastructure for the exchange of documents	**5** (Per quarter, not cumulative)	Q3-2016: 5 Q4-2016: 5 Q1-2017: 5 Q2-2017: 5
Number of downloads of Open e-TrustEx	**150** (Per year, cumulative)	Q3-2016: 81 Q4-2016: 132 Q1-2017: 196 Q2-2017: 201
Number of documents exchanged in the generic e-TrustEx environment (via the e-TrustEx Node)	**300 000** (Per quarter)	Q3-2016: 181 151 Q4-2016: 242 999 Q1-2017: 231 653 Q2-2017: 248 588

1.5.9.5 Governance approach

The e-TrustEx project, an action of the ISA[2] programme, follows the ISA[2] governance structure. To achieve its objectives, this action will collaborate with several DGs of the European Commission and with various other stakeholders.

Regular Operational Management Board (OMB) meetings aim to ensure continuous coordination with the system owners of the various systems connected to e-TrustEx. The OMB will be composed of representatives of the system suppliers and system owners of systems already connected to eTrustEx or in the process of being connected to eTrustEx. The objective of the OMB is to provide a vehicle for the participants to take decisions and handle all IT tactical and IT operational and technical implementation matters.

The graphic below presents an overview of the governance structure.
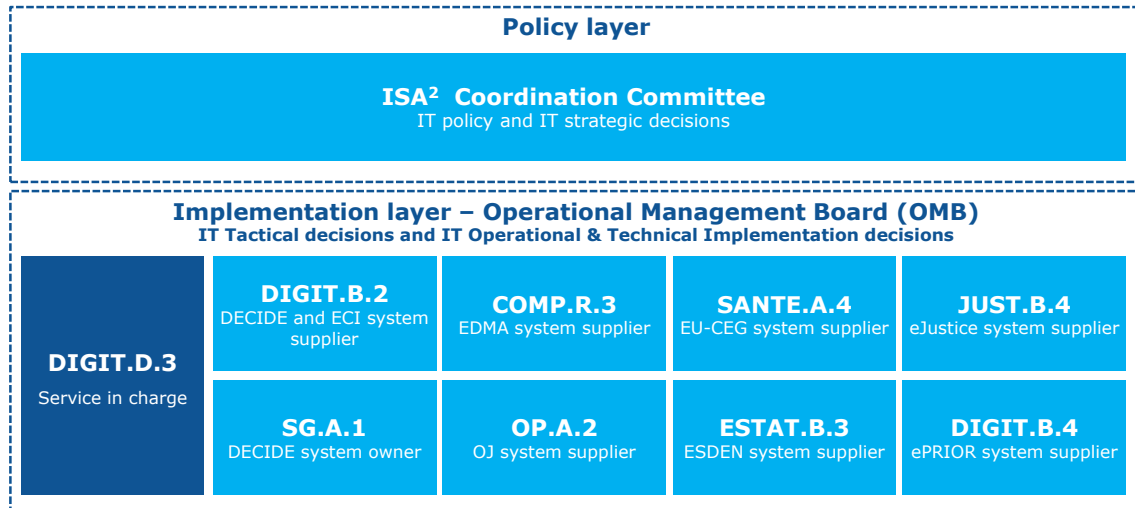
1.5.10 TECHNICAL APPROACH AND CURRENT STATUS

This action is the continuation of work started in ISA and on-going work funded under the first Work Programmes of ISA[2]. After several enhancements, the e-TrustEx platform is today more scalable, reliable and supports additional functionalities.

During the last years, a number of pilots involving the secure exchange of information have been carried out in several sectors using the e-TrustEx platform. As a result of these successful pilots, eTrustEx is now on-boarding an increasing number of stakeholders. Some of them are already using the platform in a production mode.

As from 2018, the project will be focusing on three key work packages:

1. Making AS4, the messaging protocol of the CEF eDelivery building block, the prevalent API for communications over the Internet. This will involve simplifying the native web-services offered by the platform, the associated message exchange patterns and the full removal of the e-TrustEx Adapter by AS4 Access Points;
2. Continuous improvement of the platform (and the e-TrustEx web application), including its documentation, combined with the implementation of a governance model more in line with the maturity level of the platform. The activities involved in each improvement cycle will contribute towards the further development of its functionality. The activities associated to the operational parts of the action will contribute towards the provision of support and the rollout capacity required by the Member States and the policy DGs of the European Commission;
3. Support the creation of a dedicated service in the European Commission with the capacity of sustaining projects that have reached operational mode.

The outputs and results of the execution phase are divided into work packages as detailed in the next section.

Execution phase [PHASE 1] – completed, from April 2016 – March 2017
Main focus: Additional functionalities and improvements

Details: The activities of this phase are contained in the following WPs:

	Scope	Identified objectives
WP2	Continuous Improvement of software package	Improvement of the several elements of the e-TrustEx platform, including its web application, based on change requests received from users and technological advancements. This included elements such as: • Implementation of interoperable queue protocol • UX redesign study for the eTrustEx GUI, taking mobile access into account • Centralised configuration mechanism • Notification mechanism • Interoperable queue protocol • Start work on replacement of the web applet using WebStart
WP3	Operation and support	Supporting projects that have already reached production such as DECIDE.

