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Live Webinar

Electronic Registered Delivery Service (ERDS) and the eIDAS Regulation

—
12 September 2016

Agenda

- 15⁰⁰ **Introduction**
Thomas Fillis – DIGIT
- 15¹⁰ **Introduction to eIDAS Electronic Registered Delivery Services (ERDS)**
Marco Fernandez Gonzalez – CNECT
- 15³⁵ **Introduction to CEF eDelivery**
Adrien Ferial – DIGIT
- 15⁵⁵ **Linking ERDS to CEF eDelivery**
Joao Rodrigues Frade – DIGIT
- 16¹⁵ Q&A
- 16³⁰ End

Introduction

Thomas Fillis
DIGIT

Benefits with an impact

10 TOP PRIORITIES OF THE EC

Jobs, growth and investments

Digital Single Market

Energy Union and Climate

Internal market

A deeper and fairer economic and monetary union

A balanced EU-US free trade agreement

Justice and fundamental rights

Migration

A stronger global actor

Democratic change

PROBLEM

- Europeans often face barriers when using online tools and services
- At present, markets are largely domestic in terms of online services
- Only 7% of EU small- and medium-sized businesses sell cross-border

SOLUTION

- This includes common EU data protection, copyright rules, boosting digital skills, accessible online content
- ...and **Cross-border Digital Public services** (CEF Digital)

CONSEQUENCE

- Maximise economic potential, growth/jobs – anticipated to be 415€ billion to EU economy

What happened before

26/07/16

CEF eDelivery - What's In It For You

26/05/16

Information session on AS4 Profile

25/05/16

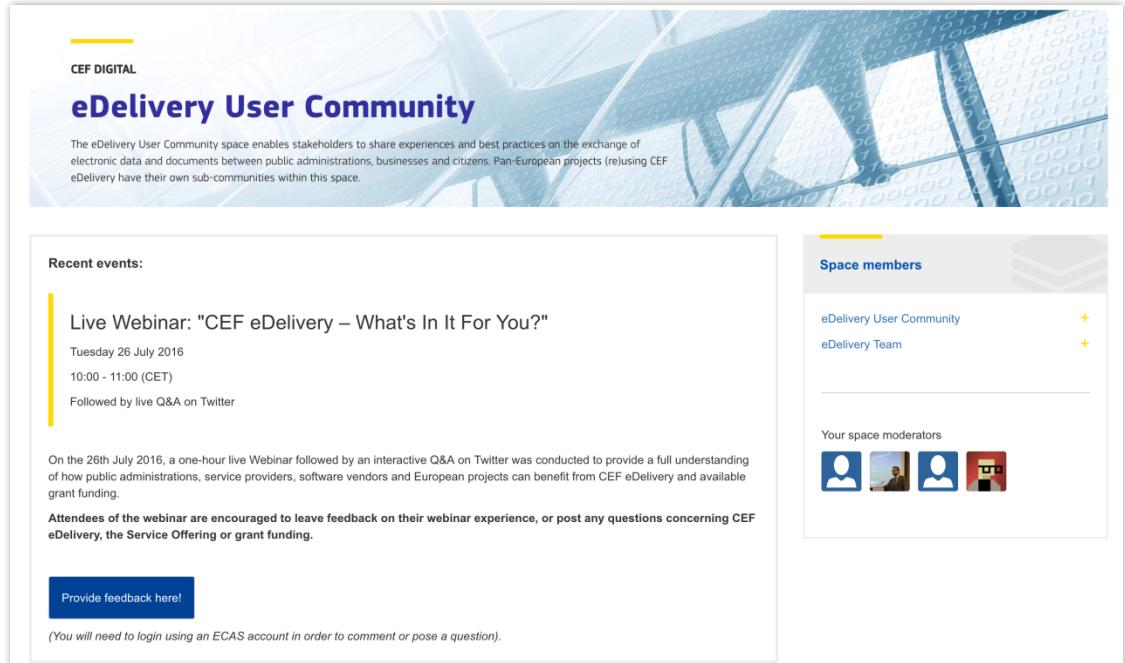
eDelivery Extended Expert Group

19/05/16

CEF Digital Presents at the AMA

More information on CEF Digital

[Event Calendar](#)



The screenshot shows the homepage of the CEF DIGITAL eDelivery User Community. At the top, there is a banner with a blue gradient background featuring binary code patterns. The text "CEF DIGITAL" is in a small yellow box, and "eDelivery User Community" is in a large blue box. Below the banner, a section titled "Recent events:" lists a "Live Webinar: 'CEF eDelivery – What's In It For You?'" scheduled for Tuesday 26 July 2016 from 10:00 - 11:00 (CET), followed by a live Q&A on Twitter. A note below states that on the 26th July 2016, a one-hour live Webinar followed by an interactive Q&A on Twitter was conducted to provide a full understanding of how public administrations, service providers, software vendors and European projects can benefit from CEF eDelivery and available grant funding. Attendees are encouraged to leave feedback on their webinar experience or post any questions concerning CEF eDelivery, the Service Offering or grant funding. A "Provide feedback here!" button is present, along with a note that users will need to log in using an ECAS account. To the right, there are sections for "Space members" (listing "eDelivery User Community" and "eDelivery Team") and "Your space moderators" (showing four user icons). The bottom right corner features the European Commission logo.

Today's speakers

Joao Rodrigues Fraude

Head of the CEF Building Blocks
sector in DIGIT

Marco Fernandez Gonzalez

European Commission's task force
“legislation team (eIDAS)”

Adrien Ferial

Technical office leader of CEF
eDelivery

Moderated by

Thomas Fillis

Stakeholder Management Office
in DIGIT

Highlights of the webinar

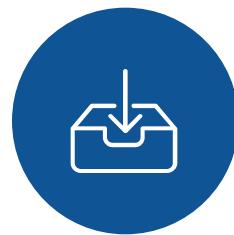
DURING



Engage in the Quiz

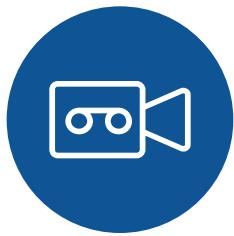


Ask questions



Download the presentation

AFTER



Download the webinar recording



Interact with our online community

Introduction to eIDAS Electronic Registered Delivery Services (ERDS)

Marco Fernandez Gonzalez
CNECT

The eIDAS Legal Framework

	Legal Act	Reference	Adoption date	Entry into force
eID	eIDAS Regulation	910/2014	23.07.2014	17.09.2014 (1.07.2016 - application provisions on TS)
	ID on procedural arrangements for MS <u>cooperation</u> on eID (art. 12.7)	2015/296	24.02.2015	17.03.2015
	IR on <u>interoperability framework</u> (art. 12.8) Corrigendum C(2015) 8550 of 4.02.2016	2015/1501	8.09.2015	29.09.2015
	IR <u>assurance levels for electronic identification means</u> (art. 8.3)	2015/1502	8.09.2015	29.09.2015
Trust services	ID on circumstances, formats and procedures of <u>notification</u> (art. 9.5)	2015/1984	3.11.2015	5.11.2015 (notified to Ms)
	IR on <u>EU Trust Mark</u> for Qualified Trust Services (art.23.3)	2015/806	22.05.2015	12.06.2015
	ID on technical specifications and formats relating to <u>trusted lists</u> (art. 22.5)	2015/1505	8.09.2015	29.09.2015
	ID on <u>formats of advanced electronic signatures and seals</u> (art. 27.5 & 37.5)	2015/1506	8.09.2015	29.09.2015
	ID on <u>standards for the security assessment of qualified signature and seal creation devices</u> (art. 30.3 & 39.2)	2016/2303	25.04.2016	05.2016

eIDAS – The Regulation in a nutshell

2 MAIN CHAPTERS SUBJECT TO DIFFERENT RULES AND REQUIREMENTS

Chapter II

Mutual recognition of e-identification means

Chapter III

Electronic trust services

- Electronic signatures
- Electronic seals
- Time stamping
- Electronic registered delivery service
- Website authentication

Chapter IV



Electronic Documents

eIDAS: Key principles for eID



The Regulation does not
impose the use of eID

Cooperation between
Member States

Interoperability
framework

Mandatory **cross-
border recognition**
only to access public
services

Sovereignty of MS to
use or introduce means
for eID

Principle of **reciprocity**
relying on defined levels
of assurance

**Full autonomy for
private sector**

eIDAS: Key principles for Trust services



The Regulation does not impose
the use of Trust services

Transparency and
accountability

Non-mandatory technical
standards ensuring
**presumption of
compliance**

Non-discrimination in
Courts of eTS vs paper
equivalent

Technological **neutrality**

Specific **legal effects**
associated to qualified
trust services

Risk management
approach

eIDAS

eID

**Electronic
signatures**

Electronic seals

**Electronic time
stamps**

**Electronic
registered delivery
services**

**Website
authentication**

**Electronic
documents**

**Validation
Preservation**

eIDAS

Definition of Trust Services & electronic documents

art. 3(36)

Electronic registered delivery service

'electronic registered delivery service' means a service that makes it possible to transmit data between third parties by electronic means and **provides evidence relating to the handling of the transmitted data, including proof of sending and receiving the data**, and which protects transmitted data against the risk of loss, theft, damage or any unauthorised alterations

(art. 2(9) of Directive 97/67)

Registered item

'registered item' means a service providing a flat-rate guarantee against risks of loss, theft or damage and supplying the sender, where appropriate upon request, with proof of the handing in of the postal item and/or of its delivery to the addressee

eIDAS – Trust services

Horizontal principles

Liability

International aspects

Supervision

Security requirements

Data protection

Trusted lists

Qualified services

Prior authorisation

EU trust mark

Electronic signatures,
including validation and
preservation services

Electronic seals,
including validation and
preservation services

Time stamping

Electronic registered delivery service

Website authentication

Key principles for e-registered delivery services



Non-qualified electronic registered delivery service providers (1)

Obligations of non-qualified electronic registered delivery service providers

- Verify that requirements of the Regulation applicable to (all) TSPs are met:
- Data processing and protection (art.5)
- Liability and burden of proof, including limitation of use of the services (art.13)
- Access to person with disabilities (art.15)
- Risk management and security breach notification (art.19)

Associated legal effect to the service

- Non-discrimination as evidence in court vis-à-vis paper equivalent

Non-qualified electronic registered delivery service providers (2)

Obligations of non-qualified electronic registered delivery service providers

- The supervisory body has no general obligation to supervise non-qualified service providers.
- The supervisory body should only take action when it is informed (for example, by the non-qualified trust service provider itself, by another supervisory body, by a notification from a user or a business partner or on the basis of its own investigation) that a non-qualified trust service provider does not comply with the requirements of this Regulation. (Recital 36)

Sanctions if non-compliance is established?

- Member States shall lay down the rules on penalties applicable to infringements of this Regulation. The penalties provided for shall be effective, proportionate and dissuasive. (art.16)

Qualified electronic registered delivery service (1)

Obligations of qualified e-registered delivery service providers

- Fulfil Initiation procedure
- Meet all requirements applicable to all TSPs (art. 5, 13, 15 and 19)
- Meet Requirements for all QTSPs (art.24.2)
 - Employ competent staff
 - Financial resources to cover liability risks
 - Anti-forgery measures
 - Use trustworthy systems
 - Termination plans
 -
- The electronic registered delivery service the TSP intend to provide shall meet the requirements for qualified electronic registered delivery services (art.44)

Qualified electronic registered delivery service (2)

E-registered delivery : requirements to be qualified

- Provided by one or more qualified trust service provider(s);
- Ensure with a high level of confidence the identification of the sender;
- Ensure the identification of the addressee before the delivery of the data;
- Sending and receiving of data is secured by an advanced electronic signature or an advanced electronic seal to preclude the possibility of the data being changed undetectably;
- any change of the data needed for the purpose of sending or receiving the data is clearly indicated to the sender and addressee of the data;
- the date and time of sending, receiving and any change of data are indicated by a qualified electronic time stamp.

**All TSPs involved in the transmission of data shall be qualified > Interoperability is key
> Cef eDelivery Acces Point (eSens profile of AS4 tech.spec.)**

Qualified electronic registered delivery service (3)

Supervision /control

- Before starting providing a qualified e-registered delivery service: Procedure of initiation (art.21)
- Notification of the intend to start providing e-registered delivery service together with a conformity assessment report
- SB verifies that a TSP and TS meets the requirements of the Regulation within 3 months
- Grants the qualified status (or refuses)
- Inform the body in charge of the Trusted List to add it to the list
- While providing the qualified e-registered delivery service on an ad hoc basis (art.20.2)
- Every 2 years from the granting of the qualified status to the QTSP and the qualified e-registered delivery service (art.20.1)

Sanctions if non-compliance of QTSP is established?

