Fahrplan für Anwender: CEN EU Standard E-Rechnung und E-Beleg

E-Rechnungsgipfel (Neuss)
21.09.2021

Svante.Schubert@gmail.com

Standardisierung

Was ist ein Standard?

- Ein Standard ist eine **Blaupause** oder ein **Kochrezept**!
- Ein Standard schafft Interoperabiliät (z.B. DINA4)
- Ein Standard erhöht Wiederverwendbarkeit
- Ein Standard verhindert Lock-In-Effekt
- Ein Standard senkt Kosten (z.B. freie Test/Validator)

Standardisierung

Meine Mitarbeit an Standards:

- **UN/CEFACT**: Supply Chain
- **CEN TC 434**: e-Rechnung & e-Beleg
- **CENTC 440**: public e-Procurement
- **FeRD**: ZUGFeRD/Factur-X & Order-X

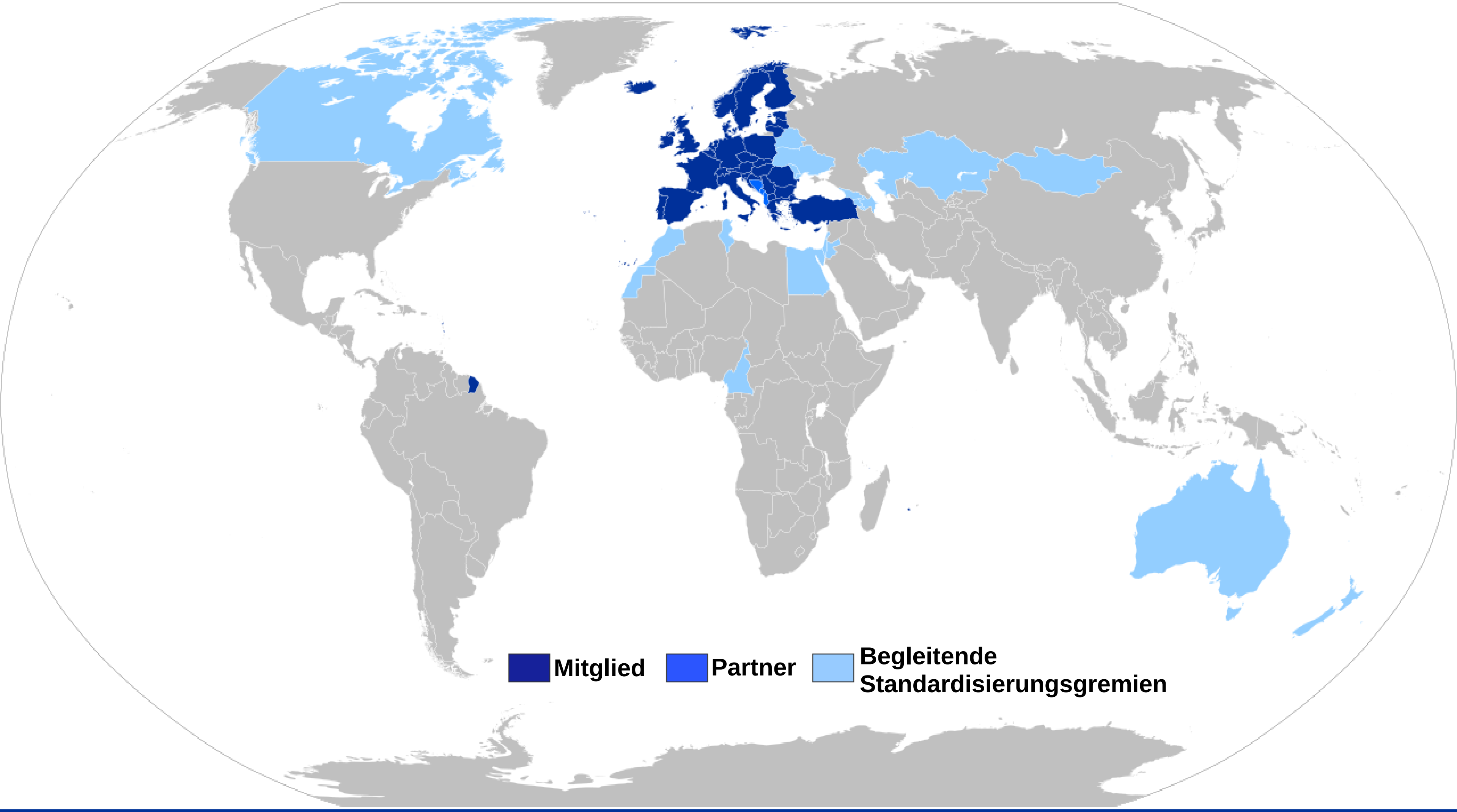
Standardisierung

Meine Mitarbeit an Standards:

- **UN/CEFACT**: Supply Chain
- **CEN TC 434**: e-Rechnung & e-Beleg
- **CENTC 440**: public e-Procurement
- **FeRD**: ZUGFeRD/Factur-X & Order-X
- **OASIS OpenDocument TC**: Office Format (co-chair)

Standardisierung

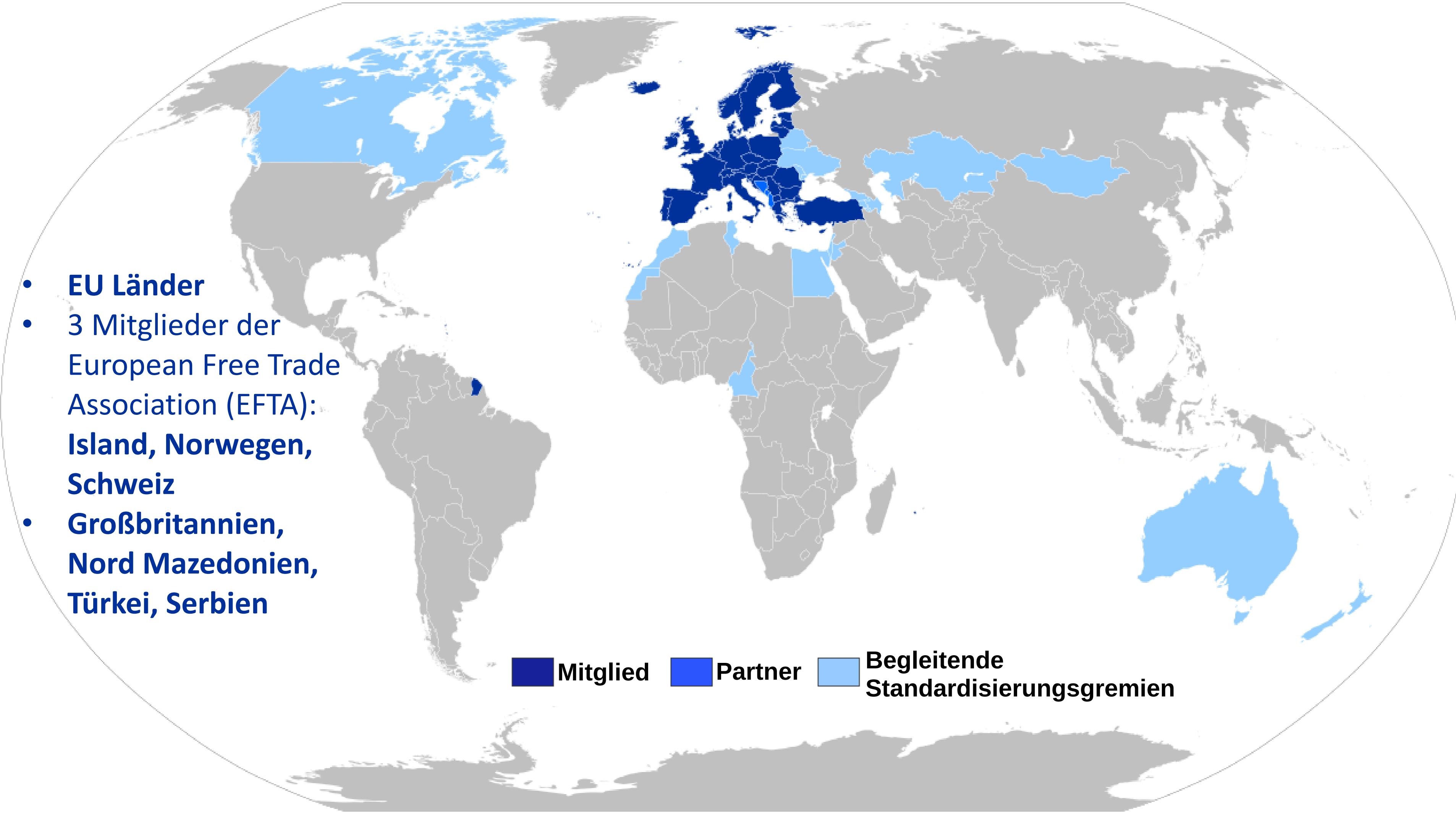
Wer ist CEN (Comité Européen de Normalisation)?



