On-site workshop

eInvoicing Implementation Workshop

12 November 2018, Prague, Czech Republic

#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.

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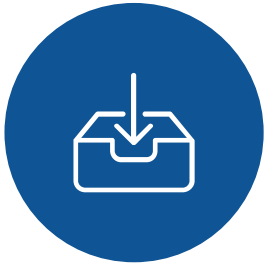
Who are you?

Highlights of the workshop

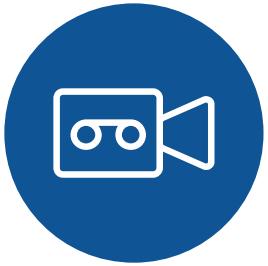
DURING

Ask questions



Download other presentations at CEF Digital

AFTER



Download our other webinar recordings

Interact with our online community

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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

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CEF eInvoicing – Our services and how to get started

Christian Vindinge Rasmussen
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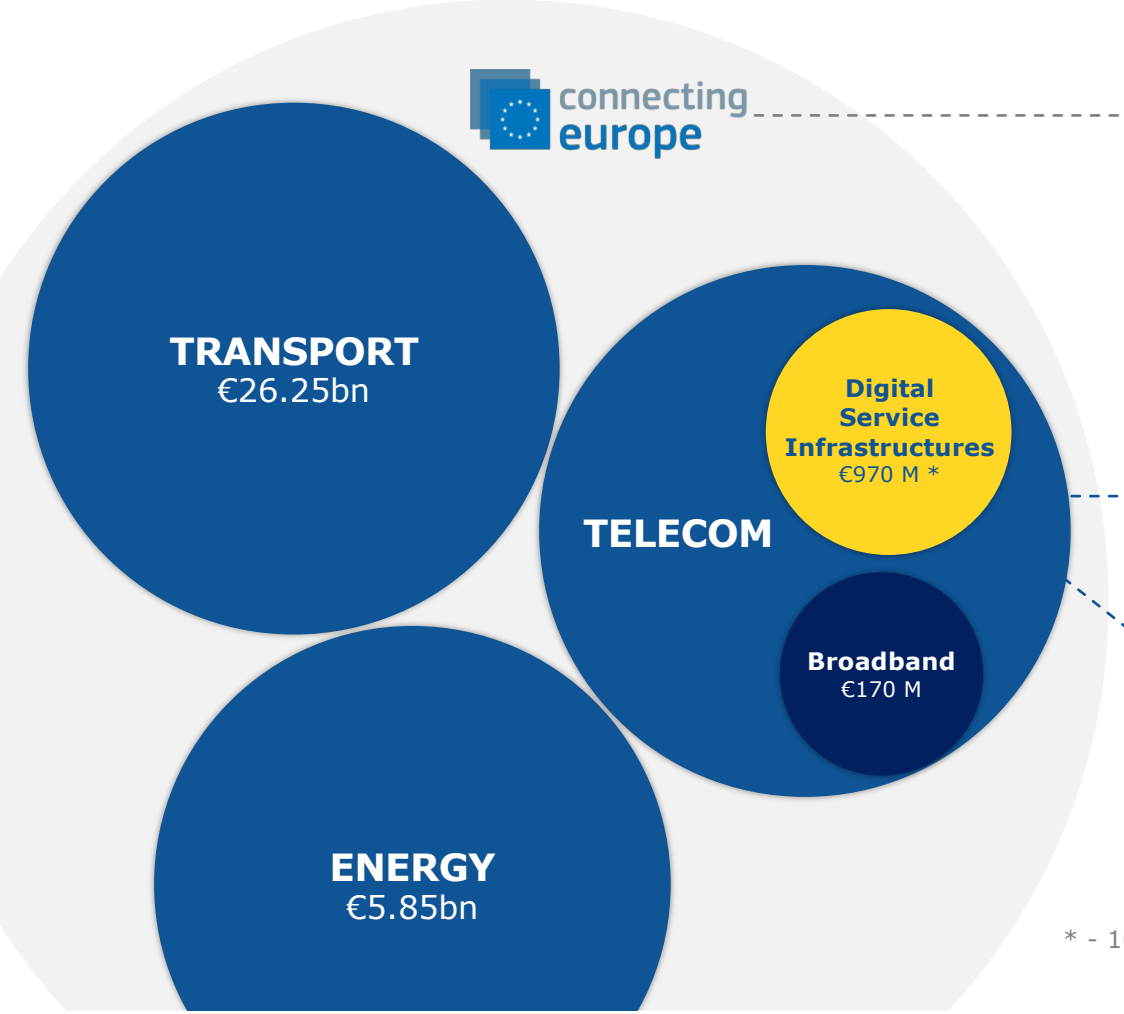
What is CEF eInvoicing

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.

* - 100 M Juncker Package

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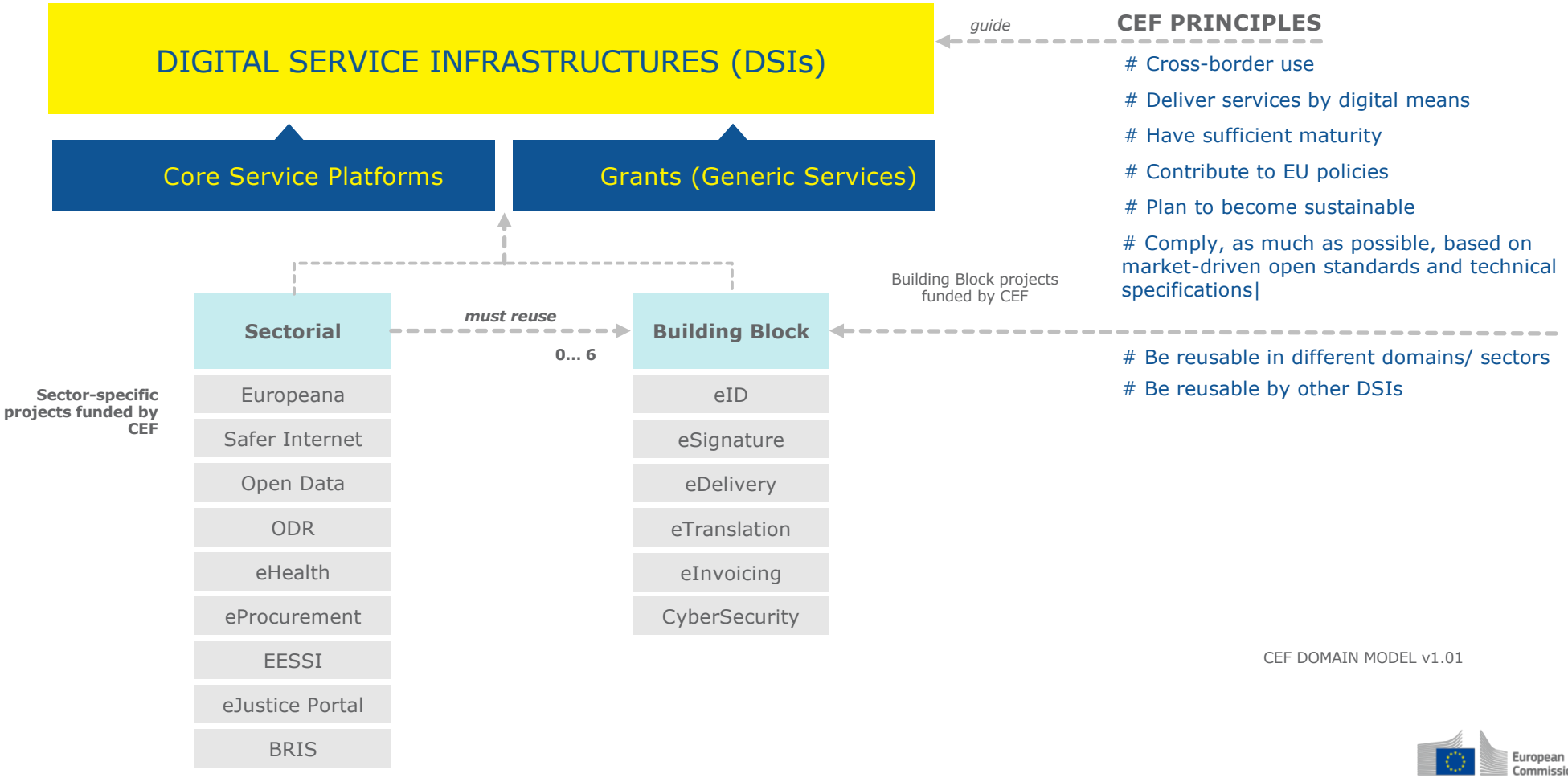
What are Digital Service Infrastructures?



CEF DOMAIN MODEL v1.01

(*) A Building Block is a package of technical specifications, services and sample software that can be reused in different policy domains:

The 'Big Picture'

Funding for the
EUROPEAN COMMISSION

CORE SERVICE PLATFORMS

Services offered by the European Commission

eJustice

ODR

Open Data

BRIS

EESSI, etc.

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)

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 (FIWARE)**

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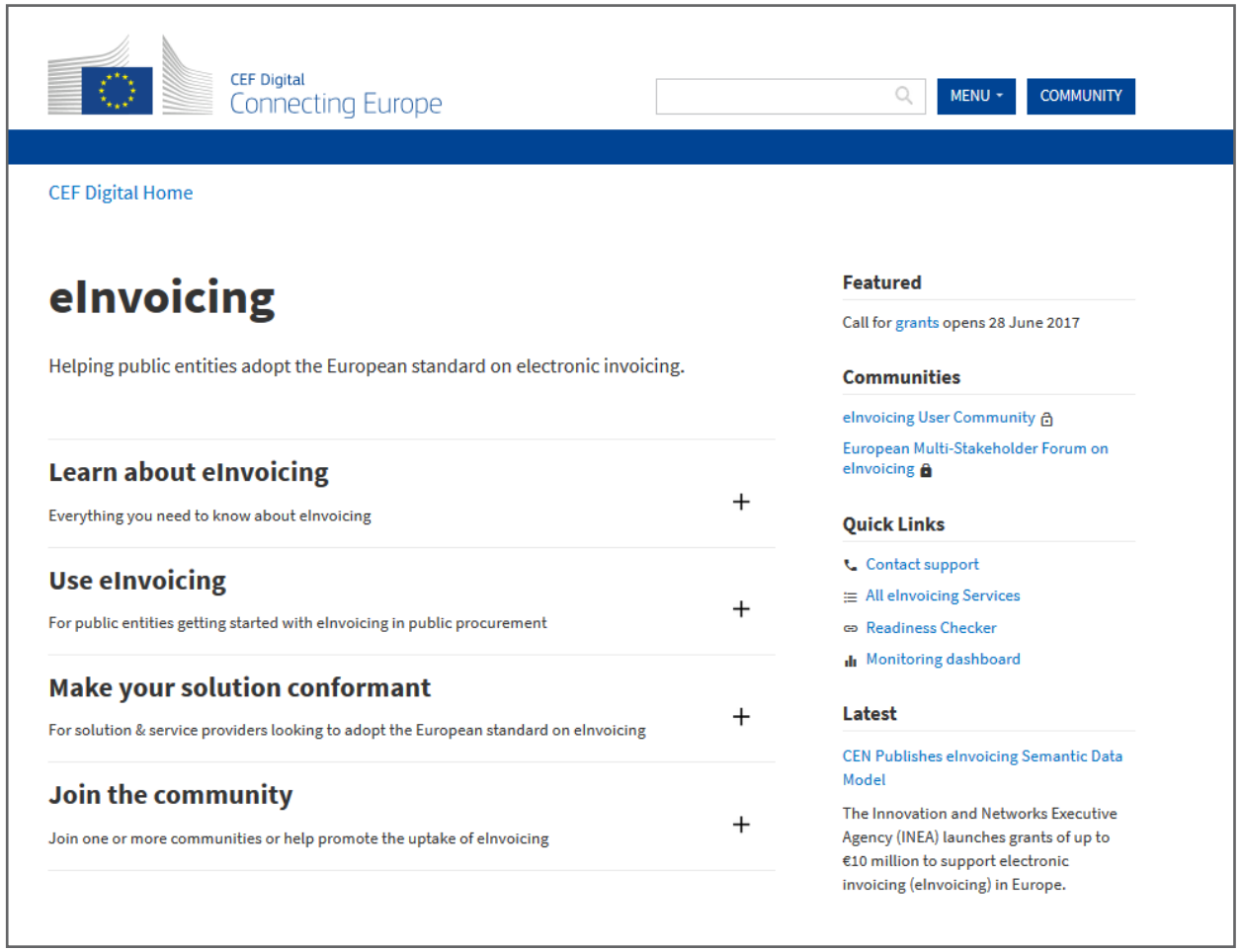
CEF Digital & upcoming webinars

CEF Digital



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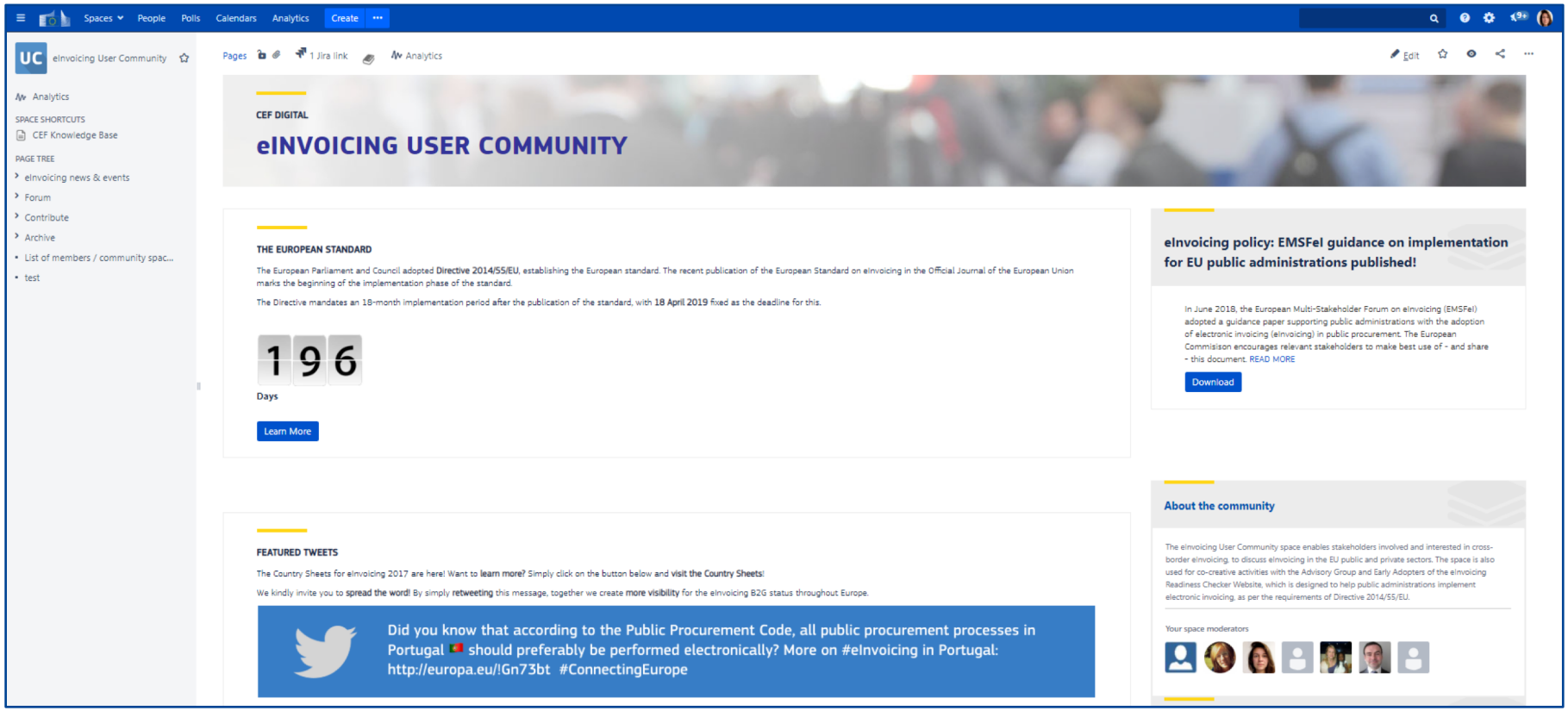
CEF eInvoicing User Community



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

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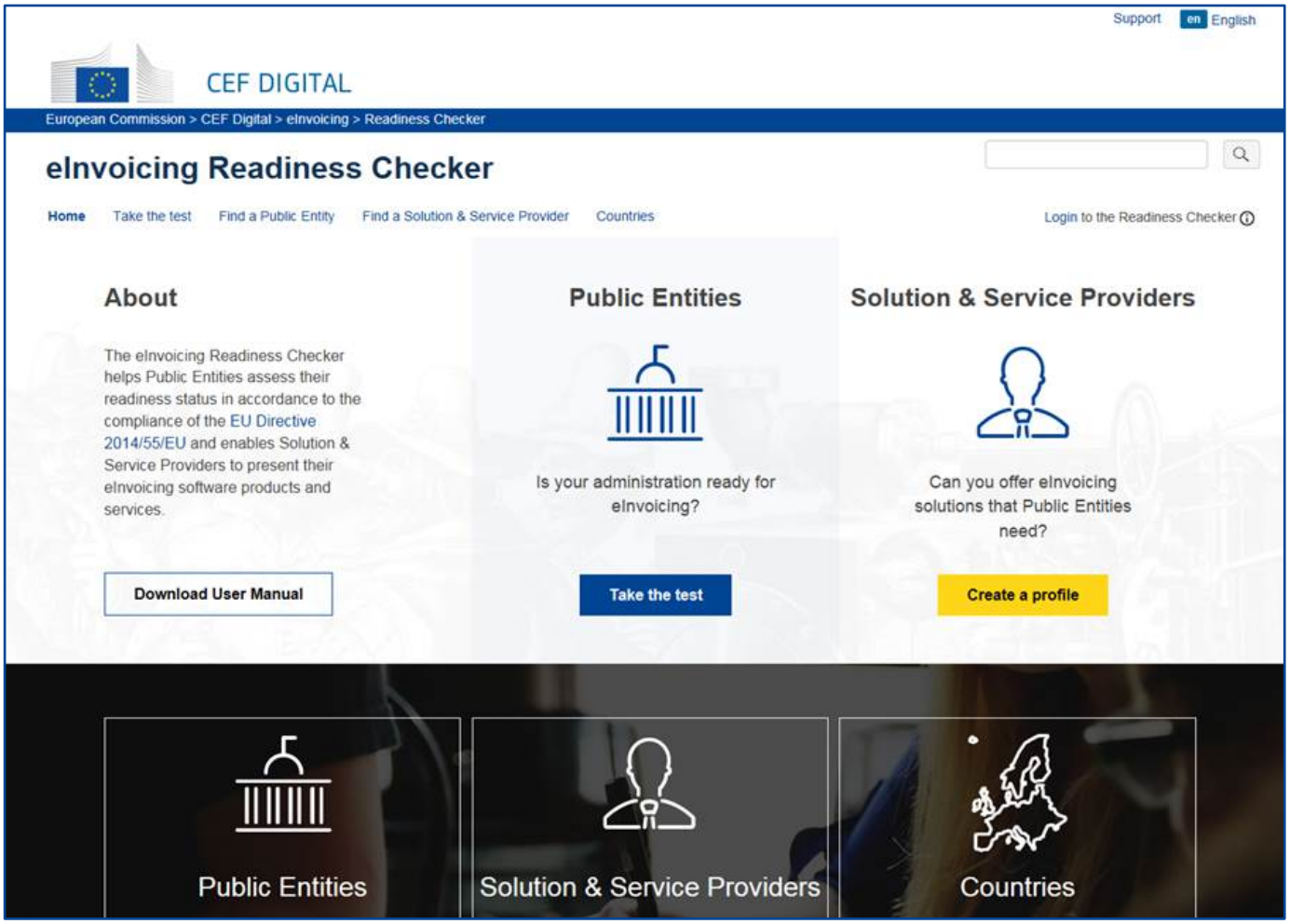
eInvoicing Readiness Checker



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CEF eInvoicing Success Stories

We want to share your experience with CEF eInvoicing services

And promote CEF eInvoicing to help other understand how it can be used!

What kind of stories do you want to see and read about?

- Public administration implementation stories?
- Service providers stories? – How did they helped a public administration realize a project?
- Certain industry focused stories?

