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Live Webinar

# Electronic Registered Delivery Service (ERDS) and the eIDAS Regulation

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12 September 2016

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# Agenda

- 15<sup>00</sup> Introduction  
Thomas Fillis – DIGIT
- 15<sup>10</sup> Introduction to eIDAS Electronic Registered Delivery Services (ERDS)  
Marco Fernandez Gonzalez – CNECT
- 15<sup>35</sup> Introduction to CEF eDelivery  
Adrien Ferial – DIGIT
- 15<sup>55</sup> Linking ERDS to CEF eDelivery  
Joao Rodrigues Frade – DIGIT
- 16<sup>15</sup> Q&A
- 16<sup>30</sup> End

# Introduction

**Thomas Fillis**  
DIGIT

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# 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

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For more information see also the DSM [page on the Europa website](#) and the DSM [roadmap](#)

# 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](#)

**CEF DIGITAL**

## eDelivery User Community

The eDelivery User Community space enables stakeholders to share experiences and best practices on the exchange of electronic data and documents between public administrations, businesses and citizens. Pan-European projects (re)using CEF eDelivery have their own sub-communities within this space.

**Recent events:**

**Live Webinar: "CEF eDelivery – What's In It For You?"**  
Tuesday 26 July 2016  
10:00 - 11:00 (CET)  
Followed by live Q&A on Twitter

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 of the webinar are encouraged to leave feedback on their webinar experience, or post any questions concerning CEF eDelivery, the Service Offering or grant funding.**

[Provide feedback here!](#)

*(You will need to login using an ECAS account in order to comment or pose a question).*

**Space members**

- eDelivery User Community
- eDelivery Team

**Your space moderators**

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## Today's speakers

### **Joao Rodrigues Frade**

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

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# Highlights of the webinar

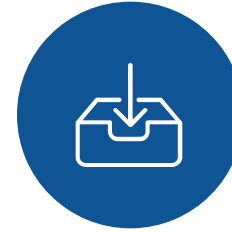
## DURING



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

	<b>Legal Act</b>	<b>Reference</b>	<b>Adoption date</b>	<b>Entry into force</b>
	eIDAS Regulation	910/2014	23.07.2014	17.09.2014 (1.07.2016 - application provisions on TS)
<b>eID</b>	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
	ID on circumstances, formats and procedures of <u>notification</u> (art. 9.5)	2015/1984	3.11.2015	5.11.2015 (notified to Ms)
<b>Trust services</b>	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

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# 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**

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# 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**

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# eIDAS: Key principles for Trust services



## 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

**eID**

**Electronic  
signatures**

**Electronic seals**

**Electronic time  
stamps**

**Electronic  
registered delivery  
services**

**Website  
authentication**

**Electronic  
documents**

**Validation  
Preservation**

eIDAS

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# Definition of Trust Services & electronic documents

art. 3(36)

## Electronic registered delivery service

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'**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

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'**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

## 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

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# Key principles for e-registered delivery services





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# Non-qualified electronic registered delivery service providers (1)

## **Obligations of non-qualified electronic registered delivery service providers**

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- 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**

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

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## Non-qualified electronic registered delivery service providers (2)

### **Obligations of non-qualified electronic registered delivery service providers**

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- 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 of is established?**

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- 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)

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# Qualified electronic registered delivery service (1)

## Obligations of qualified e-registered delivery service providers

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- 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)

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## Qualified electronic registered delivery service (2)

### **E-registered delivery : requirements to be qualified**

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- 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.)**

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# Qualified electronic registered delivery service (3)

## Supervision /control

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- 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?

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- 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)

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## Qualified electronic registered delivery service (4)

### **Associated legal effect to the qualified e-registered delivery service**

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- 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.

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# eIDAS – Supporting tools

## **Trusted lists for QTSPs and QTSs (art.22 and ID (EU) 2015/1505)**

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- 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)**

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- 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



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## Implementing acts

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

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- 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:**

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- 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**

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## 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**

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# Quiz 1

## Is ERDS only for public services?

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**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

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## Quiz 2

### **Is ERDS equivalent to registered postal items?**

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**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.

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## 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.

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## Quiz 4

### Is the eIDAS Regulation about interoperability?

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**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..."

