2017

E-Invoicing / E-Billing

Significant market transition lies ahead

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0. Executive Summary

Before the turn of the century, there were less than 15 specialised e-invoicing service providers worldwide. Soon may the number of network operators reach 1500. We estimate that the size of the global e-invoicing and enablement market in 2017 is Euro 3.3 billion, and that it will reach approximately Euro 16.1 billion in 2024.

The private industry was the main driver for the market development in phase one; however, it is now being increasingly supported by the governments. The VAT gap becomes more and more the main accelerator for the digitalisation of any business, fiscal, reporting, inventory, trade, and logistic documents.

The objective to significantly reduce the VAT gap cannot be achieved using models based on a voluntary participation with some incentives. Hence, tax payers are increasingly required to use real-time clearance models. In this case, organisations are required to exchange invoices via tax authorities, or to submit at least key invoice data in electronic format. Latin American, Asian and some European countries with the largest tax collection challenges implemented the clearance model first. The model might gradually conquer the world, and it is expected to be the dominant control method globally from 2025. It will eventually cover all kinds of fiscal documents, such as invoices, payment receipts, credit notes, debit notes, monthly salary statements etc. On the positive side, e-invoices that are issued using clearance models reduce tax compliance costs by 8-39% compared to paper invoices.

Today's business models evolved through decades, which focused on conventional paper processing. In Europe and North America, businesses and governments are usually taking a gradual approach to replacing these paper-based systems with digital substitutes. Small steps can only create incremental improvements.

A rapidly growing number of disruptive next-generation technologies lay a strong foundation as strategic drivers. They pave the way to substitute old solutions and processes by a completely new approach. A powerful market transition is taking place in our industry. This period of movement from one stage to another creates new opportunities for innovative and forward-thinking companies, which are ready to take advantage of this shift.

The invoice processing with its' high proportion of repetitive and rule based work is a key topic to be affected by the market transition ahead of us. This phase can mean an opportunity or a threat.

More than 90% of all invoices worldwide are still processed manually. This is absolutely unsatisfactory. Requirements for the clearance model may help to significantly increase the proportion of electronic invoicing. Emerging technologies like blockchain, cloud aggregation platforms, robotic process automation, machine learning and advanced analytics may pave the way to improve the degree of business process automation and exploit the full potential for savings.

The digital transformation is no longer an option, it's the imperative. It is rather the question how to unleash the power of the digitalisation while maintaining a healthy business.

For businesses and public-sector organisations, we see a need to change from a reactive to a proactive approach. This helps to avoid a heterogeneous solution, channel, format and process landscape. We recommend defining a holistic business process automation strategy as soon as possible. Reading this report can be a good start.

1. Introduction

1.1 The purpose of the Report

E-invoicing/e-billing is a rapidly expanding technology. Whereas Latin American and many European and Asian countries are already considerably advanced in this field, a vast majority of organisations have not yet decided upon one system or service.

A high number of providers offer solutions and services for this matter. In this phase, it is important to have up-to-date information and guidance on selecting the right solution and provider.

An independent international e-invoicing consultant and market analyst has written this report. Its purpose is to support invoice issuers and recipients wishing to replace expensive paper-based invoice management. It gives relevant information for succeeding with an e-invoicing project. The report not only provides facts, but also qualitative views, evaluation and details about the products offered by many providers.

1.2 Methodology

The author has worked in the e-invoicing business since 1997. During the first two years in Switzerland, he established one of the first e-billing/e-invoicing services in Europe. Since 1999, he has acted as an independent consultant and has made business plans, RFPs, system evaluations and many technical and marketing concepts for large invoice issuers and recipients, governments, integrators, solution and service providers. During this time, he has constantly collected important data about the relevant markets. The results are repeatedly published in newsletters and market reports.

