The Future of Finance: Adopting E-Invoicing Across Europe

Contact us

INTRODUCTION

This report aims to provide a comprehensive analysis of the growing significance of e-invoicing within the European financial landscape. As businesses across Europe navigate the digital transformation of financial processes, understanding and leveraging e-invoicing has become paramount to ensure operational efficiency, regulatory compliance, and cost savings.

With 25 years of existence and 8 years of proven business expertise in e-invoicing, honed through collaboration with our esteemed client, Tradeshift, Setronica has not only mastered the intricacies of the industry, but has also embraced the ever-evolving trends. Setronica's decision to research the market was fuelled by a passion to stay at the forefront of technology and provide modern solutions that redefine the invoicing landscape, ensuring efficiency and excellence for our users.
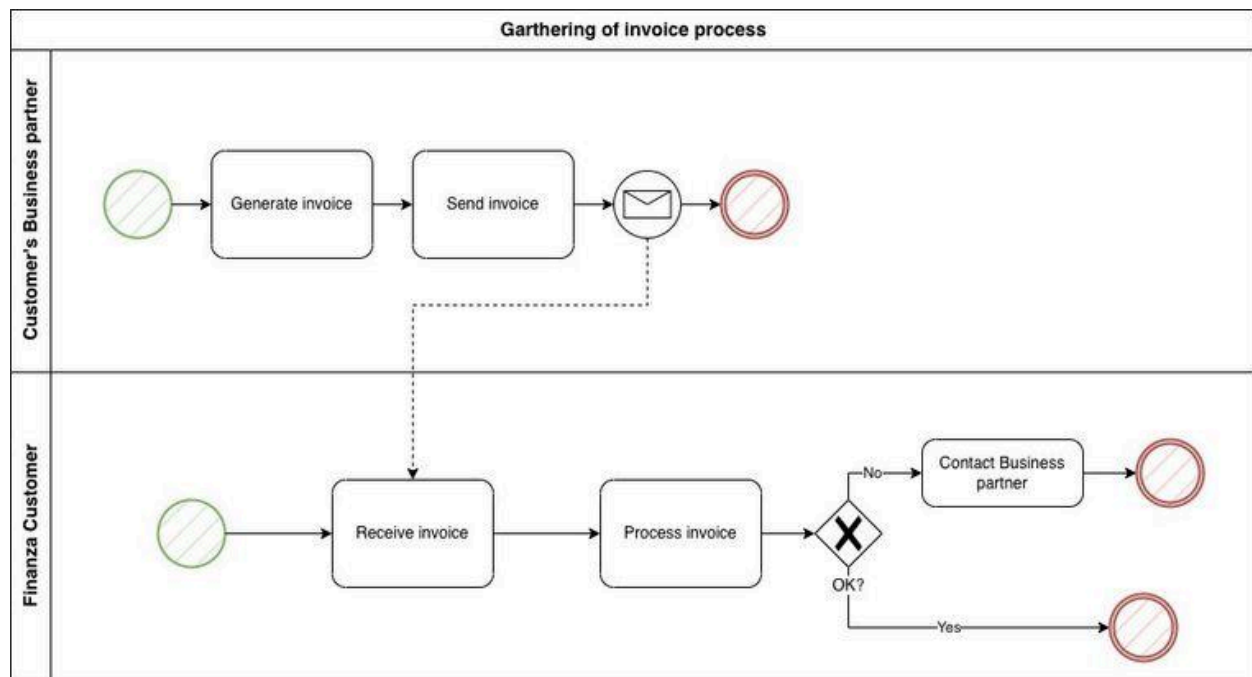
OBJECTIVES OF THE REPORT

The report is designed with the following objectives in mind:

- **To understand the e-invoicing landscape:** Provide a clear definition of e-invoicing and outline its goal within the context of financial operations and regulatory compliance.
- **To analyse regulatory preconditions:** Examine the regulatory environment across Europe, highlighting country-specific mandates and the timeline for e-invoicing adoption.
- **To assess market dynamics:** Explore the size, growth, and segmentation of the e-invoicing market, including the impact of COVID-19 and identifying key trends shaping the future of e-invoicing.
- **To evaluate technological and market players:** Delve into the technological infrastructure that supports e-invoicing and conduct a competitor analysis to understand the competitive landscape.
- **To guide transition strategies:** Offer actionable insights and guidance for businesses looking to transition to e-invoicing, ensuring a smooth adoption process that aligns with European standards.

TABLE OF CONTENTS

---

543 Kirkham Ln, League City, TX 77573-6537, USA

contact@setronica.com
setronica.com

WHAT IS E-INVOICING?

Receiving e-invoices business process

Electronic invoicing is the exchange of an electronic invoice document between a supplier and a buyer. An electronic invoice (e-Invoice) is an invoice that has been issued, transmitted and received in a structured data format which allows for its automatic and electronic processing, as defined in Directive 2014/55/EU.

