On-site workshop

eInvoicing Implementation Workshop

29 November 2018, Berlin, Germany

#ConnectingEurope

Today's speakers

Christian Rasmussen

Christian is an experienced eProcurement Expert specialized in the execution of large scale ICT projects with past experience from the Nordic region including Denmark, Norway and Sweden. Christian has also been involved in the past EU-funded large scale pilots PEPPOL.eu and eSENS.eu as Work packager leader including focus on new eProcurement and eDelivery development.

Martin Forsberg

Martin Forsberg works as an expert in the area of electronic business, customs and financial processes. Martin was involved in the PEPPOL and eSENS Large Scale Pilots. He is active in standardization committees such as CEN TC434 and OASIS UBL.

Who are you?

What is most important for you?

Highlights of the workshop

DURING

Ask questions

Download other presentations at CEF Digital

AFTER

Download our other webinar recordings

Interact with our online community

European Commission

Objectives of this workshop

Participants will learn about:

- CEF eInvoicing and our services
- The **European norm** and the **Directive 2014/55/EU** on electronic invoicing in public procurement
- Presentation of the European norm and related **specifications**
- **Ways to implement eInvoicing**

Audience for this workshop

- Public authorities
- Private entities
- Policy makers
- Members of standardisation bodies
- eInvoicing implementers for:
  - Software services
  - Solution providers

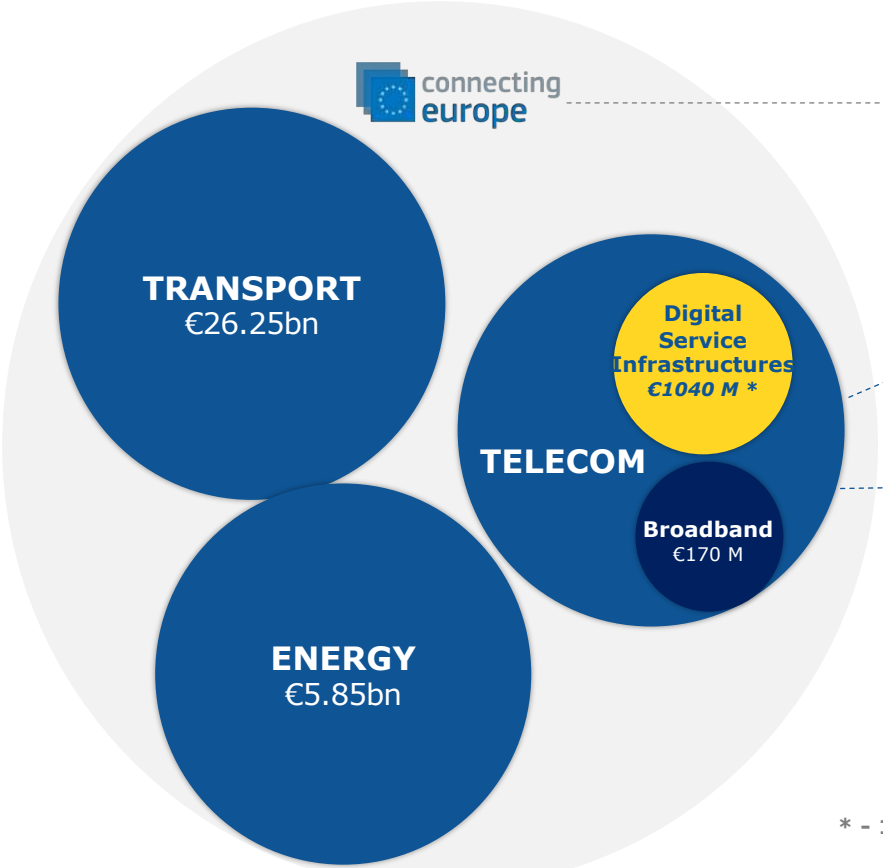
European Commission

CEF eInvoicing – Our services and how to get started

Christian Vindinge Rasmussen
DIGIT

What is CEF eInvoicing?

What is CEF?



HOW IS IT REGULATED?

CEF Regulation

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

CEF Telecom Guidelines

The CEF Telecom guidelines cover the specific objectives and priorities as well as eligibility criteria for funding of broadband networks and Digital Service Infrastructures (DSIs).

CEF Work Programmes

Translates the CEF Telecom Guidelines in general objectives and actions planned on a yearly basis.

CEF Funding

From 2014-2020 1.040M Euro will be re-invested into adoption of the core building blocks in the DSIs.

Budget indications from 2020-2024 gives additional 1.600M Euro for further funding of implementation

*** - 100 M Juncker Package**

European Commission

What is a CEF Building Block?

IDENTIFY
with **eID**

TRANSLATE
with **eTranslation**

INVOICE
with **eInvoicing**

SIGN
with **eSignature**

EXCHANGE
with **eDelivery**

DEFINITIONS

A Building Block is a package of technical specifications and/or services and/or sample software that can be reused in projects of any policy domain. In particular:

- The technical specifications of a Building Block are as much as possible open and market-driven.
- The services of a Building Block must be well defined i.e. documented, with SLAs, training, helpdesk, etc.
- The software of a Building Block must have sufficient maturity i.e. successfully piloted for cross-border transactions.

European Commission

The CEF 'Big Picture'

Funding for the
EUROPEAN COMMISSION

Services offered by the European Commission

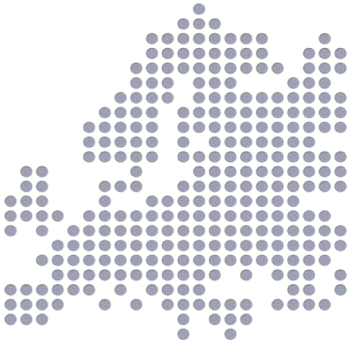
Justice	Consumer Protection	Information Society	Internal Market	Social Security
				
eJustice Portal	**ODR**	**Open Data**	**BRIS**	**EESSI, etc.**

Building Blocks

- **IDENTIFY** *with* eID
- **SIGN** *with* eSignature
- **INVOICE** *with* eInvoicing
- **EXCHANGE** *with* eDelivery
- **TRANSLATE** *with* eTranslation

Funding for the
MEMBER STATES

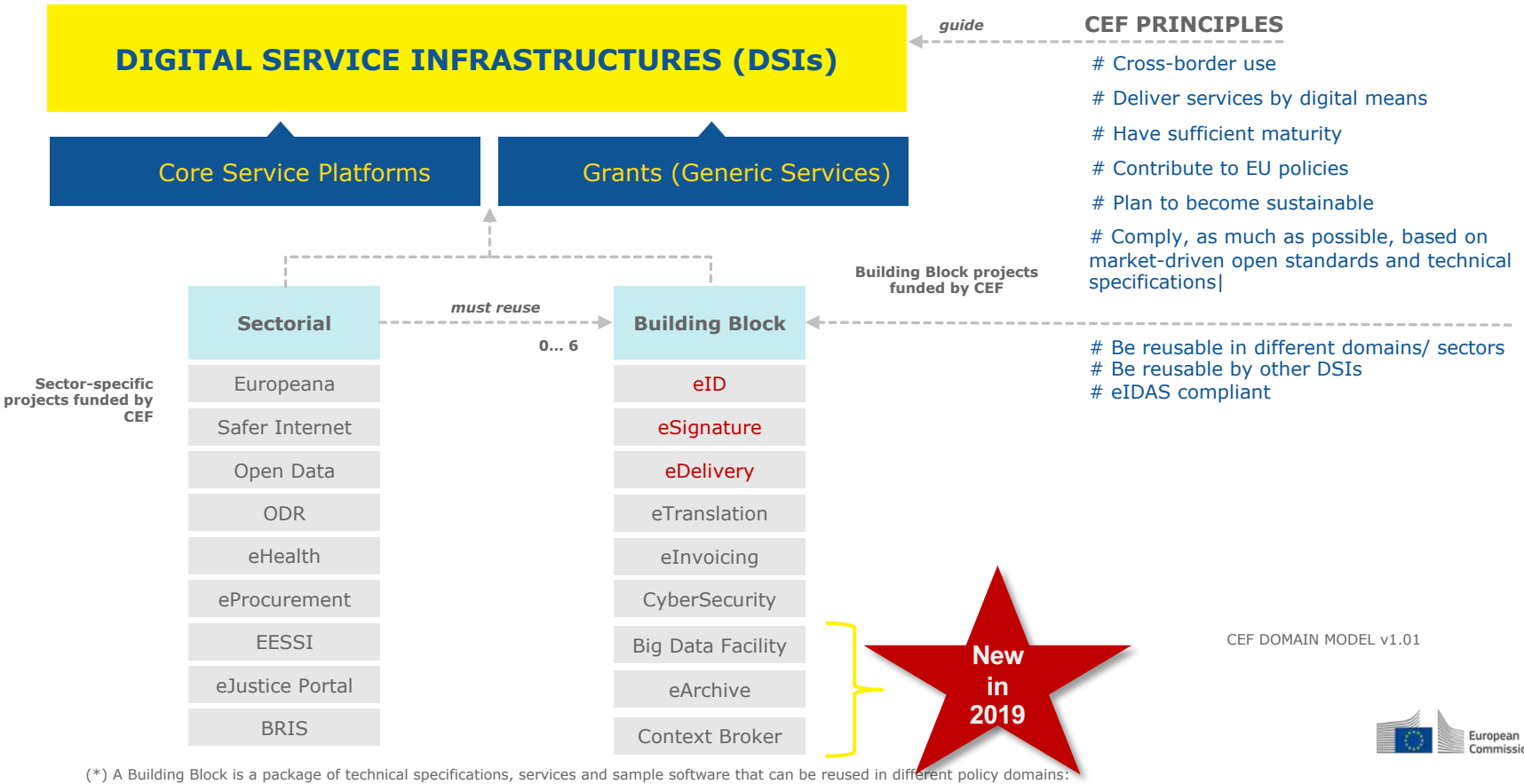
Grants - Projects in the Member States



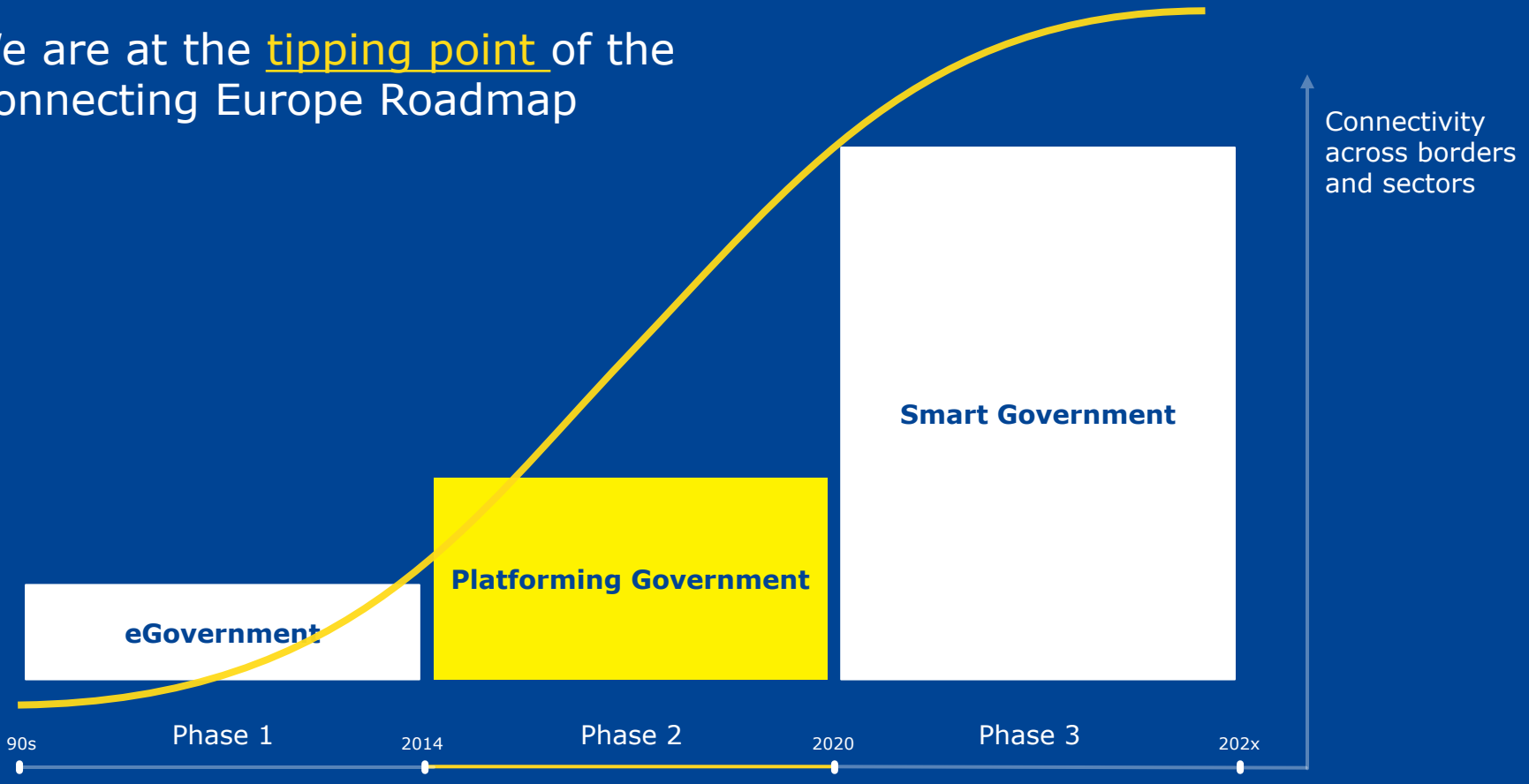
Typically 'deployment' projects at national level (up to 75% of eligible cost)

European Commission

What are Digital Service Infrastructures?

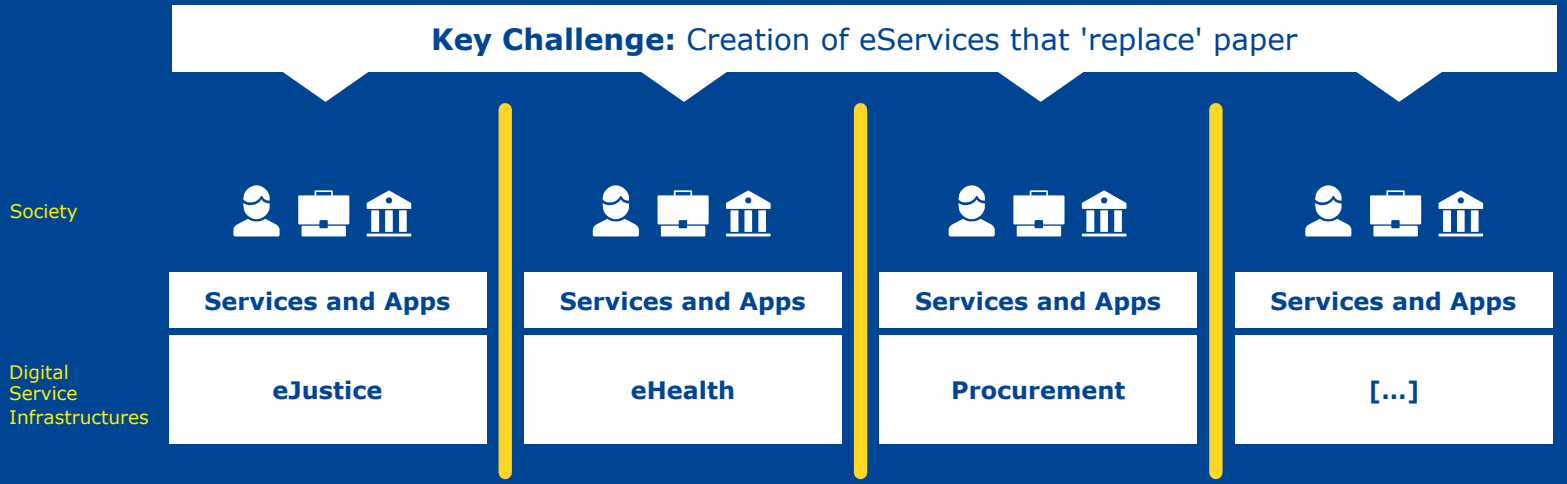


We are at the tipping point of the Connecting Europe Roadmap



Phase 1: eGovernment.

However Europe cannot fully benefit from it because we are still working in silos, we still have digital borders….



Citizens Businesses Public Administrations

Phase 2: Platforming Government. We need to remove digital barriers to create a fully functioning Digital Single Market.

Key Challenge: Connecting eServices across-borders and across-sectors

Society

Digital Service Infrastructures

CEF Building Blocks

Services and Apps	Services and Apps	Services and Apps	Services and Apps	Services and Apps
eJustice	**eHealth**	**Procurement**	**Taxation**	**[...]**

Enabling Seamless Flow of Data

Powered by the CEF Building Blocks

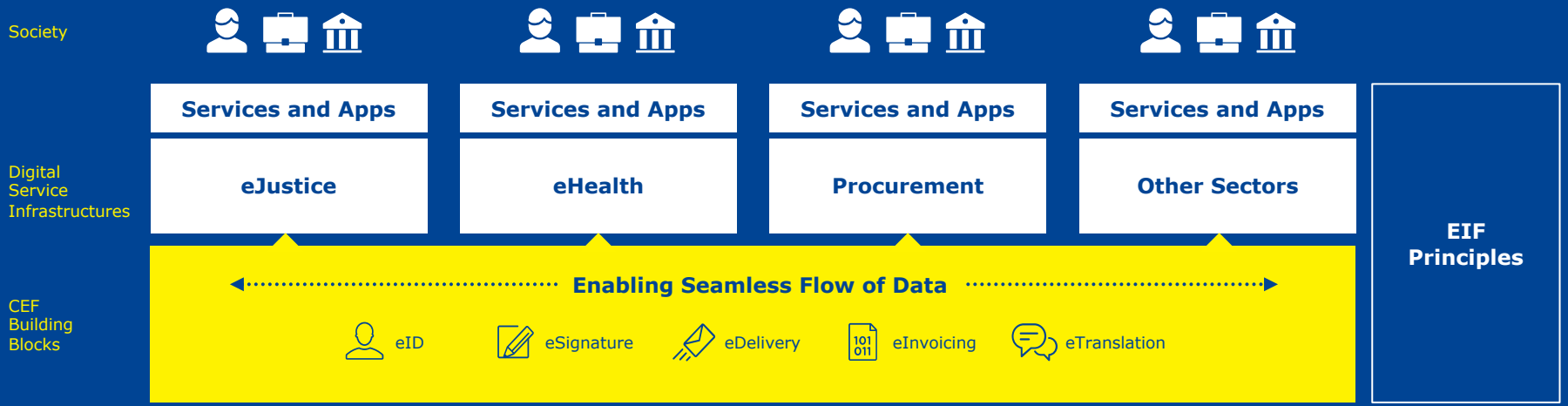
eID eSignature eDelivery eInvoicing eTranslation

Sectors are still being on boarded

Citizens Businesses Public Administrations

Phase 3: Smart Government. This is how we will ensure high quality, user-centric digital public services for citizens and seamless cross-border public services for businesses.

Key Challenge: Exploitation of the Digital Platform i.e. Once Only, Digital by Default, …



Citizens Businesses Public Administrations

The European Commission’s Digital Strategy

TALLINN Declaration

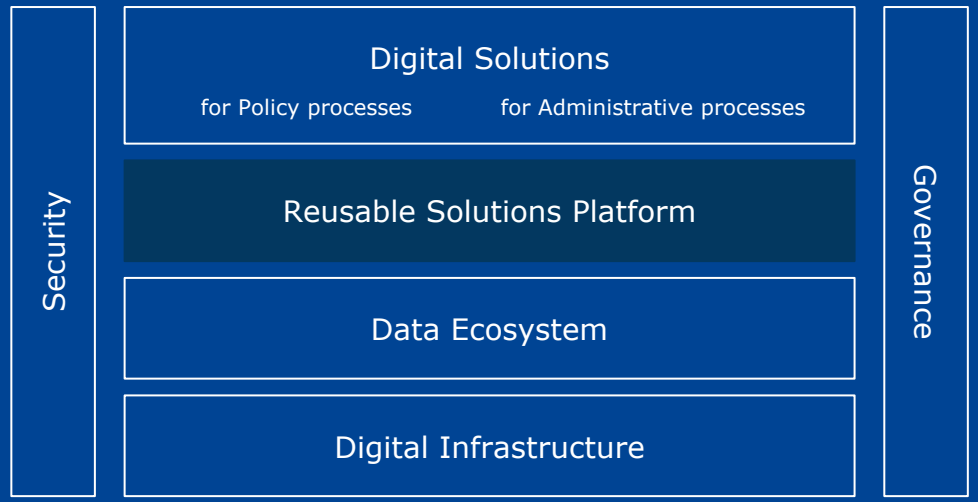
eIDAS Regulation

Better Regulation Agenda

Massive Adoption of Building Blocks

Digital Commission

Digitally transformed + User-focused + Data-driven



The CEF Building Blocks

eID

Extending the use of online services to citizens of other EU member states

eDelivery

Supporting electronic registered delivery of data and documents

eSignature

Creating and verifying electronic signatures

eInvoicing

Supporting Public Entities in the uptake of the EU Standard for eInvoicing

eTranslation

Exchanging information across languages in the EU Member States

eArchiving

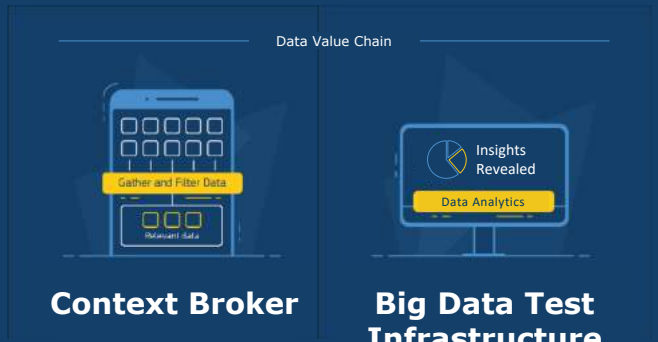
Tackling the challenge of short, medium and long-term data management and reuse

EU Login

EU Send

EU Sign
f.k.a. ESSI

*Available **as-a-service** to the European Commission*



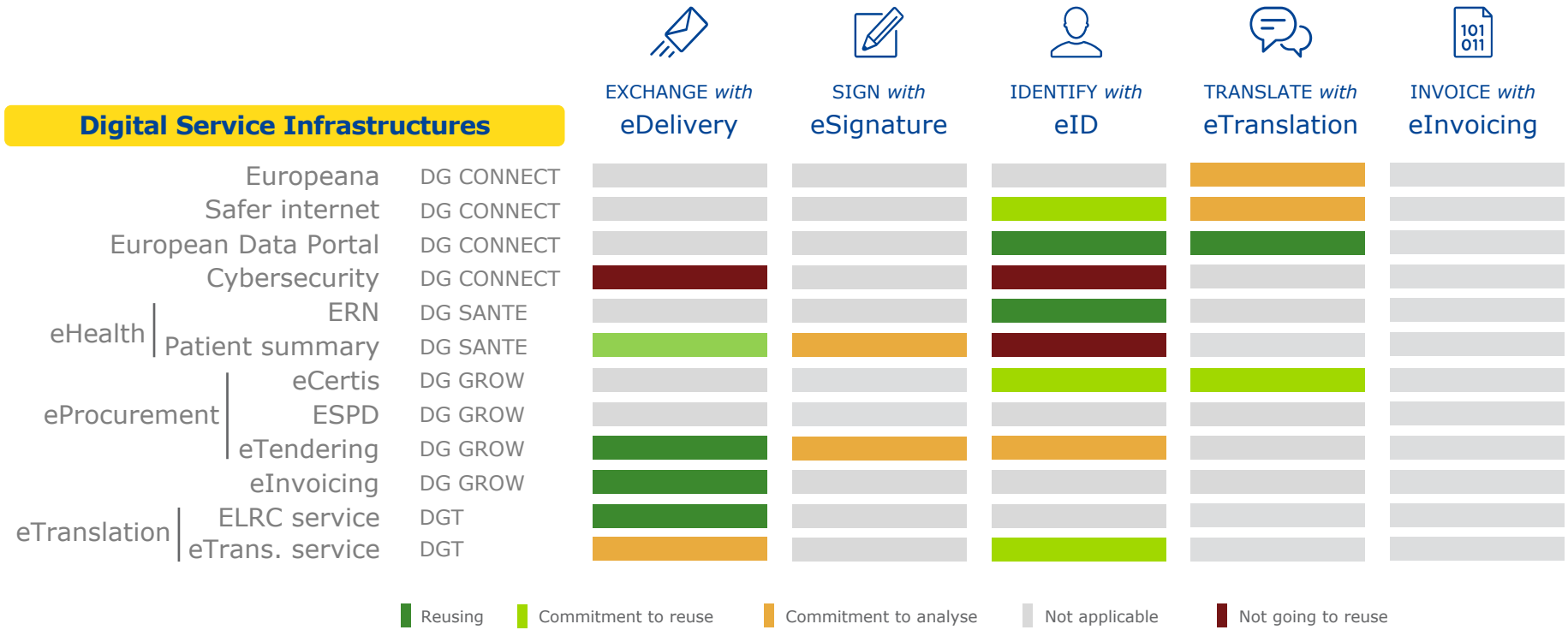
Context Broker

Managing and sharing real time data (context information) via a central hub

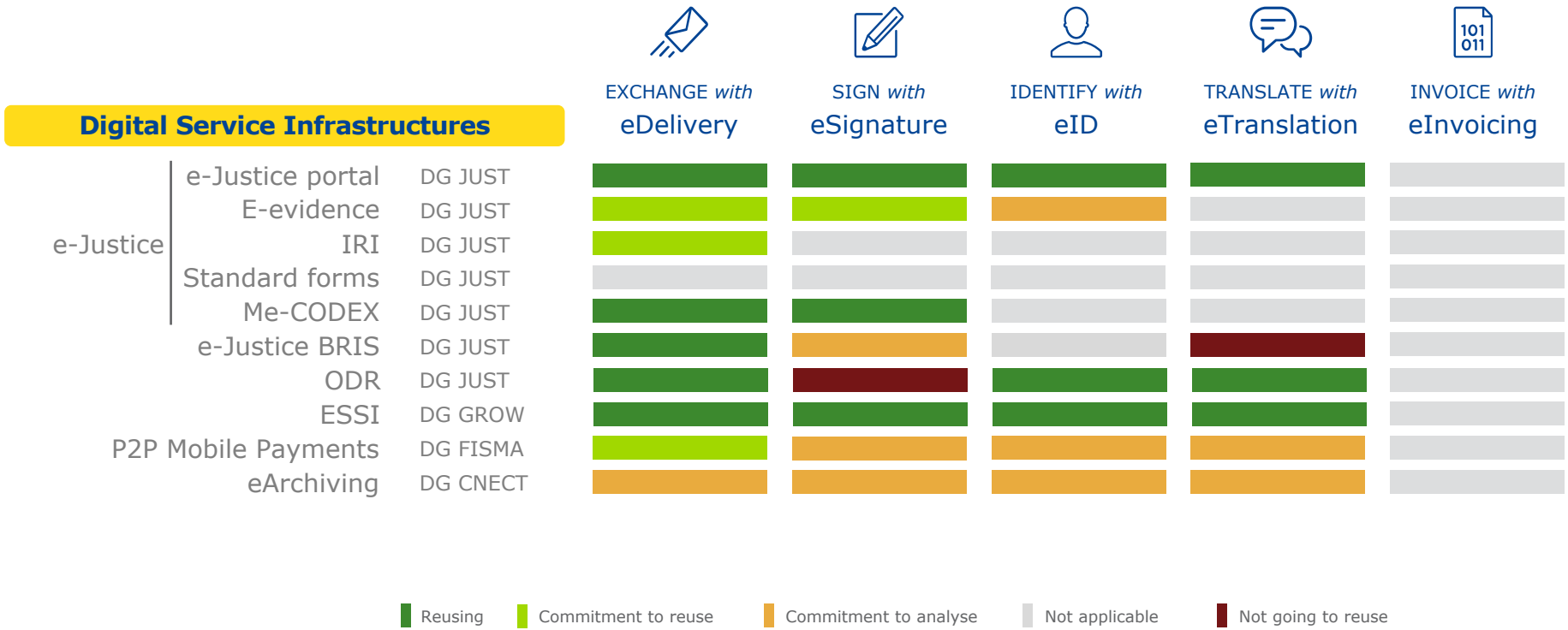
Big Data Test Infrastructure

Data and analytics services from infrastructure to tools for experimenting with Big Data technologies

Deployment in the CEF Digital Programme



Deployment in the CEF Digital Programme



Significant growth in the last year. Since November 2017…

Reuse

+ 128 %

41 more projects at the EC are **reusing** the CEF Building Blocks

32
EC projects reusing BBs

73
EC projects reusing BBs

Nov. 2017 **Nov. 2018**

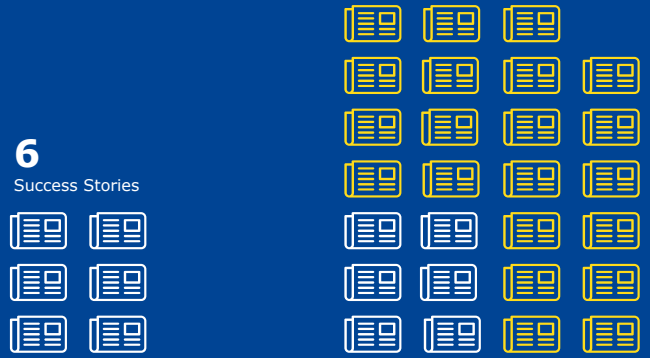
Success Stories

+ 350%

21 more teams told us how they have successfully re-used the CEF Building Blocks

6
Success Stories

27
Success Stories



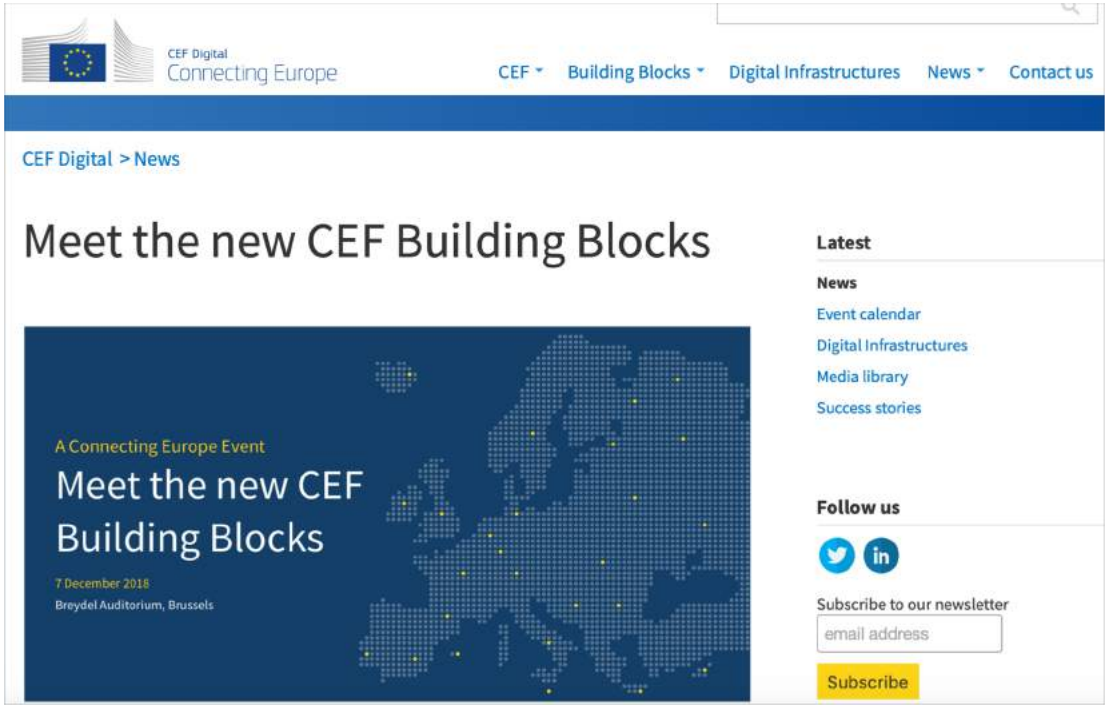
Nov. 2017 **Nov. 2018**

Monitoring dashboard on CEF Digital

View Success Stories on CEF Digital

New DSI's!!!