The report is based on

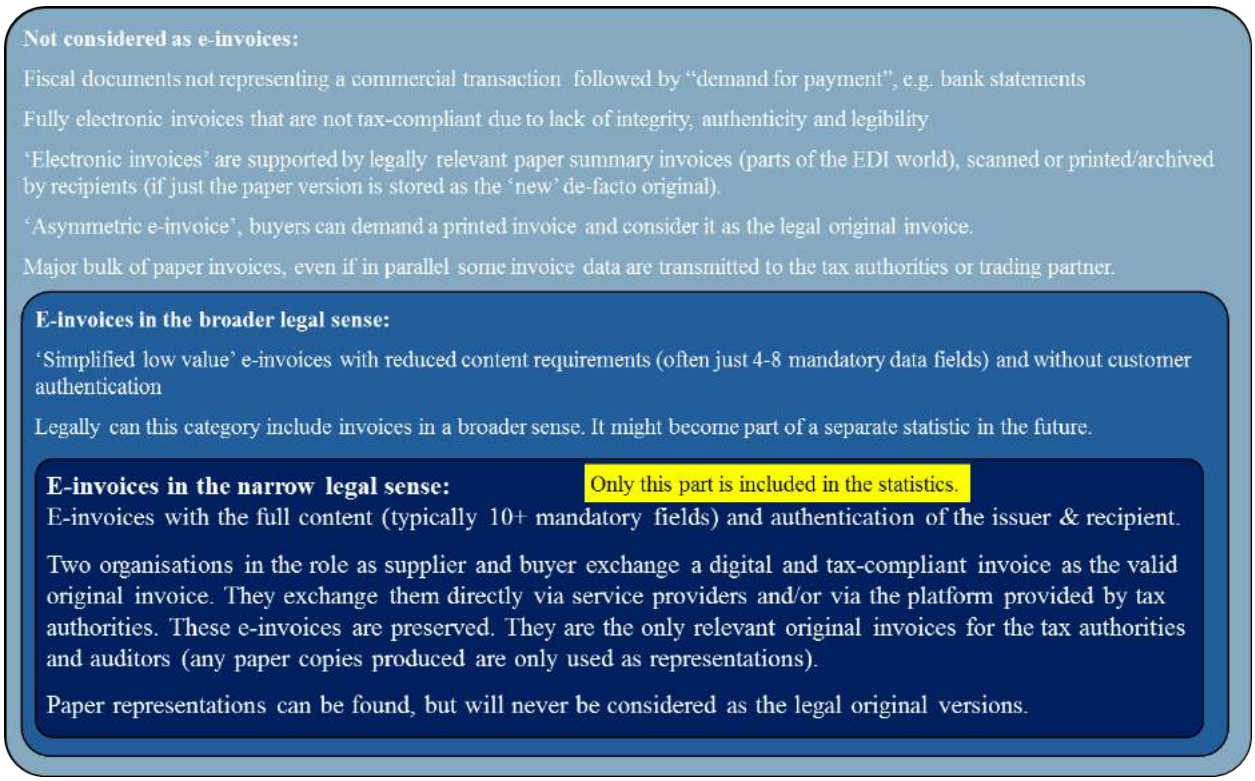
- Publicly available information; we gathered information from thousands of sources over the years and adjusted them
- Market research carried out by third parties (representing 15,000+ enterprises and 10,000+ consumers)
- Verification of important figures by customer/provider visits and/or calls
- Own in-depth experience from more than 160 customer consulting projects in 50+ countries
- Consolidation of the above information

1.3 Terms and definitions

The term “e-invoice” is used for the Business-to-Business (B2B) and Business-to-Government (B2G/G2B) segment. It includes exclusively the electronic invoice exchange between suppliers and buyers, but does not consider the data exchange between suppliers/buyers and tax authorities for reporting and control purposes. The legislation in EU countries considers a relatively broad definition: The issuing and receipt of VAT compliant invoices in an electronic format. Most national legislation mandates users to archive the e-invoices in its original (electronic) format, even if it were printed after receipt. This definition in Europe corresponds with the broad recognition by users and includes image-based digital invoices (mainly PDFs).

