

Next Generation E-Invoicing

How Germany implements with ZUGFeRD the European Recommendations

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CBI Conference 2013

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OVERVIEW

1. E-Invoicing in Germany
2. German Forum on Electronic Invoices (FeRD)
3. ZUGFeRD – The Core Data Format for Germany
4. Next steps



Status on E-Invoicing in Germany



- Classic EDI well established in private sector, e.g. Consumer Goods, Automotive etc.
- Annual savings e.g. in the consumer goods sector using EDI-invoices:
> 2.500.000 €
- According to German Federal Statistical Office in 2011 only **27%** of German companies (more than 9 employees) are using electronic invoices, **7%** are using structured formats.
- Signature was hindering broad adoption in the past, especially with SME involvement.
- To foster structured invoicing, easy-to-use standards are necessary.

New opportunities due to the new legislation in Europe



Two main elements:

- **Signature was skipped, Paper = Electronic**
Internal Controls are relevant for paper invoices as well, so no big deal when changing to E-Invoices
- **Identical Representations of an invoice are allowed**
Two or more invoices with the same VAT-relevant content can be transmitted. This means invoices can be sent in different formats without marking one of them as copy.

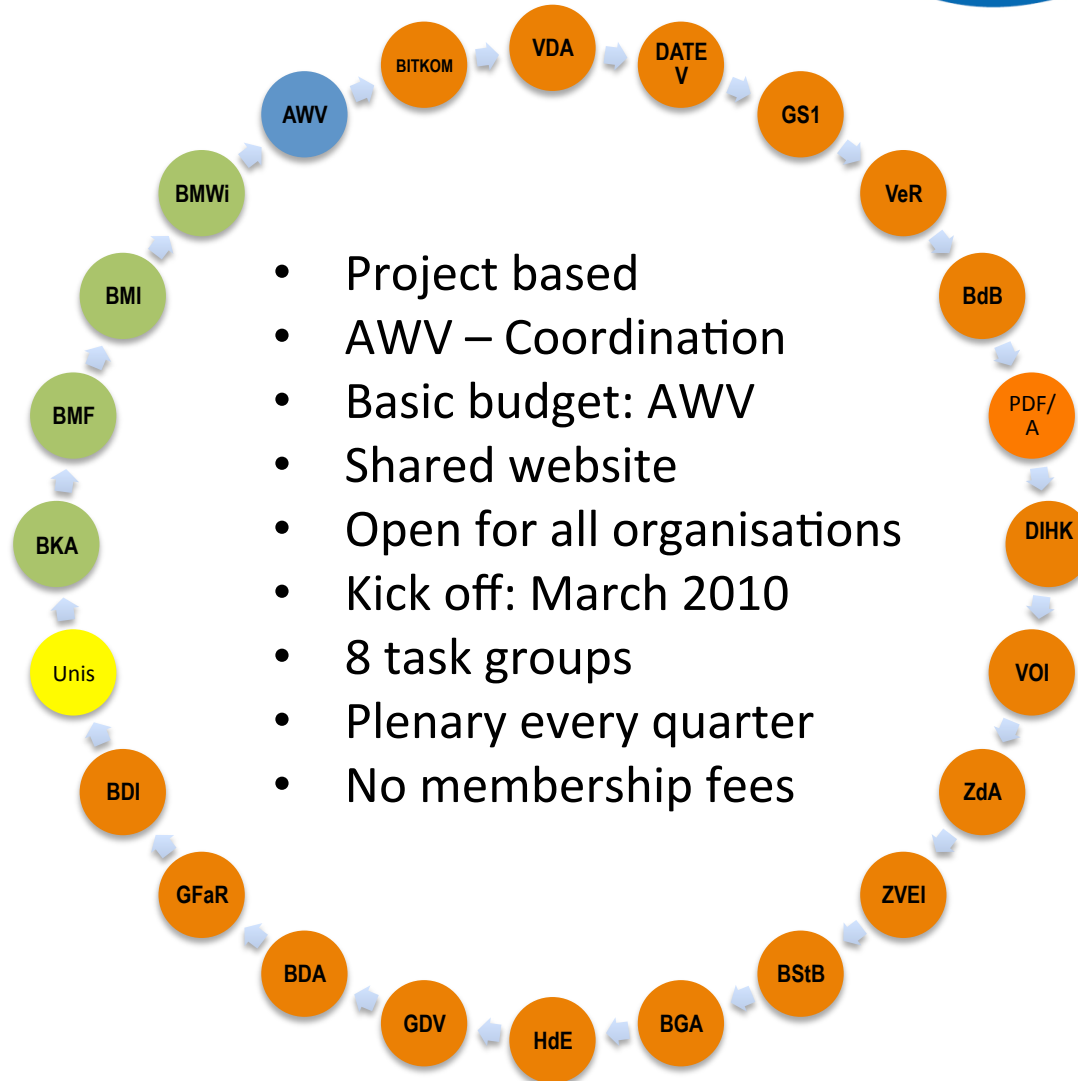


FeRD (Forum elektronische Rechnung Deutschland) is the national E-Invoicing Forum in Germany and was founded in 2004. It is the German representation in the European Multi-Stakeholderforum.