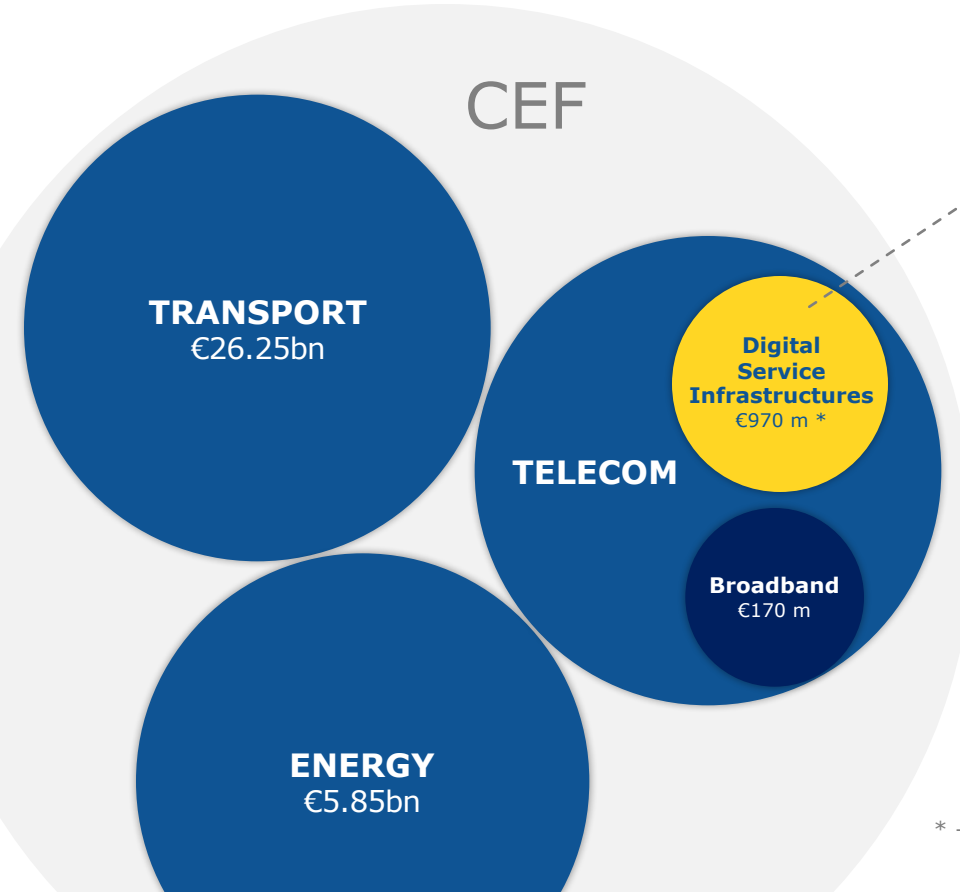
**Questions?**



# 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)

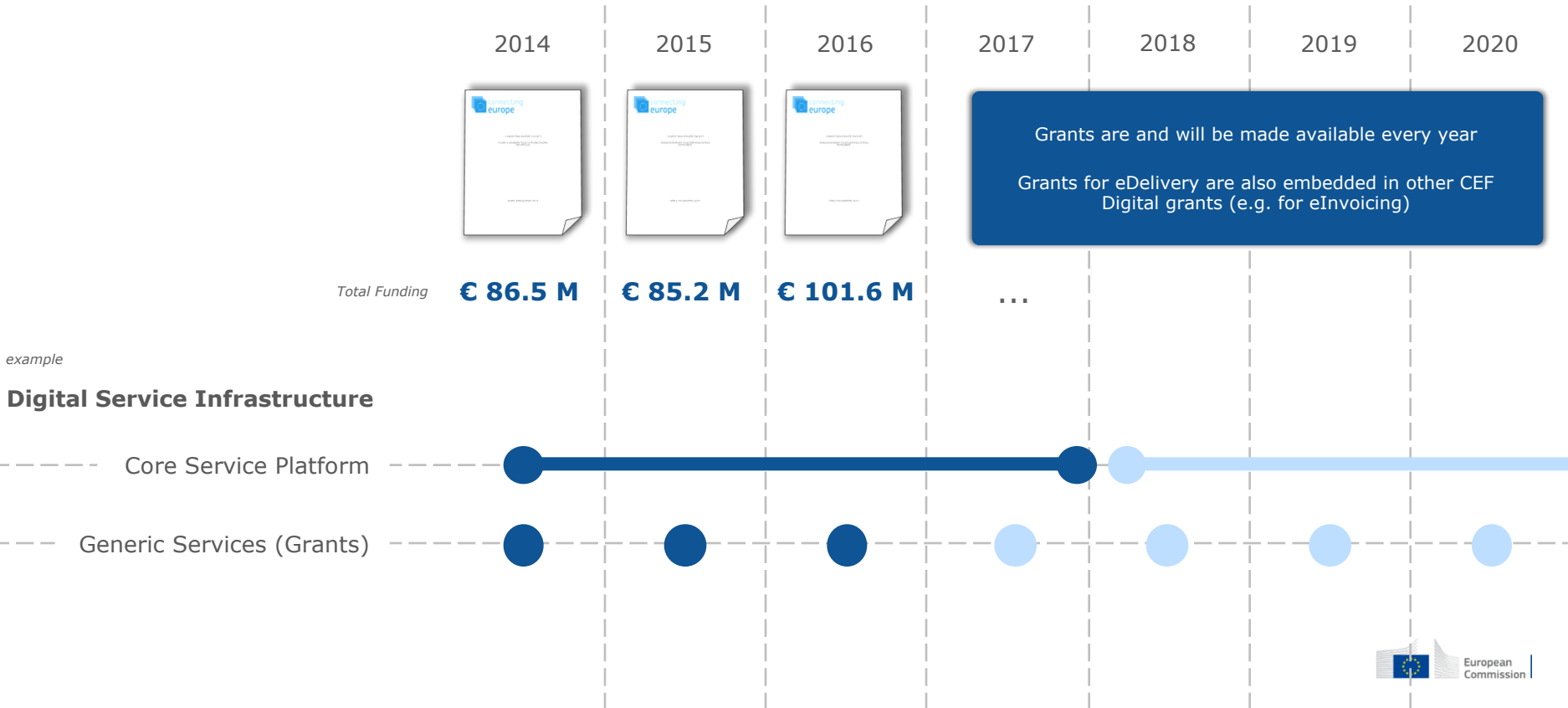
EUROPEAN COMMISSION

MEMBER STATES

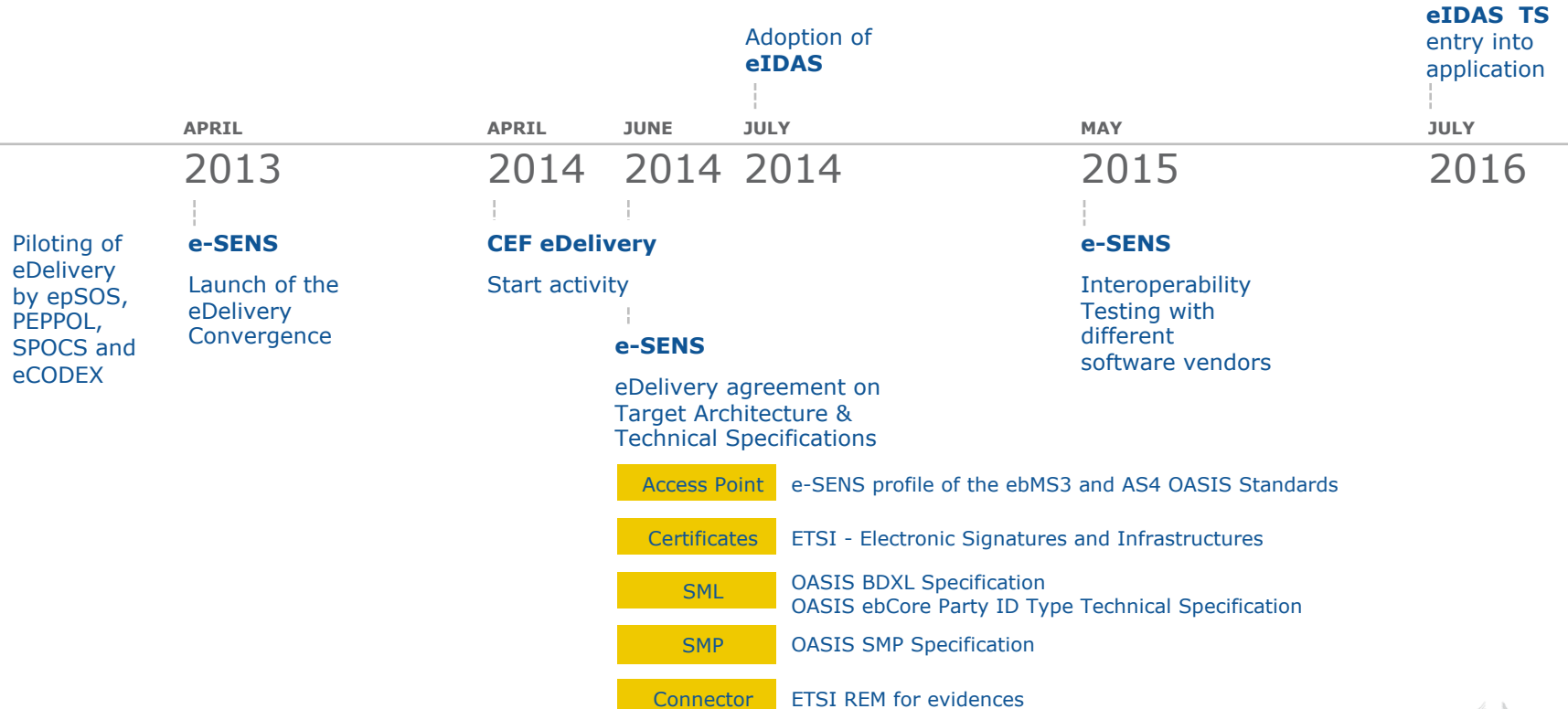
CORE SERVICE PLATFORM  
(Procurement)

GENERIC SERVICES  
(Grants)