The European Committee for Standardization (CEN) developed standard EN-16931 for electronic invoicing at the request of the European Commission following the Directive 2014/55/EU.
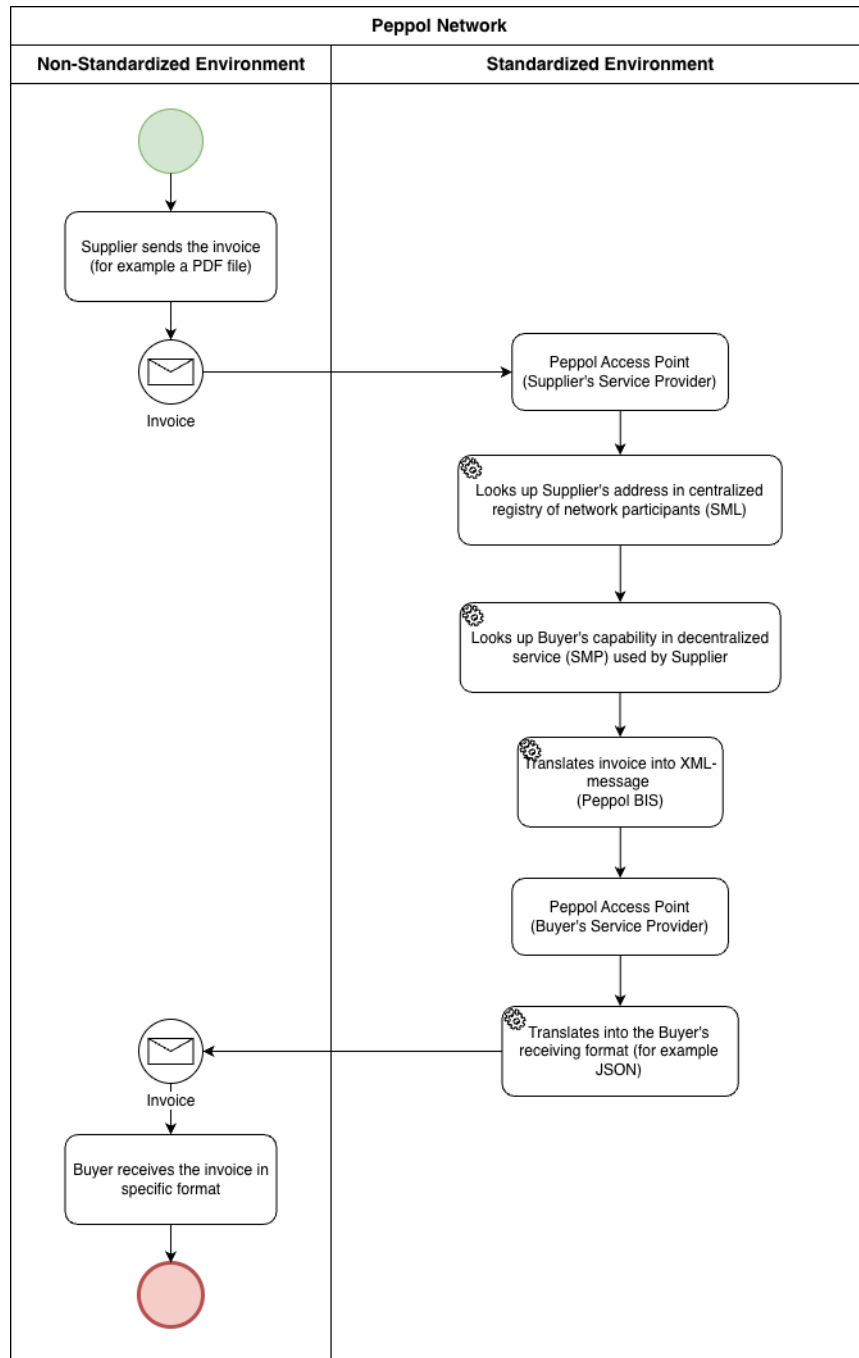
Sending e-invoice to Customer from Non-Standardized format to Standardized one

THE GOAL OF E-INVOICING IN MODERN FINANCE

On **8 December 2022**, the European Commission made the VAT in the Digital Age (ViDA) regulatory proposal which contained VAT reforms, including an EU real-time digital reporting requirements (DRR) based on e-invoicing. The idea was to reduce EU-wide VAT revenue loss known as the 'VAT Gap' which amounted to **€93 billion** in **2020** according to HJK Auditors.

REGULATORY PRECONDITIONS FOR E-INVOICING IN EUROPE

The landscape of e-invoicing in Europe is diverse, with various countries at different stages of implementing electronic invoicing mandates. This section explores the regulatory preconditions and implementation timelines for e-invoicing across several European countries, with a focus on Serbia and Belgium, to provide a comprehensive understanding of the evolving e-invoicing ecosystem.

Serbia has embraced e-invoicing with a structured approach to enhance tax compliance and streamline business transactions. Since **1 January 2023**, e-invoicing has been mandatory for all B2B (Business-to-Business) transactions, following the introduction of the Continuous Transaction Controls (CTC) model. This model facilitates the creation, issuance, sending, receiving, processing, and storage of e-invoices through a central clearing system, ensuring adherence to the Serbian Standard on Electronic Invoicing.

Belgium is poised to introduce mandatory B2B e-invoicing and e-reporting from **July 2024**. The country's finance minister has outlined the plan, which is likely to be implemented through Peppol. The rollout will be phased, starting with large taxpayers being required to issue e-invoices in July 2024, followed by medium-sized taxpayers in **January 2025**, and finally extending to all taxpayers by July 2025. This phased approach is in line with the EU guidelines

set out in the ViDA framework, which promotes interoperability between data exchange systems in EU Member States.