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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

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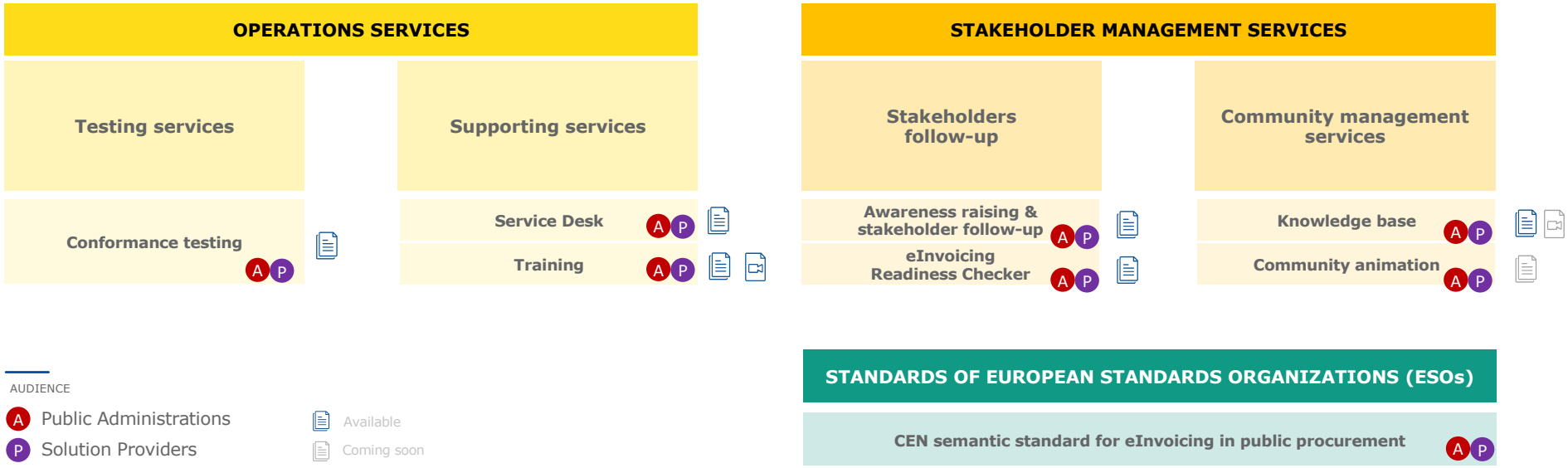
CEF eInvoicing Service offering



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 use 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 eInvoicing service offering, and more about the building block, can be found online

CEF Digital >

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)**
March		**EESPA**	**EESPA**	
April		**Ireland** **Malta**		
May				
June				**EESPA?** **EBA?**

Green = Done or planned

Red = Agreed but details missing

Blue = Request for workshop but not planned

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New focus

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

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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.*

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What you can get from us

Free Workshops – Free Material – provided by CEF

The workshop modules which have taken place so far assessed the needs for implementation of the European standard on eInvoicing in national contexts and focused on the information below:

- **Lessons learned** and **success stories** from early adopters of eInvoicing solutions, presenting the benefits of eInvoicing from a user's perspective;
- The **European standard**, its compliant syntaxes and their conversion and validation mechanisms;
- **Grant funding** for eInvoicing projects;
- **Other resources and tools** from the CEF eInvoicing Building Block (such as the eInvoicing Readiness Checker).

Highlights covered in Implementation workshops to date include:

- Infrastructure based on the CEF eDelivery architecture
- Basic XML using examples from the EN-syntaxes + mapping/conversion considerations
- Understanding OASIS UBL 2.1 and Understanding UN/CEFACT CII D16B
- Examples of early adopters of large scale eInvoicing – lessons learned
- eInvoicing from a user perspective (including ordering and payments)
- Funding and grants
- CEF tools and community
- History of CEF

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The new material includes:

- **Hands-on support** and examples of CIUS creation
- **Roadmaps** and **guidelines** towards implementation of the Directive - public and private sector
- **Governance models** and steps towards public policy creation around the Directive
- **Security aspects** of eInvoicing and eDelivery - eIDAS compliance
- **Status updates** on implementations in the Member States with examples from the implementers

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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.*

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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

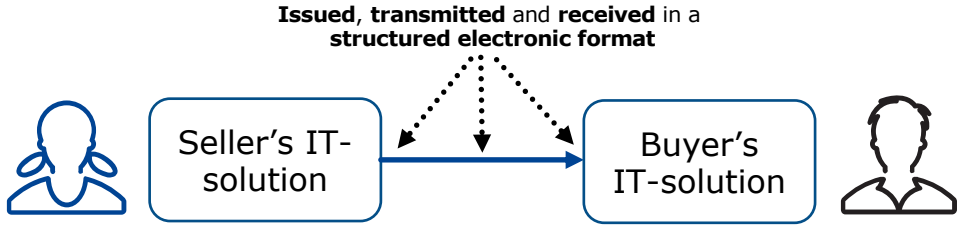
(1) '**electronic invoice**' means an invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing;

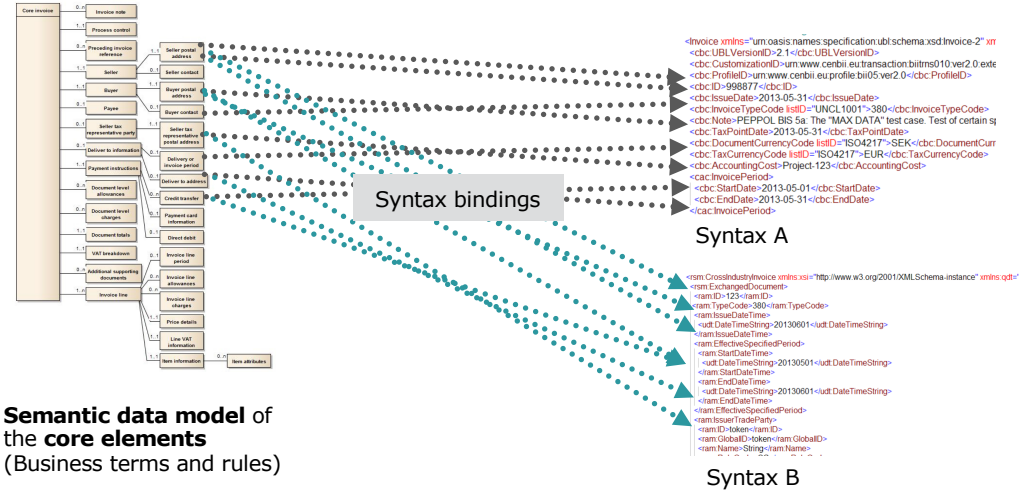
(2) '**core elements of an electronic invoice**' means a set of essential information components which an electronic invoice must contain in order to enable cross-border interoperability, including the necessary information to ensure legal compliance;

(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;





Semantic data model of the **core elements**
(Business terms and rules)

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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?

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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

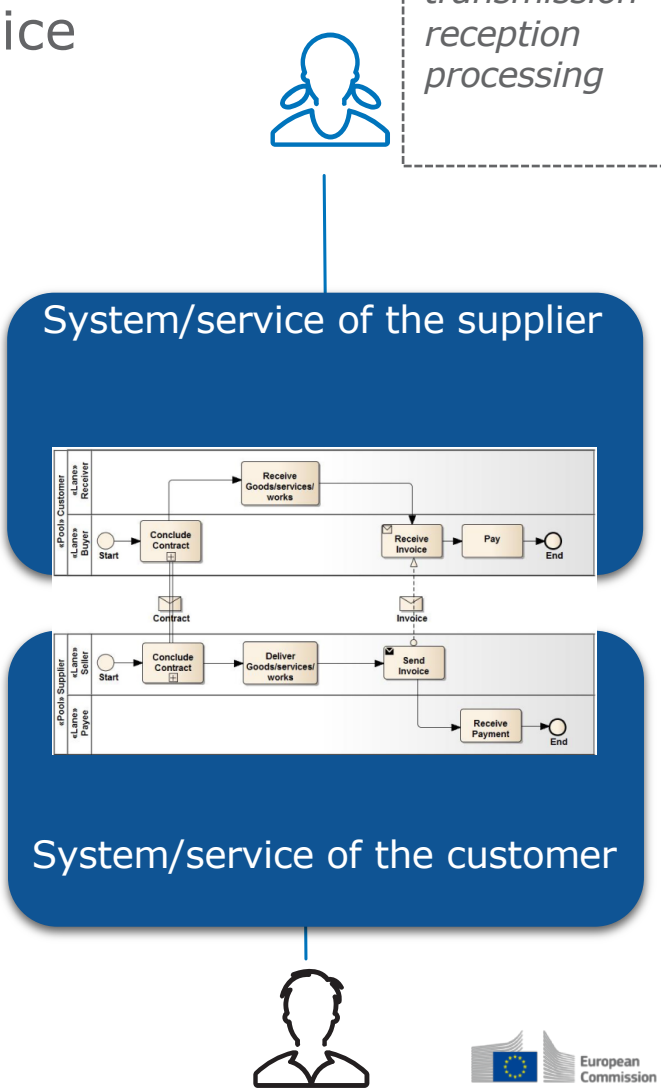
  - Provided by the customer

  - 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*

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Many different options – transmission of the eInvoice

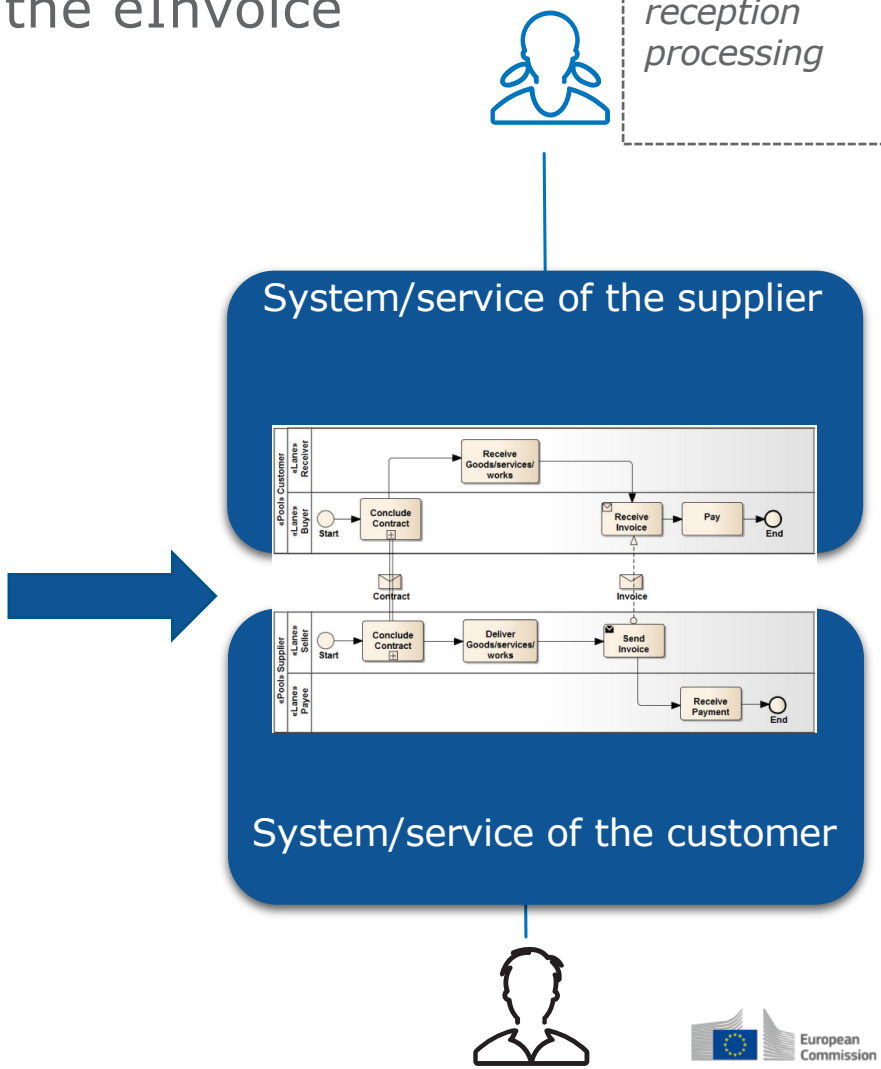
generation
transmission
reception
processing

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



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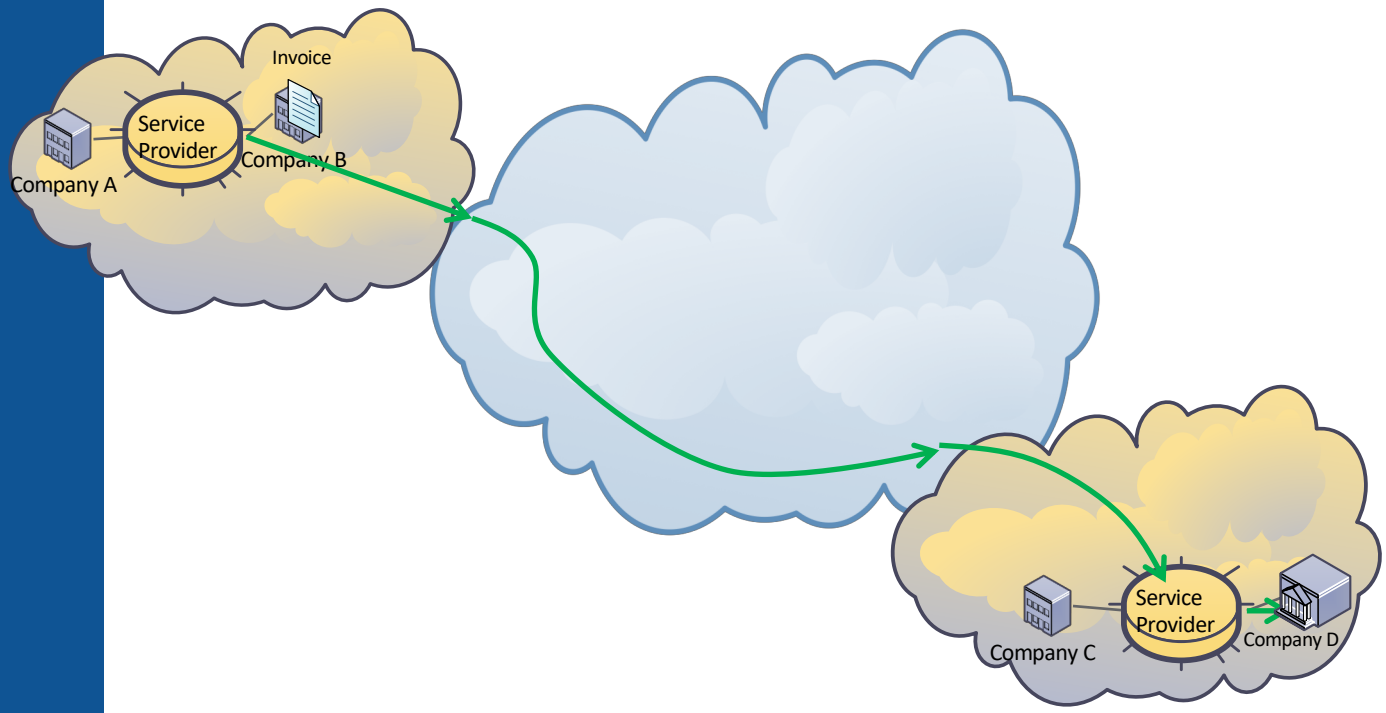
Challenges with most models

- Onboarding of trading partners often requires testing/configuration
- Service providers often charge per trading partner's connection
- Addressing configuration often managed ”statically”
- Changing service provider (and migrating all trading partners) can be costly



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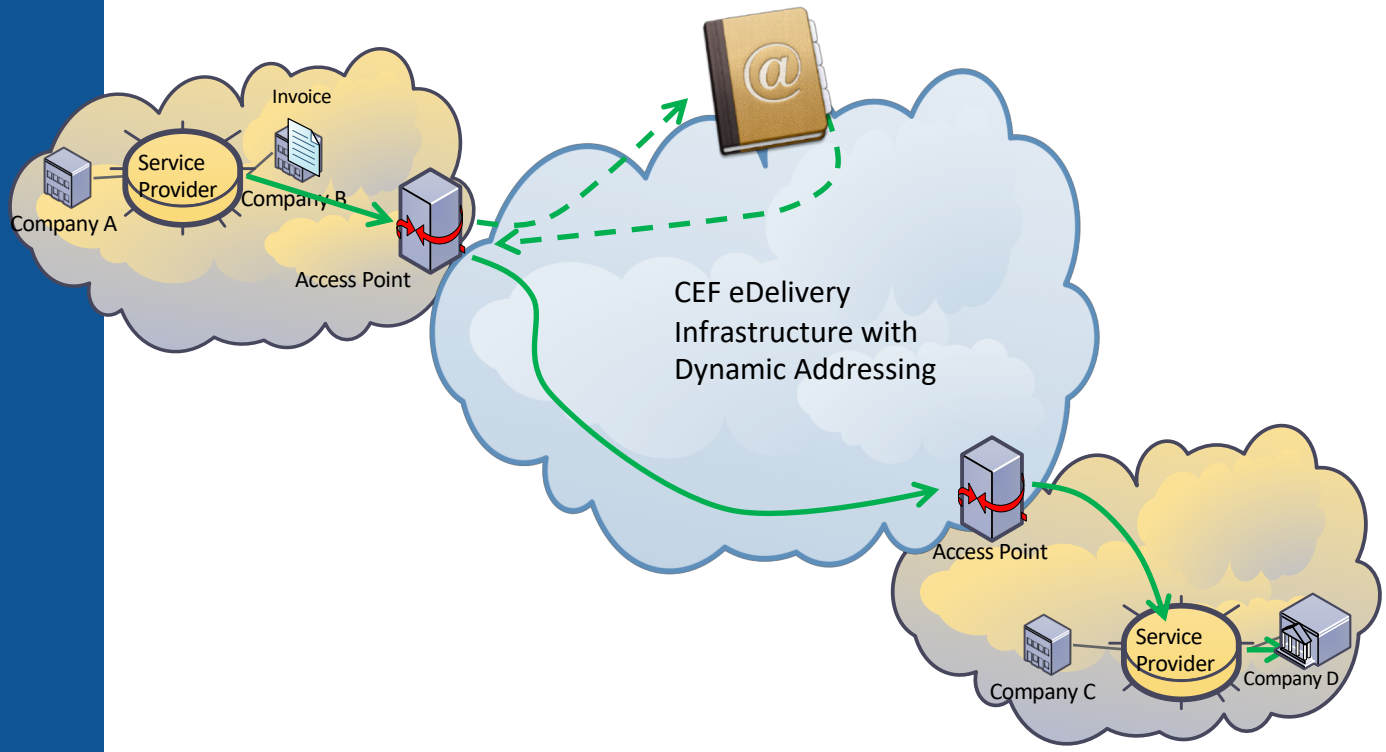
CEF eDelivery (PEPPOL) offers dynamic addressing

- 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



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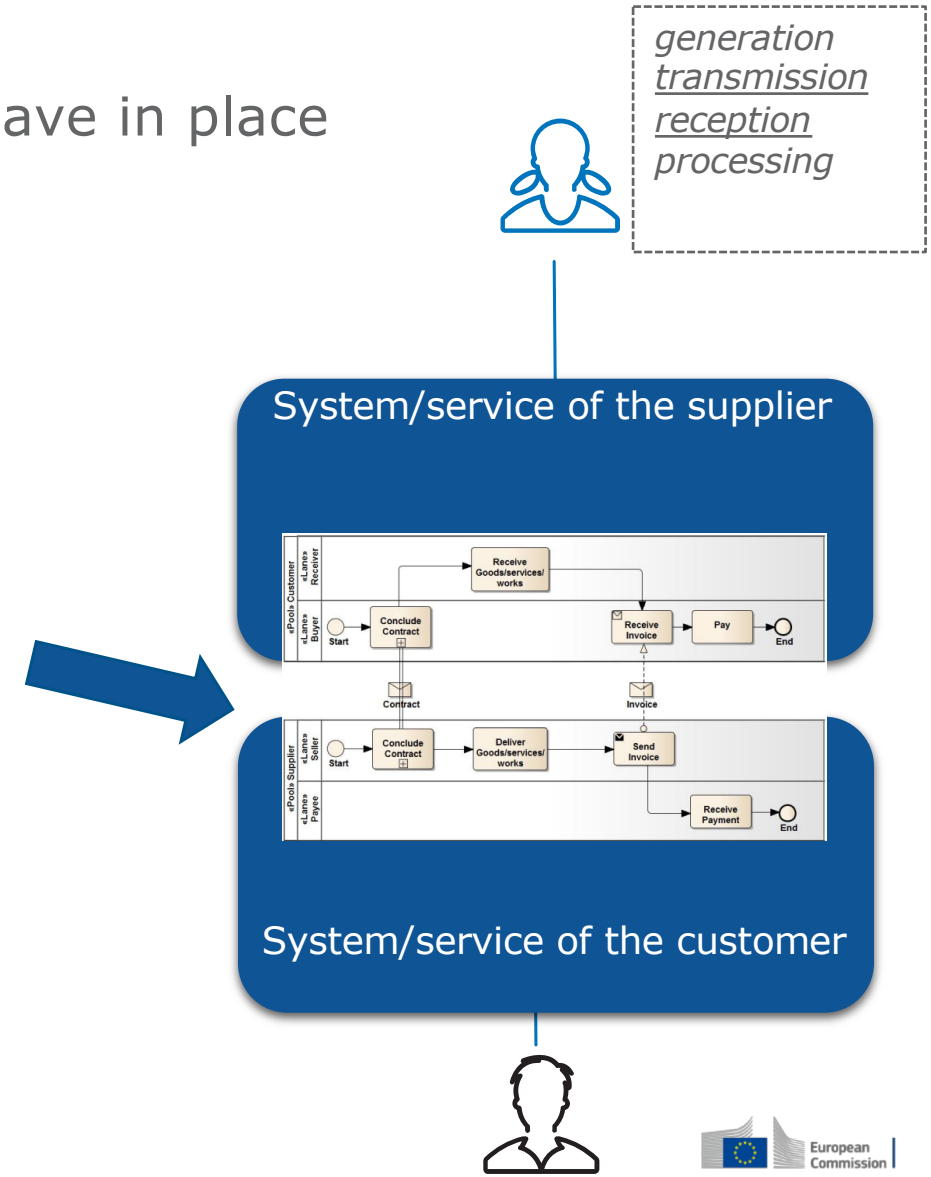
Reception of eInvoice - components to have in place

- Service for receiving eInvoices
  - The ”inbox”/ or technical entry point (access point)
  - May support several formats
  - Important aspects: connectivity with other service providers, logging, validation and archiving
- 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