Standardisierung

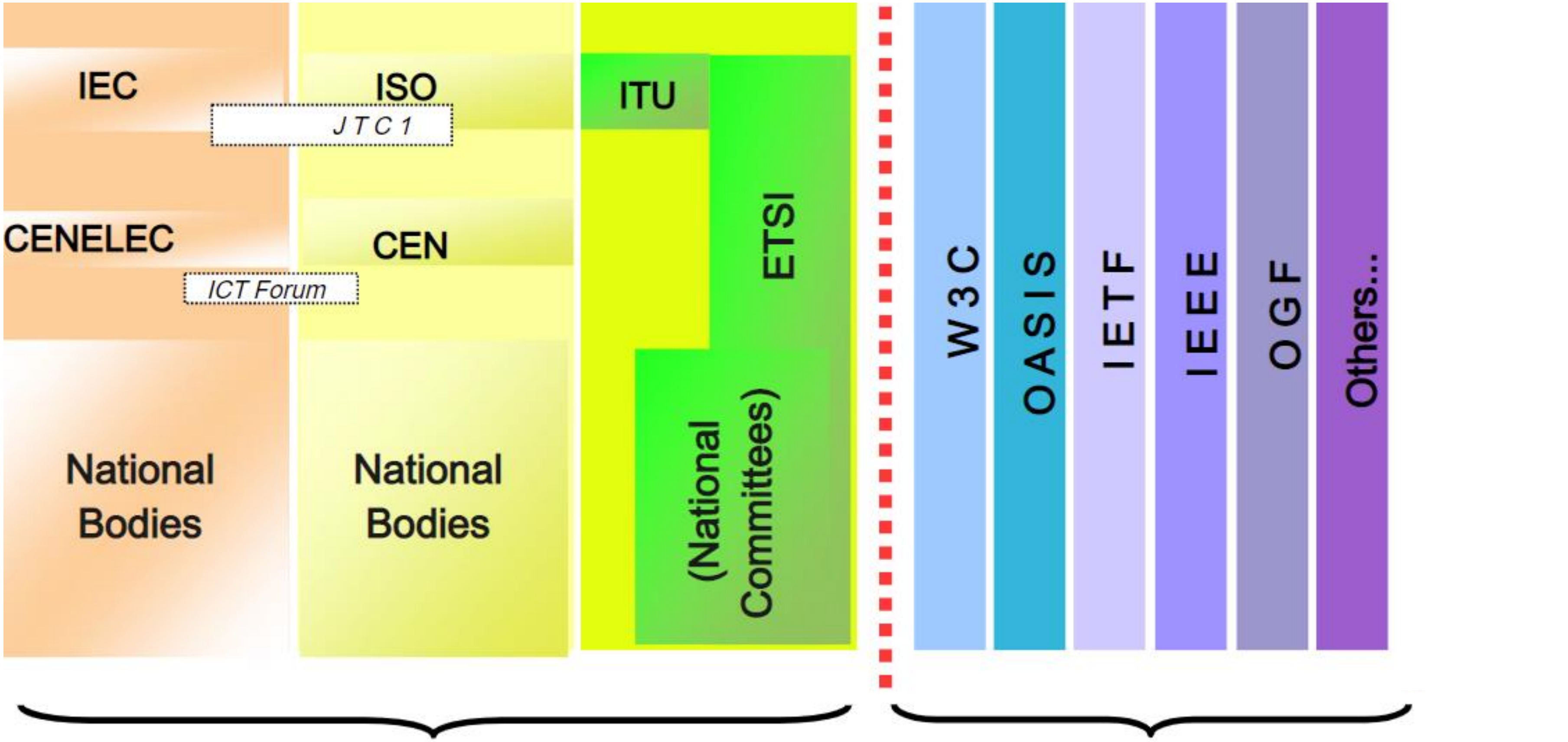
Wer ist CEN (Comité Européen de Normalisation)?

- **EU Länder**
- 3 Mitglieder der European Free Trade Association (EFTA): **Island, Norwegen, Schweiz**
- **Großbritannien, Nord Mazedonien, Türkei, Serbien**



Standardisierung

Was ist ein EU CEN Standard?