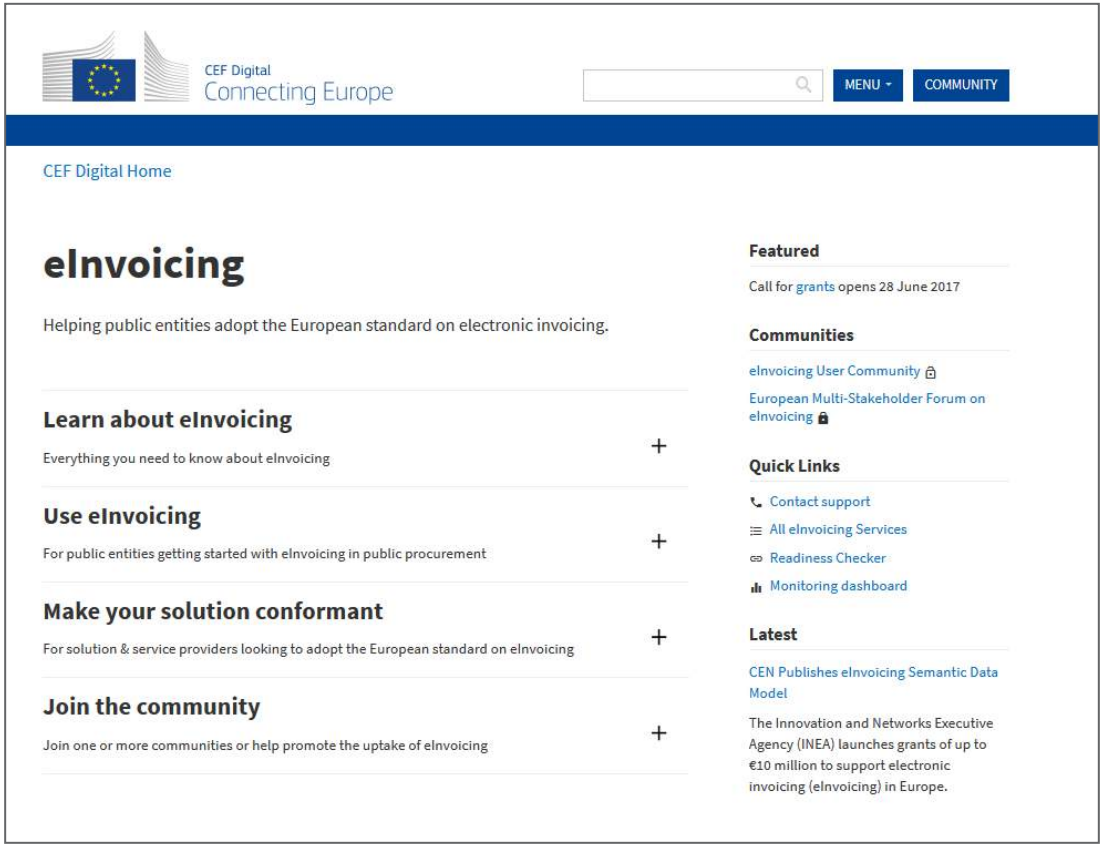
- **In 2019, 3 new DSIs will be launched and new funding will be made available through CEF.**
- **Big Data Testing Facilities**
- **eArchiving**
- **Context Broker**



European Commission

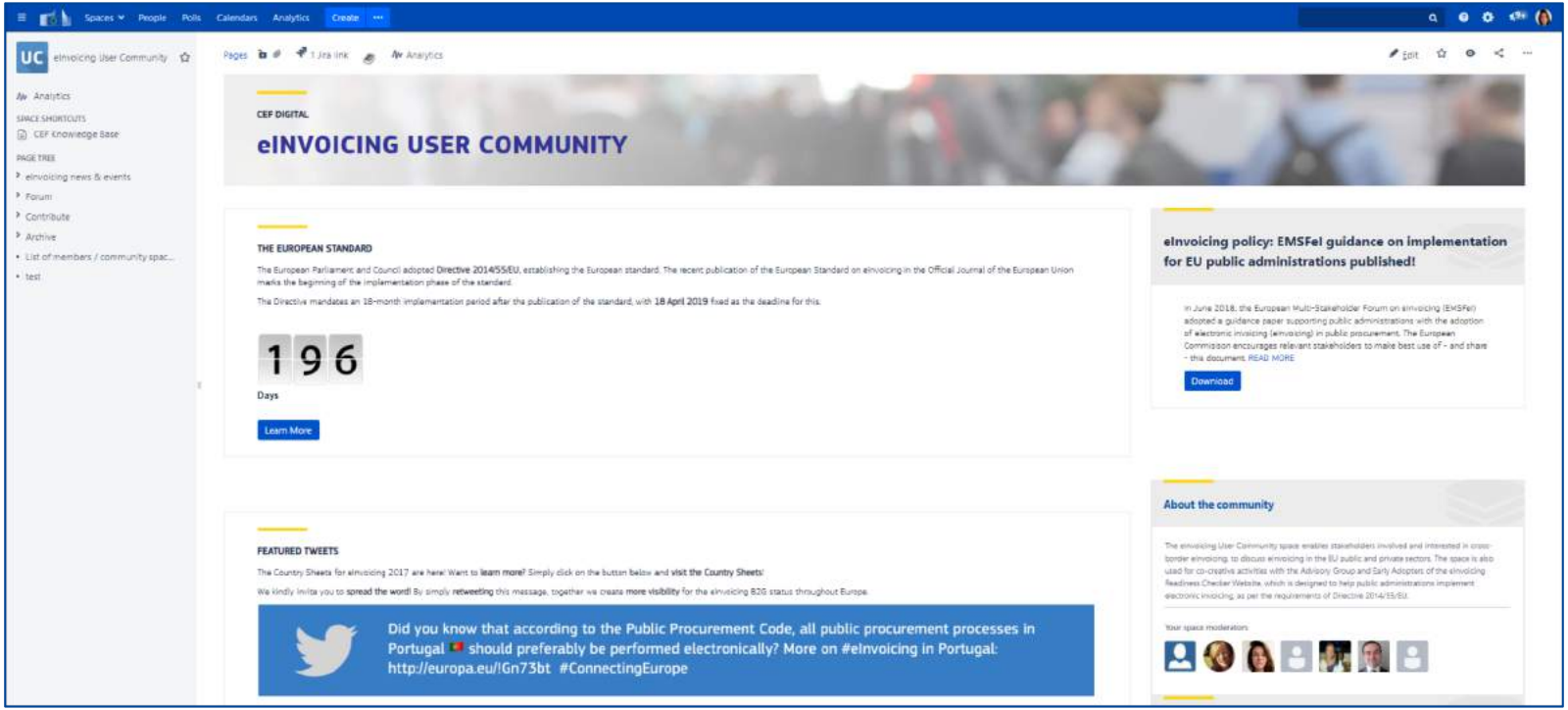
CEF Digital

CEF Digital



European Commission

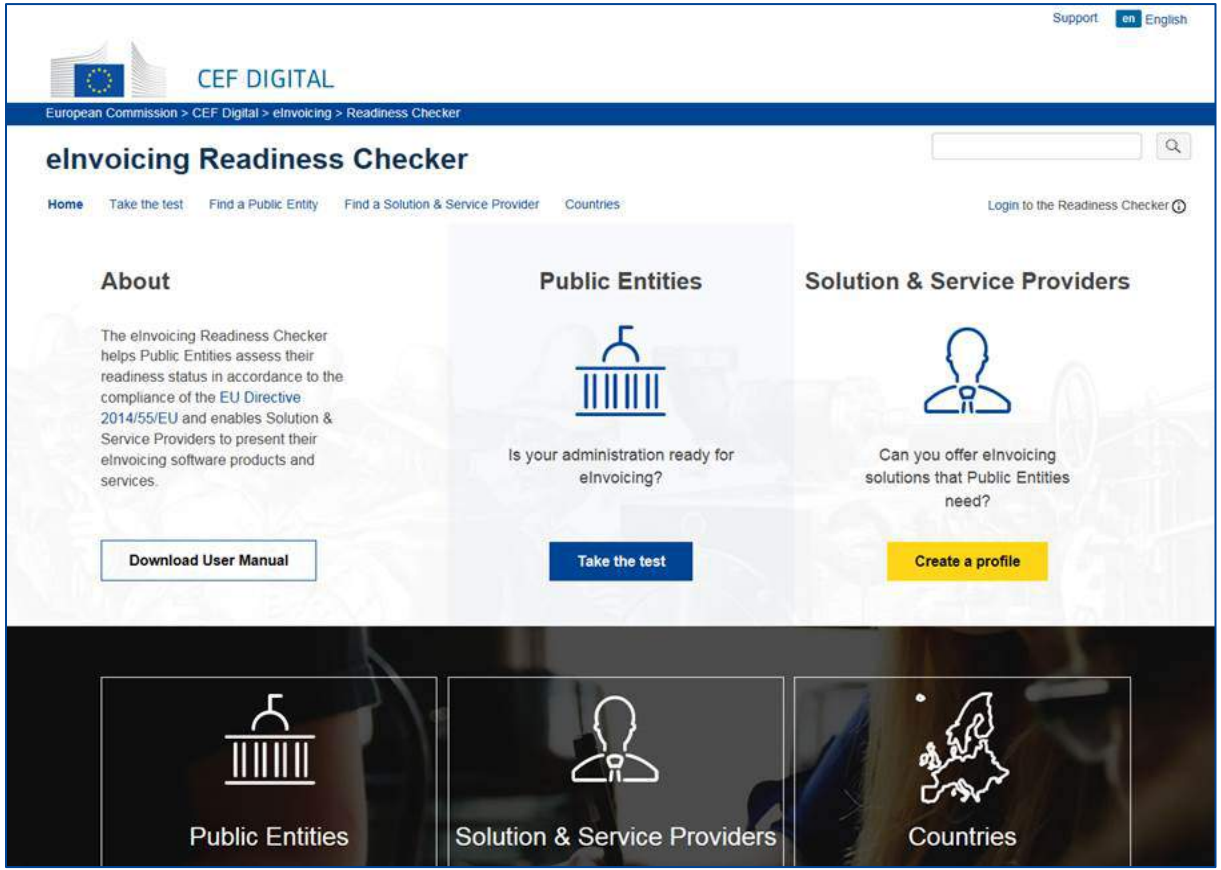
CEF eInvoicing User Community



Keep an eye out for CEF eInvoicing event in Brussels on 4 December

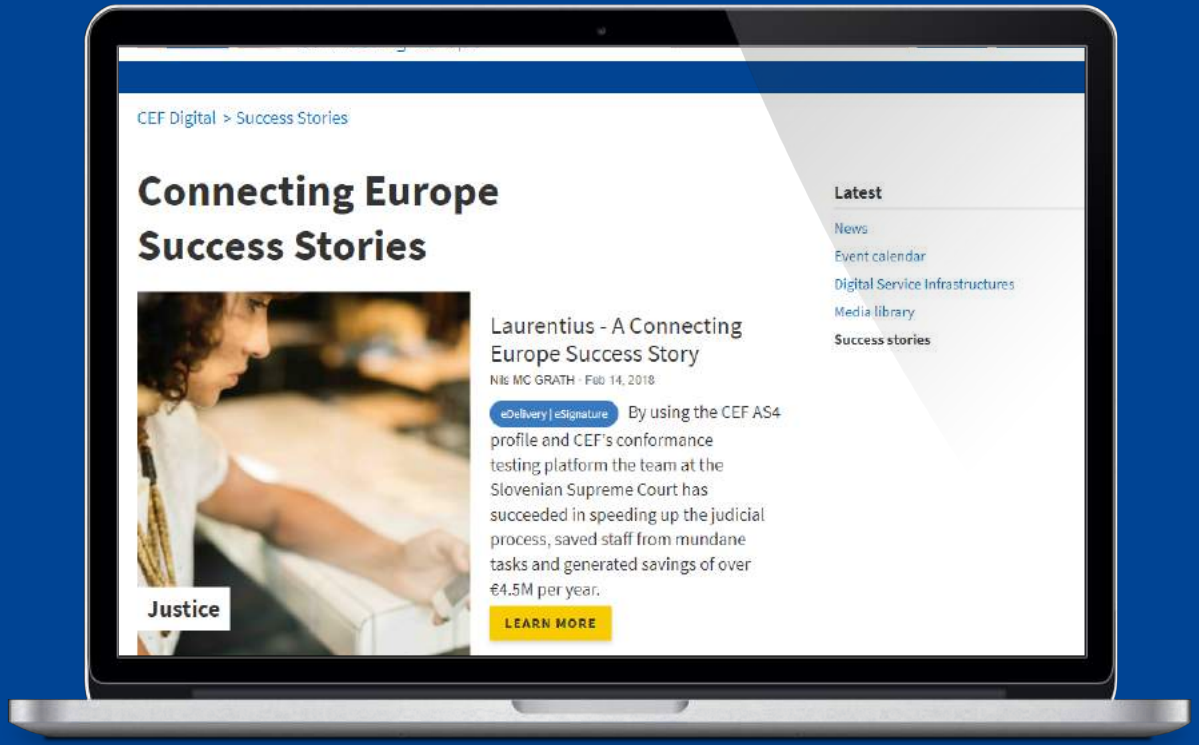
European Commission

eInvoicing Readiness Checker



European Commission

* https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL/Success+Stories



Read all the Connecting Europe success stories on CEF Digital

View ›

CEF eInvoicing Trainings

OBJECTIVE OF THE SERVICE

The CEF eInvoicing training service provides policy makers, public entities, suppliers to public entities, solution & service providers with information on the eInvoicing Directive and the European standard on eInvoicing. The following type of sessions are available:

Implementation workshops – one full or one half-day on-site workshop provided to public entities and policy makers So far workshops in **Cyprus, Finland, Estonia, Poland, Greece, Croatia, Ireland, Sweden and Malta**; Apply via CEF-BUILDING-BLOCKS@ec.europa.eu

Remote trainings – live open online sessions focused on eInvoicing topics for specialised target audiences

Webinars – series of 9 one-hour long webinars on eInvoicing topics open to all audiences (all materials & recordings available on CEF Digital)

BENEFITS

- Free of charge information sessions that aim to support public entities and software & service providers to comply with the eInvoicing Directive and the European standard on eInvoicing

Achievements

Past eInvoicing workshops

Scope changed during the first year from **capacity building** to **actual hands-on** implementation workshops.

Different maturity levels in the EU:

- Only few high maturity Member States
- Large group of Member States getting started
- 8 less maturity Member States

- **11 on-site workshops** held from **Sep. 2017 to Oct. 2018**

	2017	2018	2019	Request
September	**Finland** **Cyprus**			
October		**Sweden** **Lithuania**		
November	**Poland** **Estonia**	**Czech Rep.** **Germany**		
December	**Greece**	**Austria** **Spain**		
January			**Ireland (2)** **Portugal**	
February		**Croatia**		**Denmark** **Norway** **Belgium** **Italy** **Latvia** **France** **Greece (2)** **Estonia (2)** **Cyprus (2)** **Finland (2)** **EESPA?** **EBA?**
March		**EESPA**	**EESPA**	
April		**Ireland** **Malta**		
May				
June				

Green = Done or planned

Red = Agreed but details missing

Blue = Request for workshop but not planned

Current landscape

First set of workshops was intended to:

- Setting the scene
- Getting Member States up to speed with eInvoicing
- Focus on Public authorities

The Member States are going from **gaining knowledge and capacity building** to **actual implementations** of the eInvoicing Directive

- Only few Member States are implementation ”ready”
- Large group of countries is now moving faster
- Some Member States still have no active role in the community or is currently planning for implementation

New focus = new material and workshops

With the **increase in demand** and **change of scope**, CEF will focus on:

- Getting the last Member States onboard
- Onboarding service providers
- New material on implementation roadmaps
- New Webinars

Focus has changed in **75%** of the Member States to **actual implementation** of the building blocks, CIUS creation, governance model.

We will **continue to offer the first workshop** to those countries who did not yet benefit from it.

On request, we will offer **follow-up workshops on onboarding service providers** and only if demand permits.

New content available *for* ***workshops*** *and* ***webinars*** *oriented towards* ***private sector*** *including best practice, roadmaps and implementation guides, hands-on support with CIUS and eDelivery.*

eInvoicing from a user's perspective

Martin Forsberg
DIGIT

Background

- Problems with **many standards**
- **Lack of normative contextualised standards** (only workshop agreements)
- **Different approaches and ambitions** in Member States to implementing eInvoicing and eProcurement
- The Directive on electronic invoicing in public procurement (Directive 2014/55/EU) was developed, setting a **minimum requirement** for the public sector

> **From the Directive**
>
> *The benefits of electronic invoicing are maximised when the generation, sending, transmission, reception and processing of an invoice can be fully automated.*
>
> *…*
>
> *A mere image file should not be considered to be an electronic invoice for the purpose of this Directive.*

Requirements for the contracting authorities/entities

From article 7

Receipt and processing of electronic invoices

*Member States shall ensure that contracting authorities and contracting entities **receive and process electronic invoices** which comply with the **European standard on electronic invoicing** whose reference has been published pursuant to Article 3(2) and with **any of the syntaxes on the list** published pursuant to Article 3(2).*

a list with a limited number of syntaxes which comply with the European standard on electronic invoicing

Semantic data model of the core elements of an electronic invoice

Definitions

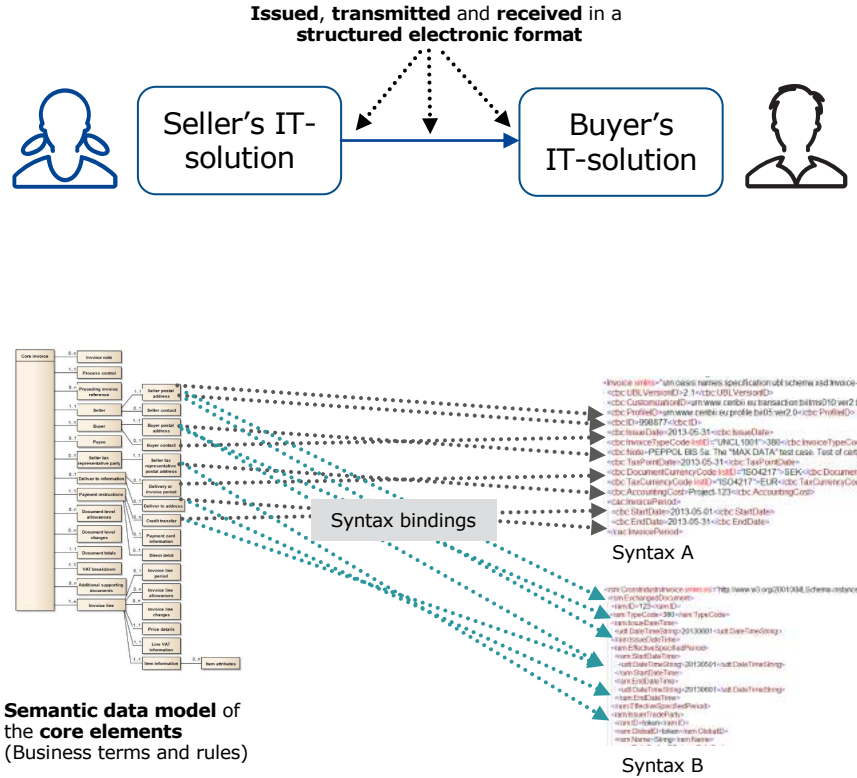
(1) **‘electronic invoice’** means an invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing;

(2) ‘**core elements of an electronic invoice**’ means a set of essential information components which an electronic invoice must contain in order to enable cross-border interoperability, including the necessary information to ensure legal compliance;

(3) ‘**semantic data model**’ means a structured and logically interrelated set of terms and their meanings that specify the core elements of an electronic invoice;

(4) ‘**syntax**’ means the machine readable language or dialect used to represent the data elements contained in an electronic invoice;

(5) ‘**syntax bindings**’ means guidelines on how a semantic data model for an electronic invoice could be represented in the various syntaxes;



European Commission

So eInvoicing, in the context of the Directive, is

- Formatted in a structured way so that it can be processed efficiently
- Issued, transmitted and received electronically

This rules out:

- Paper invoices which are scanned by the receiver but managed in an electronic workflow system
- PDF-invoices created by the issuer and sent to the receiver

eInvoicing from a user perspective

Why eInvoice?

Quicker payments

Better quality

Good for environment

Saves time

Better security

Required by the customer

Cost saving

Required by law?

Many different options – Generation of the eInvoice

generation
transmission
reception
processing

Generation of the eInvoice, examples

- Directly from the ERP/Accounting system

  - Often internal format which is transformed into exchange format

- Through a web-portal

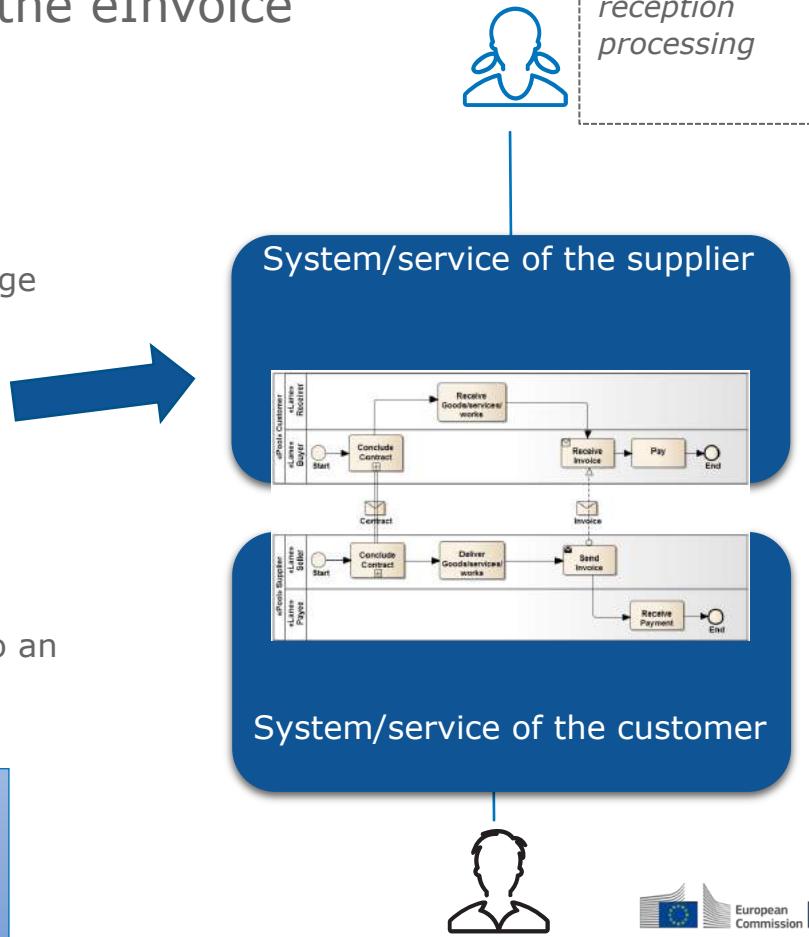
  - Provided by the customer

  - By supplier's own choice

- Printer capture/Virtual printer

  - Software installed as printer

  - When printing, the data is captured and transformed to an eInvoice



Preferred option may depend on
- *Volume of invoices*
- *Size of supplier*
- *Requirement from customer*

European Commission

Many different options – transmission of the eInvoice

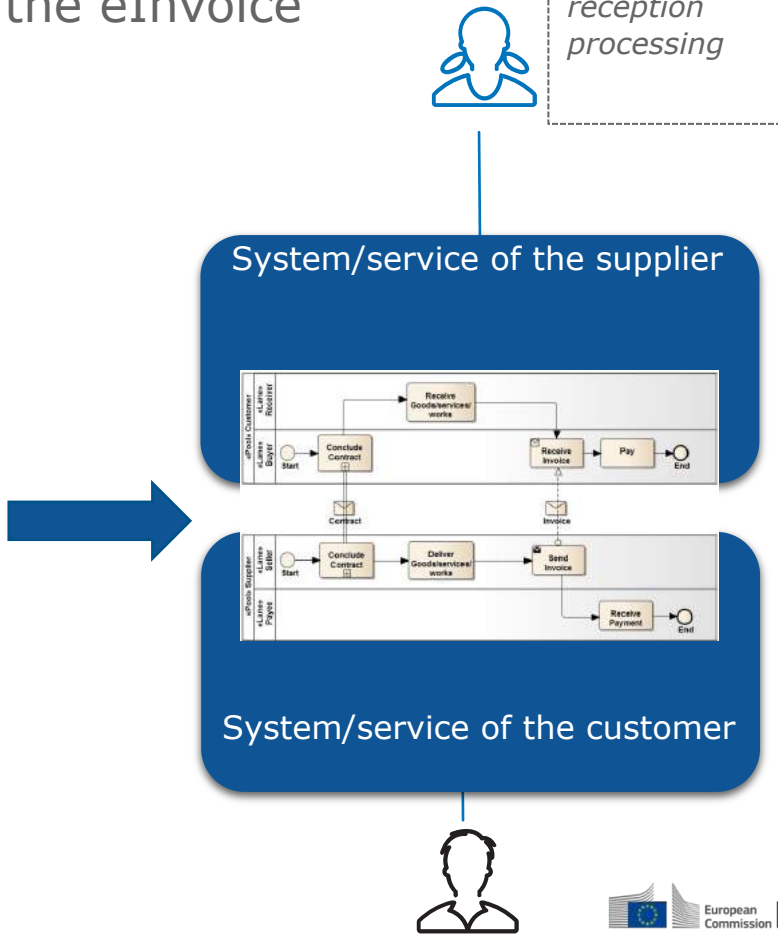
generation
transmission
reception
processing

Transmission of the eInvoice

- 4-corner model – often with help from a service provider
  - Connected to network of other service providers
  - Connected to an eDelivery network (PEPPOL)

- 3-corner model – both trading partners are using the same platform

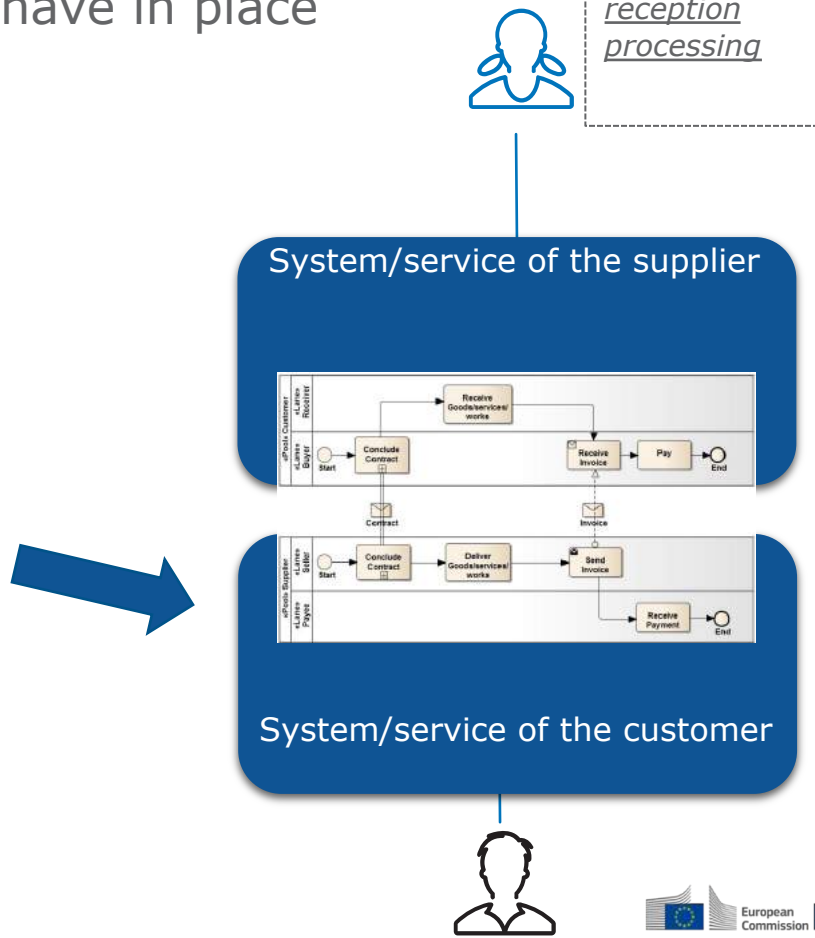
- 2-corner - Peer-to-peer, direct connection
  - FTP, web service/API, e-mail



Reception of eInvoice - components to have in place

- Workflow for eInvoice/eProcurement solution
  - For handling the eInvoices in an efficient manner
  - Visualization, assessment/approval
  - Sometimes integrated in the ERP but often a separate service
- ERP/Accounting solution
  - For accounting and payment initiation

generation
transmission
reception
processing



Centralized or decentralized handling of invoice assessment

generation
transmission
reception
processing

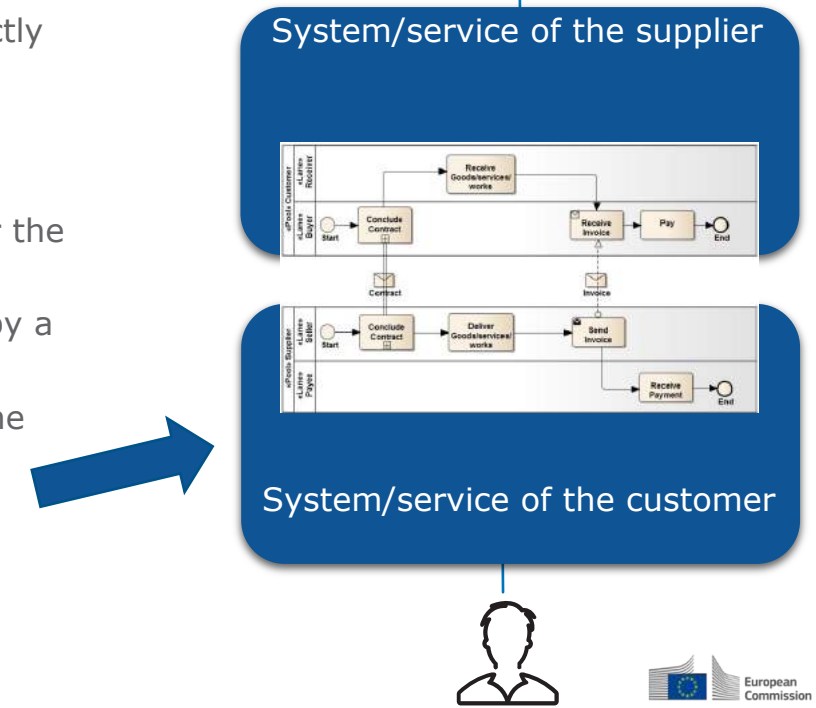
- For invoices which are not automatically matched, a manual assessment is necessary
- By using references, the invoice can be forwarded directly to the person/role responsible for assessing the invoice