Centralized or decentralized handling of invoice assessment

generation
transmission
reception
processing

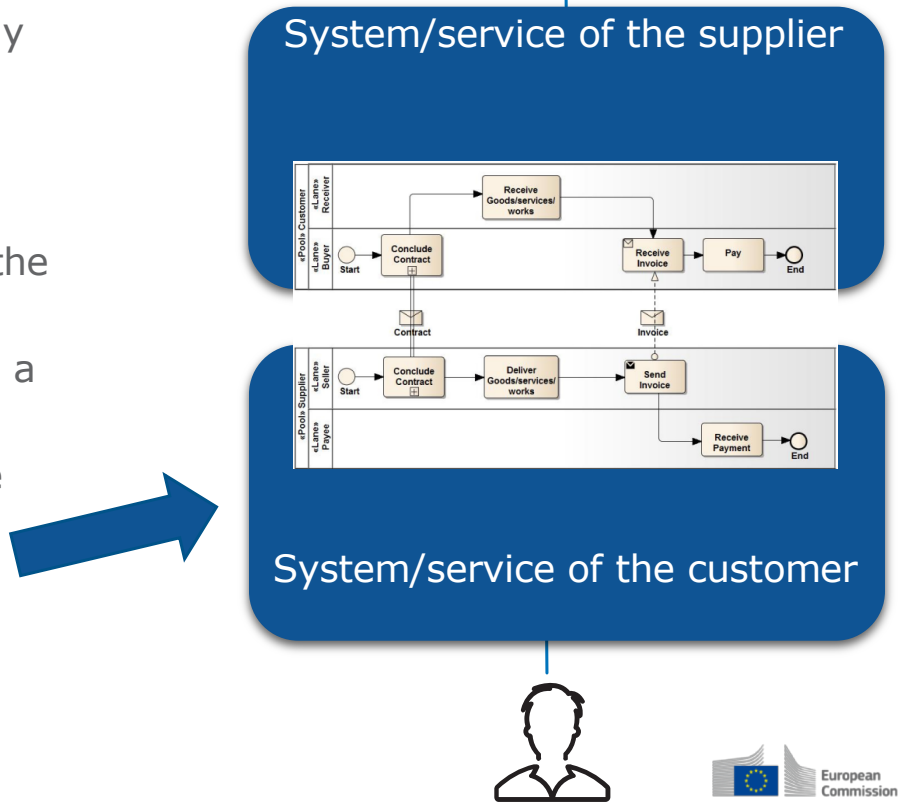
- For invoices which are not automatically matched, a manual assessment is necessary
- By using references, the invoice can be forwarded directly to the person/role responsible for assessing the invoice

  - Requires a workflow system

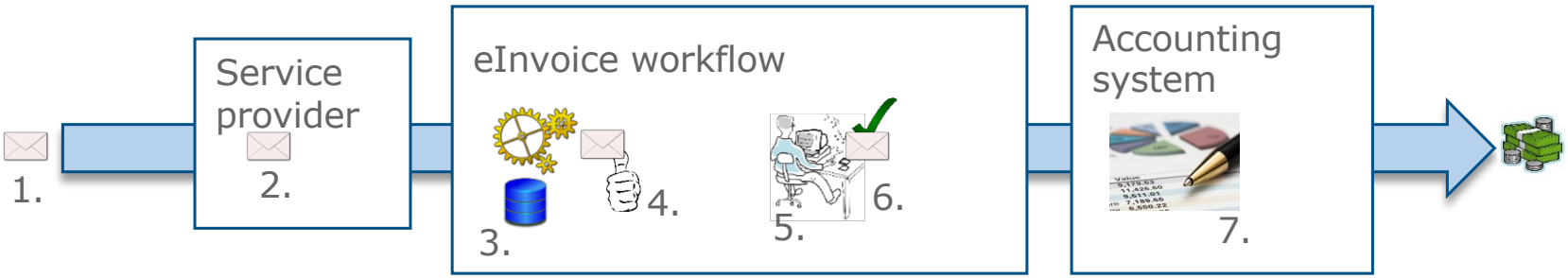
  - Important with data quality of the reference value

  - 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

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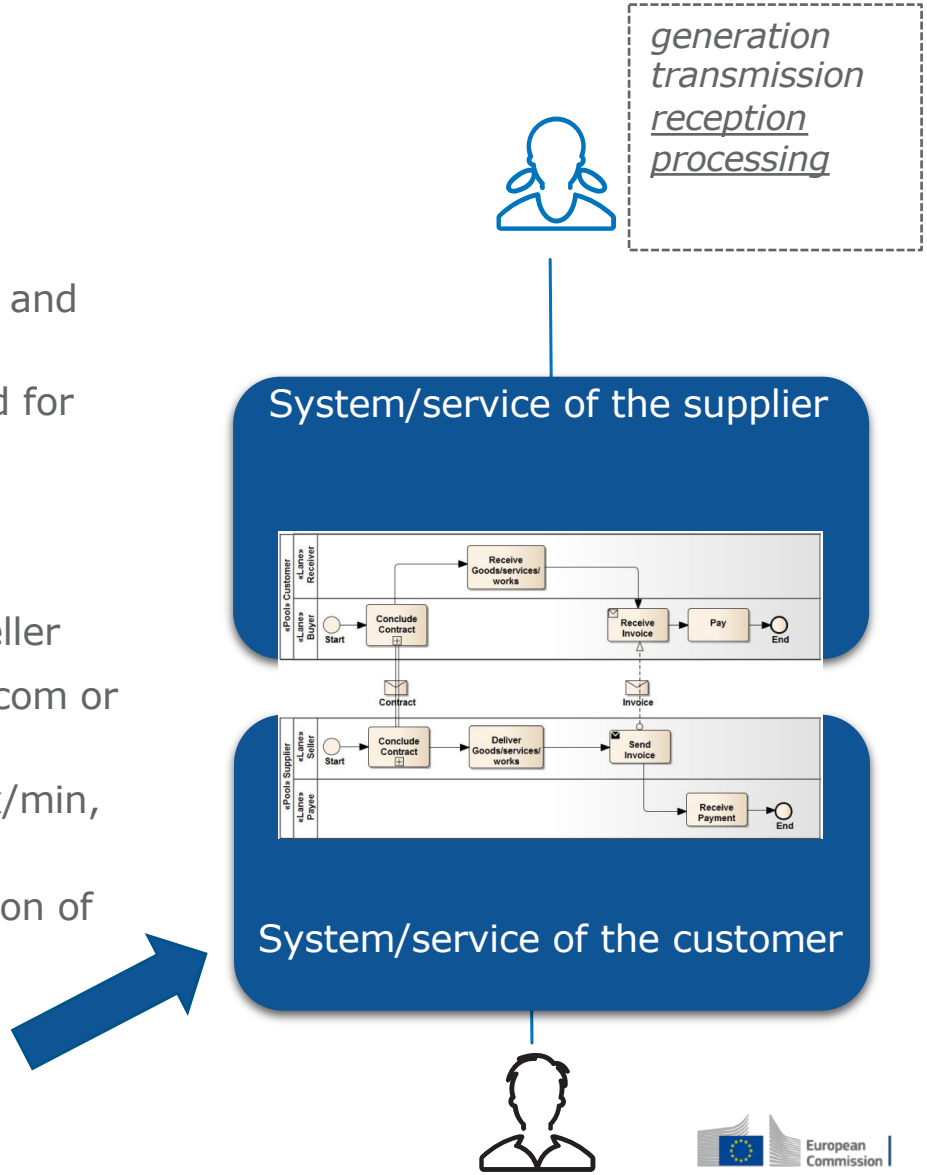
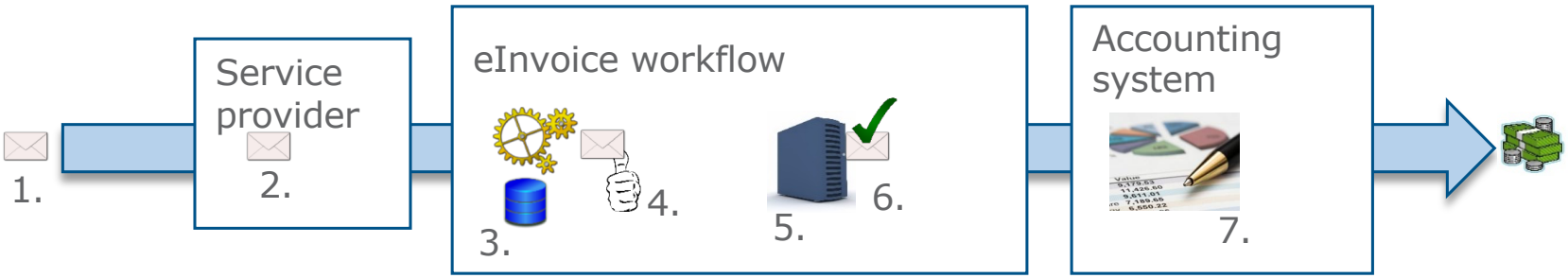
Straight through invoice processing

- 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

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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

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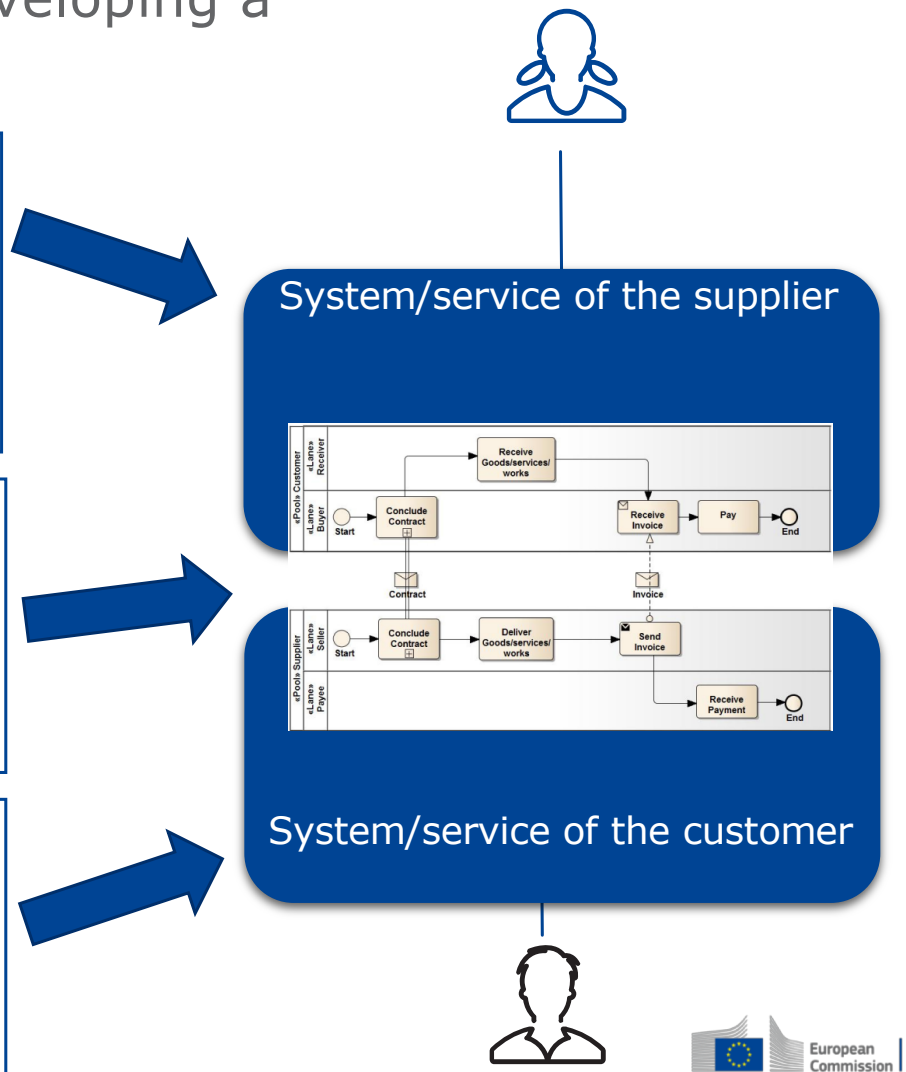
Examples of things to consider when developing a roadmap for eInvoicing

For the supplier/issuer – Internal perspective
- 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

Interconnectivity – External perspective
- 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)

For the public sector – Internal perspective
- 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?



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Discussion – what measures can be done for these three views

1. Solutions and strategies for suppliers (how to ensure that the suppliers are ready?)

2. Stategies for Transmission/connectivity (eDelivery/PEPPOL, central service, private solutions)

3. Solutions and strategies for the public sector (are the public entities ready?)

The European Norm and its content

Martin Forsberg
DIGIT

Initiation of the standardisation

From article 3

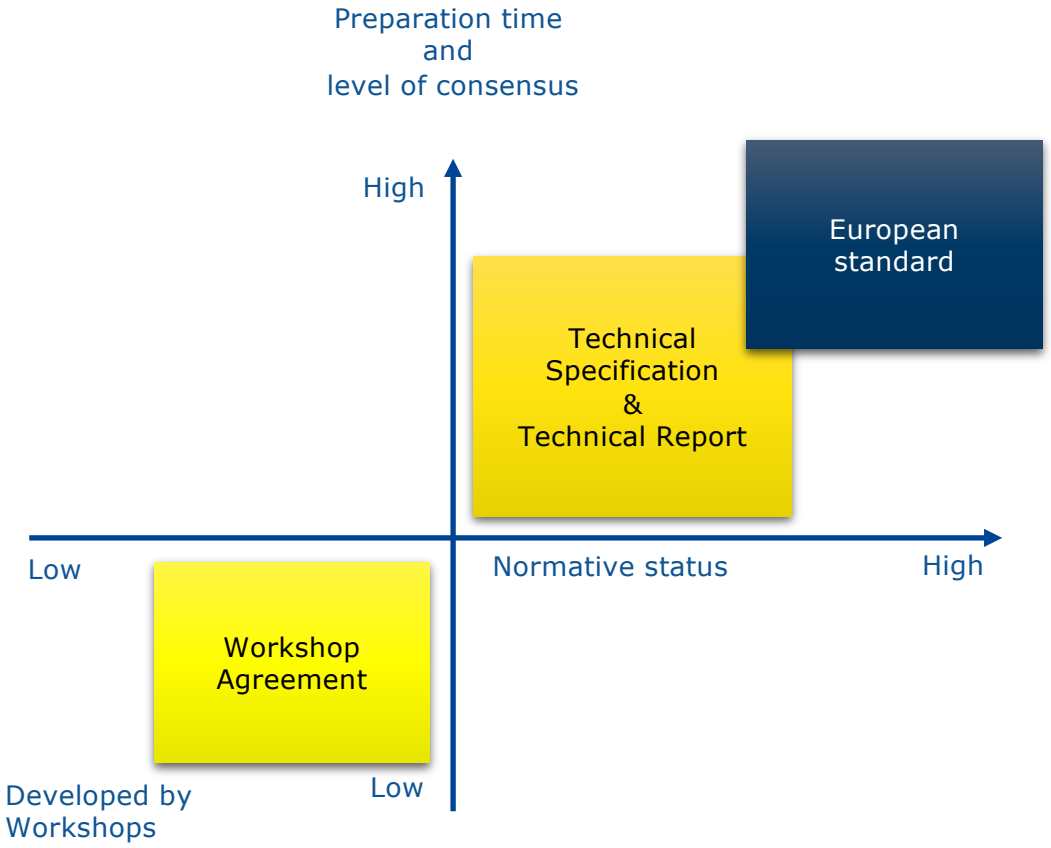
*The Commission shall request that the relevant **European standardisation organisation** draft a European standard for the semantic data model of the core elements of an electronic invoice (the 'European standard on electronic invoicing').*

…

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

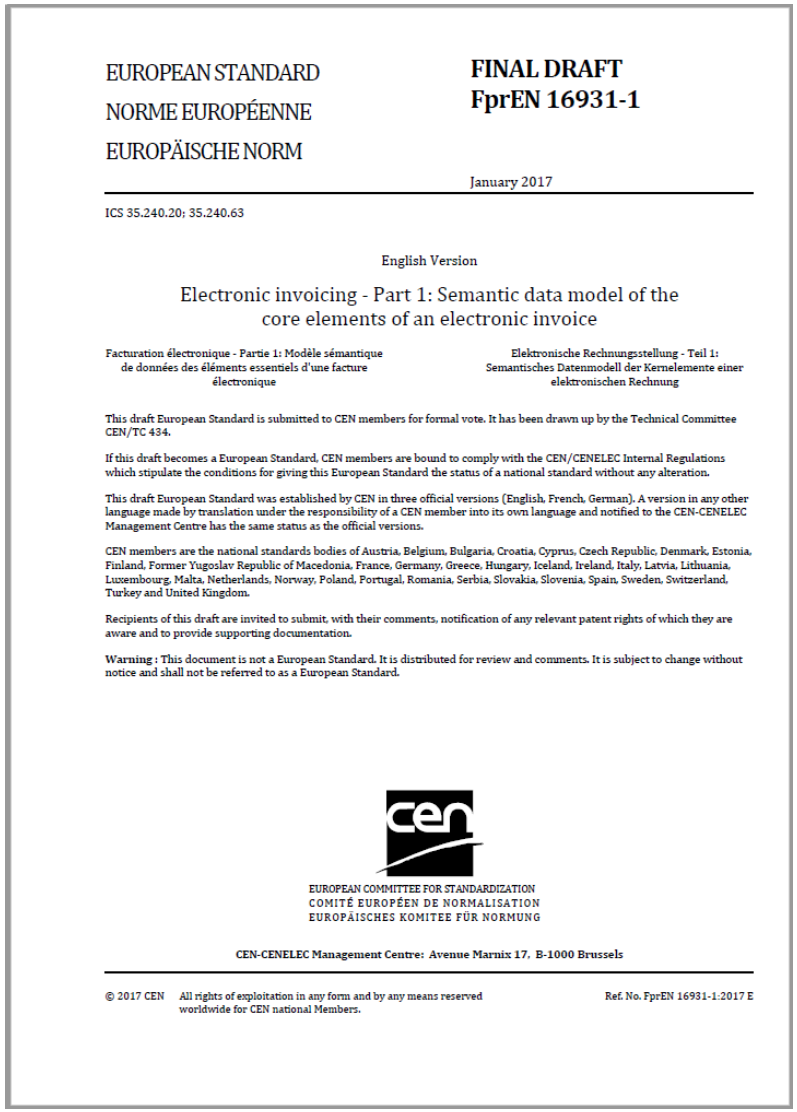
- CEN - European Committee for Standardisation
- The work started in a project committee (PC434) but was later changed into a technical committee (TC434)
- TC434 has over 100 committee members from 31 countries
- Participation in the work must go through the national standardisation committees.
- The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

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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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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)

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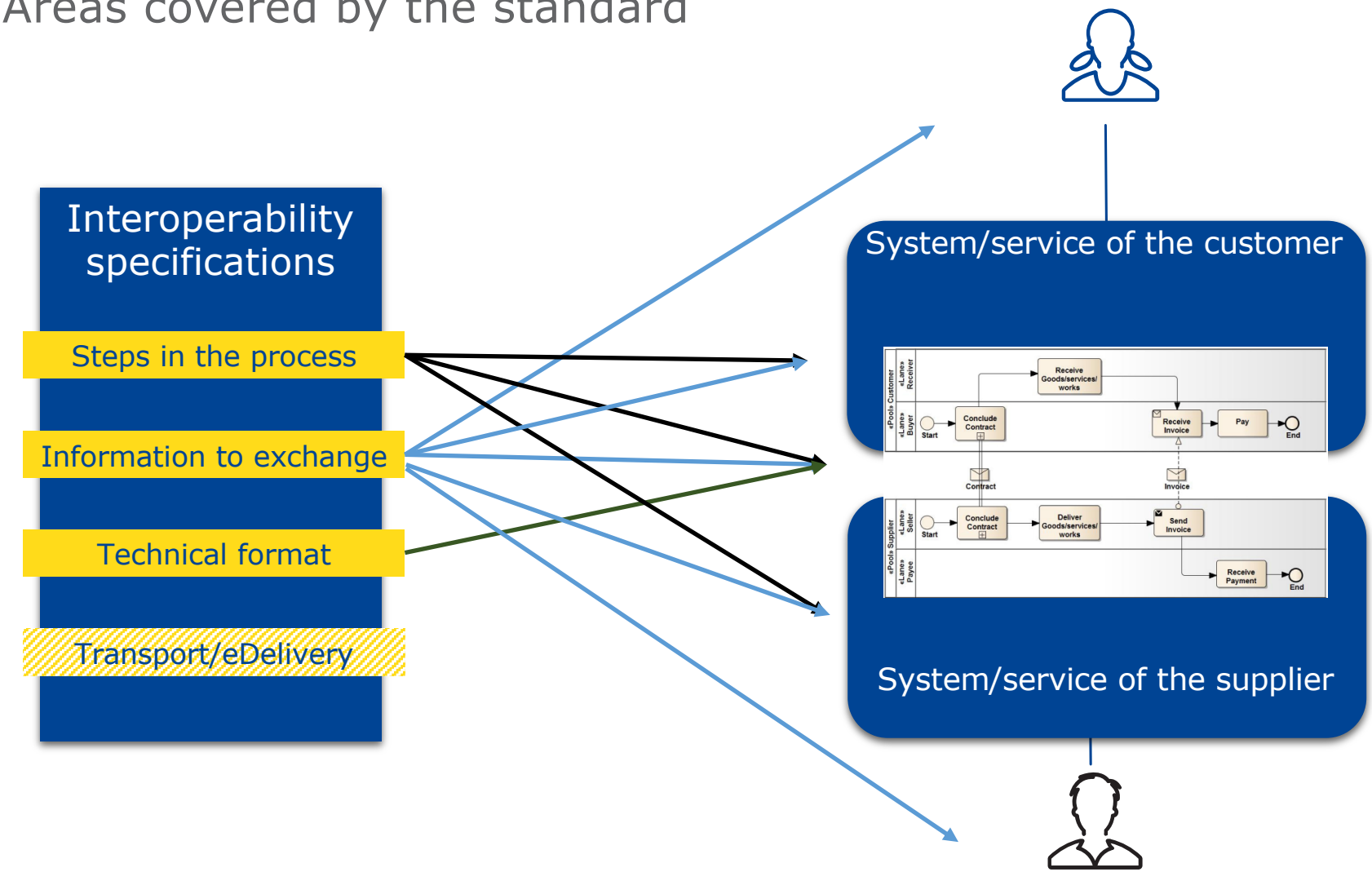
Areas covered by the standard