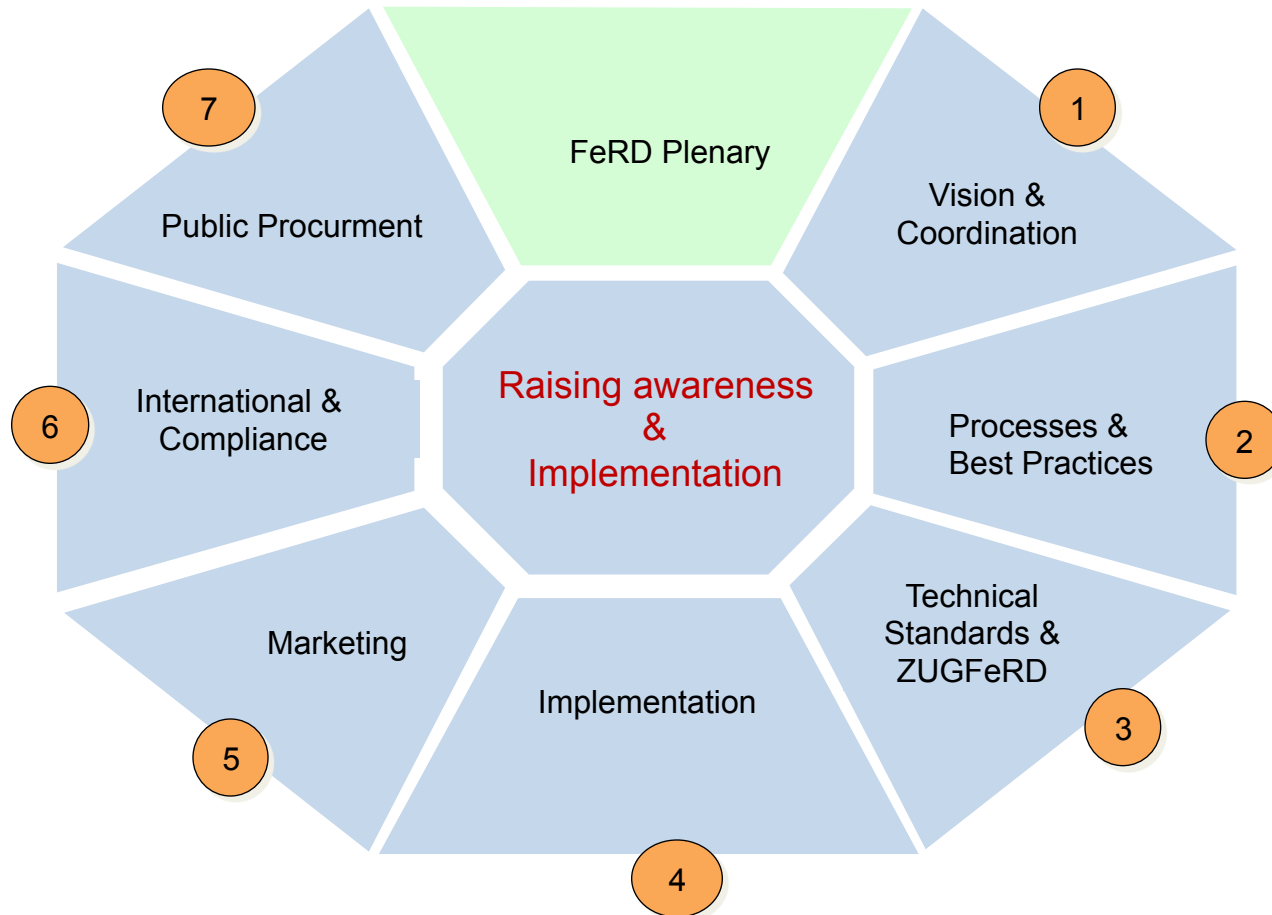
It is the German industry-neutral platform with members from ministries and other governmental bodies and all important industry associations.

Aim is to foster electronic invoicing in the public and private sector.

FeRD - Organisation



FeRD – Organisation



FeRD - Results



- Description of efficient processes (2012)
 - eInvoice processes in private and public area
 - „Handlungsempfehlungen zur Umsetzung des elektronischen Rechnungsaustauschs mit der öffentlichen Verwaltung“
- Task-Force “Invoice Volume” (2012)
 - Basis for German evaluation
 - Coordination with EuroStat
 - Input in EU MSF
- FeRD Data Model (2012-2013)
 - UN/CEFACT und PDF/A 3
 - Private and public area
 - International compatible
 - Input in EU MSF
- Compliance (2011- 2013)
 - Support to national tax authorities
 - DG Taxud Explanatory Notes
 - Identification legal aspects for EU MSF
 - Activity 3 EU MSF
- CEBIT 2013
 - 12 Pilots of ZUGFeRD
 - Joint Declaration of BITKOM and BMI and BMWi
 - Workshops on implementation