  - Requires a workflow system

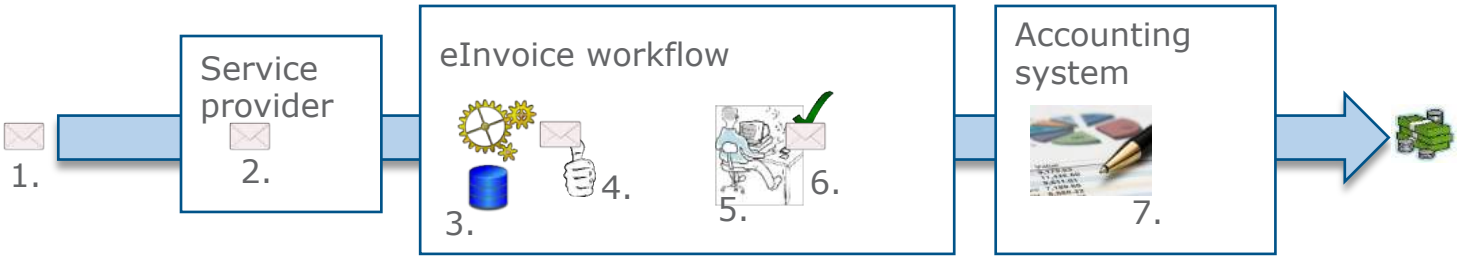
  - Important with data quality of the reference value

  - Sometimes hard to make the supplier to provide/enter the reference
- Without available references, all invoices are received by a single entry point

  - Person/function assessing or forwards the invoice to the relevant person



Buyer process – manual assessment with workflow support

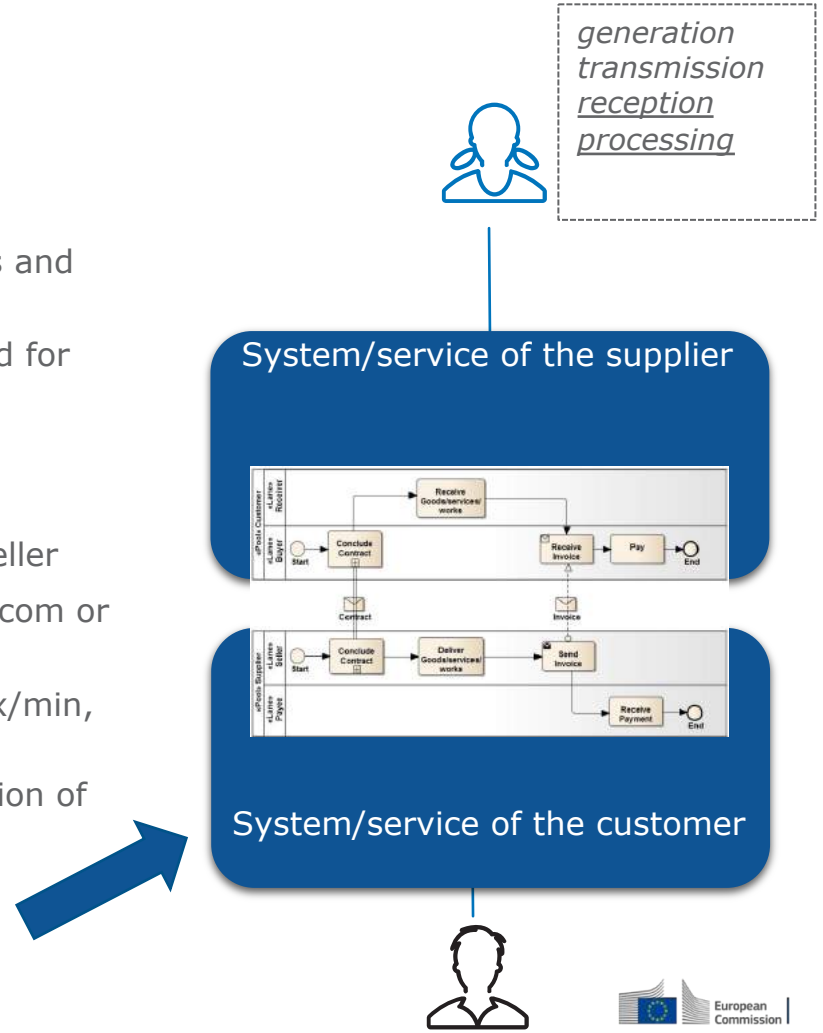


1. The invoice is transmitted from the supplier
2. The invoice is received by the buyer
3. The invoice is routed automatically to the workflow
4. The supplier information is verified
5. There is a buyer reference in the invoice for forwarding in the workflow
6. The invoice is assessed and approved
7. Cost is booked into accounts and payment is initiated

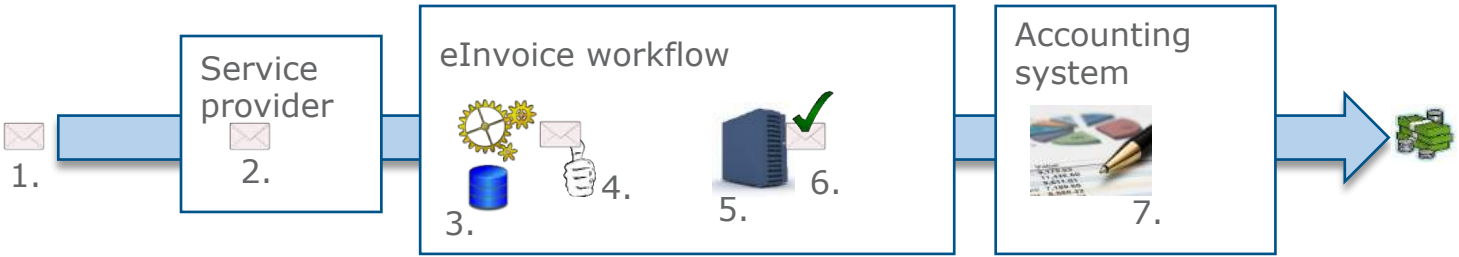
Straight through invoice processing

- Information in the invoice is used to automatically assess and approve the invoice
- Only invoices deviating from what is expected are marked for manual assessment

- Use of Order reference
  - Refers to a purchase order previously issued by the seller
- Periodical invoices related to subscription, electricity, telecom or other invoice objects
  - Requires an invoice object registry with approved max/min, allowed variances
  - Can result in positive side effects – such as identification of unused phone subscriptions



Buyer process – straight through processing



1. The invoice is transmitted from the supplier
2. The invoice is received by the buyer
3. The invoice is routed automatically to the workflow
4. The supplier information is verified
5. The invoice has a reference to an order or a registered object (e.g subscription number, rent object id). Rules for approval is associated with the registered object
6. The invoice is automatically assessed and approved
7. Cost is booked into accounts and payment is initiated

The European Norm and its content

Martin Forsberg
DIGIT

Initiation of the standardisation

From article 3

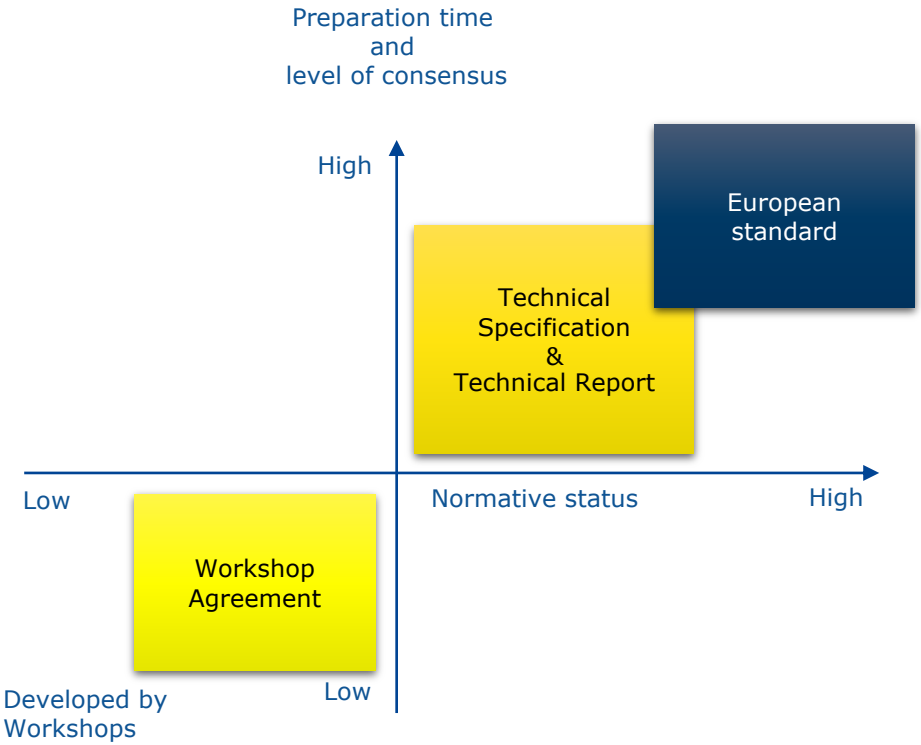
*The Commission shall request that the relevant **European standardisation organisation** draft a European standard for the semantic data model of the core elements of an electronic invoice (the 'European standard on electronic invoicing').*

…

The Commission shall request that the relevant European standardisation organisation provide a list with a limited number of syntaxes which comply with the European standard on electronic invoicing, the appropriate syntax bindings and guidelines on transmission interoperability, in order to facilitate the use of such standard.

CEN/TC 434 was established

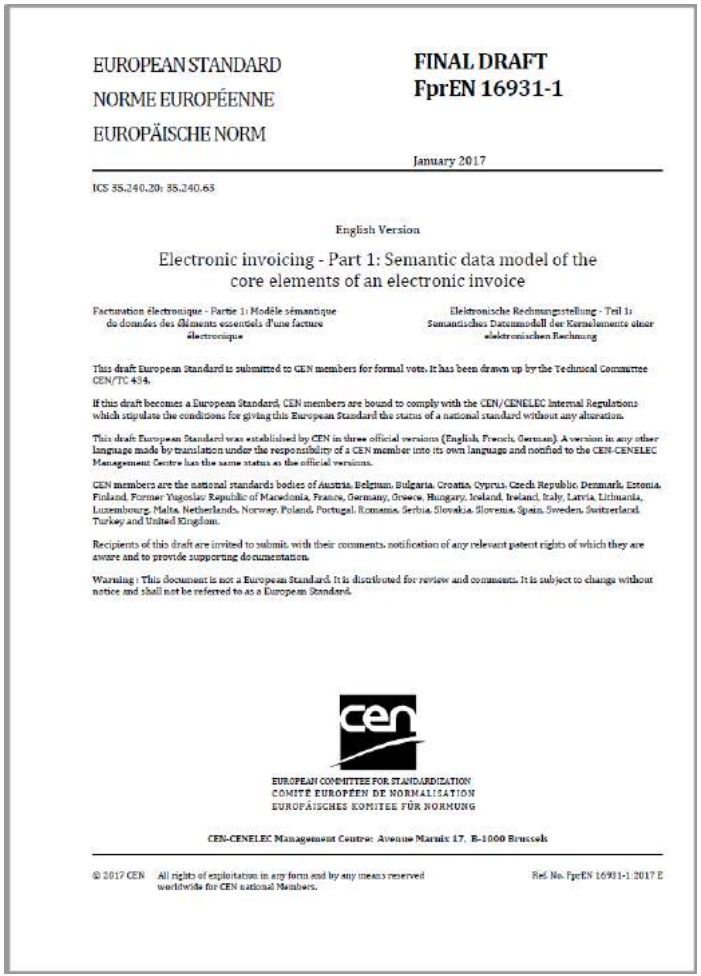
- CEN - European Committee for Standardisation
- The work started in a project committee (PC434) but was later changed into a technical committee (TC434)
- TC434 has over 100 committee members from 31 countries
- Participation in the work must go through the national standardisation committees.
- The committee is about to finalize all deliverables defined in the standardisation request



Current status

Number	Title	Status
EN 16931-1	Semantic data model of the core elements of an electronic invoice	Approved!
CEN/TS 16931-2	List of syntaxes that comply with EN 16931-1	Approved!
CEN/TS 16931-3-1	Methodology for syntax bindings of the core elements of an electronic invoice	Approved!
CEN/TS 16931-3-2	Syntax binding for ISO/IEC 19845 (UBL2.1) invoice and credit note	Approved!
CEN/TS 16931-3-3	Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B	Approved!
CEN/TS 16931-3-4	Syntax binding for UN/EDIFACT D16B	Approved!
CEN/TR 16931-4	Guidelines on interoperability of electronic invoices at the transmission level	Approved!
CEN/TR 16931-5	Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment	Approved!
CEN/TR 16931-6	Result of the test of EN 16931-1 with respect to its practical application for an end user	Approved!

Introduction to key concepts of the standard



EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

FINAL DRAFT
FprEN 16931-1

January 2017

ICS 35.240.20; 35.240.63

English Version

Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice

Facturation électronique - Partie 1: Modèle sémantique de données des éléments essentiels d'une facture électronique

Elektronische Rechnungsstellung - Teil 1: Semantisches Datenmodell der Kernelemente einer elektronischen Rechnung

This draft European Standard is submitted to CEN members for formal vote. It has been drawn up by the Technical Committee CEN/TC 434.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Ref. No. FprEN 16931-1:2017 E

Section 1-3 - Scope, references, terms & definitions

Section 4 – The concept of a core invoice

Section 5 – Business process to support

Section 6 – The semantic model, rules and data types

Section 7 – Core Invoice Usage Specification (and compliance)

Annex A – Examples (Informative)

Annex B – Assessment of the EN towards the Standardization request (Informative)

Annex C – How does the EN meet legal requirements (Informative)

Annex D – BPMN symbols (informative)

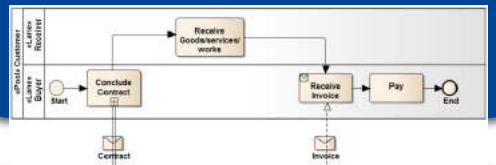
European Commission

Areas covered by the standard

The European Standard

- Steps in the process
- Information to exchange
- Technical format
- Transport/eDelivery

System/service of the customer



System/service of the supplier

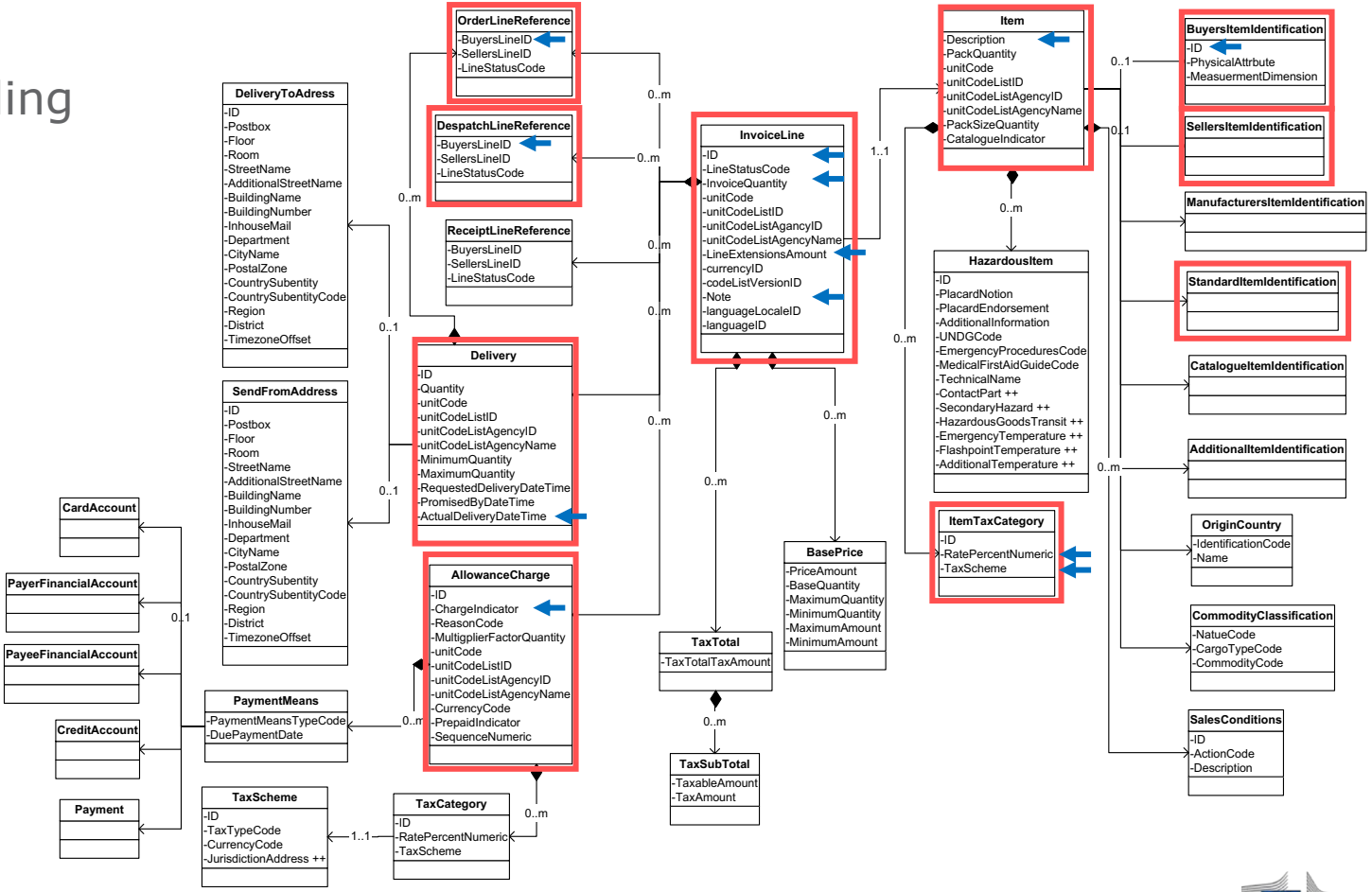
Reasons for a core invoice

The European standard recognises the following reasons:

- Business environment is diverse – also the need for information exchange
- Invoices from different situations may potentially contain many information elements – a complete model becomes very large and complex
- Even if it would technically be possible to have a large model, it would be challenging and costly
- When different countries/industries use subset of large standards, interoperability is hampered and silo-implementations are created

EN 16931-1:2017 Chapter 4

Common understanding



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The concept of a core invoice – How?

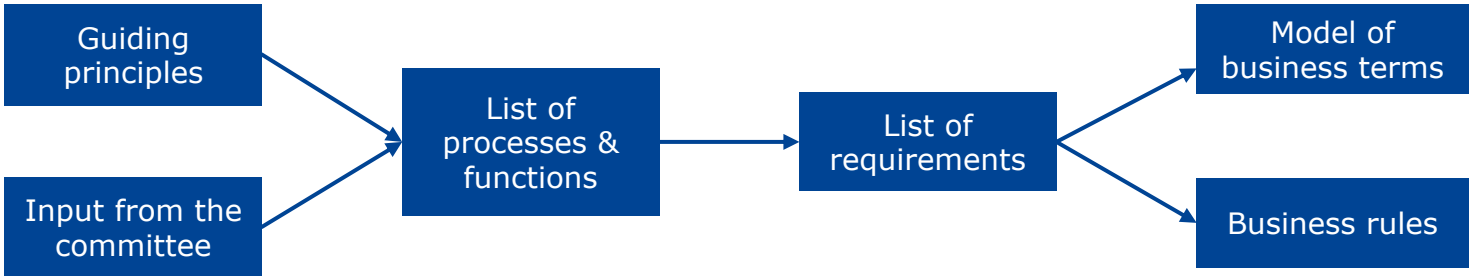
The norm identifies a few **guiding principles**:

- It should be easier to use than paper invoicing
- Standardised information elements makes processing more efficient (than paper invoices)
- It should be possible to use without prior consultation or bilateral agreements
- It should contain information to enable efficient and automatic processing
- Software should be able to present all information, and automatically process structured data
- Structured data should result in optimised business processes
- The core invoice model should not make assumptions on the method of creation, delivery or processing
- The core invoice model should not make assumptions on the syntax or transmission technology

EN 16931-1:2017 Chapter 4

Requirement driven approach on defining the model

- Each business term in the model comes from one or more documented (and numbered) requirement
- The requirements give a good understanding of the background



Business processes to support

The invoice model contains information elements to support the following processes

— P1: Invoicing of deliveries of goods and services against purchase orders, based on a contract

— P2: Invoicing deliveries of goods and services based on a contract

— P3: Invoicing the delivery of an incidental purchase order

— P4: Pre-payment

— P5: Spot payment

— P6: Payment in advance of delivery

— P7: Invoices with references to a despatch advice

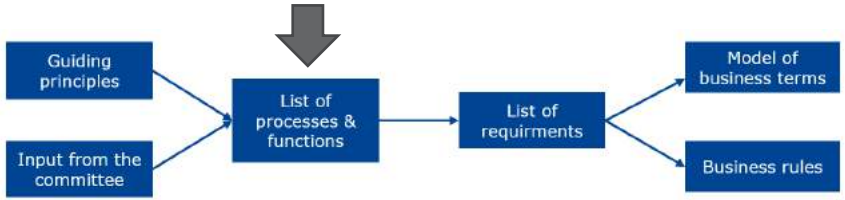
— P8: Invoices with references to a despatch advice and a receiving advice

— P9: Credit notes or invoices with negative amounts, issued for a variety of reasons including the return of empty packaging

— P10: Corrective invoicing (cancellation/correction of an invoice)

— P11: Partial and final invoicing

— P12: Self billing



EN 16931-1:2017 Chapter 5.2.1

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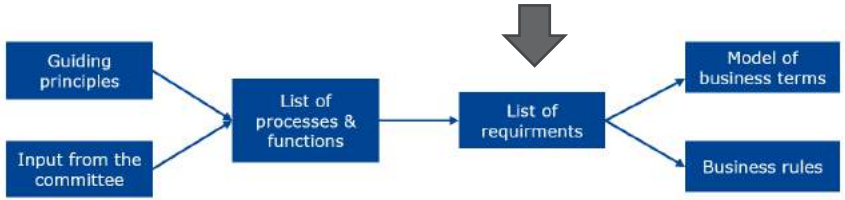
Business requirements derived from the processes

- Based on the identified processes and listed invoice functions, requirements are defined
- Each requirement has an assigned identifier

R5	information to trace to a single related purchase order from the document level (all processes, except P2 and P5);
R6	information to trace to a single related purchase order line from the invoice line (all processes, except P2 and P5);
R7	information to trace to a single contract and the underlying call for tenders from the document level (all processes, except P3 and P5);



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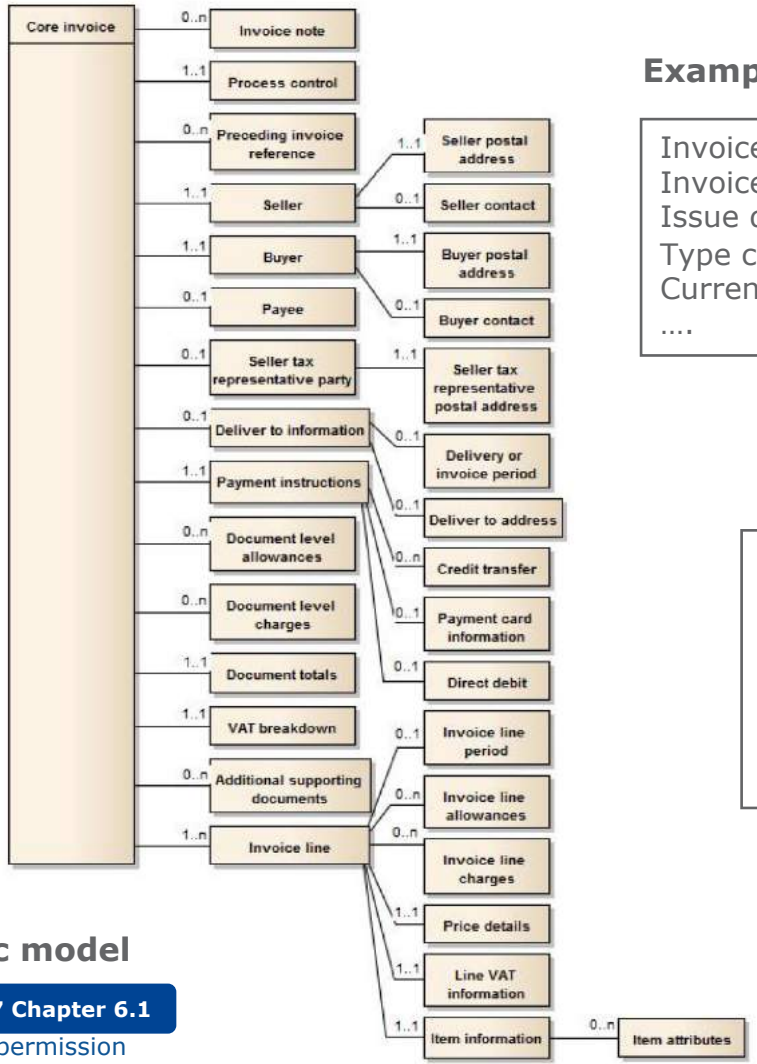

Examples of key components

Invoice (header)
Invoice number (1..1)
Issue date (1.1)
Type code (1.
Currency cod
….

Seller information
Name (1..1)
Trading name (0..1)
Identifier (0..n)
Legal registration identifier (0..1)
VAT num
Additiona
…

Payment instructions
Payment means type code (1..1)
text (0..1)
(0..1)

VAT Breakdown
Category taxable amount (1..1)
Category tax amount (1..1)
Category code
Category rate (
Exemption text
Exemption cod

Item information
Name (1..1)
Description (0..1)
Sellers identifier (0..1)
Buyers identifier (0..1)
Standard identifier (0..1)
Item classification (0..n)
Country of origin (0..1)

The semantic model

EN 16931-1:2017 Chapter 6.1

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Examples of business terms

ID	Level	Cardinality	Business Term	Description	Usage Note	Req. ID	Semantic data type [2]
BT-1	+	1..1	Invoice number	A unique identification of the Invoice.	The sequential number required in Article 226(2) of the directive 2006/112/EC [2], to uniquely identify the Invoice within the business context, time-frame, operating systems and records of the Seller. It may be based on one or more series of numbers, which may include alphanumeric characters. No identification scheme is to be used.	R56	Identifier
BT-2	+	1..1	Invoice issue date	The date when the Invoice was issued.		R56	Date
BT-3	+	1..1	Invoice type code	A code specifying the functional type of the Invoice.	Commercial invoices and credit notes are defined according the entries in UNTDID 1001 [6]. Other entries of UNTDID 1001 [6] with specific invoices or credit notes may be used if applicable.	R44	Code

ID – Unique id for each business term

Level – indicates depth in model (+, ++, +++, ++++)

Cardinality – Indicates optionality, repetitions allowed

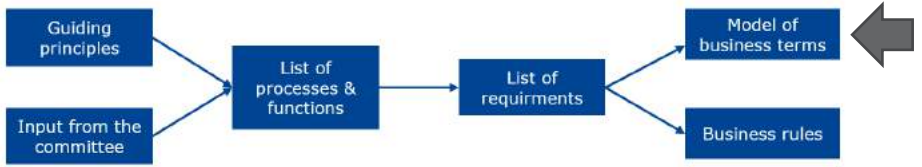
Business term – name of the business term

Description – short description/definition

Usage note – guiding/explanatory information

Req id – reference to underlying requirement

Data type – the type of



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Business rules

- Conditions – dependencies between terms
- Integrity constraints (In many cases, the data model cardinality indicates the same thing)

ID	Description	Target / context	Business term / group
BR-CO-8	Invoice line charge reason code and Invoice line charge reason shall indicate the same type of charge reason.	Invoice line Charges	BT-144, BT-145
BR-CO-9	The Seller VAT identifier, Seller tax representative VAT identifier, Buyer VAT identifier shall have a prefix in accordance with ISO code ISO 3166-1 alpha-2 by which the country of issue may be identified. Nevertheless, Greece may use the prefix 'EL'.	VAT identifiers	BT-31, BT-48, BT-63
BR-CO-10	Sum of Invoice line net amount = ∑ Invoice line net amount.	Document totals	BT-106

ID – Unique id for each business rule

Description – textual description of the rule

Target/Context – the cgroup/class for where the rule applies

Business term/group – reference to the term for which the rule applies

EN 16931-1:2017 Chapter 6.4.2

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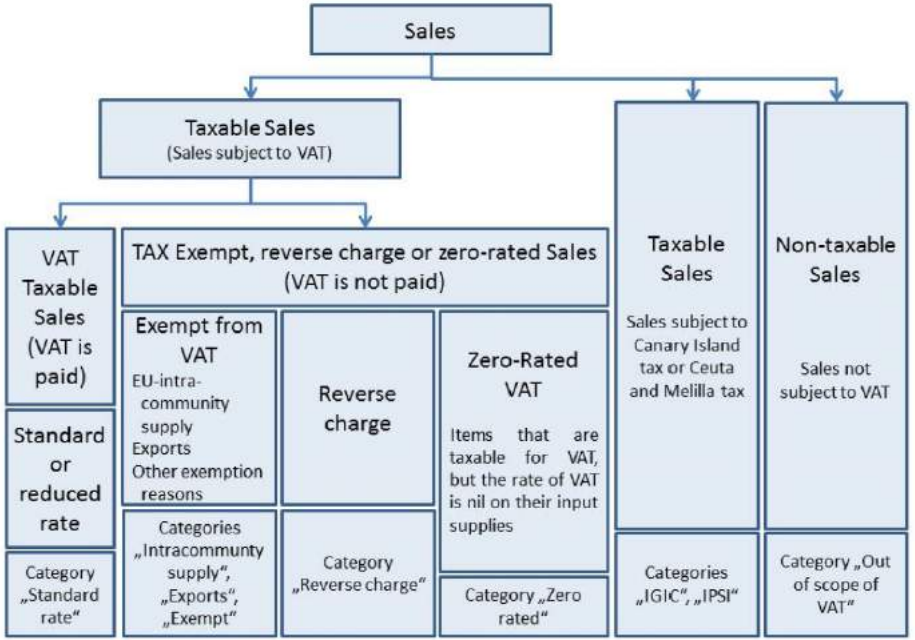
Business rules – VAT Rules

- VAT Rules – Rules for each VAT category



ID	Description
BR-Z-1	An Invoice that contains a line, a document level allowanc where the Invoiced item VAT category code (BT-151, BT- shall contain in the VAT breakdown (BG-23) exactly one equal with "Zero rated".
BR-Z-2	An Invoice that contains a line where the Invoiced item VAT category code (BT-151) is "Zero rated" shall contain the Sellers VAT Identifier (BT-31), the Seller Tax registration identifier (BT-32) or the Seller tax representative VAT identifier (BT-63).
BR-Z-3	An Invoice that contains a document level allowance where the Invoiced item VAT category code (BT-95) is "Zero rated" shall contain the Sellers VAT Identifier (BT-31), the Seller Tax registration identifier (BT-32) or the Seller tax representative VAT identifier (BT-63).

