



**PAGERO**

# European e-invoicing

Current landscape, benefits and challenges

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Pagero White Paper



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# 1. Background

## 1.1. The purpose of the document

The increasing level of legislation on e-invoicing, catalysed by the need to encourage cost savings, improve efficiency, shorten VAT gaps and reduce environmental impact, is currently driving both private and public sector organisations across Europe to adopt e-invoicing. Given the variation in local standards, infrastructure and regulations from one European country to the next, implementing a single solution for European e-invoicing has left most multinationals scratching their heads.

This document aims to give an overview of the current European e-invoicing landscape, the benefits of e-invoicing and the challenges that multinational businesses digitising their invoice-handling need to take into consideration to make the e-invoice process as efficient and beneficial as possible.

## 1.2. What is an e-invoice?

The European Directive on value-added tax (Directive 2010/45/EC) defines an electronic invoice as follows: "An invoice that contains the information required in this Directive, and which has been issued and received in any electronic format."

The European Directive on electronic invoicing in public procurement (Directive 2014/55/EU) defines an electronic invoice as follows: "An invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing."

There is obviously a crucial discrepancy in the definition of electronic invoice between the two directives. While the VAT Directive recognises electronic invoices in PDF and other human-readable formats as valid electronic invoices, the Procurement Directive does not.

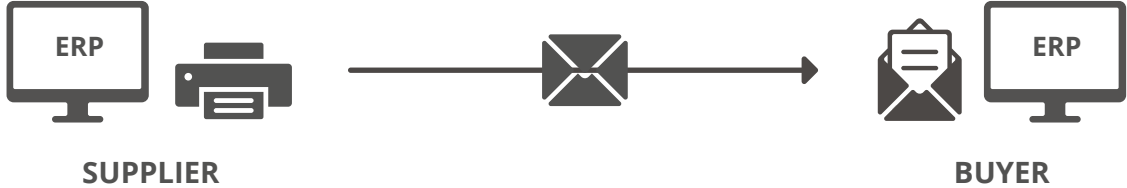
In practice, PDF is one of the most widespread formats in which invoices are issued, transmitted and received. However, a PDF invoice is not a true electronic file, since the handling of such an invoice requires manual intervention by the recipient: invoice data must be imported using manual keying or OCR software. Nor does a PDF invoice provide the same analytics advantages as "true" e-invoices received in structured (also called machine-readable) formats.

# 2. General benefits of e-invoicing

The graphic below shows the invoice process improvements implied by a digital flow and a summary of the general benefits of e-invoicing for a business sending or receiving invoices.

## 2.1. Streamlined handling

### PAPER FLOW



- 1. Invoice created in ERP
- 2. Invoice printed
- 3. Invoice put into envelope
- 4. Invoice sent via post

- 1. Invoice sorted
- 2. Invoice opened
- 3. Invoice data keyed into ERP
- 4. Invoice validated and approved
- 5. Invoice paid

### DIGITAL FLOW



- 1. Invoice created in ERP
- 2. Invoice sent via Pagero Online

- 1. Invoice received in ERP
- 2. Invoice automatically validated and approved
- 3. Invoice paid

#### SUPPLIER

- Shortened DSO
- Improved traceability
- Reduced man hours spent on invoicing
- Reduced cost (postage, paper, etc.)
- Reduced CO2 emissions
- Lowered archiving costs

#### BUYER

- Reduced AP resources
- Higher data accuracy
- Improved supplier communication
- Lowered cost per invoice
- Lowered archiving costs



## **3. European landscape**

### **3.1. Public sector legislation**

Private industry has long been the main driver behind market development of e-invoicing. Today, however, e-invoicing has become a powerful tool in hands of many governments, used to minimise the VAT gap and prevent VAT fraud.

In 2014, the European Commission published Directive 2014/55/EU, which promotes the uptake of electronic invoicing in public procurement. This directive is to be incorporated into national law in each member state no later than 27 November 2018.

