

## RETARUS WHITEPAPER

# Everything You Need To Know About Electronic Invoicing in Germany: XRechnung and ZUGFeRD 2.0

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Enterprises in Germany are finally gaining momentum in substituting analog processes with digital solutions. A prime example where companies can strongly leverage digitization to speed up manual, time-consuming processes is electronic data interchange (EDI) – particularly when it comes to handling invoices. The electronic invoice has the potential to eliminate errors, increase efficiency and reduce costs significantly, all while improving overall productivity and speed.

# What is an electronic invoice?

Structured

## electronic format

The term electronic invoice is used differently in different companies, ranging from scanned paper invoices to purely digital documents. According to the EU Directive 2014/55/EU on electronic invoicing for public contracts and the resulting German federal e-invoicing regulation (E-Rechnungsverordnung), an invoice is electronic if it is issued, transmitted and received in a structured electronic format, which enables automatic and electronic processing of the invoice.<sup>1</sup> The aim of these initiatives is to promote electronic invoicing and to create standardized models for it. Based on the EU Directive, the DIN EN 16931 standard also defines a semantic data model for the mandatory core elements of an electronic invoice.

## Public sector

as a driver

A key element for the enforcement of electronic invoicing is the public sector and companies under this segment must be prepared to implement the standard quickly. For Germany, the e-invoicing regulation stipulates that by November 2020 at the latest, all invoices issued to authorities at federal and state level must conform to the new standard. Moreover, switching to electronic invoicing also pays off if there are no authorities on the customer list.

Formats that enable automatic and electronic processing of documents and can be transferred directly to the respective enterprise resource planning (ERP) system are particularly suitable for this change.

At the German federal level, the national administrative standard XRechnung, which was defined based on the DIN standard, is the only applicable standard. However, at the state level, deviating formats may also be accepted. It is

<sup>1</sup> Cf. the definition of an electronic invoice in “Verordnung über die elektronische Rechnungsstellung im öffentlichen Auftragswesen des Bundes”, available at: [https://www.bmi.bund.de/SharedDocs/downloads/DE/gesetzentexte/e-rechnungsverordnung.pdf?\\_\\_blob=publicationFile&v=3](https://www.bmi.bund.de/SharedDocs/downloads/DE/gesetzentexte/e-rechnungsverordnung.pdf?__blob=publicationFile&v=3); “E-Beschaffung und E-Rechnung”, available at: <https://www.bmi.bund.de/DE/themen/moderne-verwaltung/verwaltungsmodernisierung/e-beschaffung/e-beschaffung-artikel.html>.

mandatory that all of the aforementioned formats comply with the DIN standard. In B2B environments, ZUGFeRD 2.0 is a format with potential. Following, you will find the most important facts about both formats – from structure to use and implementation.

# What is XRechnung?

## Invoice format

for German authorities

In response to the European requirements, the Coordination Office for IT Standards (Koordinierungsstelle für IT-Standards, KoSIT)<sup>2</sup> developed XRechnung as a format for electronic invoicing on behalf of the IT Planning Council of the Federal Government and the States (IT-Planungsrat von Bund und Ländern), which meets the guideline requirements. For invoices to the German administration, XRechnung is the only approved format. In other EU countries, comparable standards have been established in many places that also comply with the EU directive (for example FatturaPA in Italy).

## How is XRechnung structured?

XML file with

## fixed format

XRechnung consists of at least one XML file. In addition, other formats such as PDFs can be embedded in the XML. A pure PDF or hybrid formats based on PDF are not permitted. The semantic core elements of the XML file are regulated in the standard DIN EN 19631<sup>3</sup>, which defines the essential technical elements that an electronic invoice must contain for legal validity. The syntax of the electronic invoice can correspond to both the Universal Business Language (UBL) and the CII scheme (Cross Industry Invoice) of UN/CEFACT. In addition to VAT components, the so-called Leitweg-ID<sup>4</sup> is of central importance as part of the XRechnung. The ID is generated by the authorities when the order is placed and transmitted to the supplier upon which it determines where the invoice needs to be transferred.

<sup>2</sup> "Der Standard XRechnung und unterstützende Produkte", available at: [https://www.xoev.de/die\\_standards/detail.php?gsid=bremen83.c.16851.de](https://www.xoev.de/die_standards/detail.php?gsid=bremen83.c.16851.de).