The adoption and implementation of e-invoicing mandates vary across Europe, with countries at different stages of readiness and execution:

- **Albania** and **Turkey** were among the early adopters, with e-invoicing mandates in place since January 2021 and January 2014, respectively.
- **Spain** has implemented live invoice and book reporting since July 2017 and is planning to introduce pre-clearance B2B e-invoices by July 2025.
- **France** is set to roll out e-invoicing and e-reporting for B2B and B2C transactions by September 2026.
- **Croatia**, like Belgium, plans to mandate B2B e-invoicing by January 2026.
- **Germany** and **Greece** are working on proposals for mandatory B2B e-invoicing, targeting implementation between 2025 and 2028.
- Several countries, including **Denmark, Estonia, Finland, Latvia, Poland, Portugal**, and **Romania**, have outlined plans or are in the process of consultations to introduce or expand e-invoicing requirements within the next few years

MARKET ANALYSIS

This section delves into a comprehensive market analysis, exploring the size, growth trajectory, dynamics, and the profound impact of global events such as COVID-19 on the e-invoicing ecosystem.

Size and growth

In 2023 the Europe E-invoicing market size reached **€1.46 billion**. Looking forward, IMARC Group expects the market to reach **€5.5 Billion** by 2032, exhibiting a growth rate (CAGR) of **15.4%** during 2024-2032.

Dynamics

The European e-invoicing market is characterised by intense competition among vendors, with both established players and new entrants vying for market share. Vendors differentiate themselves through product innovation, integration capabilities, compliance with local regulations and customer support services. Strategic partnerships and collaborations with financial institutions, payment service providers and technology companies are common in the market.

Segmentation

The European e-invoicing market can be segmented according to deployment type, enterprise size, industry vertical, and region. Deployment types include on-premises, cloud-based and hybrid solutions. Enterprise sizes range from small and medium enterprises (SMEs) to large enterprises. Industry verticals adopting e-invoicing solutions include retail, healthcare, manufacturing, transportation, banking and finance, and others.

According to the Technavio research, the market is divided into B2B and B2C segments:

- The B2B segment is **65%** and will reach **€2.3 billion** in 2022.
- The B2C segment is **35%** and will reach **€1.2 billion** in 2022.

Of invoices sent either between two businesses or between businesses and the public sector, the estimated share of e-invoices is above 40% only in Denmark, Norway, Sweden, Finland, Iceland and Estonia. This share drops to between 15% and 40% for much of Europe, and even below 15% for a few countries (see Charts 1 and 2 below).
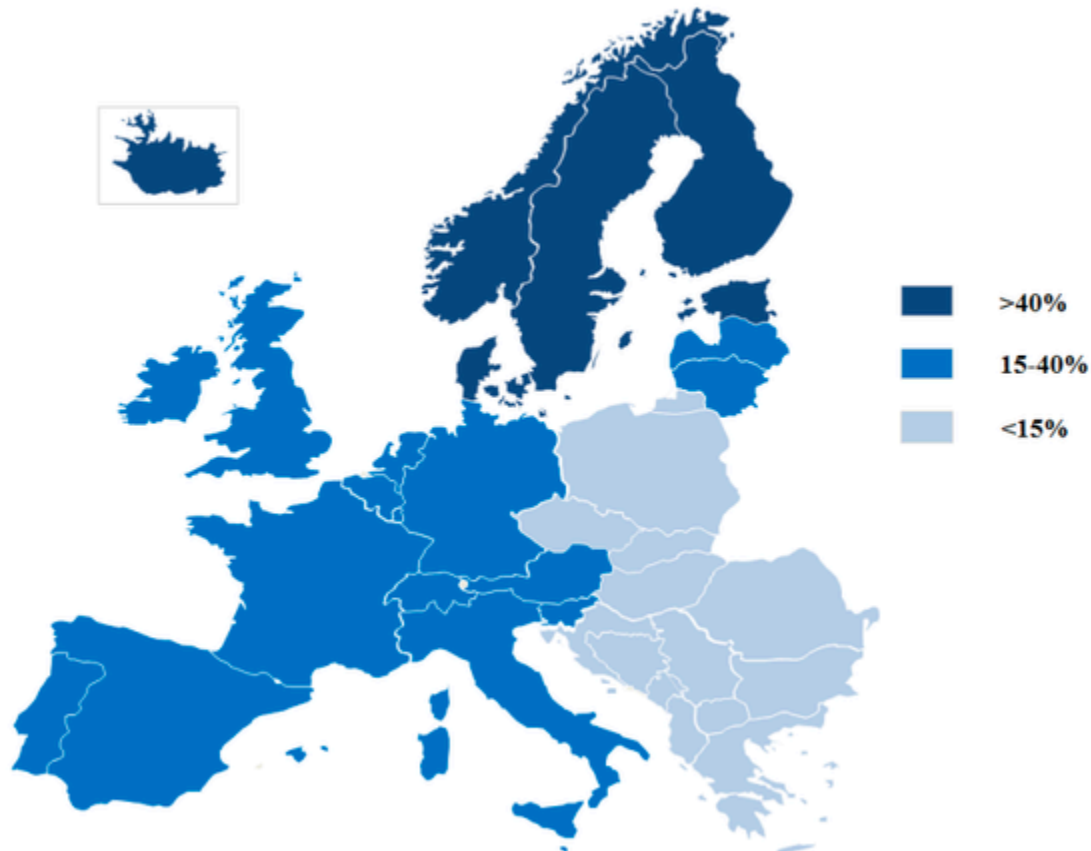
Chart 1: B2B/G2B/B2G electronic share of total invoice / bill volume.