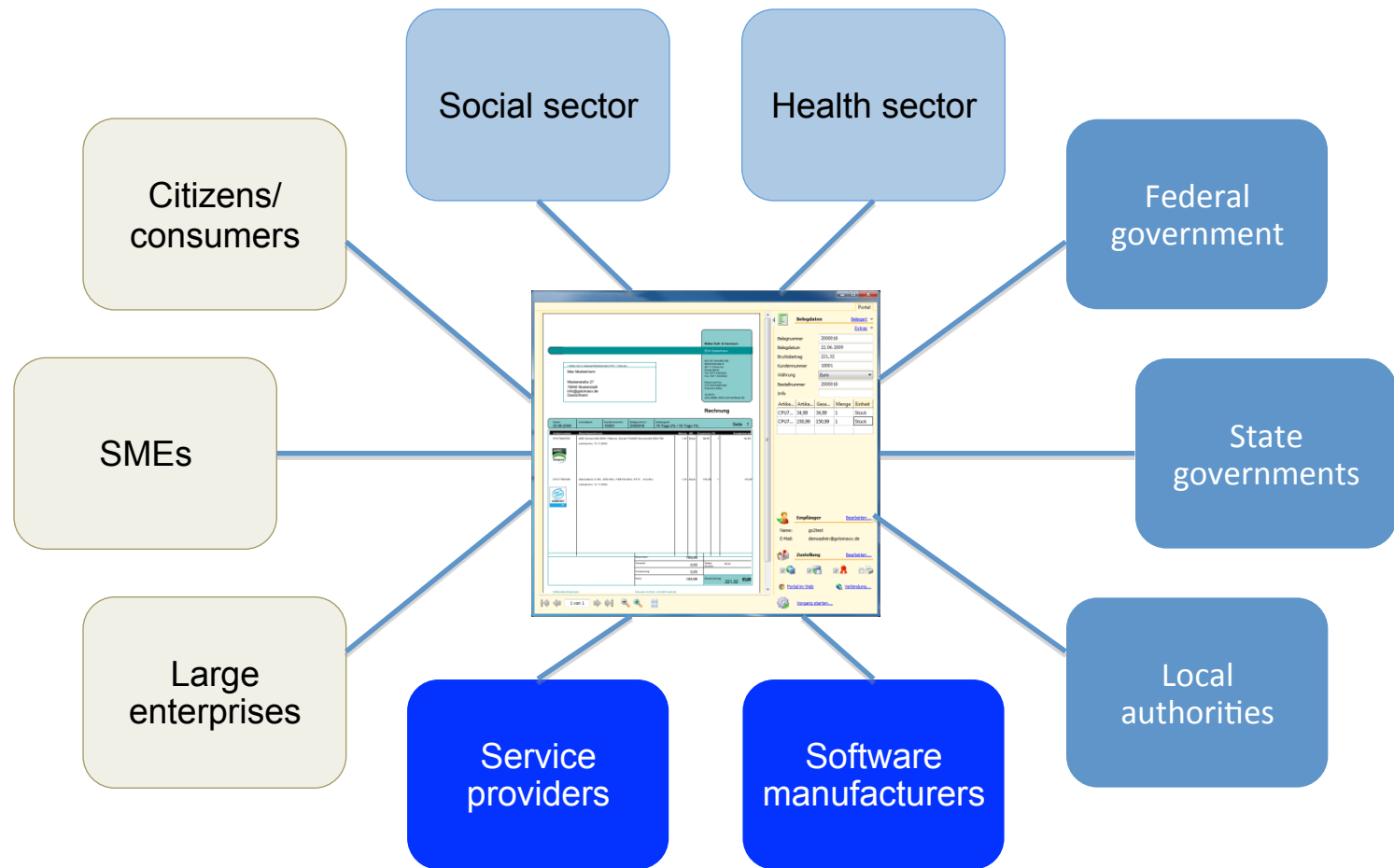


CEBIT 2013



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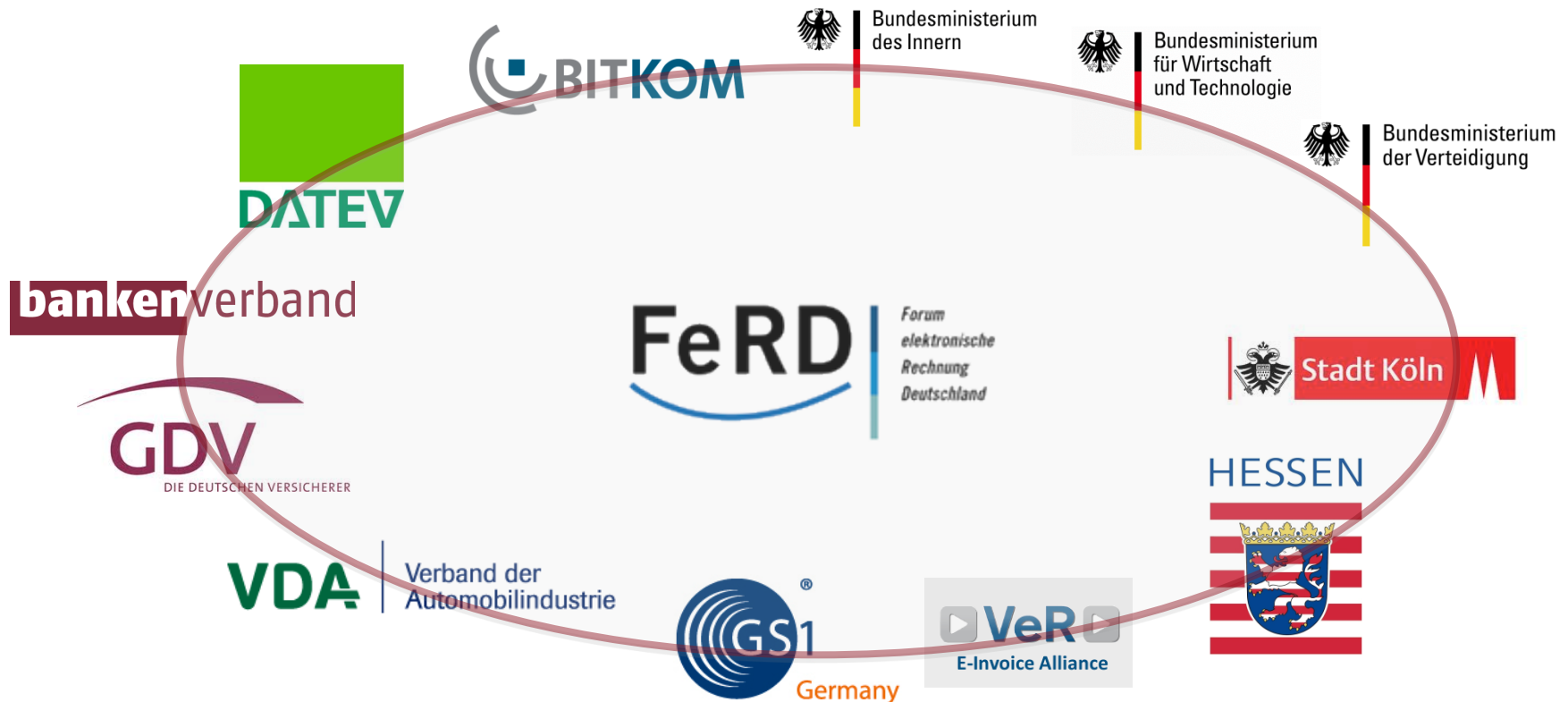
All sectors need to be involved if electronic invoicing is to become the norm



How can the business community and public authorities agree on a common infrastructure?



In its work package, “Public Procurement”, the German Forum on Electronic Invoicing (*Forum elektronische Rechnung Deutschland, FeRD*) brought representatives from federal, state and local government together with representatives from major private-sector industries.



The idea behind ZUGFeRD

The ZUGFeRD approach builds on a combination of PDF with integrated structured data.

– The receiver decides if he processes structured data or just prints out the PDF, following the traditional manual process.

– ZUGFeRD is based on a core invoice, which leads to easy implementation.

– As it based on standards (XML, PDF/A), tools are available.