<sup>3</sup> "Norm DIN EN 19631", available at: <https://www.xoev.de/sixcms/media.php/13/Leitweg-ID-Formatspezifikation-v2.0.0-final.pdf>.

<sup>4</sup> "Die Leitweg-ID", available at: <https://www.xoev.de/sixcms/media.php/13/Leitweg-ID-Formatspezifikation-v2.0.0-final.pdf>.

## When will XRechnung be used?

Mandatory from

**November 2020**

Since November 2018, the supreme federal authorities and constitutional bodies have been accepting the XRechnung, and from 18 April 2020 all other public-sector clients will accept it as well. From November 2020, however, companies will be required to send all invoices to the public administration via XRechnung.<sup>5</sup> The only exceptions are invoices with an amount of less than 1,000.00 Euros, confidential invoice data and matters relating to the Foreign Service or foreign countries.

## How is XRechnung transmitted to its recipients?

**Different**

transmission paths

There are several transmission paths for the XRechnung. Invoices to federal authorities can already be uploaded via the Central Federal Invoice Receipt Platform (Zentrale Rechnungseingangsplattform des Bundes, ZRE)<sup>6</sup> or addressed directly to the correct recipient via the Leitweg-ID. By November 2019 at the latest, additional portals of the German states must be available via which the XRechnung can be transferred to the respective state authorities. In addition to email and De-Mail, XRechnung will also be transmitted via OpenPEPPOL (Pan-European Public ProcurementOnline)<sup>7</sup>, a European communication infrastructure for electronic documents.

<sup>5</sup> Cf. "E-Rechnungsverordnung (E-Rech-VO)", available at: <https://www.bmi.bund.de/SharedDocs/downloads/DE/gesetzentexte/e-rechnungsverordnung.pdf>.

<sup>6</sup> ZRE, available at: <https://xrechnung.bund.de/prod/authenticate.do>.

<sup>7</sup> "About OpenPEPPOL", available at: <https://peppol.eu/about-openpeppol/>.

# What is ZUGFeRD 2.0 and where is it used?

## Used in B2B

Similar to XRechnung, the ZUGFeRD 2.0 format (Central User Guide of the German Electronic Invoice Forum, German: Zentraler User Guide des Forums elektronische Rechnung Deutschland) is used to exchange electronic invoices and is based on the EU Directive 2014/55/EU and DIN EN 16931. While the previous version 1.0 was intended as a standard for public administration, version 2.0 initially had to make way for the XRechnung. The format, however, might be accepted at state level. ZUGFeRD was developed by companies from various industries and is supported by the Federal Ministry of Economics and Energy among others.

## How is ZUGFeRD 2.0 structured and what are its benefits?

## Advantages of a hybrid format

ZUGFeRD 2.0 is a hybrid format consisting of a PDF/A-3 invoice and an embedded, machine-readable and structured XML invoice. The biggest advantage of ZUGFeRD 2.0 over pure XML formats such as XRechnung is that the invoice components can be viewed and checked directly. The syntax of the standard corresponds to UN/CEFACT CII. Furthermore, ZUGFeRD 2.0 enables automated processing on the recipient side.

### Advantages

- ✓ automated processing on receiving end
- ✓ review and verification capabilities
- ✓ multiple formats for various needs
- ✓ reduced OPEX for small and medium enterprises
- ✓ consistent format for invoices

### Disadvantages

- ✗ different profiles need to be processed on receiving end
- ✗ individual characteristics need to be adjusted depending on vendor
- ✗ not a replacement for XRechnung

## Why should ZUGFeRD 2.0 be archived?

### Complete archiving

ZUGFeRD 2.0 invoices must always be archived “completely” (PDF + XML) and be stored in the original format. Otherwise, like all other invoices, they must be archived in compliance with standard accounting principles.<sup>8</sup> Specialized service providers, who are in charge of the technical implementation of the electronic invoice, offer corresponding long-term archiving solutions.

## What are the different ZUGFeRD 2.0 profiles and their advantages?

### Profile “Extended” as optimal solution

ZUGFeRD 2.0 offers several profiles to choose from. Structured data for simple invoices where additional information can be integrated as free text is categorized as the “Basic” profile. However, this profile does not include all the information required by DIN EN 16931. The “Comfort” profile (now referred to as “EN 16931” in ZUGFeRD 2.0) also contains structured data for fully automated invoice processing and fully reflects DIN EN 16931. Additionally, the profile “Extended” contains additional information for cross-industry invoice exchange and is therefore the most comprehensive profile that can be used. The “Minimum” and “Basic WL” profiles, which are also offered, do not meet German VAT requirements and are therefore only suitable as booking aids.