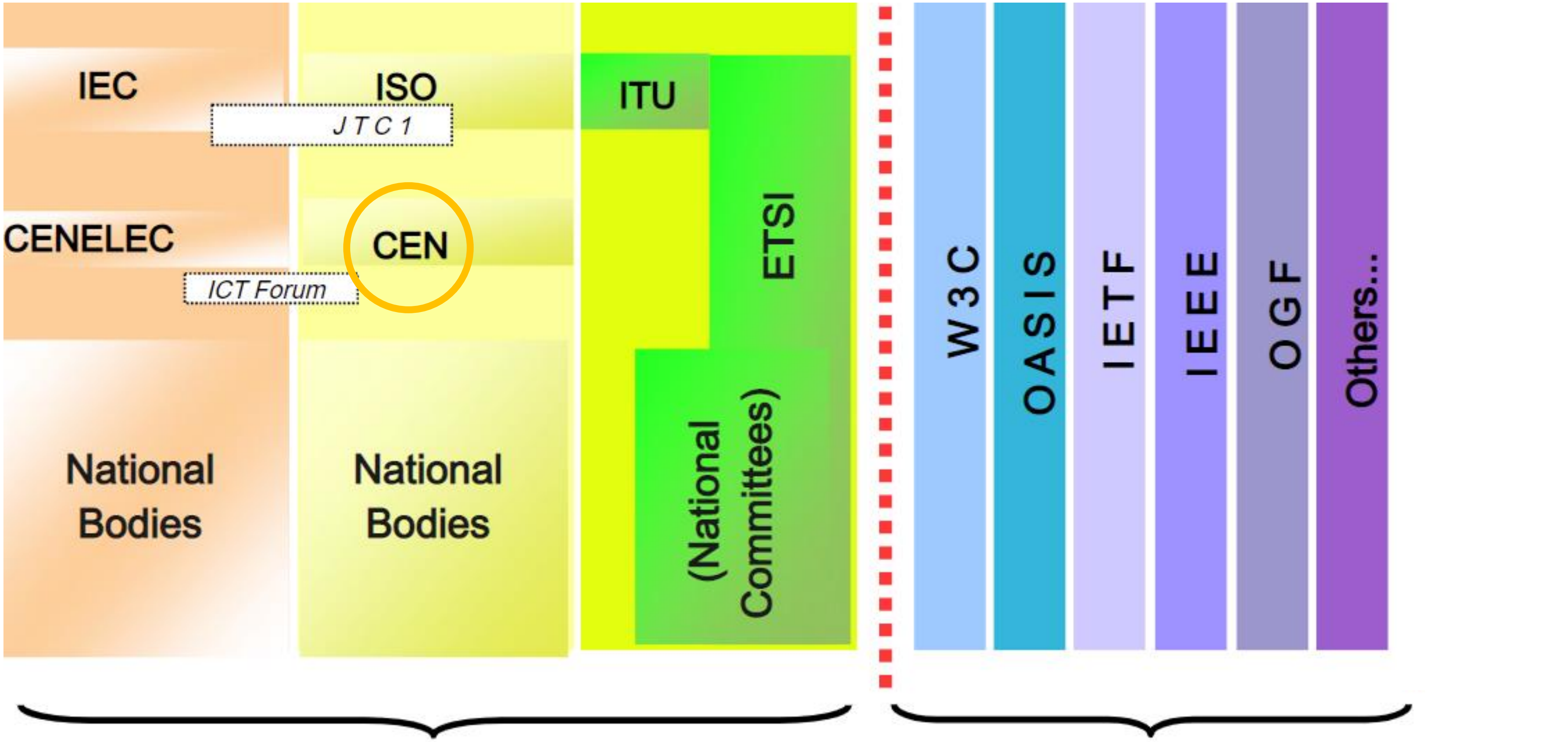
Europäisches Standardisierungssystem

Außerhalb des Geltungsbereichs (nicht direkt nutzbar)

[Pflicht durch EU Verordnung 1025/2012]

Standardisierung

Was ist ein EU CEN Standard?



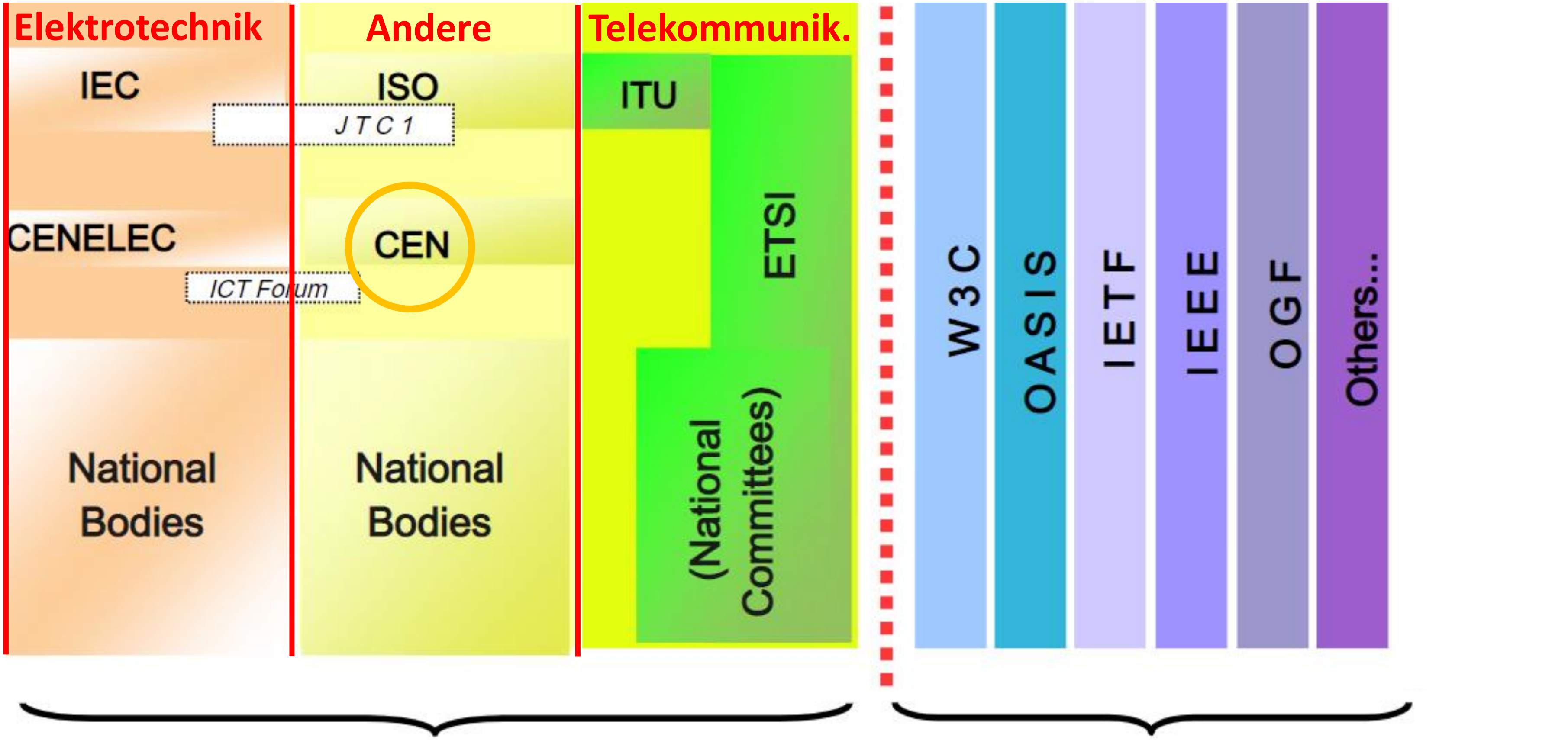
Europäisches Standardisierungssystem

Außerhalb des Geltungsbereichs (nicht direkt nutzbar)

Pflicht durch EU Verordnung 1025/2012

Standardisierung

Was ist ein EU CEN Standard?