Chart 2: B2B electronic share of total invoice / bill volume. Source: Billentis

Of invoices sent to consumers, the statistics are even lower, with the estimated share of e-invoices below 15% in most of Europe. The share is between 15% and 40% in Finland, Sweden, France, Ireland, the Netherlands and the United Kingdom. Only in Denmark, Norway, Iceland and Estonia does the share go above 40%.

Covid-19 impact

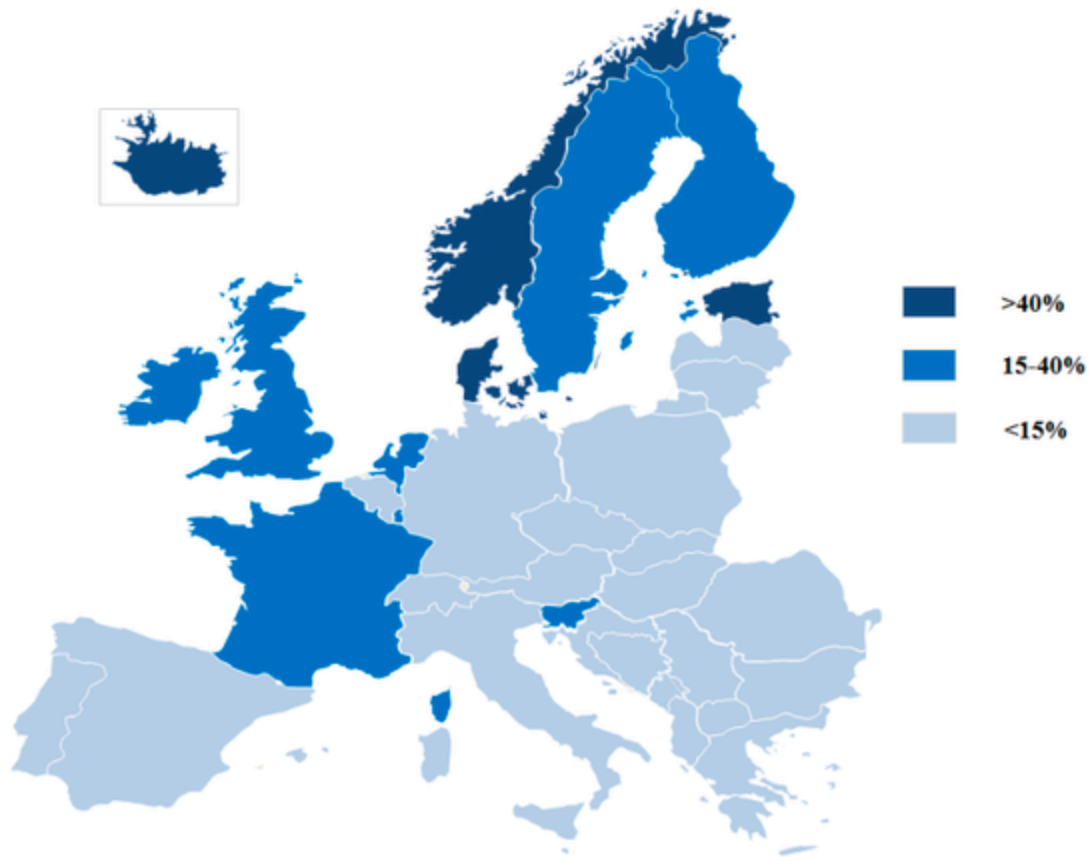The COVID-19 pandemic has accelerated the adoption of e-invoicing in Europe. As remote working has become the norm, companies have realized the importance of digitizing their operations, including invoicing processes. E-invoicing has enabled companies to ensure business continuity, maintain cash flow and minimize physical contact. It has also contributed to cost savings as organizations seek to reduce operational costs during the economic downturn caused by the pandemic.

Key trends

1. **Adoption of artificial intelligence and machine learning:** E-invoicing solutions are incorporating artificial intelligence (AI) and machine learning (ML) technologies to automate invoice processing, detect anomalies, and provide intelligent insights.
2. **Blockchain-based invoicing:** The use of blockchain technology ensures the integrity and immutability of invoice data, enhancing security and trust in E-Invoicing transactions.
3. **Mobile invoicing:** With the increasing use of mobile devices, e-invoicing solutions are providing mobile apps and responsive interfaces for convenient invoice generation, approval, and payment on the go.
4. **Advanced analytics and reporting:** E-invoicing platforms are incorporating advanced analytics capabilities to provide businesses with real-time insights, financial forecasting, and customized reporting.

LOCATION-SPECIFIC ANALYSIS

Here's an in-depth look at e-invoicing adoption and market characteristics in Slovenia, Serbia, and Croatia.