Definitions in other regions of the world differ greatly. Although, in any case, it is not valid, for others e-invoicing means much more than simply ‘automated invoicing’. In this report, ‘e-invoicing’ is used in the narrow legal sense as described below. Terms like ‘touchless e-invoicing’, ‘zero touch e-invoicing’ or ‘true e-invoicing’ are used in the event of structured e-invoices.

Figure 1: Definition of e-invoice in a global context



In this report, "e-billing" covers the electronic bills from Business-to-Consumers (B2C).
Note: Some market participants use this term alternatively for the process on the issuer side in general, regardless of whether the customer is an enterprise or household.

Remark: In the past, we included invoices/e-invoices in the statistics if they fulfilled the description as defined in their national legislation. Unfortunately, the figures were not completely comparable at a global level. This approach is now replaced by a common denominator, valid for a majority of countries around the world. The new figures are therefore lower than in past publications.

2. The market

2.1 Global market volume and value

2.1.1 Volume of invoices and invoice-like documents

2.1.1.1 Bills/Invoices

Whereas the volume (paper + electronic) in Europe and Latin America is relatively well known, figures for other continents may just be guessed.

Figure 2: Guess for global bill/invoice volume

Segment	Estimated annual volume to be at least
B2C/G2C	200 billion
B2B/B2G/G2B	200[1] billion
Total	**400 billion**

Source: Billentis

2.1.1.2 Invoice-like documents and messages

Additional volume of invoices in the broader legal sense and "invoice-like documents and messages" can also be tremendous (depending on country likely **5 to 15 times over the invoice volume**). Invoices are different from receipts (payslips, tickets). Both invoices and receipts are ways of tracking purchases of goods and services. In general, the content of the invoices can be similar to that of receipts including tracking the amount of the sale, calculating sales tax owed and calculating any discounts applied to the purchase. Classical examples of these "invoice-like documents and messages" are

- Invoice data sent to the tax authorities just for validation or audit reasons, e-reporting, VAT statements
- Digital replacements of "fiscal printers producing payment receipts". Electronic (payment) receipts, generated by tills at the Points of Sale (shops, restaurants, ticket counters) and sent to the tax authorities just for validation or audit reasons (e.g. in Taiwan and some Latin American countries); more accurate translations to English use the terms "electronic tax receipts" or "uniform invoices" for these messages.

2.1.2 Value of the e-invoicing market

E-invoicing market has been around for over 20 years now. Electronic documents have gradually replaced paper-based invoices. In phase one, the European market was developed mainly by private industry; globally it was advanced by high-volume industries. In the second phase of the market development, private industry was still the main driver. Nowadays, however, the main driver is an increasing number of governments, which require organisations to exchange invoices electronically. In this regard, Latin America is very advanced, followed by Asia. This trend can be seen around the world.

Billentis estimates that the size of the global e-invoicing and enablement market in 2017 is Euro 3.3 billion (USD 3.6 billion), and that it will reach approximately Euro 16.1 billion (USD 17.4 billion) in 2024.

[1] Compared to report 2016 slightly increased figure; got meanwhile more accurate figures from some larger countries.

One of the assumptions is that all Latin American and most Asian countries will have established a clearance model until 2024 that requires market participants to exchange invoices only in electronic format. The estimates include solutions and services that are directly related to e-invoicing, as defined in this report; e.g., exchange networks, communication gateways, SaaS, PaaS, implementation costs, value added services like data validation, formatting and synchronisation. Workflow, archive solutions, and processing of data that is related to invoices (purchase orders, catalogues, sourcing and payment) are not part of this estimate.