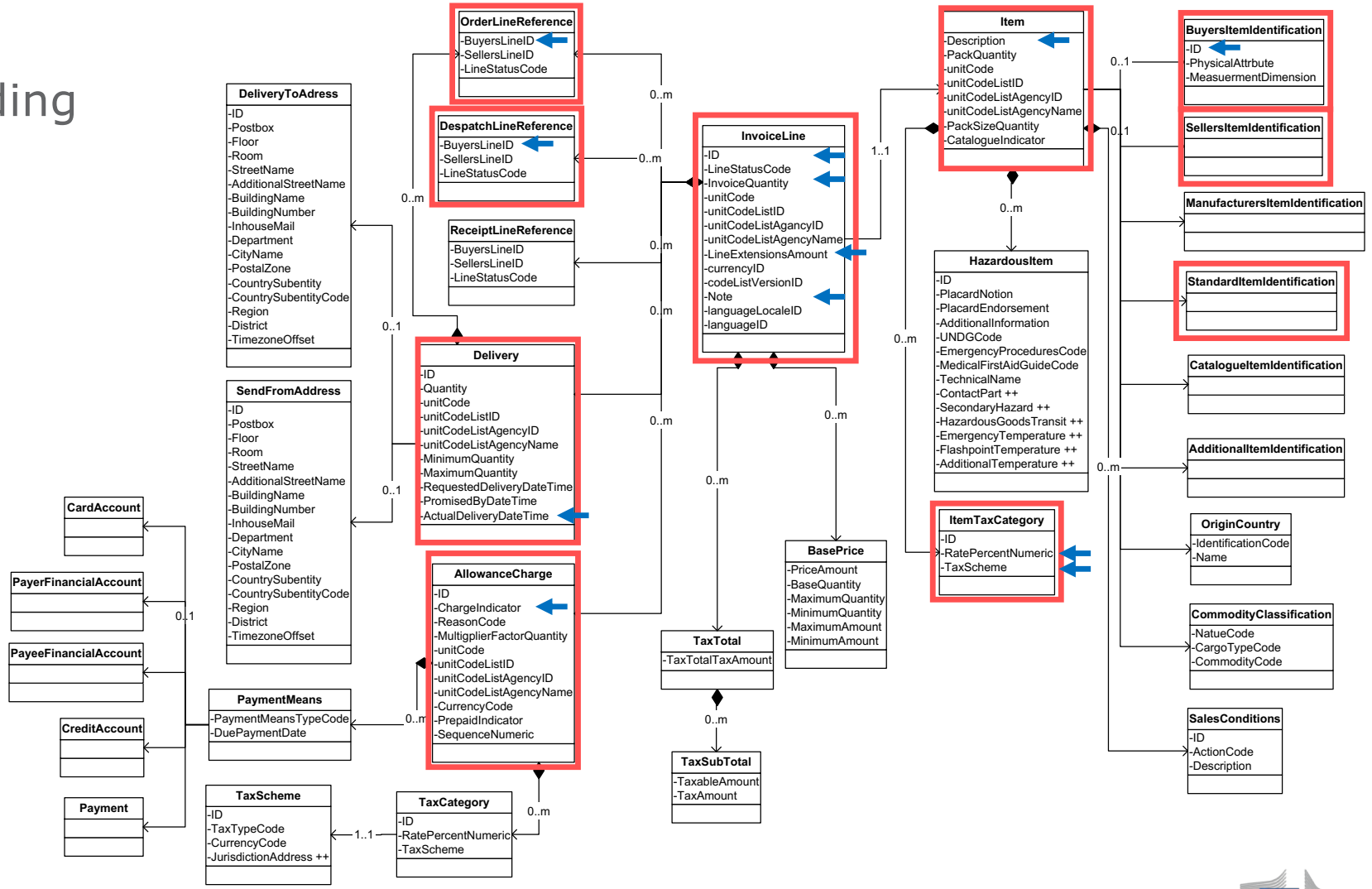
Reasons for a core invoice

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

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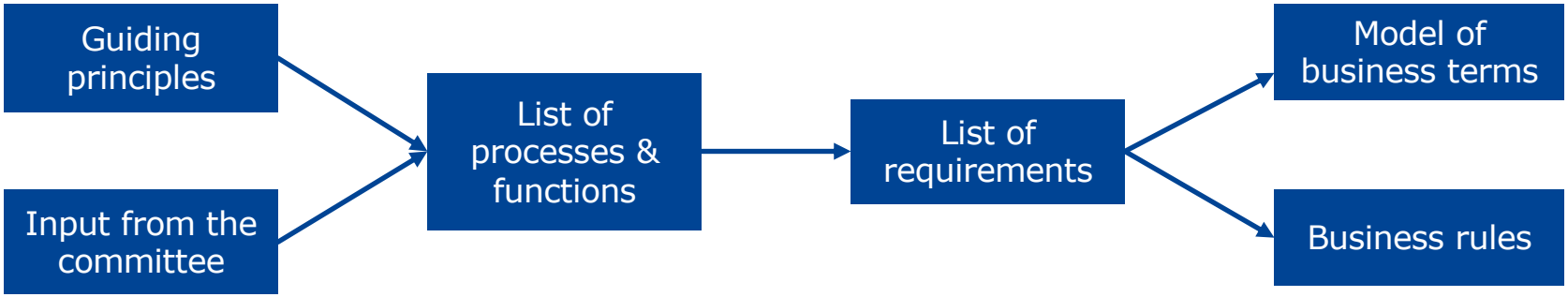
Requirement driven approach on defining the model

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



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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

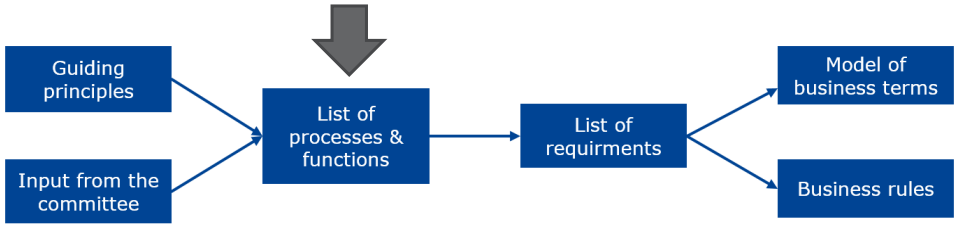
— P8: Invoices with references to a despatch advice and a receiving advice

— 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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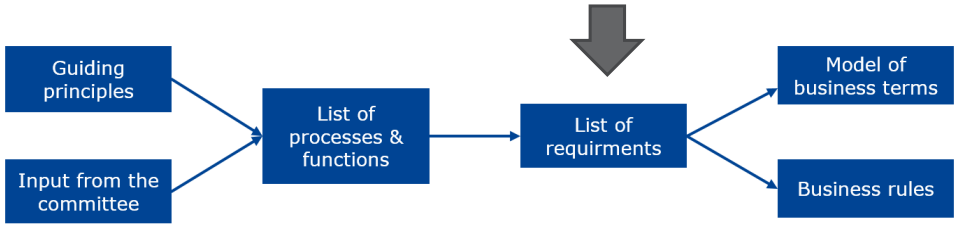
Business requirements derived from the processes

- 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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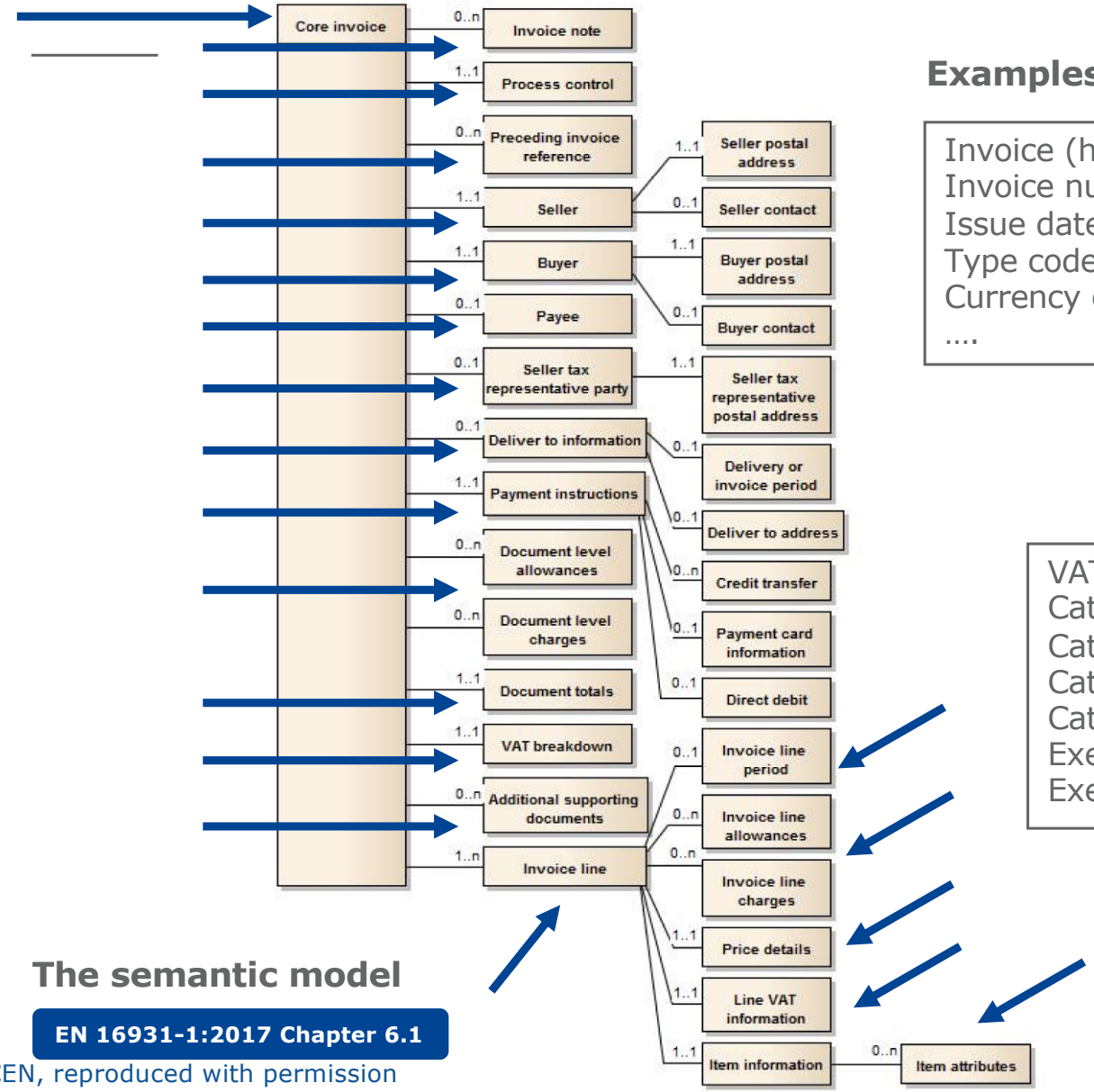

Examples of key components

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

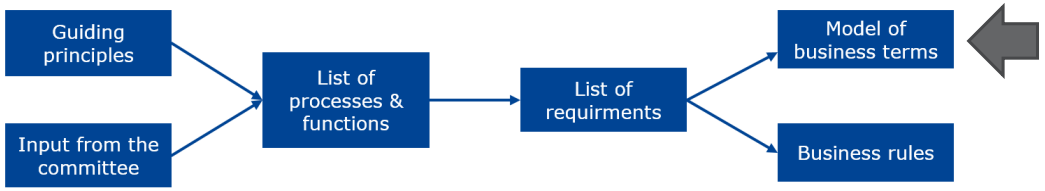
Business term – name of the business term

Description – short description/definition

Usage note – guiding/explanatory information

Req id – reference to underlying requirement

Data type – the type of



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Semantic datatypes

Primitive types
- Binary
- Date
- Decimal
- String

Primitive types used in

Semantic datatypes
- Amount (two decimals)
- Unit Price Amount
- Quantity
- Percentage
- Identifier
- Document reference
- Code
- Date
- Text
- Binary object

Data types can have suplamentary components/attributes

Component	Use	Primitive Type	Example
Content	Mandatory	Binary	
Mime Code	Mandatory	String	"image/jpeg"
Filename	Mandatory	String	"drawing5.jpg"

A Receiver of an Invoice, conformant to this document shall accept and process attachments that are of the following mime types (commonly used file extensions are added between brackets):

— application/pdf (.pdf)

— image/png (.png)

— image/jpeg (.jpg)

— text/csv (.csv)

— application/vnd.openxmlformats-officedocument.spreadsheetml.sheet (.xslx)

— application/vnd.oasis.opendocument.spreadsheet (.ods)

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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

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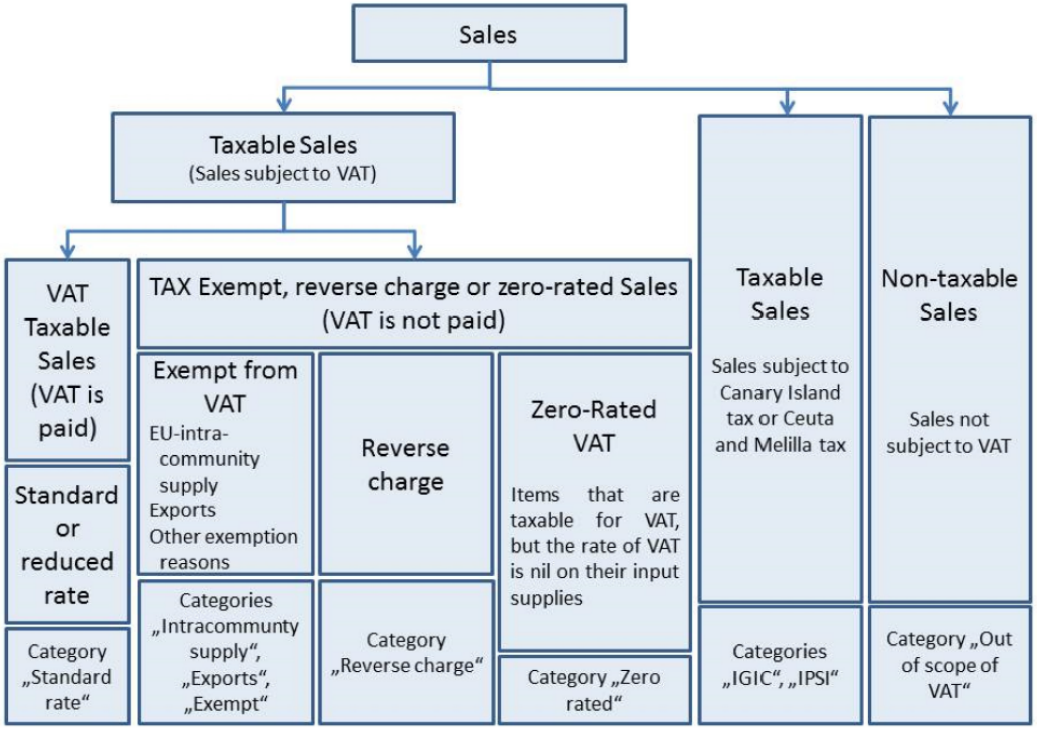
Business rules – VAT Rules

- 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).

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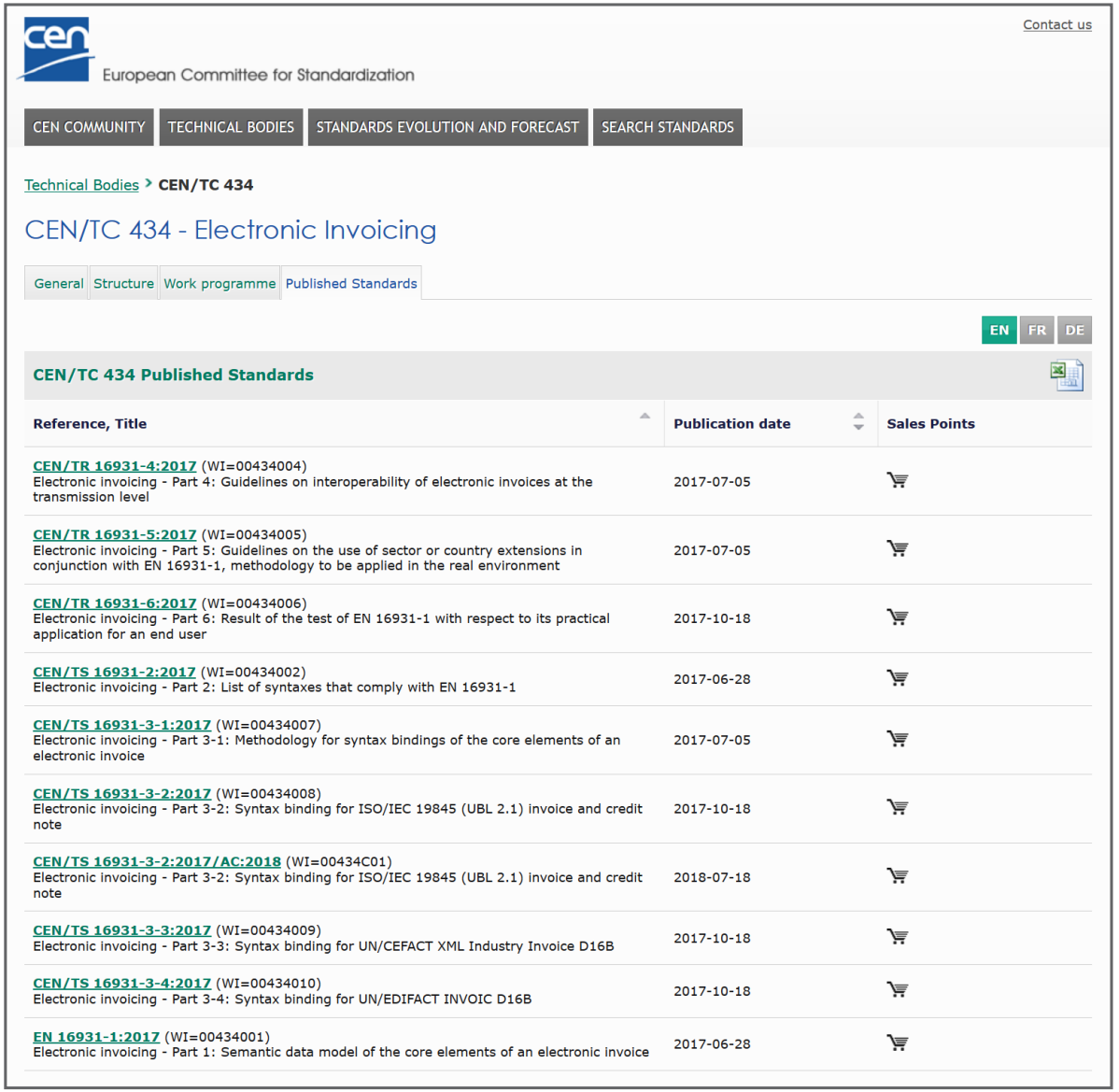
Access to the specifications

Negotiations with the EC on sponsored access – agreement imminent

Be aware of the copyright rules



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Technical Bodies › **CEN/TC 434**

CEN/TC 434 - Electronic Invoicing

General | Structure | Work programme | Published Standards

EN FR DE

CEN/TC 434 Published Standards

Reference, Title	Publication date	Sales Points
CEN/TR 16931-4:2017 (WI=00434004) Electronic invoicing - Part 4: Guidelines on interoperability of electronic invoices at the transmission level	2017-07-05	
CEN/TR 16931-5:2017 (WI=00434005) 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	2017-07-05	
CEN/TR 16931-6:2017 (WI=00434006) Electronic invoicing - Part 6: Result of the test of EN 16931-1 with respect to its practical application for an end user	2017-10-18	
CEN/TS 16931-2:2017 (WI=00434002) Electronic invoicing - Part 2: List of syntaxes that comply with EN 16931-1	2017-06-28	
CEN/TS 16931-3-1:2017 (WI=00434007) Electronic invoicing - Part 3-1: Methodology for syntax bindings of the core elements of an electronic invoice	2017-07-05	
CEN/TS 16931-3-2:2017 (WI=00434008) Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note	2017-10-18	
CEN/TS 16931-3-2:2017/AC:2018 (WI=00434C01) Electronic invoicing - Part 3-2: Syntax binding for ISO/IEC 19845 (UBL 2.1) invoice and credit note	2018-07-18	
CEN/TS 16931-3-3:2017 (WI=00434009) Electronic invoicing - Part 3-3: Syntax binding for UN/CEFACT XML Industry Invoice D16B	2017-10-18	
CEN/TS 16931-3-4:2017 (WI=00434010) Electronic invoicing - Part 3-4: Syntax binding for UN/EDIFACT INVOIC D16B	2017-10-18	
EN 16931-1:2017 (WI=00434001) Electronic invoicing - Part 1: Semantic data model of the core elements of an electronic invoice	2017-06-28	

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 e-invoicing

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).