PDF/A-3

Rechnungsteller

Lieferant GmbH
Lieferantenstraße 20
80333 München
Deutschland

Rechnungsempfänger

Kunden AG Mitte
Hans Muster
Kundenstraße 15
69876 Frankfurt
Deutschland

RECHNUNG

Rechnungsnummer: 471102
Rechnungsdatum: 05.03.13
Leistungsdatum: 05.03.13
Referenz (bitte bei Zahlung angeben): 2013-471102
Kundennummer: GE2020211
Beträge in: EUR
Hinweis: Rechnung gemäß Bestellung vom 01.03.2013

Unsere Pos. Art. Nr.	Anfallsbeschreibung	Menge	Meng.-einheit	Preis/Einheit	Betrag	USt. %
1 TB100A4	Trennblätter A4 GTIN: 4012345001235	20	Stk.	9,90	198,00	19
2 ARNR2	Joghurt Banane GTIN: 4000050986428	50	Stk.	5,50	275,00	7
Rechnungssumme Netto (excl. USt.)					473,00	
Steuerbasisbetrag USt. 7%					275,00	19,25
Steuerbasisbetrag USt. 19%					198,00	37,62
Rechnungssumme Brutto (inkl. USt.)					529,87	

Zahlungsinformationen:
Zahlbar innerhalb 30 Tagen netto bis 20.03.2013, 3% Skonto innerhalb 10 Tagen bis 15.03.2013

Bank-/Steuerinformationen

Kontanz.: 1234 5678 90 IBAN Nr.: DE08 7009 C
BIC: 700 901 00 BIC: GENODEF1
Bankname: Hausbank München

ZUGFeRD Invoice_CEBIT.xml

```
<?xml version='1.0' encoding='UTF-8'?>
<rs:Invoice xmlns:rs="http://www.w3.org/2001/XMLSchema"
xmlns:rsm="urn:un:unesce:fact:inst:standard:Invoice5" xmlns:si="http://www.w3.org/2001/XMLSchema-instance"
xmlns:chena="urn:un:unesce:fact:inst:standard:Invoice3.../Schema/ZUGFeRD_Invoice_3_1_CEBIT.xsd">
<rsm:SpecifiedExchangeDocumentContext>
<TestIndicator>false</TestIndicator>
<Guid>urn:urn:invoice:1:80c0b1t:ID</Guid>
</rsm:SpecifiedExchangeDocumentContext>
</rsm:SpecifiedExchangeDocumentContext>
<rsm:HeaderExchangeDocument>
<ID>471102</ID>
<Name>RECHNUNG</Name>
<TypeCode>388</TypeCode>
<IssueDateTime>formatCode="182"-20130305</IssueDateTime>
<LanguageID>de</LanguageID>
<IncludeNote>
<Content>Rechnung gemäß Bestellung von 01.03.2013</Content>
</IncludeNote>
</rsm:HeaderExchangeDocument>
</rsm:SpecifiedSupplyChainTradeTransaction>
<rs:ApplicableSupplyChainTradeAgreement>
<SellerTradeParty>
<Name>Lieferant GmbH</Name>
<PostalTradeAddress>
<PostcodeCode>80333</PostcodeCode>
<LineOne>Lieferantenstraße 20</LineOne>
<CityName>München</CityName>
<CountryID>DE</CountryID>
</PostalTradeAddress>
<SpecifiedTaxRegistration>
<ID>si:schemaID="FC"-201/113/40209</ID>
</SpecifiedTaxRegistration>
<SpecifiedTaxRegistration>
<ID>si:schemaID="W"-0213050789</ID>
</SpecifiedTaxRegistration>
</SellerTradeParty>
<BuyerTradeParty>
<ID>GE2020211</ID>
<Name>Kunden AG Mitte</Name>
<DefinedTradeContact>
<PersonName>Hans Muster</PersonName>
</DefinedTradeContact>
<PostalTradeAddress>
<PostcodeCode>69876</PostcodeCode>
<LineOne>Kundenstraße 15</LineOne>
<CityName>Frankfurt</CityName>
<CountryID>DE</CountryID>
</PostalTradeAddress>
</BuyerTradeParty>
</rs:ApplicableSupplyChainTradeAgreement>
<rs:ApplicableSupplyChainTradeDelivery>
<ActualDeliverySupplyChainEvent>
<ActualDeliverySupplyChainEvent>
</ActualDeliverySupplyChainEvent>
</rs:ApplicableSupplyChainTradeDelivery>
<rs:ApplicableSupplyChainTradeSettlement>
<PaymentReference>2013-471102</PaymentReference>
<InvoiceCurrencyCode>EUR</InvoiceCurrencyCode>
</rs:ApplicableSupplyChainTradeSettlement>
</rs:Invoice>
```

Why ZUGFeRD now?



- New VAT regulation in Europe
 - permits electronic invoices without signature e.g. by E-Mail
 - No contract needed
- Public Sector starts to look in E-Invoicing:
 - Germany as late starter wants to benefit
 - Other countries already established solutions (Denmark, Sweden, Spain etc.)
 - Focus in Europe
- PDF/A3 is standard now
 - Allows integration of data into a PDF/A (Archiving format of PDF)
 - No more binding to Adobe -> many solutions available
- Different sectors are looking at a “core”
 - To connect SMEs beyond EDI (e.g. WebEDI-profiles)
 - To make bookkeeping and archiving easier

The Opportunity



- Important Players are on board through FeRD:
 - Industry: e.g. GS1, VDA (Automotive)
 - ERP-Providers: BITKOM (SAP up to SAGE)
 - Invoicing-Providers: VeR (eInvoice Alliance)
 - Public Sector:
Ministries of Economy, Internal Affairs, Finance,
State of Hesse (States), City of Cologne (municipalities)
 - Tax consultants: Datev
(service provider of the majority of tax consultants in Germany)
 - Banks: BdB (Association of German Banks) – Value-add services
- Possible enhancement in electronic invoicing to connect non-EDI partners

FeRD's vision for the data format



- In future, it should be just as easy to send and receive electronic invoices as paper invoices.
- Everyone involved should be able to exchange electronic invoices without prior consultation or agreement.

