The European Norm and its content

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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.*
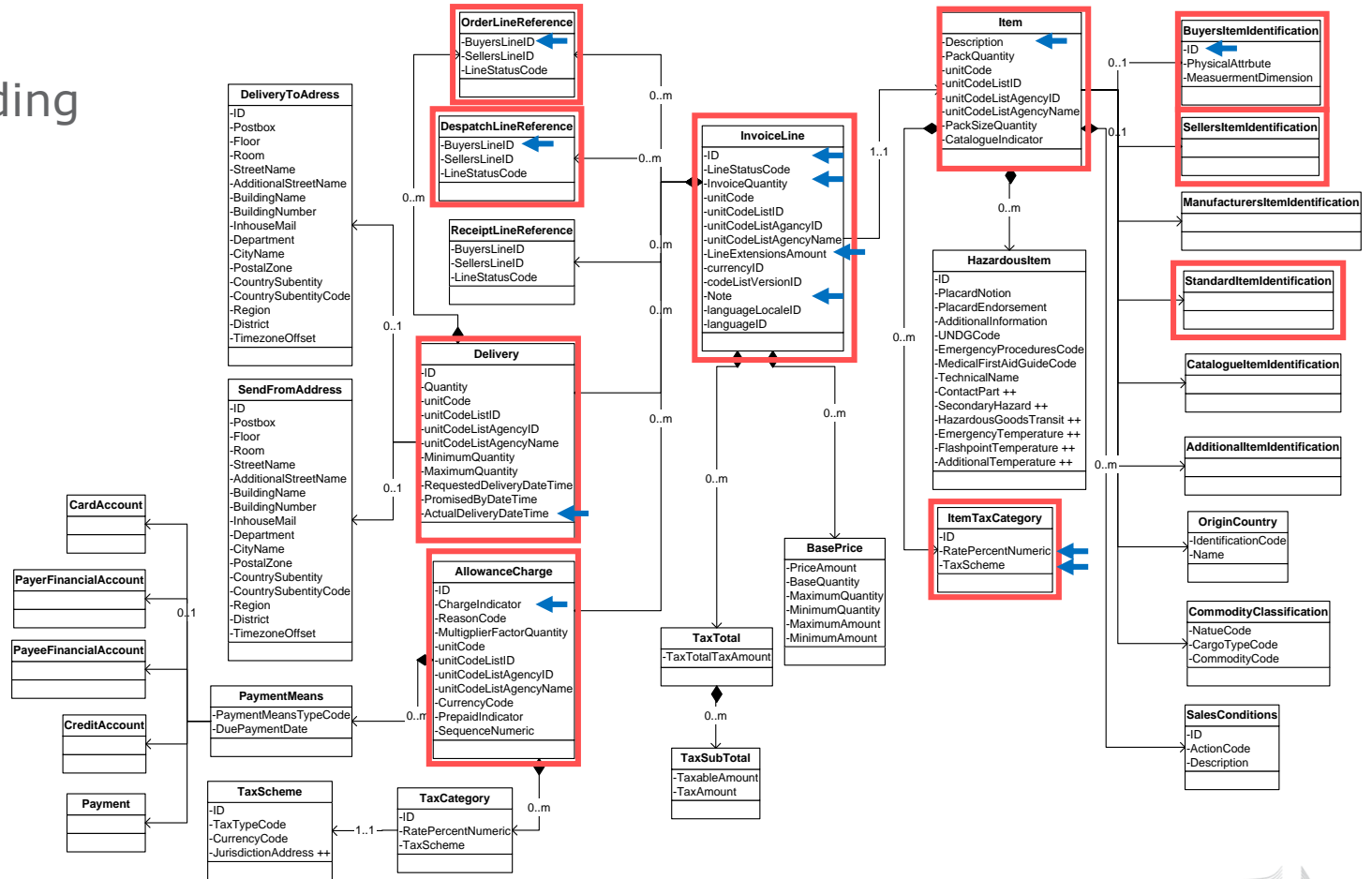
Initiation of the standardisation
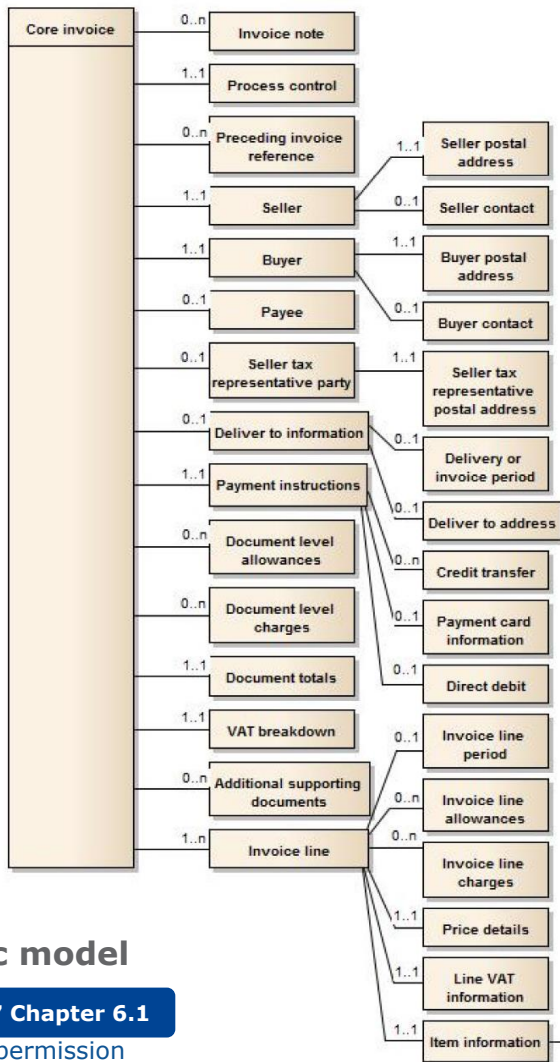
From article 3