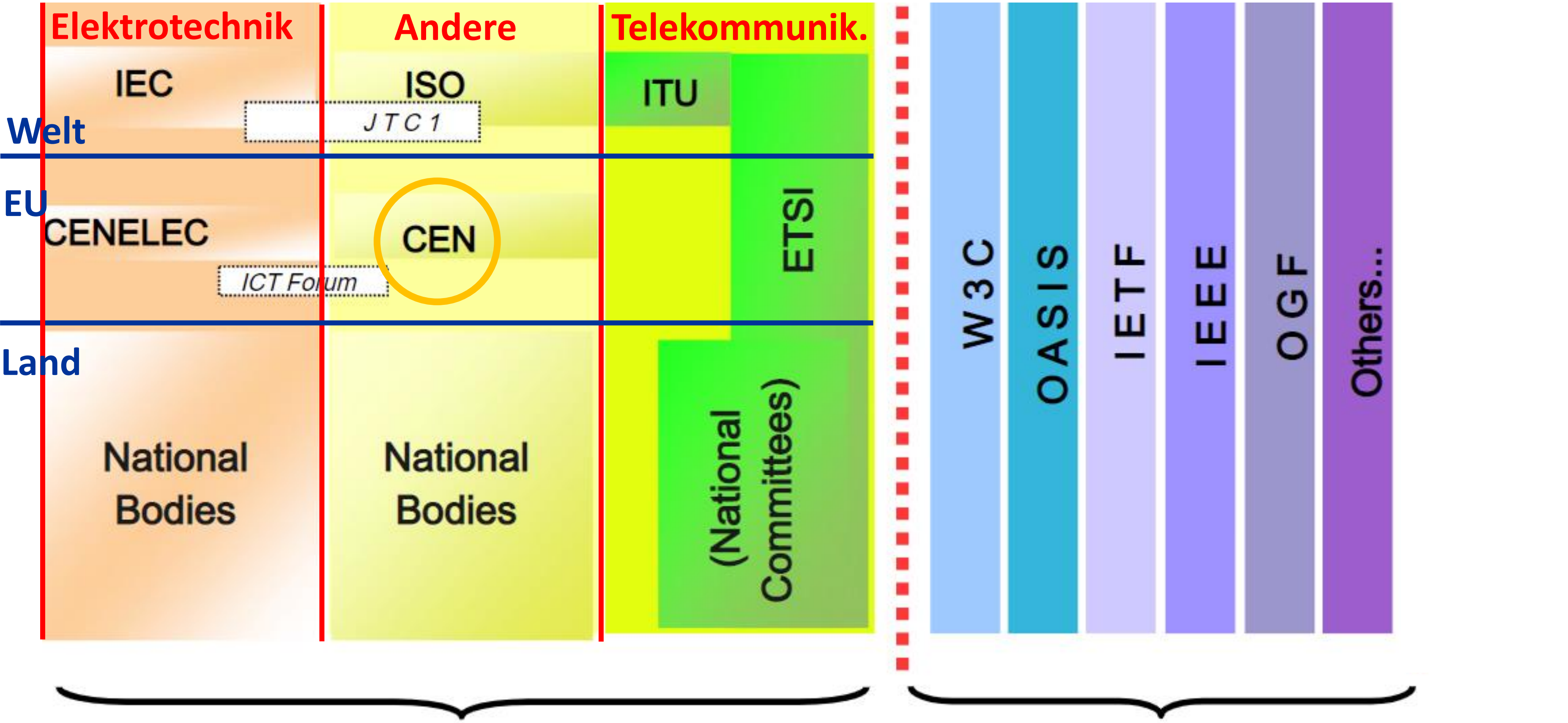
Europäisches Standardisierungssystem

[Pflicht durch EU Verordnung 1025/2012]

Außerhalb des Geltungsbereichs (nicht direkt nutzbar)

Standardisierung

Was ist ein EU CEN Standard?



Europäisches Standardisierungssystem

[Pflicht durch EU Verordnung 1025/2012]

Außerhalb des Geltungsbereichs (nicht direkt nutzbar)

CEN/TC 434 - Electronic Invoicing

General | Structure | Work programme | Published Standards

CEN/TC 434 Subcommittees and Working Groups

Working group	Title
CEN/TC 434/WG 1	Core semantic data model
CEN/TC 434/WG 3	Syntax bindings
CEN/TC 434/WG 4	Guidelines at transmission level
CEN/TC 434/WG 5	Extension methodology
CEN/TC 434/WG 6	Test methodology and test results
CEN/TC 434/WG 7	Registry Services

European Committee for Standardization

CEN COMMUNITY | TECHNICAL BODIES | STANDARDS EVOLUTION AND FORECAST | SEARCH STANDARDS

Technical Bodies > **CEN/TC 434**

CEN/TC 434 - Electronic Invoicing

General | Structure | Work programme | Published Standards

CEN/TC 434 Subcommittees and Working Groups

Working group	Title
CEN/TC 434/WG 1	Core semantic data model
CEN/TC 434/WG 3	Syntax bindings
CEN/TC 434/WG 4	Guidelines at transmission level
CEN/TC 434/WG 5	Extension methodology
CEN/TC 434/WG 6	Test methodology and test results
CEN/TC 434/WG 7	Registry Services

CEN/TC 434 - Electronic Invoicing

CEN/TC 434 Subcommittees and Working Groups

Working group	Title
CEN/TC 434/WG 1	Core semantic data model
CEN/TC 434/WG 3	Syntax bindings
CEN/TC 434/WG 4	Guidelines at transmission level
CEN/TC 434/WG 5	Extension methodology
CEN/TC 434/WG 6	Test methodology and test results
CEN/TC 434/WG 7	Registry Services

cen European Committee for Standardization

CEN COMMUNITY | TECHNICAL BODIES | STANDARDS EVOLUTION AND FORECAST | SEARCH STANDARDS

Technical Bodies > **CEN/TC 434**

CEN/TC 434 - Electronic Invoicing

General | Structure | Work programme | Published Standards

CEN/TC 434 Subcommittees and Working Groups

Working group	Title
CEN/TC 434/WG 1	Core semantic data model
CEN/TC 434/WG 3	Syntax bindings
CEN/TC 434/WG 4	Guidelines at transmission level
CEN/TC 434/WG 5	Extension methodology
CEN/TC 434/WG 6	Test methodology and test results
CEN/TC 434/WG 7	Registry Services

European Committee for Standardization

CEN COMMUNITY | TECHNICAL BODIES | STANDARDS EVOLUTION AND FORECAST | SEARCH STANDARDS

Technical Bodies > CEN/TC 434

CEN/TC 434 - Electronic Invoicing

General | Structure | Work programme | Published Standards

CEN/TC 434 Subcommittees and Working Groups

Working group	Title
CEN/TC 434/WG 1	Core semantic data model
CEN/TC 434/WG 3	Syntax bindings
CEN/TC 434/WG 4	Guidelines at transmission level
CEN/TC 434/WG 5	Extension methodology
CEN/TC 434/WG 6	Test methodology and test results
CEN/TC 434/WG 7	Registry Services