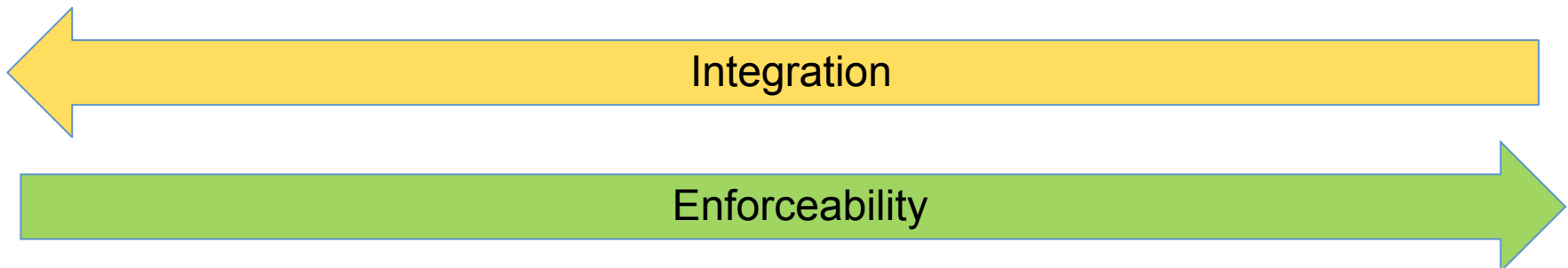
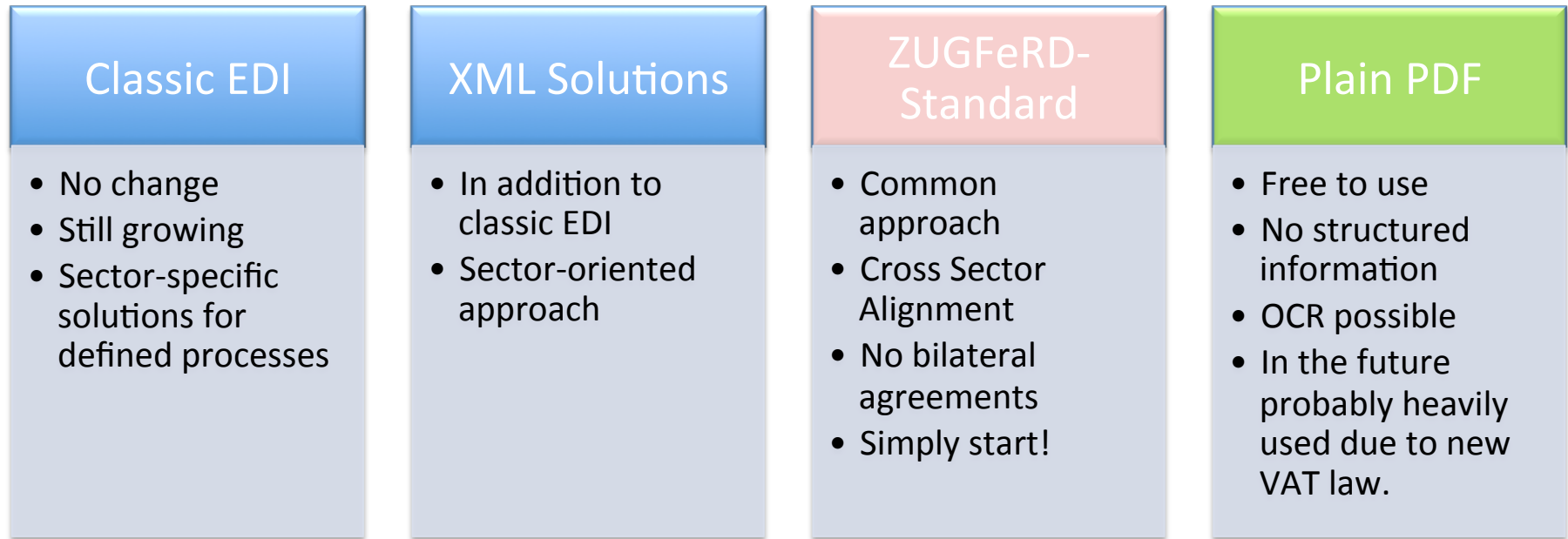
Business process optimisation by using structured data

- To enable the invoice recipient to exercise this option, the sender should include structured data even if they are not used by the sender itself.
- Software manufacturers should support all defined data fields as structured data.
- The invoice recipient may elect the option to optimise its business process by using structured data.

What needs to be decided when establishing a common, trusted infrastructure

Levels of a common standard	
Content/ semantics	<ul style="list-style-type: none">■ What elements of an invoice should always be included?■ What other information can be added?
Data transfer	<ul style="list-style-type: none">■ In what structure will the data be sent?■ What electronic transmission methods should be supported?
Governance	<ul style="list-style-type: none">■ Who will set the rules?■ How can all interested parties be adequately involved?■ How can maintenance of the standard be ensured?

Positioning of the FeRD-Standard



The ZUGFeRD Solution (1)



○ **Transmission**

- No special regulation / limitation
- E-Mail is regarded as preferred option
- Advantage: no technical obstacles
(signature, webservice etc.)

○ **Transmission-Format**

- PDF/A with integrated structured XML-file
- Advantages:
 - PDF/A is the Format for long-time archiving based in PDF.
 - PDF/A3 offers the integration of XML.
 - PDF/A3 will be ISO-Standard in 11/2012
(no longer limited to Adobe, availability of low-cost tools)
 - The sender does not need to care about receiver capability. Small SME archives invoice, prints it and follows manual process, bigger companies process XML-file and use PDF for legibility.