EN 16931-1:2017 Chapter 6.4.3

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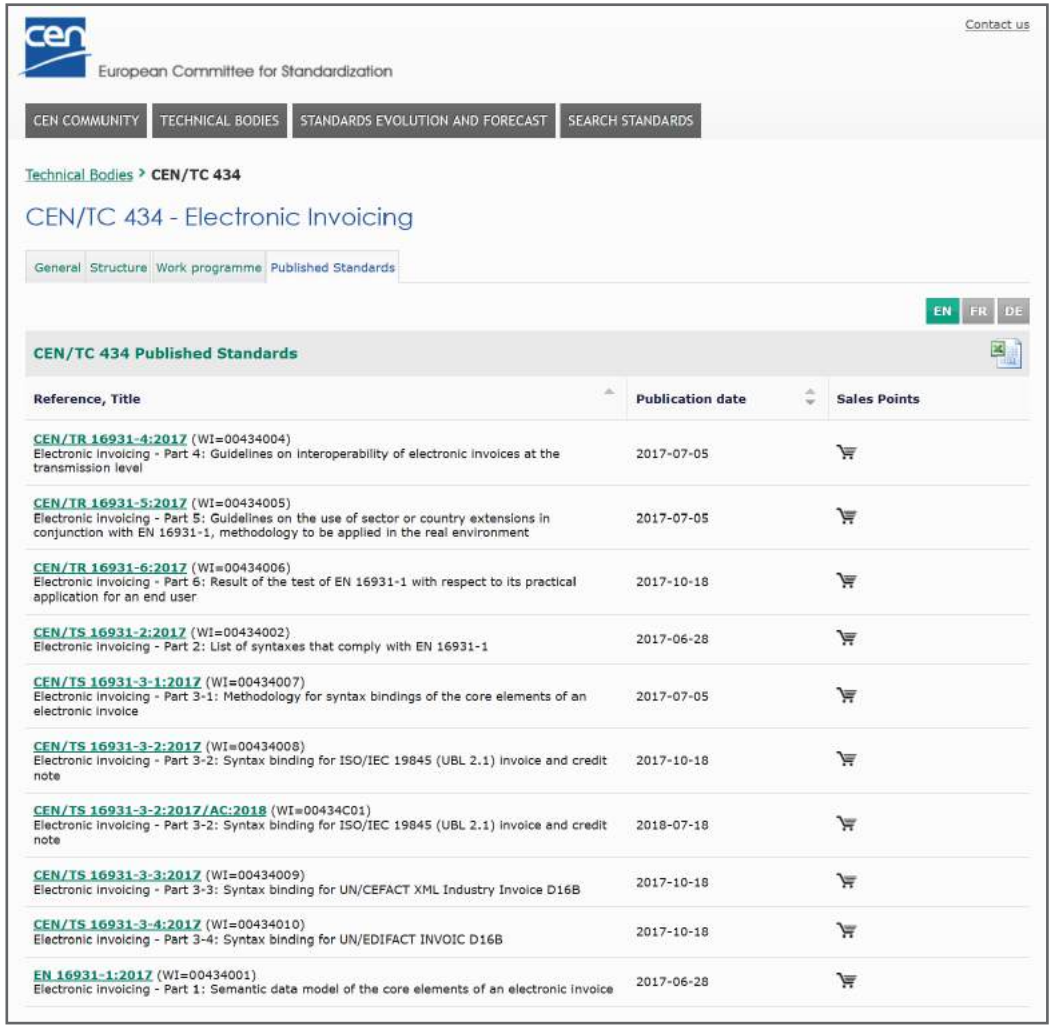
Access to the specifications

Negotiations with the EC on sponsored access – agreement imminent

Be aware of the copyright rules



Examples of questions which the standard gives answers to

Which document types can be attached to an invoice?

Which element should be used for a reference to the customer, similar to "Your reference" in a paper invoice?

We use “Reverse Charge” VAT. Should the Tax Amount always be 0?

Syntaxes which comply with the European standard on eInvoicing

Martin Forsberg
DIGIT

Many syntaxes – a problem?

- There are a large number of syntaxes in use
- Many communities are already using e-invoicing since a long time
- Use of many syntaxes result in interoperability problems

(9)
In order to further simplify the use of electronic invoicing and to reduce costs, one of the long-term objectives should be to **limit the number of syntaxes used**, preferably by concentrating on those most commonly used.

Article 3
Establishment of a European standard
…
The Commission shall request that the relevant European standardisation organisation **provide a list with a limited number of syntaxes** which comply with the European standard on electronic invoicing, the appropriate syntax bindings and guidelines on transmission interoperability, in order to facilitate the use of such standard.

Article 7
Receipt and processing of electronic invoices
Member States shall ensure that contracting authorities and contracting entities receive and process electronic invoices which comply with the European standard on electronic invoicing whose reference has been published pursuant to Article 3(2) and with **any of the syntaxes on the list** published pursuant to Article 3(2).

The standardization request from EC defined a number of criteria

Req ID	Requirement of sub-requirement
1	Comply with the core invoice semantic data model specified in the EN
2	Be international, open and free to use
3	Have a governance and sustainability model
3.1	There is an established organisation maintaining the syntax (format)
3.2	There is a maintenance process that is: - documented with defined participation and voting rules; - governed; - open to participation for stakeholders.
3.3	There is a funding model allowing further development and maintenance.
3.4	Support can be provided (consulting, educating, training) to solution providers (implementers) or users (companies, PAs etc.).
4	Be part of a coherent set of standards and technical specifications to support the broader e-procurement process or the broader e-invoicing supply chain
5	Be widely used in the EU or worldwide
6	Be used in production environments (and not just test) by both the public and the private sector
7	Reflect well-accepted technology and aim to incorporate the latest technological developments considered to be state of the art
8	Have guidelines, code lists, validating tools freely available to ease implementation by ICT vendors and suppliers
9	Have a set of official, freely available syntax-dependent artefacts for validation (the XML Schema or Schematron) to support tool independent validation
10	Have an official updating and versioning strategy that takes due account of backward compatibility, as well as appropriate guidelines for customisation that explain how to extend and restrict the syntax

Specifications from CEN/TC434

Reference	WG	Title
EN 16931-1	WG1	Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
TS 16931-2	WG2	Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
TS 16931-3-1	WG3	Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
TS 16931-3-2	WG3	Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note
TS 16931-3-3	WG3	Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B
TS 16931-3-4	WG3	Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B
~~TS 16931-3-5~~	~~WG3~~	~~Electronic invoicing - Part 3-5: Syntax binding for the Financial Invoice based on ISO 20022~~
TR 16931-4	WG4	Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission guideline
TR 16931-5	WG5	Electronic invoicing - Part 5: Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment
TR 16931-6	WG6	Electronic invoicing - Part 6: result of the test of EN 16931-1 with respect to its practical application for an end user

Specifications from CEN/TC434

Reference	WG	Title
EN 16931-1	WG1	Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
TS 16931-2	WG2	Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
TS 16931-3-1	WG3	Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
TS 16931-3-2	WG3	Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note
TS 16931-3-3	WG3	Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B
TS 16931-3-4	WG3	Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B
~~TS 16931-3-5~~	~~WG3~~	~~Electronic invoicing - Part 3-5: Syntax binding for the Financial Invoice based on ISO 20022~~
TR 16931-4	WG4	Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission guideline
TR 16931-5	WG5	Electronic invoicing - Part 5: Guidelines on the use of sector or country extensions in conjunction with EN 16931-1, methodology to be applied in the real environment
TR 16931-6	WG6	Electronic invoicing - Part 6: result of the test of EN 16931-1 with respect to its practical application for an end user

Specifications from CEN/TC434

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EN 16931-1	WG1	Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice
TS 16931-2	WG2	Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1
TS 16931-3-1	WG3	Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice
TS 16931-3-2	WG3	Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note
TS 16931-3-3	WG3	Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Cross Industry Invoice D16B
TS 16931-3-4	WG3	Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B
~~TS 16931-3-5~~	~~WG3~~	~~Electronic invoicing - Part 3-5: Syntax binding for the Financial Invoice based on ISO 20022~~
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TR 16931-6	WG6	Electronic invoicing - Part 6: result of the test of EN 16931-1 with respect to its practical application for an end user

Usage specifications and compliance

Martin Forsberg
DIGIT

Compliance and conformance - The European standard defines these concepts

Compliant
some or all features of the core invoice model are used and all rules of the core invoice model are respected

Core Invoice Usage Specifications

Conformant
all rules of the core invoice model are respected and some additional features not defined in the core invoice model are also used

Extensions

From article 7 in the directive

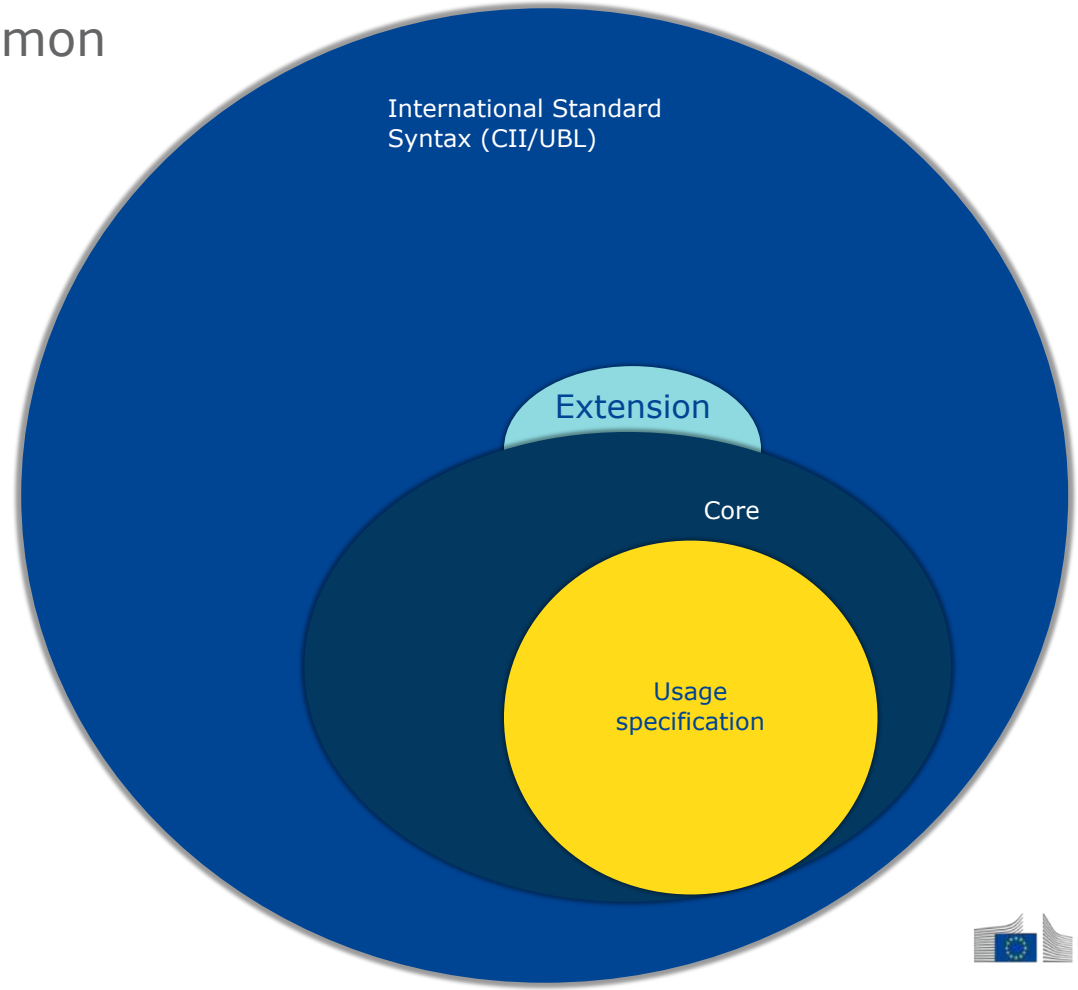
Receipt and processing of electronic invoices

*Member States shall ensure that contracting authorities and contracting entities receive and process electronic invoices which **comply** with the European standard on electronic invoicing whose reference has been published pursuant to Article 3(2) and with any of the syntaxes on the list published pursuant to Article 3(2).*

Core – something in common

IMPORTANT

An invoice which follows a CIUS MUST ALWAYS also be compliant towards the (non-restricted) norm.



Requirements for the contracting authorities/entities

From article 7

Receipt and processing of electronic invoices

Member States shall ensure that contracting authorities and contracting entities ***receive and process electronic invoices which comply with the European standard on electronic invoicing*** *whose reference has been published pursuant to Article 3(2) and with any of the syntaxes on the list published pursuant to Article 3(2).*

Claiming compliance towards the norm

Compliance of sending or receiving party

*A receiving party may only claim compliance to the core invoice model if he accepts invoices that comply with the core invoice model in general**, or with a CIUS**, that is itself compliant with the core invoice model.*

EN 16931-1:2017 Chapter 7

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What is allowed to restrict in a Core Invoice Usage Specification

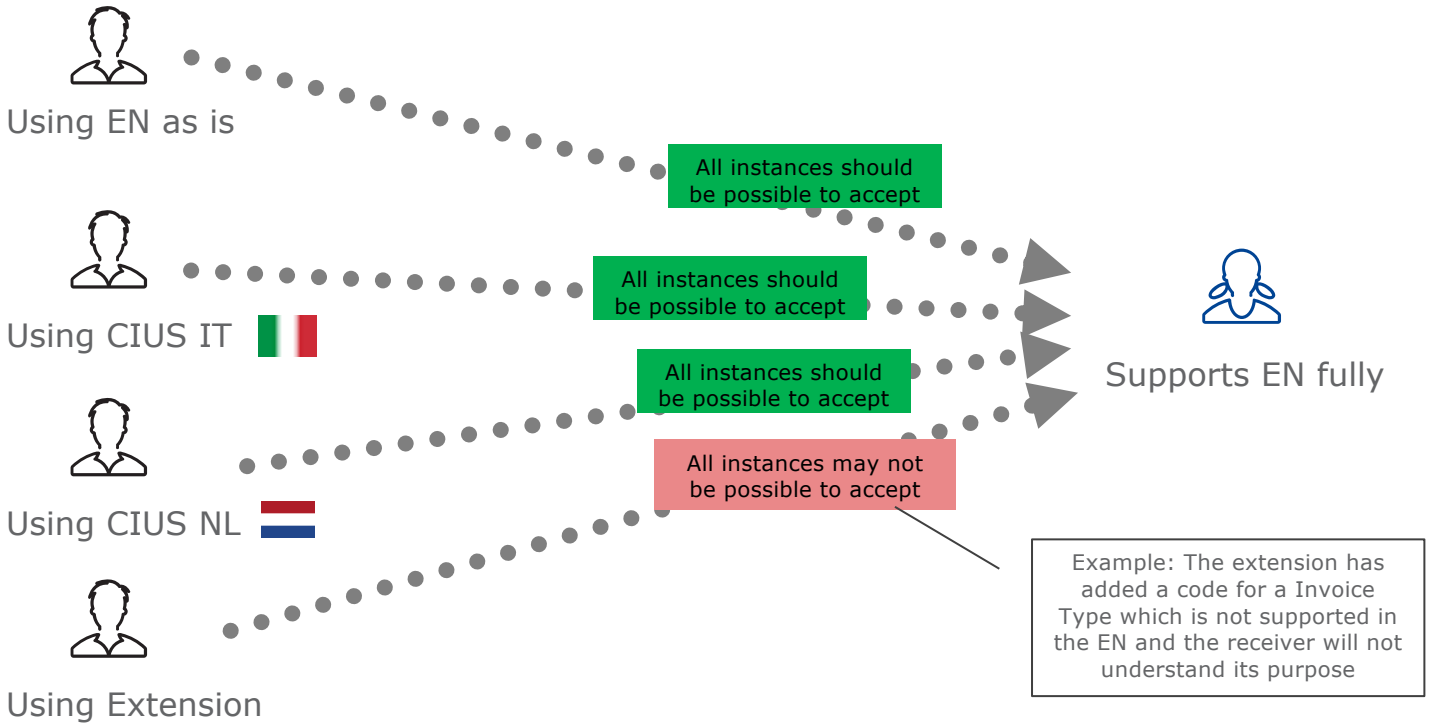
- ”Forbid” optional elements 0..n/0..1 ➔ 0..0
- Make definition narrower
- Add synonyms or explanatory text
- Make optional element mandatory
- Limit allowed number of repetitions
- Change data type to narrower representation (alphanumeric ➔ numeric)
- Limited allowed code values
- Add additional business rules or make existing more restrictive
- Restrict field lengths
- Require certain formatting on values
- Restrict number of decimals/fractions

IMPORTANT

An invoice which follows a CIUS MUST ALWAYS also be compliant towards the (non-restricted) norm.

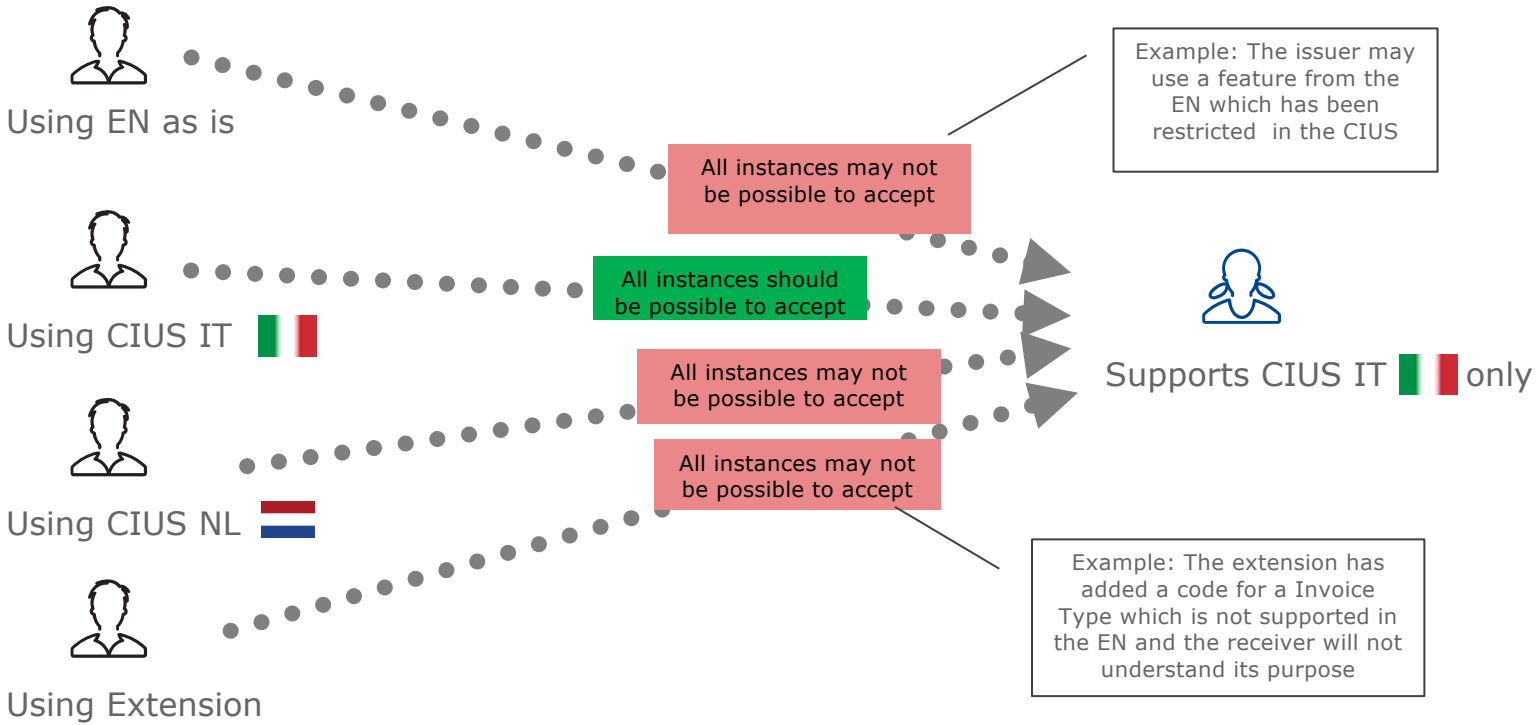
EN 16931-1:2017 Chapter 7

A few scenarios



Assuming the invoices are conformant against its specifcation (EN/CIUS/Extension)

A few more scenarios



Assuming the invoices are conformant against its specifcation (EN/CIUS/Extension)

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UC eInvoicing User Community

SPACE SHORTCUTS
CEF Knowledge Base

PAGE TREE
- eInvoicing news & events
- Forum
- Contribute
  - CEF eInvoicing Implementation Work
  - Guidance Paper for EU public admini
  - eInvoicing Pioneer Group
  - **Community-driven Registry of CIU**
  - Catalogue of Good Practices to supp
  - Older posts (CONTRIBUTE)
  - Follow-up actions after the CEF eInvc
- Archive
- Meta
- Links

Pages > eInvoicing User Community > Contribute

Community-driven Registry of CIUS (Core Invoice Usage Specifications) and Extensions

Created by Ines COSTA, last modified by Philip HELGER on Oct 29, 2018

Topic	Registry of CIUS (Core Invoice Usage Specifications) and Extensions
Excerpt	This page aims to give the eInvoicing community the opportunity to share the ongoing and planned initiatives across Member States and sectors to create CIUS and Extensions on the European standard on eInvoicing.
Status	OPEN
Deadline	Ongoing

Provide information on CIUS and Extensions

The table below aims to give the eInvoicing community the opportunity to share the ongoing and planned initiatives across Member States and sectors to create CIUS and Extensions on the European standard on eInvoicing. The content is community-driven and the contributors take the sole responsibility of the information shared. Please note that the information available does not have an authoritative character.

We invite you to contribute to build on the information available about the CIUS and Extensions on the European standard on eInvoicing by filling the table below:

Name	Type	Country	Sector	Purpose of the CIUS or Extension	Publisher	Governor	Underlying specification	Further info	Status	Contact
OpenPEPPOL BIS 3.0 SA	CIUS	Any	Any	Restricts the business process scope of the EN with reference to BIS2 business processes.	OpenPEPPOL	OpenPEPPOL	EN16931	http://docs.peppol.eu/poacc/billing/3.0/	ACTIVE	Olav Astad KRISTIANSEN
Icelandic national CIUS	CIUS	IS	Any	Applies national regulations and imposes data format to payment instructions when using national payment clearing services.	IST	ISgov	PEPPOL BIS 3.0 SA	http://www.stadlar.is/stadlastarf/fegstadlarad-i-upplysingataekni.aspx	DEVELOPMENT	Georg BIRGISSON
Austrian national CIUS	CIUS	AT	Any	Apply national regulations	BRZ	BRZ	EN16931	Publication on eRechnung.gv.at asap	ACTIVE	Philip HELGER
Austrian government CIUS	CIUS	AT	Any	Additional regulations only applying to the mandatory government interface. This CIUS builds on top of the Austrian national CIUS!	BRZ	BRZ	AT national CIUS	Publication on eRechnung.gv.at asap	ACTIVE	Philip HELGER
Energy eInvoice	Extension	NL	Energy	Enables the addition of information concerning: 1) Measured energy use, including meter info, meter readings, fuel type etc. 2) VAT specification for more than one party, which is a consequence of the so called supplier-centered model.	Energy eInvoice steering committee	Energy eInvoice steering committee	Simplerinvoicing (SI-UBL)	https://energie-efactuur.nl/en/	DEVELOPMENT	Wouter van den Berg (TNO)
Italian national CIUS	CIUS	IT	Any	Applies national regulations and restricts data format in compliance with eInvoice national format (FatturaPA)	AgID, AdE	AgID, AdE	EN16931	http://www.agid.gov.it/agenda-digitale/pubblica-amministrazione/cef-telecom-einvoicing-eigor	DEVELOPMENT	Fabio MASSIMI
NLCIUS	CIUS	NL	Any	Applies national regulations and conventions. The purpose of the NLCIUS is to prevent the need for any other NL	NEN / SMeF	NEN / SMeF	EN16931	NLCIUS is a joint initiative of government, industry and	ACTIVE	Michiel Stornebrink (TNO)

General rules and country-qualified rules

- A **general rule** applies for all invoices
  - The rule is triggered by the existence of a spefic business term

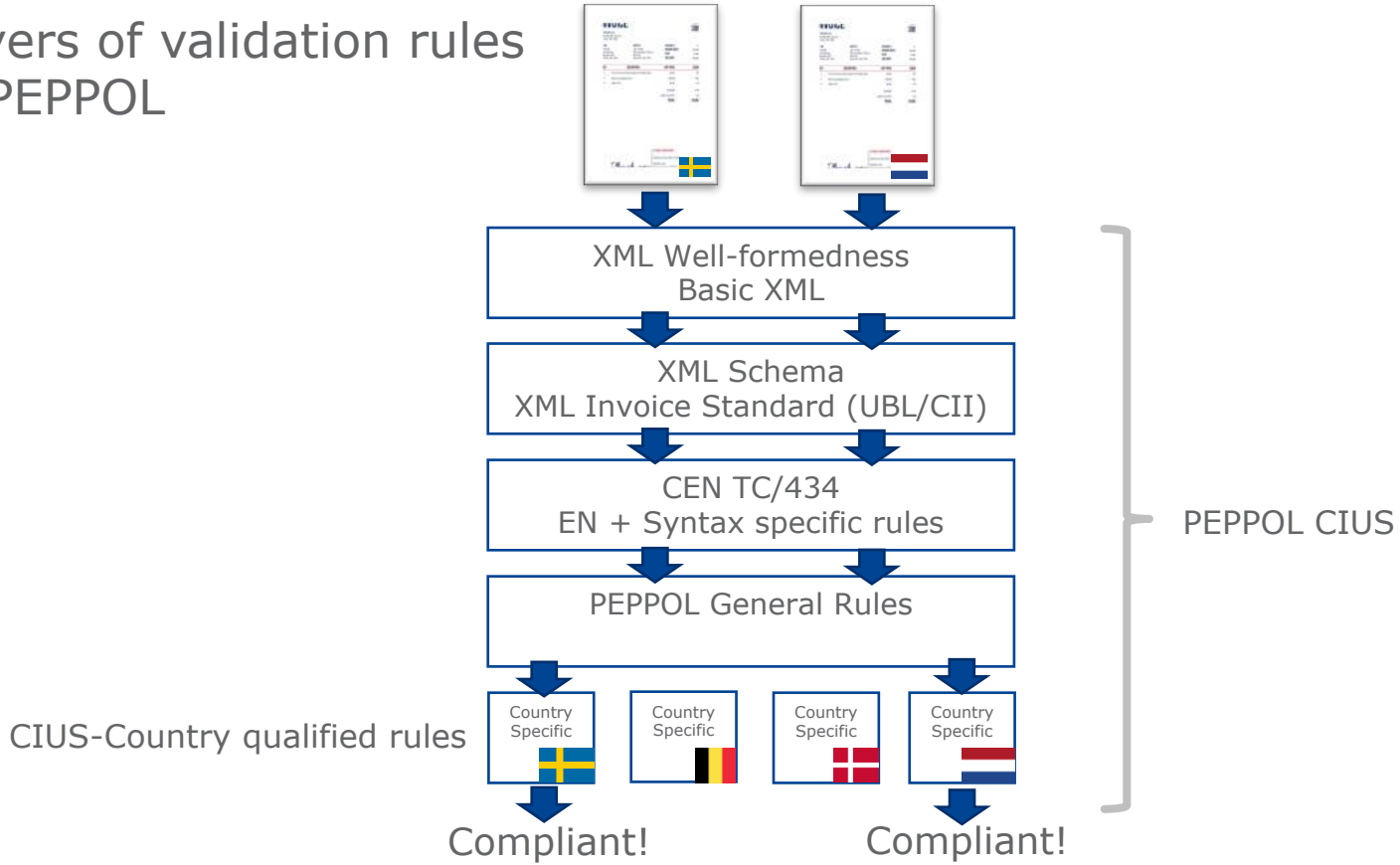
Rule text from the standard
In an Invoice line where the Invoice item VAT category code (BT-151) is "Export outside the EU" the Invoiced item VAT rate (BT-152) shall be 0 (zero).
Context (what triggers the rule)
Existence of
InvoiceLine/Item/ClassifiedTax/CategoryCode='XYZ'

Example rule text from a CIUS
The Seller Name must not have more than 50 characters
Context (what triggers the rule)
Existence of
Seller/Name

- A **country-qualified rule** applies only for invoices issued in a specific country
  - The rule is triggered by the given country code of the seller

Example rule text from a Country specific CIUS
When the Seller is Swedish, the Legal Registration Number must be numeric with 10 digits.
Context (what triggers the rule)
Existence of
Seller/Address/CountryCode='SE'
AND existence of
Seller/LegalRegistrationNumber

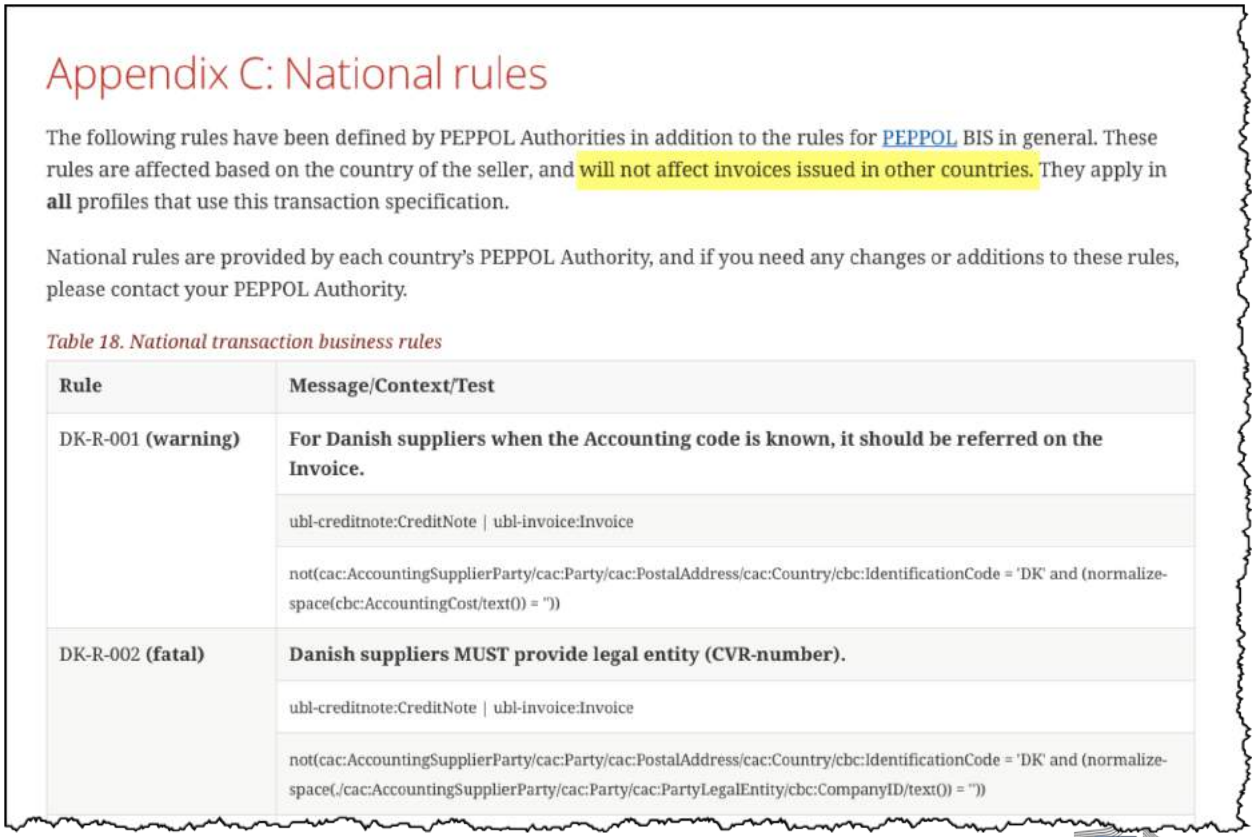
Layers of validation rules in PEPPOL



National rules in PEPPOL CIUS

To avoid creation of national CIUS'es:

- affected based on the country of the seller.
- Don't affect invoices issued in other countries.
- PEPPOL Authority responsible



Appendix C: National rules

The following rules have been defined by PEPPOL Authorities in addition to the rules for PEPPOL BIS in general. These rules are affected based on the country of the seller, and will not affect invoices issued in other countries. They apply in **all** profiles that use this transaction specification.