## How can ZUGFeRD 2.0 be implemented?

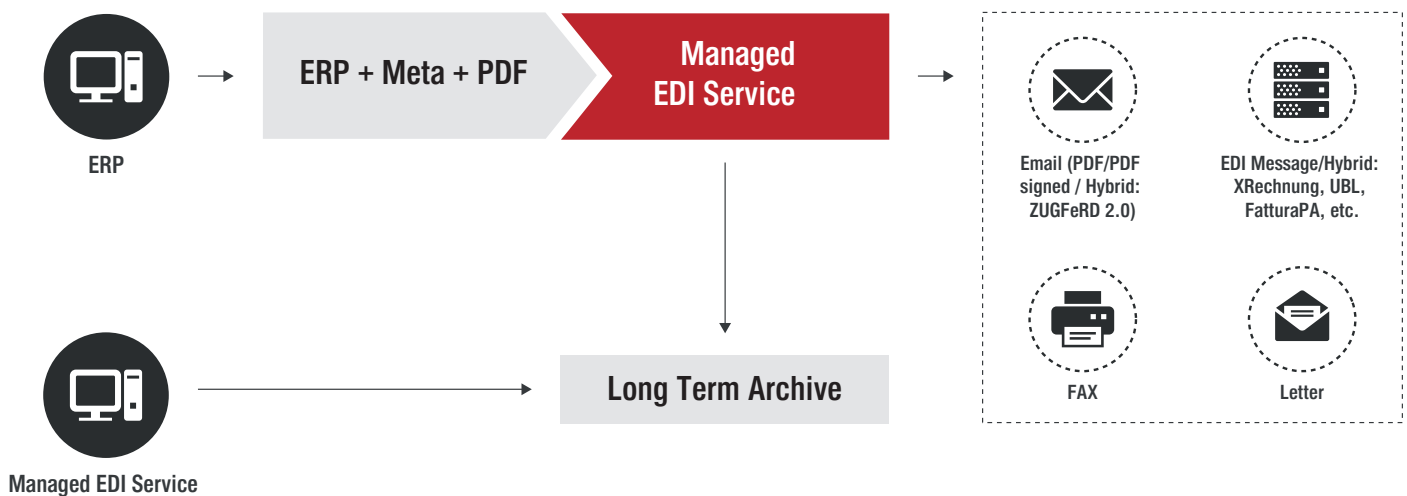
### Managed EDI services provide different opportunities

In many companies, the billing process is highly fragmented. Starting from the ERP system, different channels such as email and fax servers, printers, EDI and archives must be used to create various invoice formats such as PDF (via e-mail), fax, letter or EDI message. Hybrid formats such as ZUGFeRD 2.0 and other multi-output options are difficult to implement. A solution that exports both EDI and PDF data directly from the ERP system for each recipient and transfers it to a managed EDI service is much more efficient. The managed EDI service transfers the invoice in recipient specific format and directly transmits it via the desired

<sup>8</sup> “Grundsätze zur ordnungsmäßigen Führung und Aufbewahrung von Büchern, Aufzeichnungen und Unterlagen in elektronischer Form sowie zum Datenzugriff (GoBD)”, available at: [https://www.bundesfinanzministerium.de/Content/DE/Downloads/BMF\\_Schreiben/Weitere\\_Steuerthemen/Abgabenordnung/2014-11-14-GoBD.html](https://www.bundesfinanzministerium.de/Content/DE/Downloads/BMF_Schreiben/Weitere_Steuerthemen/Abgabenordnung/2014-11-14-GoBD.html).

channel. By utilizing this, the PDF data of a ZUGFeRD invoice can be sent directly in the respective layout and in large quantities by email. In case the customer needs the invoice as a XRechnung, by fax or electronically signed as PDF, it can also be created and transmitted directly via a managed EDI service.

## Reference Process



# Electronic invoices as a standard

## Comprehensive solution

is ideal

With public sector as a driver, electronic invoicing is increasingly becoming the standard, especially for transactions with public authorities and larger organizations. Ideally, companies should opt for a solution that not only connects them to the public administration and transmits invoices simply and efficiently but also covers all formats and transmission paths. This way, companies can best benefit from the advantages of electronic invoicing.