Asia and Latin America are expected to achieve the highest annual grow rates (CAGR 62% and CAGR 32%, respectively). Europe has the highest market value today but may achieve until 2024 only single-digit percent annual growth rates on average. On the one hand, this is because the starting basis is already high. Another important reason is that the unit prices may fall significantly faster than elsewhere. Now, the average cost per e-invoice is much higher than the average cost worldwide. This is due to the very fragmented market structure, the high number of small solution providers that operate mostly on the domestic market, different languages, legislations and standards. In contrast, countries with clearance models and e-invoicing requirements feature a highly standardized approach, and achieve a high proportion of electronic invoices. Interconnects between different e-invoicing network operators are not required in such countries, or otherwise are very easy and economical to implement and operate. Hence, the average cost per e-invoice in countries with clearance models is typically in the low single-digit Euro cent area.

2.2 Evolving market models

2.2.1 Overview

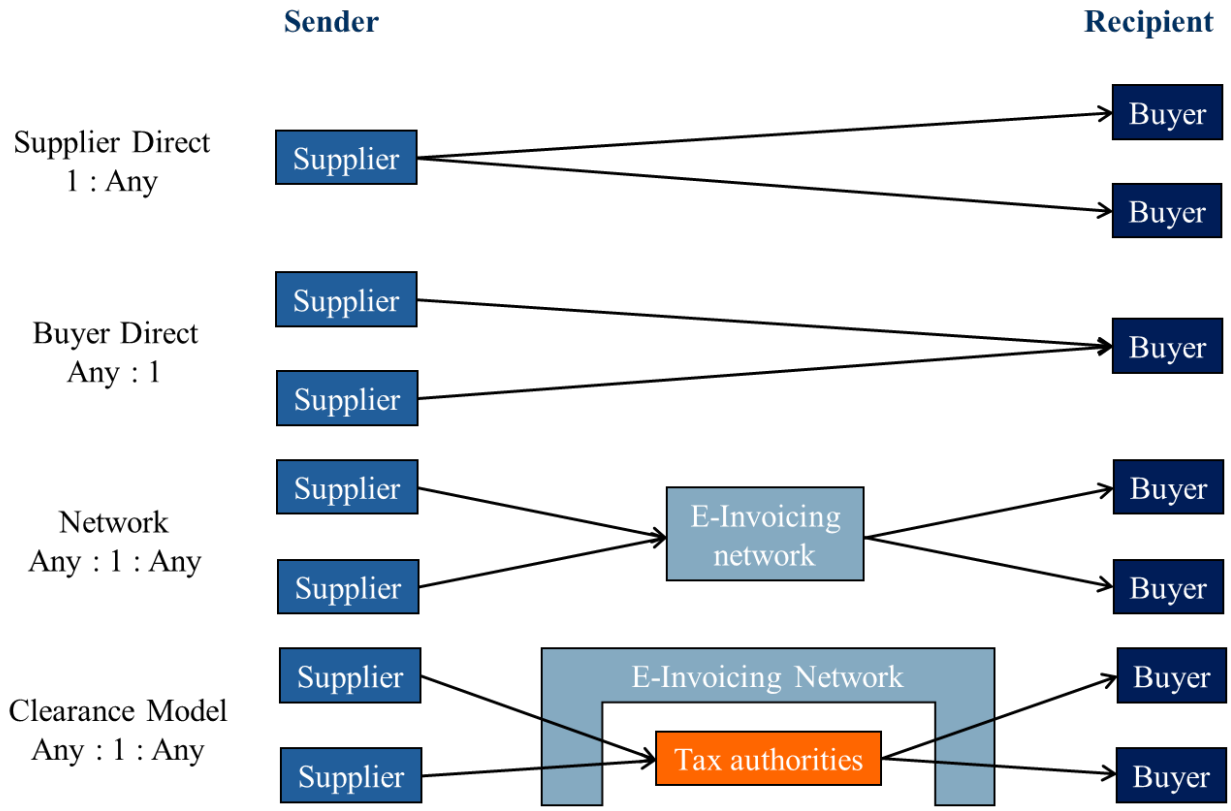
Many large organisations intend to exchange electronic business messages directly with their counterparts. This is still a good approach in the case of stable partnerships with very large trading parties and if the legal requirements for these messages are not very high.