- Where a QTSP does not remedy to an identified failure: withdraw the qualified status of that provider or of the affected service it provides (art.20.3).
- Member States shall lay down the rules on penalties applicable to infringements of this Regulation. The penalties provided for shall be effective, proportionate and dissuasive. (art.16)

Qualified electronic registered delivery service (4)

Associated legal effect to the qualified e-registered delivery service

- Non-discrimination as evidence in court vis-à-vis paper equivalent
- Data sent and received enjoy the presumption of:
 - the integrity of the data,
 - the sending of that data by the identified sender,
 - the receipt of the data by the identified addressee
 - the accuracy of the date and time of sending and receipt of the data.

eIDAS – Supporting tools

Trusted lists for QTSPs and QTSS (art.22 and ID (EU) 2015/1505)

- Ensure continuity with the existing TLs established under the Service Directive.
- Ensure legal certainty.
- Foster interoperability of qualified trust services by facilitating a.o. the validation of e-signatures and e-seals.
- Allow citizens, businesses and public administrations to easily get the status of a trust service.

EU trust mark for qualified trust services (art.23 and (EU) 2015/806)

- Usage by QTSP after qualified status has been indicated in the TLs
- Trustmark indicates in a simple, recognisable, and clear manner the qualified status of a trust service
- Link to the relevant TL has to be ensured by the QTSP



Implementing acts

Possibility for the Commission to adopt implementing acts to list standards for processes for sending and receiving data:

- Their use will not be mandatory
- Their use will bring presumption of compliance with the requirements of the Regulation

Adoption of this implementing act would take into account considerations related to:

- Legal certainty
- Market needs
- Availability of standards (or Technical specifications)
- Compatibility of standards (or Technical specifications) with requirements set in the Regulation
- Outcomes of non-regulatory approach (such as CEF actions)

Interactive quiz

Quiz

- 1. Is ERDS only for public services? Y / N**
- 2. Is ERDS equivalent to registered postal items? Y / N**
- 3. Is the identification of senders and addressees required for QERDS to be electronic? Y / N**
- 4. Is the eIDAS Regulation about interoperability? Y / N**

Quiz 1

Is ERDS only for public services?

No

Electronic registered delivery services may be provided for technically and legally secure exchange of documents by all segments of the civil society. In other words, it may be used for A2A, A2B, A2C, B2B, B2C and C2C interactions

Quiz 2

Is ERDS equivalent to registered postal items?

No

The provisions of the Regulation on QERDS have been set in order to allow such assimilation but the Regulation does not establish it. Member States are therefore free to set it up at national level.

Quiz 3

Is the identification of senders and addressees required for QERDS to be electronic?

No

The identification required under article 44 of the eIDAS Regulation must be understood in a broad sense and is not limited neither to electronic identification of the sender and the addressee nor to notified eID means under eIDAS when identifying electronically.

The conformity assessment report must show that the identification process set by the qualified trust service provider meets the requirements of the Regulation and the Supervisory Body must verify it during the "initiation of qualified trust services" set in article 21 of the Regulation.

One should note that such identification also depends on the economic / business model of the qualified trust service provider. Indeed, a qualified trust service provider providing qualified electronic registered delivery services may decide to provide it on its own or in cooperation with other qualified trust service providers. As well, it might decide to identify and register its customers once and for all or conversely to allow each customer to identify for each message it would like to send.

Regarding notified eIDs, it goes without saying that qualified trust service providers may rely upon notified eIDs should they deem it appropriate with regard to their business model and provided that the conformity assessment body and the supervisory body considers that such identification process meets the requirements set in article 44.

Quiz 4

Is the eIDAS Regulation about interoperability?

No

Recital 66 sets that "It is essential to provide for a legal framework to facilitate cross-border recognition between existing national legal systems related to electronic registered delivery services. That framework could also open new market opportunities for Union trust service providers to offer new pan-European electronic registered delivery services.".

Recital 66 is not about interoperability but about legal recognition. What matters is that the legal effect of existing ERDS are recognized across borders and to allow the providers of such services to expand their operations at EU level without the specific need for an agreement with other operators; the latter remaining a business decision.

As well the provisions of the Regulation do not only apply to existing ERDS and providers but also to expected newcomers. Therefore, ERDS provisions are in the Regulation neither only to connect existing systems nor to provide an interoperability platform. In this regard, the Implementing act does not aim at providing an interoperability framework for e-registered delivery services. To achieve interoperability, e-registered delivery services would build upon the CEF-DSI e-delivery action that provides with the technical layer for the Pan-European interoperability of e-registered delivery services.

Quiz 4 - Is the eIDAS Regulation about interoperability?

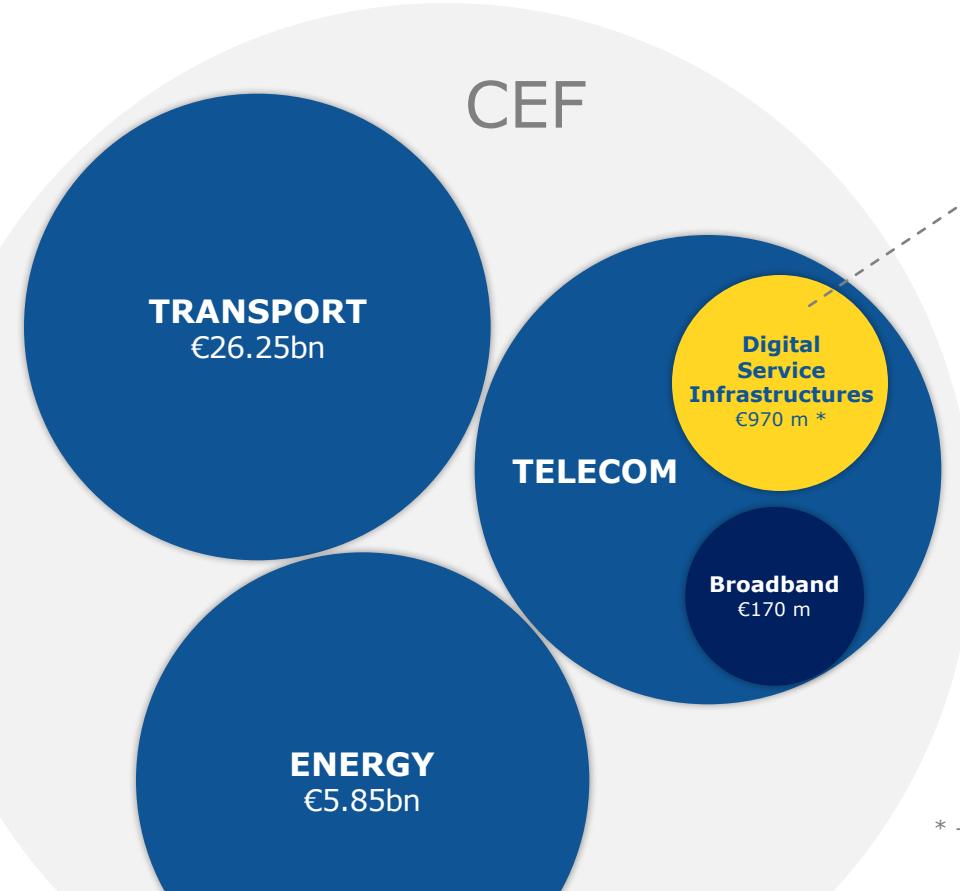
Requirement	Description	eIDAS reference
REQ1 Message Integrity	Messages should be secured against any modification during transmission.	Article 3 (36) Article 19 Article 24 Article 44, (d) the sending and receiving of data is secured by an advanced electronic signature or an advanced electronic seal of a qualified trust service provider in such a manner as to preclude the possibility of the data being changed undetectably;
REQ2 Message Confidentiality	Messages should be encrypted during transmission	Article 5 Article 19 Article 24
REQ3 Sender Identification	The identity of the sender should be verified.	Article 24 Article 44 (b) they ensure with a high level of confidence the identification of the sender;
REQ4 Recipient / Addressee Identification	Recipient / addressee Identity should be verified before the delivery of the message.	Article 24 Article 44 (c) they ensure the identification of the addressee before the delivery of the data;
REQ5 Time-Reference	The date and time of sending and receiving a message should be indicated via a qualified electronic timestamp.	Article 44 (f) the date and time of sending, receiving and any change of data are indicated by a qualified electronic time stamp.
REQ6 Proof of Send/Receive	Sender and receiver of the message should be provided with evidence of message recipient and deliver.	Article 3 (36) "... provides evidence relating to the handling of the transmitted data, including proof of sending and receiving the data..."

Questions?

Introduction to CEF eDelivery

Adrien Ferial
DIGIT

What is CEF



The **Connecting Europe Facility (CEF)** is a regulation that defines how the EU Commission can finance support for the establishment of trans-European networks to reinforce an interconnected Europe.

HOW IS IT REGULATED?

eIDAS regulation

Provides a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public authorities, underpinning the CEF DSI.

eGovernment Action Plan 2016-2020

The Commission will lead by example and adopt the CEF DSI as an early adopter. This has been stipulated in the Commission's latest eGov Action Plan.

* - 100 m Juncker Package

Financial instruments - how they work



DIGITAL SERVICE INFRASTRUCTURES (DSIs)

EUROPEAN COMMISSION



CORE SERVICE PLATFORM
(Procurement)

MEMBER STATES



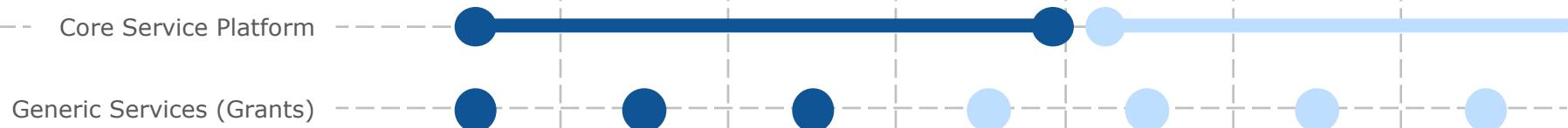
GENERIC SERVICES
(Grants)

Financial instruments - Grants: CEF Telecom calls (2016)



