

Microsoft Dynamics 365 and Power Platform Community Conference

MAY 26 – 28, 2025
Portorož, Slovenia, Europe



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**Microsoft Dynamics 365
and Power Platform Community Conference**

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How to generate **ZUGFeRD** compliant e-invoices in D365

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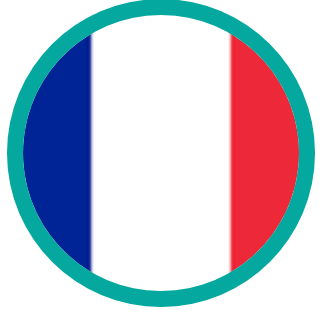


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Introduction : ZUGFeRD formats and profiles





FR

2015:FNFE org.
Factur-X



DE

2014: ZUGFeRD group
E-invoice 1.0, CII-syntax



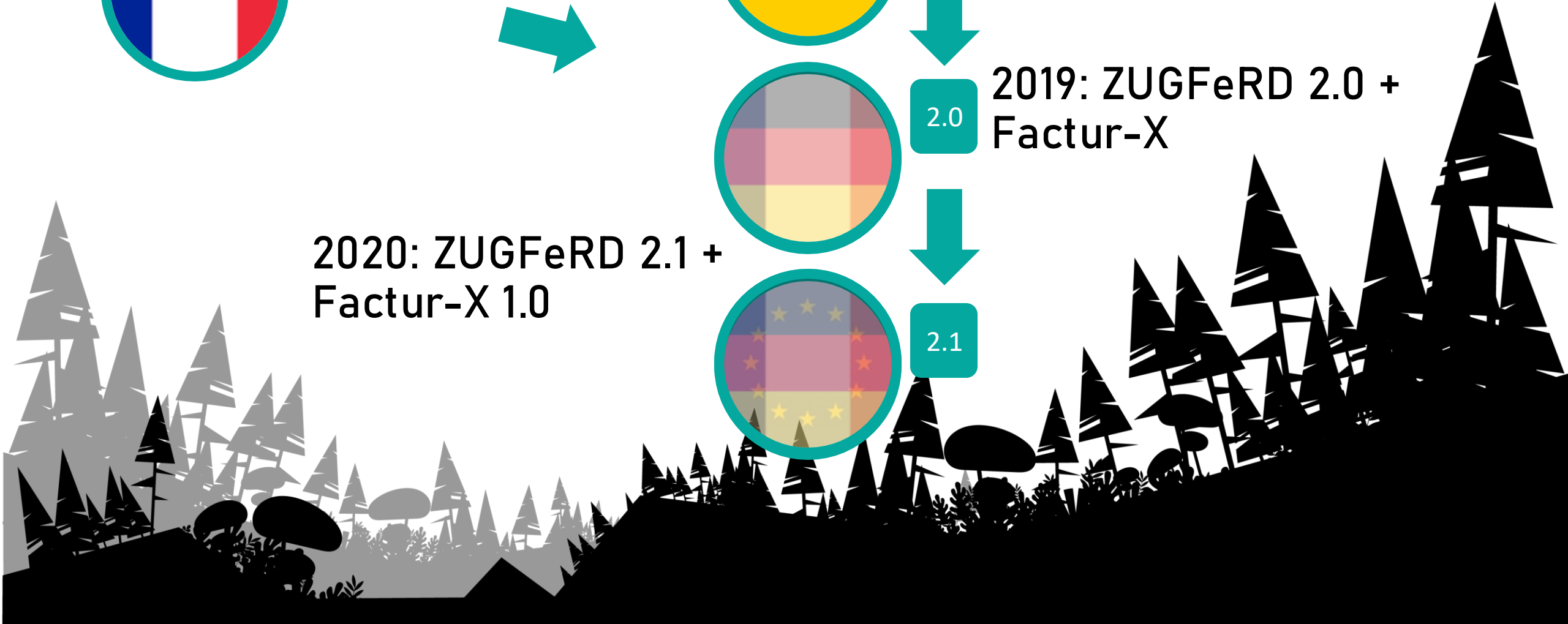
2.0

2019: ZUGFeRD 2.0 +
Factur-X



2.1

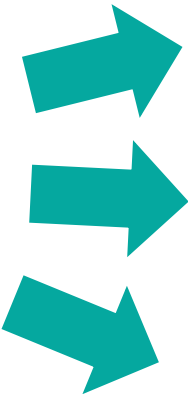
2020: ZUGFeRD 2.1 +
Factur-X 1.0



2024: ZUGFeRD 2.3 +
Factur-X 1.0



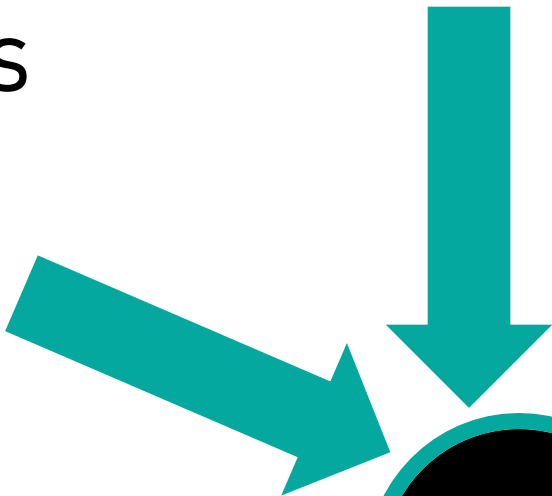
2.3.2



PROFILES (CII syntax)	
✗ BASIC, BASIC WL	
✓ EN 16931	= "COMFORT"
✓ XRECHNUNG	
✓ EXTENDED	

2.1

2004-2013: OASIS
non-profit org



xRechnung XML, not
a hybrid invoice



ZUGFeRD 1.0

<rsm:ExchangedDocument>

<rsm:SpecifiedSupplyChainTradeTransaction>

<ram:ApplicableSupplyChainTradeAgreement>

<ram:SellerTradeParty>

<ram:BuyerTradeParty>

<ram:BuyerOrderReferencedDocument>

<ram:ApplicableSupplyChainTradeDelivery>

<ram:ActualDeliverySupplyChainEvent>

<ram:ApplicableHeaderTradeSettlement>

<ram:SpecifiedTradeSettlementPaymentMeans>

<ram:ApplicableTradeTax>

<ram:SpecifiedTradePaymentTerms>

<ram:SpecifiedTradeSettlementMonetarySummation>

<ram:IncludedSupplyChainTradeLineItem>

<ram:IncludedSupplyChainTradeLineItem>

<rsm:CrossIndustryDocument/>