The invoice can be seen as the “queen of documents/messages”. In most countries, it is THE document regarding VAT reclaim, for tax reasons and auditing. If paper based invoices are replaced by electronic invoices, it is essential to stay VAT compliant. Even if very large organisations prefer to exchange electronic invoices directly with their counterparts, the vast majority of companies are advised to use a professional third party service.

We distinguish between several e-invoicing models:

- Supplier Direct Model (in-house)
- Buyer Direct Model (in-house)
- Outsourced Direct Model: Software as a Service (SaaS), Platform as a Service (PaaS)
- Network Model, Third party operator service
- Hybrid Model
- Total Invoice Management (in-house or outsourced)
- Clearance model

Figure 3: Overview about main market models



2.2.2 Supplier Direct Model

A supplier implements an e-billing/e-invoicing solution within his environment for distributing the electronic invoices via different channels:

- Sends them to the customers via email, SMS, Apps etc.
- Provides the e-invoices on his customer portal; Customers can login, view and download them

The supplier direct model is quite popular in high-volume industries like telecommunications, utility and card companies, as well as online shopping portals. Small businesses also have a preference to exchange e-invoices directly with their trading partners. Due to their size, they do not have the capacity to provide e-invoices on their own portals, but instead exchange them as PDF invoices attached to emails.

2.2.3 Buyer Direct Model

A buyer implements an e-invoicing and/or invoice management solution within his environment for receiving the electronic invoices via different channels:

- Gets invoices directly as a data stream for importing them into his AP solution (preferred mainly for invoices of large suppliers)
- Smaller suppliers key-in the invoice data in a web-template on the corporate invoice portal of the buyer (webEDI); data can be automatically processed and imported into the AP system

This model is preferred by larger organisations with a limited number of suppliers.
The model can also be quite successful with smaller suppliers if orders are sent to them in electronic form alone (e.g. via extranet portal). Many solution providers offer a functionality to convert these purchase order data easily into an invoice for sending back to the buyer.