example

Digital Service Infrastructure

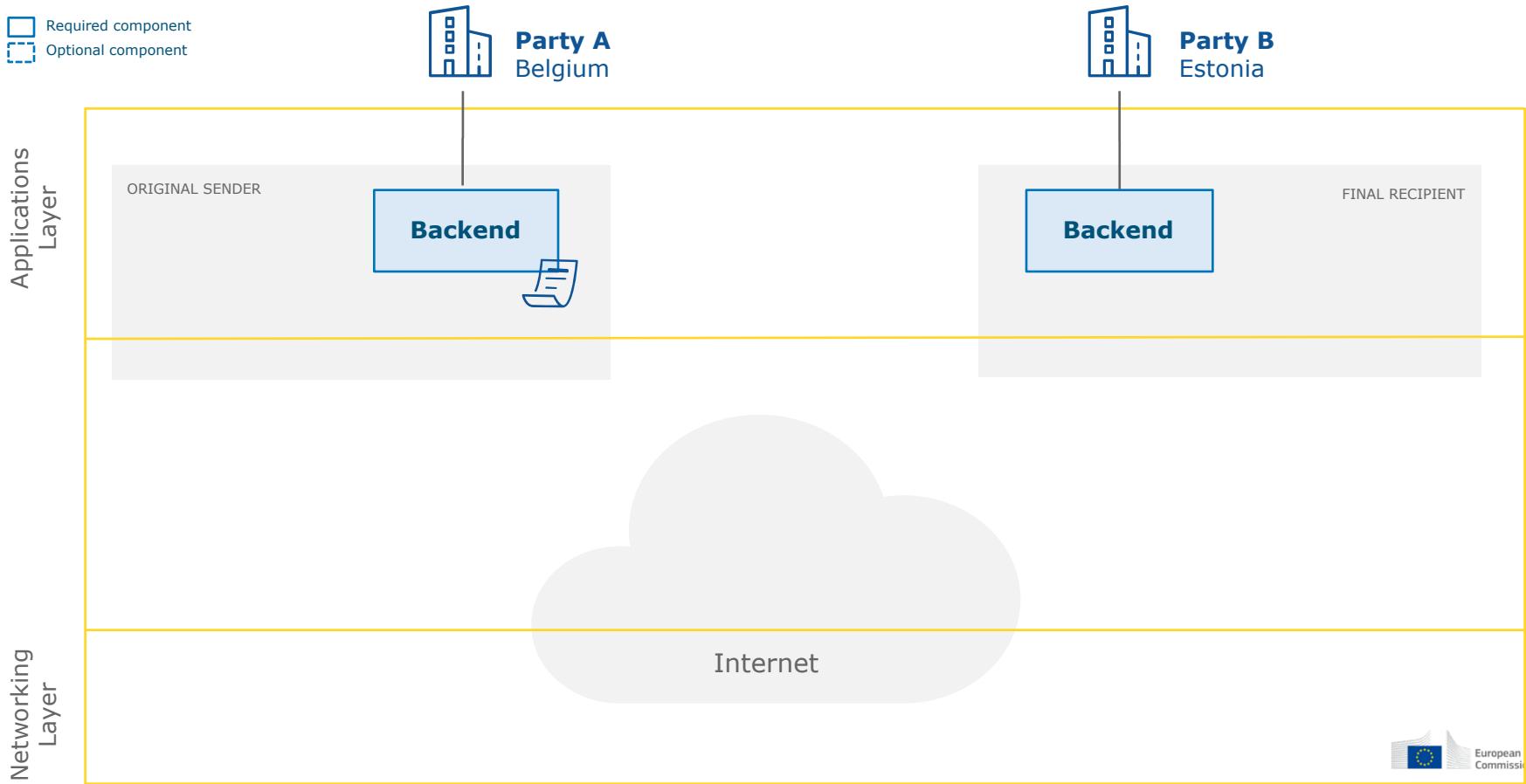


Timeline

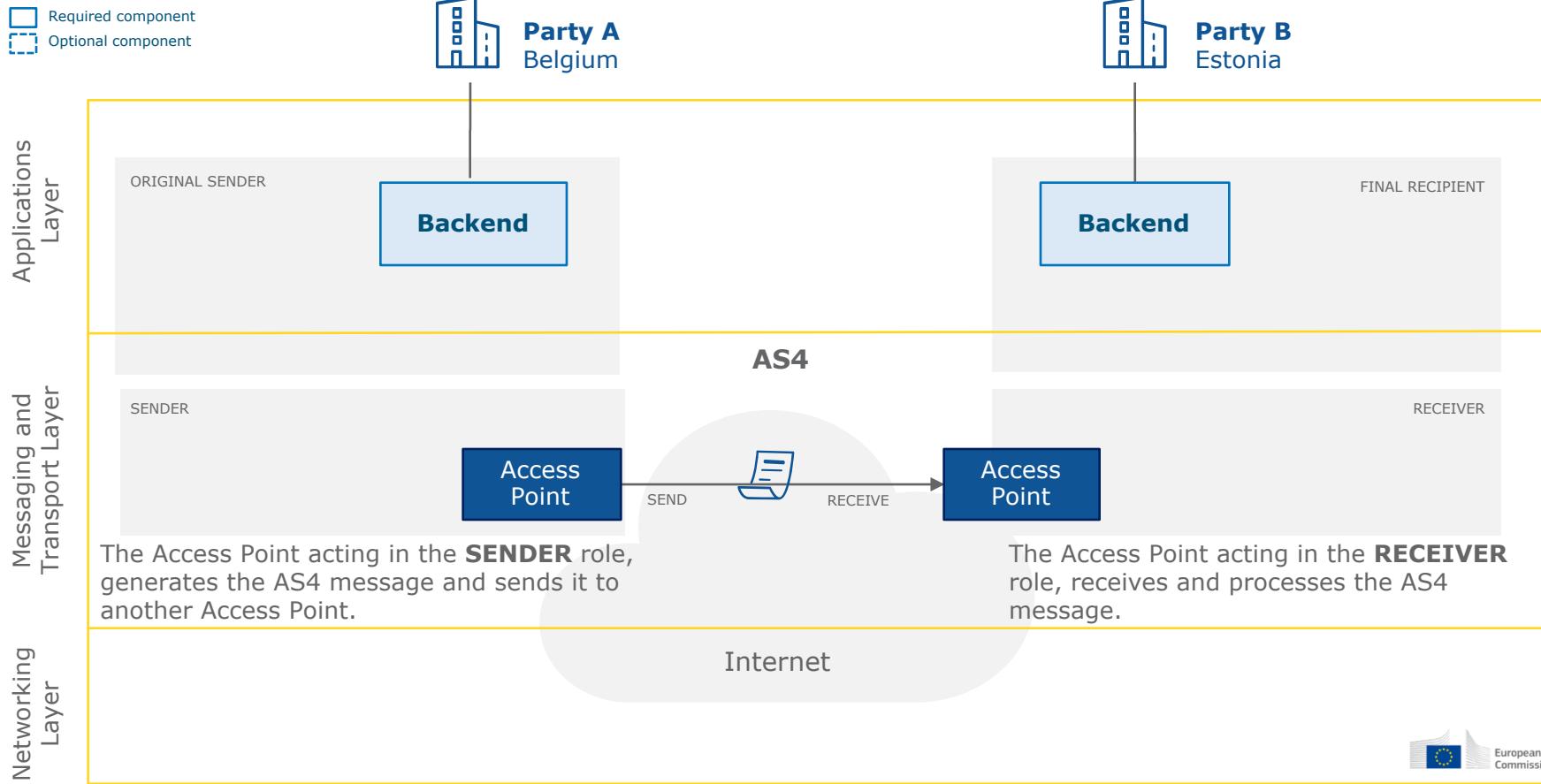
Adoption of eIDAS					eIDAS TS entry into application
APRIL	APRIL	JUNE	JULY	MAY	JULY
2013	2014	2014	2014	2015	2016
Piloting of eDelivery by epSOS, PEPPOL, SPOCS and eCODEX	e-SENS Launch of the eDelivery Convergence	CEF eDelivery Start activity	e-SENS eDelivery agreement on Target Architecture & Technical Specifications	e-SENS Interoperability Testing with different software vendors	
			Access Point e-SENS profile of the ebMS3 and AS4 OASIS Standards		
			Certificates ETSI - Electronic Signatures and Infrastructures		
			SML OASIS BDXL Specification OASIS ebCore Party ID Type Technical Specification		
			SMP OASIS SMP Specification		
			Connector ETSI REM for evidences		