<ram:GuidelineSpecifiedDocumentContextParameter>

<ram:ID>urn:ferd:CrossIndustryDocument:invoice:1p0:basic</ram:ID>

</ram:GuidelineSpecifiedDocumentContextParameter>



ZUGFeRD 2.3 BASIC

<rsm:ExchangedDocument>

<rsm:SupplyChainTradeTransaction>

<ram:IncludedSupplyChainTradeLineItem>

<ram:IncludedSupplyChainTradeLineItem>

<ram:ApplicableHeaderTradeAgreement>

<ram:SellerTradeParty>

<ram:BuyerTradeParty>

<ram:BuyerOrderReference>

<ram:ApplicableHeaderTradeDelivery>

<ram:ActualDeliverySupplyChainEvent>

<ram:ApplicableSupplyChainTradeSettlement>

<ram:SpecifiedTradeSettlementPaymentMeans>

<ram:ApplicableTradeTax>

<ram:SpecifiedTradePaymentTerms>

<ram:SpecifiedTradeSettlementHeaderMonetarySummation>

<rsm:CrossIndustryInvoice/>

<ram:GuidelineSpecifiedDocumentContextParameter>

<ram:ID>urn:cen.eu:en16931:2017#compliant#urn:factur-x.eu:1p0:basic</ram:ID>

</ram:GuidelineSpecifiedDocumentContextParameter>



ZUGFeRD 1.0

<rsm:ExchangedDocument>

<rsm:SpecifiedSupplyChainTradeTransaction>

<ram:ApplicableSupplyChainTradeAgreement>

<ram:SellerTradeParty>

<ram:BuyerTradeParty>

<ram:ApplicableSupplyChainTradeDelivery>

<ram:ActualDeliverySupplyChainEvent>

<ram:ApplicableSupplyChainTradeSettlement>

<ram:SpecifiedTradeSettlementPaymentMeans>

<ram:ApplicableTradeTax>

<ram:SpecifiedTradePaymentTerms>

<ram:SpecifiedTradeSettlementMonetarySummation>

<ram:IncludedSupplyChainTradeLineItem>

<ram:IncludedSupplyChainTradeLineItem>

```
<ram:GuidelineSpecifiedDocumentContextParameter>  
  <ram:ID>urn:ferd:CrossIndustryDocument:invoice:1p0:basic</ram:ID>  
</ram:GuidelineSpecifiedDocumentContextParameter>
```