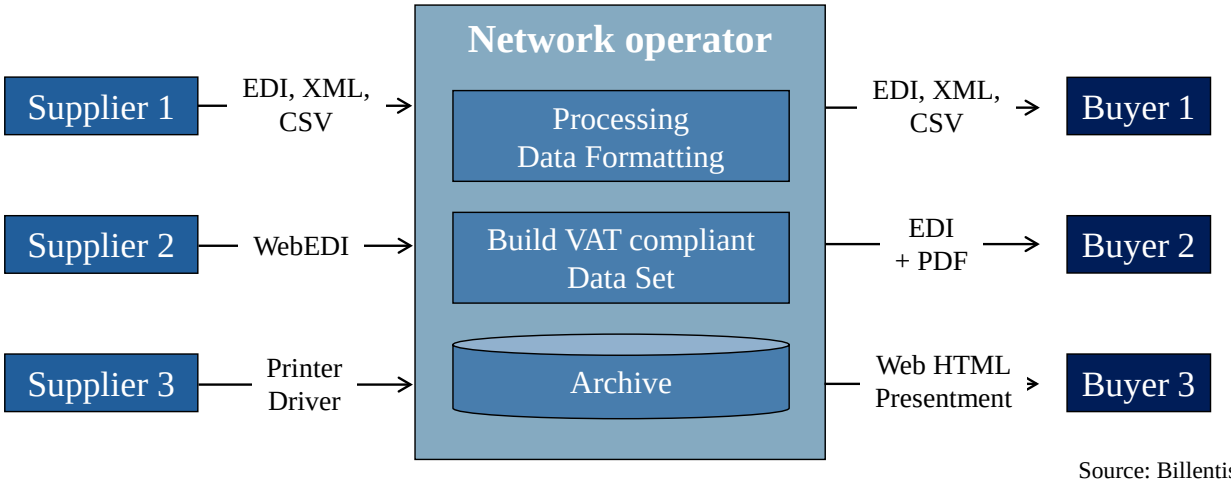
2.2.4 Direct Model as a Service

Over the years, large organisations using biller or buyer direct models concluded that the marketing rollout is harder than expected and that the maintenance of their applications is ultimately too expensive. That is why some service providers offer white-label services for them (SaaS, Software as a Service, PaaS, Platform as a Service). They run a direct model on behalf of large issuers and recipients of invoices. These providers typically develop, maintain and operate the software. Customers pay just a fixed integration fee and a volume/time based fee.

2.2.5 Network Model

Issuer and recipient have just one interface to their service provider, the network operator[2]. This e-invoicing network operator manages the VAT compliant invoice transfer to clients. Issuers can deliver invoice data (e.g. ERP output format, any XML data or a flat file) to the operator who translates it into the target format of the recipient. The operator supports the main legal requirements, authenticity and the end-to-end data integrity. An increasing number of operators offer additional services such as tax compliant long-term archiving.

Figure 4: Network Model



Source: Billentis

Large issuers and recipients intend to make a full integration into their AR and AP applications. SMEs often prefer easier and quicker solutions, either by using WebEDI or printer drivers. For both channels, suppliers' AR systems do not need any modification or upgrade. Use of e-invoicing is possible for them within hours after making their decision.

2.2.6 Hybrid Model

Message transfer with a few high-volume and strategic important counterparts is based on a direct model, whereas mid-sized and small counterparts are addressed via network operators.

Organisations using this model have combined the advantages and disadvantages of direct & network models.

Advantage: Good solution for all organisations already practising a direct model with chance for an efficient route to all smaller suppliers and customers.

[2] In some countries, the terms "consolidator", "service provider", "e-Commerce network", "B2B network", "e-invoice cloud", B2B cloud or "supplier network" are more common.

2.2.7 Different forms of clearance models for e-invoicing and e-reporting

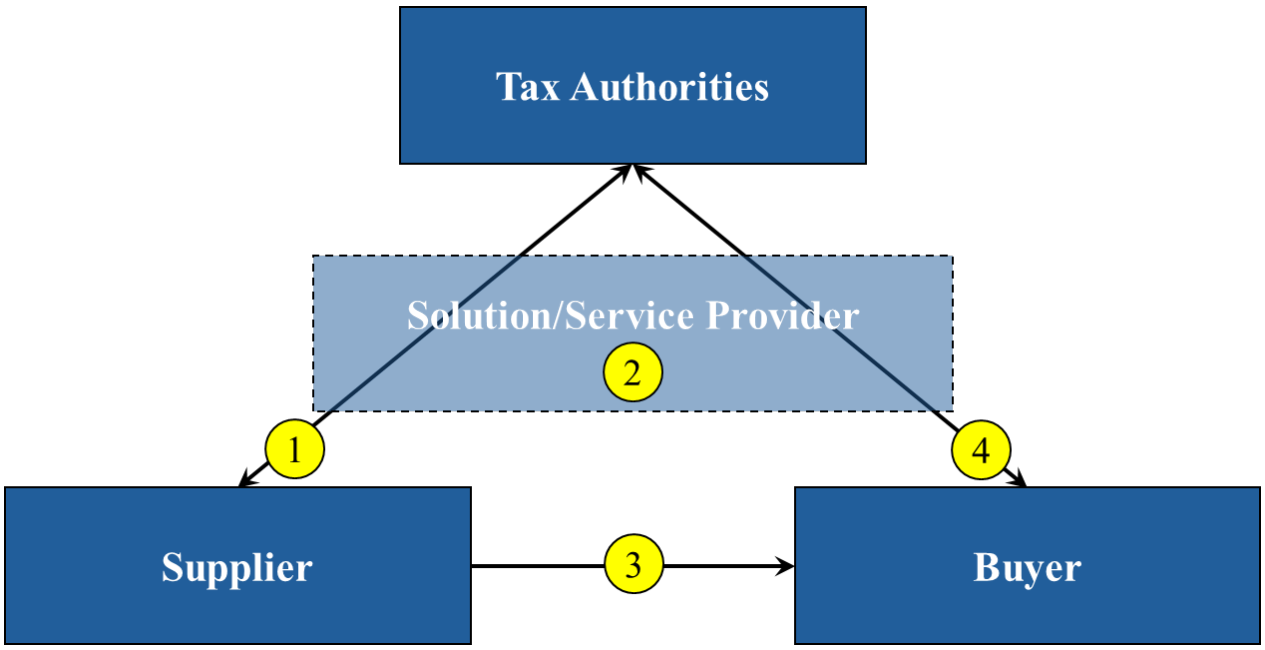
At least in the countries with VAT systems, an invoice is a key document to provide evidence for tax compliance. For historical reasons, most of these countries still practice the post-audit model, which means that tax audits happen years after the business transactions have taken place. This model has many disadvantages for taxpayers and tax authorities. It is also one major reason for tax evasion. This post-audit model is no longer up-to-date. Hence, we see a rapid change towards real-time or at least near real-time clearance models. In this case, organisations are required to exchange invoices via tax authorities, or to submit at least key invoice data in electronic format. Latin American, Asian and some European countries with the largest tax collection challenges implemented the clearance model first. The model might gradually conquer the world, and it is expected to be the dominant control method globally from 2025 [1]. It is already affecting most businesses operating internationally. The model might become the norm, but, unfortunately, not all countries will implement it in the same form.