All public entities are mandated to become e-invoice ready; i.e. able to receive and process e-invoices. Central authorities must be e-invoice ready from November 2018, although there is some scope for regional and local authorities to delay e-invoice readiness until November 2019. Some countries, such as Sweden, plan to go a step further and expand the mandate to governmental suppliers; i.e. suppliers to governmental entities will no longer be allowed to submit either paper or PDF invoices. Such a submission mandate is already a reality at all levels in France, Italy and Spain, as well as for central governmental entities in Austria and Denmark, for example.

Legislative enforcement of e-invoicing means that its adoption rate is growing at a rapid pace. A market report published by Billentis in 2016 states that over 300,000 public administrations or agencies across Europe will be affected by the European directive.

### **3.2. Local variations create trade barriers**

The divergent legal and technical requirements currently in existence with respect to e-invoices constitute market access barriers to cross-border public procurement and obstacles to trade. These obstacles derive from the existence of a variety of non-synchronised legal requirements and technical standards as well as the lack of interoperability between different service providers or Value Added Networks (VANs).

The European Commission emphasises that the Directive will result in a norm rather than in a European infrastructure for e-invoicing. Recently, a European norm on electronic invoicing (EN) has been published, but the usage of this standard has not (at least not yet) been mandated. Most likely, however, this format will only set the minimum requirements, while giving Member States the right to local adoptions, including extensions.

### **3.3. Divergent regulatory landscape**

What is also worth mentioning is the fact that business-to-business (B2B) and business-to-government (B2G) e-invoicing is regulated differently and may differ within any one country; i.e. for domestic transactions. While the framework for B2B e-invoicing is largely regulated by the VAT Directive, which does not allow states to impose stricter requirements than those outlined in the VAT Directive, governments have more freedom when it comes to regulating B2G e-invoicing, which has led to significant differences among EU Member States.

# 4. Current legislation

Below is an overview of some of the local requirements and standards for e-invoicing.

- Legislation
- Infrastructure
- Format standards
- Special requirements

## UNITED KINGDOM

- Mandated B2G e-invoicing to NHS
- PEPPOL
- PEPPOL BIS
- E-order messages are also in scope as well as GS1 standards GTIN and GLN

## ITALY

- Mandated B2G e-invoicing
- Sistema di Interscambio
- FatturaPA
- Application response message. Special archiving requirements. "Regular" e-mail distribution not allowed, only via PEC.

## SPAIN

- Mandated B2G e-invoicing
- Puntos Generales de Entrada de Facturas (PGEF)
- Facturae
- Real-time reporting. Mandated e-signature.

## EUROPEAN UNION

- Upcoming mandated B2G e-invoicing, 2018/19
- Most probably PEPPOL
- Most probably EN 16931-1
- N/A



## GERMANY



Upcoming mandated B2G e-invoicing, 2018/19



TBD.



ZUGFeRD, Xrechnung



Obligation to archive the source file from which legal invoice has been created. Store outside of Germany requires notification to the local tax authority.



## FRANCE



Mandated B2G e-invoicing



ChorusPro



UBL V2, UN/CEFACT CII



Digital signatures mandated for PDF e-invoices. PDF e-invoice allowed if uploaded via Chorus Pro, else structured format. Special requirements on paper invoice dematerialization.



## NETHERLANDS



Mandated B2G e-invoicing



Simplerinvoicing



PEPPOL BIS



N/A



## BELGIUM



Mandated B2G e-invoicing in Flanders



PEPPOL



UBL 2.1



N/A



## FINLAND



Mandated B2G e-invoicing to certain governmental agencies



Tieke



Finvoice



N/A



## TURKEY



Mandated B2G and B2B e-invoicing



GIB Gelir Idaresi Baskanligi



UBL-TR 1.2



Storage on Turkish soil. E-invoice clearing by the State prior exchange between the trading partners.



## **5. General challenges with e-invoicing**

### **5.1. Technical architecture**

#### **Point-to-point communication (two-corner model)**

Traditional EDI solutions have benefitted business relations where large volumes of business documents are being exchanged using point-to-point communications. However, as this type of communication requires separate set-up and configuration for each individual business partner (including format mapping and compliance with customer requirements), this reduces the scalability of enrolment.