EU member	E-invoicing format	Electronic signature	Archiving period
Slovenia	National format e-Slog 2.0 or the UBL 2.1 (PEPPOL BIS 3.0)	Not Mandatory	10 years
Serbia	UBL 2.1 (PEPPOL BIS 3.0)	Qualified electronic signature	B2G documents must be stored permanently. B2B documents must be stored for 11 years.
Croatia	UBL 2.1 (PEPPOL BIS 3.0) or CII	Not mandatory	11 years

Slovenia

Slovenia has two central platforms to receive electronic invoices, depending on the function of the public institution. The UPJ platform (Public Payment Administration) for institutions categorized as "budget users", and the Exchange HUB for entities categorized as "non-budget users". Both platforms are connected to the PEPPOL network.

Serbia

From 1 January 2023 e-invoicing is mandatory in the B2B sector. The Serbian Ministry of Finance is the body responsible for the implementation of electronic invoicing in the country. In accordance with the Law of Electronic Invoicing (RS 44/2021, 129/2021), the electronic invoice will be developed gradually.

The Serbian government will use a national platform named eFaktura in order to manage the exchange of electronic invoices. The eFaktura platform validates the documents before sending them to the recipient. In order to use the eFaktura system, the taxpayer must first register in the portal and must be authenticated by means of a Qualified electronic signature.

Croatia

Since 2019 the electronic invoice with public administrations has been mandatory.

The government has a central platform called Servis eRačun and is operated by the financial agency FINA, which is connected to all public administrations. Connections to the platform are performed through PEPPOL.

You can find e-invoicing requirements for other countries in the EU by selecting the country on this map.

COMPETITOR ANALYSIS

EU e-invoicing market has these key players:

Company	Key offerings	Operational countries
Tradeshift	Global compliance, AP automation, supplier onboarding, real-time tracking, enhanced cash flow, and tax season simplification	Global network, with operations and users worldwide, particularly strong in North America and Europe.
The Sage Group plc	Business management solutions including accounting, payroll, CRM, ERP for SMBs.	Operates worldwide, with a significant presence in the UK, Europe, North America, and Australia.
SAP Ariba	Comprehensive suite of solutions extending beyond traditional procurement processes. Reduces buying cycles and supply costs significantly.	Globally, with a strong presence in North America, Europe, Asia-Pacific.
IBM Corporation	Advanced technology integrations such as artificial intelligence (AI) and blockchain to enhance the efficiency and accuracy of invoicing.	Global operations, with a presence in over 170 countries.
Coupa	Emphasizes cloud-based deployment for scalable, flexible solutions. Recognized for rapid implementation and significant cost savings.	Global presence, particularly strong in North America, Europe, and increasingly in Asia-Pacific.

Comarch SA	Quick and easy cloud-based implementation, global legal compliance for exchange of invoice documents, enhanced business efficiency through creation, processing, and storage of e-invoices, and a subscription-based, cost-effective solution.	Primarily operates in Europe but has been expanding its presence in North America and Asia.
Cegedim SA	Supplies services, technological tools, specialized software, data flow management services, and databases, mainly for healthcare sectors.	Primarily in Europe but also operates in North America and has a presence in more than 100 countries.
Basware Corporation	Offers purchase-to-pay (P2P), accounts payable automation, e-invoicing, and e-procurement capabilities. Stands out for advanced e-procurement solutions and automation.	Wide international presence, including Europe, North America, and Asia-Pacific.

This table provides a generalized overview based on information available as of 2023. For the most current and detailed information, consulting the companies' official communications is recommended.

KEY INDUSTRY DEVELOPMENTS

1. **Introduction of regulatory mandates:** Governments across Europe have introduced regulations and mandates to promote E-Invoicing adoption. For example, the European Union Directive 2014/55/EU mandates the use of E-Invoicing in public procurement processes.

2. **Partnerships and collaborations:** Invoicing service providers have formed strategic partnerships with financial institutions, payment service providers, and technology companies to enhance their offerings, expand their market reach and drive innovation.

3. **Technological advancements:** E-invoicing solutions are continuously evolving, leveraging advancements in cloud computing, AI, ML, and blockchain to deliver more robust, secure, and user-friendly platforms.

4. **Increasing interoperability efforts:** Market participants are actively working towards harmonizing E-Invoicing standards and promoting interoperability between different systems and formats. This ensures seamless exchange of invoices between businesses and facilitates cross-border transactions.

ROLE OF PAN-EUROPEAN PUBLIC PROCUREMENT ONLINE (PEPPOL) NETWORK

The Pan-European Public Procurement Online (PEPPOL) network is a cornerstone in the digital transformation of financial and administrative operations across Europe and beyond. It is designed as a secure and interoperable network that facilitates the seamless exchange of electronic documents, primarily e-invoices, among various stakeholders including businesses, government entities, and public sector organizations.

The network's architecture allows entities from different countries, including those outside the European Union (EU), to communicate electronically, streamlining the processes involved in public procurement and beyond.