The interoperability challenge

Required component
Optional component

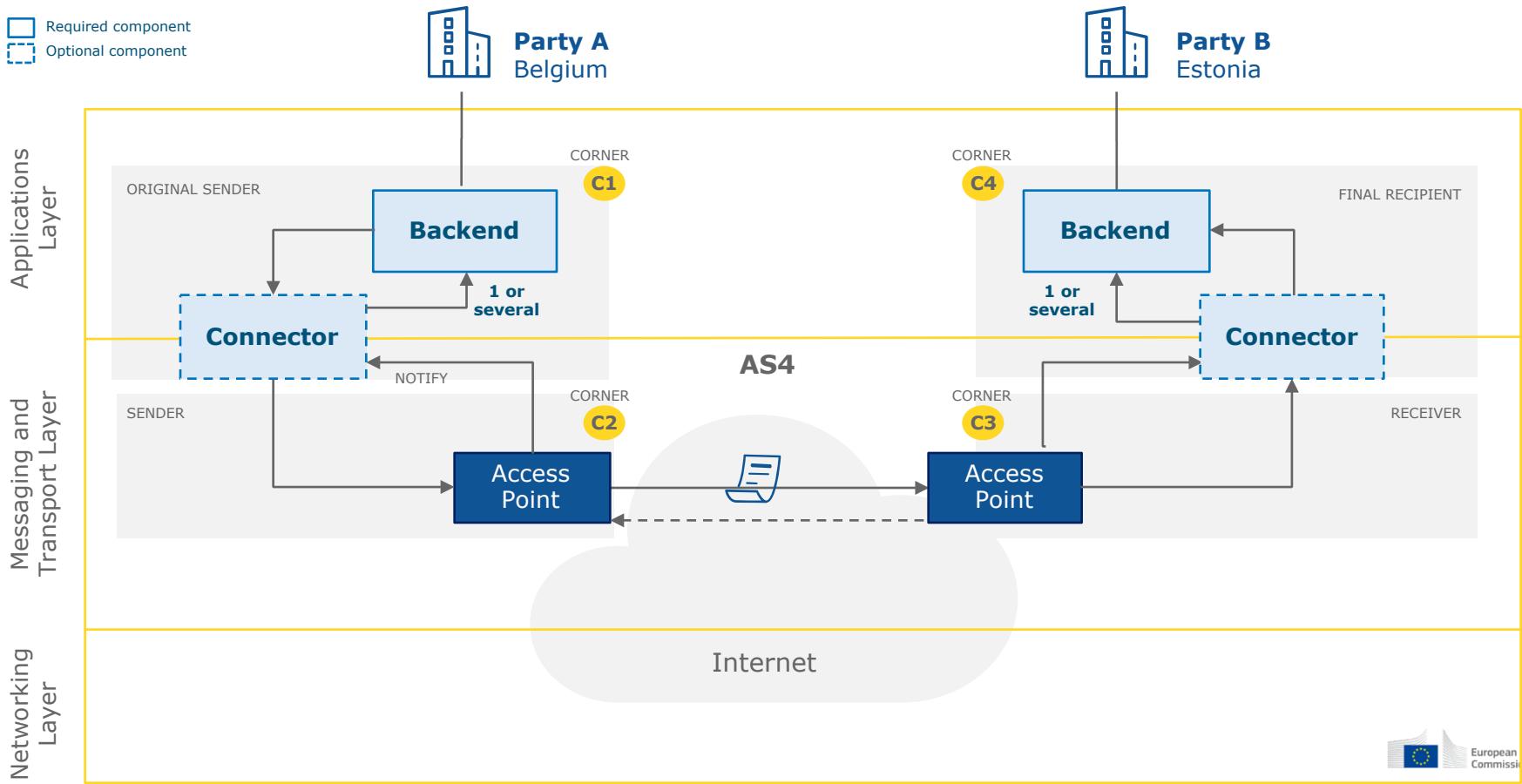


Introducing the Messaging and Transport Layer



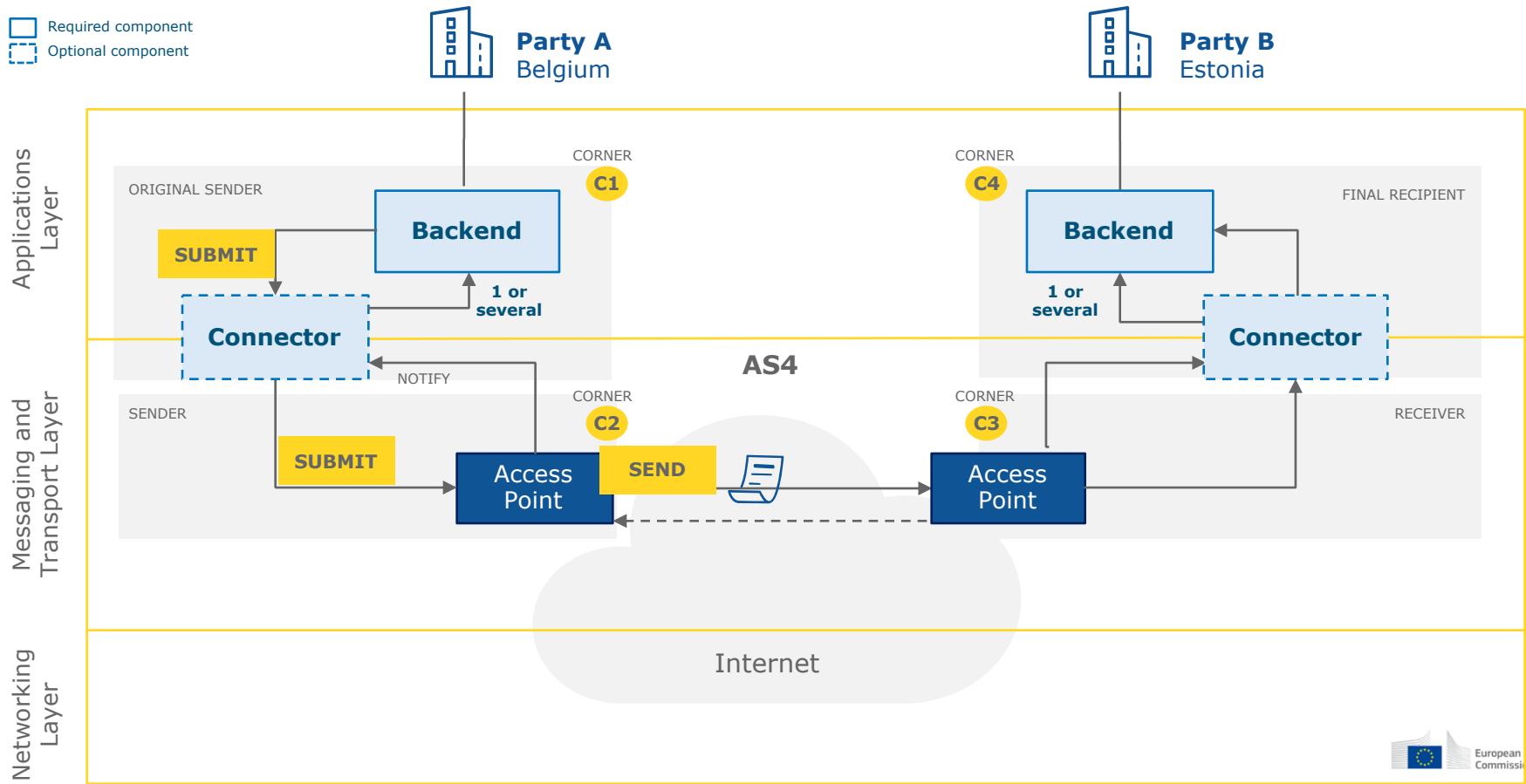
Introducing the 4-Corner model

Required component
Optional component



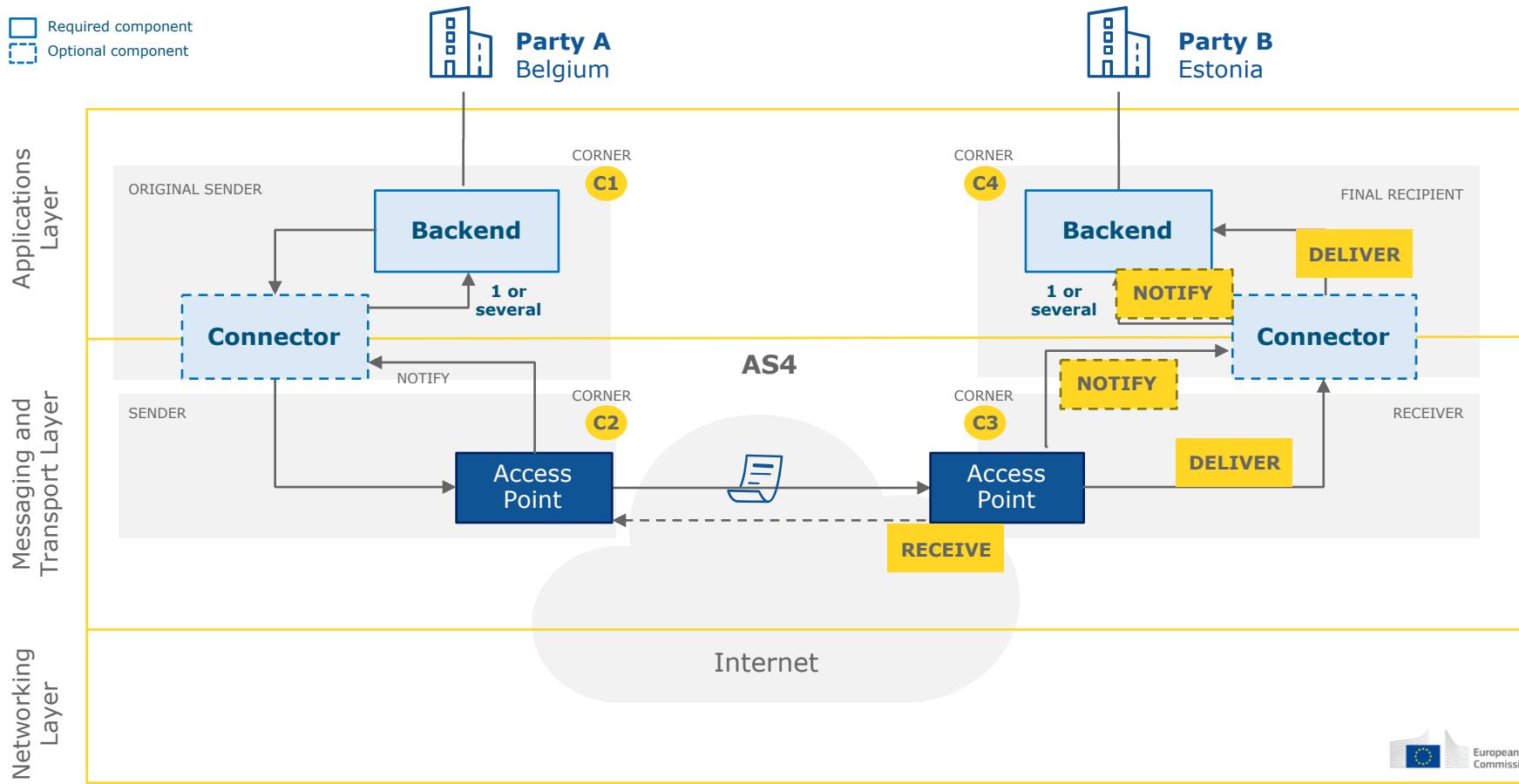
The 4-Corner Model step by step

- Required component
- Optional component



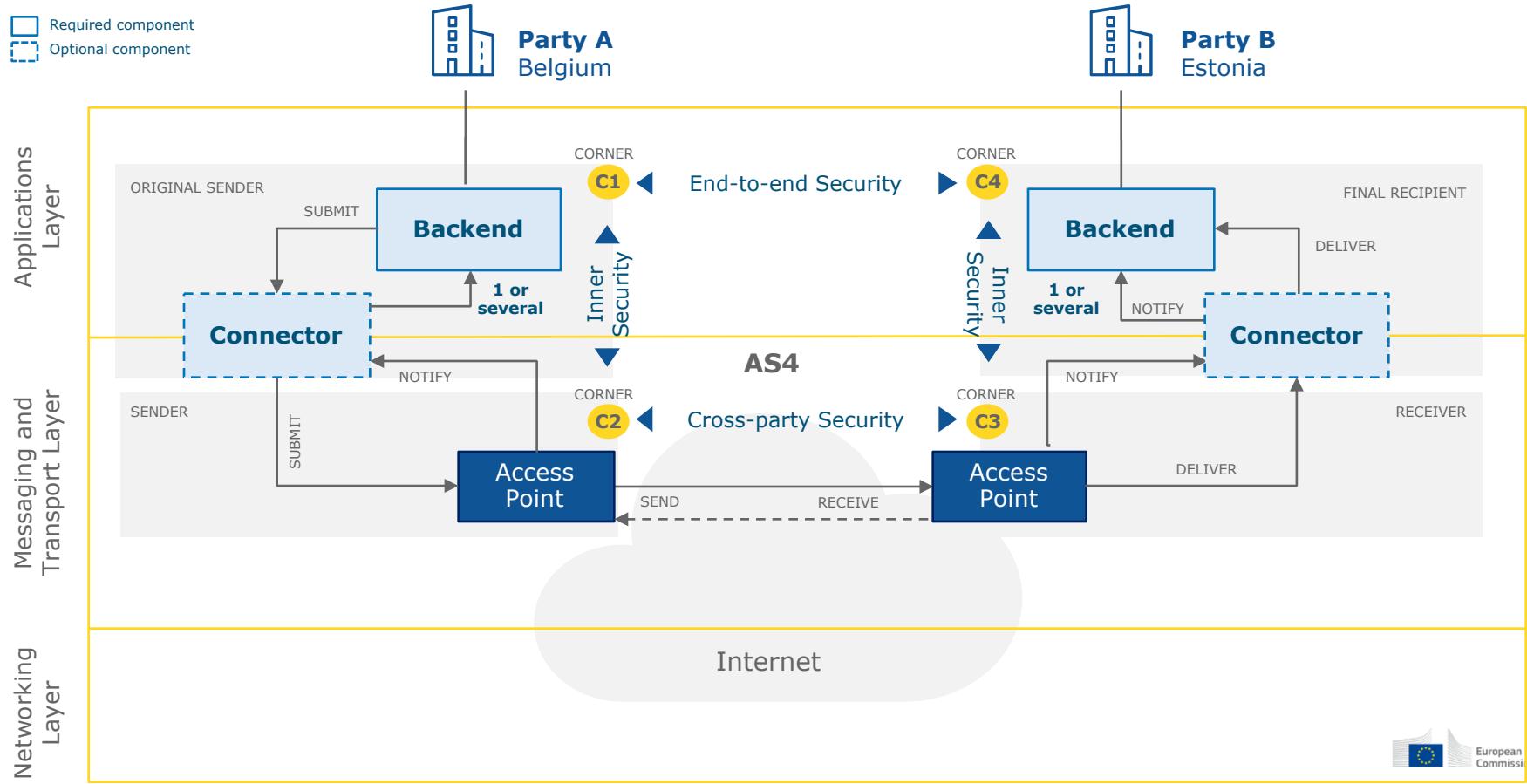
The 4-Corner Model step by step

Required component
Optional component



Security zones of a 4-Corner eDelivery Infrastructure

Required component
Optional component



e-SENS AS4 conformant solutions

CEF DIGITAL
European Commission > CEF Digital Home > CEF building blocks > eDelivery > eDelivery Services > eDelivery Software > Access Point software

eDelivery

Home Discover How it works Services Collaboration

TECHNICAL SPECIFICATIONS

- Access Point specifications
- Connector specifications
- PKI specifications
- SML specifications
- SMP specifications

SOFTWARE

- Access Point software
 - > e-SENS AS4 conformant solutions
 - > SML software
 - > SMP software
 - Security Controls
 - Connector software

MANAGED SERVICES

- PKI Service
- SML service

TESTING SERVICES

- eDelivery Conformance testing
- eDelivery Connectivity testing

SUPPORTING SERVICES

- eDelivery Training and Deployment
- eDelivery Service desk

e-SENS AS4 conformant solutions

This page lists the solutions that have passed or are in the process of passing the conformance testing according to the e-SENS AS4 profile:

- Domibus (EC sample implementation)
- Flame
- Holodeck
- IBM
- Laurentius
- Mendelson
- RSSBus

A full list of other vendors supporting AS4 can be accessed at the bottom of this page.

Vendor	Status
Domibus *	Conformant
Flame	Conformant
Holodeck B2B	Ongoing

Latest release: Download Domibus v3.1.1
Test report: Download (zip)
Contact: CEF-EDELIVERY-SUPPORT@ec.europa.eu

* (EC sample implementation)

Latest release: Download FMS Server and Light Client v5.3
Test report: Download (zip)
Contact: info@flameis.com

Latest release: Download Holodeck B2B v2.0
Test report: Download (zip)
Contact: info@holodeck-b2b.org

More information on CEF Digital

Conformant Solutions >

DOMIBUS



FLAME



HOLODECK



IBM



LAURENTIUS



MENDELSON



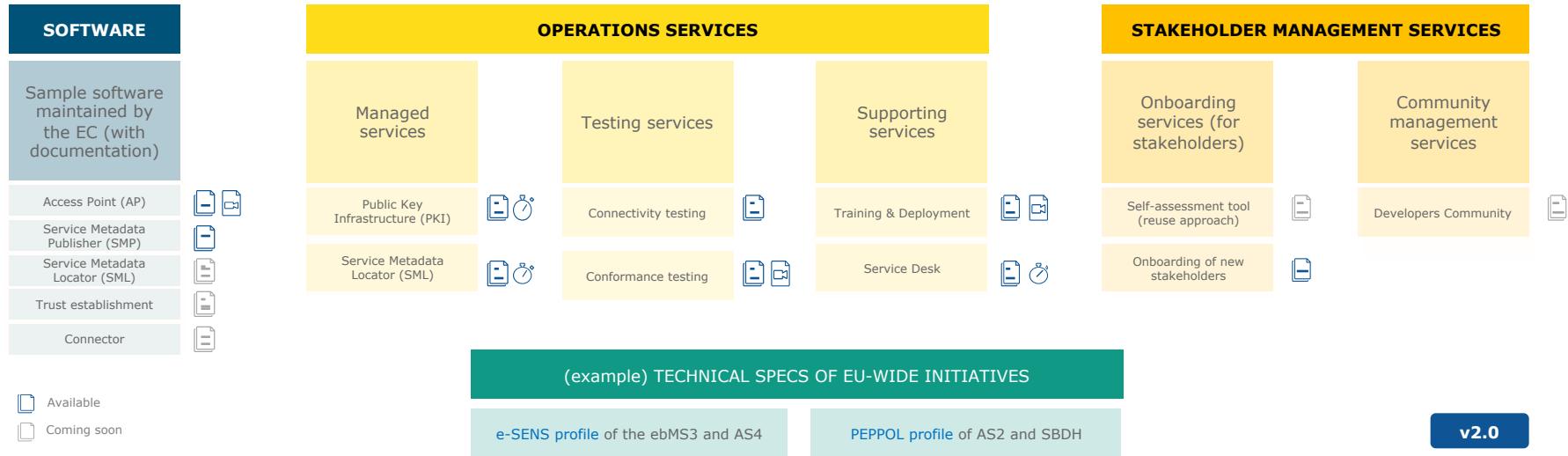
RSSBus



Conformant

Ongoing

CEF eDelivery Service offering



Service offering Description (SoD)

All services are described in an SoD describing its purpose, the users for which it is for, its benefits and the process to obtain it



Service Level Arrangements (SLA)

Documents that describe Service Level Targets to be reached when delivering Building Block Services.



eLearning, videos, success stories

Some services feature multimedia such as eLearnings, instructional videos or success stories to help grasp what the service is about

CEF Digital platform

CEF eDelivery service offering, and more about the building block, can be found online

[CEF Digital >](#)