National rules are provided by each country's PEPPOL Authority, and if you need any changes or additions to these rules, please contact your PEPPOL Authority.

Table 18. National transaction business rules

Rule	Message/Context/Test
DK-R-001 **(warning)**	**For Danish suppliers when the Accounting code is known, it should be referred on the Invoice.**
	ubl-creditnote:CreditNote | ubl-invoice:Invoice
	not(cac:AccountingSupplierParty/cac:Party/cac:PostalAddress/cac:Country/cbc:IdentificationCode = 'DK' and (normalize-space(cbc:AccountingCost/text()) = ''))
DK-R-002 **(fatal)**	**Danish suppliers MUST provide legal entity (CVR-number).**
	ubl-creditnote:CreditNote | ubl-invoice:Invoice
	not(cac:AccountingSupplierParty/cac:Party/cac:PostalAddress/cac:Country/cbc:IdentificationCode = 'DK' and (normalize-space(./cac:AccountingSupplierParty/cac:Party/cac:PartyLegalEntity/cbc:CompanyID/text()) = ''))

Example - Swedish rules

- Formats for VAT and organisation numbers
- Swedish VAT rates
- Tax registration F-Skatt
- Payment means Bankgiro and Plusgiro

SE-R-001 For Swedish suppliers, Swedish VAT-numbers must consist of 14 characters.	fatal
SE-R-002 For Swedish suppliers, the Swedish VAT-numbers must have the trailing 12 characters in numeric form	fatal
SE-R-003 Swedish organisation numbers should be numeric.	fatal
SE-R-004 Swedish organisation numbers consist of 10 characters.	fatal
SE-R-005 For Swedish suppliers, when using Seller tax registration identifier, 'Godkänd för F-skatt' must be stated	fatal
SE-R-006 For Swedish suppliers, only standard VAT rate of 6, 12 or 25 are used	fatal
SE-R-007 For Swedish suppliers using Plusgiro, the Account ID must be numeric	warning
SE-R-008 For Swedish suppliers using Bankgiro, the Account ID must be numeric	warning
SE-R-009 For Swedish suppliers using Bankgiro, the Account ID must have 7-8 characters	warning
SE-R-010 For Swedish suppliers using Plusgiro, the Account ID must have 2-8 characteres	warning
SE-R-011 For Swedish suppliers using Swedish Bankgiro or Plusgiro, the proper way to indicate this is to use Code 30 for PaymentMeans and FinancialInstitutionBranch ID with code SE:BANKGIRO or SE:PLUSGIRO	warning

Member state plans for the future

Denmark

TODAY

eInvoice usage in public sector

98 %

Main syntax standard

ISO/IEC 19845:2015 UBL

Infrastructure

NemHandel

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
(+Rules for domestic suppliers)

Plans for infrastructure

PEPPOL and NemHandel in parallel.
PEPPOL only long term.

Legislation (transposition of the directive)

eInvoicing already mandated for suppliers by law. Additional types fo public entities will be affected.

Sweden

TODAY

eInvoice usage in public sector

50% local/regional authorities
60% governmental authorities

Main syntax standard

ISO/IEC 19845:2015 UBL

Infrastructure

Various

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
(+Rules for domestic suppliers)

Plans for infrastructure

PEPPOL

Legislation (transposition of the directive)

Law mandating suppliers to invoice electronically both above and below threshold.

Norway

TODAY

eInvoice usage in public sector

70-80%

Main syntax standard

ISO/IEC 19845:2015 UBL

Infrastructure

PEPPOL

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
(+Rules for domestic suppliers)

Plans for infrastructure

PEPPOL

Legislation (transposition of the directive)

Still under discussion. Potentially partial mandating.

Netherlands

TODAY

eInvoice usage in public sector

Central government 50%
Regional/local 5%

Main syntax standard

ISO/IEC 19845:2015 UBL

Infrastructure

Central government - hub
The rest - PEPPOL

TOMORROW

Implementaion of the EN/CIUS

Country CIUS but will also accept PEPPOL CIUS

Plans for infrastructure

PEPPOL

Legislation (transposition of the directive)

As is from the directive. Mandate on the central government to require eInvoicing in new contracts.

Austria

TODAY

eInvoice usage in public sector

Federal government 50%
The rest - ?%

Main syntax standard

Domestic XML format
ISO/IEC 19845:2015 UBL

Infrastructure

Central service (webform+upload)
PEPPOL

TOMORROW

Implementaion of the EN/CIUS

Austrian CIUS on 2 levels. Country specific rules and government specific rules)
PEPPOL for cross boarder

Plans for infrastructure

Central service (webform+upload)
PEPPOL

Legislation (transposition of the directive)

As is from the directive

Cyprus

TODAY

eInvoice usage in public sector

0%

Main syntax standard

-

Infrastructure

-

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
(+Rules for domestic suppliers)

Plans for infrastructure

PEPPOL

Legislation (transposition of the directive)

As is from the directive

Poland

TODAY

eInvoice usage in public sector

0%

Main syntax standard

-

Infrastructure

-

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
(+Rules for domestic suppliers)

Plans for infrastructure

PEPPOL

Legislation (transposition of the directive)

As is from the directive

Croatia

TODAY

eInvoice usage in public sector

Small number

Main syntax standard

ISO/IEC 19845:2015 UBL

Infrastructure

Centralized solution

TOMORROW

Implementaion of the EN/CIUS

PEPPOL CIUS
Domestic CIUS

Plans for infrastructure

PEPPOL + Connection to central solution directly or through service provider

Legislation (transposition of the directive)

Under discussion but likely also below threshold, potentially mandating suppliers

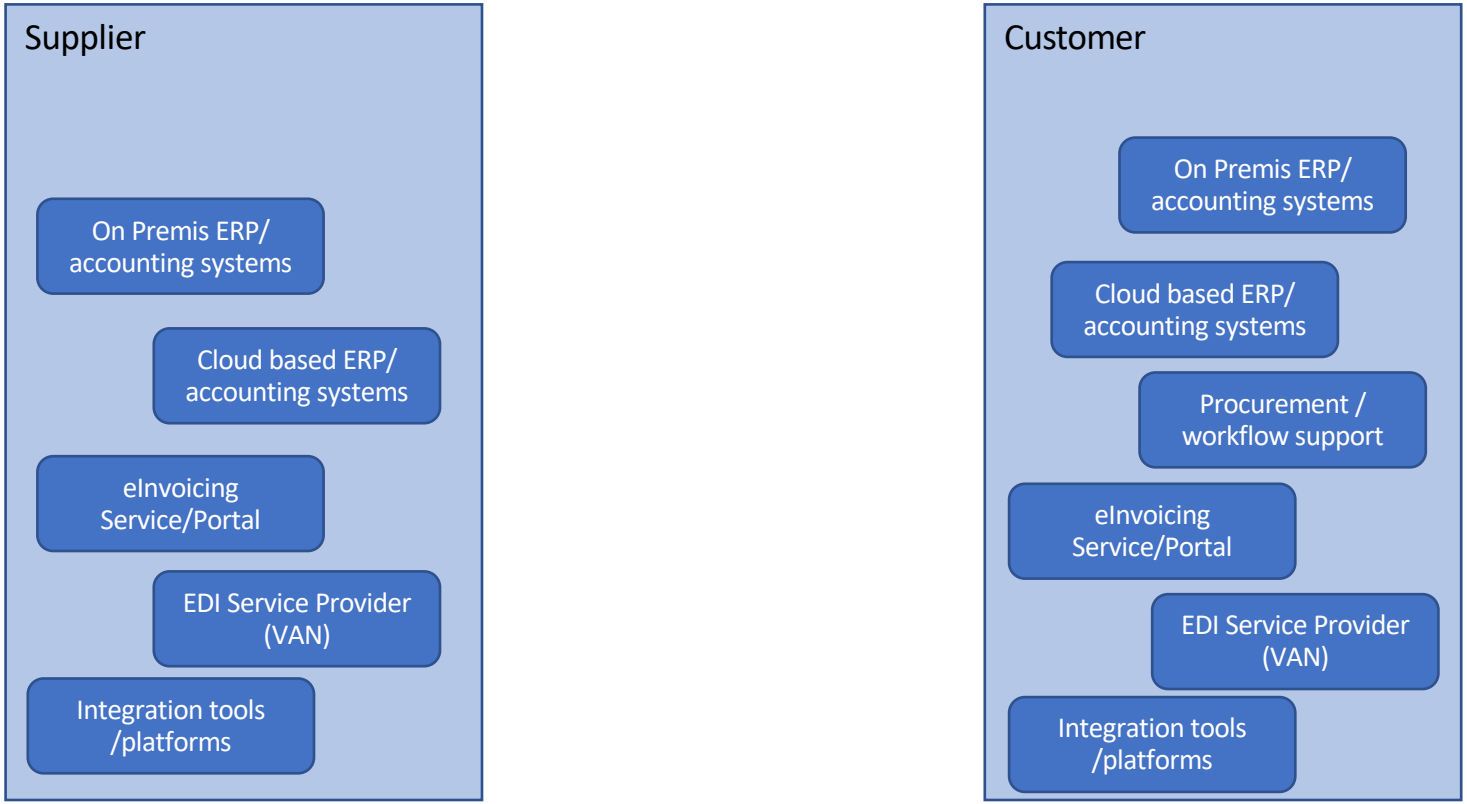
Main take aways so far…

- **Implementation of the EN is progressing** slowly, but still progressing over the next 12 (-18) months
- **CIUS is being developed** across different domains
  - **PEPPOL CIUS** is currently expected to be the most used
- Some **Member States** (MS) have moved from little or some knowledge, to now **good insight to the EN** and have actual roadmap for implementations
- Some **Member States** are **lacking behind**…
  - **Political backing**
  - **Lack of clear responsibility of eInvoicing within the MS**
  - **Lack of national expertise in implementation or governance of eInvoicing**

Infrastructure (eDelivery) in coherence with CEF Invoicing

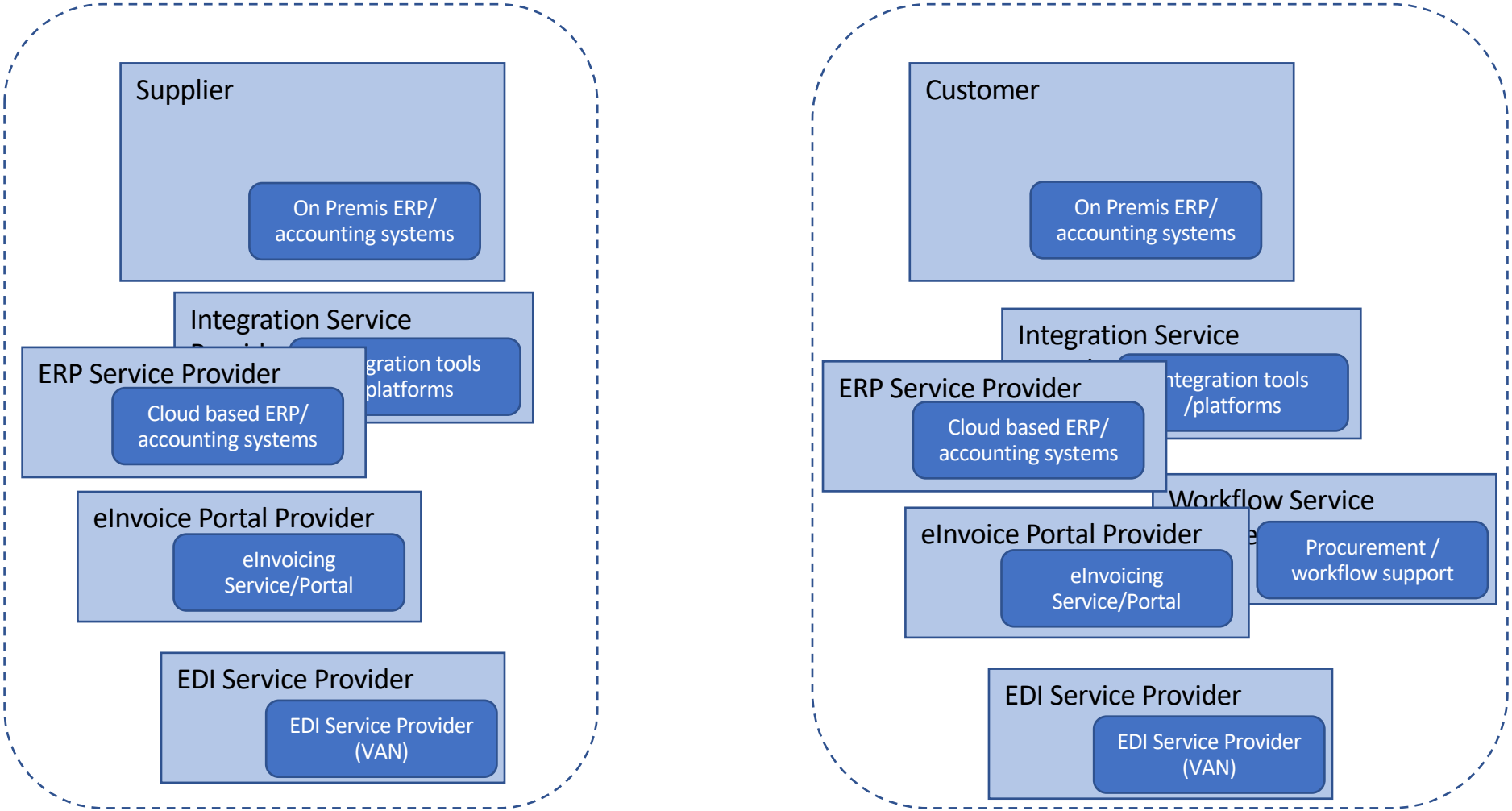
Four-corner model

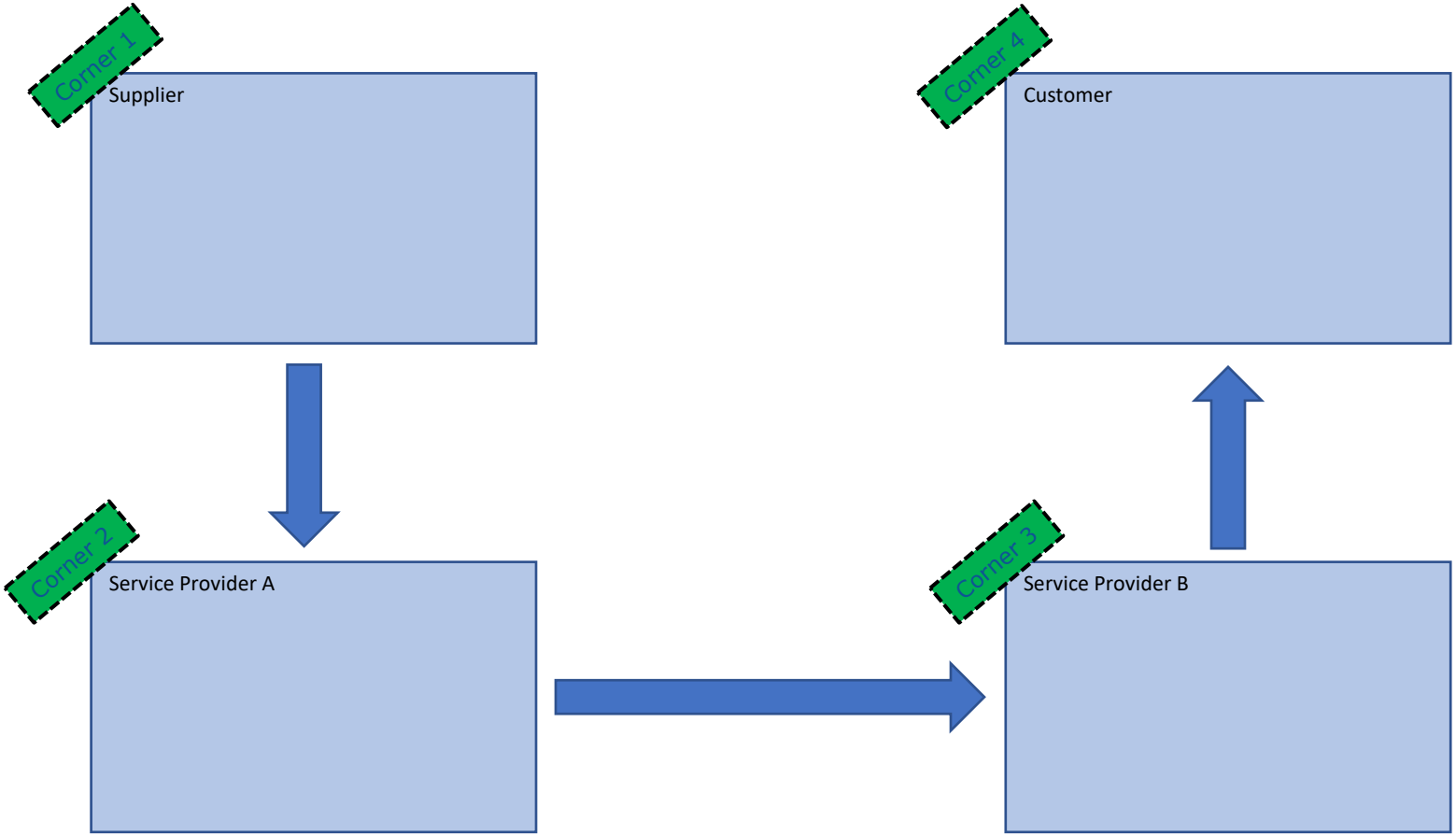
A common approach for service provider collaboration


Supplier
On Premis ERP/ accounting systems
Cloud based ERP/ accounting systems
eInvoicing Service/Portal
EDI Service Provider (VAN)
Integration tools /platforms
Customer
On Premis ERP/ accounting systems
Cloud based ERP/ accounting systems
Procurement / workflow support
eInvoicing Service/Portal
EDI Service Provider (VAN)
Integration tools /platforms

System environments tend to be very complex today.

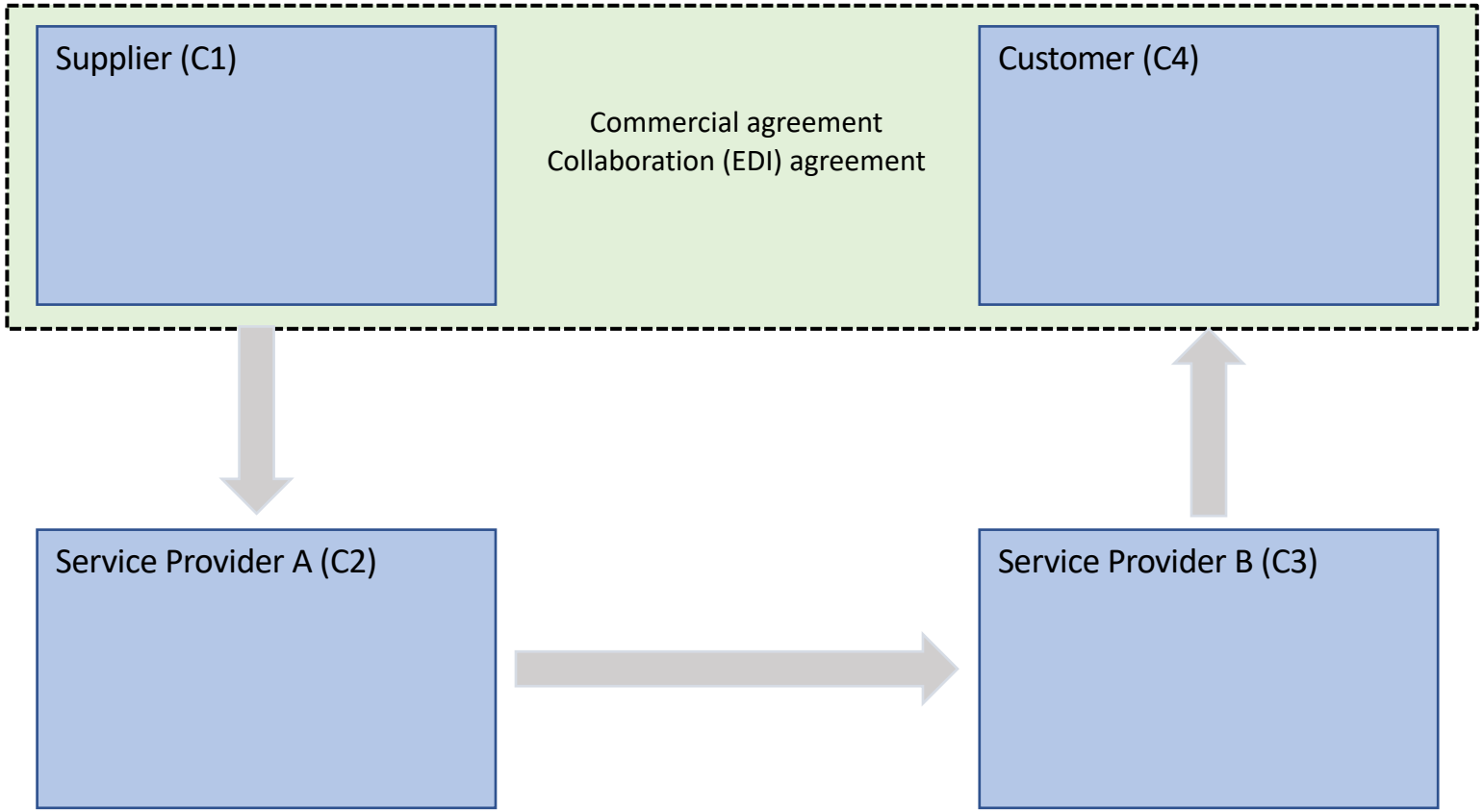
Many critical business functions are carried out as services provided by third parties.

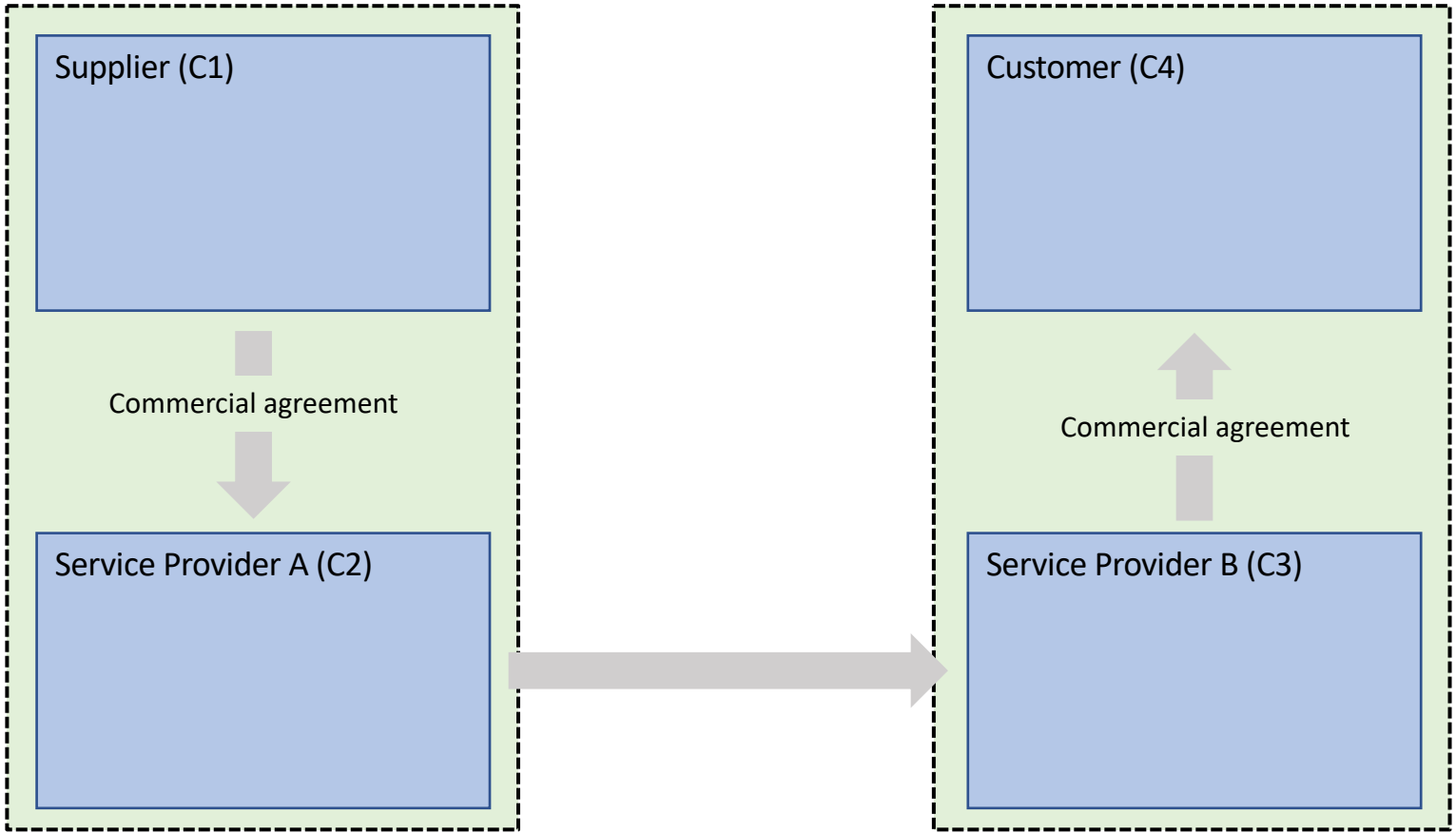

Supplier
On Premis ERP/ accounting systems
Integration Service
ERP Service Provider
Cloud based ERP/ accounting systems
eInvoice Portal Provider
eInvoicing Service/Portal
EDI Service Provider
EDI Service Provider (VAN)
Customer
On Premis ERP/ accounting systems
Integration Service
/platforms
ERP Service Provider
Cloud based ERP/ accounting systems
Workflow Service
eInvoice Portal Provider
eInvoicing Service/Portal
Procurement / workflow support
EDI Service Provider
EDI Service Provider (VAN)

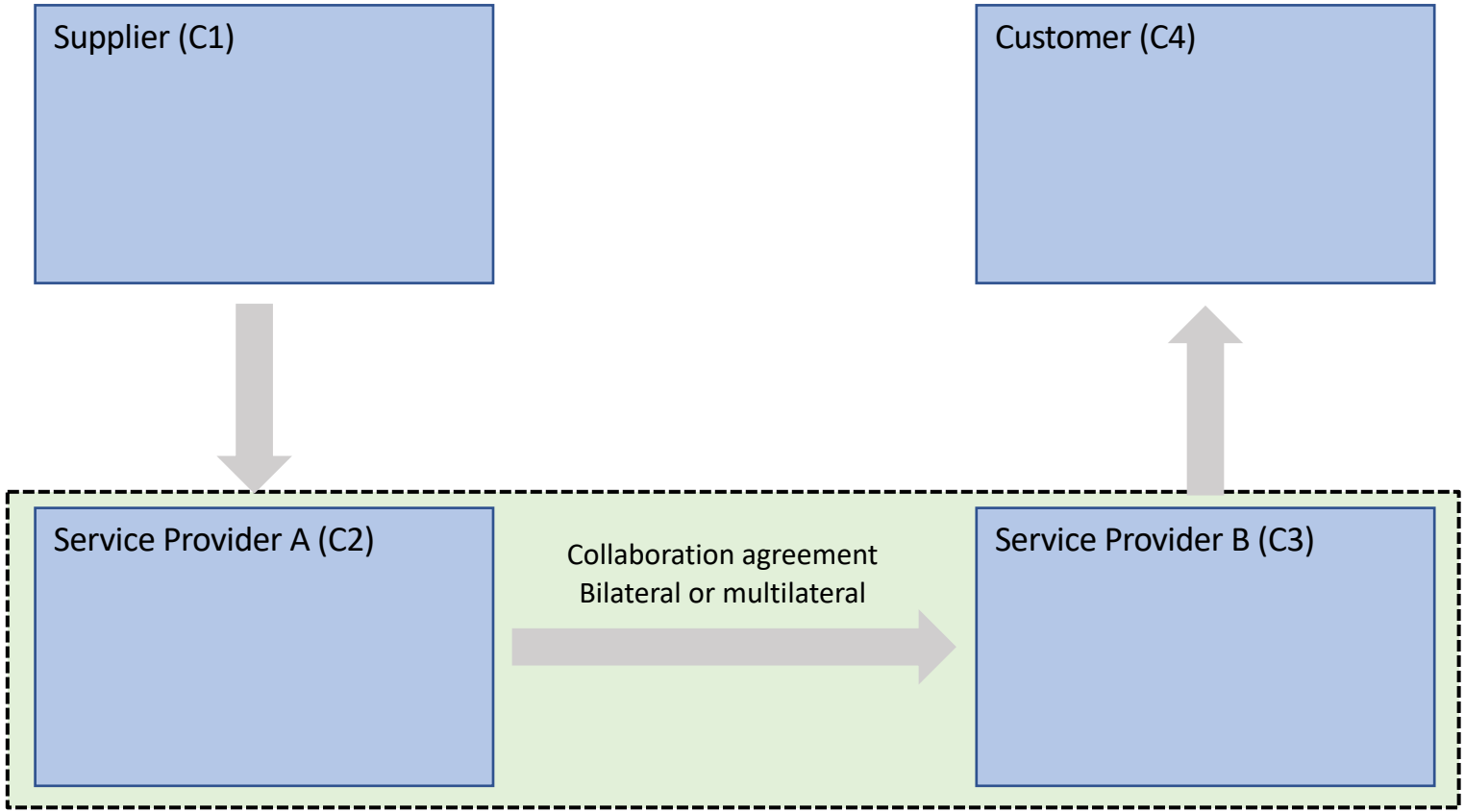

Corner 1
Supplier
Corner 4
Customer
Corner 2
Service Provider A
Corner 3
Service Provider B