European Commission

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

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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
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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

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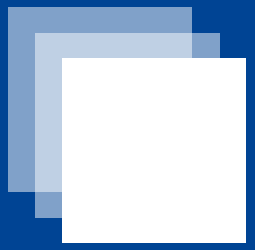
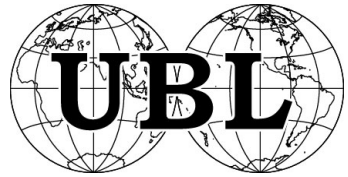


Syntax bindings

OASIS Universal Business Language 2.1



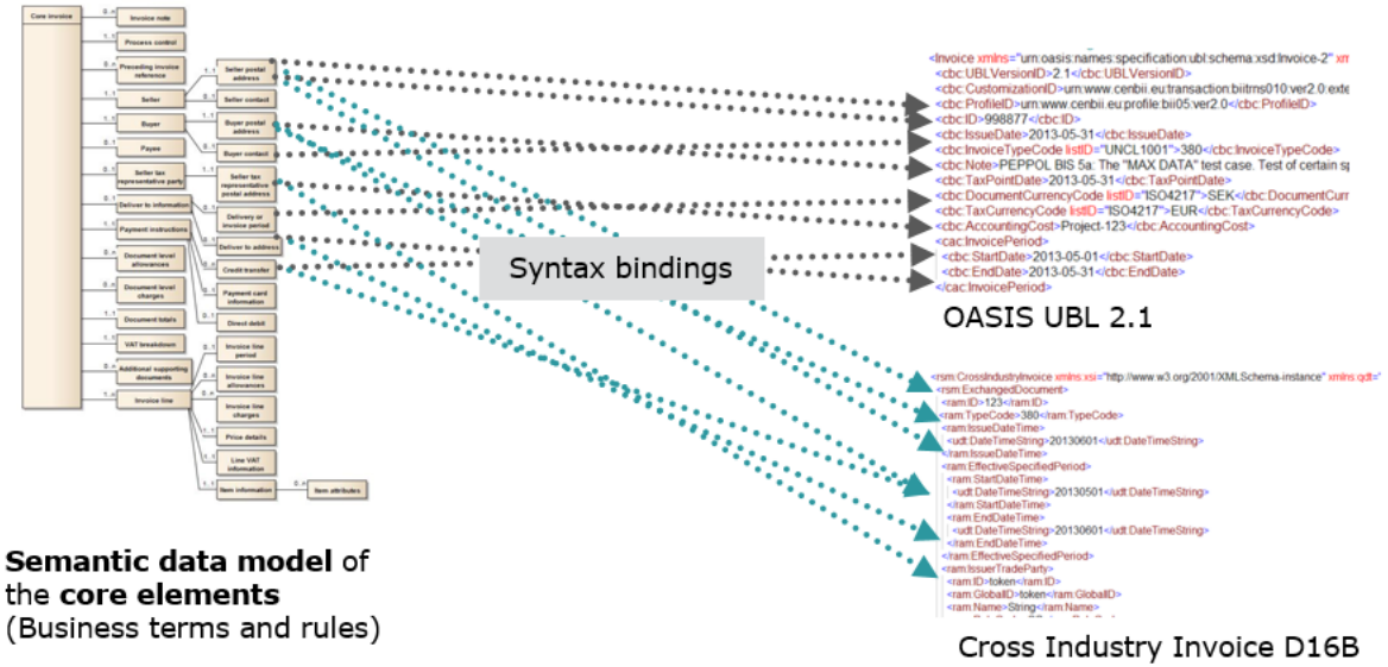
- UBL stands for Universal Business Language
- OASIS UBL 2.1 is developed and maintained by the UBL Technical Committee within OASIS
- UBL is an ISO-standard (ISO/IEC 19845-2015)

- UBL was developed with starting point in the CBL/xCBL format
- Sweden and Denmark early adopters around 2003-2004

Cross Industry Invoice D16B

- CII stands for Cross Industry Invoice
- CII is developed and maintained by UN/CEFACT
- UN/CEFACT serves as the focal point for trade facilitation recommendations and electronic business standards, covering both commercial and government business processes that can foster growth in international trade and related services.
- UN/CEFACT develops and maintains UN/EDIFACT, XML Schemas, Code lists and a number of UNECE Recommendations (such as Recommendation N°. 20 - Codes for Units of Measure)

Syntax binding specifications



Semantic data model of
the **core elements**
(Business terms and rules)

European Commission

Syntax binding – Semantic model → Syntax

ID	Level	Card.	BT	Desc.	DT	Path	Type	Card.	Match	Rules
BT-1	1	1..1	Invoice number	A unique identification of the Invoice.	I	/Invoice/cbc:ID	I	1..1		
BT-2	1	1..1	Invoice issue date	The date when the Invoice was issued.	D	/Invoice/cbc:IssueDate	D	1..1		
BT-3	1	1..1	Invoice type code	A code specifying the functional type of the Invoice.	C	/Invoice/cbc:InvoiceTypeCode	C	0..1	CAR-2	
BT-5	1	1..1	Invoice currency code	The currency in which all Invoice amounts are given, except for the Total VAT amount in accounting currency.	C	/Invoice/cbc:DocumentCurrencyCode	C	0..1	CAR-2	
BT-6	1	0..1	VAT accounting currency code	The currency used for VAT accounting and reporting purposes as accepted or required in the country of the Seller.	C	/Invoice/cbc:TaxCurrencyCode	C	0..1	SEM-2	

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Syntax binding – Syntax → Semantic model

Path	Card.	ID	Level	Card.	BT	Desc.	DT
/Invoice							
/Invoice/cbc:CustomizationID	0..1	BT-24	2	1..1	Specification identifier	An identification of the specification containing the total set of rules regarding semantic content, cardinalities and business rules to which the data contained in the instance document conforms.	I
/Invoice/cbc:ProfileID	0..1	BT-23	2	0..1	Business process type	Identifies the business process context in which the transaction appears, to enable the Buyer to process the Invoice in an appropriate way.	T
/Invoice/cbc:ID	1..1	BT-1	1	1..1	Invoice number	A unique identification of the Invoice.	I
/Invoice/cbc:IssueDate	1..1	BT-2	1	1..1	Invoice issue date	The date when the Invoice was issued.	D
/Invoice/cbc:DueDate	0..1	BT-9	1	0..1	Payment due date	The date when the payment is due.	D
/Invoice/cbc:InvoiceTypeCode	0..1	BT-3	1	1..1	Invoice type code	A code specifying the functional type of the Invoice.	C

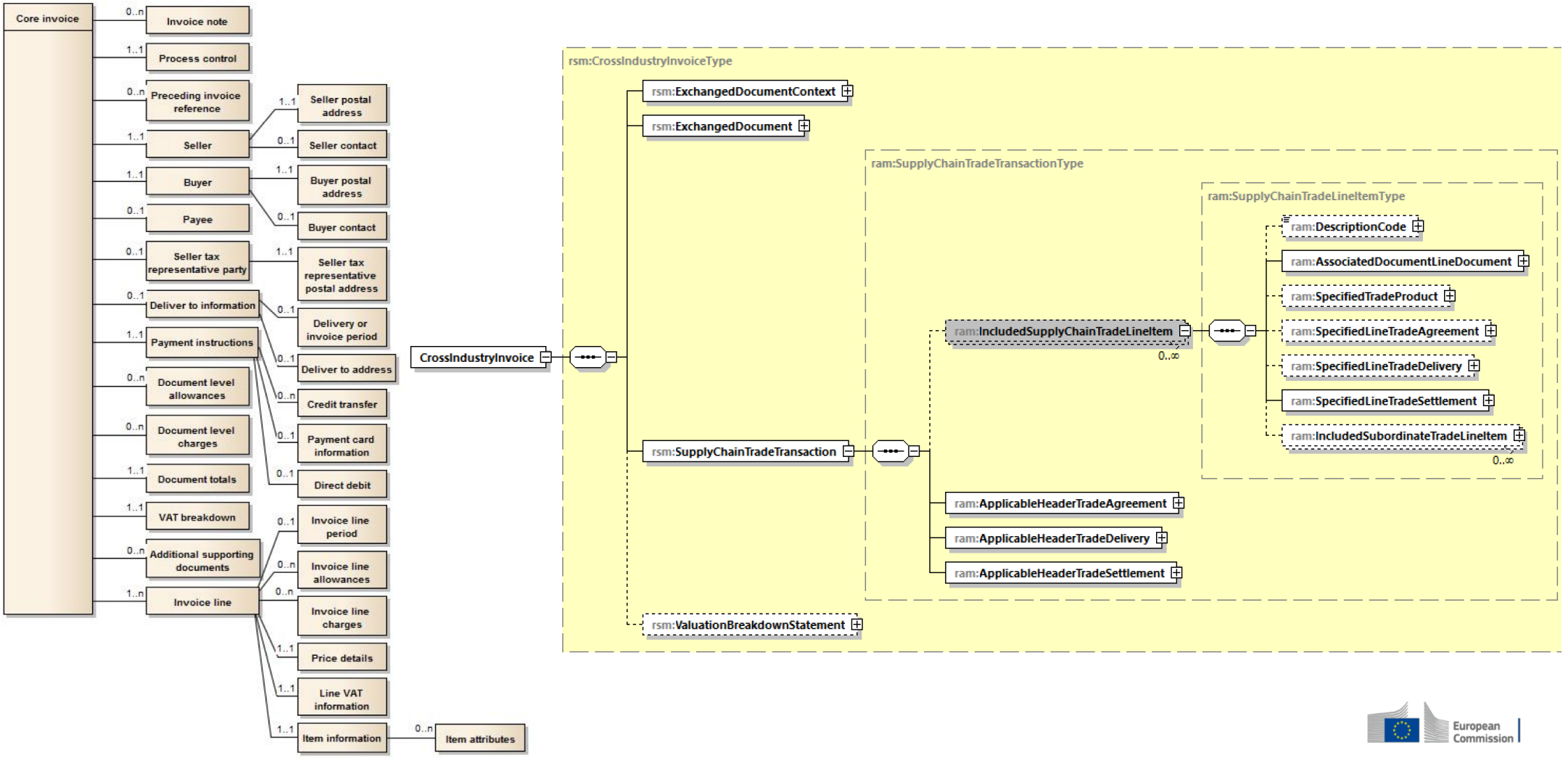
European Commission

Not a simple pair matching game

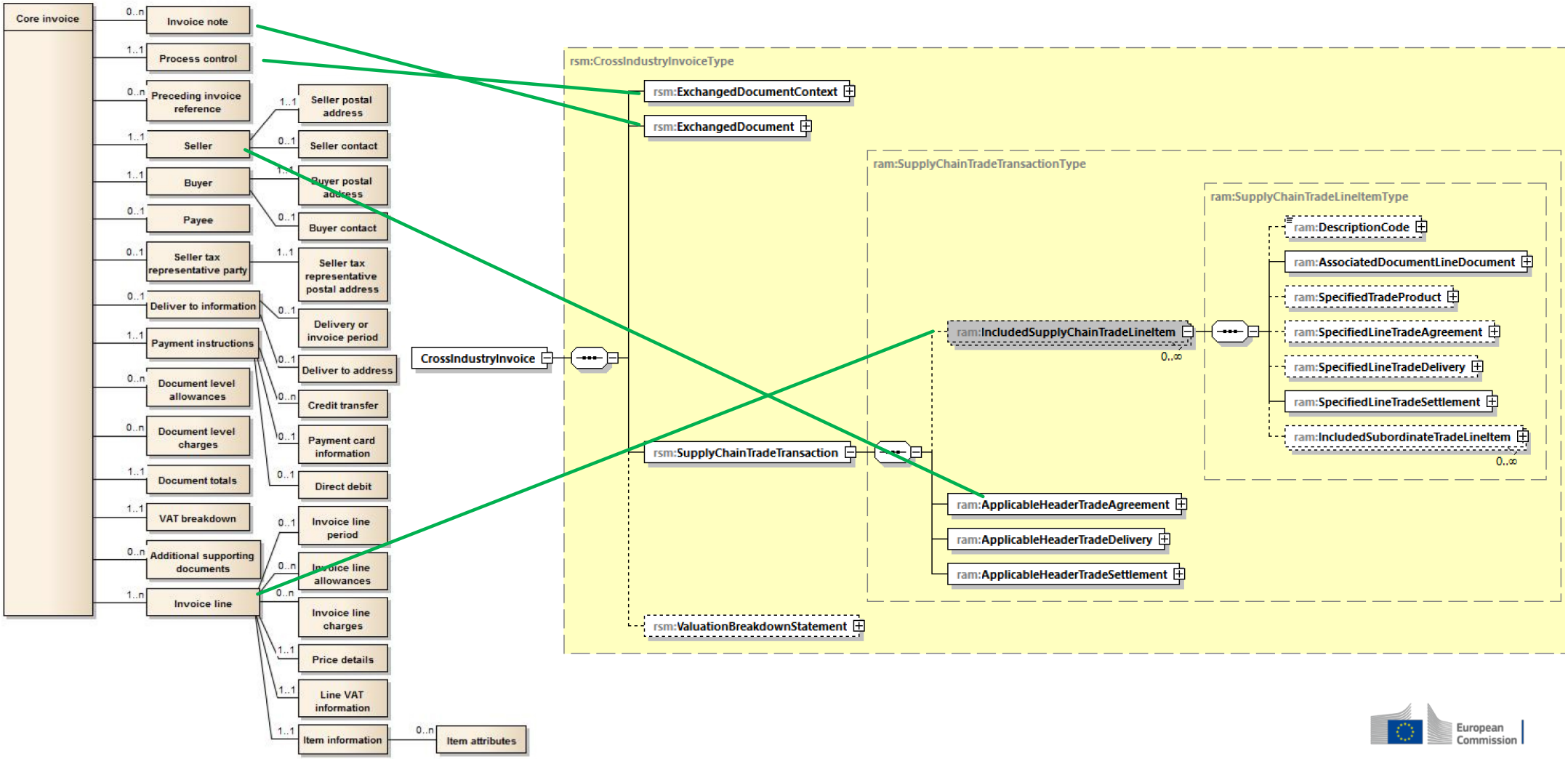
- Not all business terms can be mapped to a single element, often qualifiers are necessary
- The syntaxes have different structures and order of elements
- The syntaxes may have different cardinalities or even datatypes

- The syntax mappings have additional and separate validation rules

European Commission



European Commission



European Commission

```
<Invoice
 xmlns:cac="urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2"
 xmlns:cbc="urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2"
 xmlns="urn:oasis:names:specification:ubl:schema:xsd:Invoice-2">
    <cbc:CustomizationID>urn:cen.eu:en16931:2017</cbc:CustomizationID>
    <cbc:ProfileID>P3</cbc:ProfileID>
    <cbc:ID>TOSL108</cbc:ID>
    <cbc:IssueDate>2013-06-30</cbc:IssueDate>
    <cbc:DueDate>2013-07-20</cbc:DueDate>
    <cbc:InvoiceTypeCode>380</cbc:InvoiceTypeCode>
    <cbc:Note>Ordered in our booth at the convention</cbc:Note>
    <cbc:TaxPointDate>2013-06-30</cbc:TaxPointDate>
```

```
<rsm:CrossIndustryInvoice
 xmlns:udt="urn:un:unece:uncefact:data:standard:UnqualifiedDataType:100"
 xmlns:rsm="urn:un:unece:uncefact:data:standard:CrossIndustryInvoice:100"
 xmlns:ram="urn:un:unece:uncefact:data:standard:ReusableAggregateBusinessInformationEntity:100">
    <rsm:ExchangedDocumentContext>
        <ram:BusinessProcessSpecifiedDocumentContextParameter>
            <ram:ID>P3</ram:ID>
        </ram:BusinessProcessSpecifiedDocumentContextParameter>
        <ram:GuidelineSpecifiedDocumentContextParameter>
            <ram:ID>urn:cen.eu:en16931:2017</ram:ID>
        </ram:GuidelineSpecifiedDocumentContextParameter>
    </rsm:ExchangedDocumentContext>
    <rsm:ExchangedDocument>
        <ram:ID>TOSL108</ram:ID>
        <ram:TypeCode>380</ram:TypeCode>
        <ram:IssueDateTime>
            <udt:DateTimeString format="102">20130630</udt:DateTimeString>
        </ram:IssueDateTime>
        <ram:IncludedNote>
            <ram:Content>Ordered in our booth at the convention</ram:Content>
        </ram:IncludedNote>
    </rsm:ExchangedDocument>
```

BT-1 Invoice number
BT-23 Business process type
BT-24 Specification identifier
BT-2 Invoice Issue date

```
<cac:AccountingSupplierParty>
    <cac:Party>
        <cac:PartyIdentification>
            <cbc:ID schemeID="0088">1238764941386</cbc:ID>
        </cac:PartyIdentification>
        <cac:PostalAddress>
            <cbc:StreetName>Main street 34</cbc:StreetName>
            <cbc:AdditionalStreetName>Suite 123</cbc:AdditionalStreetName>
            <cbc:CityName>Big city</cbc:CityName>
            <cbc:PostalZone>303</cbc:PostalZone>
            <cbc:CountrySubentity>RegionA</cbc:CountrySubentity>
            <cac:Country>
                <cbc:IdentificationCode>NO</cbc:IdentificationCode>
            </cac:Country>
        </cac:PostalAddress>
        <cac:PartyTaxScheme>
            <cbc:CompanyID>NO123456789MVA</cbc:CompanyID>
            <cac:TaxScheme>
                <cbc:ID>VAT</cbc:ID>
            </cac:TaxScheme>
        </cac:PartyTaxScheme>
        <cac:PartyLegalEntity>
            <cbc:RegistrationName>Salescompany ltd.</cbc:RegistrationName>
            <cbc:CompanyID>123456789</cbc:CompanyID>
        </cac:PartyLegalEntity>
        <cac:Contact>
            <cbc:Name>Antonio Salesmacher</cbc:Name>
            <cbc:Telephone>46211230</cbc:Telephone>
            <cbc:ElectronicMail>antonio@salescompany.no</cbc:ElectronicMail>
        </cac:Contact>
    </cac:Party>
</cac:AccountingSupplierParty>
```

```
<ram:ApplicableHeaderTradeAgreement>
    <ram:SellerTradeParty>
        <ram:GlobalID schemeID="0088">1238764941386</ram:GlobalID>
        <ram:Name>Salescompany ltd.</ram:Name>
        <ram:SpecifiedLegalOrganization>
            <ram:ID>123456789</ram:ID>
        </ram:SpecifiedLegalOrganization>
        <ram:DefinedTradeContact>
            <ram:PersonName>Antonio Salesmacher</ram:PersonName>
            <ram:TelephoneUniversalCommunication>
                <ram:CompleteNumber>46211230</ram:CompleteNumber>
            </ram:TelephoneUniversalCommunication>
            <ram:EmailURIUniversalCommunication>
                <ram:URIID>antonio@salescompany.no</ram:URIID>
            </ram:EmailURIUniversalCommunication>
        </ram:DefinedTradeContact>
        <ram:PostalTradeAddress>
            <ram:PostcodeCode>303</ram:PostcodeCode>
            <ram:LineOne>Main street 34</ram:LineOne>
            <ram:LineTwo>Suite 123</ram:LineTwo>
            <ram:CityName>Big city</ram:CityName>
            <ram:CountryID>NO</ram:CountryID>
            <ram:CountrySubDivisionName>RegionA</ram:CountrySubDivisionName>
        </ram:PostalTradeAddress>
        <ram:SpecifiedTaxRegistration>
            <ram:ID schemeID="VA">NO123456789MVA</ram:ID>
        </ram:SpecifiedTaxRegistration>
    </ram:SellerTradeParty>
```

BT-29 Seller identifier
BT-30 Seller legal registration identifier
BT-27 Seller name
BT-31 Seller VAT-identifier