EN16931-1 Erweiterungen

33 von 38 akzeptiert

Q.1	Support for the use of VAT inclusive prices and other special cases (issues 2, 8, 46)
Q.2	Support more than 2 decimals at line amount level (issue 7)
Q.3	Errors in existing version corrections (in text and figures) (issue 9)
Q.4	Business rules not in line with Directive 2006/112/EC (issue 10)
Q.5	Support for Invoice Issue Time (issue 11)
Q.6	Table 3 – BR 50 correction (issue 12)
Q.7	Table 3 – BR 50 correction (issue 13)
Q.8	Support for XML attachments (issue 14)
Q.9	Support for German Skonto (issue 16)
Q.10	Missing business rule for BT-131 (issue 18, 40)
Q.11	Support for more detailed information in paid amounts (issue 19)
Q.12	Support for car spare parts regulation (issue 20)
Q.13	Support for extra charges on behalf of a third party that are not part of the invoice (issue 21)
Q.14	Allow VAT identifiers on invoice outside of scope of VAT (issue 22)
Q.15	Support for mix of subject to VAT and not subject to VAT on same invoice (issue 23)
Q.16	EAS code list (issue 24)
Q.17	VATEX code list (issue 25)
Q.18	Support for exemptions and exemption codes at invoice and line level (issue 26)
Q.19	Paid amount (issue 28)
Q.20	Support for withholding taks (issue 29)
Q.21	Modification to 6.5.3 Unit Price Amount. Type (issue 30)
Q.22	Modification to Table 18 (issue 31)
Q.23	Modification to 6.5.5 Percentage. Type (issue 32)
Q.24	Modifications to A.1.1 Introduction (issue 33)
Q.25	Modifications to A.1.2 Example 1 (Different Invoiced item VAT rates) (issue 34)
Q.26	Modifications to A.1.3 Example 2 (Item price base quantity) (issue 35)
Q.27	Modifications to A.1.3 Example 2 (Item price base quantity) (issue 36)
Q.28	Modifications to A.3.1 Taxes other than VAT (issue 37)
Q.29	Modifications to A.3.4 Payment Instructions (issue 38)
Q.30	Support for split payment as in the IT A-Deviation (issue 39)
Q.31	Improve check on negative lines (issue 41)
Q.32	Item price base quantity (issue 42)
Q.33	Support for representation of social security fund as an invoice and in a uniform way (issue 43)
Q.34	Support for Stamp Duty (or taxes other than VAT) in a uniform way (issue 44)
Q.35	Support for split payment (issue 45)
Q.36	Multiple delivery references at line level (issue 49)
Q.37	Multiple order references at line level (issue 50)
Q.38	Are "negative invoice" and "credit note" equal alternatives? (issue 80)

EN16931-1 Erweiterungen

Wahl durch NSBs (ungewichtet & gewichtet)

		Unweighted (req >55%)	Total	Abstain	Yes	No	Check total	Weighted (req >65%)	Combined
Q.1	Support for the use of VAT inclusive prices and other special cases (issues 2, 8, 46)	57,00%	78,52%	42,19%	32,29%	4,04%	78,52%	88,88%	
Q.2	Support more than 2 decimals at line amount level (issue 7)	54,00%	78,52%	42,84%	28,91%	6,77%	78,52%	81,03%	
Q.3	Errors in existing version corrections (in text and figures) (issue 9)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.4	Business rules not in line with Directive 2006/112/EC (issue 10)	79,00%	78,52%	42,19%	33,75%	2,58%	78,52%	92,90%	
Q.5	Support for Invoice Issue Time (issue 11)	67,00%	78,52%	44,87%	27,54%	6,11%	78,52%	81,84%	
Q.6	Table 3 – BR 50 correction (issue 12)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.7	Table 3 – BR 50 correction (issue 13)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.8	Support for XML attachments (issue 14)	71,00%	78,52%	42,19%	30,22%	6,11%	78,52%	83,18%	
Q.9	Support for German Skonto (issue 16)	50,00%	78,52%	42,19%	28,10%	8,23%	78,52%	77,35%	
Q.10	Missing business rule for BT-131 (issue 18, 40)	67,00%	78,52%	42,90%	29,37%	6,25%	78,52%	82,45%	
Q.11	Support for more detailed information in paid amounts (issue 19)	54,00%	78,52%	42,25%	26,60%	9,67%	78,52%	73,34%	
Q.12	Support for car spare parts regulation (issue 20)	67,00%	78,52%	42,46%	30,89%	5,17%	78,52%	85,66%	
Q.13	Support for extra charges on behalf of a third party that are not part of the invoice (issue 21)	43,00%	78,52%	42,19%	26,15%	10,18%	78,52%	71,98%	
Q.14	Allow VAT identifiers on invoice outside of scope of VAT (issue 22)	69,00%	78,52%	42,40%	32,74%	3,38%	78,52%	90,64%	
Q.15	Support for mix of subject to VAT and not subject to VAT on same invoice (issue 23)	79,00%	78,52%	42,19%	33,75%	2,58%	78,52%	92,90%	
Q.16	EAS code list (issue 24)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.17	VATEX code list (issue 25)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.18	Support for exemptions and exemption codes at invoice and line level (issue 26)	79,00%	78,52%	42,19%	33,75%	2,58%	78,52%	92,90%	
Q.19	Paid amount (issue 28)	69,00%	78,52%	44,81%	28,34%	5,37%	78,52%	84,07%	
Q.20	Support for withholding taks (issue 29)	55,00%	78,52%	45,47%	26,88%	6,17%	78,52%	81,33%	
Q.21	Modification to 6.5.3 Unit Price Amount. Type (issue 30)	79,00%	78,52%	42,19%	33,01%	3,32%	78,52%	90,86%	
Q.22	Modification to Table 18 (issue 31)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.23	Modification to 6.5.5 Percentage. Type (issue 32)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.24	Modifications to A.1.1 Introduction (issue 33)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	
Q.25	Modifications to A.1.2 Example 1 (Different Invoiced item VAT rates) (issue 34)	86,00%	78,52%	42,19%	33,81%	2,52%	78,52%	93,06%	

https://votecalculator.cencenelec.eu/cen

EN16931-1 Zeitplan (Erweiterungen)

		# weeks	start	end
ib	*internal ballot (optional)*	8	26/03/2021	21/05/2021
a	Drafting of prEN	8	21/05/2021	16/07/2021
b	Editing	5	16/07/2021	20/08/2021
c	Translation	8	20/08/2021	15/10/2021
d	Enquiry	12	15/10/2021	7/01/2022
e	Comments (Flex)	6	7/01/2022	18/02/2022
b	Editing	5	18/02/2022	25/03/2022
c	Translation	5	25/03/2022	29/04/2022
j	Solving negative assessment (if necessary)	4	29/04/2022	27/05/2022
f	Formal Vote (not needed if no negative feedback)	8	27/05/2022	22/07/2022
b	Editing	2	22/07/2022	5/08/2022
g	TC Proofing	2	5/08/2022	19/08/2022
c	Translation	4	19/08/2022	16/09/2022
	Total time (weeks)	77		

EU Decision	8	16/09/2022	11/11/2022
OJEU publication	4	11/11/2022	9/12/2022
Transposition	24	9/12/2022	26/05/2023
Implementation	52	26/05/2023	24/05/2024
Deprecation	0	24/05/2024	24/05/2024

prEN = Norm Entwurf

Entwurf wird derzeit übersetzt!