The ZUGFeRD Solution (2)

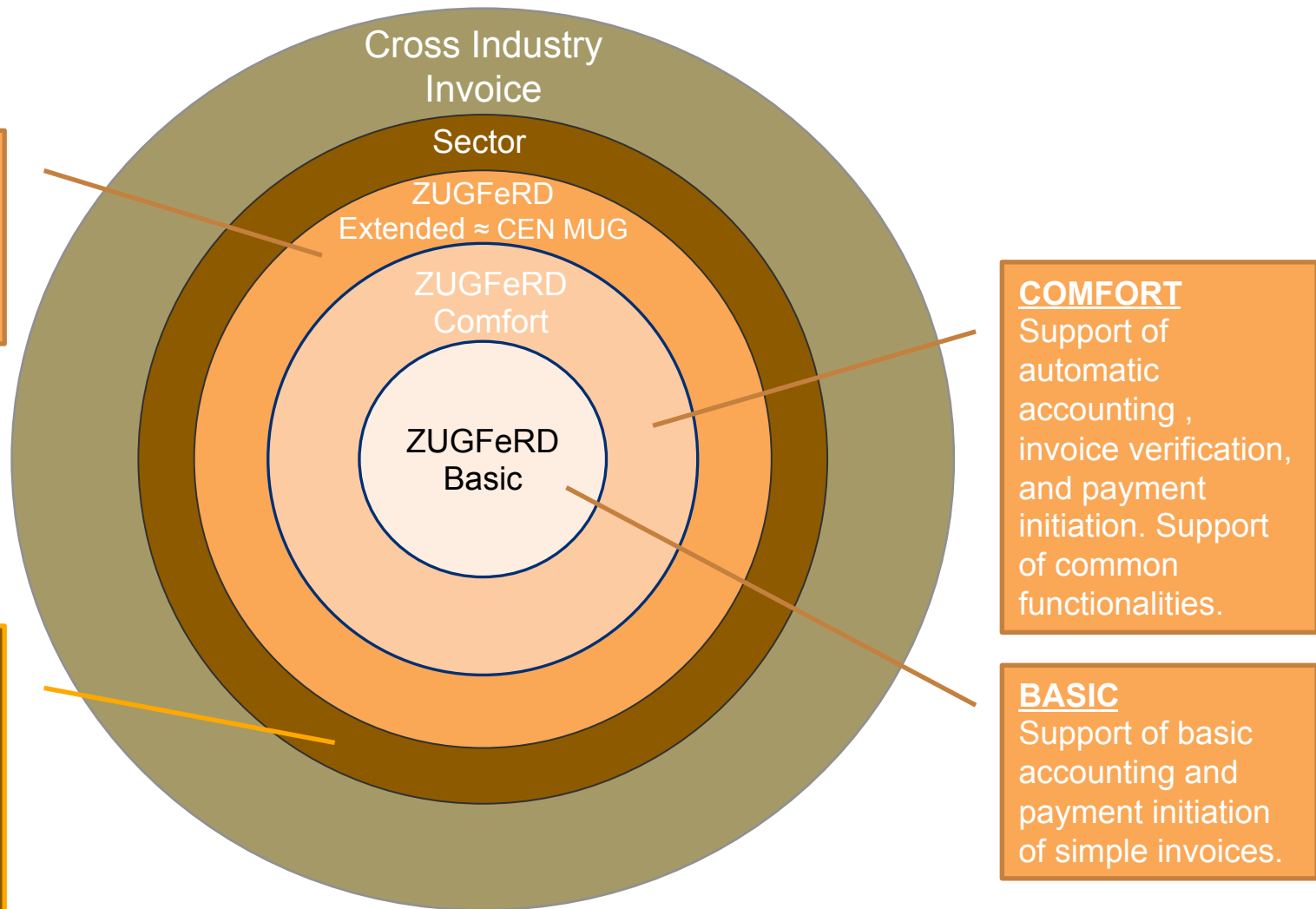
○ Content of XML-File

- Intersectoral Core Invoice based on CEN-MUG Recommendation (UN/CEFACT Cross Industry Invoice European Core)
- Input from e.g. GS1 Germany (WebEDI) or Odette (Autogrator)
- Advantage: common approach covering most requirements from public and private sector and helping ERP and software providers to implement the solution.

○ Syntax of XML-File

- UN/CEFACT Cross Industry Invoice (UN/XML), according to CEN-Recommendation (MUG)
- Advantage:
 - Common syntax facilitate Implementation (rather than semantic interoperability)
 - Open for European Developments

ZUGFeRD Data Model in Relation to the UN/CEFACT CII and CEN MUG



Position towards Syntax



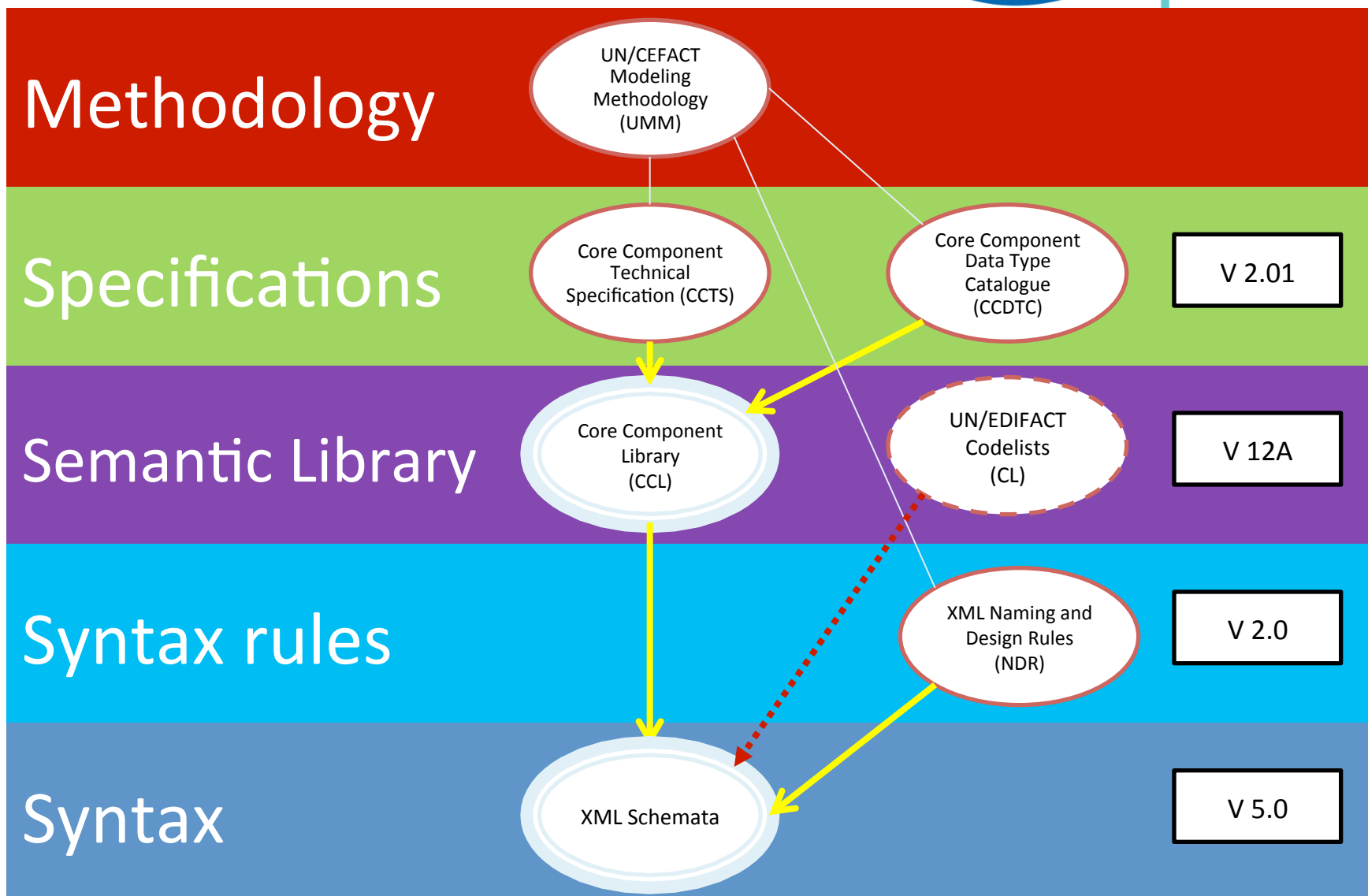
○ **The approach in the current environment:**