Key features of PEPPOL

- **PEPPOL BIS Billing 3.0:** The Peppol BIS Billing 3.0 is a Core Invoice Usage Specification (CIUS) of the European standard for e-invoicing, and it is a preferred option for e-invoicing in Europe.
- **Integration with ERP systems**: Businesses can integrate their ERP systems with Peppol to create and send e-invoices in the standard PEPPOL format, ensuring compliance with the ViDA and DRR requirements.
- **Real-time invoicing and reporting:** Peppol's e-invoicing platform facilitates real-time issuance, exchange, reception, and validation of e-invoices, as well as the creation and communication of the "ViDA message" to tax administrations, which fulfils the content requirements established by ViDA.

Why PEPPOL is widespread

The PEPPOL network is already widespread in Europe, with **224** Access Points connected to the PEPPOL eDelivery Network in **20** EU countries, **3** EEA countries, and **3** other non-European countries.

The standardized information content of the PEPPOL network makes it easier to process and enables translations of invoices between different formats. Moreover, the European Commission supports the adoption of the PEPPOL

There is a trend in Europe towards the PEPPOL Network becoming a standard Core Invoice Usage Specification (CIUS) for e-invoicing, and it can be attributed to several factors:

- **Standardization:** PEPPOL standardizes the format and content of electronic documents, including invoices, making it easier for entities to process and understand them, regardless of their origin. This standardization also supports the translation of invoices between different formats, enhancing interoperability.
- **European Commission Support:** The PEPPOL network has received robust support from the European Commission, which sees it as a vital tool in achieving greater efficiency and transparency in public procurement processes across the EU.
- **Global Reach:** Although originally focused on Europe, PEPPOL has expanded its reach globally, with access points in over 30 countries worldwide. This expansion is driven by the network's ability to facilitate easier and more efficient cross-border transactions and procurement processes.
- **Growing Network:** The PEPPOL network boasts a significant number of access points across the EU, EEA, and several non-European countries. This extensive network ensures that businesses and public sector entities can connect with a wide range of partners, fostering greater collaboration and efficiency in their operations.

Technical details of PEPPOL

The main part of the European standard on e-Invoicing (EN) is the semantic data model (EN 16931-1) and its business rules.

The EN does not define the technical structure (syntax) of the electronic invoice, but instead uses two international XML message standards to carry the information defined in the core invoice data model. The European standard specifies how the information in the core invoice must be mapped into each message standard. The syntaxes supported are

- the widespread UBL 2.1 Invoice message (which is being supported by PEPPOL)
- and the UN/CEFACT Cross Industry Invoice (CII) message.

Invoice exchange process and verification flow within PEPPOL

The PEPPOL network facilitates electronic exchange of business documents, including invoices, across different countries and systems. The process involves several steps, ensuring secure transactions between buyers and suppliers:

1. PEPPOL Infrastructure Understanding:
   - Access Points (APs): Gateways for sending and receiving documents.
   - PEPPOL BIS: Standards for content and format

2. Sender Preparation:
   - Invoice creation: Using financial system, adhering to PEPPOL BIS standards.
   - Select Access Point
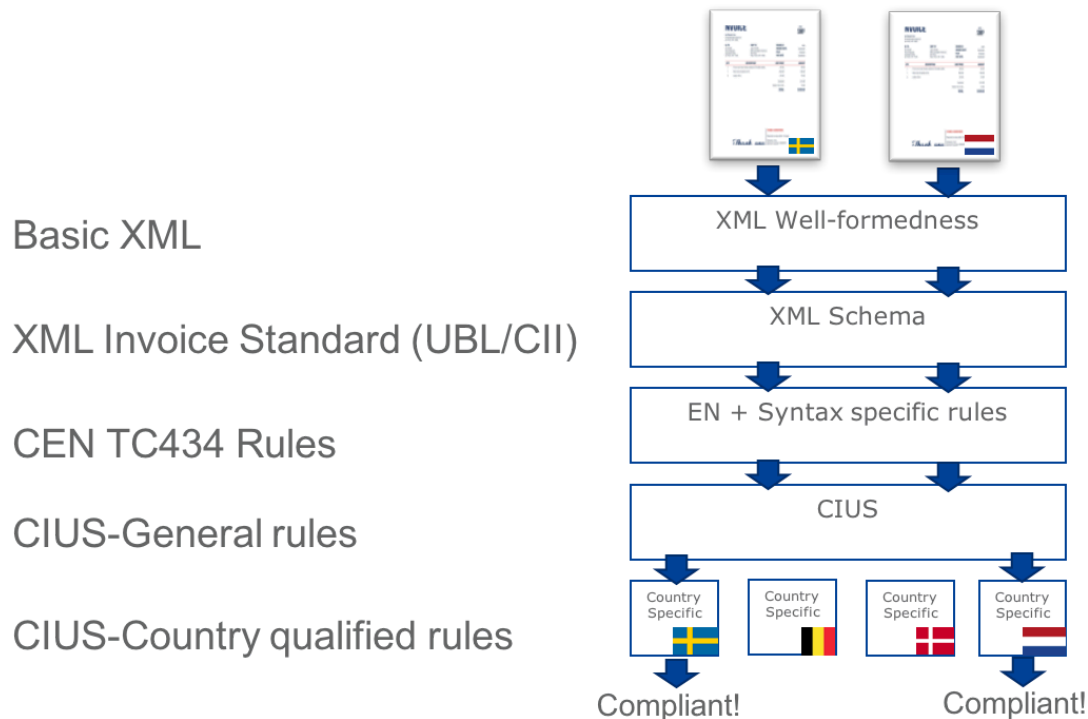
3. Document Transmission:

- Sender's AP sends the invoice to the PEPPOL network
- Routing to recipient's AP using PEPPOL ID

4. Receipt by Receiver:
   - Recipient's AP receives the invoice from the PEPPOL network
   - Delivery to recipient's financial or ERP system

5. Acknowledgement and Processing:
   - Optional acknowledgement of receipt.
   - Invoice processing for payment or dispute
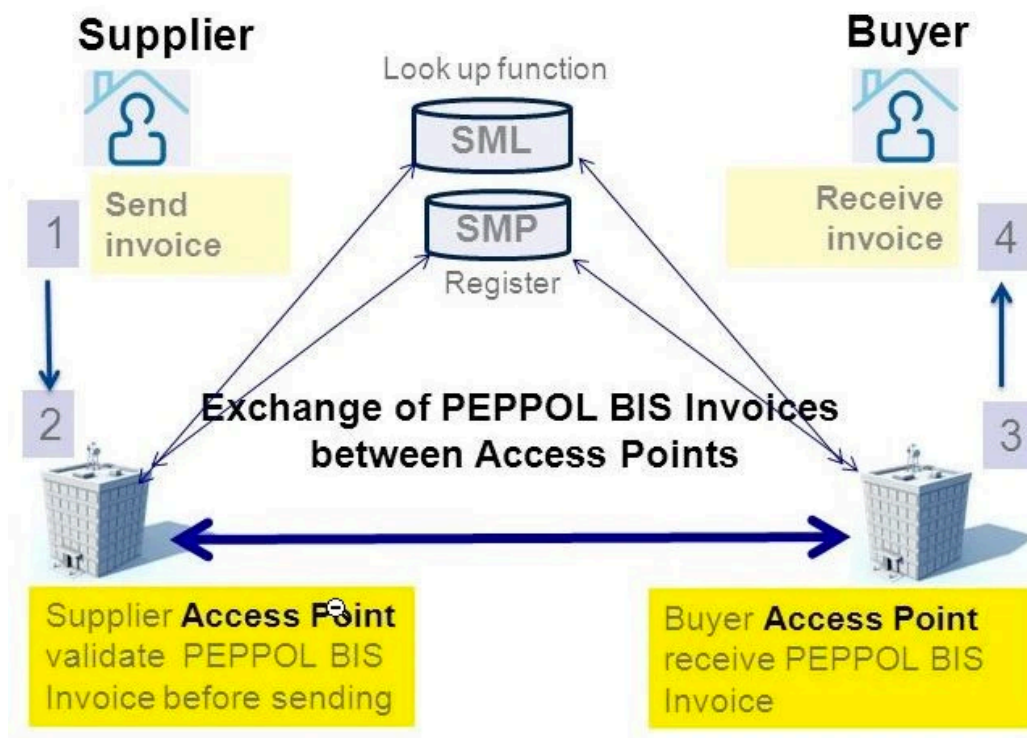
Exchange of PEPPOL BIS Invoices between Access Points

The verification flow within the PEPPOL network ensures compliance, security, and interoperability of exchanged documents.

1. **Preparation and compliance:** Both parties ensure document compliance with PEPPOL BIS and system readiness.
2. **Document sending:** Sender prepares and sends the document to their PEPPOL Access Point.
3. **Document routing and verification:** The document is routed through the network to the recipient's Access Point, where it undergoes verification for compliance and integrity.
4. **Delivery and acknowledgement:** Verified documents are delivered to the recipient's application, and acknowledgements may be sent back.
5. **Error handling:** Errors are detected and resolved through notifications, leading to document resubmission if necessary.

Basic XML

XML Invoice Standard (UBL/CII)

CEN TC434 Rules

CIUS-General rules

CIUS-Country qualified rules

XML Well-formedness

XML Schema

EN + Syntax specific rules

CIUS

Country Specific

Country Specific

Country Specific

Country Specific

Compliant!   Compliant!

5 layers of verification of an e-invoice XML-file

TECHNOLOGICAL INFRASTRUCTURE FOR E-INVOICING

The adoption of e-invoicing across Europe is not merely a legislative shift but a transformation that hinges on robust technological infrastructure. The backbone of this infrastructure includes various tools and technologies, many of which are open-source, providing accessible solutions for businesses of all sizes to integrate e-invoicing into their operations seamlessly.

Here are examples of open-source projects facilitating e-invoicing adoption:

- phax/en16931-cii2ubl: This Java library is a converter for EN16931 invoices from CII (Cross Industry Invoice) to UBL (Universal Business Language) formats. It ensures that CII invoices conform to UBL standards according to the EN16931 validation rules, catering especially to XRechnung invoices within Germany. The library is licensed under Apache-2.0, making it freely available for commercial and non-commercial use.
- ConnectingEurope/eInvoicing-EN16931: This project provides validation artefacts for the European e-invoicing standard EN16931. It includes tools for testing CII and UBL documents against the EN16931 standard, ensuring that e-invoices generated by businesses comply with European regulations. The project is an essential resource for developers and businesses looking to implement EN16931 compliant e-invoicing solutions.