# Financial instruments - Grants: CEF Telecom calls (2016)



# Timeline

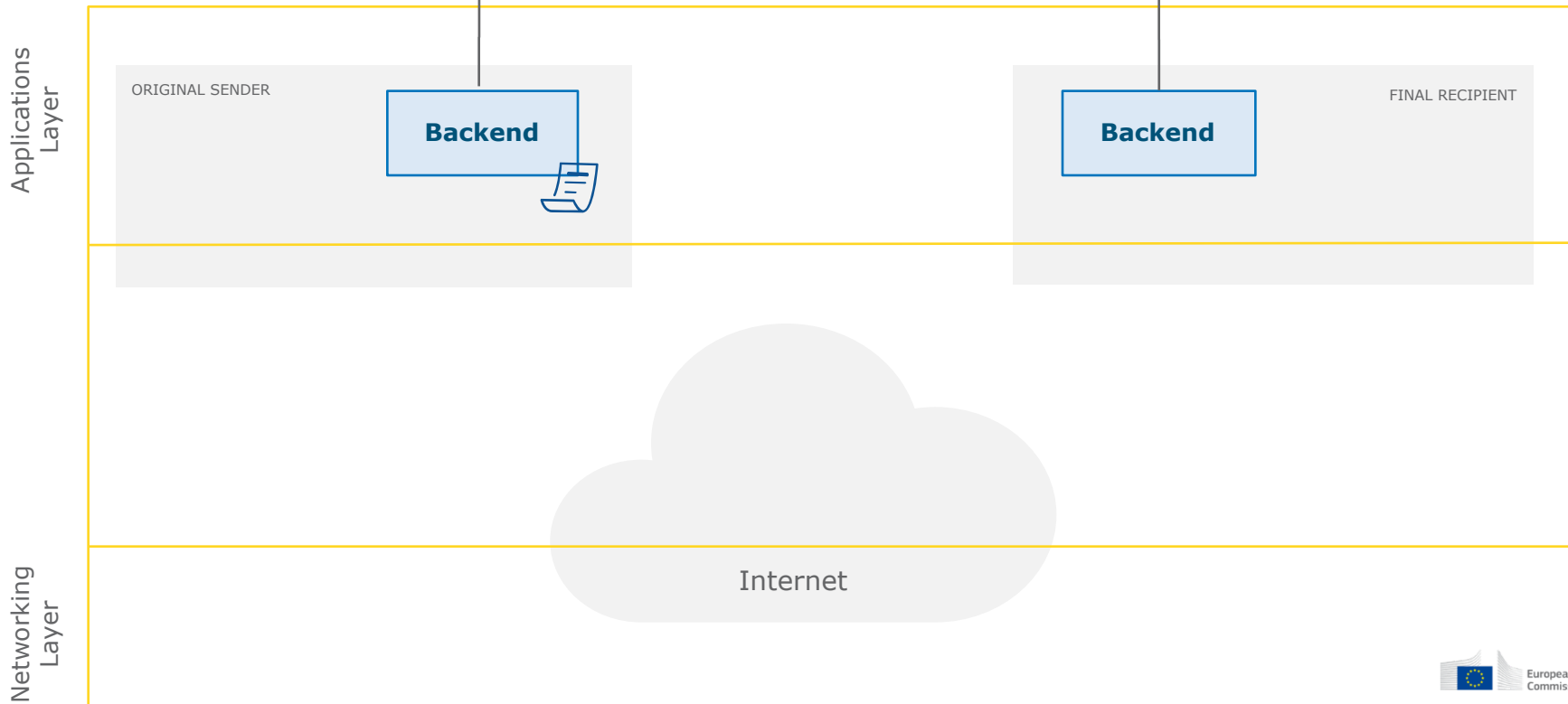


# The interoperability challenge



 Required component  
 Optional component

 **Party A**  
Belgium

 **Party B**  
Estonia

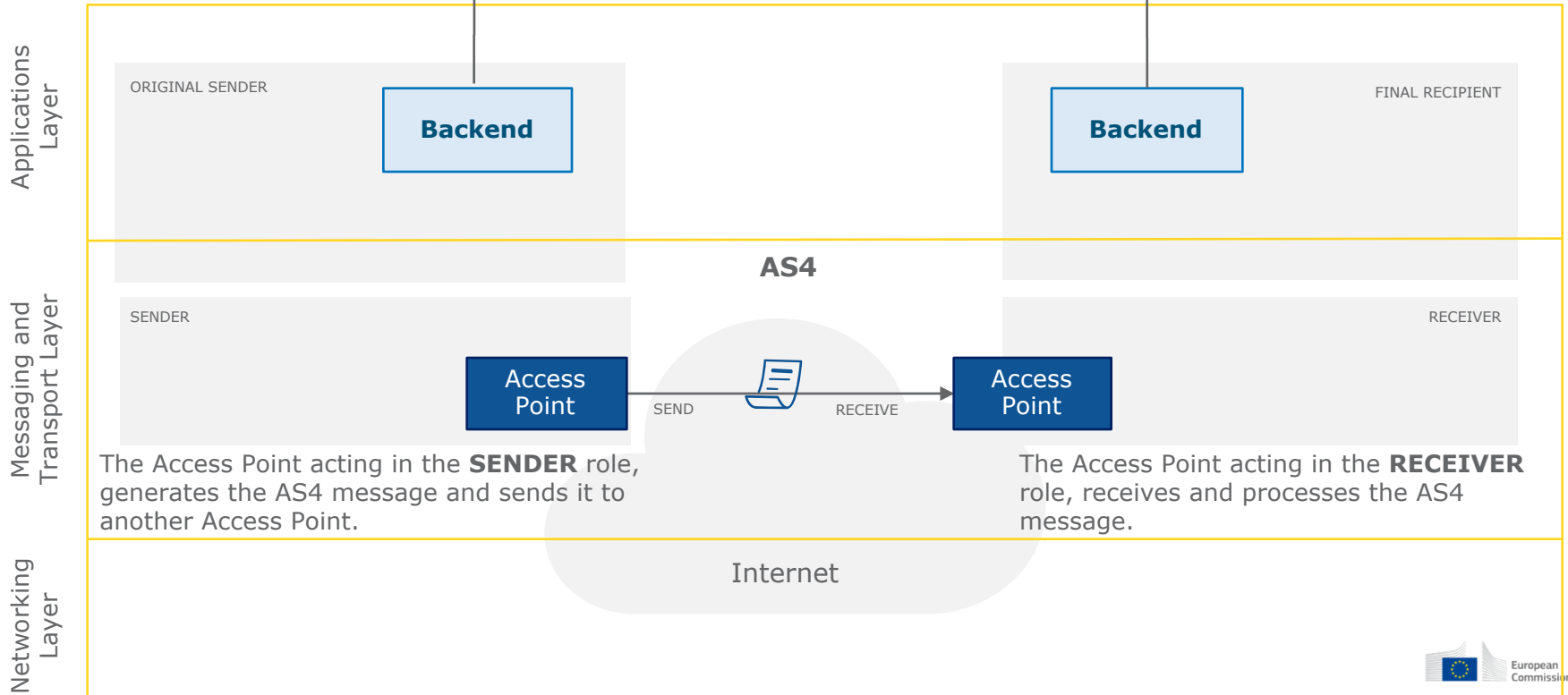


# Introducing the Messaging and Transport Layer



 Required component  
 Optional component

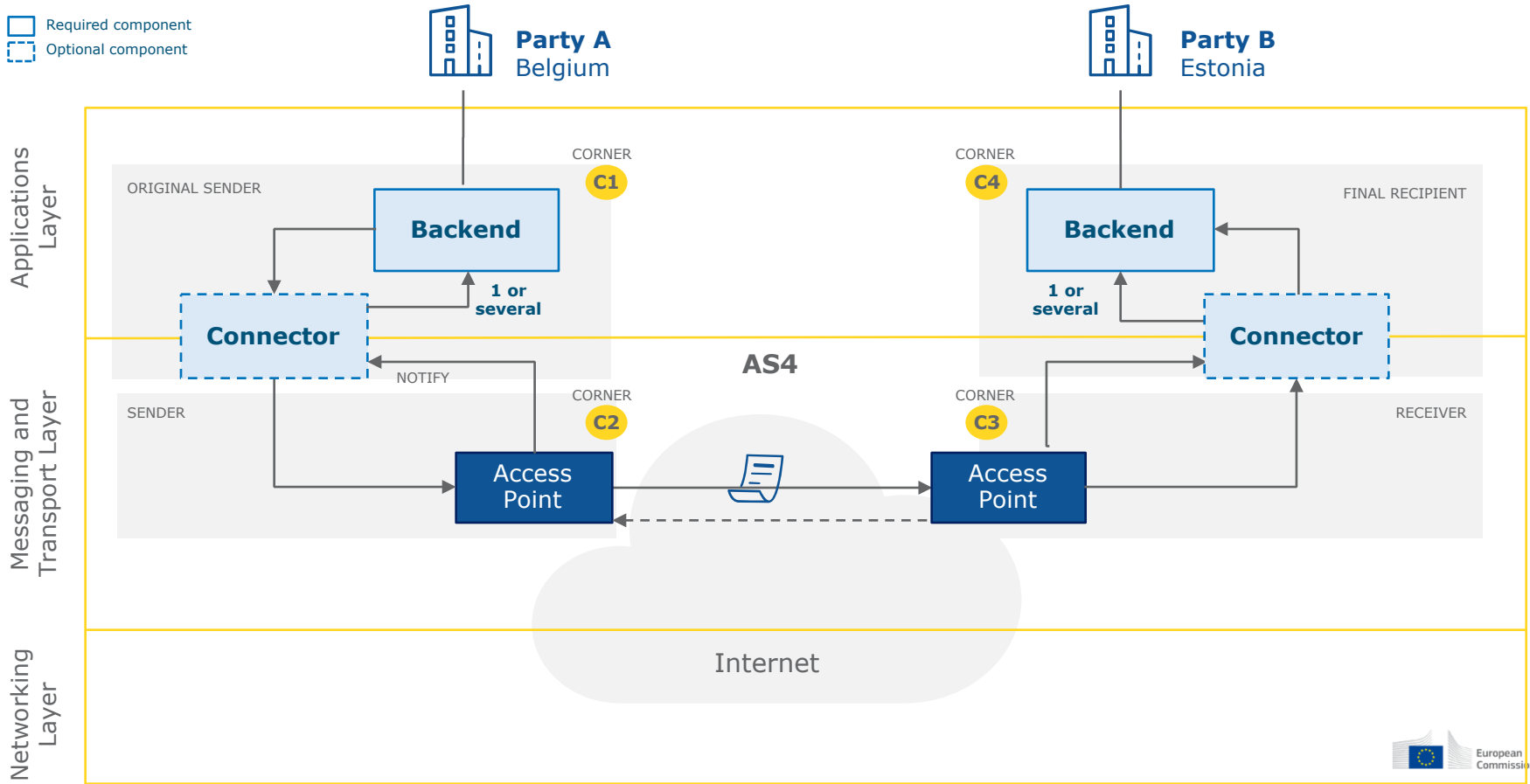
 **Party A**  
Belgium

 **Party B**  
Estonia





# Introducing the 4-Corner model

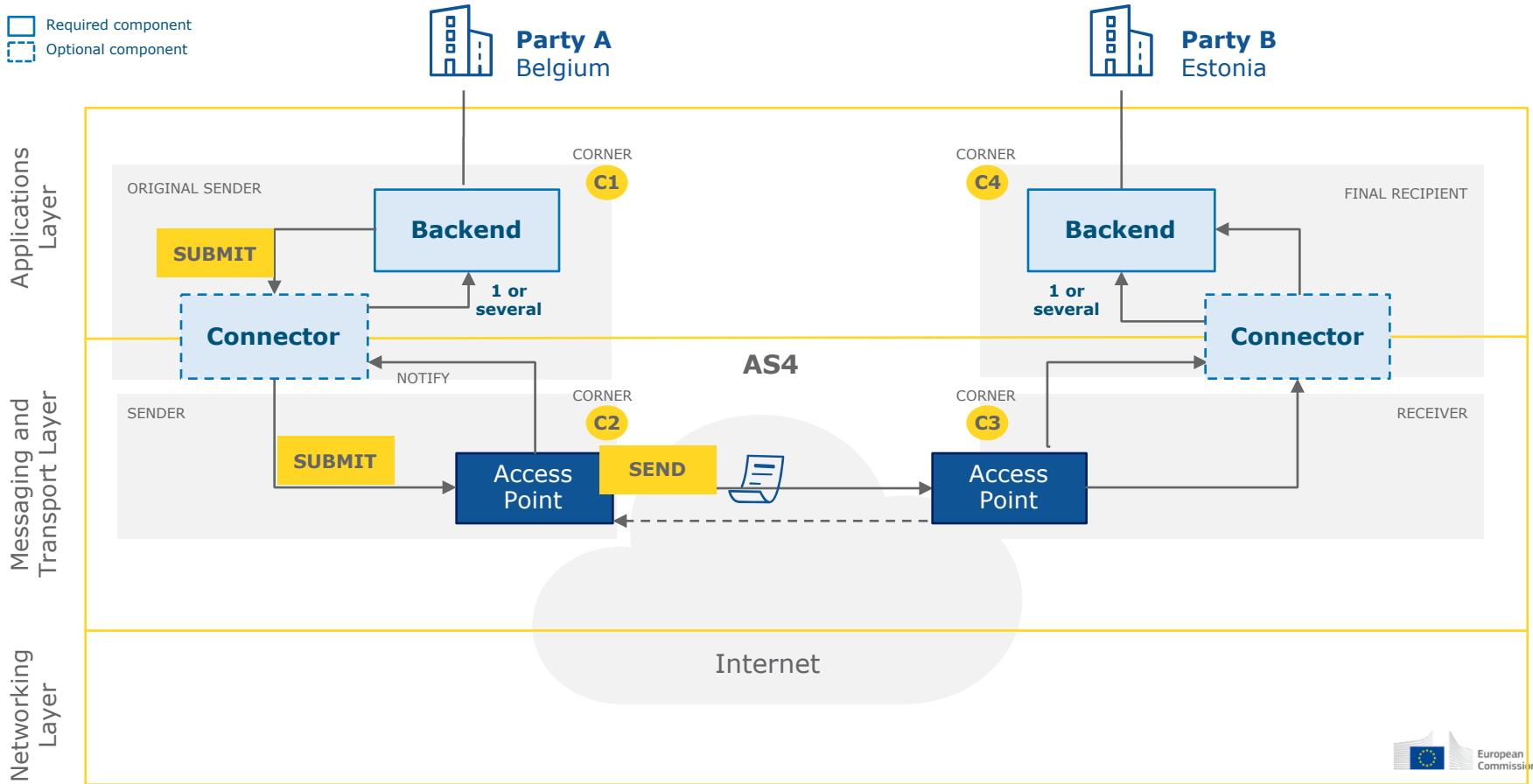
 Required component  
 Optional component