European Commission

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

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

Core Invoice Usage Specifications

Extensions

From article 7 in the directive

Receipt and processing of electronic invoices

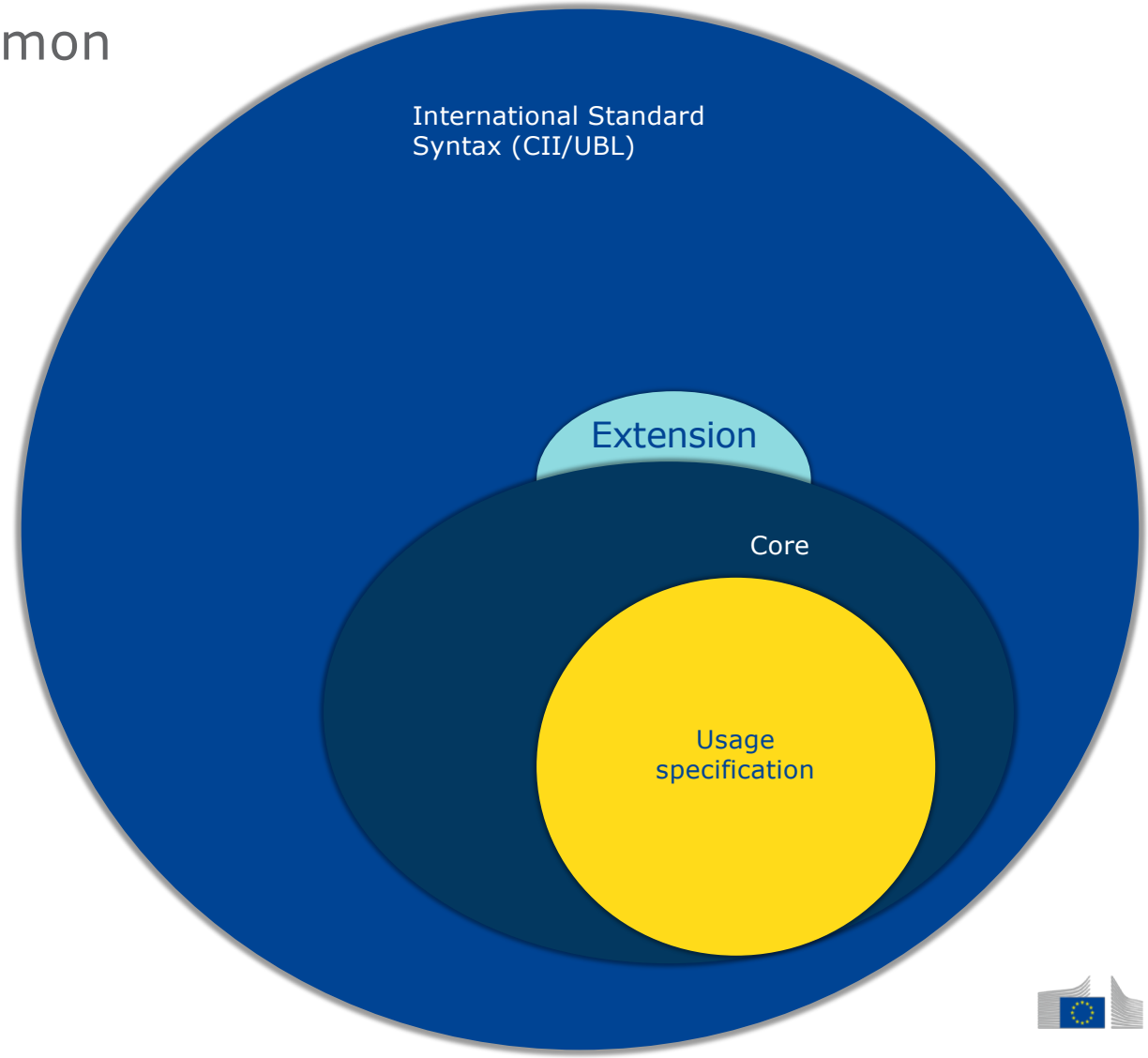
*Member States shall ensure that contracting authorities and contracting entities receive and process electronic invoices which **comply** with the European standard on electronic invoicing whose reference has been published pursuant to Article 3(2) and with any of the syntaxes on the list published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

European Commission

Core – something in common

IMPORTANT

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



European Commission

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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European Commission

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

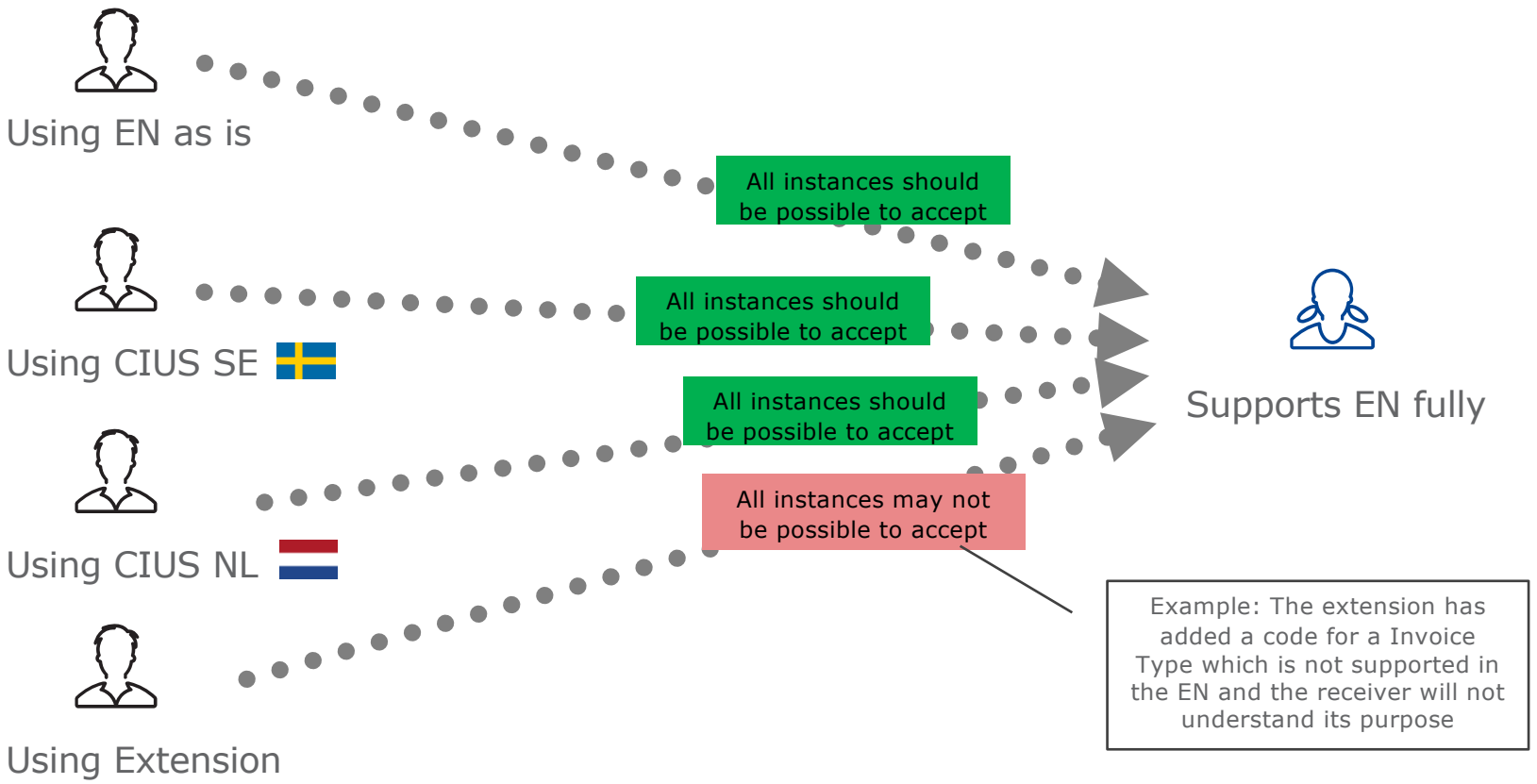
IMPORTANT

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

EN 16931-1:2017 Chapter 7

European Commission

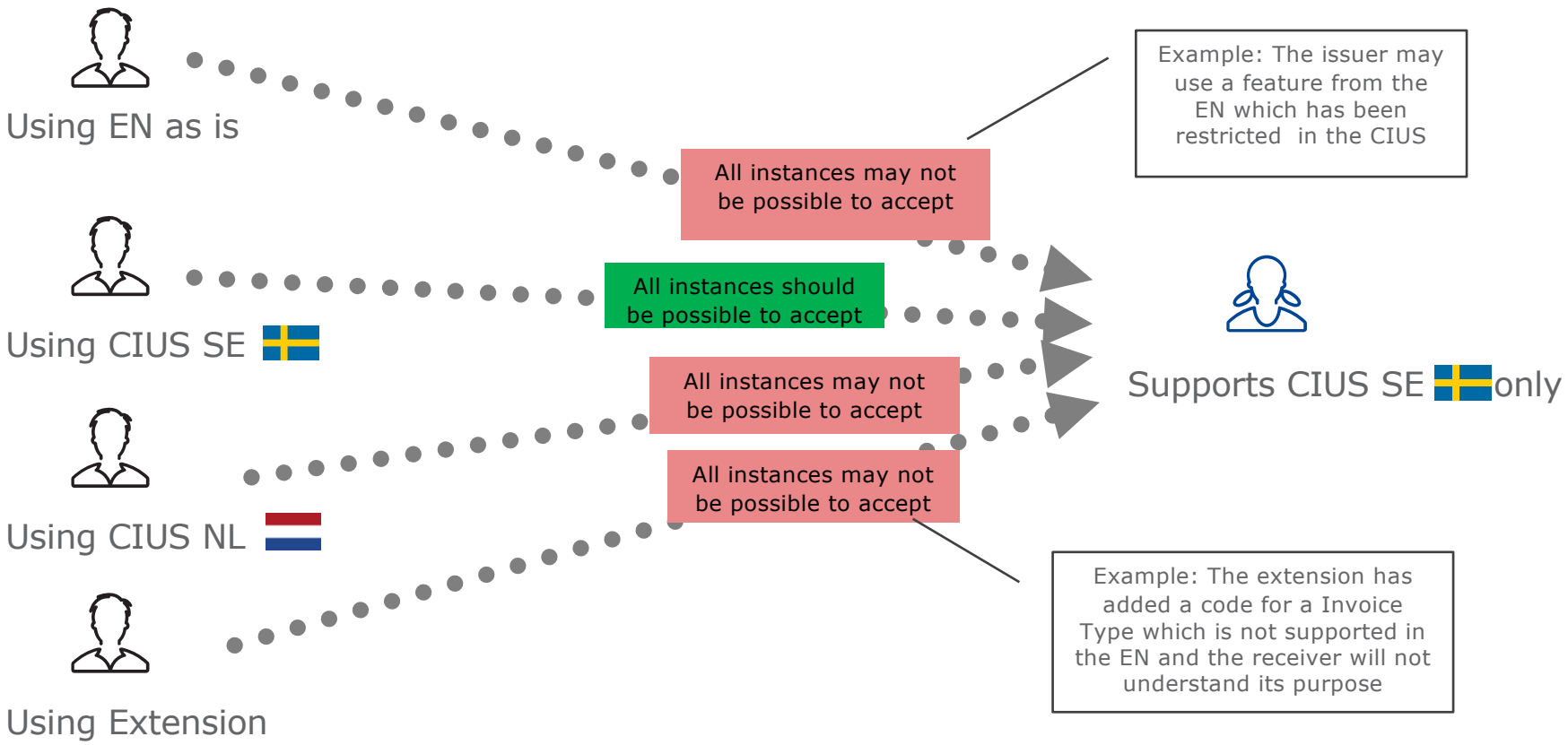
A few scenarios



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

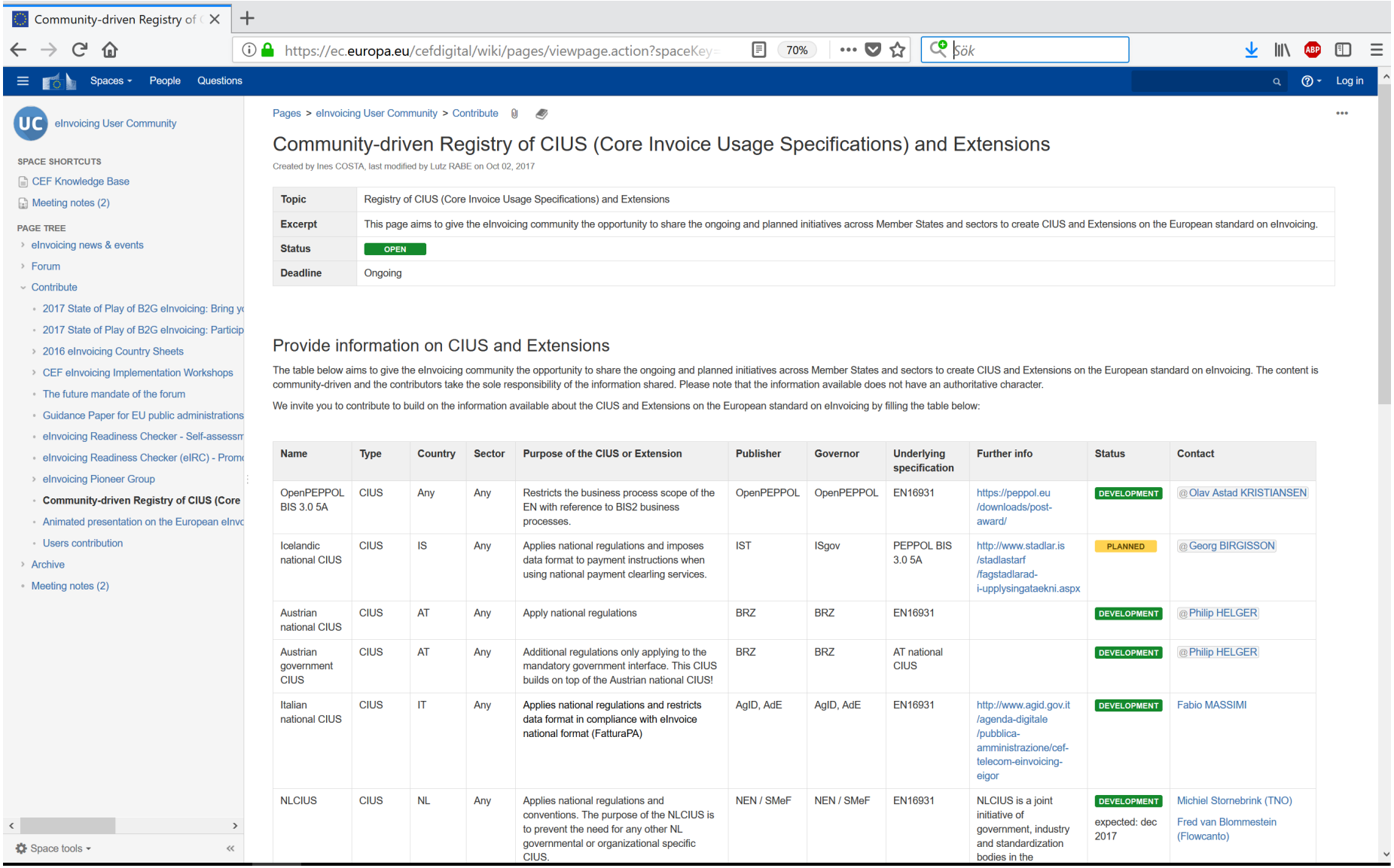
European Commission

A few more scenarios



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

European Commission



European Commission

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'

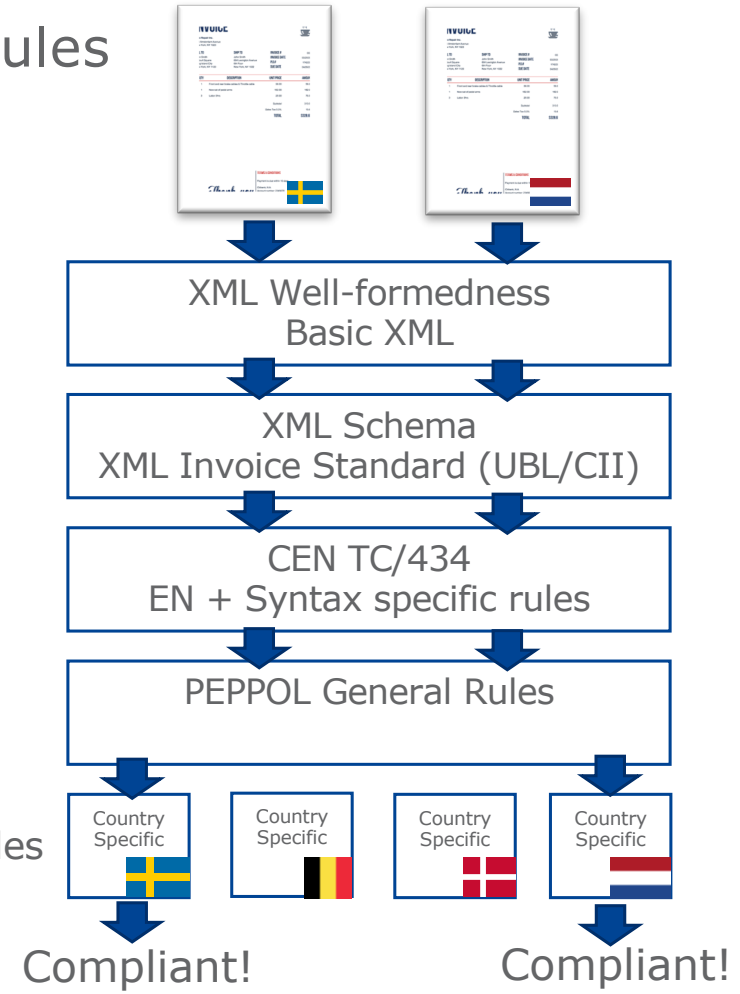
Example rule text from a CIUS
The Seller Name must not have more than 50 characters
Context (what triggers the rule)
Existence of
Seller/Name

- 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

European Commission

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.

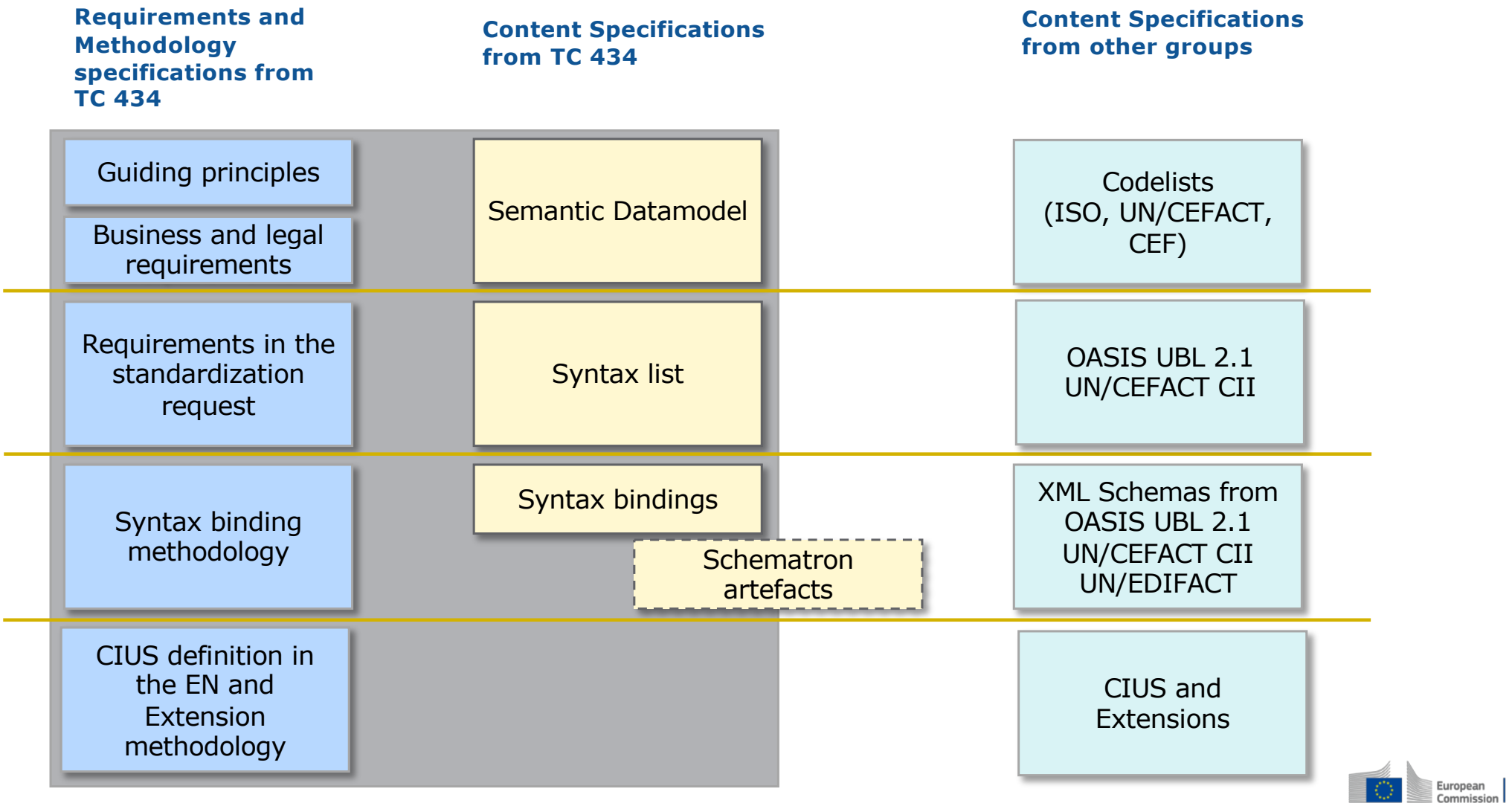
Table 18. National transaction business rules

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


Requirements and Methodology specifications from TC 434
Content Specifications from TC 434
Content Specifications from other groups
Guiding principles
Business and legal requirements
Semantic Datamodel
Codelists (ISO, UN/CEFACT, CEF)
Requirements in the standardization request
Syntax list
OASIS UBL 2.1
UN/CEFACT CII
Syntax binding methodology
Syntax bindings
Schematron artefacts
XML Schemas from OASIS UBL 2.1
UN/CEFACT CII
UN/EDIFACT
CIUS definition in the EN and Extension methodology
CIUS and Extensions