*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.

Common understanding

OrderLineReference
- BuyersLineID
- SellersLineID
- LineStatusCode

DespatchLineReference
- BuyersLineID
- SellersLineID
- LineStatusCode

ReceiptLineReference
- BuyersLineID
- SellersLineID
- LineStatusCode

DeliveryToAdress
- ID
- Postbox
- Floor
- Room
- StreetName
- AdditionalStreetName
- BuildingName
- BuildingNumber
- InhouseMail
- Department
- CityName
- PostalZone
- CountrySubentity
- CountrySubentityCode
- Region
- District
- TimezoneOffset

SendFromAddress
- ID
- Postbox
- Floor
- Room
- StreetName
- AdditionalStreetName
- BuildingName
- BuildingNumber
- InhouseMail
- Department
- CityName
- PostalZone
- CountrySubentity
- CountrySubentityCode
- Region
- District
- TimezoneOffset

Delivery
- ID
- Quantity
- unitCode
- unitCodeListID
- unitCodeListAgencyID
- unitCodeListAgencyName
- MinimumQuantity
- MaximumQuantity
- RequestedDeliveryDateTime
- PromisedByDateTime
- ActualDeliveryDateTime

InvoiceLine
- ID
- LineStatusCode
- InvoiceQuantity
- unitCode
- unitCodeListID
- unitCodeListAgancyID
- unitCodeListAgencyName
- LineExtensionsAmount
- currencyID
- codeListVersionID
- Note
- languageLocaleID
- languageID

Item
- Description
- PackQuantity
- unitCode
- unitCodeListID
- unitCodeListAgencyID
- unitCodeListAgencyName
- PackSizeQuantity
- CatalogueIndicator

HazardousItem
- ID
- PlacardNotion
- PlacardEndorsement
- AdditionalInformation
- UNDGCode
- EmergencyProceduresCode
- MedicalFirstAidGuideCode
- TechnicalName
- ContactPart ++
- SecondaryHazard ++
- HazardousGoodsTransit ++
- EmergencyTemperature ++
- FlashpointTemperature ++
- AdditionalTemperature ++

BuyersItemIdentification
- ID
- PhysicalAttrbute
- MeasuermentDimension

SellersItemIdentification

ManufacturersItemIdentification

StandardItemIdentification

CatalogueItemIdentification

AdditionalItemIdentification

OriginCountry
- IdentificationCode
- Name

CommodityClassification
- NatueCode
- CargoTypeCode
- CommodityCode

SalesConditions
- ID
- ActionCode
- Description

ItemTaxCategory
- ID
- RatePercentNumeric
- TaxScheme

BasePrice
- PriceAmount
- BaseQuantity
- MaximumQuantity
- MinimumQuantity
- MaximumAmount
- MinimumAmount