Although invoice-relevant data can be exchanged using the same technical platforms, and following the same schemes and models, it is useful to distinguish between e-invoicing and e-reporting to tax authorities. Mainly in Asian publications, e-reporting from cash registers and virtual printers to tax authorities is often translated into English using the term “e-invoicing”. However, we use the term differently in this document.

Figure 5: Distinguishing between e-invoicing and e-reporting to tax authorities

E-invoicing	**E-reporting to tax authorities**
Both the supplier **and** the buyer have finally an electronic invoice that represents for tax purposes the **invoice original**. These invoices include the full content. In practice, it may be one document, or several documents, one of which contains all the core information relevant for tax purposes, with separate extensions that are more relevant to suppliers and buyers.	E-reporting includes reports of business transactions, extracts of invoices, declarations of any other fiscal data, and VAT records. It is devised to speed up processing of VAT statements and returns. In one application example, only the supplier has finally an electronic invoice, but sends the original invoice in paper form to the buyer. In another scenario, the parties exchange just an extract of the invoice electronically (which is suitable for reporting and tax audit purposes).

Figure 6: General principles of the Clearance Model



Item	Forms/Description
1	E-invoicing: In many countries, the tax authority issues invoice numbers ('folio') that must be used by suppliers. After creation, suppliers in some countries are required to provide full invoice data to the tax authorities and directly or indirectly to the buyers; a few tax authorities require these data already before supplies are shipped. The tax authority or accredited service providers validate the data and return them with electronic approval codes to the suppliers. E-reporting: Some countries require only invoice extracts in any format, or as Standard Audit File (SAF-T). Besides invoice data, suppliers must report other data of fiscal relevance. Until today, clearance models have been addressing mainly, but not only, the suppliers.
2	Most countries with clearance models require the use of certified software respectively accredited service providers for the data exchange between tax payers and tax authorities. These service providers format the data if necessary, and validate the tax relevant content and the identity of trading parties. They usually also provide buyers with e-invoices.
3	E-invoicing: As the supplier is required to produce structured invoice data for the tax authorities anyway, is he also able to provide these data in the appropriate format (structured and/or as PDF) directly to the buyer or does so via service providers.
4	Today, suppliers and buyers in some countries with clearance models still exchange invoices in paper form. Nevertheless, the probability that the invoices are also exchanged electronically is high (80%). Regardless of the invoice format, buyers are responsible for cross-checking invoice data against data reported by suppliers to tax authorities. Depending on country regulations, they may also be required to confirm receipt. Some countries offer incentives to do this voluntarily. Buyers are obliged to accept and pay only invoices that are validated by the clearance system.