European Commission

PEPPOL

PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE

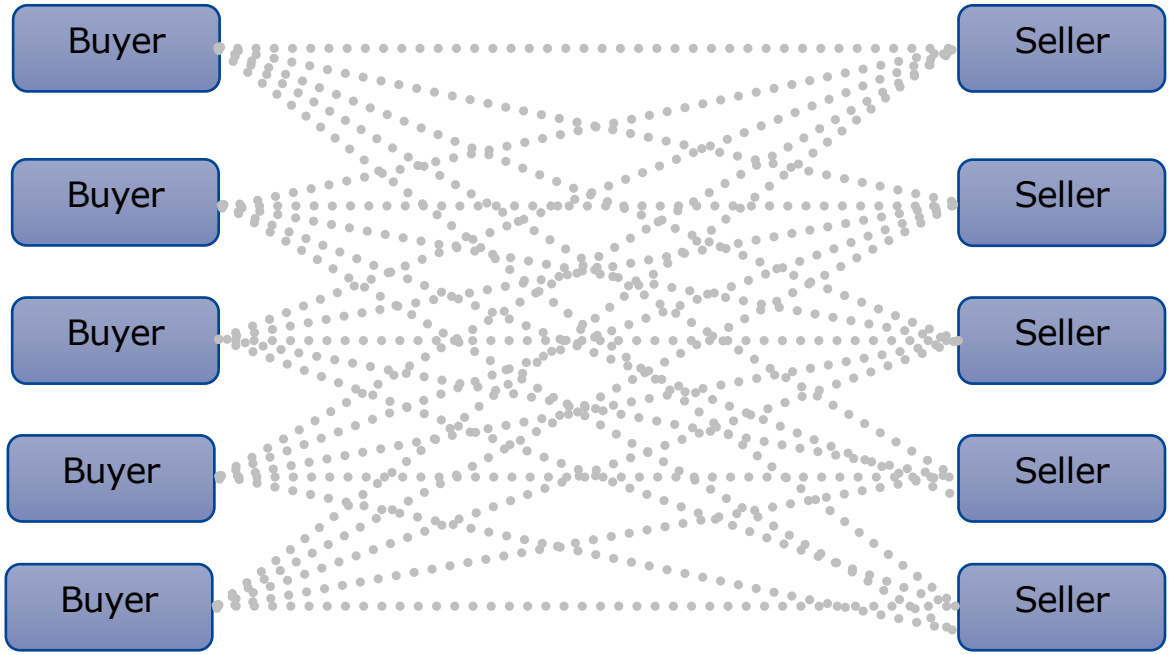
A short introduction

What is PEPPOL

Infrastructure where Buyers and Sellers can exchange e-documents

Specifications for electronic invoice, order, catalogue…

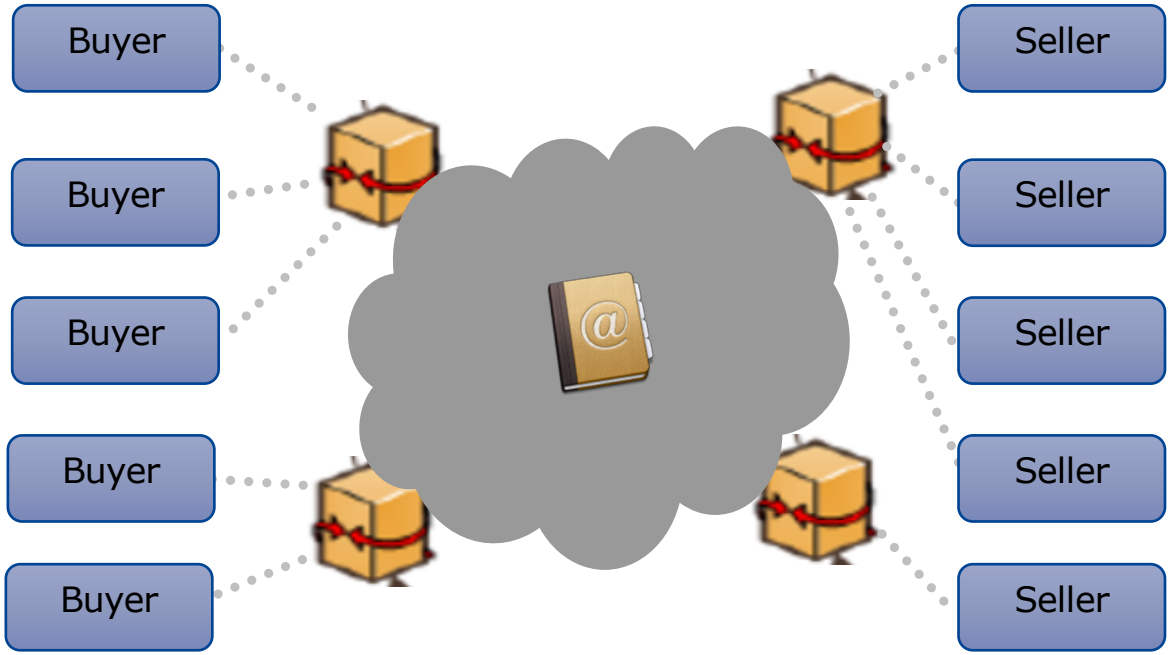
Non-for-profit organisation which maintains and governs



European Commission

PEPPOL

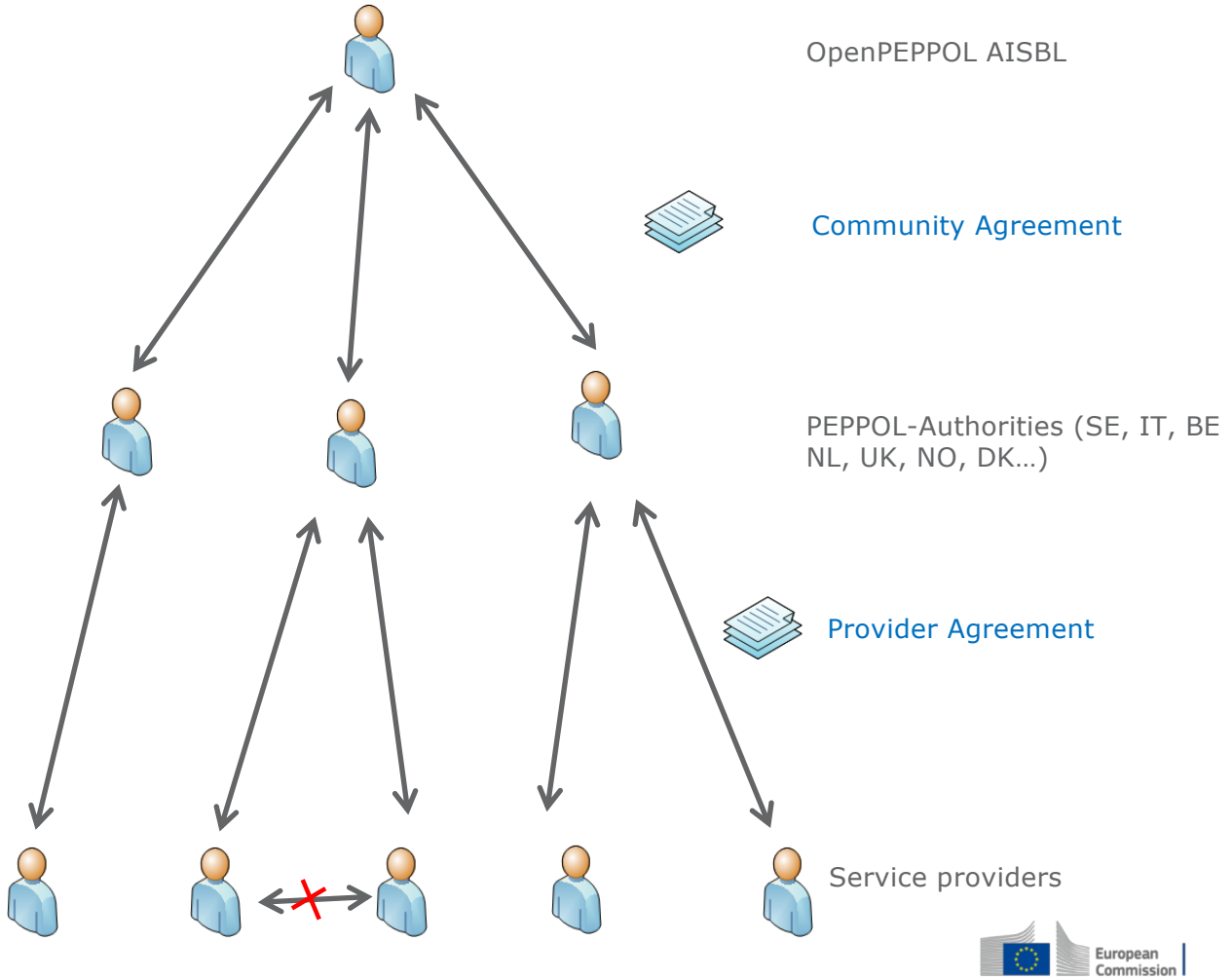
PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE



European Commission

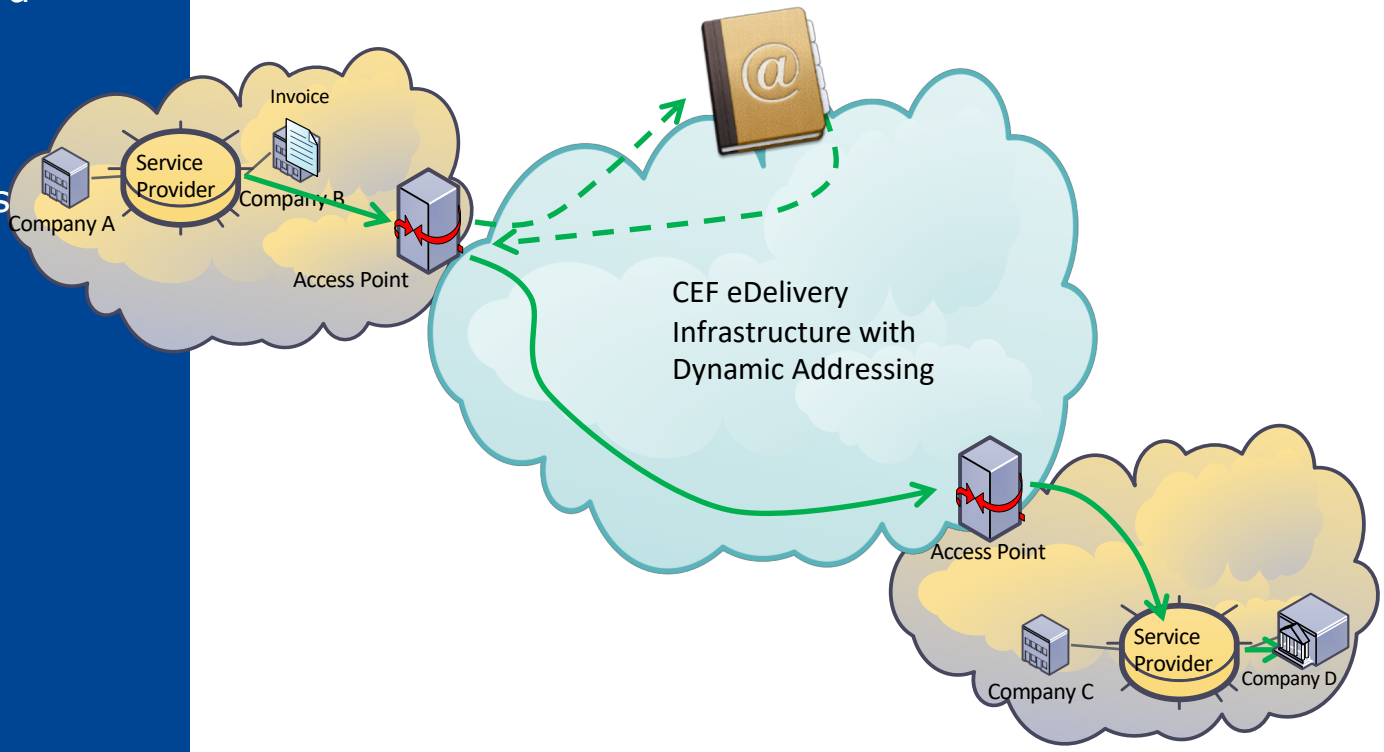
Transport Infrastructure Agreements (TIA)

- 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)



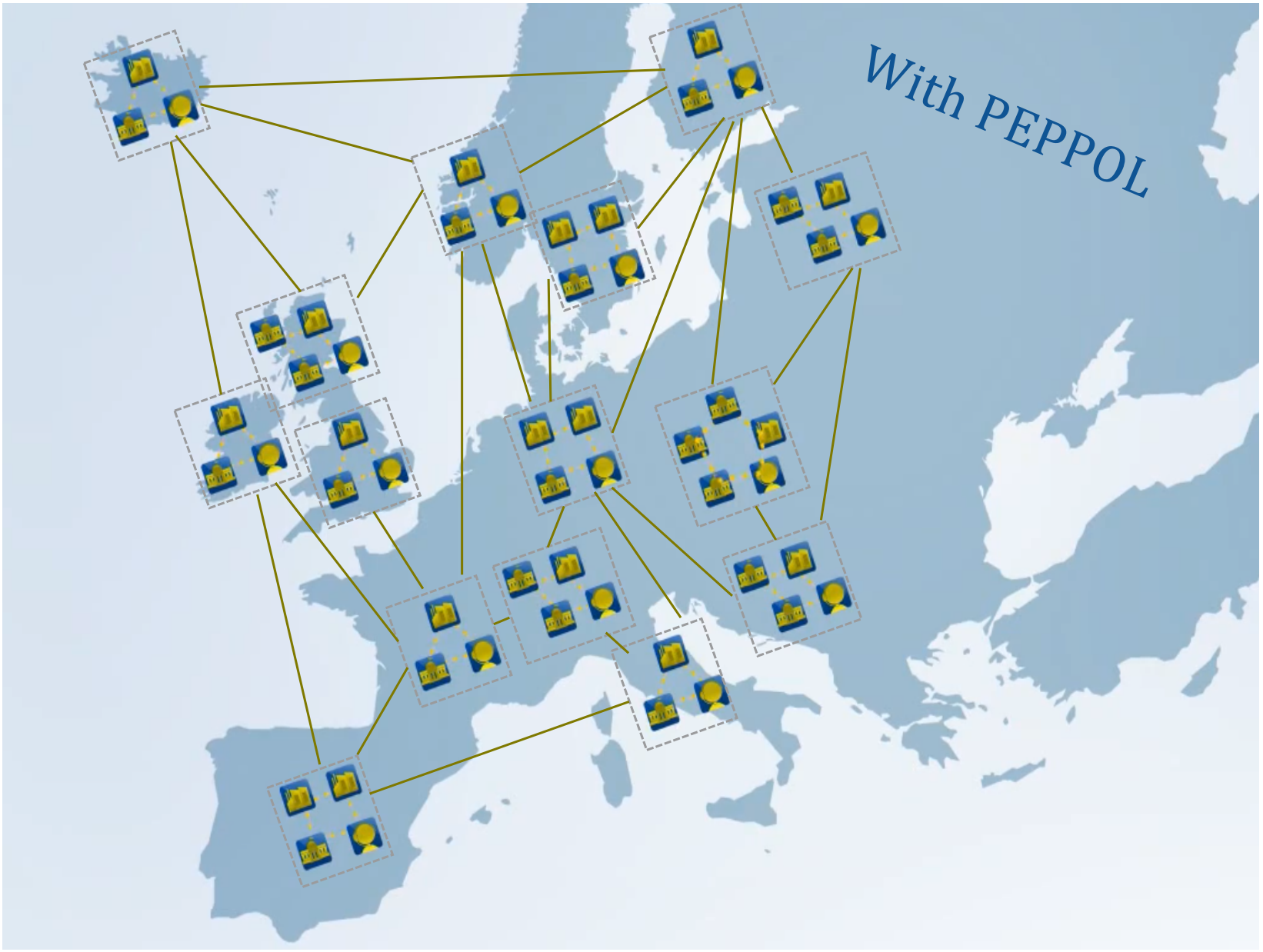
CEF eDelivery (PEPPOL) offers dynamic addressing

- 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



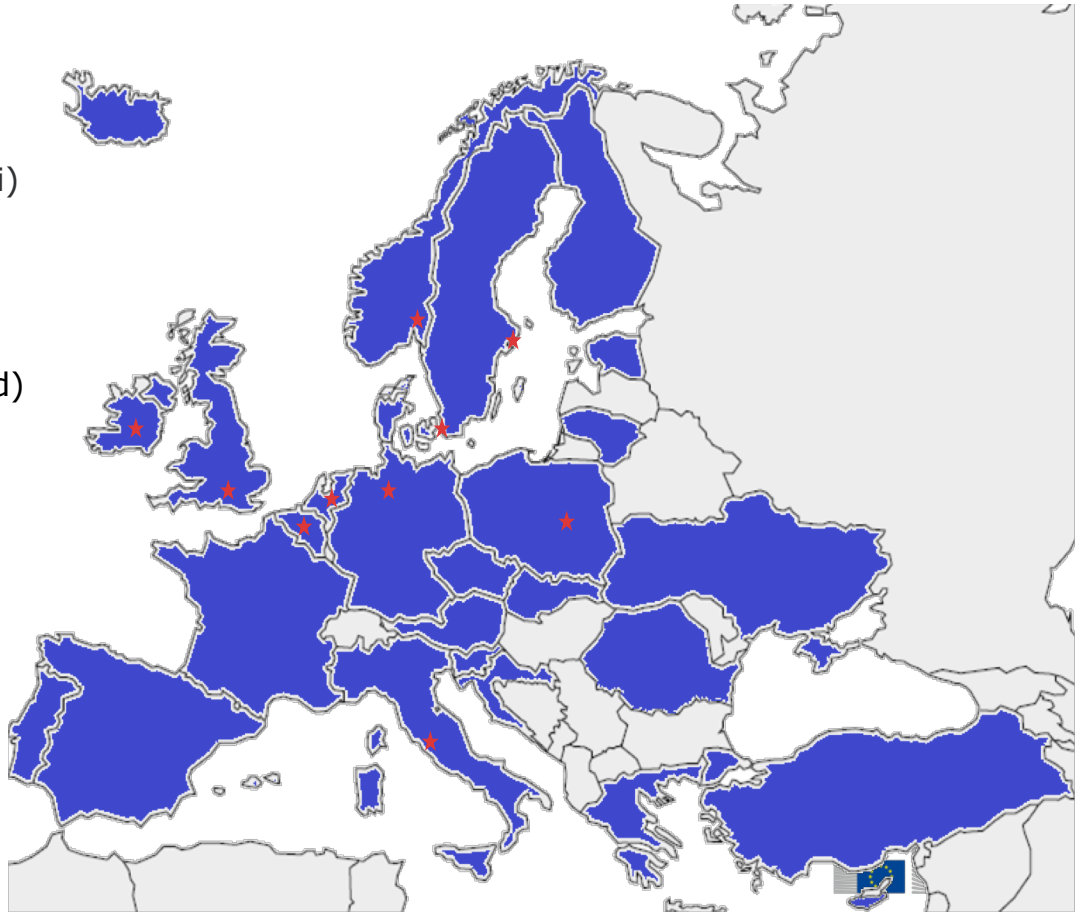
European Commission

PEPPOL today

176 Certified Access Points in **19** European countries, plus Canada and USA. More than **150.000** e-Invoice receiving organizations connected

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



Member state plans for the future

Tentative information – no formal decisions made

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.

European Commission

Tentative information – no formal decisions made

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.

European Commission

Tentative information – no formal decisions made

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.

European Commission

Tentative information – no formal decisions made

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.