Contractual view

on four-corner-model

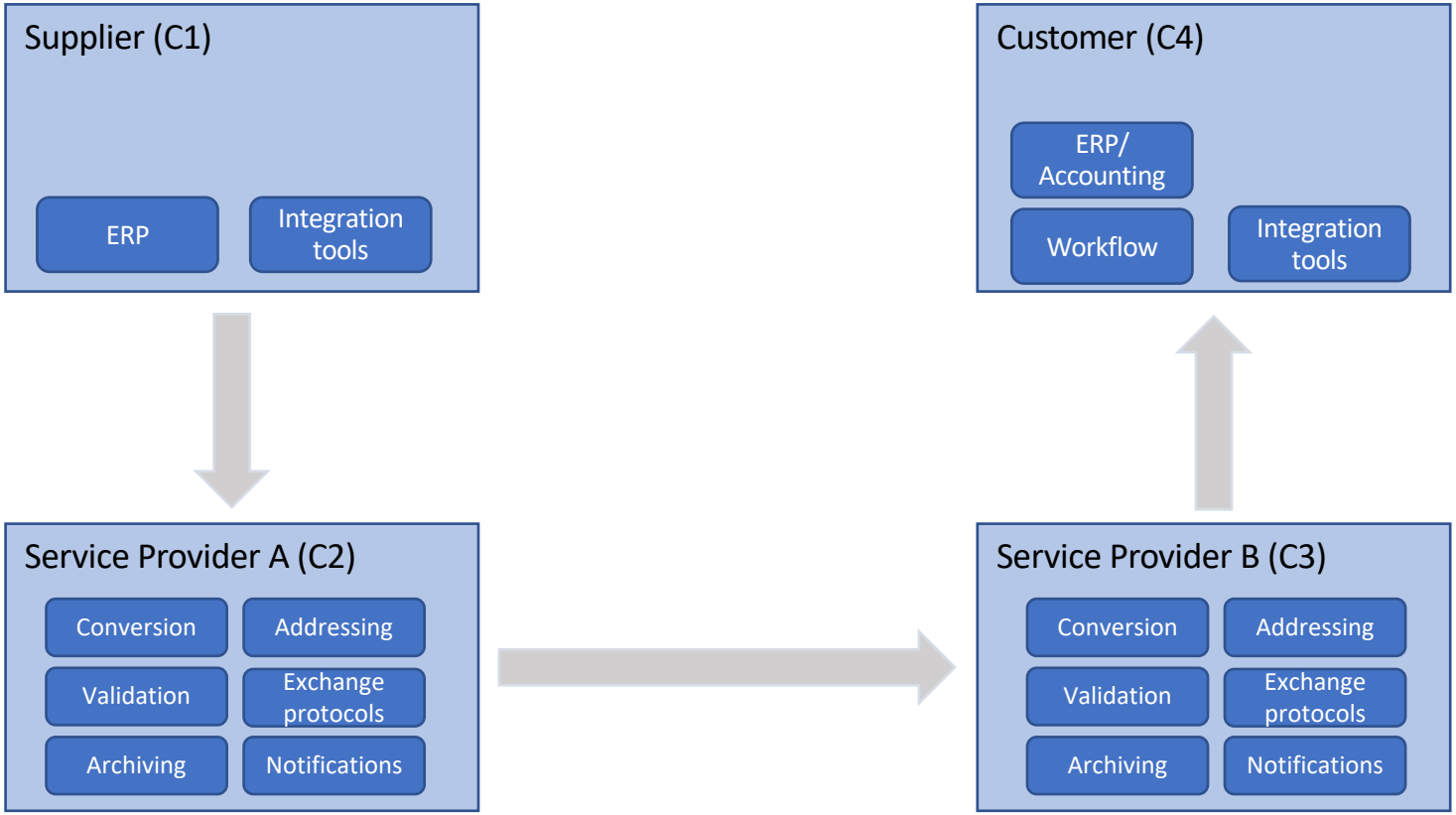

Supplier (C1)
Commercial agreement
Collaboration (EDI) agreement
Customer (C4)
Service Provider A (C2)
Service Provider B (C3)


Supplier (C1)
Commercial agreement
Service Provider A (C2)
Customer (C4)
Commercial agreement
Service Provider B (C3)


Supplier (C1)
Customer (C4)
Service Provider A (C2)
Collaboration agreement
Bilateral or multilateral
Service Provider B (C3)

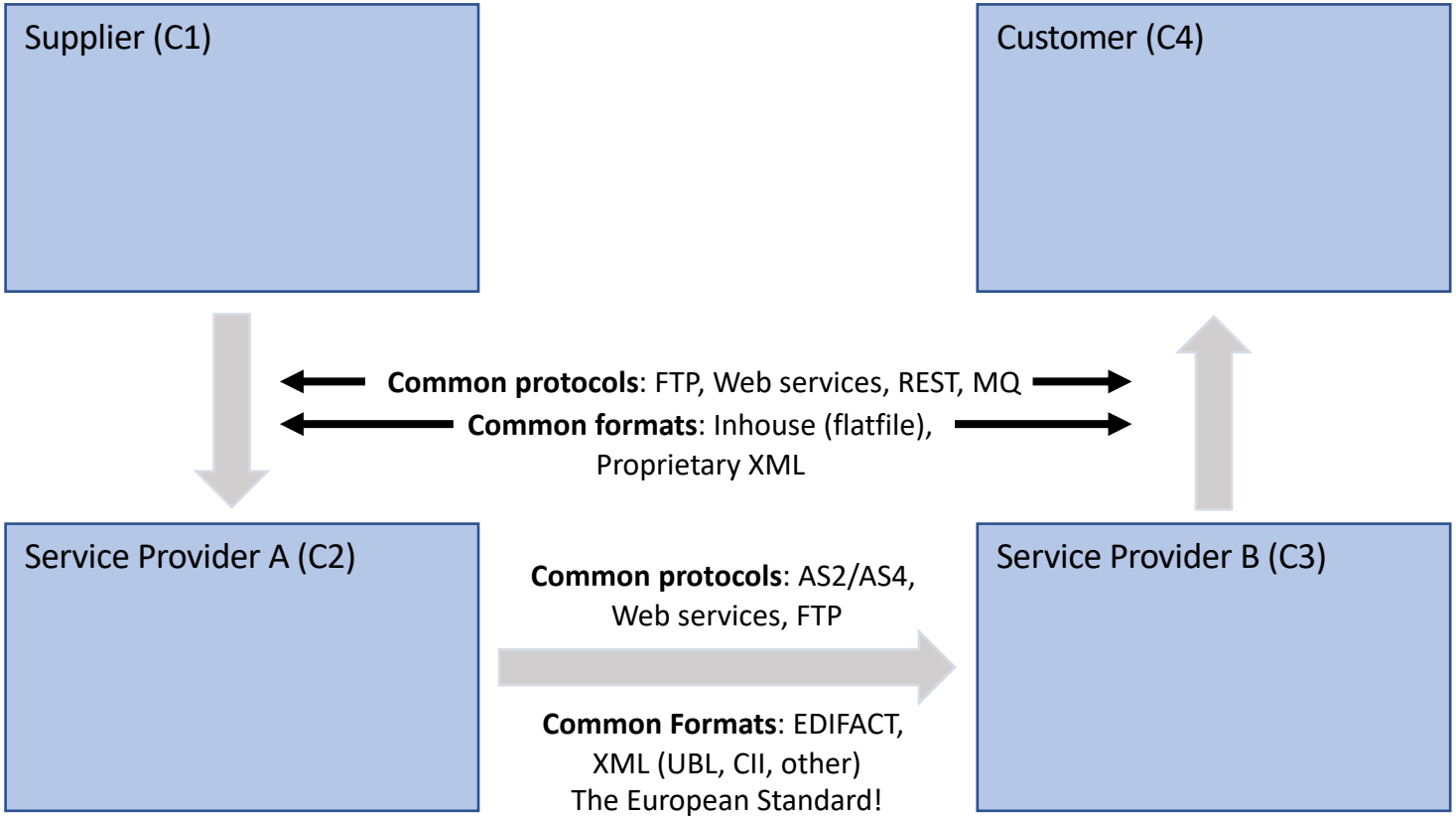
Functional view and common added services

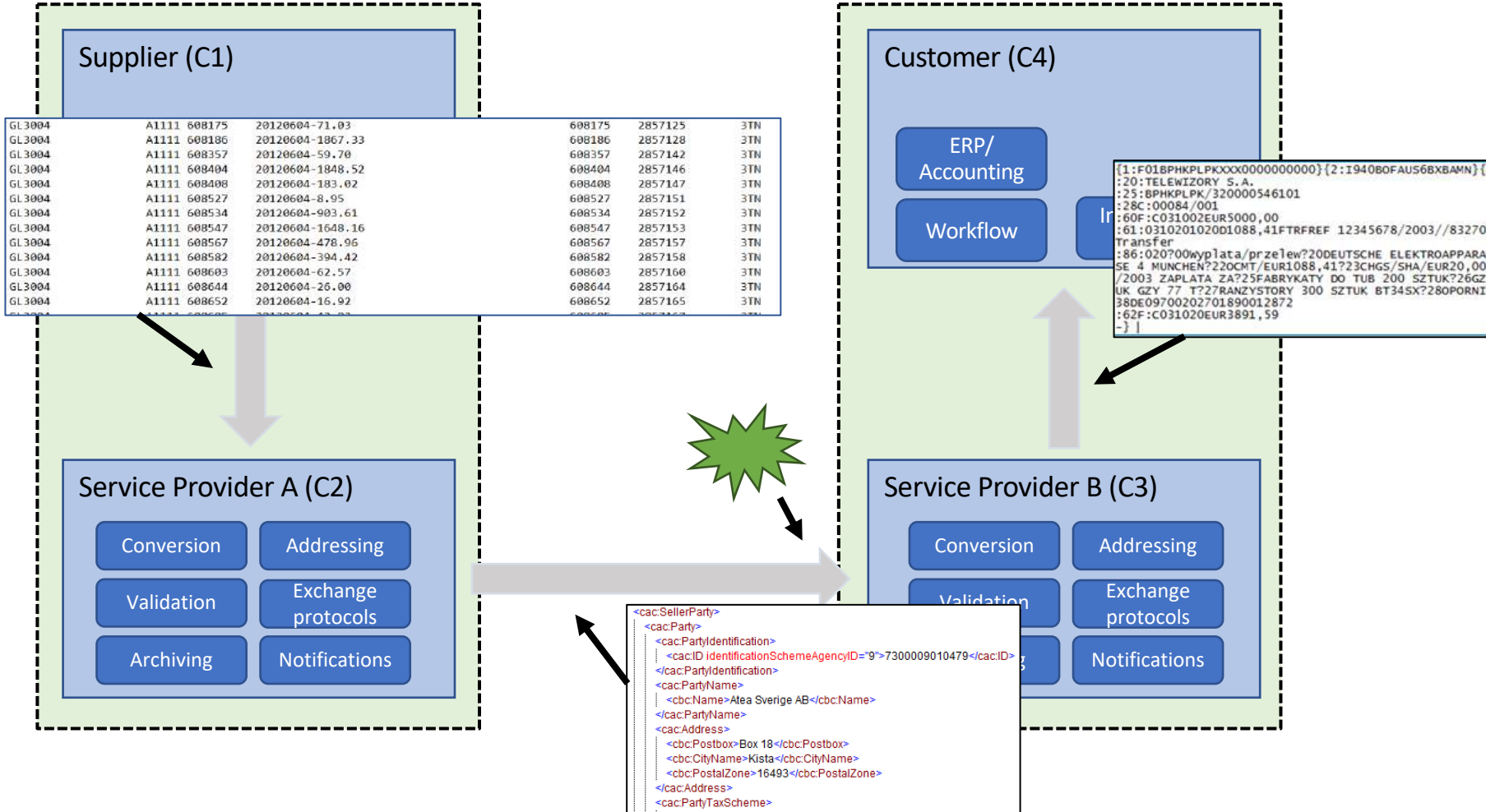
in four-corner-model


Supplier (C1)
ERP
Integration tools
Customer (C4)
ERP/ Accounting
Workflow
Integration tools
Service Provider A (C2)
Conversion
Addressing
Validation
Exchange protocols
Archiving
Notifications
Service Provider B (C3)
Conversion
Addressing
Validation
Exchange protocols
Archiving
Notifications

Use of standards

in four-corner-model

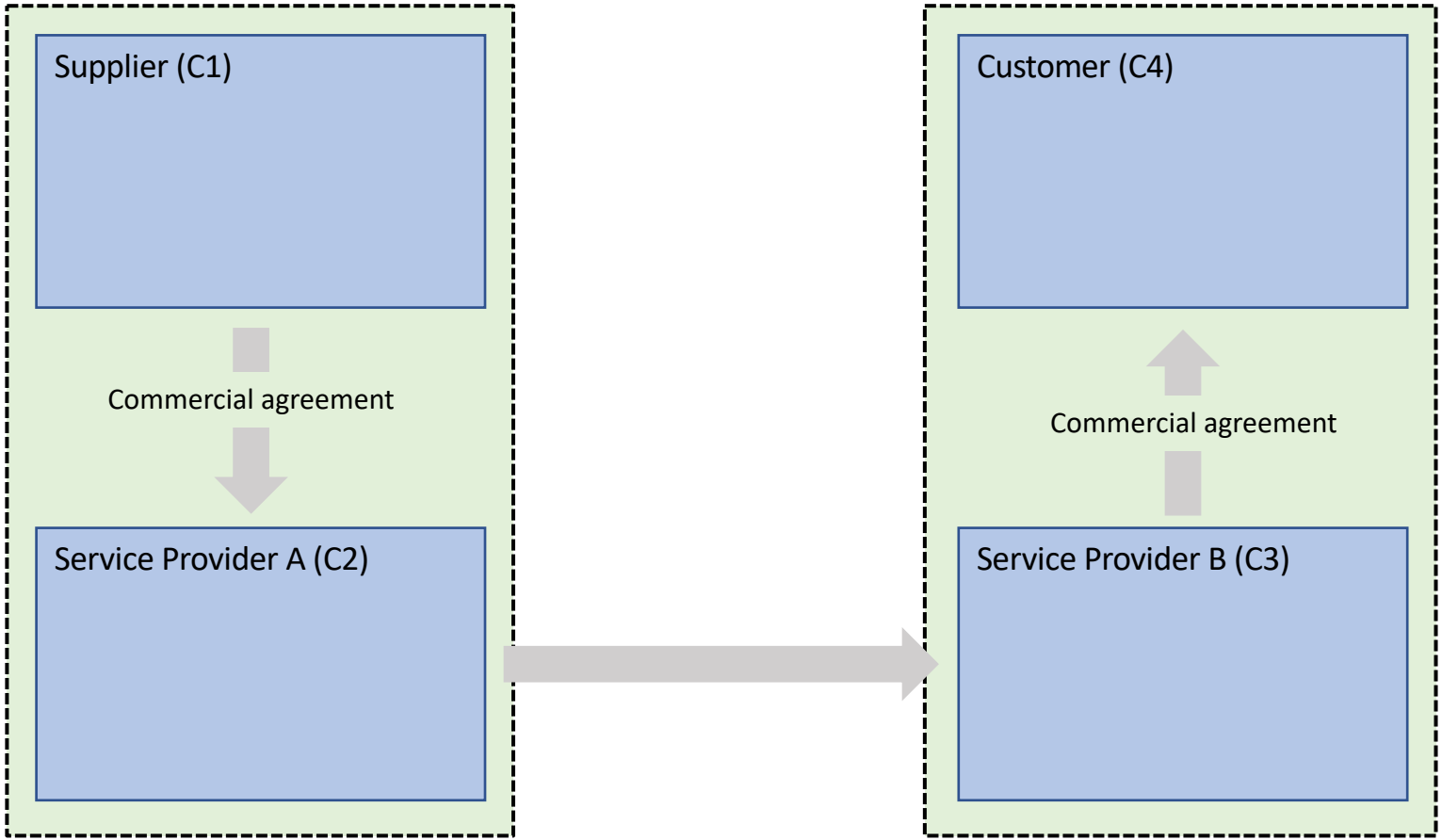

Supplier (C1)
Customer (C4)
Common protocols: FTP, Web services, REST, MQ
Common formats: Inhouse (flatfile), Proprietary XML
Service Provider A (C2)
Common protocols: AS2/AS4, Web services, FTP
Common Formats: EDIFACT, XML (UBL, CII, other) The European Standard!
Service Provider B (C3)

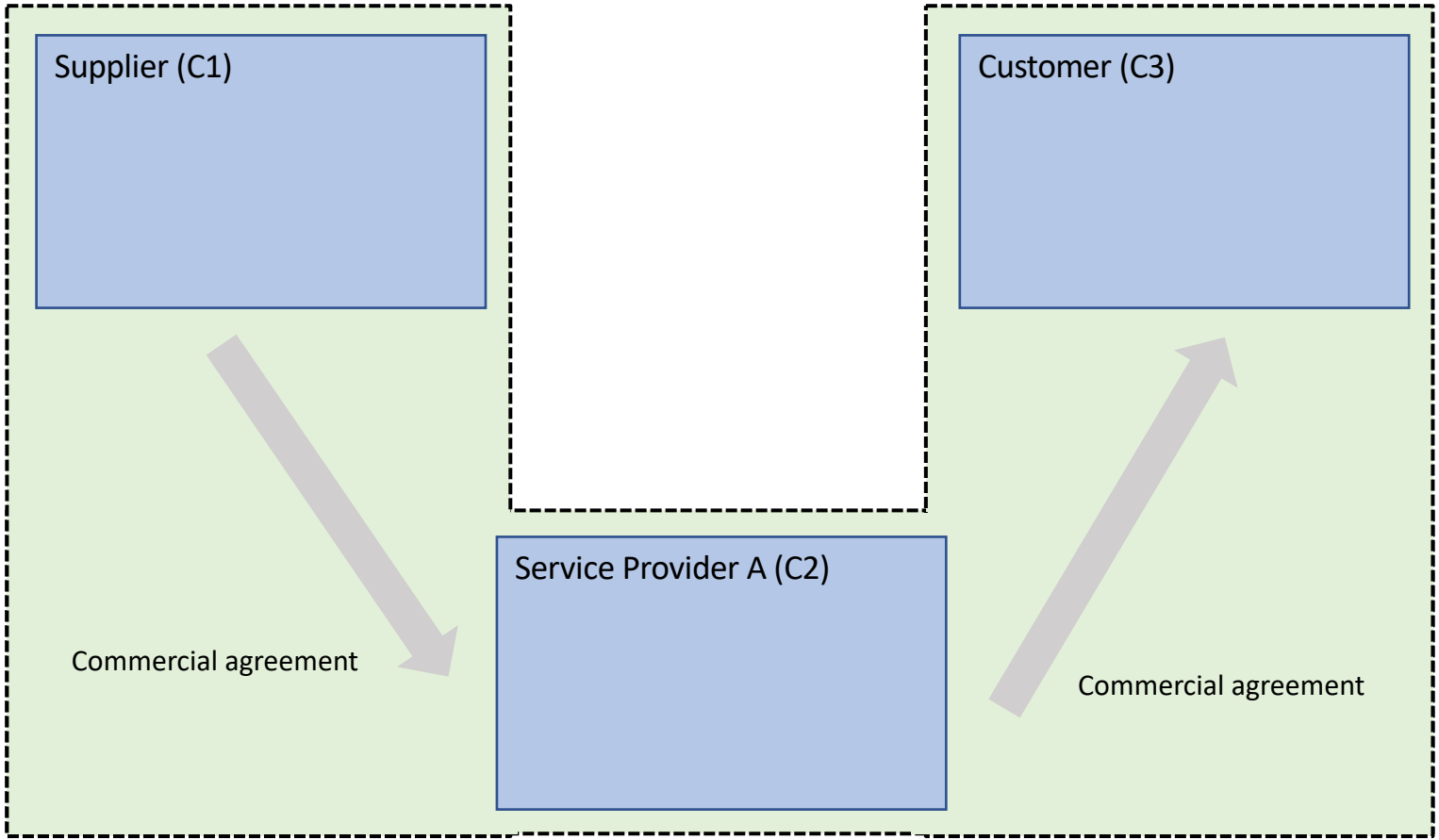

Supplier (C1)
GL3004 A1111 608175 20120604-71.03 608175 2857125 3TN
GL3004 A1111 608186 20120604-1867.33 608186 2857128 3TN
GL3004 A1111 608357 20120604-59.70 608357 2857142 3TN
GL3004 A1111 608404 20120604-1848.52 608404 2857146 3TN
GL3004 A1111 608408 20120604-183.02 608408 2857147 3TN
GL3004 A1111 608527 20120604-8.95 608527 2857151 3TN
GL3004 A1111 608534 20120604-903.61 608534 2857152 3TN
GL3004 A1111 608547 20120604-1648.16 608547 2857153 3TN
GL3004 A1111 608567 20120604-478.96 608567 2857157 3TN
GL3004 A1111 608582 20120604-394.42 608582 2857158 3TN
GL3004 A1111 608603 20120604-62.57 608603 2857160 3TN
GL3004 A1111 608644 20120604-26.00 608644 2857164 3TN
GL3004 A1111 608652 20120604-16.92 608652 2857165 3TN
Service Provider A (C2)
Conversion
Addressing
Validation
Exchange protocols
Archiving
Notifications
Customer (C4)
ERP/ Accounting
Workflow
{1:F01BPHKPLPKXXX0000000000}{2:I940BOFAUS6BXBAMN}{
:20:TELEWIZORY S.A.
:25:BPHKPLPK/320000546101
:28C:00084/001
:60F:C031002EUR5000,00
:61:0310201020D1088,41FTRFREF 12345678/2003//83270
Transfer
:86:020?00Wyplata/przelew?20DEUTSCHE ELEKTROAPPARA
SE 4 MUNCHEN?22OCMT/EUR1088,41?23CHGS/SHA/EUR20,00
/2003 ZAPLATA ZA?25FABRYKATY DO TUB 200 SZTUK?26GZ
UK GZY 77 T?27RANZYSTORY 300 SZTUK BT34SX?28OPORNI
38DE09700202701890012872
:62F:C031020EUR3891,59
-}
Service Provider B (C3)
Conversion
Addressing
Exchange protocols
Notifications
<cac:SellerParty>
<cac:Party>
<cac:PartyIdentification>
<cac:ID identificationSchemeAgencyID="9">7300009010479</cac:ID>
</cac:PartyIdentification>
<cac:PartyName>
<cbc:Name>Atea Sverige AB</cbc:Name>
</cac:PartyName>
<cac:Address>
<cbc:Postbox>Box 18</cbc:Postbox>
<cbc:CityName>Kista</cbc:CityName>
<cbc:PostalZone>16493</cbc:PostalZone>
</cac:Address>
<cac:PartyTaxScheme>

Four-corner model characteristics (in the context of eInvoicing/EDI)

- *End Entities (Supplier/Customer)* may choose any *Service Provider* connected to the network.
- The *Service Providers* are acting on behalf of the *End Entities.*
- *The Service Provider* collaborates in networks, either with bilateral or multilateral collaboration agreements
- The collaboration agreements specifies technical aspects (such as type of transport protocol) but also service levels and issue resolution procedures
- The *Exchange Format* of payloads/messages used between the *Service Provider are often pre-agreed*.
- Each *End Entity* only needs to enter into a contractual agreement with its selected *Service Provider .*
- *Service Providers* may transform data to/from the agreed *Exchange Format* before sending or after receiving depending of the *End Entity's* preferences. The creation of the business document, in its *Exchange Format,* can happen either in the issuer´s own systems or it may be translated from an *In-house Format* to the *Exchange Format* by the *Service Provider*.
- The *Service Provider* often offers more added value services to the *End Entity* (such as archiving, syntax validation, syntax transformation).

What about the three-corner model?


Supplier (C1)
Commercial agreement
Service Provider A (C2)
Customer (C4)
Commercial agreement
Service Provider B (C3)


Supplier (C1)
Customer (C3)
Service Provider A (C2)
Commercial agreement
Commercial agreement

Collaboration between service providers is necessary!

EESPA
European E-invoicing Service Providers Association

- Non-for profit trade association with 70 member organisations
- Recommends best practices
- Promotes interoperability
- Advocates wide adoption of e-invoicing

PEPPOL
PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE

- Non-for-profit association with 300 member organisations (260 service provider/Access points)
- Recommends and develops standards for use in e-procurement
- Provides the legal framework and technical services for an exchange network

Big overlap of members in the two associations

European Commission

PEPPOL

PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE

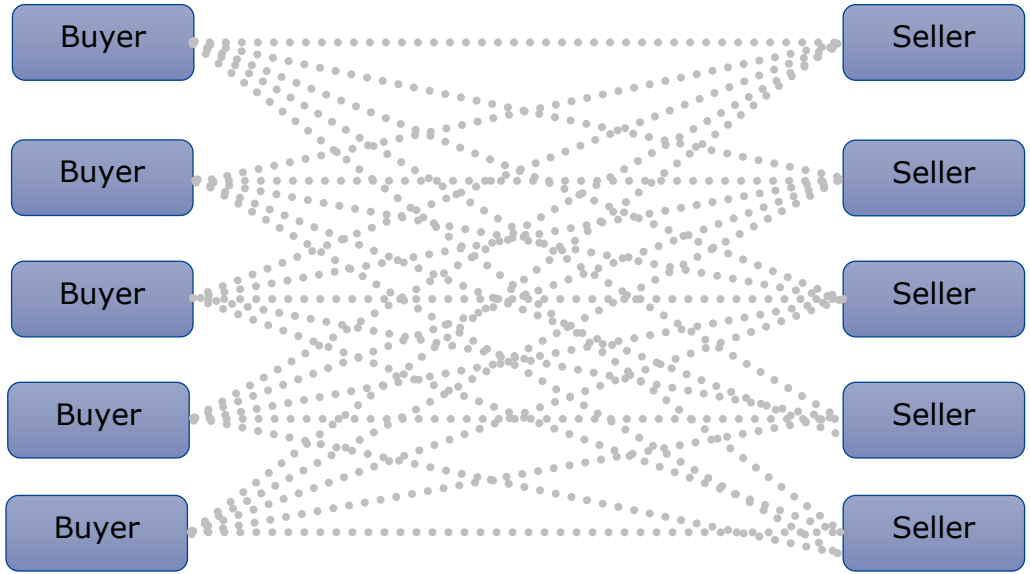
A short introduction

What is PEPPOL

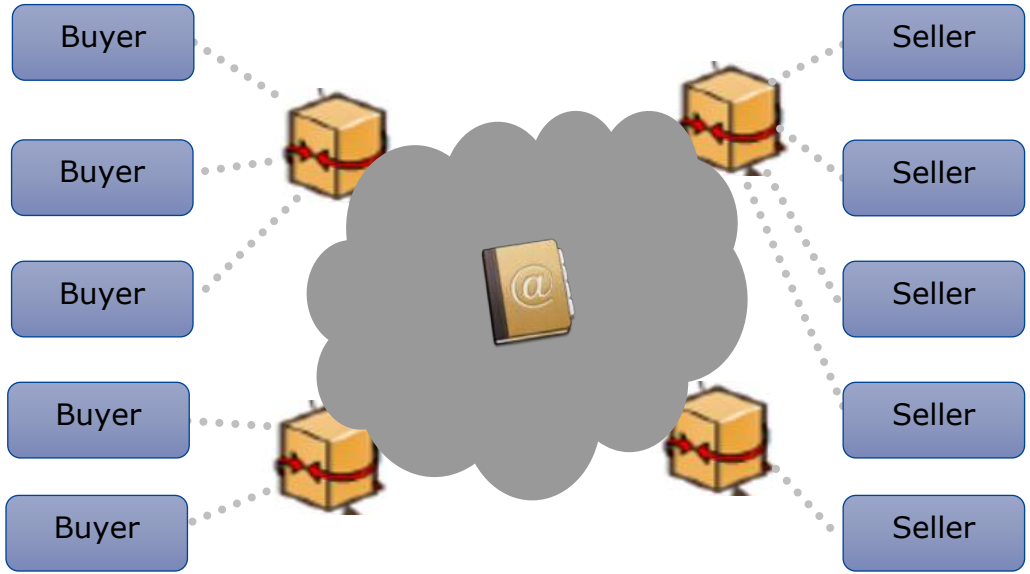
Infrastructure where Buyers and Sellers can exchange e-documents

Specifications for electronic invoice, order, catalogue…

Non-for-profit organisation which maintains and governs


Buyer
Buyer
Buyer
Buyer
Buyer
Seller
Seller
Seller
Seller
Seller

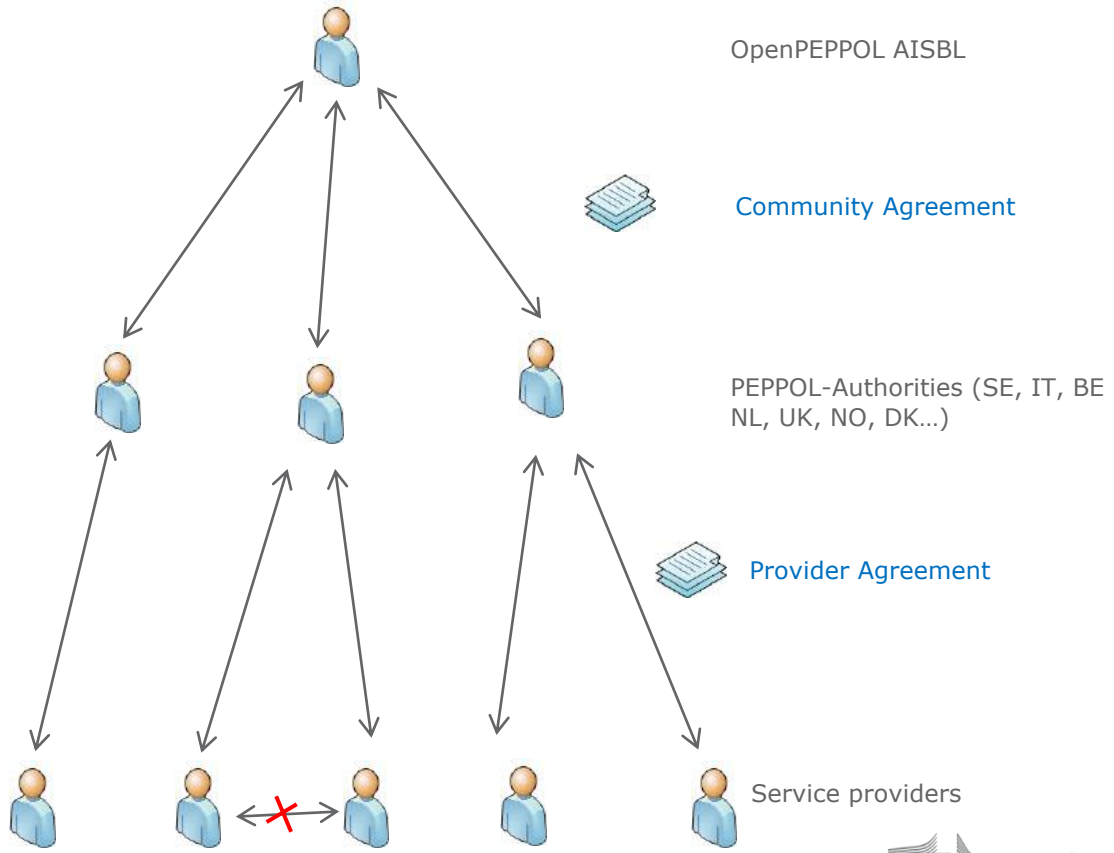
PEPPOL
PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE



European Commission

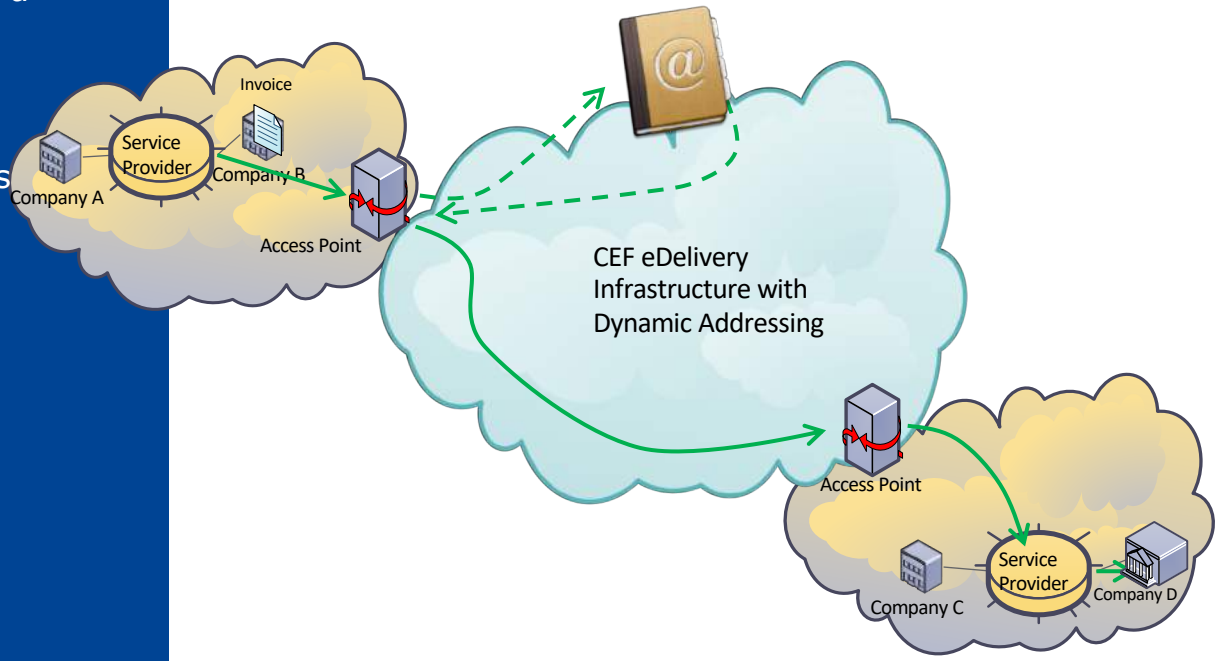
Transport Infrastructure Agreements (TIA)

- The Access Point Provider and the Service Metadata Publisher Provider must sign a contract with OpenPEPPOL (or any of the PEPPOL Authorities)
- Agreements defines responsibilities, expectations, service levels and more
- Only providers who have signed the agreements can participate in the network (controlled by digital certificates on a communication level)



CEF eDelivery (PEPPOL) offers dynamic addressing

- The receiving address is stored in a registry in the network
- No need for pre-configuration of each trading partner
- Dynamic addressing enables mass adoption
- Makes migration between service providers easier



European Commission

European Commission

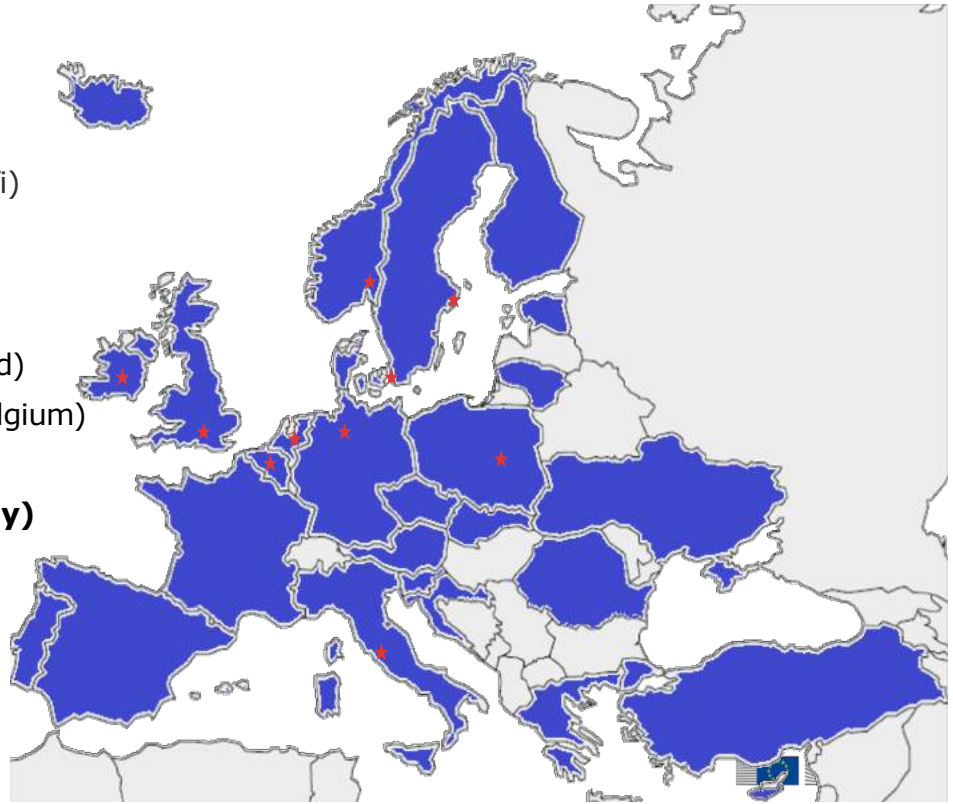
European Commission

PEPPOL today

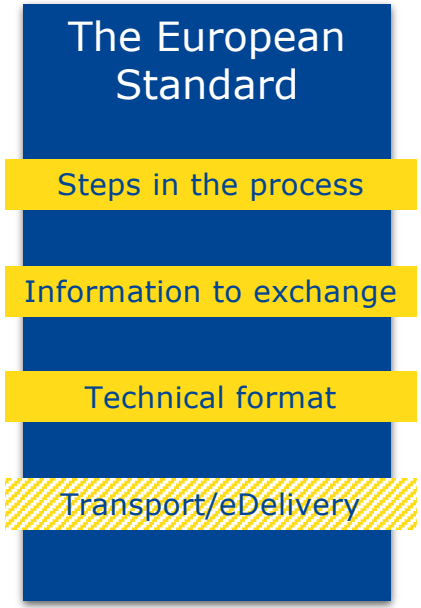
+200 Certified Access Points in **20** European countries, plus Singapore, Canada and USA. More than **150.000** e-Invoice receiving organizations connected. **60 million** e-invoices between APs in 2017.

12 PEPPOL Authorities

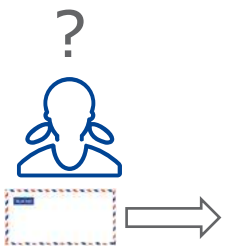
- Agency for Digital Italy (AgID) (Italy)
- Agency for Public Management and eGovernment (Difi) (Norway)
- Danish Business Authority (Denmark)
- Department of Health (UK)
- Department of Public Expenditure and Reform (Ireland)
- Federal Public Service Policy and Support (BOSA) (Belgium)
- Agency for Digital Government (DIGG) (Sweden)
- **Free Hanseatic City of Bremen – KoSIT (Germany)**
- Ministry of Economic Development (Poland)
- SimplerInvoicing (Netherlands)
- **Info-communications Media Development Authority (IMDA) (Singapore)**
- OpenPEPPOL AISBL



No mandatory support for any particular transport mechanism on European level



Exchange infrastructure –
a challenge which will
take time to solve

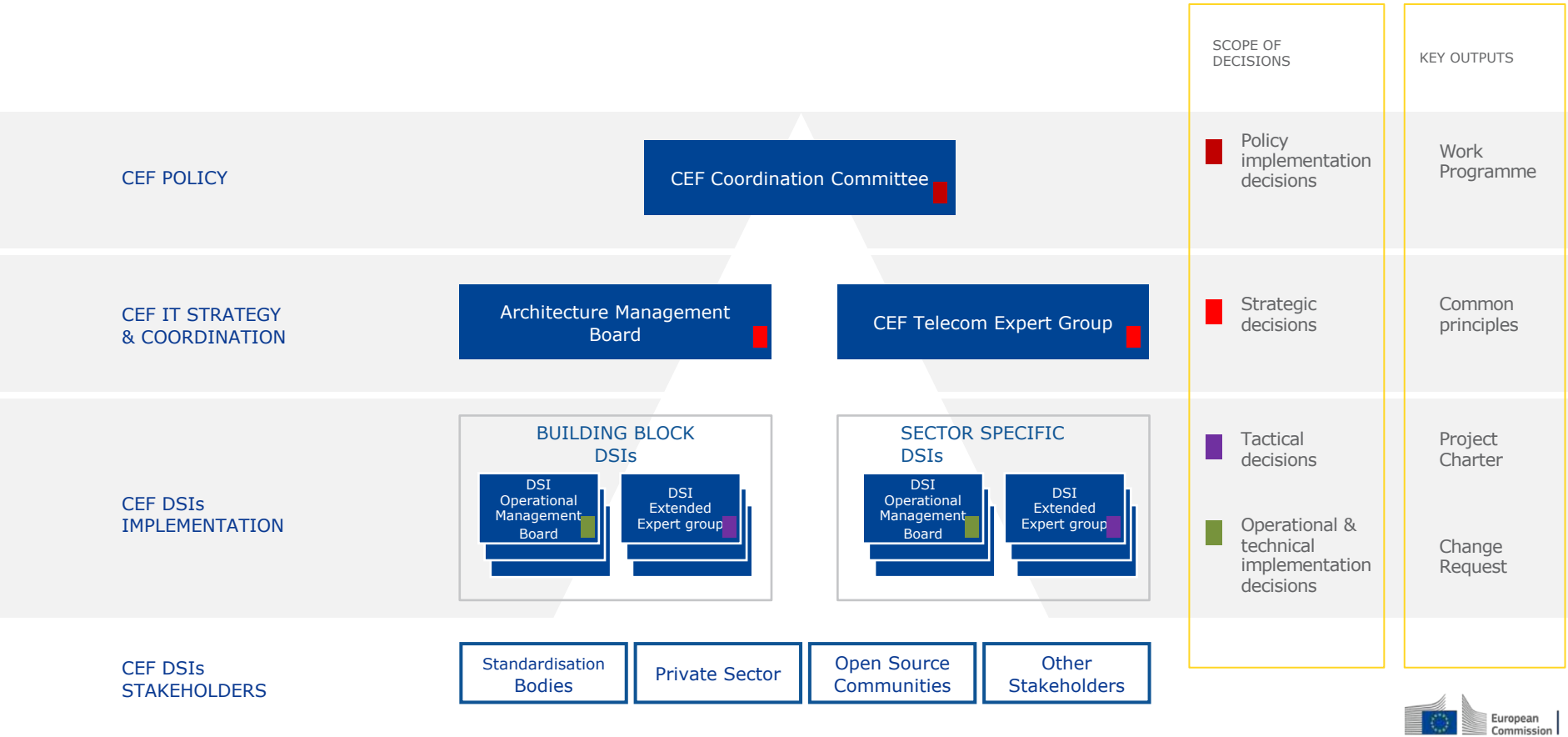


Governance Models and implementation roadmaps in eInvoicing, and eDelivery

Christian Rasmussen

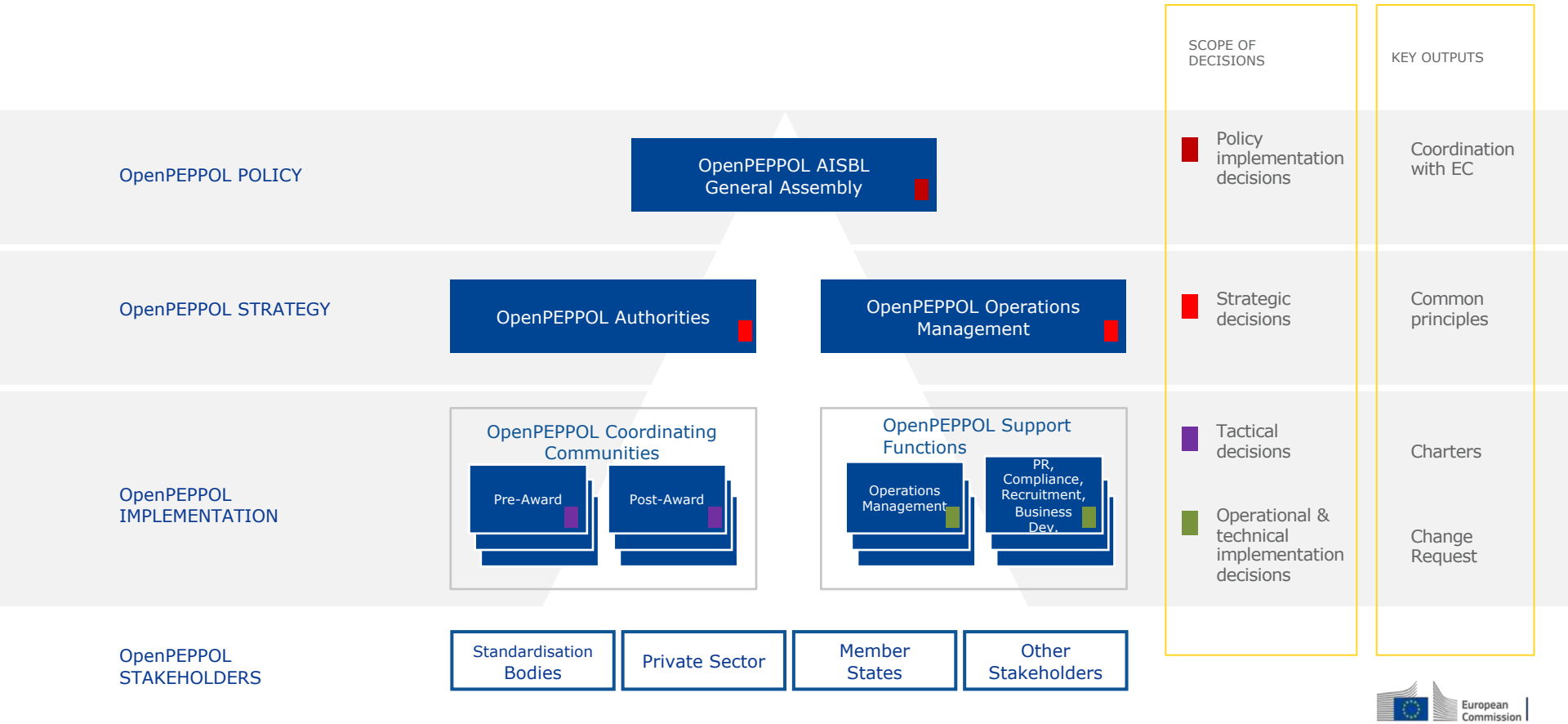
DIGIT

CEF's IT Governance Model



European Commission

OpenPEPPOL's Governance Model



European Commission

For Service Providers - Your checklist:

- Which OpenPEPPOL Authority should I sign up with?
- Where should I invest my time in the OpenPEPPOL governance model?
- How should I involve my stakeholders?

- If your country has a PEPPOL Authority then this should be priority one for you
- If your PEPPOL Authority has specific rules – make sure to study these first before entering into an agreement
- Get onboard and start to interact with the community
  - Not only at CEF Digital but also at OpenPEPPOL Coordinating Communities
- Involve your primary stakeholders early in the process and make sure it is transparent what you intend to do
- And remember – many other people around EU is doing the same thing right now as you – thinking, asking and doing eInvoicing implementations

Roadmap for mass adoption of eInvoicing

Success factors from early adopters are

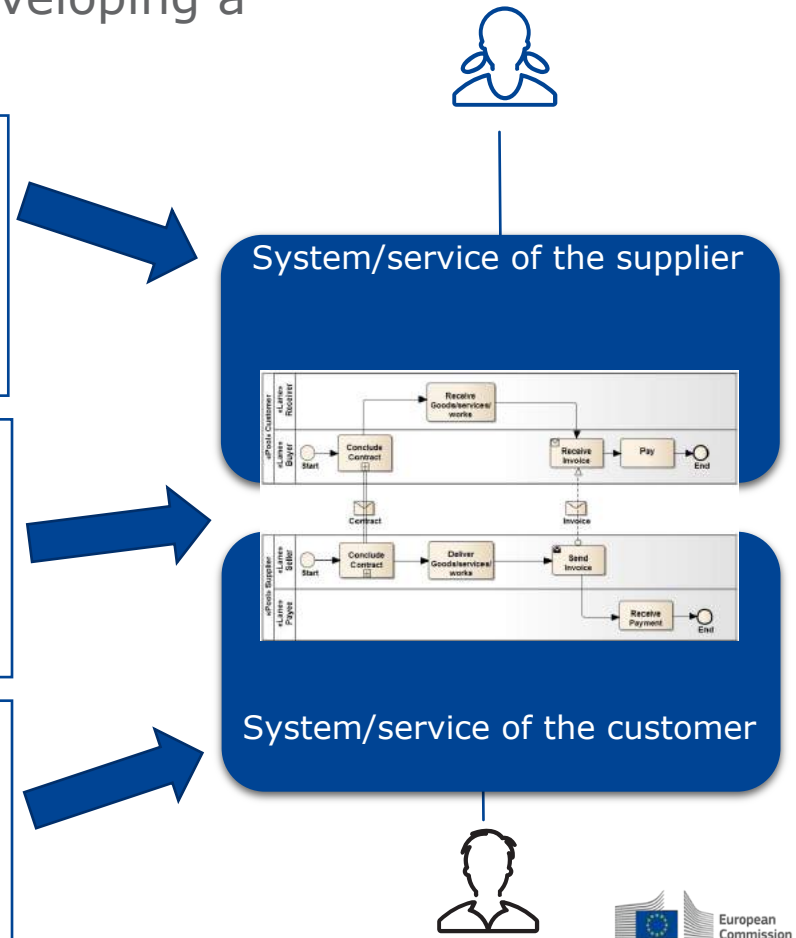
- Policy on standard for format and content
- Policy on transmission technology
- Support available to implementers
- Tools which helps on conformance testing
- Legal requirements

Examples of things to consider when developing a roadmap for eInvoicing

Policy for For the supplier/issuer
- Suppliers have a diverse environment (such as different technical solutions, processes, maturity level)
- Clear policy around standards helps
- Supporting tools can be provided – validation tools, presentation style sheets, translations
- Aligned requirements on use of references and identifiers if possible

Policy for Interconnectivity
- Minimum requirement on technology for how to connect and for service providers to collaborate
- Publicly available strategy on how to handle the European standard – both domestically and cross border (CIUS)
- Transmission cross border (eDelivery)

Policy for the public sector
- Up to each entity to tender for solutions or centrally provided?
- Maturity level of the public entities – are temporary solutions necessary?
- Mandate eInvoicing? Through law/contracts? Also below threshold?
- Centrally provided supporting tools, help desk, training and capacity building?



Roadmap to deploy CEF ***eInvoicing*** on a country level

Domain Owner

Participants in eInvoicing implementations

PHASE	ELICIT requirements	CONSIDERATIONS	SELECT eInvoicing Standards	DEPLOY	INTEGRATE with backend(s)	INTEGRATE with partners	OPERATE
CEF TEAM	Standard Specification Readiness checkerl	Onboarding Validation tool		Service Desk Training and deployment		Connectivity Testing	Service Desk CEF eInvoicing Community
YOUR TEAM	Attend workshops • Complete self-assessment tool • Identify business requirements • Carry out feasibility study	Drivers for implementation • National policy making • Coherence with EU law • Infrastructure and technical impl. • Onboarding • Success factors and pitfalls • Sustainability beyond transposition	*EN eInvoicing* Cross-Industry Invoice UBL *National Standards* Assess current solutions	Deploy components • Configure components • Validation • CIUS	Integrate with CRM, ERP systems • RESTfull APIs, SOAP • Perform Pre-production testing	Participate in Connectivity testing • Perform Pre-production testing	*Open source* Hosting • Maintenance *Commercial solution* Hosting • Fees *Custom built* Hosting • Maintenance

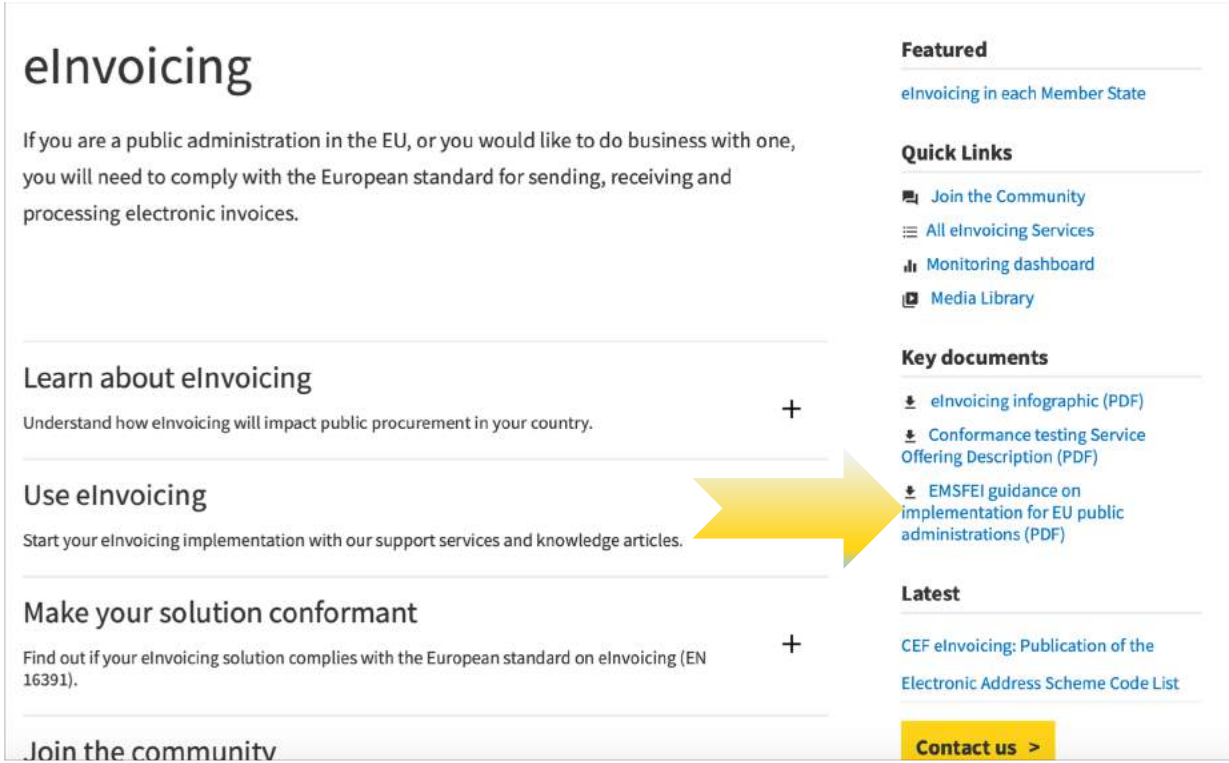
Roadmap to deploy CEF ***eDelivery***

Domain Owner | *Participants in eDelivery Messaging Infrastructure*

PHASE	ELICIT requirements	DESIGN eDelivery infrastructure	SELECT eDelivery solutions	DEPLOY eDelivery solutions	INTEGRATE with backend(s)	INTEGRATE with partners	OPERATE eDelivery solutions
CEF TEAM	Technical Specifications Onboarding Self-Assessment tool	Documentation (COD, SOD, …) Design message exchange model	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 discovery model • Design security model • Design integration approach • Participate in the writing of a SDD • PoC (optional)	*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

Need a checklist?

- At CEF Digital you can find a comprehensive checklist on how to implement CEF eInvoicing on EU public level
- The checklist is created by other Member States who already implemented the EN standard and eDelivery infrastructure



European Commission

Security Aspects of eDelivery – eIDAS compliance

Christian Rasmussen
DIGIT

Commission 2017 Work Programme

https://twitter.com/EU_Commission

KEY INITIATIVES

21 key initiatives to implement our 10 political priorities in 2017

A New Boost for Jobs, Growth and Investment

A Europe that preserves our way of life and empowers our young

1. Youth initiative
2. Implementation of the Action Plan on Circular Economy
3. Financial framework beyond 2020

A Connected Digital Single Market

A Europe that empowers its citizens and businesses

4. Implementation of the Digital Single Market Strategy

A Resilient Energy Union with a Forward-Looking Climate Change Policy

A Europe that takes responsibility for delivery on promises made

5. Implementation of the Energy Union Strategy: low-emission travel and mobility

A Deeper and Fairer Internal Market with a Strengthened Industrial Base

A Europe that makes a strong contribution to jobs and growth and stands up for its industry

6. Implementation of the Single Market Strategy
7. Fairer taxation of companies
8. Implementation of the Space Strategy for Europe
9. Implementation of the Capital Markets Union Action Plan

A Deeper and Fairer Economic and Monetary Union

A Europe that protects our economies and ensures a fair playing field for workers and business

10. A strong Union built on a strong EMU
11. European Pillar of Social Rights

Trade: A reasonable and Balanced Free Trade agreement with the U.S.

A Europe that is open and trading with our partners while strengthening its defence instruments

12. Implementation of the Trade for All strategy

An Area of Justice and Fundamental Rights Based on Mutual Trust

A Europe that defends and preserves our values of freedom, democracy and the rule of law

13. Data Protection Package
14. Progress towards an effective and genuine Security Union

Towards a New Policy on Migration

A Europe that protects our borders and delivers on a responsible migration policy

15. Implementation of the European Agenda on Migration

A Stronger Global Actor

A Europe that protects also defends our interests beyond our borders

16. Implementation of the European Defence Action Plan
17. Implementation of the EU Global Strategy
18. EU Strategy for Syria
19. Africa – EU Partnership: renewed impetus

A Union of Democratic Change

A Europe that takes responsibility, listens and delivers

20. Modernisation of Comitology procedures
21. A more strategic approach to enforcement of EU law

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**

connecting europe

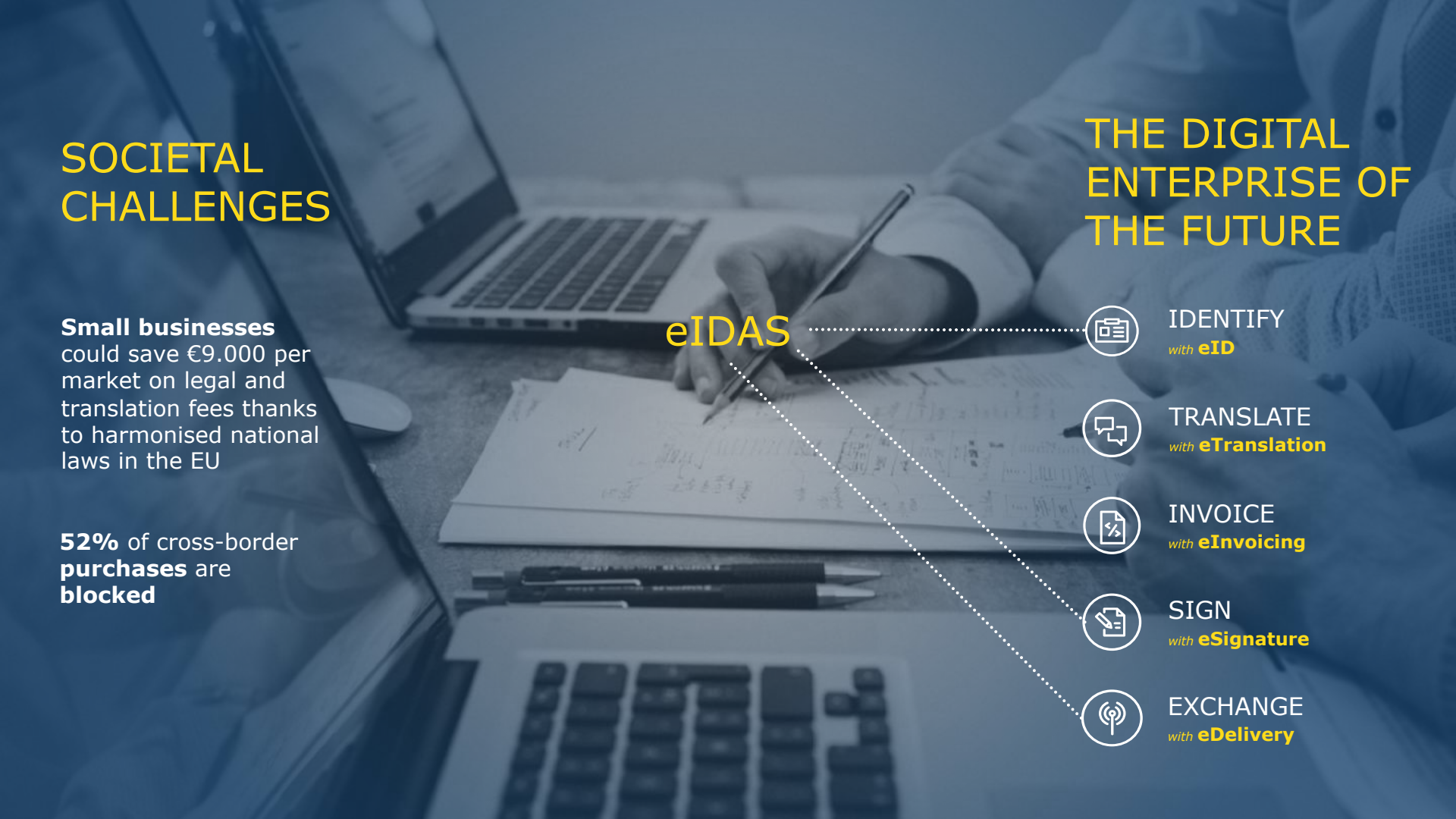
CONSEQUENCE

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

For more information see also the DSM page on the Europa webiste and the DSM roadmap

European Commission


SOCIETAL CHALLENGES
Only 59% of Europeans can **access 4G** networks
90% of jobs will soon require **digital skills**
+ **€11 billion** in **savings** for consumers when **shopping online**
eIDAS
THE DIGITAL CITIZEN OF THE FUTURE
IDENTIFY
with **eID**
TRANSLATE
with **eTranslation**
INVOICE
with **eInvoicing**
SIGN
with **eSignature**
EXCHANGE
with **eDelivery**