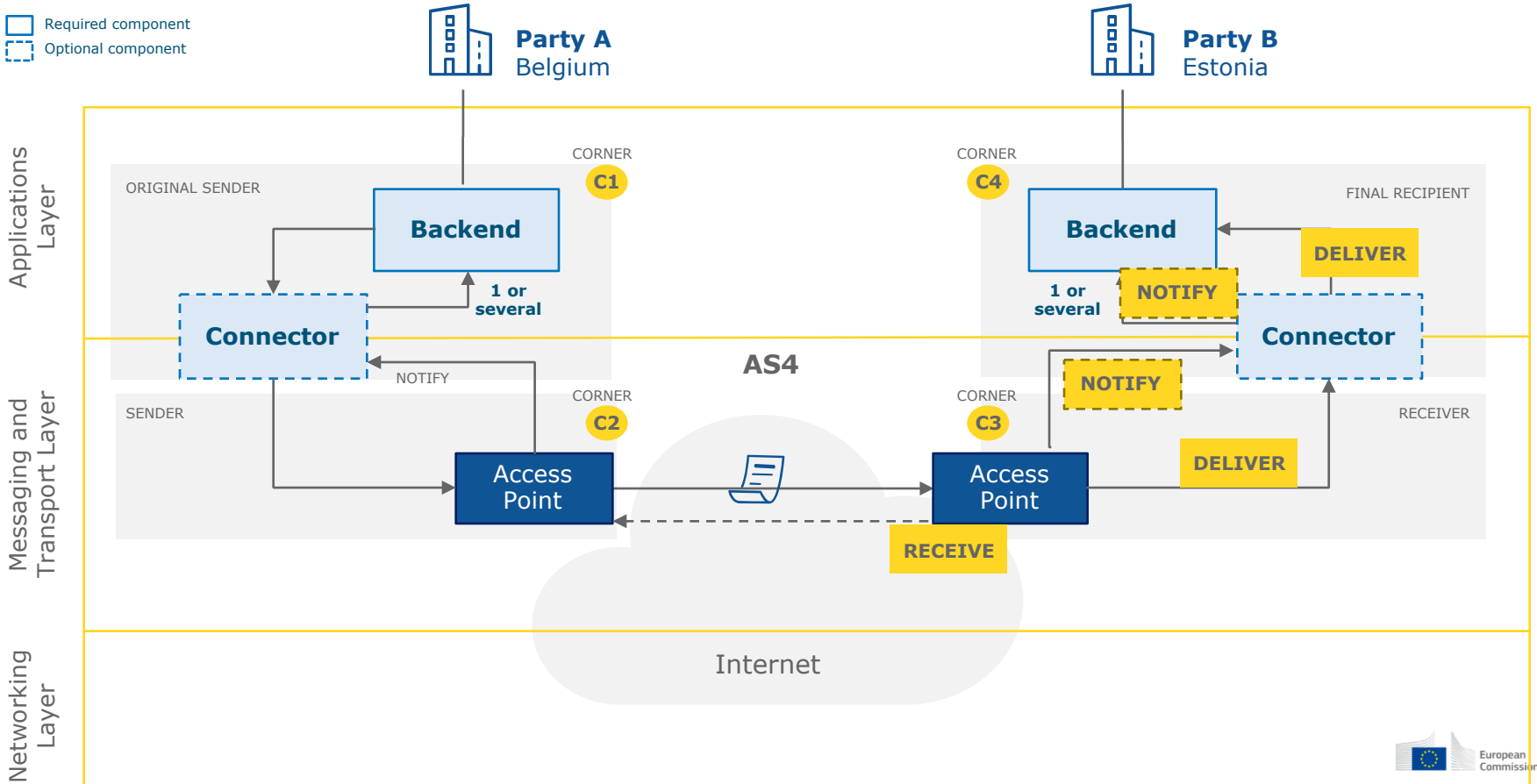
# The 4-Corner Model step by step

 Required component  
 Optional component





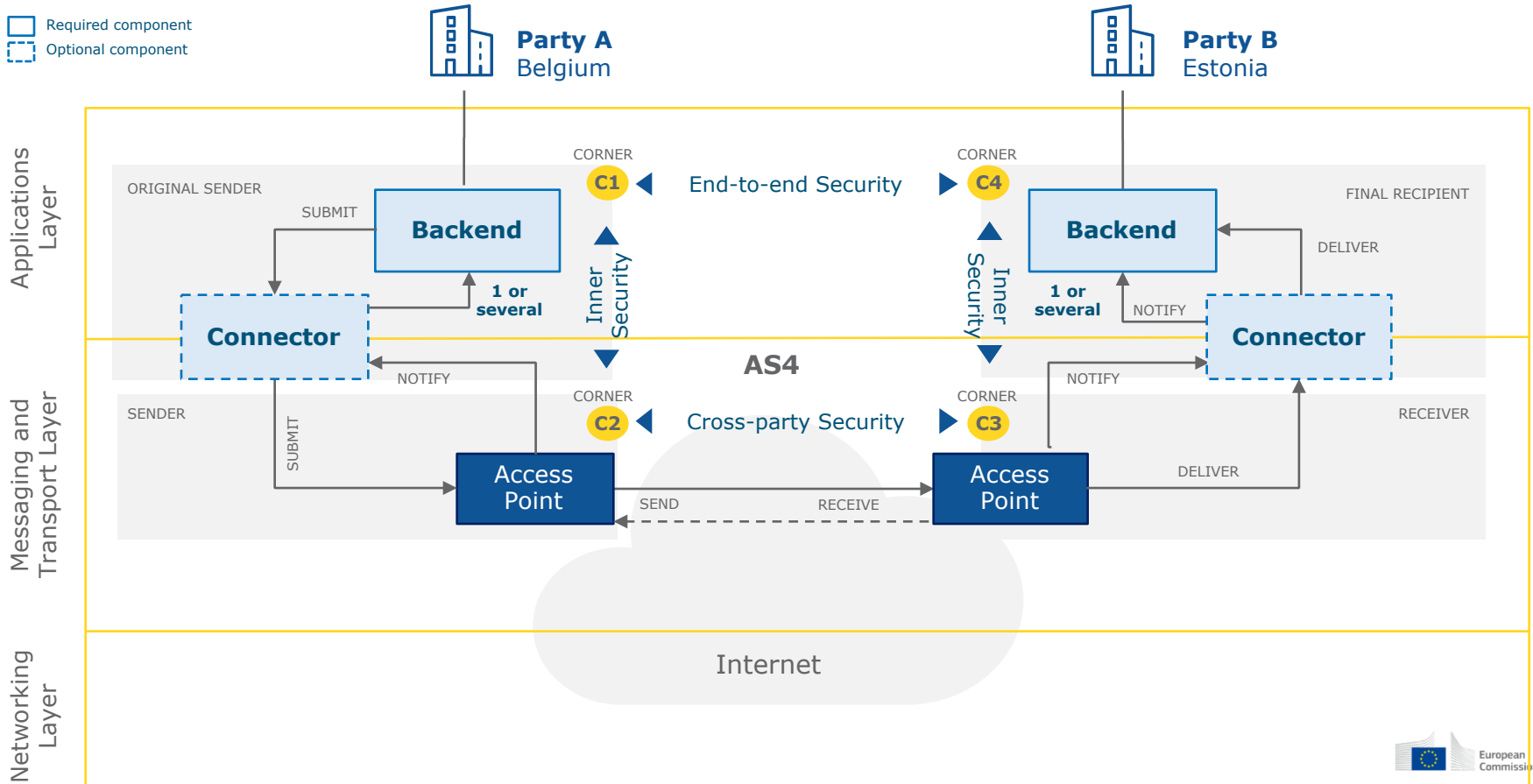
# The 4-Corner Model step by step

 Required component  
 Optional component



# Security zones of a 4-Corner eDelivery Infrastructure







 Required component  
 Optional component



# e-SENS AS4 conformant solutions

The screenshot shows the CEF Digital website with the following structure:

- Header:** CEF DIGITAL logo, navigation links (Home, Discover, How it works, Services, Collaboration), and a search bar.
- Breadcrumbs:** European Commission > CEF Digital Home > CEF building blocks > eDelivery > eDelivery Services > eDelivery Software > Access Point software
- Section:** eDelivery
- Left Sidebar:** TECHNICAL SPECIFICATIONS (Access Point, Connector, PKI, SML, SMP), SOFTWARE (Access Point, e-SENS AS4 conformant solutions, SML, SMP, Security Controls, Connector), MANAGED SERVICES (PKI, SML), TESTING SERVICES (Conformance, Connectivity), SUPPORTING SERVICES (Training and Deployment, Service desk).
- Main Content:**
  - e-SENS AS4 conformant solutions**
  - Text: "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:"
  - List of conformant solutions:
    - Domibus (EC sample implementation)
    - Flame
    - Holodeck
    - IBM
    - Laurentius
    - Mendelson
    - RSSBus
  - Text: "A full list of other vendors supporting AS4 can be accessed at the bottom of this page."
  - Table of vendor details:

Vendor	Status	Latest release	Test report	Contact
 Domibus *		Download Domibus v3.1.1	Download (zip)	CEF-EDELIVERY-SUPPORT@ec.europa.eu
 Flame		Download FMS Server and Light Client v5.3	Download (zip)	info@flamems.com
 Holodeck B2B		Download Holodeck B2B v2.0	Download (zip)	info@holodeck-b2b.org

\* (EC [sample implementation](#))

More information on CEF Digital

[Conformant Solutions >](#)

**DOMIBUS**



**FLAME**



**HOLODECK**



**IBM**



**LAURENTIUS**



**MENDELSON**



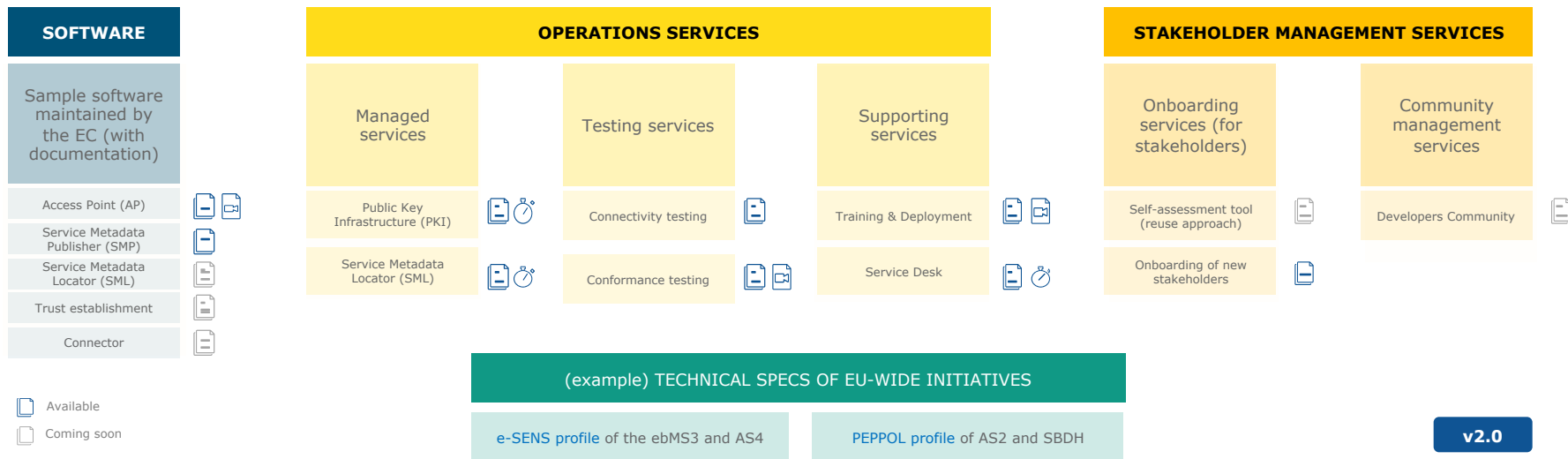
**RSSBus**



 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

Domain Owner

Participants in eDelivery Messaging Infrastructure



PHASE

**ELICIT**  
requirements

**DESIGN**  
eDelivery  
infrastructure

**SELECT**  
eDelivery  
solutions

**DEPLOY**  
eDelivery  
solutions

**INTEGRATE**

with backend(s)    with partners

**OPERATE**  
eDelivery  
solutions



CEF TEAM

Technical  
Specifications

Onboarding

Self-Assessment  
tool

Documentation  
(COD, SOD, ...)

List of Software  
solutions

SML Service

PKI Service

Service Desk

Training and  
deployment

Connectivity  
Testing

Service Desk

CEF eDelivery  
Community



YOUR TEAM

- Attend workshops
- Complete self-assessment tool
- Identify business requirements
- Carry out feasibility study

- Design message exchange model
- Design discovery model
- Design security model
- Participate in the writing of a SDD

*Open source*

- Assess OSS projects
- Customise/extend solution

*Commercial solution*

- Assess Vendors
- Buy solution

*Custom built*

- Build solution

- Deploy components
- Configure components

- Integrate with eDelivery Access Point
- Perform Integration testing
- Perform Pre-production testing

- Participate in Connectivity testing
- Perform Pre-production testing

*Open source*

- Hosting
- Maintenance

*Commercial solution*

- Hosting
- Fees

*Custom built*

- Hosting
- Maintenance

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

## CEF Projects

ODR	DG JUST	
eHealth	DG SANTE	
eProcurement	DG GROW	NEW
EESSI	DG EMPL	
EU e-Justice portal	DG JUST	
BRIS (ECP)	DG JUST	
Cybersecurity	DG CONNECT	
eTranslation	DGT	

## Cross-border implementations

FLUX	DG MARE	
CISE	DG MARE	
EU-CEG	DG SANTE	
LRI	DG JUST	
EUGO	DG GROW	
ECRIS	DG JUST	NEW
PNR	DG HOME	NEW
Tachonet	DG MOVE	NEW

## Commission Managed Services

ePrior	DIGIT	
e-TrustEx	DIGIT	

## Member States led projects

e-SENS Pre-award pilot	LSP	
e-CODEX	LSP	
OpenPeppol	LSP	
e-SENS	LSP	

## Other EU institutions

CISH	The European Council	NEW
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Commitment to analyse   
 Commitment to reuse   
 Reusing   
 Update since Q2'16

# Self-assessment tool

More information on CEF Digital

Take the self-assessment>

> FILL THE QUESTIONNAIRE

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**

4 REQUIREMENTS OF THE MESSAGE EXCHANGE NETWORK 0 / 28

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 sync, 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)



>>> GET STARTED

>> EVALUATE

4

Discover which **services** of CEF eDelivery you need

6

Read more **online**



# **Interactive quiz**

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## 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