These open-source projects exemplify the collaborative effort in the tech community to support the widespread adoption of e-invoicing across Europe.

The technological infrastructure for e-invoicing is crucial for several reasons:

- **Compliance:** It ensures that businesses can meet legal requirements across different European countries, avoiding penalties and facilitating smoother cross-border transactions.

- **Efficiency:** Automated e-invoicing processes reduce manual errors, save time, and lower costs associated with traditional paper-based invoicing.
- **Interoperability:** Standardized formats and protocols enable seamless exchange of invoices between various systems, making it easier for businesses to work with domestic and international partners.
- **Innovation:** The adoption of e-invoicing paves the way for further digital transformation in finance, opening up opportunities for advanced analytics, real-time reporting, and better cash flow management.

TRANSITIONING TO E-INVOICING

This section provides a step-by-step guide and practical advice to facilitate a seamless shift from traditional invoicing methods to a robust, efficient e-invoicing system.

Steps for successful implementation and compliance with European regulations

1. **Conduct a thorough analysis** of your current invoicing processes to identify areas where e-invoicing can introduce efficiency and cost savings.
2. **Establish a clear roadmap** outlining key milestones, such as technology selection, system integration, testing phases, and full-scale deployment.
3. **Focus on selecting a flexible e-invoicing platform** that not only meets current regulatory requirements but is also adaptable to future changes and can integrate smoothly with other business systems, including ERP and CRM software.
4. **Engage in proactive communication** with all stakeholders, including suppliers, customers, and employees, to ensure they understand the benefits and changes brought by e-invoicing.
5. **Offer training sessions** for employees to familiarize them with the new system and processes.

6. For suppliers and customers, **consider implementing incentive programs** to encourage early adoption.
7. **Monitor the transition closely**, gathering feedback to address any challenges promptly and making adjustments to the process as needed.
8. Finally, **ensure ongoing compliance** with all regulatory requirements, staying informed about any changes in e-invoicing legislation and standards.

CONCLUSION

The Europe e-invoicing market is experiencing significant growth driven by factors such as government initiatives, cost reduction needs, and increasing awareness about the benefits of digitalization. While resistance to change and interoperability challenges pose hurdles, emerging technologies and value-added services present opportunities for market players.

The COVID-19 pandemic has further accelerated the adoption of E-Invoicing, highlighting its importance in ensuring business continuity and efficiency. With continuous technological advancements and regulatory support, the future of the Europe -Invoicing market looks promising, with increased adoption expected across various industries and regions.

FAQ

How can businesses ensure their e-invoicing solutions are future-proof?

To future-proof e-invoicing solutions, businesses should select platforms that offer flexibility, scalability, and compliance with evolving standards. Engaging with solutions that actively update to align with the latest regulatory requirements and technological advancements is crucial. Additionally, choosing providers that support interoperability between different e-invoicing systems can help businesses adapt to future changes in the e-invoicing landscape.

What role do international standards play in e-invoicing, and how should businesses adapt?

International standards for e-invoicing, such as the Cross-Industry Invoice (CII) and Universal Business Language (UBL), facilitate cross-border transactions by ensuring compatibility and understanding between different systems and regulations. Businesses should choose e-invoicing solutions that support these standards to ensure smooth international operations. Staying informed about changes in these standards and participating in industry discussions can also help businesses adapt more effectively.

Can e-invoicing integrate with existing business systems, and what are the benefits?

Yes, e-invoicing solutions can integrate with existing business systems, such as Enterprise Resource Planning (ERP) and accounting software. This integration streamlines the invoicing process, reduces manual data entry, and minimizes errors. It allows for automated data exchange and processing, leading to improved efficiency, faster payment cycles, and enhanced data accuracy. Businesses should look for e-invoicing solutions that offer easy integration capabilities with their current systems to maximize these benefits.

References

1. ViDA: VAT in the Digital Age and what it will mean for business
2. Richtlijn - 2014/55 - EN - EUR-Lex
3. EN 16931 compliance
4. Serbia B2B e-invoicing update - vatcalc.com
5. All about mandatory e-invoicing in Belgium
6. E-invoicing in Europe
7. Required syntaxes
8. Belgian Peppol Authority - Confluence

ABOUT SETRONICA

We take pride in our expertise in creating and delivering outstanding software products. We can help you clearly define your ideas and then develop them in the most effective and appropriate manner, using the most suitable technology.

Having outstanding ideas and concepts is essential, but they are meaningless if they can't be implemented. With our team's expertise and enthusiasm, we can make sure that your ideas become reality.

Our teams are developing software solutions for companies such as Tradeshift, WOWcher, RealPage, Marks and Spencer, Amazon.com, LaRedoute, Lifetime Brands, BeachCamera, Borderlinx, eSupplySystems, Mydeco, Butterfly Photo, Sensis Pty Limited, Intershop, PLUS Warenhandelsgesellschaft, Time-Life, Zabar's, Action Village, CBS Sportsline, Bertelsmann SE & Co, Niman Ranch, FLAX art & design, Four Seasons General Merchandise (4sgm), Tesco, Ixtens, Merchantry, SysIQ and and others.

We are available to address any questions and provide support throughout the process. We appreciate your consideration and eagerly await your response to commence this exciting project.

Contact us