- Reference Library of UN/CEFACT based on CCTS 2.01 as recommended by EU Expert Group
- UN/CEFACT NDR 2.0 (Naming & Design Rules)
- Content based on CEN MUG

○ **Vision of this approach:**

- ZUGFeRD is open for further developments in a European Framework, especially for new developments in UN/CEFACT and CEN MUG regarding messages based on CCTS 3 and NDR 3.
- This will lead in future versions to a migration, having a common European format for Core-Invoices.

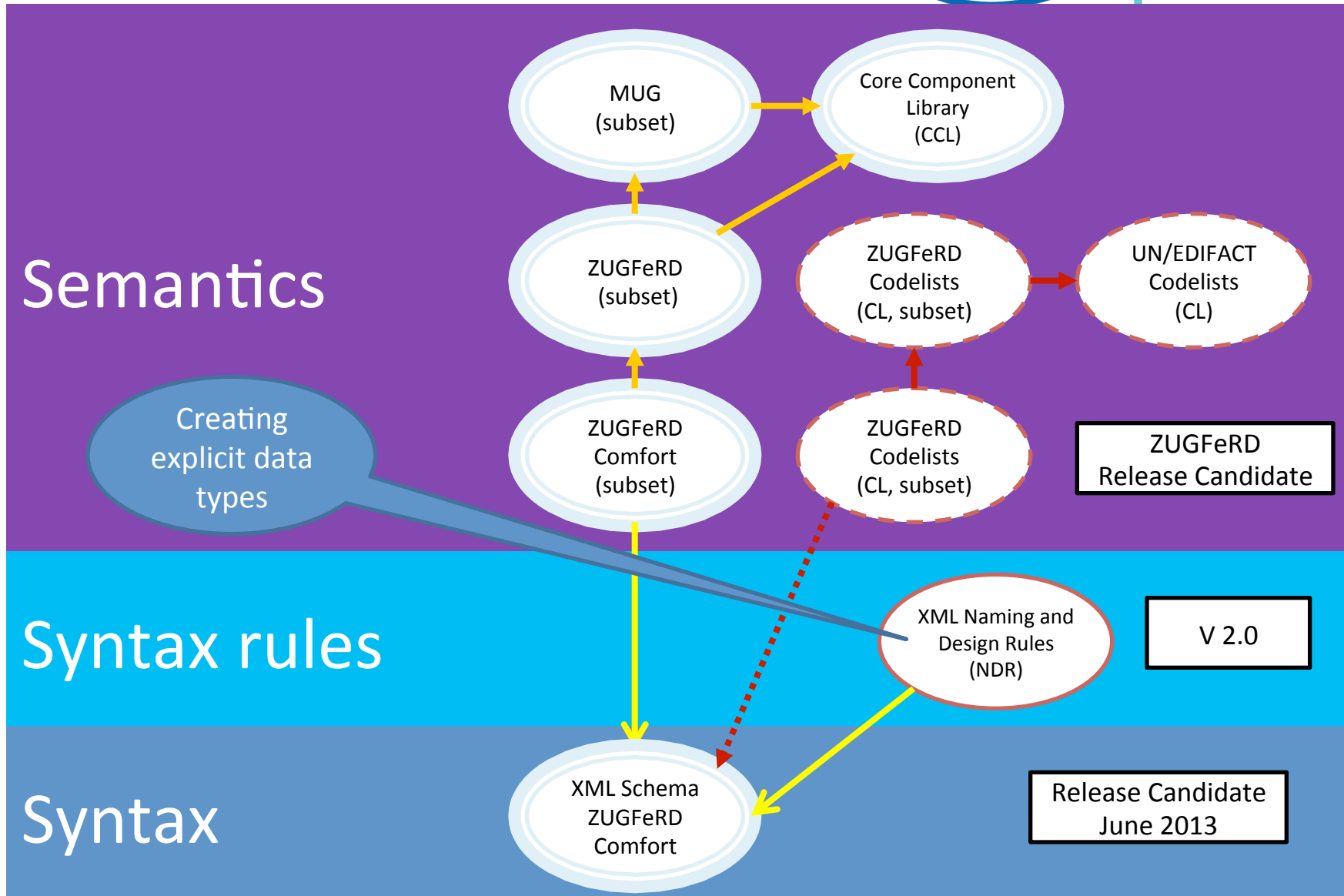
UN/CEFACT in Practice



ZUGFeRD XML

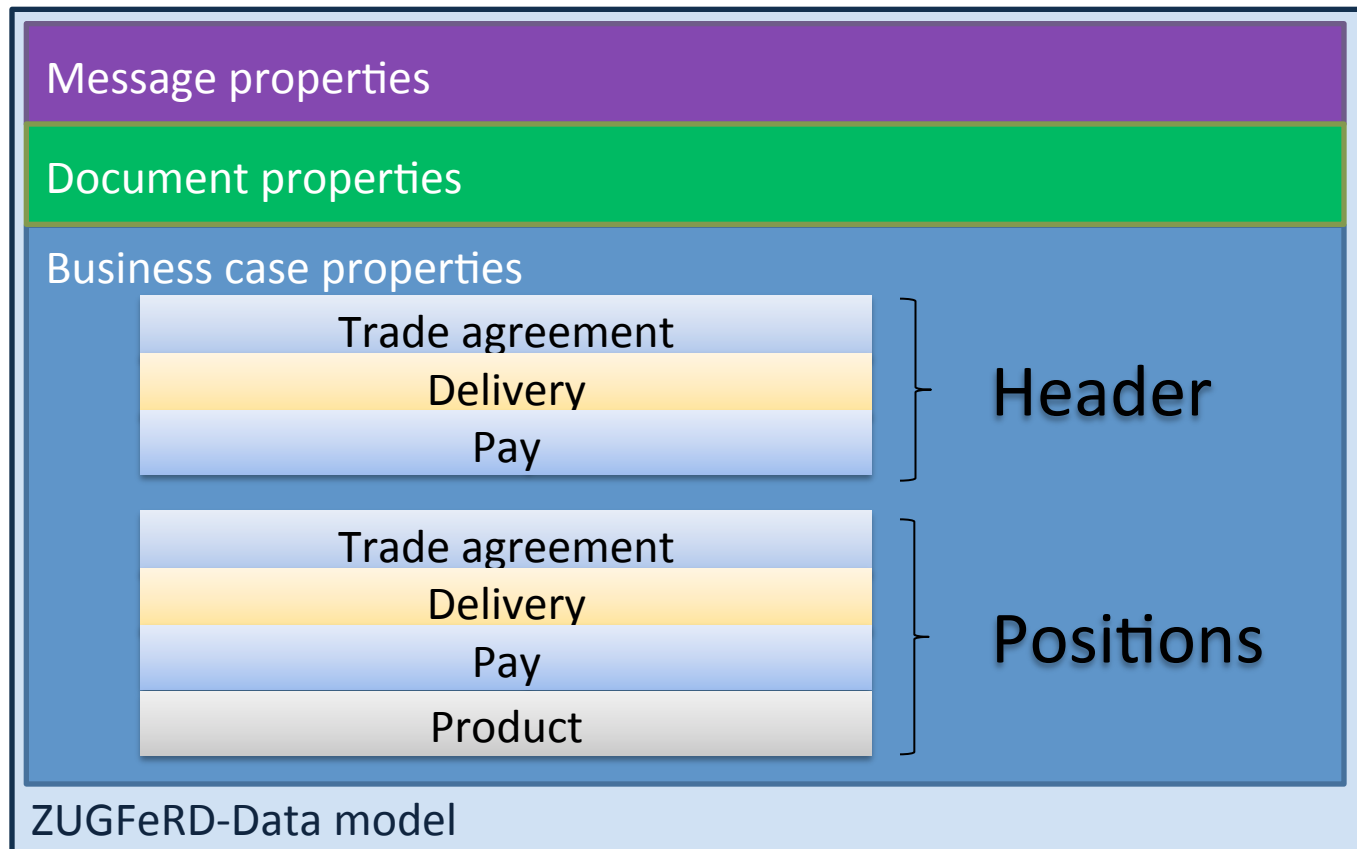


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Semantical Concept of the Data Model

- **Based on process and business relationship**
(not on documents)



PDF/A3 – The Hybrid-Format

PDF/A-3 Document

Logical structure

```
/Root
/Pages
/Names
/AcroForm
/Metadata
/OutputIntents
/AF
```

Annex E
(normative)

Associated Files

E.1 Embedding an associated file

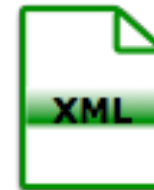
To incorporate an entire document, or a fragment of a document for which there is a valid MIME type, a file specification dictionary (ISO 32000-1, 7.11.3) shall be used. The MIME type of an embedded file, or a subset of a file, shall be specified using the Subtype key of the embedded file stream dictionary. If the MIME type is not known, the "application/octet-stream" shall be used.

NOTE 1 As described in RFC 2046, 4.5.1, the "octet-stream" subtype is used to indicate arbitrary binary data.