ZUGFeRD EN 16931

```
<ram:GuidelineSpecifiedDocumentContextParameter>  
  <ram:ID>urn:cen.eu:en16931:2017</ram:ID>  
</ram:GuidelineSpecifiedDocumentContextParameter>
```

```
<rsm:ExchangedDocument>
```

```
<rsm:SupplyChainTradeTransaction>
```

```
<ram:IncludedSupplyChainTradeLineItem>
```

```
<ram:IncludedSupplyChainTradeLineItem>
```

```
<ram:ApplicableHeaderTradeAgreement>
```

```
<ram:BuyerReference>
```

```
<ram:SellerTradeParty>
```

```
<ram:SellerOrderReferencedDocument>  
>
```

```
<ram:BuyerTradeParty>
```

```
<ram:BuyerOrderReferencedDocument>
```

```
<ram:ApplicableHeaderTradeDelivery>
```

```
<ram:ActualDeliverySupplyChainEvent>
```

```
<ram:ShipToTradeParty>
```

```
<ram:ApplicableHeaderTradeSettlement>
```

```
<ram:SpecifiedTradeSettlementPaymentMeans>
```

```
<ram:ApplicableTradeTax>
```

```
<ram:SpecifiedTradePaymentTerms>
```

```
<ram:SpecifiedTradeSettlementHeaderMonetarySummation>
```



ZUGFeRD EXTENDED

```
<ram:GuidelineSpecifiedDocumentContextParameter>  
  <ram:ID>urn:cen.eu:en16931:2017#conformant  
  #urn:factur-x.eu:1p0:extended</ram:ID>  
</ram:GuidelineSpecifiedDocumentContextParameter>
```

<rsm:ExchangedDocument>

<rsm:SupplyChainTradeTransaction>

<ram:IncludedSupplyChainTradeLineItem>

<ram:DeliverynoteReferencedDocument>

<ram:IncludedSupplyChainTradeLineItem>

<ram:SellerOrderReferencedDocument>

<ram:BuyerOrderReferencedDocument>

<ram:ApplicableHeaderTradeAgreement>

<ram:SellerTradeParty>

<ram:SellerOrderReferencedDocument>

<ram:BuyerReference>

<ram:BuyerTradeParty>

<ram:BuyerOrderReferencedDocument>

<ram:ApplicableHeaderTradeDelivery>

<ram:ActualDeliverySupplyChainEvent>

<ram:ShipToTradeParty>

<ram:ApplicableHeaderTradeSettlement>

<ram:UltimateShipToTradeParty>

<ram:SpecifiedTradeSettlementPaymentMeans>

<ram:ApplicableTradeTax>

<ram:SpecifiedTradePaymentTerms>

<ram:SpecifiedTradePaymentTerms>

<ram:SpecifiedTradeSettlementHeaderMonetarySummation>

<ram:SpecifiedTradePaymentTerms>



Mapping trap: line charges

In D365, no information about line surcharges is presented, if not for the active Retail Call Center ("MCR") configuration key : the **MCRMarkupCalculatedAmount** field keeps the total of all line charges which affect the invoice amount.

This MCRMarkupCalculatedAmount is leveraged in our ZUGFeRD configuration to reflect the sum of all charges per line.