Deploying CEF eDelivery

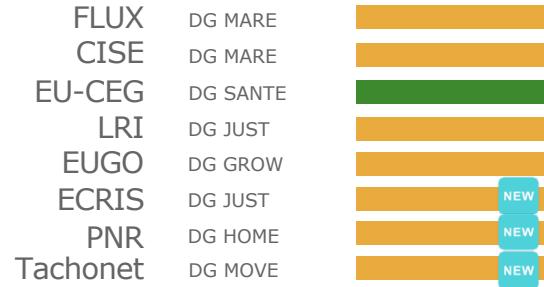
	<i>Domain Owner</i>	<i>Participants in eDelivery Messaging Infrastructure</i>				
 PHASE	ELICIT requirements	DESIGN eDelivery infrastructure	SELECT eDelivery solutions	DEPLOY eDelivery solutions	INTEGRATE with backend(s) with partners	OPERATE eDelivery solutions
 CEF TEAM	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Technical Specifications</p> <p>Onboarding</p> <p>Self-Assessment tool</p> </div> <div style="text-align: center;"> <p>Documentation (COD, SOD, ...)</p> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>List of Software solutions</p> <p>SML Service</p> <p>PKI Service</p> </div> <div style="text-align: center;"> <p>Service Desk</p> <p>Training and deployment</p> </div> </div>			<p>Connectivity Testing</p>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Service Desk</p> </div> <div style="text-align: center;"> <p>CEF eDelivery Community</p> </div> </div>
 YOUR TEAM	<ul style="list-style-type: none"> Attend workshops <ul style="list-style-type: none"> • Complete self-assessment tool • Identify business requirements • Carry out feasibility study 	<ul style="list-style-type: none"> Design message exchange model <ul style="list-style-type: none"> • Design discovery model • Design security model • Participate in the writing of a SDD 	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p><i>Open source</i></p> <ul style="list-style-type: none"> Assess OSS projects Customise/extend solution <p><i>Commercial solution</i></p> <ul style="list-style-type: none"> Assess Vendors Buy solution <p><i>Custom built</i></p> <ul style="list-style-type: none"> Build solution </div> <div style="width: 33%;"> <ul style="list-style-type: none"> Deploy components Configure components </div> <div style="width: 33%;"> <ul style="list-style-type: none"> Integrate with eDelivery Access Point <ul style="list-style-type: none"> • Perform Integration testing • Perform Pre-production testing </div> </div>	<ul style="list-style-type: none"> Participate in Connectivity testing • Perform Pre-production testing 	<div style="display: flex; justify-content: space-between;"> <div style="width: 33%;"> <p><i>Open source</i></p> <ul style="list-style-type: none"> Hosting • Maintenance <p><i>Commercial solution</i></p> <ul style="list-style-type: none"> Hosting • Fees <p><i>Custom built</i></p> <ul style="list-style-type: none"> Hosting • Maintenance </div> </div>	

Uptake of eDelivery (<https://ec.europa.eu/cefdigital/wiki/x/zQK6AQ>)

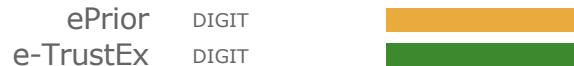
CEF Projects



Cross-border implementations



Commission Managed Services



Member States led projects



Other EU institutions



Commitment to analyse

Commitment to reuse

Reusing

NEW Update since Q2'16

Self-assessment tool

More information on CEF Digital

[Take the self-assessment>](#)

> FILL THE QUESTIONNAIRE

2

4 REQUIREMENTS OF THE MESSAGE EXCHANGE NETWORK
9 / 26

4.1 SOFTWARE

FUNCTIONALITY

Score (0-2)

Exchange documents and/or data using a standardised messaging protocol which supports one-way push and/or two-way asynchronous message exchange patterns

Exchange (multiple) attachments, e.g. PDF, in addition to messages

Advanced and configurable logging of events related to the exchange of data and documents

4.2 OPERATIONAL SERVICES

4.3 STAKEHOLDER MANAGEMENT SERVICES

[View Results >](#)

Self-assess your **business needs**, on a scale from 0 (unnecessary) to 2 (obligated)

1

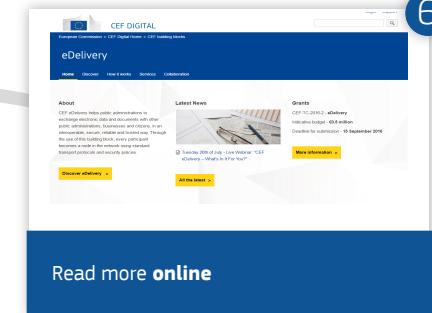
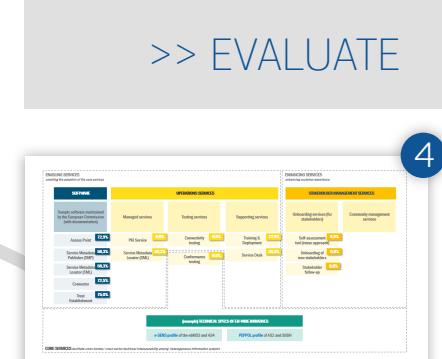
STEPS ANSWERS

1 YOUR ORGANISATION 7 / 7

2 BUSINESS BACKGROUND INFORMATION 9 / 9

3 TECHNICAL BACKGROUND INFORMATION 8 / 8

Provide general information about **your organisation** and **your project**



>>> GET STARTED

Interactive quiz

Quiz

5. **Is CEF eDelivery based on internal protocols only used by the EU institutions? Y / N**
6. **Does CEF eDelivery mandate the use of vendor-specific software implementations? Y / N**
7. **Is CEF eDelivery already used in production? Y / N**
8. **Is the CEF eDelivery service offering free of charge for public administrations? Y / N**
9. **Under certain conditions, are you eligible for grants if you reuse CEF eDelivery in your domain? Y / N**

Quiz 5

Is CEF eDelivery based on internal protocols only used by the EU institutions?

No

The eDelivery specifications were developed on top of standards developed by OASIS and ETSI. These profiles were elaborated by e-SENS.

You can find all CEF eDelivery technical specifications on the CEF Digital Single Web Portal:

<https://ec.europa.eu/cefdigital/wiki/x/DwFfAQ>

Quiz 6

Does CEF eDelivery mandate the use of vendor-specific software implementations?

No

As CEF eDelivery promotes specifications over implementations, users are free to select existing open source or commercial solutions or can build their own solution.

CEF eDelivery operates a Conformance Testing service which allows software providers and service providers to check if their software implementations are conformant with the CEF eDelivery Access Point and SMP specifications. The products which are declared "Conformant" are listed in a dedicated page on the CEF Digital Single Web Portal. For AS4, the list of vendors can be found here:

<https://ec.europa.eu/cefdigital/wiki/x/foGOAQ>

Vendors willing to upgrade their data exchange solution to support, and therefore fully comply with, the CEF eDelivery standards are eligible for grants.

Quiz 7

Is CEF eDelivery already used in production?

Yes

On 12/09/2016, 133 Access Points, 1 centralised SML and 63 SMP are up and running in production in various projects (OpenPEPPOL, EU-CEG, e-CODEX, etc.)

The CEF monitoring dashboard is updated every quarter and measures the uptake of eDelivery:

<https://ec.europa.eu/cefdigital/wiki/x/zQK6AQ>

Quiz 8

Is the CEF eDelivery service offering free of charge for public administrations?

Yes

Public administrations of EU and EEA countries can benefit of the services offered by CEF eDelivery. These services are provided **free of charge**.

The terms and conditions for using the Supporting services, Managed services and Testing services are described in Service Offering Description documents available on the CEF Digital Single Web Portal:
<https://ec.europa.eu/cefdigital/wiki/x/DwFfAQ>

Quiz 9

Under certain conditions, are you eligible for grants if you reuse CEF eDelivery?

Yes

To promote the uptake and speed up the use of the eDelivery DSI amongst both public and private entities established in the EU and EEA countries participating in the CEF Telecom programme.

The deadline for submission of the current call for grants is 15 September 2016, but grants are and will be made available every year. Grants for eDelivery are also embedded in other CEF Digital grants (e.g. for eInvoicing).

The admissibility conditions, eligibility and selection criteria are defined in the yearly CEF Telecom Work Programme. The 2016 CEF Telecom Work Programme is available [here](#).

Questions?

Linking ERDS to CEF eDelivery

Joao Rodrigues Frade
DIGIT

**This section is not prescriptive.
It describes how we envision eDelivery to be used by default.**

Why it could change



Domain-specific requirements



Level of classification of data

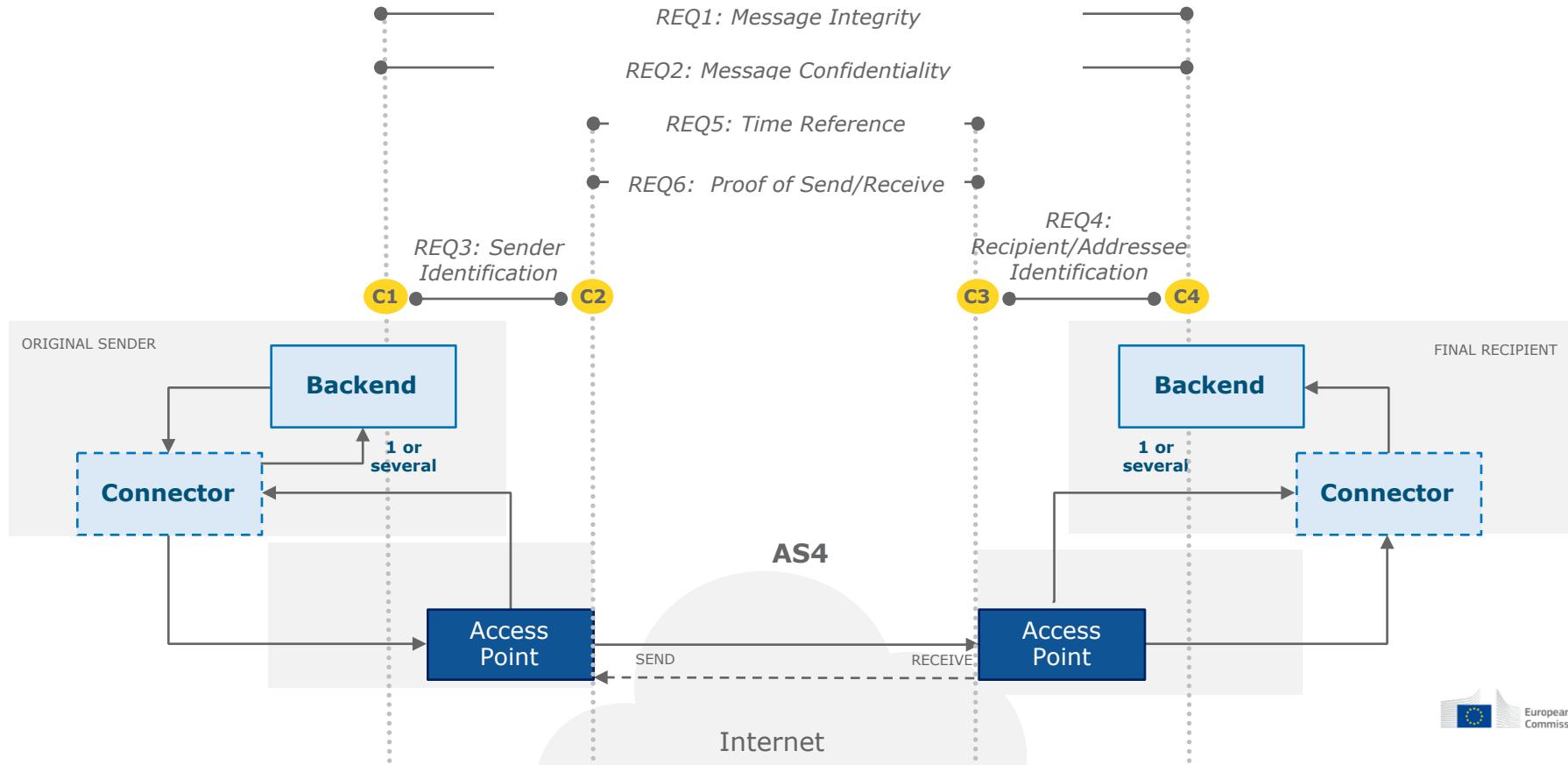


Preferences of the implementers

Summary of ERDS requirements from the eIDAS regulation.

Requirement	Description	eIDAS reference
REQ1 Message Integrity	Messages should be secured against any modification during transmission.	Article 3 (36) Article 19 Article 24 Article 44, (d) the sending and receiving of data is secured by an advanced electronic signature or an advanced electronic seal of a qualified trust service provider in such a manner as to preclude the possibility of the data being changed undetectably;
REQ2 Message Confidentiality	Messages should be encrypted during transmission	Article 5 Article 19 Article 24
REQ3 Sender Identification	The identity of the sender should be verified.	Article 24 Article 44 (b) they ensure with a high level of confidence the identification of the sender;
REQ4 Recipient / Addressee Identification	Recipient / addressee Identity should be verified before the delivery of the message.	Article 24 Article 44 (c) they ensure the identification of the addressee before the delivery of the data;
REQ5 Time-Reference	The date and time of sending and receiving a message should be indicated via a qualified electronic timestamp.	Article 44 (f) the date and time of sending, receiving and any change of data are indicated by a qualified electronic time stamp.
REQ6 Proof of Send/Receive	Sender and receiver of the message should be provided with evidence of message recipient and deliver.	Article 3 (36) "... provides evidence relating to the handling of the transmitted data, including proof of sending and receiving the data..."