European Commission

Tentative information – no formal decisions made

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

European Commission

Tentative information – no formal decisions made

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

European Commission

Tentative information – no formal decisions made

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

European Commission

Tentative information – no formal decisions made

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

European Commission

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**

European Commission

Funding and Grants – possibilities within CEF

Christian Rasmussen
DIGIT

2018 CEF Telecom calls

Call	Indicative budget	Launch date	Deadline
CEF-TC-2018-1 **Safer Internet** **Europeana** **eID & eSignature**	€18 million €4 million €7.5+0.5 million	22 February 2018	15 May 2018
CEF-TC-2018-2,3,5 **Automated Translation** **eDelivery** **eInvoicing** **Public Open Data** **Cyber Security**	€5 million €0.5 million **€5 million** €18.5 million €13 milion	2 May 2018 2 May 2018 **2 May 2018** 2 May 2018 2 May 2018	September 2018 September 2018 **September 2018** November 2018 November 2018
CEF-TC-2018-4 **eHealth** **eProcurement** **Online Dispute Resolution** **European Justice Portal**	€5 million €3 million €0.4 million €4 million	June 2018	November 2018

European Commission

2018-2 eInvoicing call
(2018 Work Programme)

2018-2 eInvoicing call	
Launch date	2 May 2018
Deadline	September 2018
Who can apply?/Consortium composition	Minimum 2 private or public entities from one or several Member States
Budget	€5 million
Co-financing	75% of the eligible costs
Indicative duration	12 months

European Commission

Scope of the last call:

- **Proposals must meet objective 1 or 2:**

1. Uptake of eInvoicing solutions compliant with the EN and its ancillary deliverables by public entities

2. Update of eInvoicing solutions compliant with the EN and its ancillary deliverables by solution providers and public authorities

- **Promotion of eDelivery:**

Deployment of the eDelivery Building Block or use of eDelivery through a service provider

Must be carried out in conjunction with objective 1 or 2

European Commission

2018-2 eInvoicing call: expected outcomes

Increased uptake and use of eInvoicing by public authorities (especially regional/local) in meeting the requirements of the eInvoicing Directive

Support for service providers in making their existing solutions compliant with the requirements of the eInvoicing Directive

European Commission

CEF Telecom 2018-2	Proposals received	Requested budget	Available budget	Oversubscription rate
Automated Translation	11	€8,964,037	€5,000,000	1.79
eDelivery	5	€829,330	€500,000	1.66
eInvoicing	19	€8,238,483	€5,000,000	1.65
Total	**35**	**€18,031,850**	**€10,500,000**	**1.72**

European Commission

CEF eInvoicing grants 2019

Generic Services

Budgetary brackets: 6m-7m Euros

Objectives:

- Reinforced support to Member States lagging behind in terms of uptake of eInvoicing
- Finance innovative projects that allow achieving end-to-end eProcurement and integration with tax systems

Core Service Platform: 0.8-1.2m

- Training/Implementation workshops
- Country factsheets / eInvoicing Readiness Checker available since January 2017
- eInvoicing User Community

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Past eInvoicing calls

2015-1 eInvoicing call

- Call opening: 15 September 2015 - Call closure: 11 February 2016

- **Call objective:**
- Increase uptake and the use of the eInvoicing DSI by supporting authorities – especially at the regional and local levels – in meeting the requirements of the eInvoicing Directive

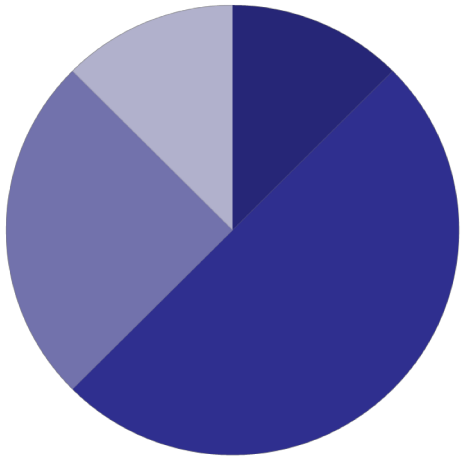
- **Overall indicative budget: €7 million**
- **Co-funding rate:** 75% of eligible costs
- **Proposals received: 10**
- **Eligible proposals received: 8**
- **Grant agreements: 8**
- **Maximum EU contribution: €4,426,111**

- **1 action** already completed

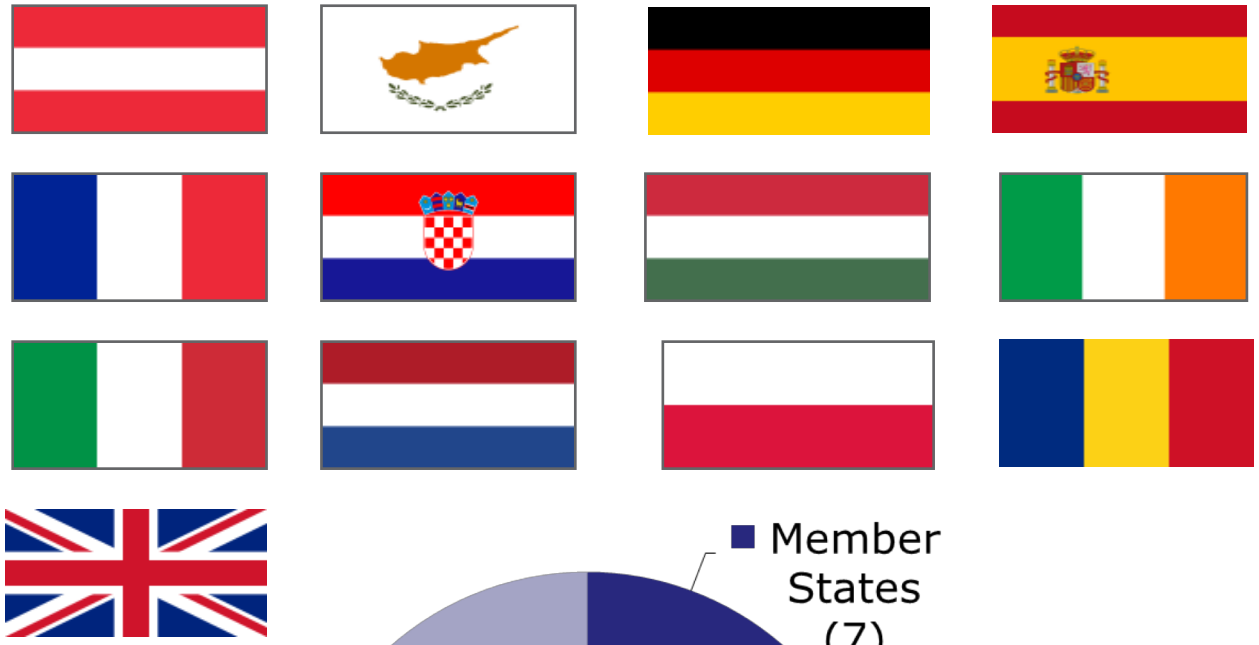
- **7 actions** on-going (all aiming to implement European eInvoicing standard), supporting:
  - Solution providers (AT - ecasio, ES - EDICOM, UK - ELCOM) in upgrading their solution to the eInvoicing standard + supporting users of the solutions
  - Uptake and upgrade of national eInvoicing platforms (CY, HR, ES, IT)
  - Tool for eInvoicing format mapping (NL, DE)

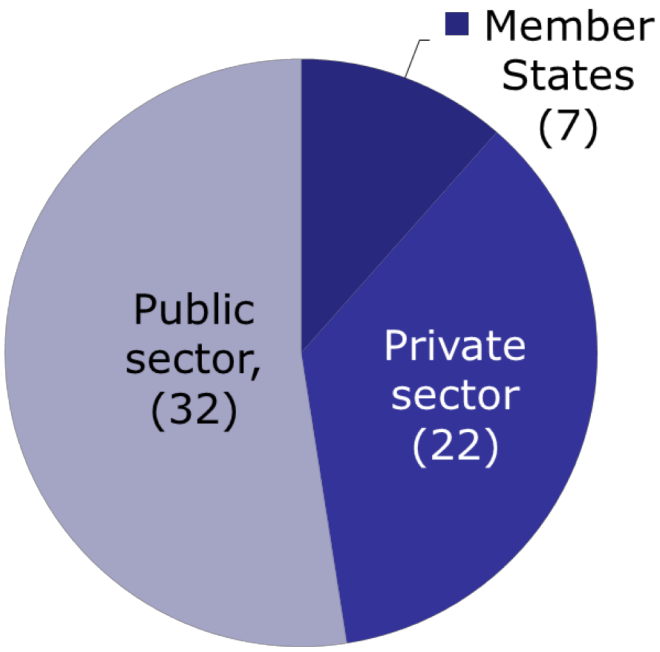
European Commission

2015-1 eInvoicing call:
Member States involved (13)



- 5 members (1 consortium)
- 6 members (4 consortia)
- 7 members (2 consortia)
- 8 or more members (1 consortium)





European Commission

2016-3 eInvoicing call

- Call opening: 13 September 2016 - Call closure: 15 December 2016

- **Call objective:**
- Increase uptake and the use of the eInvoicing DSI by supporting authorities – especially at the regional and local levels – in meeting the requirements of the eInvoicing Directive

- **Overall indicative budget: €7 million**
- **Co-funding rate:** 75% of eligible costs
- **Proposals received: 21**
- **Eligible proposals received: 20**
- **Recommended proposals: 15**
- **Recommended funding: €10,401,818**

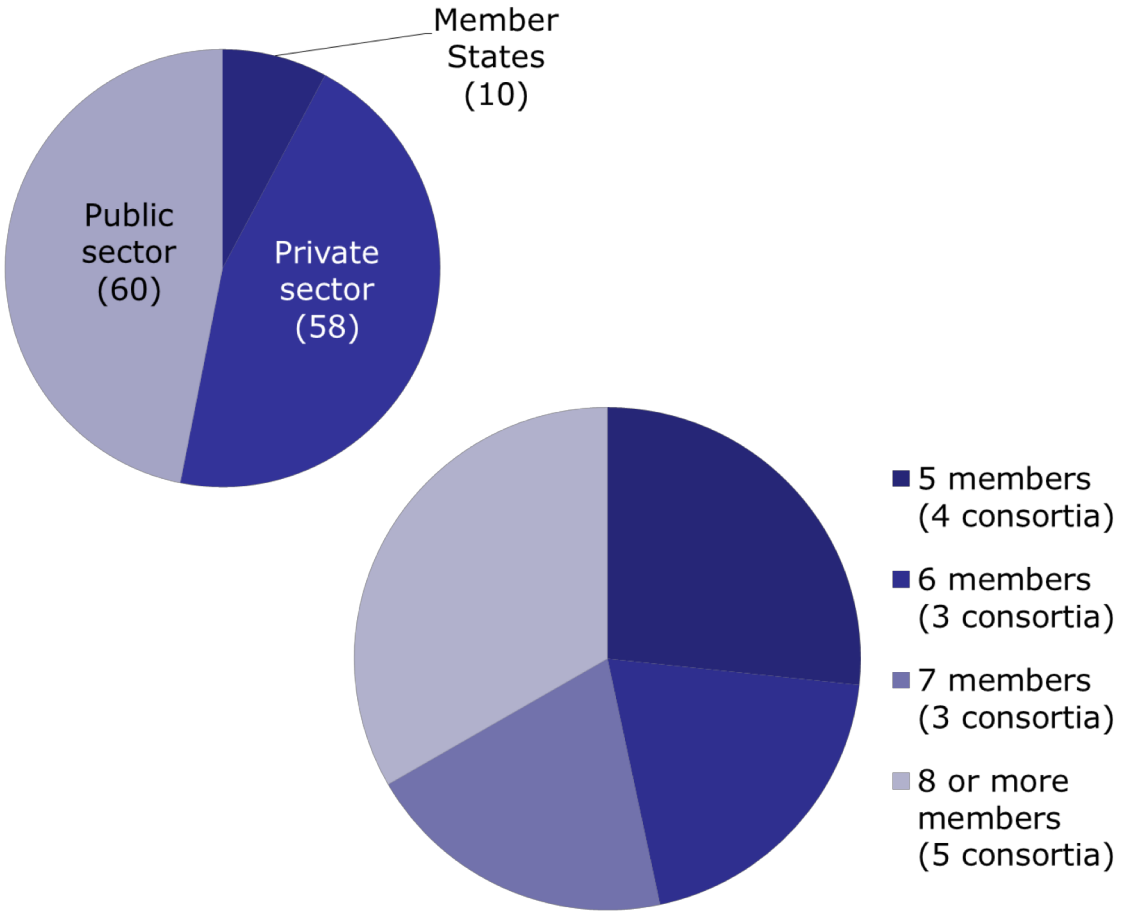
- Info below still indicative: grant agreement preparation now on-going (to be finalised by mid-September)
- Most of the actions to start between May and September 2017 and run until end of 2018
  - All will ensure the compliance with the European eInvoicing standard
  - Most will also deploy eDelivery

- Actions will support:
  - Solution providers and national eInvoicing solutions, including at the local level, to make them complaint with eInvoicing standard
  - Strong focus of some of the actions on onboarding suppliers and engaging with SMEs

European Commission

2016-3 eInvoicing call

Member States involved (22)



European Commission

2017-3 eInvoicing call

- Call opening: 28 June 2017 - Call closure: 28 November 2017

- **Call objective:**
- Increase uptake and the use of the eInvoicing DSI by supporting authorities – especially at the regional and local levels – in meeting the requirements of the eInvoicing Directive

- **Overall indicative budget: €10 million**
- **Co-funding rate:** 75% of eligible costs
- **Proposals received: 23**
- **Eligible proposals received: 21**
- **Recommended proposals: 10**
- **Recommended funding: €8,800,000**

- Info below still indicative: grant agreement preparation will start in May 2018
- Most of the actions to start between May and September 2018 and run until end of 2019
  - All will ensure the compliance with the European eInvoicing standard
  - Most will also deploy eDelivery

- Actions will support:
  - Solution providers and national eInvoicing solutions, including at the local level, to make them complaint with eInvoicing standard
  - Strong focus of some of the actions on onboarding suppliers and engaging with SMEs

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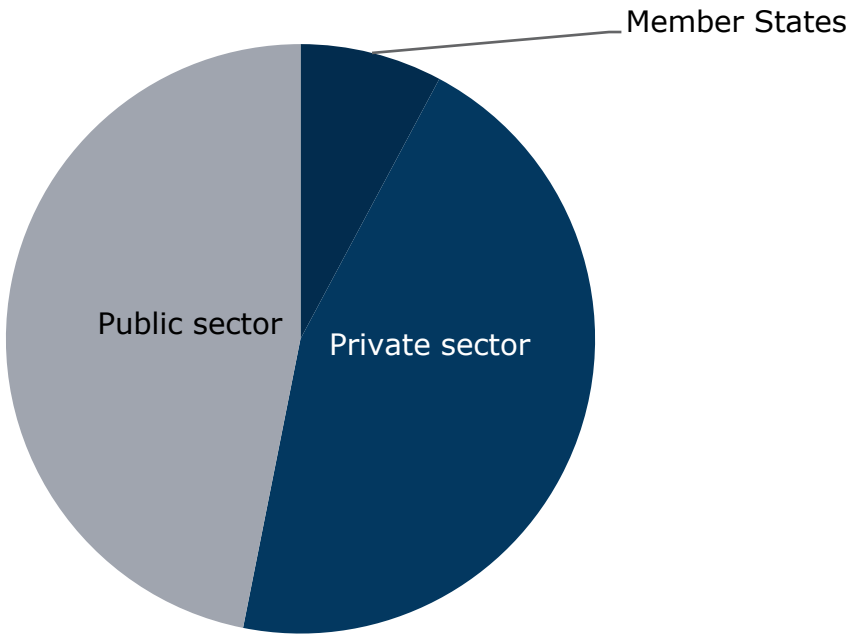
2017-3 eInvoicing call

Member States involved (16)



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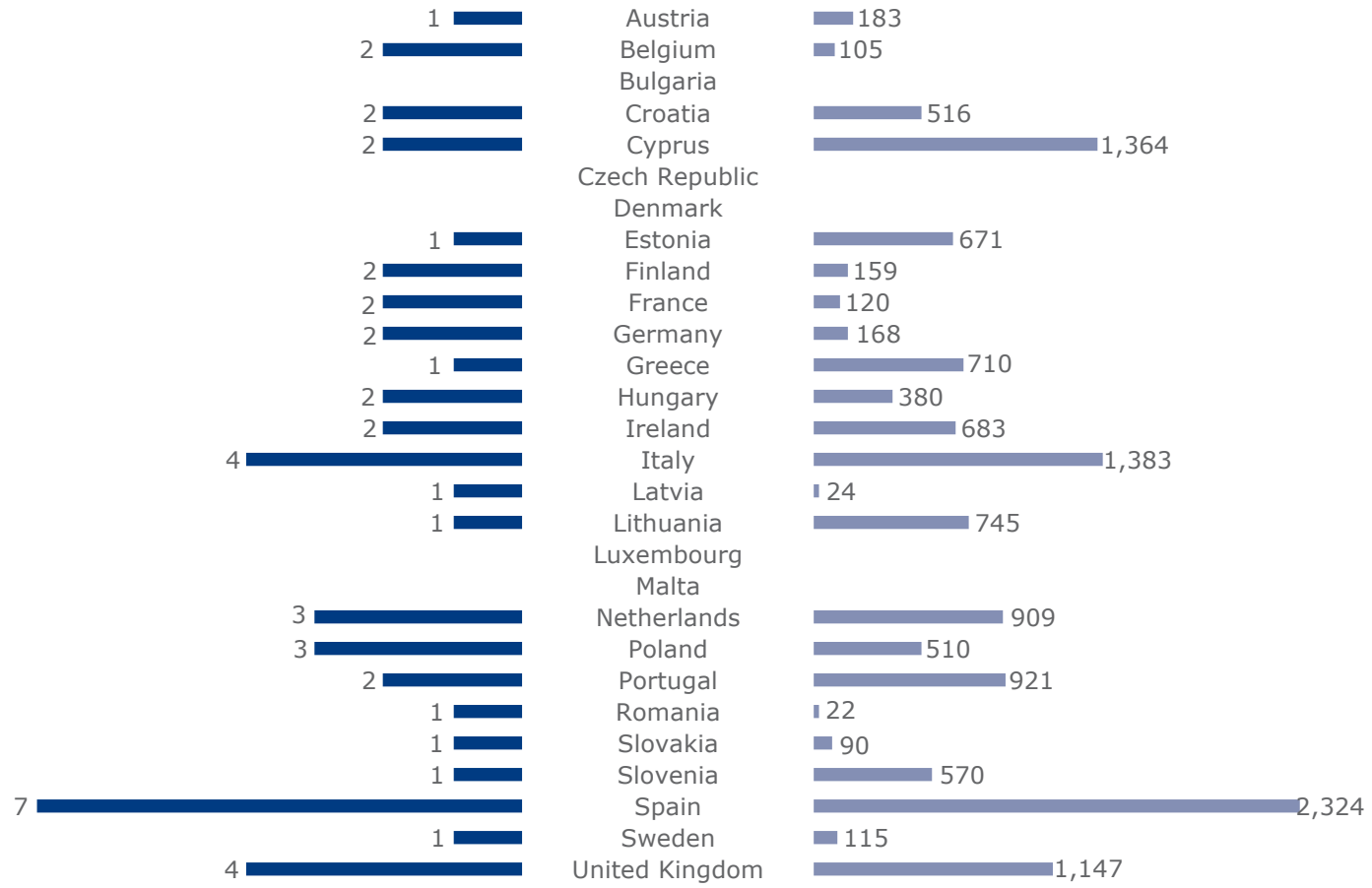
Member States
Number of projects and CEF funding (€ thousand)



EEA and Third Countries
Number of projects and CEF funding (€ thousand)

CEF Telecom 2014-2016
List of grant agreements for eInvoicing DSI building blocks

Project Code	Title	Beneficiary countries	Start Date	End Date	Project Status	CEF funding for the action (€)
2015-AT-IA-0049	EVA - e-Invoicing for Austria	AT	01/09/2016	31/12/2017	Ongoing	183,000
2015-CY-IA-0052	E-invoicing Cyprus	CY	01/10/2016	31/12/2017	Ongoing	561,430
2015-ES-IA-0055	SMART eINVOICING PLATFORM TO ENFORCE CROSS-BORDER DOCUMENTATION EXCHANGE (SEINPEX)	ES	01/08/2016	31/12/2017	Ongoing	222,781
2015-EU-IA-0050	eIGOR - eInvoicing GO Regional	IT,UK	01/01/2017	31/12/2017	Ongoing	1,252,500
2015-EU-IA-0054	Semantic conversion of business documents (SCOBDO)	DE,NL	01/09/2016	31/12/2017	Ongoing	283,199
2015-EU-IA-0058	GOVeIn European eInvoicing Project: implementation of the European electronic invoice within the Public Health area	ES,FR,HU,IE,IT,NL,PL,RO,UK	01/10/2016	31/10/2017	Ongoing	770,249
2015-HR-IA-0048	Croatian eInvoicing Business-to-Administration Exchange Project	HR	02/06/2016	30/05/2017	Closed	251,328
2015-UK-IA-0056	eInvoice Expansion	UK	01/10/2016	31/12/2017	Ongoing	901,624
2016-CY-IA-0105	Cy e-Invoicing (Local Authorities)	CY	01/01/2018	31/12/2018	Ongoing	802,134
2016-EL-IA-0130	Interoperable eInvoicing in Greece (GRinv)	EL	01/10/2017	30/09/2018	Ongoing	710,065
2016-ES-IA-0117	FACe - The core platform of the Spanish public authorities to process the European standard on electronic invoice	ES	01/09/2017	30/11/2018	Ongoing	298,691
2016-ES-IA-0134	EUeInvoicing.cat - European standards adoption for eInvoicing in Catalonia	ES	01/09/2017	31/08/2018	Ongoing	622,833
2016-EU-IA-0086	Tools and support towards the adoption of the future EN on electronic invoicing in SMEs	BE,ES,IT	01/09/2017	31/08/2018	Ongoing	372,054
2016-EU-IA-0096	GOV2EU - Supporting public entities to adopt EU Standard on electronic invoice for cross-border transactions	BE,DE,ES,FR,HU,IT,PL,PT,SK	01/09/2017	31/10/2018	Ongoing	1,248,208
2016-EU-IA-0109	SAPHeIN – Implementing SAPHetydoc for the wide adoption of eINvoicing	ES,PT	01/06/2017	31/08/2018	Ongoing	908,837
2016-EU-IA-0119	Facilitate and increase the use of the European Norm on e-invoice and the use of access point in the EU	FI,NO,SE	15/12/2016	01/06/2018	Ongoing	887,879
2016-EU-IA-0120	Internet of Business (IoB)	EE,FI,LV	01/06/2017	31/05/2018	Ongoing	795,248
2016-EU-IA-0126	Promote uptake of e-invoicing in Ireland	IE,UK	01/07/2017	30/06/2018	Ongoing	755,904
2016-HR-IA-0090	eINVOICING For Croatian Public Authorities (eICPA)	HR	19/09/2017	19/09/2018	Ongoing	264,201
2016-LT-IA-0104	eInvoicing cross-border LT	LT	01/09/2017	01/09/2018	Ongoing	744,553
2016-NL-IA-0088	NL eInvoicing	NL	16/12/2016	31/05/2018	Ongoing	705,068
2016-PL-IA-0106	European cross-border e-invoice in local public procurement in Poland	PL	01/10/2017	30/11/2018	Ongoing	420,442
2016-SI-IA-0103	Readiness of Slovenian E-invoicing	SI	01/06/2017	01/06/2018	Ongoing	570,248

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How to apply:

READ all call documentation carefully; forms, Guide for Applicants, FAQs, call webpage

REFLECT on the call content & requirements

REMEMBER that successful applications take time and effort, but guidance is available!

European Commission

CEF Telecom calls:
for more information

inea-cef-telecom-calls@ec.europa.eu

https://ec.europa.eu/inea/en/connecting-europe-facility/cef-telecom/apply-funding/2017-cef-telecom-calls-proposals

@inea_eu

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Lessons learned

QUESTIONS?