OJEU = Official Journal of the European Union

Tritt in 976 Tage in Kraft!

Standardisierung

Vogelperspektive auf EN16931

- Vom CEN TC 434 für EU Richtlinie 2014/55/EU (B2G)

Standardisierung

Vogelperspektive auf EN16931

- Vom CEN TC 434 für EU Richtlinie [2014/55/EU] (B2G)
- EN16931 greift auf zwei XML Formate (als Syntax) zurück:
  - OASIS Universal Business Language (UBL) 2.1

OASIS OPEN

  - UN/CEFACT Cross Industry Invoice (CII) 16B

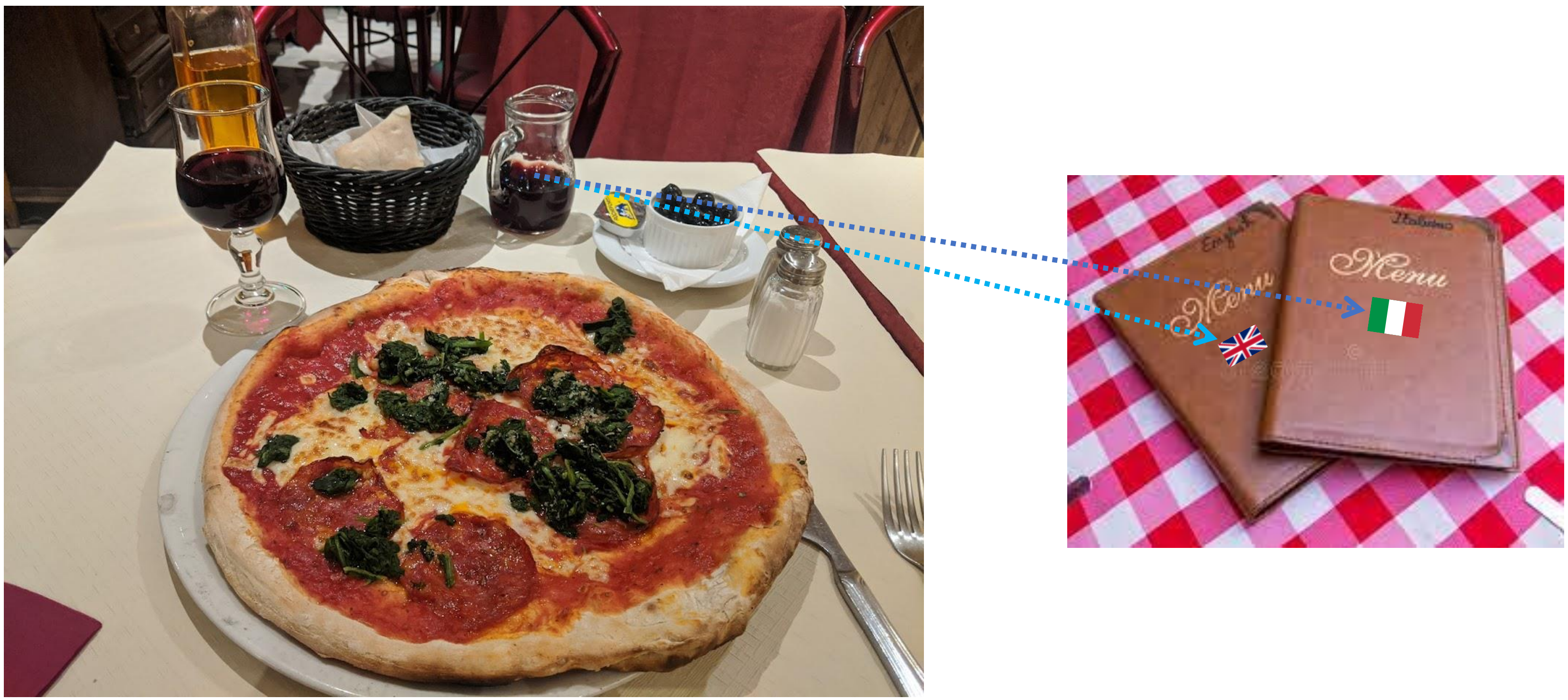
UN/CEFACT

SIMPLE, TRANSPARENT AND EFFECTIVE PROCESSES FOR GLOBAL COMMERCE

Standardisierung

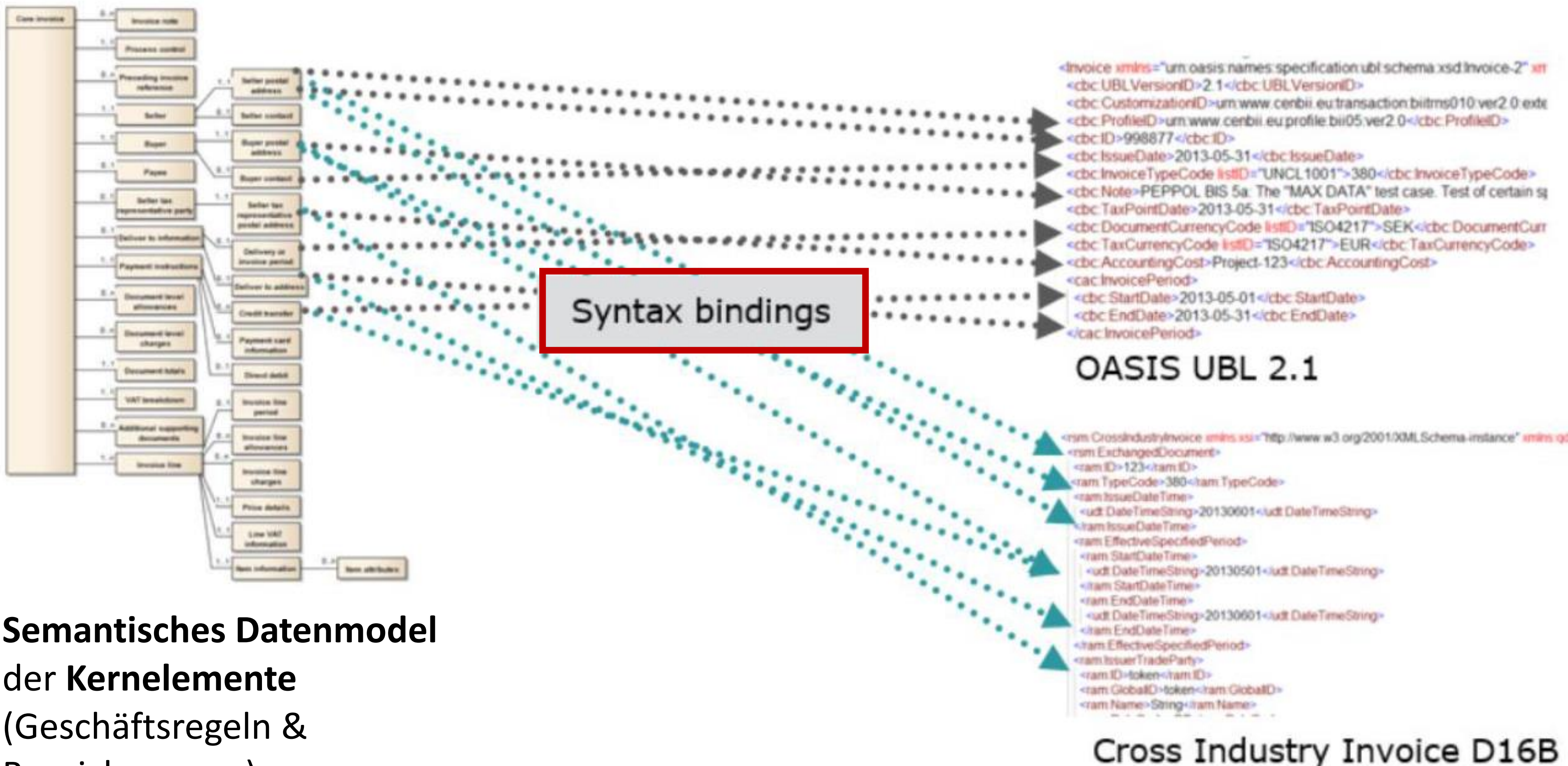
Was ist Semantik & Syntax?