As e-invoicing continues to mature, businesses are experiencing an increased number of requests for e-invoices. This has resulted in the emergence of new e-invoice VANs to whom e-invoicing and archiving processes are being outsourced (where allowed); see the three-corner and four-corner models described below. Even as the three and four-corner models resolve many earlier challenges, they also introduce new ones.

#### **Communication within a closed network (three-corner model)**

VANs normally provide networks that enable the businesses connected to them to communicate with all trading partners who are connected to the same network. Partially improving scalability compared to the two-corner model, it does entail all trading partners being connected to that same network. As many VANs provide no or only limited reach beyond their own network, such a network provides only local or regional coverage.

For multinationals having operations across Europe and selling in multiple business sectors, this model becomes very expensive. With increased market maturity, where companies experience an increased number of express demands for e-invoice, many companies are forced to contract locally.

#### **Network-to-network communication (four-corner model)**

A four-corner model allows for VAN-to-VAN communication, which normally increases the reach of the service provider. With most VANs still having a local or regional focus, it is important for multi-nationals to find a service provider that provides cross-border coverage.



## 5.2. Legal requirements

A resource-intensive element of e-invoice implementation is compliance with local legal requirements, including:

- Government infrastructure
- Archiving
- Authenticity of origin and integrity of content
- Auditability
- Legibility
- E-invoice format
- E-invoice content
- Document dematerialisation

## 5.3. Business requirements

There are also customer- and/or VAN-specific requirements to consider:

- E-invoice format
- E-invoice content
- Authenticity of origin and integrity of content
- Legibility



# 5.4. E-invoice infrastructures and hubs

To enable the large-scale on-boarding of e-invoicing, countries or industries need to provide the infrastructure and the standard by which e-invoices are exchanged between supplier and buyer. In many cases, this becomes a single hub between all senders and receivers as well as their service providers or access points.



**PEPPOL**  
PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE

### The PEPPOL network

Several European countries have chosen the PEPPOL network. PEPPOL stands for “Pan-European Public Procurement On-Line” and is an EDI protocol created to support cross-border e-procurement in line with the EU Directive. PEPPOL is focused on post-award business documents, such as orders, despatch advice and invoices.

The PEPPOL network in a country consists of PEPPOL Access Points – e-invoice service providers who have fulfilled the PEPPOL requirements set out in that country.

## Other networks

Although several countries have chosen PEPPOL, it is not the only type of infrastructure used for e-invoicing. Some public authorities have chosen to develop their own infrastructure or government hub.