CardAccount

PayerFinancialAccount

PayeeFinancialAccount

CreditAccount

Payment

PaymentMeans
- PaymentMeansTypeCode
- DuePaymentDate

AllowanceCharge
- ID
- ChargeIndicator
- ReasonCode
- MultigplierFactorQuantity
- unitCode
- unitCodeListID
- unitCodeListAgencyID
- unitCodeListAgencyName
- CurrencyCode
- PrepaidIndicator
- SequenceNumeric

TaxScheme
- ID
- TaxTypeCode
- CurrencyCode
- JurisdictionAddress ++

TaxCategory
- ID
- RatePercentNumeric
- TaxScheme

TaxTotal
- TaxTotalTaxAmount

TaxSubTotal
- TaxableAmount
- TaxAmount

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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 number (0..1)
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 (1..1)
Category rate (...
Exemption text...
Exemption code...

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 to 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

Guiding principles → Input from the committee → List of processes & functions → List of requirments → Model of business terms / Business rules
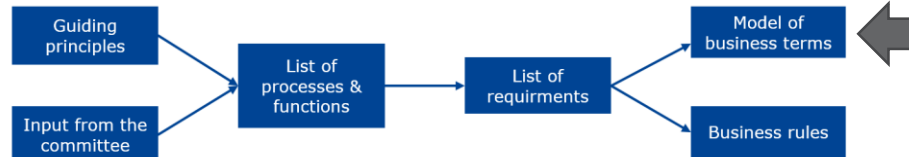
Business rules

- 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 $= \sum$ 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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Syntax bindings

- The technical formats used for representing and carrying the business information between buyers and sellers

- Long process in the standardization committee to agree on a limited list

- European Commission provided a requirement list, examples;

  - Be international, open and free to use

  - Be widely used in the EU or worldwide

  - Be used in production environments

Syntax bindings

Syntax A

Syntax B

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

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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
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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Access to the specifications

EC is sponsoring access – to the EN and the list of syntaxes. These specifications are available for free download

The other specifications must still be purchased

Compling with the standard and PEPPOL

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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).*

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.*

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Core – something in common

IMPORTANT

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

International Standard Syntax (CII/UBL)

Extension

Core

Usage specification

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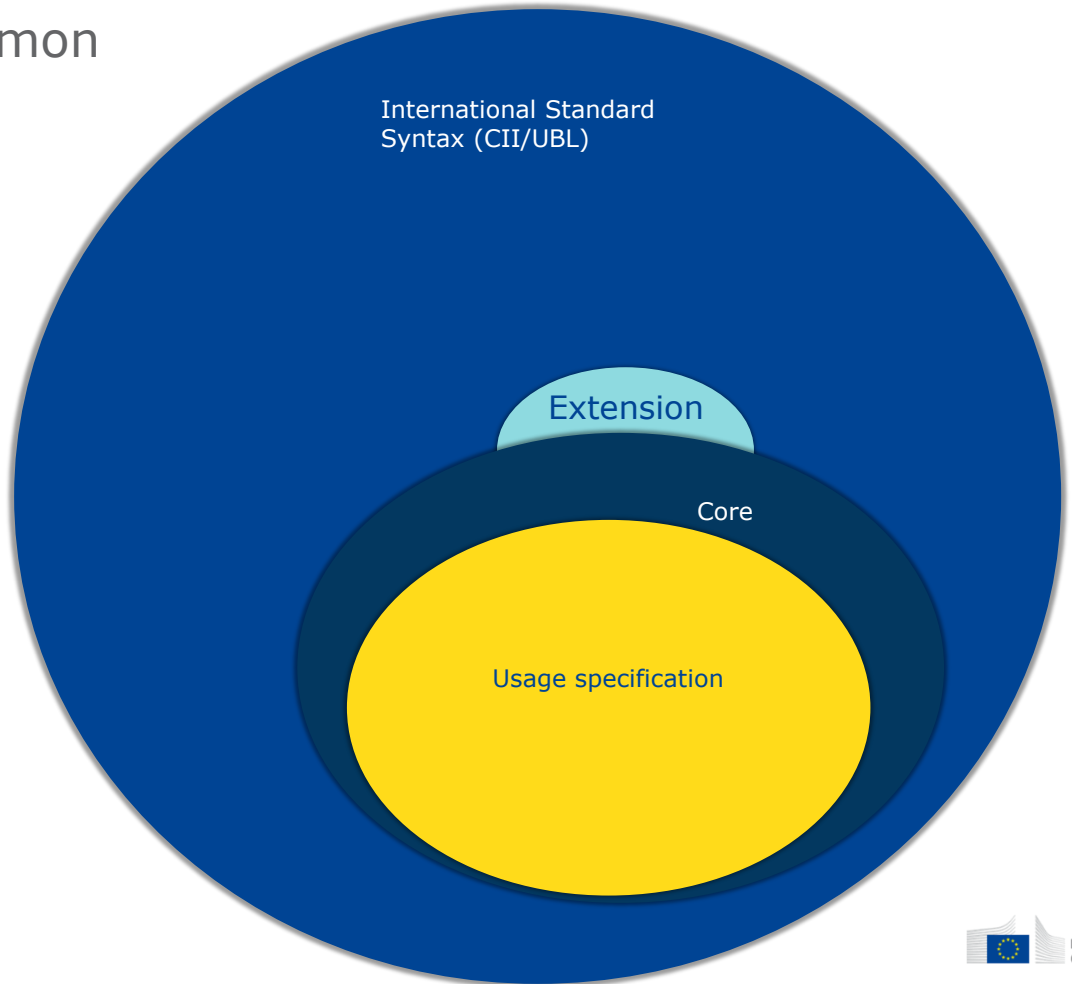
PEPPOL