Execution phase [PHASE 2] – currently ongoing, from April 2017 with planned conclusion in March 2018

Main focus: Adoption of development QA and QC best practices, continuous improvement

Details: The activities of this phase are contained in the following WPs:

	Scope	Identified objectives
WP1	Migration of e-TrustEx Adapter	Preparation of migration of the e-TrustEx Adapters to the AS4 Access Point of CEF eDelivery.
WP2	Continuous Improvement of software package	Improvement of the several elements of the e-TrustEx platform, including its web application, based on change requests received from users and technological advancements. This is expected to include elements such as: • Removal of JSCAF framework from the admin console • Improvements to the admin console • eTrustEx mobile access • Complete work on replacement of the web applet using WebStart • Improved security • Improve existing documentation • Implementation of code QA and QC methods and tool (code quality review, unit testing and integration testing tools, test automation)
WP3	Operation and support	Supporting projects that have already reached production such as DECIDE.

Execution phase [PHASE 3] – From April 2018 with planned conclusion for March 2019
Main focus: Migration of the e-TrustEx Adapter by the AS4 Access Point of CEF eDelivery
Details: The activities of this phase are contained in the following WPs:

	Scope	Identified objectives
WP1	Migration of e-TrustEx Adapter	Full migration of the e-TrustEx Adapters to the AS4 Access Point of CEF eDelivery.
WP2	Continuous Improvement of software package	Improvement of the several elements of the e-TrustEx platform, including its web application, based on change requests received from users and technological advancements. This is expected to include elements such as: • Normalising the eTrustEx DB • Setup of a cloud instance of the eTrustEx node for demo purposes • Integrate new design on eTrustEx GUI • Improve the environment for eTrustEx testing
WP3	Operation and support	Supporting projects that have already reached production such as DECIDE.

Execution phase [PHASE 4] – From April 2019 with planned conclusion for March 2020
Main focus: Leveraging the AS4 Access Point of CEF eDelivery
Details: The activities of this phase are contained in the following WPs:

	Scope	Identified objectives
WP1	Migration of e-TrustEx Adapter	After replacing the e-TrustEx Adapter with the AS4 Access Point of CEF eDelivery, several efforts will be done to: • Simplify the native web-services of e-TrustEx and • Of its message exchange patterns. Changes will be implemented in order to leverage the functionalities of the AS4 Access Point.
WP2	Continuous Improvement of software	Improvement of the several elements of the e-TrustEx platform, including its web application, based on change requests received from users and technological advancements. This is expected to include elements such as: • eTrustEx Message/User Reporting • Simplify and document the eTrustEx node data model • Improved logging on eTrustEx
WP3	Operation and support	Supporting projects that have already reached production such as DECIDE.

Execution phase [PHASE 5] – From April 2020 with planned conclusion for March 2021
Main focus: Handing operations to a dedicated service to be created in the Commission

Details: The activities of this phase are contained in the following WPs:

	Scope	Identified objectives
WP2	Continuous Improvement of software	Improvement of several elements of the e-TrustEx platform, including its web application, based on change requests received from users and technological advancements. This is expected to include elements such as: • Admin console new features • eTrustEx message export
WP3	Operation and support	Handing over of the operational part of the action to a dedicated service that is planned to be created in the European Commission.

1.5.11 COSTS AND MILESTONES

1.5.11.1 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)
Phase 1 – Execution	Additional functionalities and improvements	950	ISA^2	Q2/2016	Q1/2017
Phase 1 – Operational	Operation phase 1	250	ISA^2	Q2/2016	Q1/2017
Phase 2 – Execution	Adoption of development QA and QC best practices, Continuous improvement	1020	ISA^2	Q2/2017	Q1/2018
Phase 2 - Operational	Operation phase 2	250	ISA^2	Q2/2017	Q1/2018
Phase 3 – Execution	Migration of e-TrustEx Adapter and Continuous Improvement of software	950	ISA^2	Q1/2018	Q1/2019
Phase 3 – Operational	Operation and support	250	ISA^2		
Phase 4 – Execution	Leveraging the AS4 Access Point of CEF	750	ISA^2	Q2/2019	Q1/2020

	eDelivery and Continuous Improvement of software				
Phase 4 – Operational	Operation and support	250	ISA^2		
Phase 5 – Execution	Finalising Improvements	650	ISA^2	Q2/2020	Q1/2021
Phase 5 – Operational	Operation and support	250	ISA^2		
	Total	**5.670.000**			

1.5.11.2 Breakdown of ISA^2 funding per budget year

Budget Year	Phase	Anticipated allocations (in KEUR)	Executed budget (in KEUR)
2016	Phase 1 – Execution	950	
	Phase 1 – Operational	250	
2017	Phase 2 – Execution	1170	
	Phase 2 – Operational	250	
2018	Phase 3 – Execution	750	
	Phase 3 – Operational	250	
2019	Phase 4 – Execution	750	
	Phase 4 – Operational	250	
2020	Phase 5 – Execution	650	
	Phase 5 – Operational	250	

1.5.12 ANNEX AND REFERENCES

Description	Reference link	Attached document
Digital Single Market	http://ec.europa.eu/priorities/digital-single-market_en	
Digital Single Market Strategy	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52015DC0192	
CEF Digital	https://ec.europa.eu/digital-agenda/en/connecting-europe-facility	
eIDAS regulation	http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.257.01.0073.01.ENG	