### Network examples:

**Italy:** Sistema di Interscambio

**France:** Chorus Pro

**Spain:** Punto General de Entrada de Facturas (FACe)

**Turkey:** Gelir İdaresi Başkanlığı

**Netherlands:** SimplerInvoicing



## 5.5. Format standards

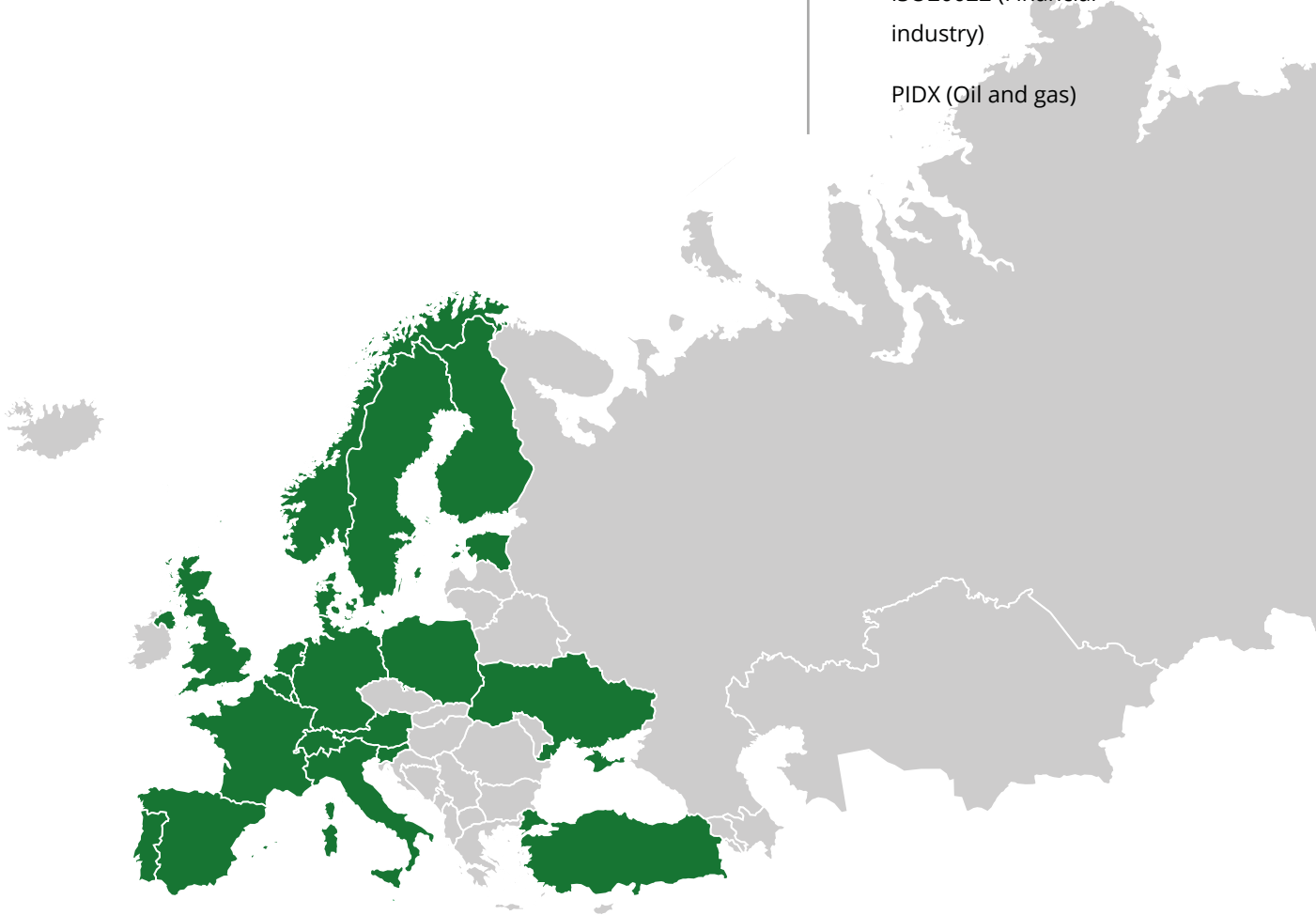
True ERP-to-ERP e-invoicing means that invoices are transferred between suppliers and buyers by way of a structured format which can be exported and imported without need for data interpretation, thus not risking data loss.

With ERP systems and service providers being unable to handle all e-invoice formats, supplier invoices normally must be mapped, converted and often enriched to fit the system and business requirements of the buyer – a resource-intensive task resembling “ERP language barriers”.

Unsurprisingly, various format standards have been developed in local attempts to unify an industry sector, ERP community or even a country. Such country-by-country efforts to promote e-invoice adoption within one’s own territory creates barriers for e-invoice adoption at the pan-European level.