Infrastructure where Buyers and Sellers can exchange e-documents

Specifications for electronic invoice, order, catalogue…

Non-for-profit organisation which maintains and governs

National rules in PEPPOL CIUS triggered by the supplier country

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

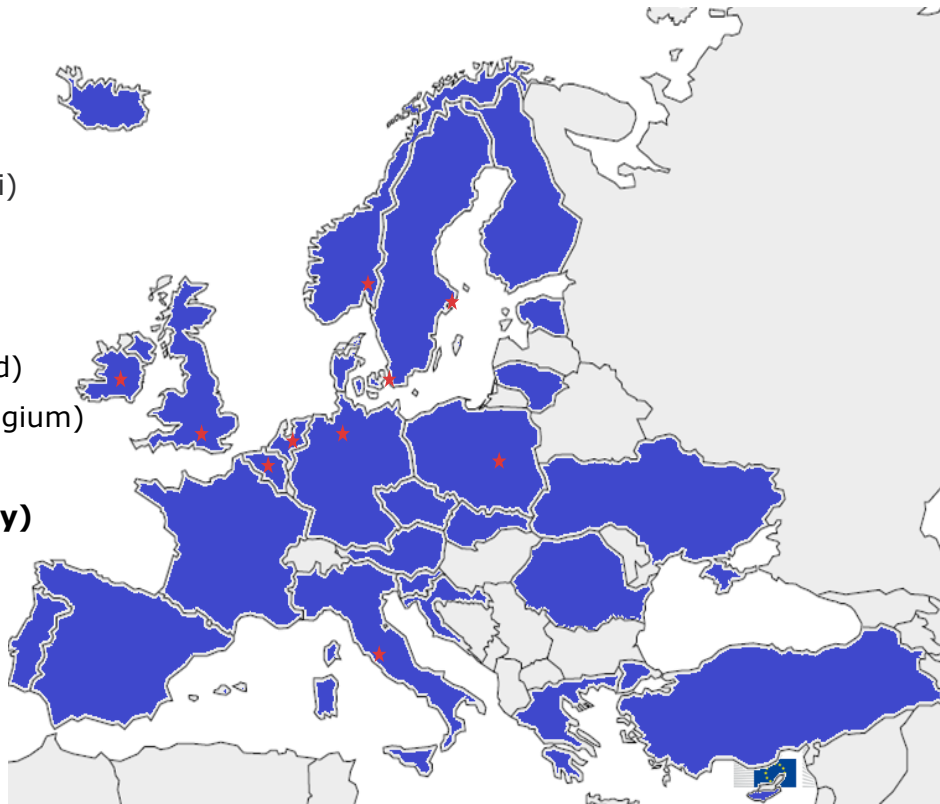| Rule	Message/Context/Test