- EN 16931 allows one charge and one allowance per invoice line.
- However, EXTENDED allows **multiple** charges/allowances per line



XRECHNUNG

```
<ram:GuidelineSpecifiedDocumentContextParameter>  
  <ram:ID>urn:cen.eu:en16931:2017#compliant#u  
  rn:xeinkauf.de:kosit:xrechnung_3.0</ram:ID>  
</ram:GuidelineSpecifiedDocumentContextParameter>
```

```
<rsm:ExchangedDocument>
```

```
<rsm:SupplyChainTradeTransaction>
```

```
<ram:IncludedSupplyChainTradeLineItem>
```

```
<ram:IncludedSupplyChainTradeLineItem>
```

```
<ram:ApplicableHeaderTradeAgreement>
```

```
<ram:SellerTradeParty>
```

```
<ram:SellerOrderReferencedDocument  
>
```

```
<ram:BuyerReference>
```

```
<ram:BuyerTradeParty>
```

```
<ram:BuyerOrderReferencedDocument>
```

```
<ram:ApplicableHeaderTradeDelivery>
```

```
<ram:ActualDeliverySupplyChainEvent>
```

```
<ram:ShipToTradeParty>
```

```
<ram:ApplicableHeaderTradeSettlement>
```

```
<ram:SpecifiedTradeSettlementPaymentMeans>
```

```
<ram:ApplicableTradeTax>
```

```
<ram:SpecifiedTradePaymentTerms>
```

```
<ram:SpecifiedTradeSettlementHeaderMonetarySummation>
```



XRECHNUNG's specialities

<ram:BuyerReference>

= Leitweg-ID

- Format: Varies by authority, e.g., **12345678-99999-99**
- unique identifier used by public sector institutions

<ram:SpecifiedTradePaymentTerms>

= structured cash discounts in one line

- Sample: **21 Tg. 5%, 45 Tg. 4%#SKONTO#TAGE=21#PROZENT=5.00#
#SKONTO#TAGE=45#PROZEN
T=4.00#**



One ER format to rule them all

- The variable Profile acts as a profile selector.
- By default, it returns the number “3” for the COMFORT (=EN 16931) profile.

FORMULA

Instruction: Ctrl+space to trigger code suggestion without typing characters; press F1 to trigger built-in editor c...

```
ZUGFeRD.'$CustTable_Invoice'. 'avaZugFerdFormatValue()'
```



FORMULA

Instruction: Ctrl+space to trigger code suggestion without typing characters; press F1 to trigger built-in editor c...

```
model.InvoiceBase.CopyNumber
```



Common trap: GmbH & Co.KG.

- Do not forget to escape non-XML characters:

FORMULA

Instruction: Ctrl+space to trigger code suggestion without typing characters; pre

```
REPLACE(  
REPLACE(  
REPLACE(  
REPLACE(  
REPLACE(parameter, "&", "&amp;", false),  
"<", "&lt;", false),  
">", "&gt;", false),  
CHAR(34), "&quot;", false),  
"'", "&apos;", false)
```





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Demo: ER-Consult's electronic reporting configurations + Docentric AX reporting solution



Docentric AX reporting solution

- Report design in **Microsoft Word**.
- Report data can be intercepted from **SSRS or ER** pipelines.
- Enhanced **Docentric print destinations**.
- **Integrated in D365FO** using x++ models.
No external servers or connectors!!



Docentric AX & eInvoices, specifically ZUGFeRD

- eInvoices use XML file format
- ZUGFeRD uses PDF/A-3 format with embedded XML e-invoice.
- Docentric AX supports ZUGFeRD via:
 - Docentric AX Designer
 - Enhanced Email print destination with additional email attachments



Docentric AX Designer

Look & Feel

- DEMO

- Creating a template of an invoice for the PDF version of the invoice



Docentric AX & ZUGFeRD

- Docentric **Email** print destination supports:
 - Adding existing attachments from different D365F0 sources
 - Creating new attachments based on SSRS or ER report formats
- Attachments can be added in different ways:
 - As **separate** document
 - **Embedded** in PDF file
 - **Merged** with PDF file
- This gives us enough flexibility to generate **ZUGFeRD compliant XML file** and embed it in the generated PDF/A-3 invoice report file.
- **DEMO**



Summary

- ZUGFeRD:
 - Formats & profiles
 - ER configurations
 - Mapping considerations
- Docentric AX & ZUGFeRD
 - Visual invoice template design
 - Combining Print management and Docentric print destinations for creating and emailing ZUGFeRD compliant elnvoices
- For more information contact us:
 - Eugen Glasow, ER-Consult (eg@erconsult.eu)
 - Albin Lotrič, Docentric (albin.lotric@docentric.com)Or visit Docentric booth 😊



THANK YOU!