- **Semantik** (*Wein*) beschrieben v. **Syntax**/Sprache (*wine*/*vino*)



Standardisierung

Semantik und Syntax in EN16931-3



Semantisches Datenmodel der **Kernelemente** (Geschäftsregeln & Bezeichnungen)

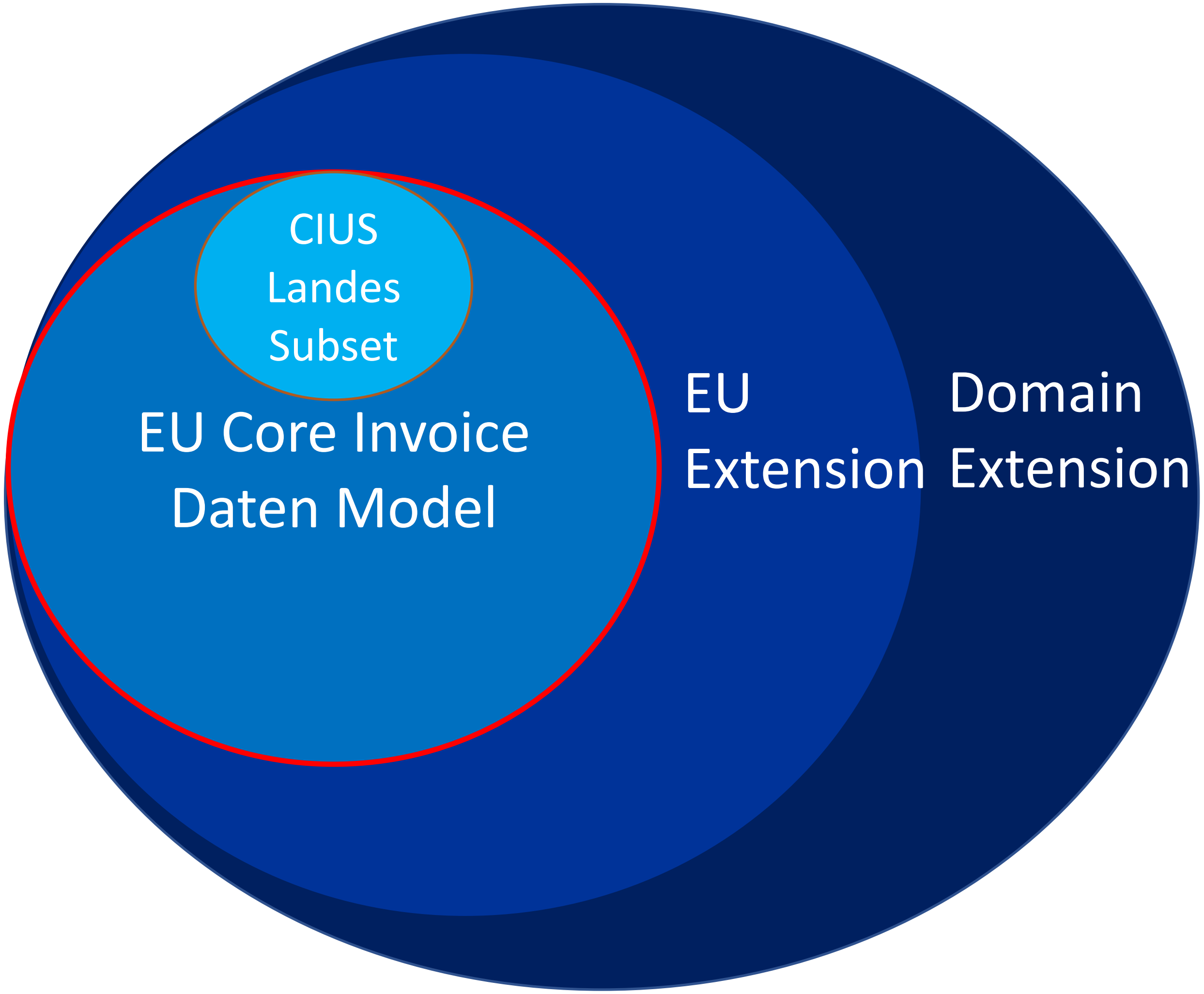
Standardisierung

EN16931-3: Syntax Binding (~400 Seiten PDF Tabellen)

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	

CEN EN16931

Core Invoice Usage Specification (CIUS)
Core Invoice & Extensions



EU Registrierungvon CIUS / Extensions

Länder mit CIUS (rechts)

Zusätzliche Extensions:

- Energie (NL)
- Transportwesen (DE)
- …

EU Registrierungvon CIUS / Extensions

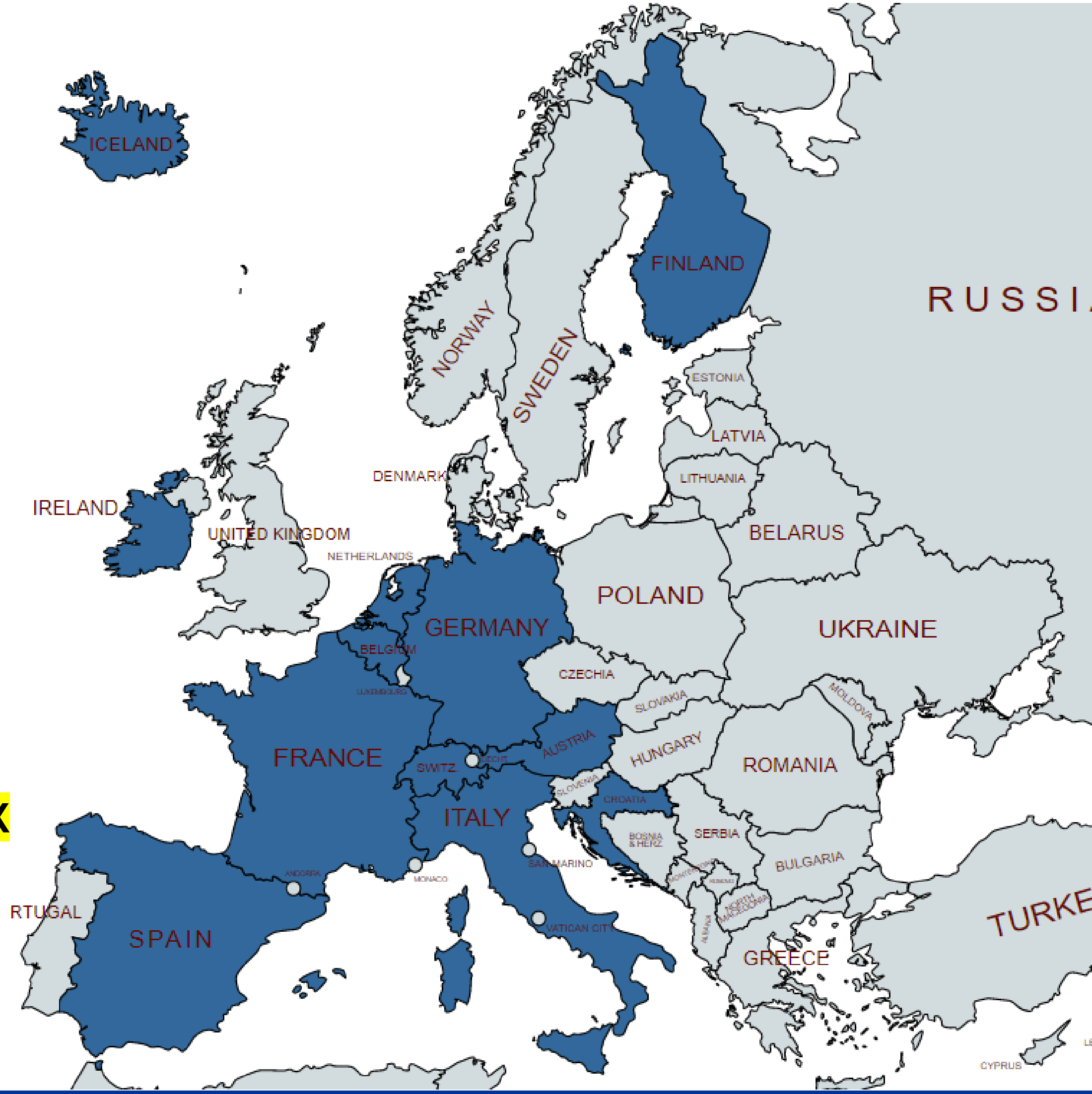
Länder mit CIUS (rechts)

Zusätzliche Extensions:

- Energie (NL)
- Transportwesen (DE)
- …

Erfolgezept e-Rechnung
(in Verwaltung)

- **Eingang: XRechnung** (XML)
- **Ausgang**: **ZUGFerD/Factur-X** (XML innerhalb PDF) als Gutschrift problemloser



E-Belege

im Vergleich zur e-Rechnung

- ***Rechnungen*** starten grundsätzlich vom ***Nettobetrag***, **Belege** hingegen vom **Bruttobetrag**
- **Belege** grundsätzlich nicht USt. relevant, daher **anonym**
- CEN e-Rechnung & e-Belege werden kompatibel sein (XML)
- **e-Belege** noch ohne EU Direktive (wird wohl folgen)

E-Belege

Chancen für die Digitalisierung

- **Belege** werden von jedem häufig verwendet (**Massenmarkt**)
- **e-Belege können auf Informationsquellen verweisen**
  - z.B. im Supermarkt: Lebensmittel Nährstoffe oder Mindestablaufsdatum
  - gewaltiges Daten Ecosystem
- **wie „Digitaler Produkt Pass**“ (Bundesumweltamt)
  - Forschungsprojekt Produktinformation 4.0
  - Transparenz in der Textilindustrie UN/CEFACT(Gläserne SupplyChain)

Digitalisierung

Kurz und bündig

- Jeder muss in der Lage sein jederzeit:
  Daten über den digitalen Zaun zu werfen &
  empfangene **Daten** automatisch **verstehen**:
  - **Ohne bi-laterale Vereinbarungen!**
  - **Ohne menschliche Interaktion!**

Digitalisierung

Kurz und bündig

- Jeder muss in der Lage sein jederzeit:
  Daten über den digitalen Zaun zu werfen & empfangene **Daten** automatisch **verstehen**:
  - **Ohne bi-laterale Vereinbarungen!**
  - **Ohne menschliche Interaktion!**

- **Ziel:**
  - **„gläserne“ Supply Chain**
  - **(Semantische) Verknüpfung der „Dateninseln“**
  - **Unterschiede aufzeigbar machen**
  - **...**

Komplexität in Standardisierung veringern

EU & Nationale Vorgaben

- Vorgaben jedes EU Landes schwer find- & vergleichbar
- Automatischer Zugriff auf Landesanforderungen fehlt (Digitalisierungslücke)

Digitalisierung der Standardisierung

Mein Schwerpunkt

- **ab 2018:**
  - “Syntax Binding” in XML statt 400 PDF Seiten Standard
  - XML aus EN16931-3 Office Dateien mit Hilfe

    OpenSource Datenextraktor (*BMBF gefördert*)

Digitalisierung der Standardisierung

Mein Schwerpunkt

- **ab 2018:**
  - “Syntax Binding” in XML statt 400 PDF Seiten Standard
  - XML aus EN16931-3 Office Dateien mit Hilfe

    OpenSource Datenextraktor (*BMBF gefördert*)
- **ab 2020:**
  - OpenSource Validierung der Genauigkeit einer EN16931 Rechnung (*EU StandICT gefördert - ongoing*)

Digitalisierung der Standardisierung

Mein Schwerpunkt

- **ab 2018:**
  - “Syntax Binding” in XML statt 400 PDF Seiten Standard
  - XML aus EN16931-3 Office Dateien mit Hilfe

    OpenSource Datenextraktor (*BMBF gefördert*)
- **ab 2020:**
  - OpenSource Validierung der Genauigkeit einer EN16931 Rechnung (*EU StandICT gefördert - ongoing*)
- **ab 2021:**
  - OpenSource “Syntax Binding XML” Editor mit Validierung (*EU NGI gefördert - ongoing*)
  - Pflege von CIUS/Extension erleichtern, Differenz zweier CIUS/Extension aufzeigen, …


2021
NEVER STOP EXPLORING
Fragen?

Let‘s connect!

https://www.linkedin.com/in/svante-schubert-2913232/