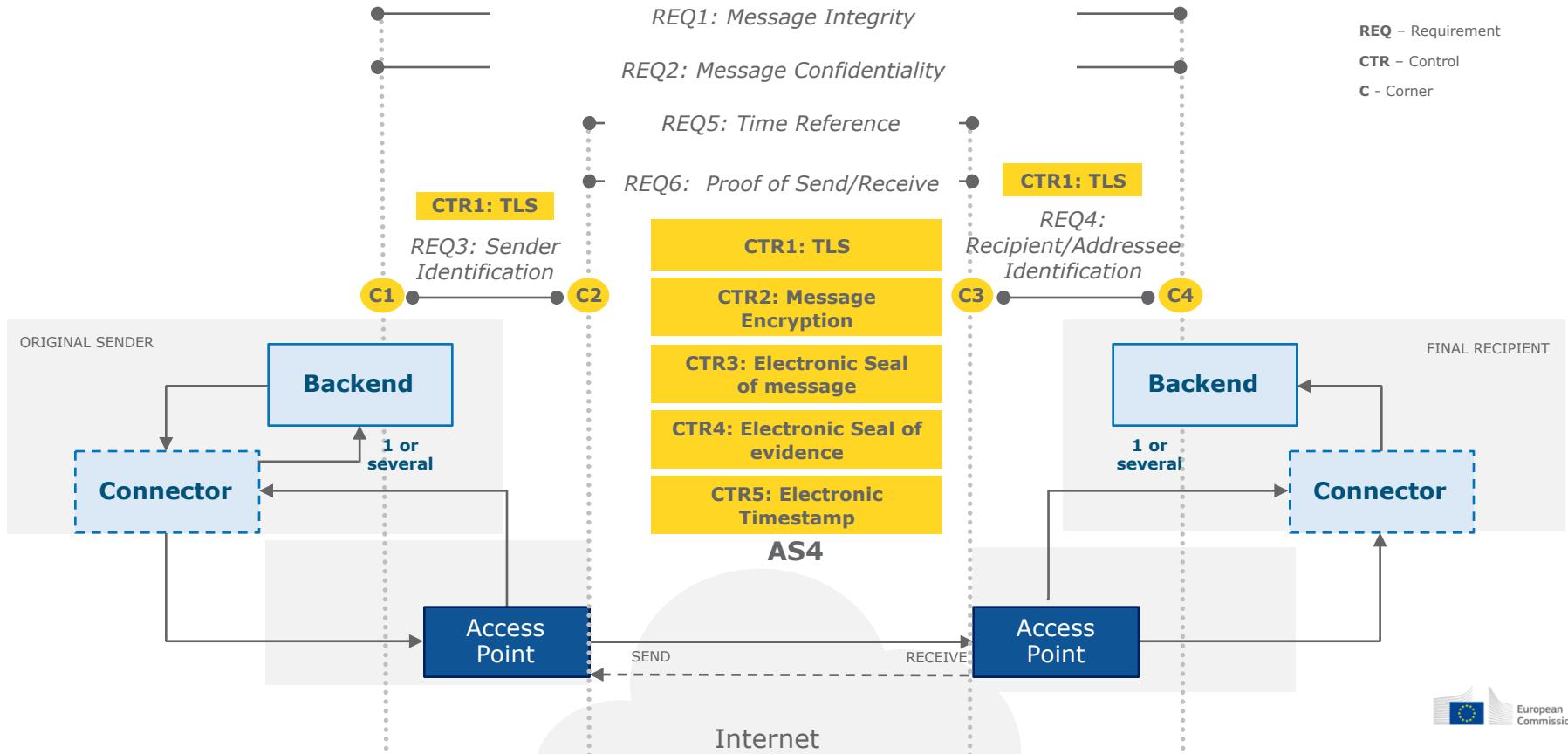
Mapping of ERDS Requirements to the 4-Corner Model



CEF eDelivery meets the ERDS Requirements

Not applicable for the requirement
Applicable for the requirement

REQ – Requirement
CTR – Control
C - Corner



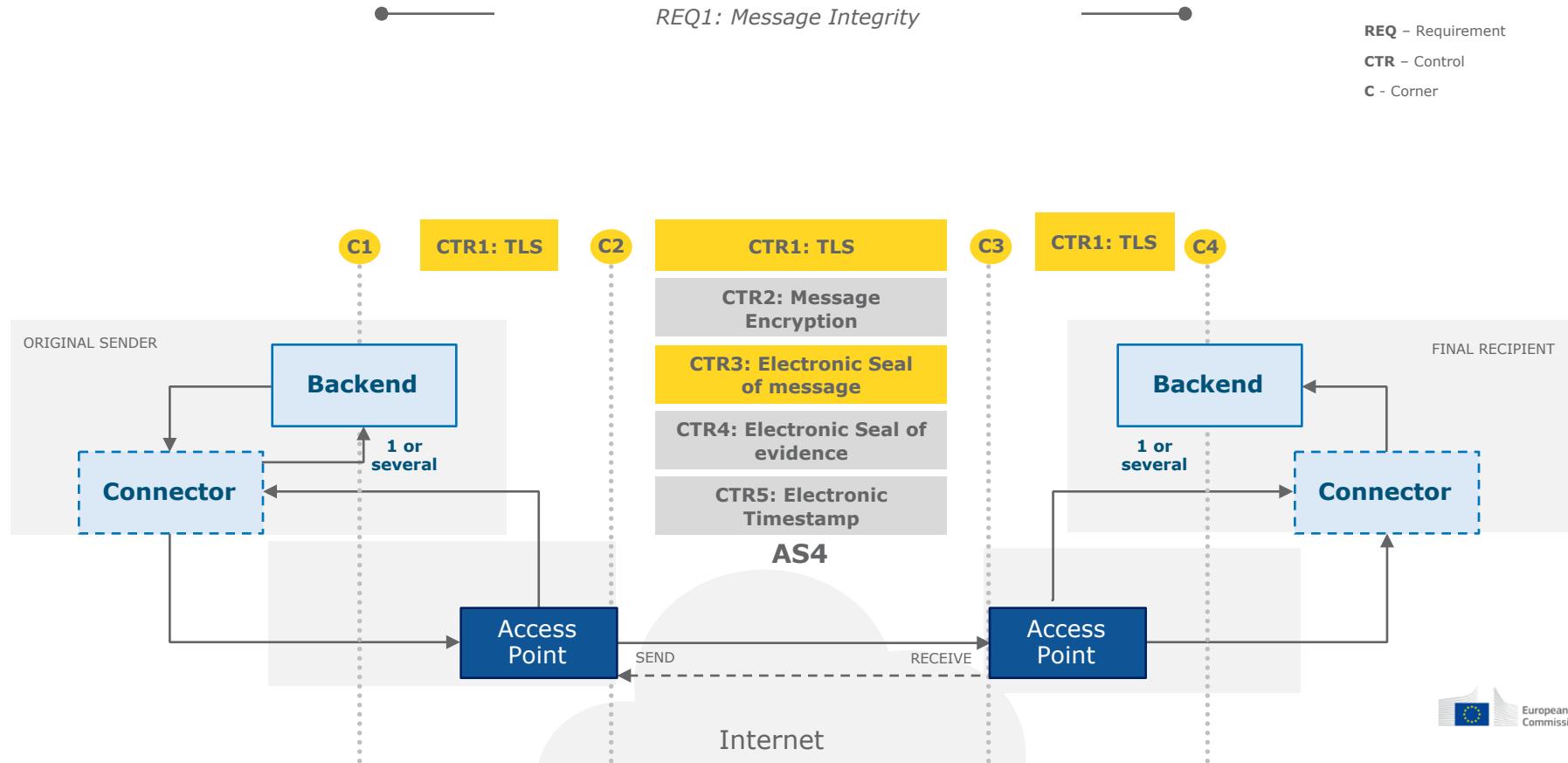
Summary of security controls

(*) Not exhaustive and it is by no means a guarantee that the system will be granted qualified status under the eIDAS regulation.
For the process of granting the qualified status, please refer to the national supervisory body in the respective country.

Security control	Legal implications
CTR1 Transport Layer Security (TLS) TLS protocols ensure authenticity and integrity of the message, by applying host to host cryptographic mechanisms	European General Data Protection Regulation (GDPR), in case of applicability.
CTR2 Message Encryption Message encryption ensures confidentiality of the message payload so that only the correct recipient can access it	European General Data Protection Regulation (GDPR), in case of applicability.
CTR3: Electronic Seal of message From technical perspective, electronic seal ensures integrity of the message header and payload and authenticity of origin	Non-qualified: Ensures integrity and origin of the data, in other words its authentication Qualified: eIDAS Regulation, Article 35. "A qualified electronic seal shall enjoy the presumption of integrity of the data and of correctness of the origin of that data" Both: Non-discrimination in legal proceedings
CTR4: Electronic Seal of evidence Provides evidence to the sender C1 that the message was sent, delivered to the final recipient C4 and authenticity of destination	
CTR5: Electronic Timestamp Data in electronic form which binds other data in electronic form to a particular time establishing evidence that the latter data existed at that time	Non-qualified: Ensures date and time of the data. Qualified: eIDAS Regulation, Article 41. "A qualified electronic time stamp shall enjoy the presumption of the accuracy of the date and the time it indicates and the integrity of the data to which the date and time are bound." Both: Non-discrimination in legal proceedings

Controls linked to **REQ1: Message Integrity**

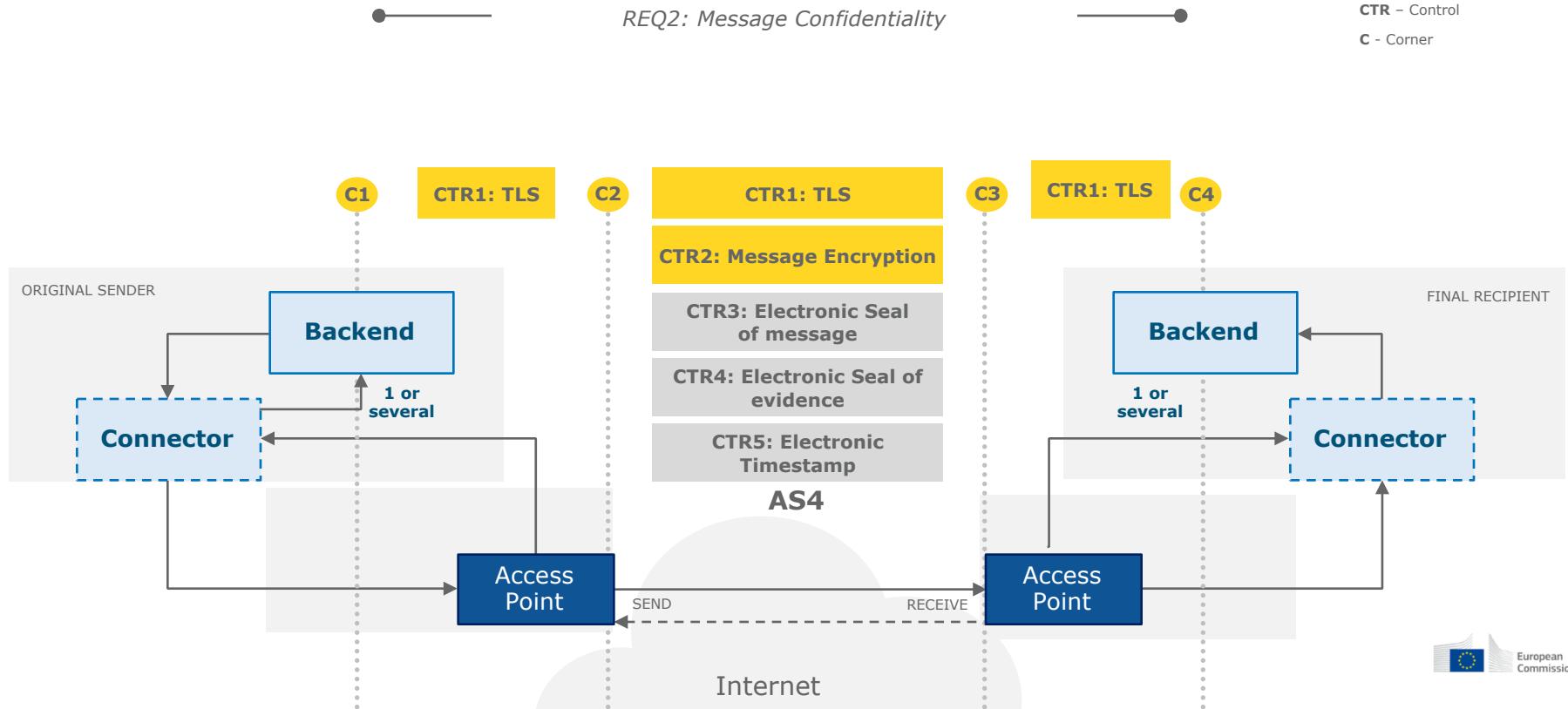
- Not applicable for the requirement
- Applicable for the requirement