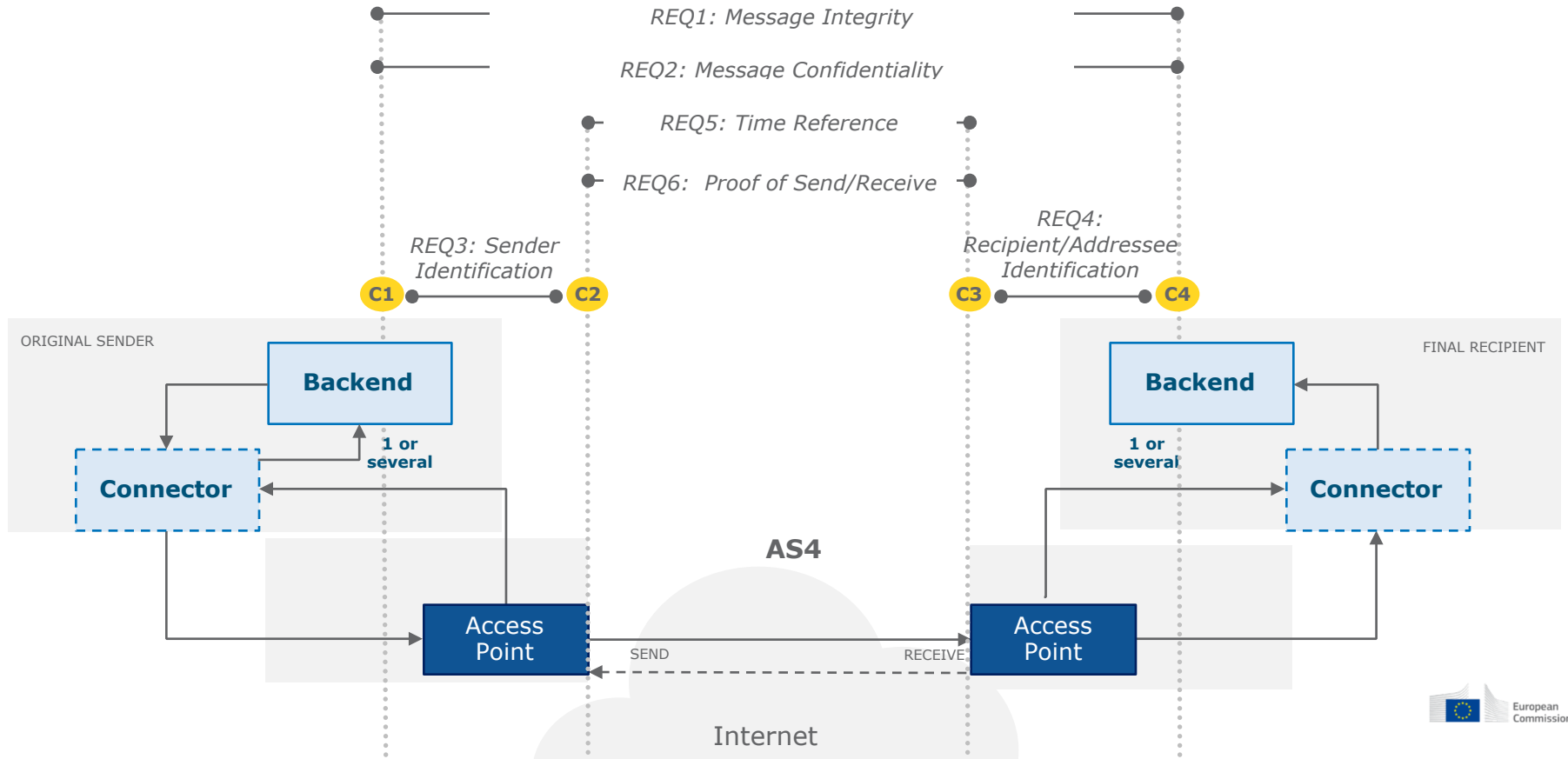


Preferences of the implementers

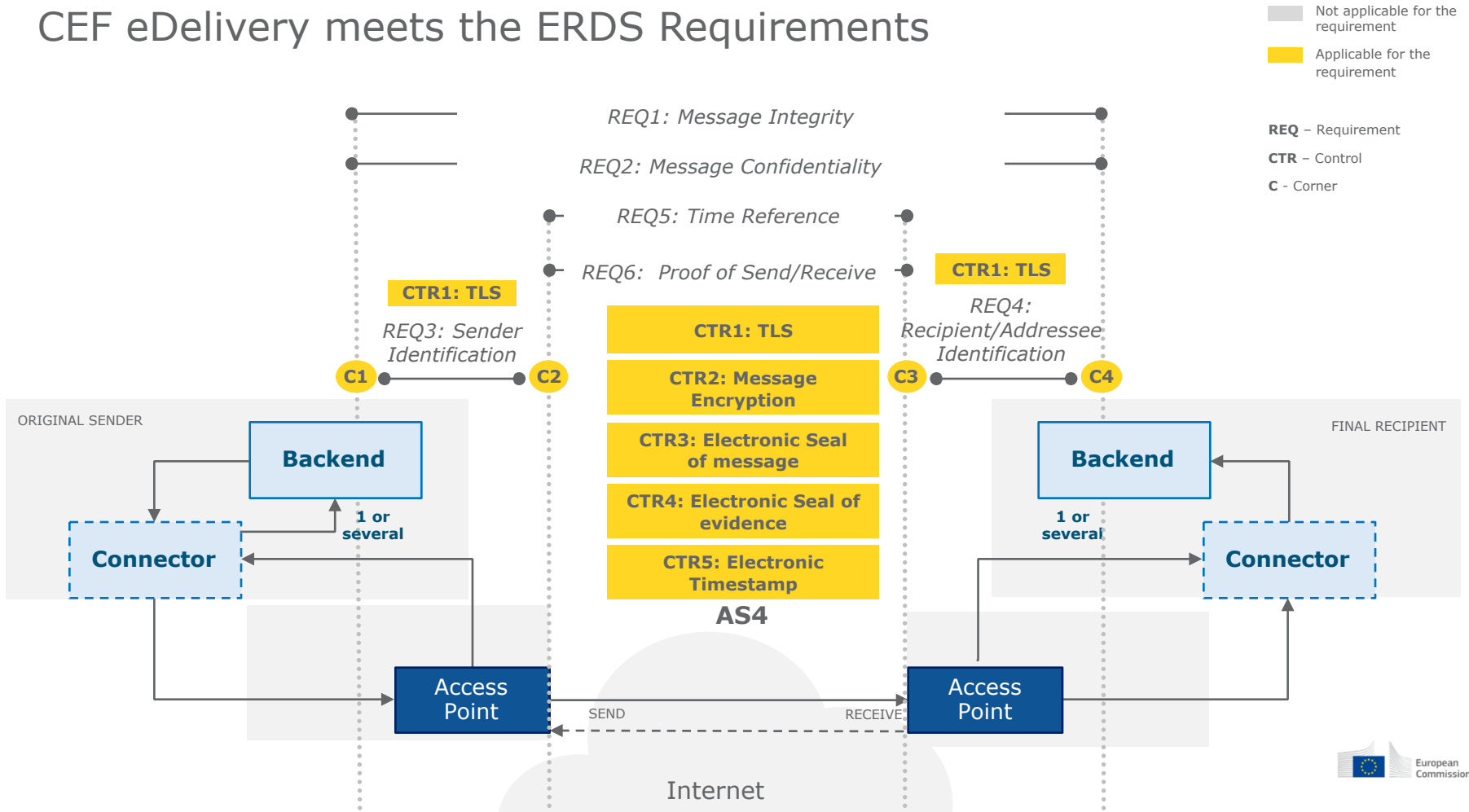
# Summary of ERDS requirements from the eIDAS regulation.

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



---

# 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*

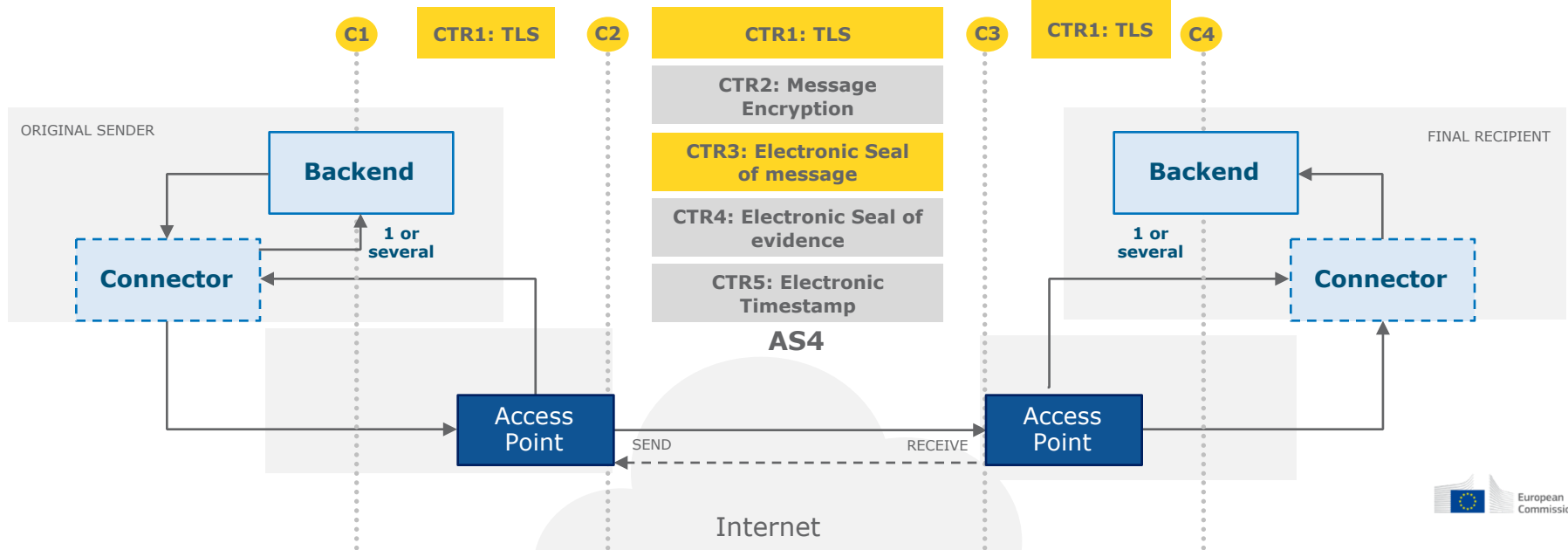
- Not applicable for the requirement
- Applicable for the requirement