DK-R-001 **(warning)**	**For Danish suppliers when the Accounting code is known, it should be referred on the Invoice.**
	ubl-creditnote:CreditNote | ubl-invoice:Invoice
	not(cac:AccountingSupplierParty/cac:Party/cac:PostalAddress/cac:Country/cbc:IdentificationCode = 'DK' 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()) = '')
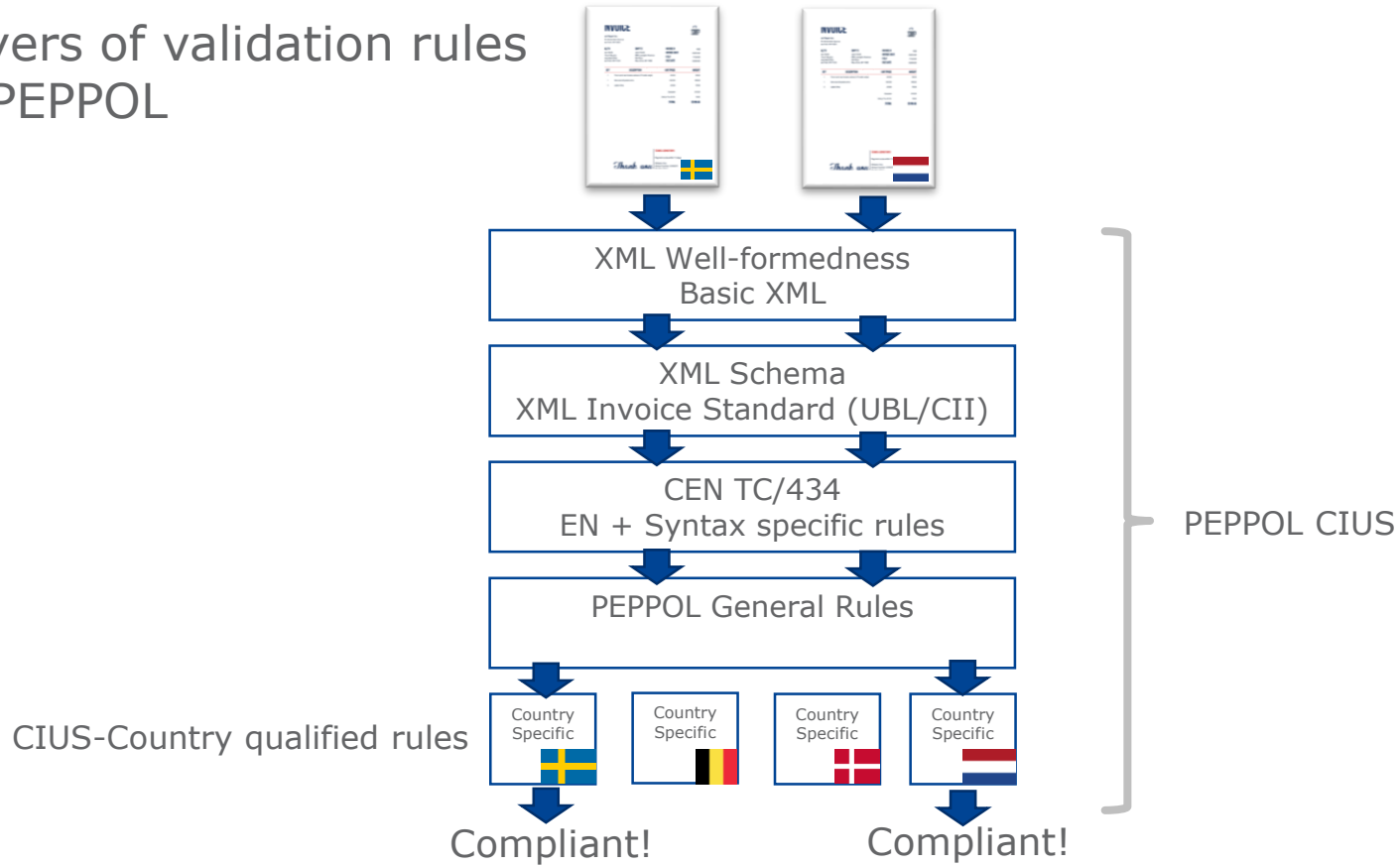
PEPPOL today

+**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

QUESTIONS?