Content

Visual part

non-visual part



PDF/A3 is defined
in ISO 19005-3



Adobe Acrobat
Document

Status & Next Steps ZUGFeRD



- ZUGFeRD Comfort Release Candidate published in June 2013
 - for real-life pilots
 - first implementation already live
 - High awareness from service providers
- Complete Specification ZUGFeRD Extended Release Candidate 12/2013
- Publication of ZUGFeRD 1.0 in May 2014 after Review Period
- Development of maintenance model within German Standards Institute (DIN) as DIN Specification

ZUGFeRD and Europe



- What we achieved:
 - 100% Compliance with CII data model as recommended by the Expert Group on E-Invoicing of the EU Commission
 - ~ 90% Compliance with recommendations of CEN MUG CWAs
 - Active participation in EU Multistakeholder Forum and contacts to other national fora
- What we want to achieve:
 - Usage of UN/CEFACT Data Model as common basis of industry and public sector in Europe
 - Having the ZUGFeRD Approach in line with future European Recommendations with a focus on SMEs
 - Working on practical solutions and interoperability models
 - Define relationship with CEN MUG or similar platforms
 - Join CEN TC and second phase of EU MSF
 - 100 % compliance with future European data model based on UN/CEFACT CII and CEN MUG

Your Questions...



GRAZIE MILLE!

Further Information:

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