*REQ1: Message Integrity*

REQ – Requirement

CTR – Control

C - Corner

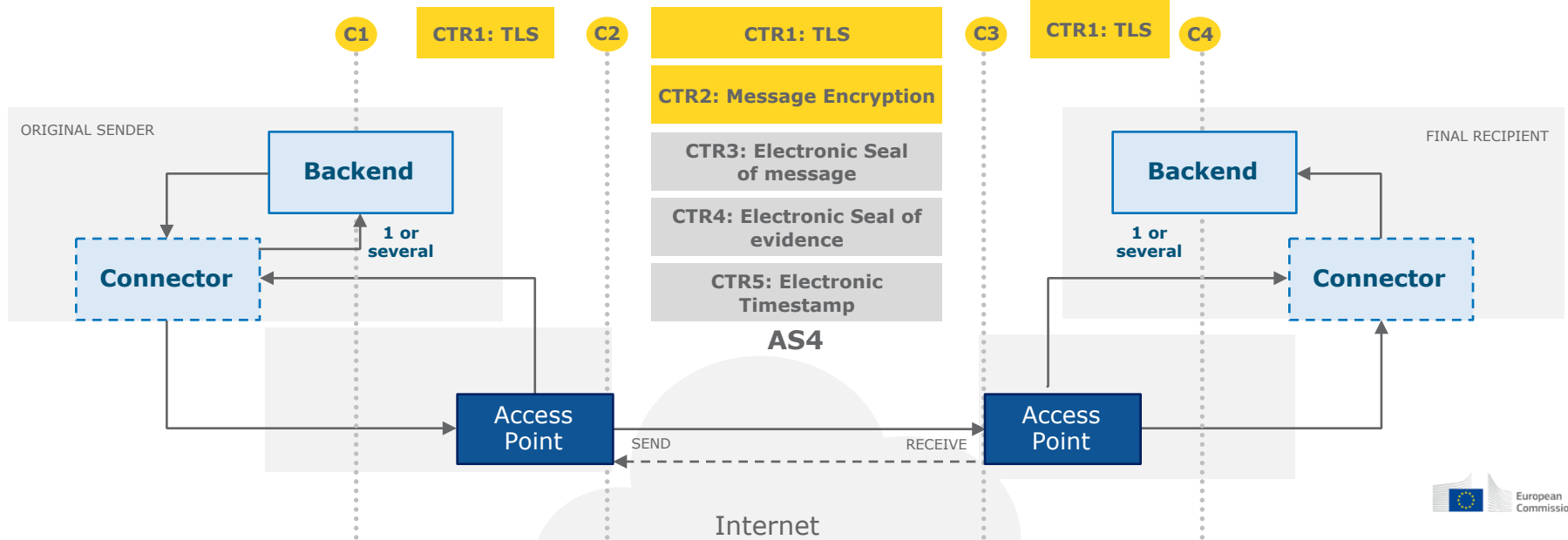


# Controls linked to *REQ2: Message Confidentiality*

- Not applicable for the requirement
- Applicable for the requirement

REQ – Requirement  
CTR – Control  
C - Corner

—●— *REQ2: Message Confidentiality* —●—





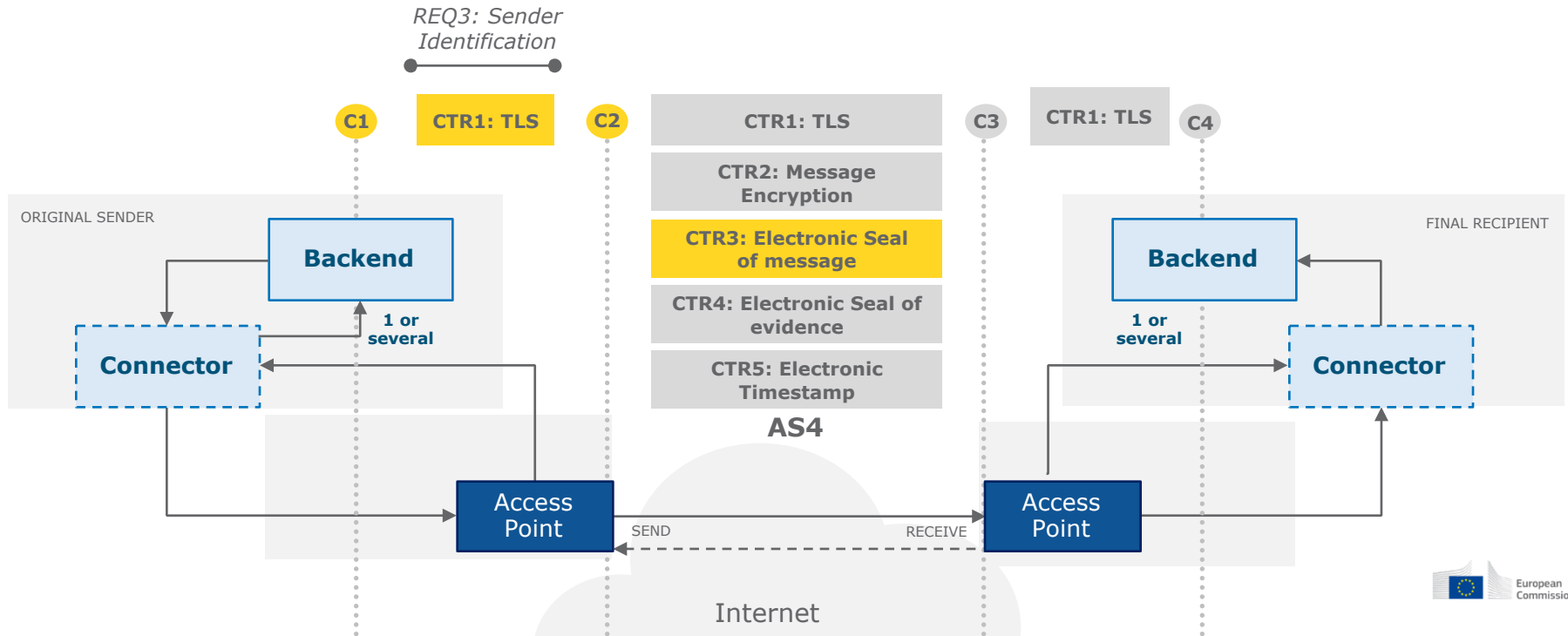
# Controls linked to *REQ3: Sender Identification*

- Not applicable for the requirement
- Applicable for the requirement

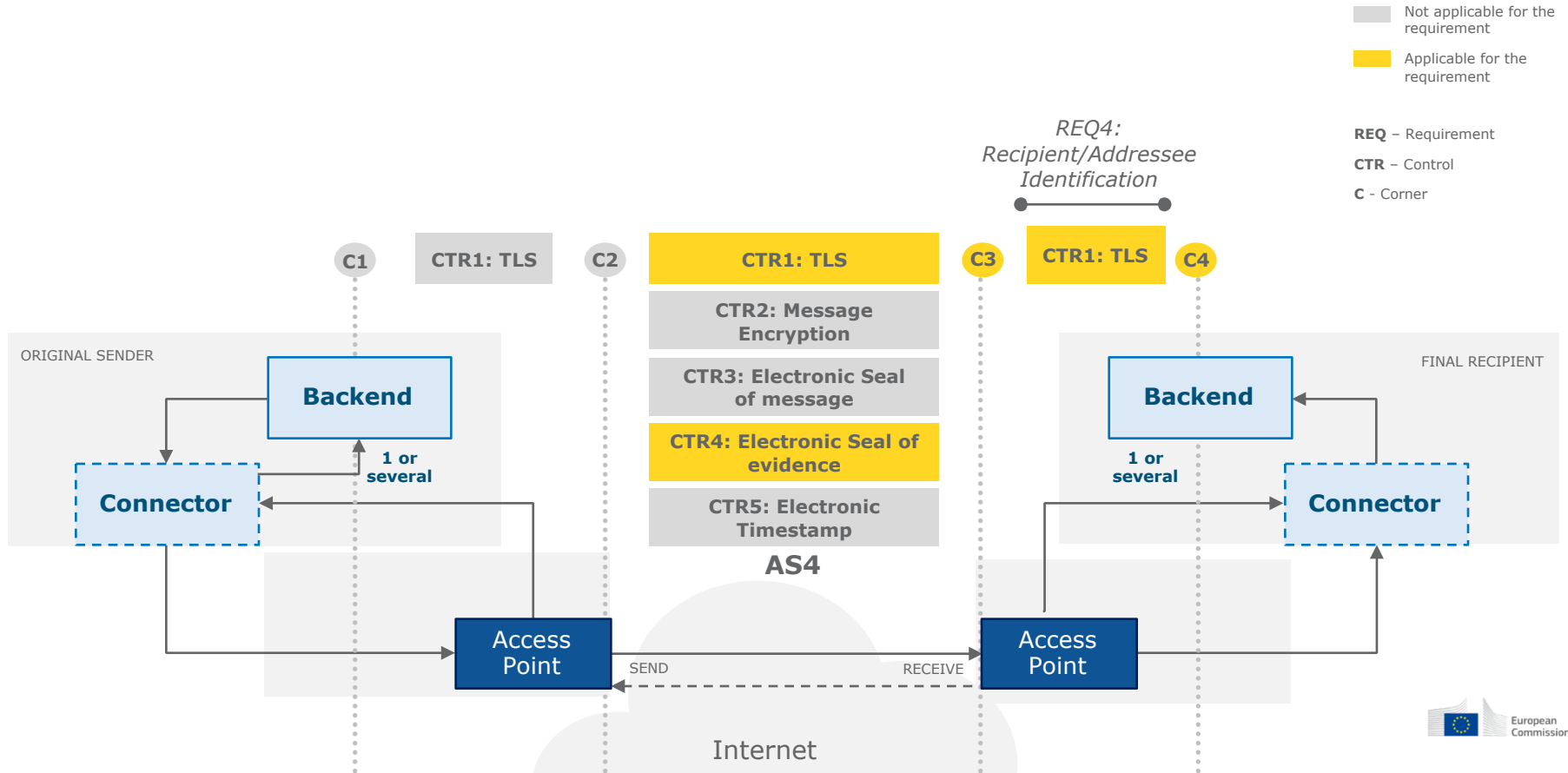
REQ – Requirement

CTR – Control

C - Corner



# Controls linked to **REQ4: Recipient/ Addressee Identification**



# Controls linked to *REQ5: Time Reference*

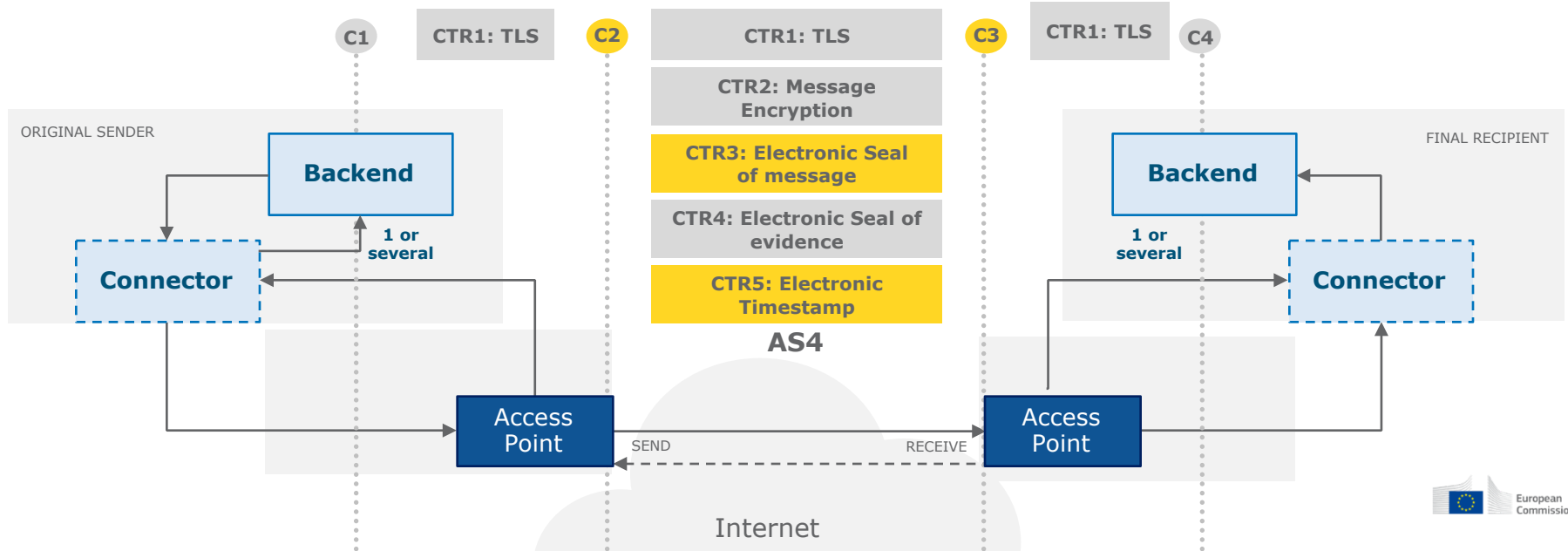
- Not applicable for the requirement
- Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner

● *REQ5: Time Reference* ●



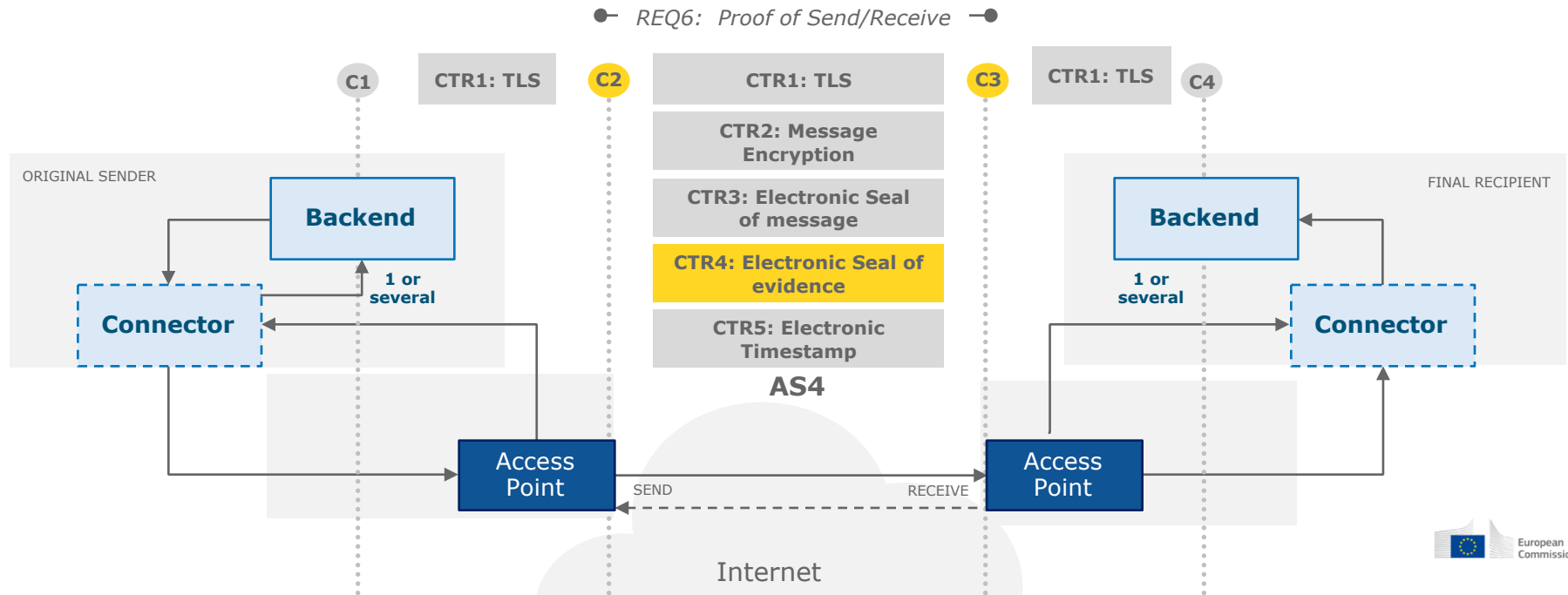
# Controls linked to **REQ6: Proof of Send/Receive**

- Not applicable for the requirement
- Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner



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

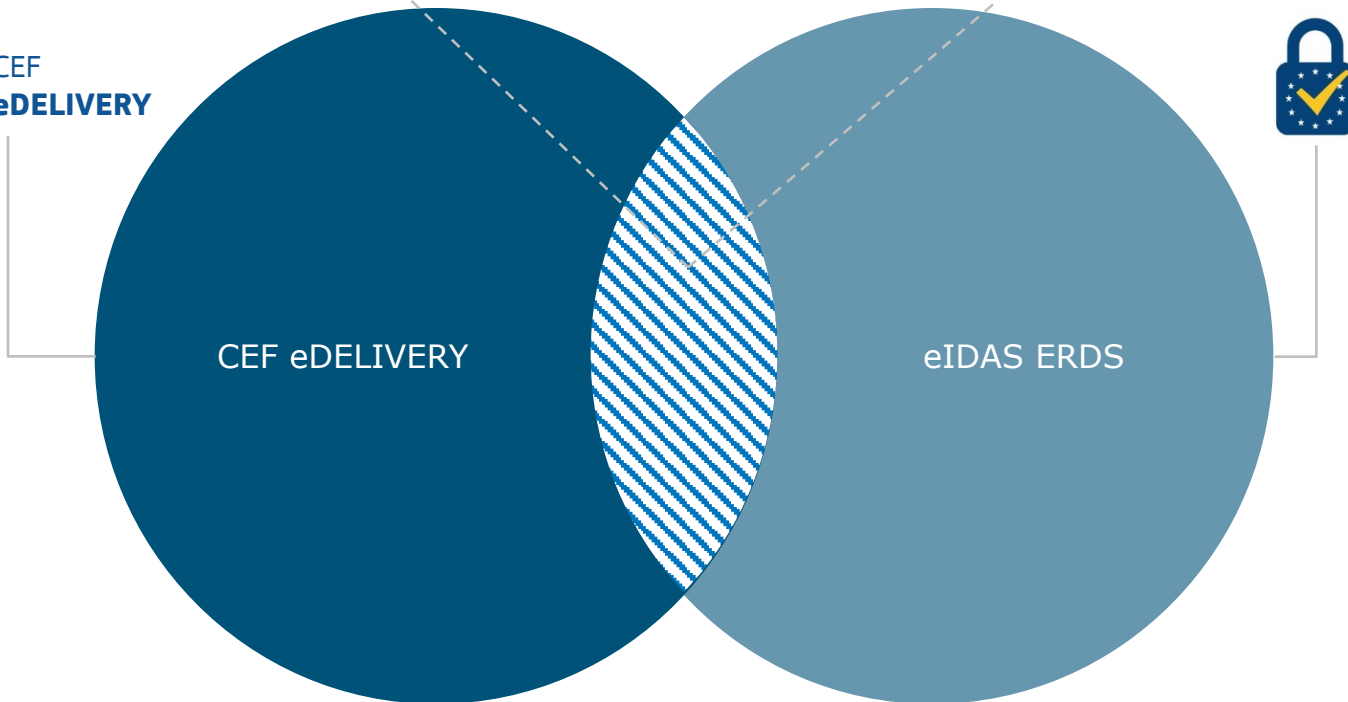
Security control	Description
<b>CTR1 Transport Layer Security (TLS)</b>	<p>Transport Layer Security (TLS 1.2 [9]) protocol is used, following ENISA security [7] and BSI [8] guidelines. For the sender identification is provided as follows:</p> <ul style="list-style-type: none"><li>• Basic authentication: 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;</li><li>• Mutual authentication: This is done using the digital certificate of C2, allowing C3 to identify C3.</li></ul>
<b>CTR2 Message Encryption</b>	<p>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.</p>
<b>CTR3: Electronic Seal of message</b>	<p>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.</p>
<b>CTR4: Electronic Seal of evidence</b>	<p>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.</p>
<b>CTR5: Electronic Timestamp</b>	<p>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.</p>

# 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]

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# **Interactive quiz**

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## 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>

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# 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/DwFfAQ>

---

## 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>

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## 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

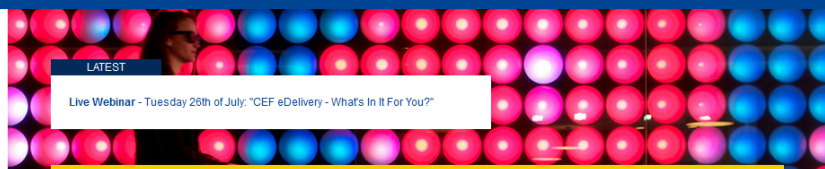
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CEF DIGITAL



European Commission



LATEST

Live Webinar - Tuesday 26th of July: "CEF eDelivery - What's In It For You?"

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# **ANNEX**

**eDelivery service offering in detail**



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Software

# Sample software maintained by the EC

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## 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



[Back to Service offering >](#)

---

## USERS

Software Providers  
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---

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---

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---

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Operations services

# Managed services

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## 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



[Back to Service offering >](#)

---

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Policy Domains

---

## STATUS

- Service
- Documentation

---

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---

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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



[Back to Service offering >](#)

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## STATUS

- Service
- Documentation

## More info

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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



[Back to Service offering >](#)

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Service Providers

## STATUS

Service  
 Documentation

## More info

[CEF Digital >](#)

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Operations services

# 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



[Back to Service offering >](#)

## USERS

Policy Domains  
Software Providers  
Service Providers

## STATUS

Service  
 Documentation

## More info

CEF Digital >

## Get started

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Stakeholder management services

# Onboarding services

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## 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



[Back to Service offering >](#)

---

## USERS

Service Providers

Policy Domains

---

## STATUS

Service

Documentation

---

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---

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Stakeholder management services

# Community management

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## 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



[Back to Service offering >](#)

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## STATUS

- Service
- Documentation

---

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