Controls linked to **REQ2: Message Confidentiality**

- Not applicable for the requirement
- Applicable for the requirement

REQ – Requirement
CTR – Control
C - Corner



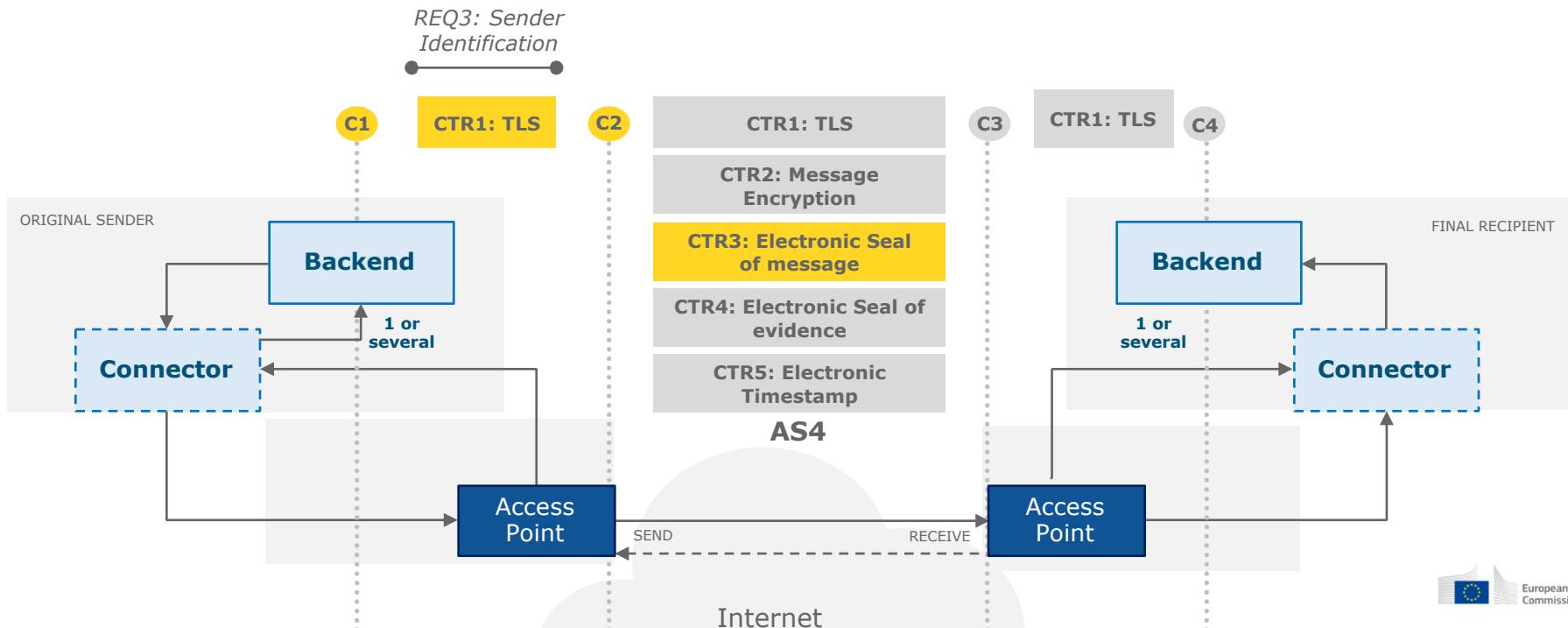
Controls linked to ***REQ3: Sender Identification***

Not applicable for the requirement
Applicable for the requirement

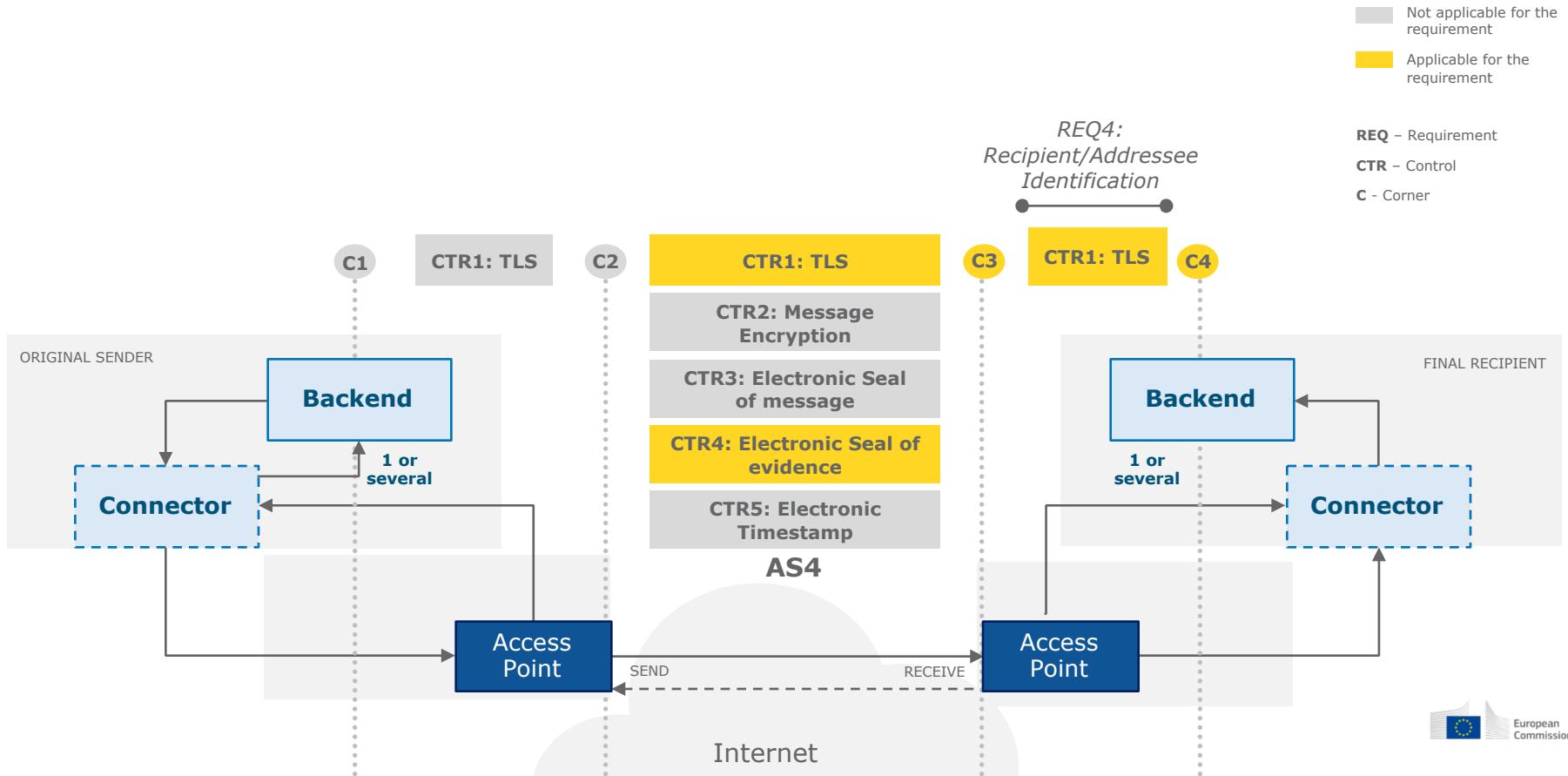
REQ – Requirement

CTR – Control

C - Corner



Controls linked to *REQ4: Recipient/ Addressee Identification*



Controls linked to ***REQ5: Time Reference***

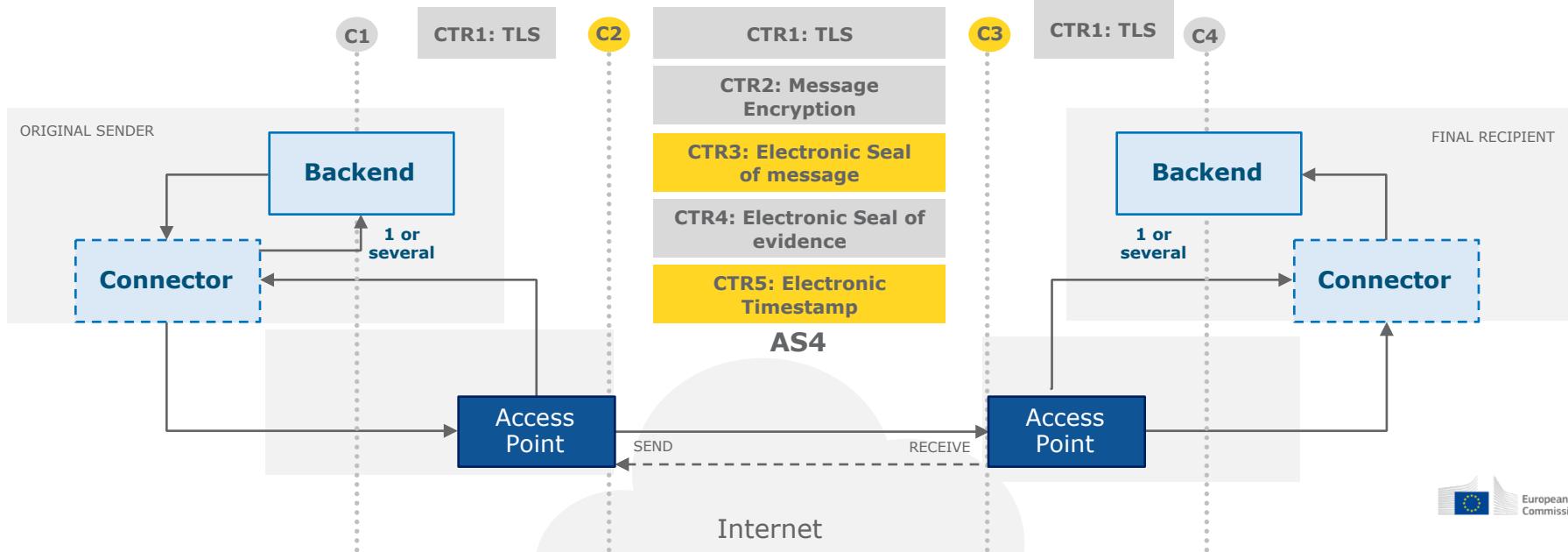
- Not applicable for the requirement
- Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner

● — *REQ5: Time Reference* — ●



Controls linked to **REQ6: Proof of Send/Receive**

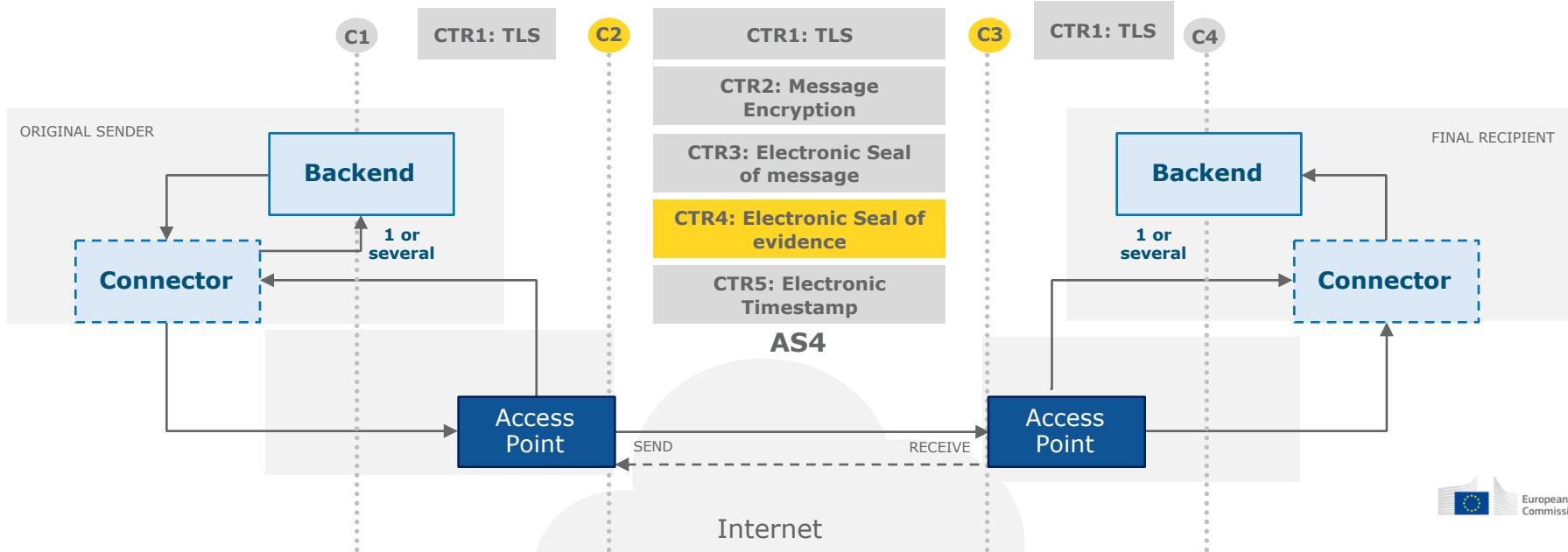
Not applicable for the requirement
Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner

● REQ6: Proof of Send/Receive ●



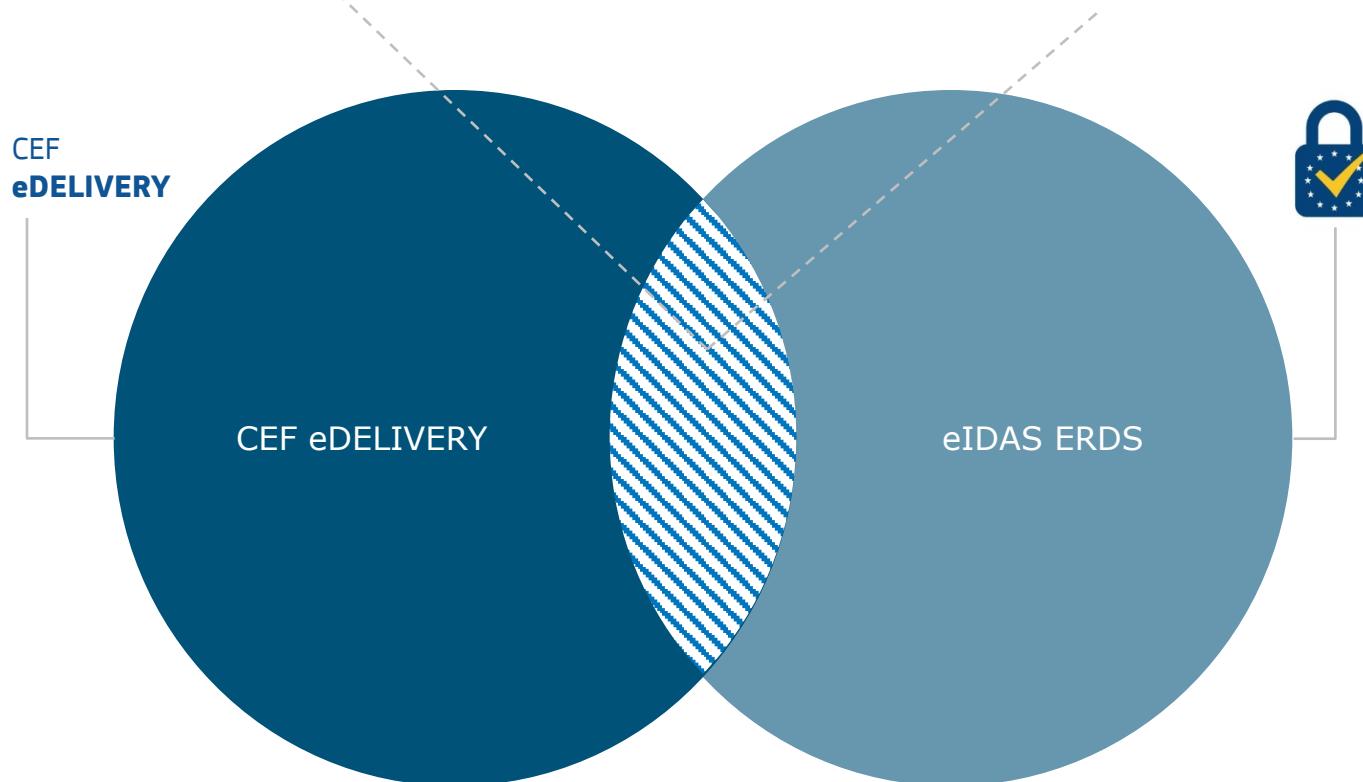
List of security controls applied to the e-SENS AS4 message protocol

Security control	Description
CTR1 Transport Layer Security (TLS)	Transport Layer Security (TLS 1.2 [9]) protocol is used, following ENISA security [7] and BSI [8] guidelines. For the sender identification is provided as follows: <ul style="list-style-type: none">• Basic authentication: C2 uses username/password to authenticate to C3. In this case, proper password management, including secure storage, sufficient complexity and regular updates need to be ensured by C2;• Mutual authentication: This is done using the digital certificate of C2, allowing C3 to identify C3.
CTR2 Message Encryption	C2 encrypts the payload of the message using AES-GCM with a random secret key, and the random key with the public key of C3 using RSA-OAEP. Message encryption follows WS-Security using W3C XML Encryption. The used cipher suite for symmetric encryption is: AES GCM-mode, and for asymmetric: RSA-OAEP. This should follow the ENISA security [7] and BSI [8] guidelines.
CTR3: Electronic Seal of message	C2 applies an electronic seal to the message header and payload using its own private key which guarantees integrity protection. The seal is verified by C3 using C2 public key for authenticity and non-repudiation of the message payload and headers. Electronic sealing follows WS-Security with W3C XML Signing. The cipher suite is RSA-SHA256.
CTR4: Electronic Seal of evidence	Electronic seal is applied to the receipt. Upon reception and verification of a message from C2, C3 generates an evidence receipt based on message identification information (e.g., message identifier, timestamp, and sender metadata) with a new timestamp and a reference to the received message, applies an electronic seal and returns the sealed evidence to C2. The receipt is sent automatically to C2 as a "signal" message response to the initial message. Electronic sealing follows WS-Security with W3C XML Signing. The used cipher suite is: RSA-SHA256.
CTR5: Electronic Timestamp	Timestamp is placed at the WS-Security header, and it is electronically sealed for integrity protection. At this moment, by default, it is not a qualified time stamp and it relies on the system clock.

Conclusion

Technical standards that enable the set-up of eDelivery Messaging Infrastructures aligned to ERD

Common requirements for provision of (qualified) electronic registered delivery service [ERDS]



Interactive quiz

Quiz

- 10. Is TLS the only security control that ensures the integrity of the message? Y / N**
- 11. Does 'CTR3: Electronic Seal of message' ensure 'REQ3: Sender Identification'? Y / N**
- 12. Is the acknowledgement containing 'CTR4 Electronic Seal of evidence' sent when the sender's signature is not valid? Y / N**
- 13. Is CEF eDelivery, an implementation of the e-SENS AS4 message protocol, pre-configured to meet the requirements of eIDAS? Y / N**
- 14. If I implement the e-SENS AS4 message protocol, do I still need to contact my national supervisory body to be granted the qualified status? Y / N**

Quiz 10

Is TLS the only security control that ensures the integrity of the message?

No

The other security control that ensure message integrity is the electronic seal.

You can find all CEF eDelivery technical specifications on the CEF Digital Single Web Portal:
<https://ec.europa.eu/cefdigital/wiki/x/DwFfAQ>

Quiz 11

Does 'CTR3: Electronic Seal of message' ensure 'REQ3: Sender Identification'?

Yes

The seal not only ensures the integrity of the message but also the identity of the sender.

You can find all CEF eDelivery technical specifications on the CEF Digital Single Web Portal:
<https://ec.europa.eu/cefdigital/wiki/x/DwFfFAQ>

Quiz 12

Is the acknowledgement containing 'CTR4 Electronic Seal of evidence' sent when the sender's signature is not valid?

No

In this case a SOAP fault is produced.

You can find all CEF eDelivery technical specifications on the CEF Digital Single Web Portal:

<https://ec.europa.eu/cefdigital/wiki/x/DwFfAQ>

Quiz 13

Is CEF eDelivery, an implementation of the e-SENS AS4 message protocol, pre-configured to meet the requirements of eIDAS?

Yes

You can find all CEF eDelivery technical specifications on the CEF Digital Single Web Portal:

<https://ec.europa.eu/cefdigital/wiki/x/DwFfAQ>

Quiz 14

If I implement the e-SENS AS4 message protocol, do I still need to contact my national supervisory body to be granted the qualified status?

Yes

For the process of granting the qualified status, you must refer to the national supervisory body in your respective country.

Questions?

Find out more on CEF Digital



The CEF Building Blocks

Supported by the Connecting Europe Facility (CEF), the CEF Building Blocks offer basic capabilities that can be used in any European project to facilitate the delivery of digital public services across borders.

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eDelivery

eID

eInvoicing

eSignature

eTranslation

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CEF-BUILDING-BLOCKS@ec.europa.eu

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ANNEX

eDelivery service offering in detail

Software

Sample software maintained by the EC

OBJECTIVE OF THE SERVICE

Standard software implementations of the technical specifications of CEF eDelivery. The European Commission maintains and develops sample software that is openly available to be re-used. The following components of a CEF eDelivery solution are provided:

- Access Point
- Service Metadata Publisher (SMP)
- Service Metadata Locator (SML)
- Trust establishment
- Connector

Through the "Operational Management Board", CEF eDelivery stakeholders define the evolution of these solutions, by suggesting features that are then developed by the CEF's team.

BENEFITS

- Released under an open source license
- Viable solutions for use in production environment
- Fully supported by the European Commission
- Based on market-driven technical specifications



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Operations services

Managed services

OBJECTIVE OF THE SERVICE

Sample software centrally hosted and managed by the EC, based on sample implementations that are based on technical specifications of CEF eDelivery.

The European Commission develops, maintains and provides software as a service for the following components of a CEF eDelivery solution:

- Public Key Infrastructure (PKI)
- Service Metadata Locator (SML)

These services facilitate the re-use of CEF eDelivery by different Policy Domains.

BENEFITS

- Reduced cost of hosting the service, which is sustained by the European Commission
- Full support by the European Commission
- Defined and agreed Service Levels



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Connectivity testing

OBJECTIVE OF THE SERVICE

Test if a newly installed [AS4 Access Point](#), conformant with the CEF eDelivery specifications, can successfully communicate with the sample AS4 Access Point hosted by the European Commission. If successful, these tests confirm that the new Access Point is in all likelihood correctly deployed and configured.

The CEF Support Team facilitates the Connectivity Testing by making available a sample AS4 Access Point in a cloud environment, as well as providing guidelines and support during the testing process.

BENEFITS

- Confirm that newly deployed AS4 Access Points can successfully communicate with a neutral organization i.e. the sample Access Point of the European Commission;
- Testing anywhere at anytime
- Testing supported by professional staff of the European Commission



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Conformance testing

OBJECTIVE OF THE SERVICE

Verify that an implementation of the CEF eDelivery Access Point and SMP specifications, a software package either commercial or Open Source, conforms to the specifications of the CEF eDelivery Access Point.

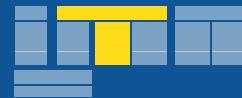
The following specifications are tested within the scope of this service:

- [e-SENS AS4 Profile](#)
- [e-SENS SMP Profile](#)

The CEF eDelivery Team provides ready to use test cases, a testing platform, and supports the users of the CEF eDelivery Conformance Testing service during the entire testing process.

BENEFITS

- Confirm and assure your users/customers that your software package or implementation of the CEF eDelivery Access Point conforms to the CEF eDelivery specifications
- Testing anywhere at anytime
- Testing supported by professional staff of the European Commission



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Supporting services

OBJECTIVE OF THE SERVICE

The CEF eDelivery team offers:

- **Service Desk** – a Single Point of Contact (SPOC) to address questions, incidents, requests and changes reported by the Users with regards to the CEF eDelivery service offering.
- **Training and deployment support** - Training sessions about the technical specifications underpinning the components of CEF eDelivery, the services offered by the Commission and its sample implementations, and interactive sessions to support in the deployment of the solution.

BENEFITS

- Day to day monitoring and 24h/7days service to maintain a high-level of availability and capacity of the CEF eDelivery Managed Services
- Proactive incident detection and resolution
- Increased autonomy of the Public Administration in handling and maintaining the CEF eDelivery components



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Stakeholder management services

Onboarding services

OBJECTIVE OF THE SERVICE

CEF offers onboarding services for new projects interested in re-using CEF eDelivery:

- **Self-assessment tool** - a survey that maps the requirements of the users to the CEF eDelivery Service Offering. During the self-assessment, users assign different scores to the relevant requirements of their business system and the eDelivery messaging infrastructure. Based on the answers provided, the tool calculates how CEF eDelivery can help users achieve their goals by indicating which services provided by CEF eDelivery will allow them to meet their specified needs and requirements.
- **Onboarding of new stakeholders** – A direct contact point for all policy domains interested in re-using CEF eDelivery, that will facilitate the understanding, adoption and deployment of the solutions.

BENEFITS

- Business-driven and time-efficient assessment
- Comparability – the self-assessment tool provides a benchmarking with use cases of other projects already re-using CEF eDelivery
- Direct and easy contact with the CEF eDelivery technical teams, through the onboarding services



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Stakeholder management services

Community management

OBJECTIVE OF THE SERVICE

Develop, expand and engage with a community of developers contributing to the evolution of CEF eDelivery's open source sample implementations.

Among the 5 components that the CEF eDelivery team develops, CEF manages an online community of developers interested in contributing to the code of the sample implementations.

BENEFITS

- Cost effective development
- Wide set of skills
- Faster response to emerging requirements



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