SOCIETAL CHALLENGES

Small businesses could save €9.000 per market on legal and translation fees thanks to harmonised national laws in the EU

52% of cross-border **purchases** are **blocked**

THE DIGITAL ENTERPRISE OF THE FUTURE

eIDAS

- IDENTIFY *with* **eID**
- TRANSLATE *with* **eTranslation**
- INVOICE *with* **eInvoicing**
- SIGN *with* **eSignature**
- EXCHANGE *with* **eDelivery**

Where eIDAS plays a role

AMLD5 – Directive (EU) 2018/843
Published on OJEU on 19/06/2018

Payment Service Directive 2 – Directive (EU) 2015/2366
Commission Delegated Regulation (EU) 2018/389 – Regulatory Technical Standards for Strong Customer Authentication

Once-Only Principle cross-border
EU Regulation on Single Digital Gateway agreed on 24/05/2018

Digital on-boarding and portability of KYC
EC Expert Group on eID and remote KYC (2nd meeting held on 10 July 2018) – jointly managed by CNECT, JUST and FISMA

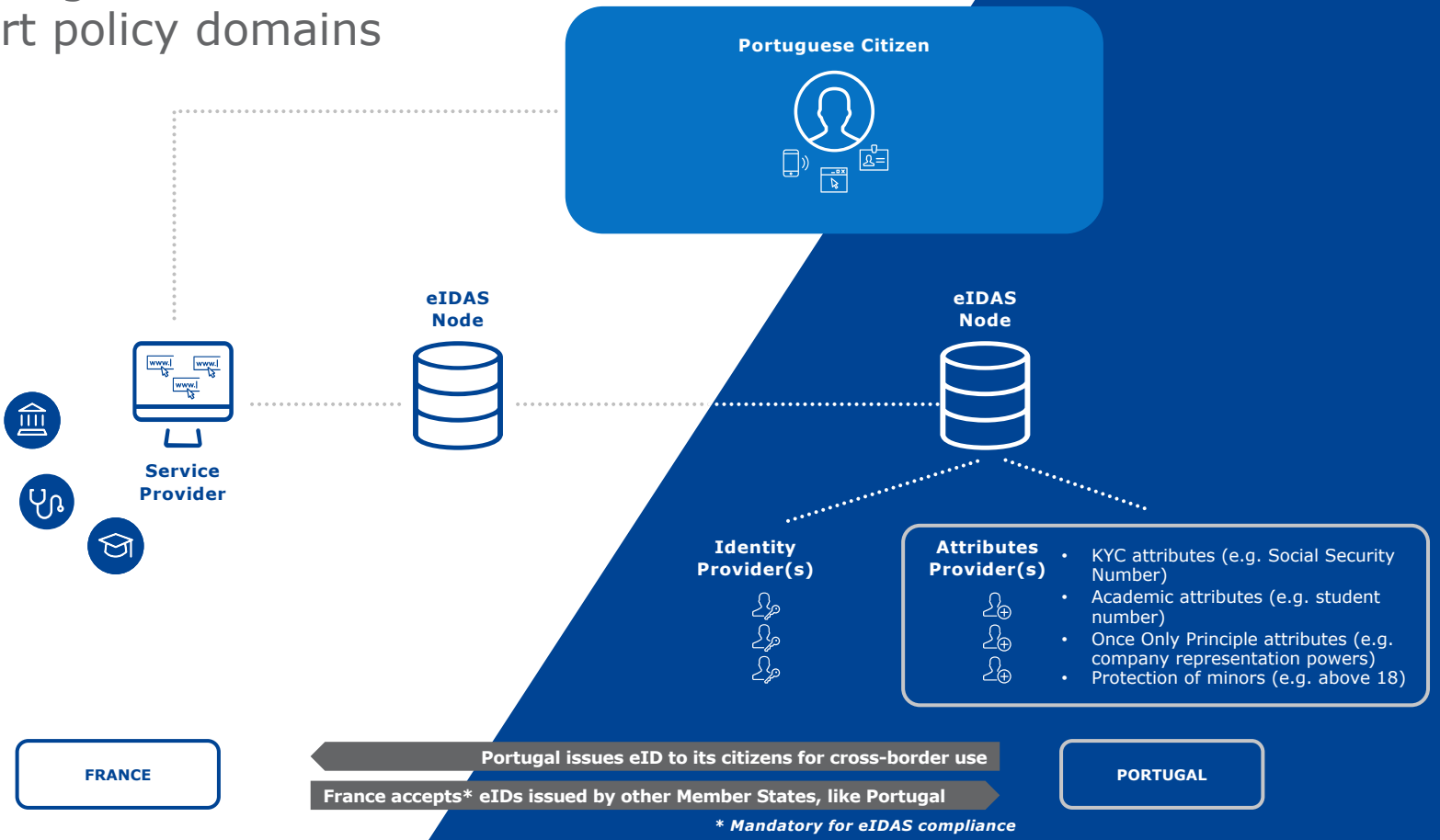
Company law
Proposal to amend the Directive (EU) 2017/1132 adopted by EC on 25/04/2018 as regards the use of digital tools and processes in company law

Tackling online disinformation / Fighting fake news
COM(2018) 236 final adopted on 26/04/2018

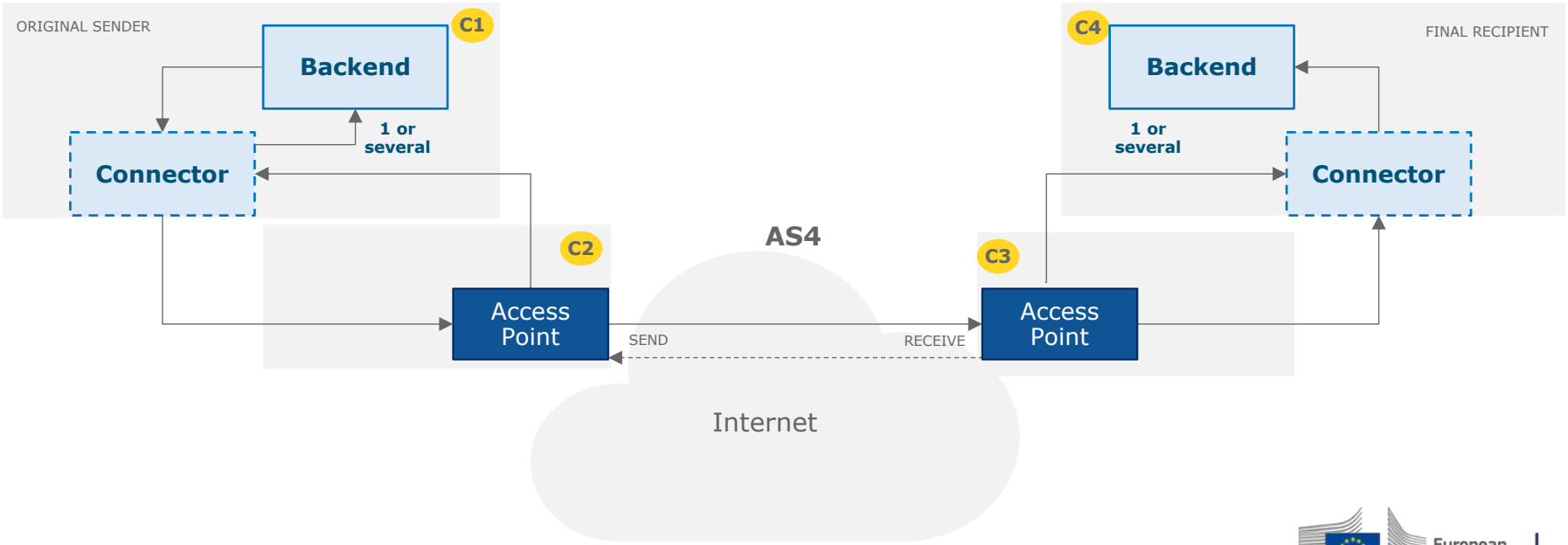
GDPR compliance
Data minimisation; use of trusted attributes, credentials and entitlements (such as age verification, proof of residence, etc.)

Audiovisual Media Service Directive
Protection of minors / Age verification and parental consent
…

Extending eIDAS eID to support policy domains



eDelivery – in a 4 corner model context



Controls linked to ***REQ1: Message Integrity***

Not applicable for the requirement

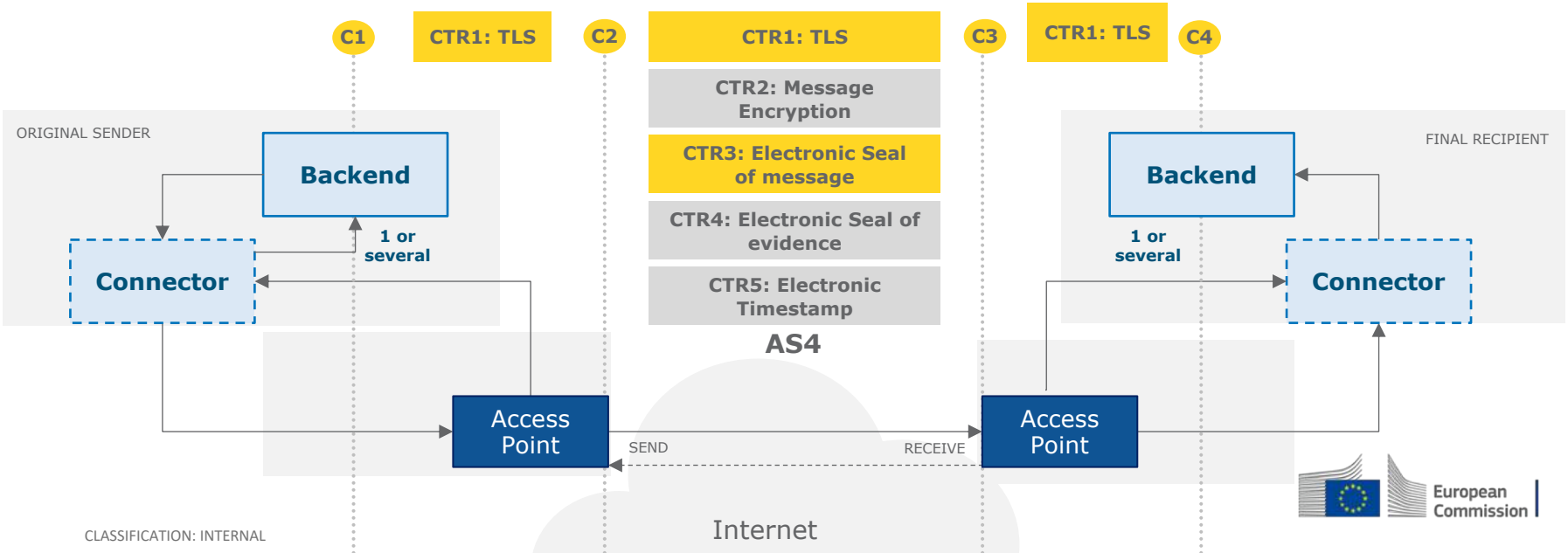
Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner

REQ1: Message Integrity



European Commission

Controls linked to ***REQ2: Message Confidentiality***

Not applicable for the requirement

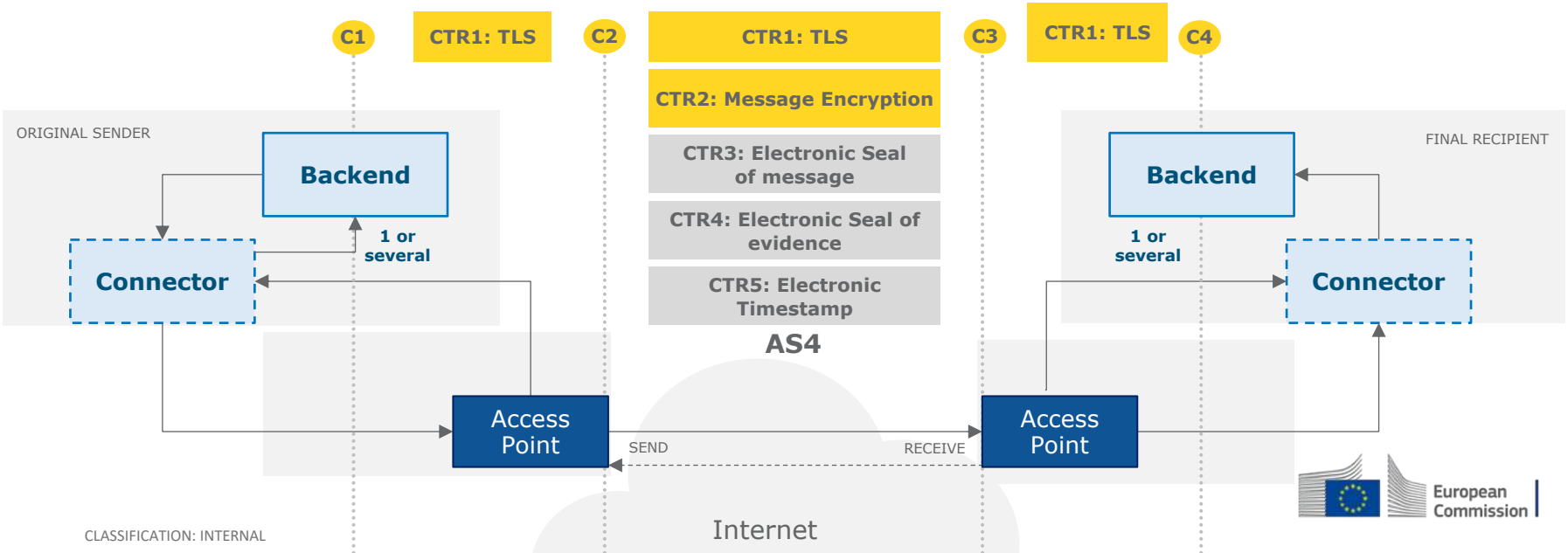
Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner

REQ2: Message Confidentiality



European Commission

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

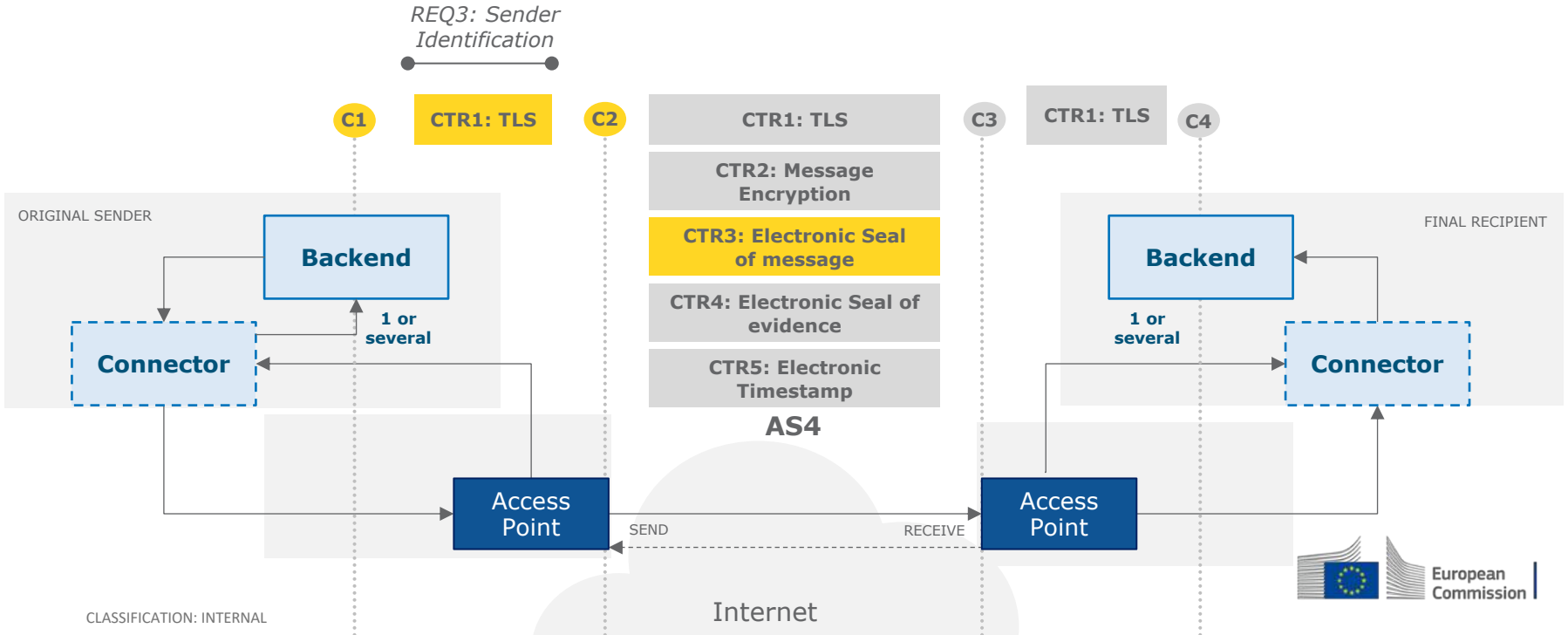
Not applicable for the requirement

Applicable for the requirement

REQ – Requirement

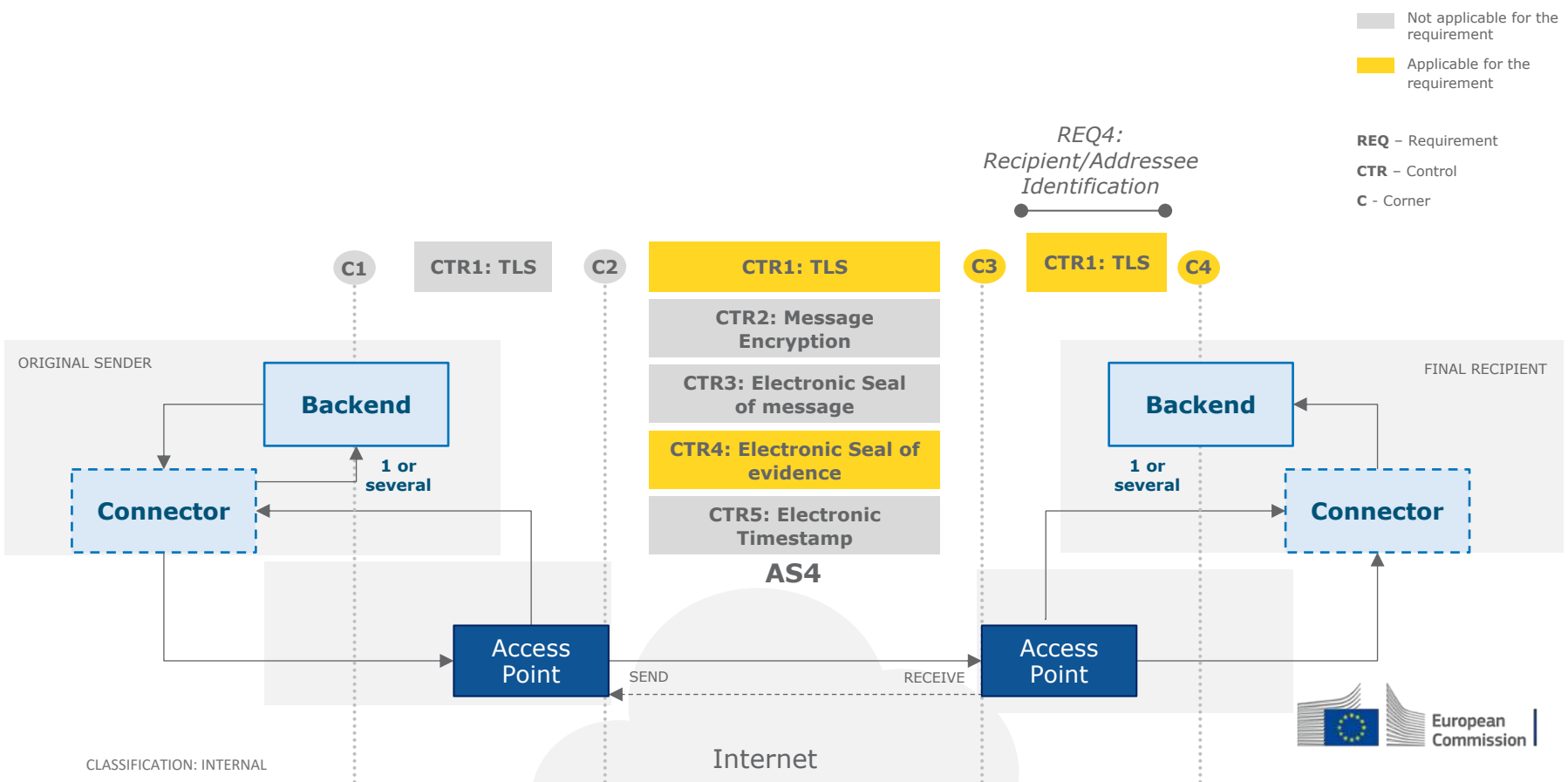
CTR – Control

C - Corner



European Commission

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



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

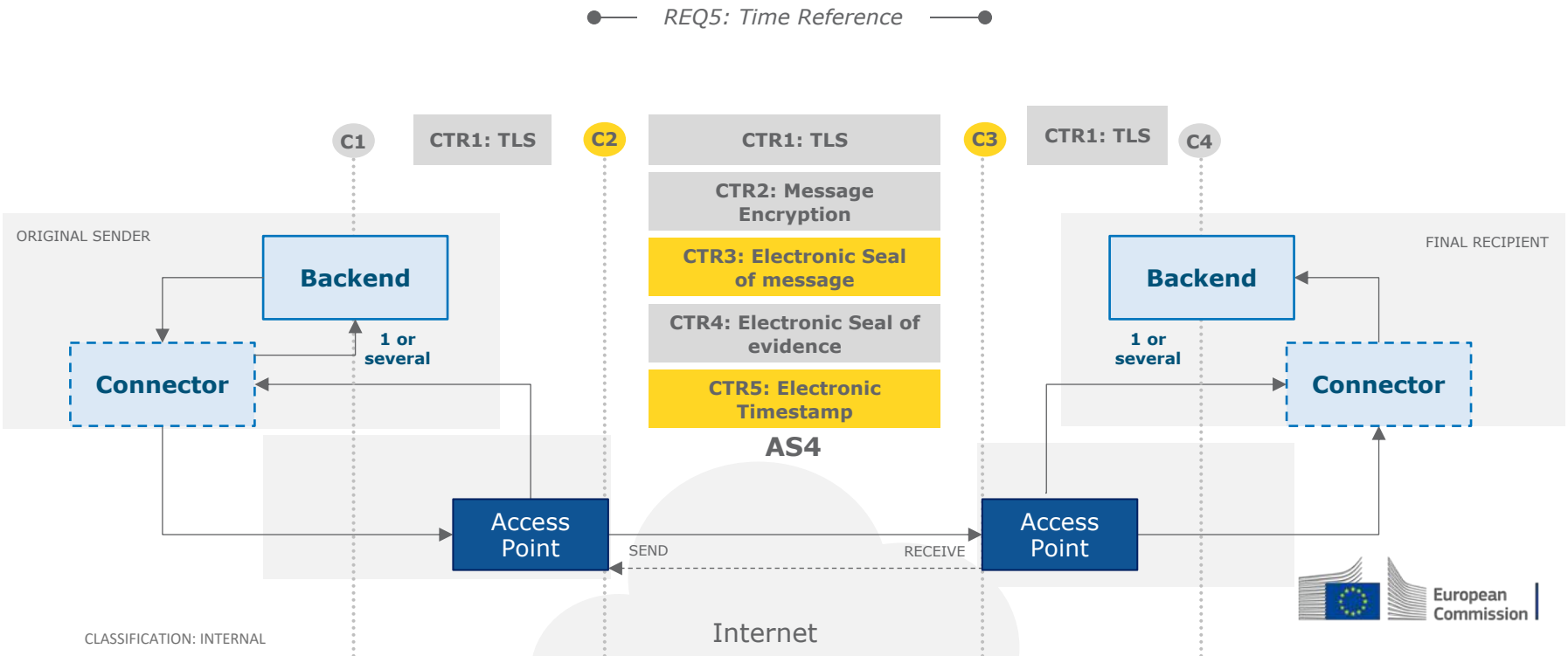
Not applicable for the requirement

Applicable for the requirement

REQ – Requirement

CTR – Control

C - Corner



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

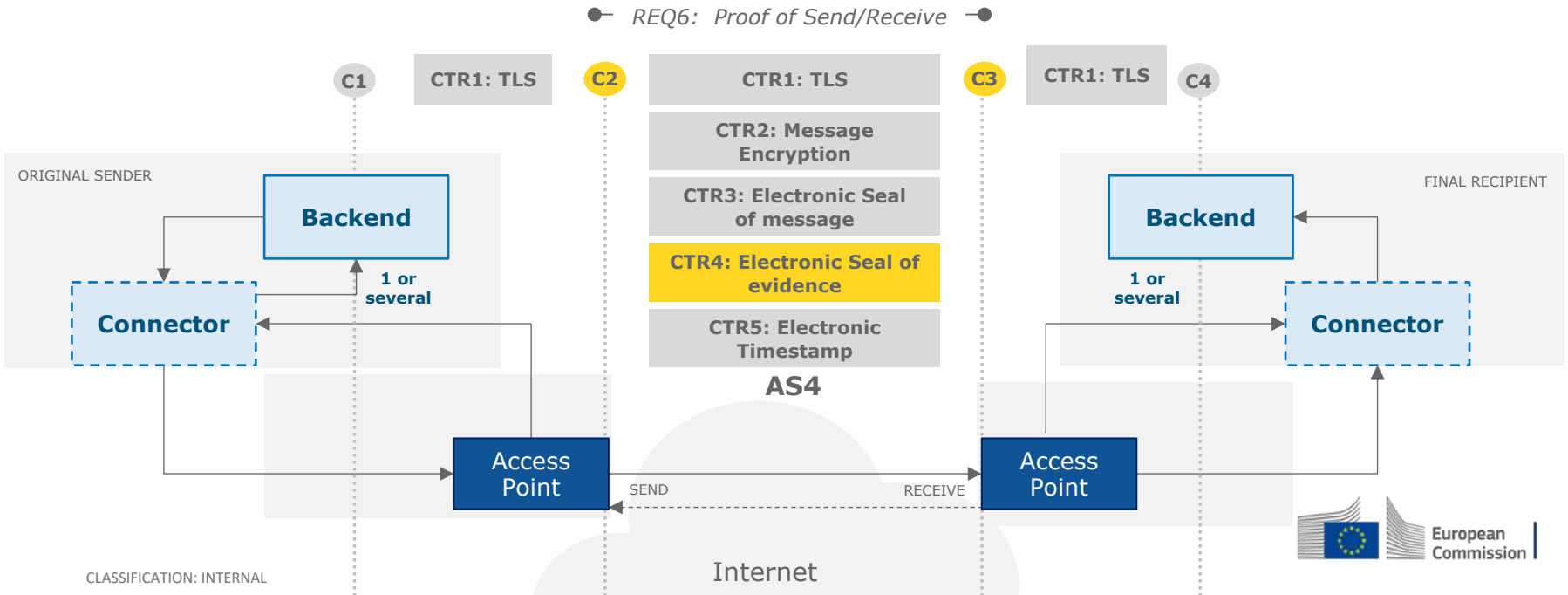
Not applicable for the requirement

Applicable for the requirement

REQ – Requirement

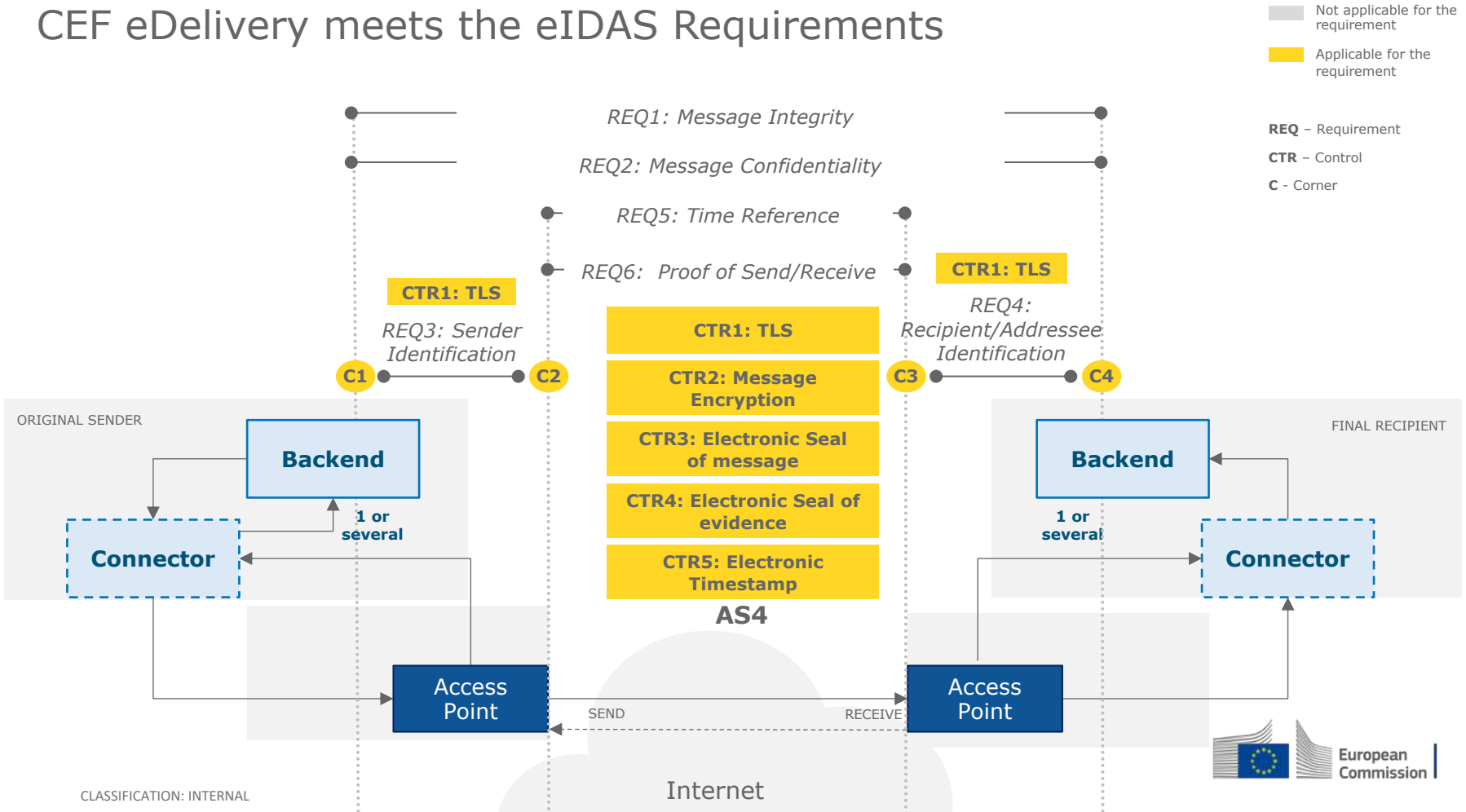
CTR – Control

C - Corner



European Commission

CEF eDelivery meets the eIDAS Requirements



Discussion

Lessons learned

QUESTIONS?