### Format examples:

- PEPPOL BIS
- EHF
- UBL 2.1
- cXML
- UBL-TR 1.2
- Facturae
- ISDOC
- FatturaPA
- ZUGFeRD
- OIOUBL
- ETIS (Telecom)
- ISO20022 (Financial industry)
- PIDX (Oil and gas)





## 5.6. Archiving

Archiving invoices electronically is in many cases beneficial in terms of storage efficiency, security, retrievability and reduced CO2. Moving from a paper-based invoice archive should, however, take the following into consideration:

- Every country has its own requirements regarding the archiving of electronic invoices; e.g. the storage period, which documents are to be stored, what elements are to be stored (e.g. the tax invoice, integrity and authenticity/I&A proof, the source file etc.), legibility (human-readability), auditability, online access, data security requirements.
- Regardless of the recipient, all European countries require storage of the original invoice; i.e. the invoice used as a basis for deducting VAT. As an e-invoice will typically be mapped, validated, enriched and converted (in order to meet both legal and business requirements), there is a risk of confusion as to which document should be considered the original invoice.
- Archiving solutions must be compliant with data privacy regulations, especially GDPR, which enters into force in May 2018.

## 5.7. Authenticity and integrity of e-invoice

The European Commission has stated in a description of the major requirements for adoption of electronic invoicing that it must be ensured that the “authenticity of origin” – i.e. the identity of the invoice issuer – and the “integrity of the content of the invoice” – i.e. the content of the invoice – have not been changed from the moment of issuance.

According to the VAT Directive (article 233), each taxable person (i.e. both supplier and buyer) is obliged to ensure I&A. This may be achieved in several ways. The VAT Directive outlines the following generally accepted I&A methods – business controls (by creation of a reliable audit trail), EDI, or electronic signature (e-signature) – while leaving each Member State the opportunity to permit other I&A methods as well.

Regulation 910/20142 (eIDAS) has further harmonised the legal framework for electronic trust services – e-signatures, e-seals, time-stamping, electronic delivery services and website authentication – by comprehensively defining requirements and legal effects.

## **E-signature**

Currently, e-signature is the most widespread I&A method. It is often mandated by local law for B2G e-invoices or may be a business requirement of a trading partner. This comes, of course, at a cost, but the benefits compared with other means are significant:

- E-signature is less costly than an EDI connection.
- An e-signature frees up human and digital resources which otherwise would have to be invested in the business controls.
- An e-signature reverses the burden of proof; i.e. it is the party who claims that the e-invoice is issued incorrectly or is corrupt who has to prove it.

While there are certain e-signature certificates which are recognised and applicable over multiple jurisdictions and which affect companies operating across several European countries, it is important to be aware that most countries will use their own version of e-signature certificate. Furthermore, as senders of e-invoices, companies need to be aware that the requirements for e-signatures may also vary between the private and public sectors.

Finally, with respect to cross-border transactions, even though the supplier's law is very likely to regulate invoice content and the issuance process, the recipient's law may have its own I&A requirements. Therefore, it is of the essence to use a service provider who can facilitate local compliance in the regions of interest.

## **E-signature validation**

As pointed out above, according to the VAT Directive, the obligation to ensure I&A also applies to a trading partner acting as a buyer. For the buyer to fulfil I&A requirements, it is not sufficient that there is a recipient of an e-invoice with e-signature. If an e-signature has been applied by the supplier, the buyer should validate the e-signature in order to ensure that the underlying certificate is valid. This requirement is explicit in some countries – e.g. France and Spain – while in others it is implicit based on the VAT Directive.





## 6. About Pagero

Pagero Group develops and markets Pagero Online, a cloud-based network platform for the communication of business documents within the purchase-to-pay, order-to-cash and logistics-to-pay (TMS) processes. Pagero Online is independent of the ERP system and suits companies of all sizes and within all industries.

We specialise in providing local reach and compliance support to our clients. This includes:

- Integration with government hubs
- Interoperability with local service providers
- Support of local standards
- Providing of full eSignature support
- Invoice archiving according to local legal demands



**Hewlett Packard  
Enterprise**

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**Hewlett Packard use Pagero to send e-invoices to more than 2,000 public and private customers in 29 EMEA countries**

*"We are currently active in 23 EMEA countries, with another five onboarding over the next few months. With the help of Pagero, we have been able to fulfil every tax and legal requirement in every country. The bandwidth is huge between highly standardised and easy procedure countries like Finland and Sweden, down to very complex countries like Italy or Spain."*

- Thomas Bonwetsch, Program Manager, EMEA



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