Most countries in Latin America, as well as Turkey and some Asian countries are very advanced. The members of the Eurasian Economic Union also strongly encourage the clearance model. It is also practised in many countries in the Far East.

Europe is in the early stage of using this model. Within Europe, Southern and Eastern European countries are leading the trend. Portugal requires invoice issuers to report up to ten invoice records to tax authorities in electronic form. Certified software is required. From July 2017, Spain will require 62,000 businesses initially (both issuers and receivers) to report invoice records and other fiscal data electronically to tax authorities within 4-8 days of the transaction. Soon, the invoicing software used by Hungarian businesses will be required to have a direct data connection to the Hungarian tax authority. Hungarian businesses will be required to report sales invoice data in real-time if the VAT on a B2B invoice is at least HUF100,000 (approx. €320). Certified software will be required. We believe that the Hungarian e-reporting model also strongly encourages e-invoicing between suppliers and buyers. Italy seems to be preparing the basis for a future mandatory clearance model. Currently, Italy has a requirement system in place for electronic invoicing between suppliers and public sector agencies. Electronic B2G invoices are exchanged via a state-owned service provider. Italy now offers incentives to use the same exchange platform also for B2B invoices. A service for the creation, submission, and storage of e-invoices is provided for free to all VAT-registered businesses. Besides the opportunity to use this service for free, additional incentives are provided to users. The service also supports certain e-reporting features. This can be interpreted as a first step on the way towards a countrywide clearance model.

The objective to significantly reduce the VAT gap cannot be achieved using models based on a voluntary participation with some incentives. Hence, tax payers are increasingly required to use the clearance system. If they do not use it, use it improperly, or if they miss deadlines, they risk to be fined. Fines vary greatly, but are often high.

Some countries like Indonesia [2] and South Korea [3] charge penalties in the amount of 2% of the VAT base and 0.5-1% of the related sales for non-compliance and/or failure to apply the tax administration clearing system within the required time. In some countries, non-compliance of invoices/e-invoices may, in worst case, result in fines that are even higher than the value of the supply [1].

Expected future development of the clearance model

- It will eventually cover all kinds of fiscal documents, such as invoices, payment receipts, credit notes, debit notes, monthly salary statements etc.
- Pure e-reporting schemes are expected to evolve towards advanced e-invoicing clearance systems
- Buyers may increasingly be required to become full part of the electronic cycle (in step one, the requirements affect mainly the suppliers)
- It will include also cross-border invoices
- Periodical post audit or near-real-time systems will evolve into real-time models
- It will extend to inventory reporting
- It will be linked to the physical supply chain: supplies will be tracked and traced from the time they are imported into the country or produced domestically until they are sold. This information will be matched with the financial supply chain documentation, such as invoices.
- All steps from invoice issuance until collection will be tracked and traced.
- Geographic preferences for different forms of the clearance model in the next three years
    - Europe, Northern America, Pacific Region and Japan: Establish or improve clearance models with a main focus on reporting of sales invoices; incentives for voluntary implementation
    - The rest of advanced economies: In many countries, invoice issuers are required to use clearance models for e-reporting and e-invoicing. Invoice receivers are required to use them for electronic interaction with tax authorities and suppliers of goods and services.

Many readers may find the requirement for an e-invoicing and e-reporting clearance model unappealing at the first glance. Nevertheless, it is clear that both tax payers and service providers benefits from it:

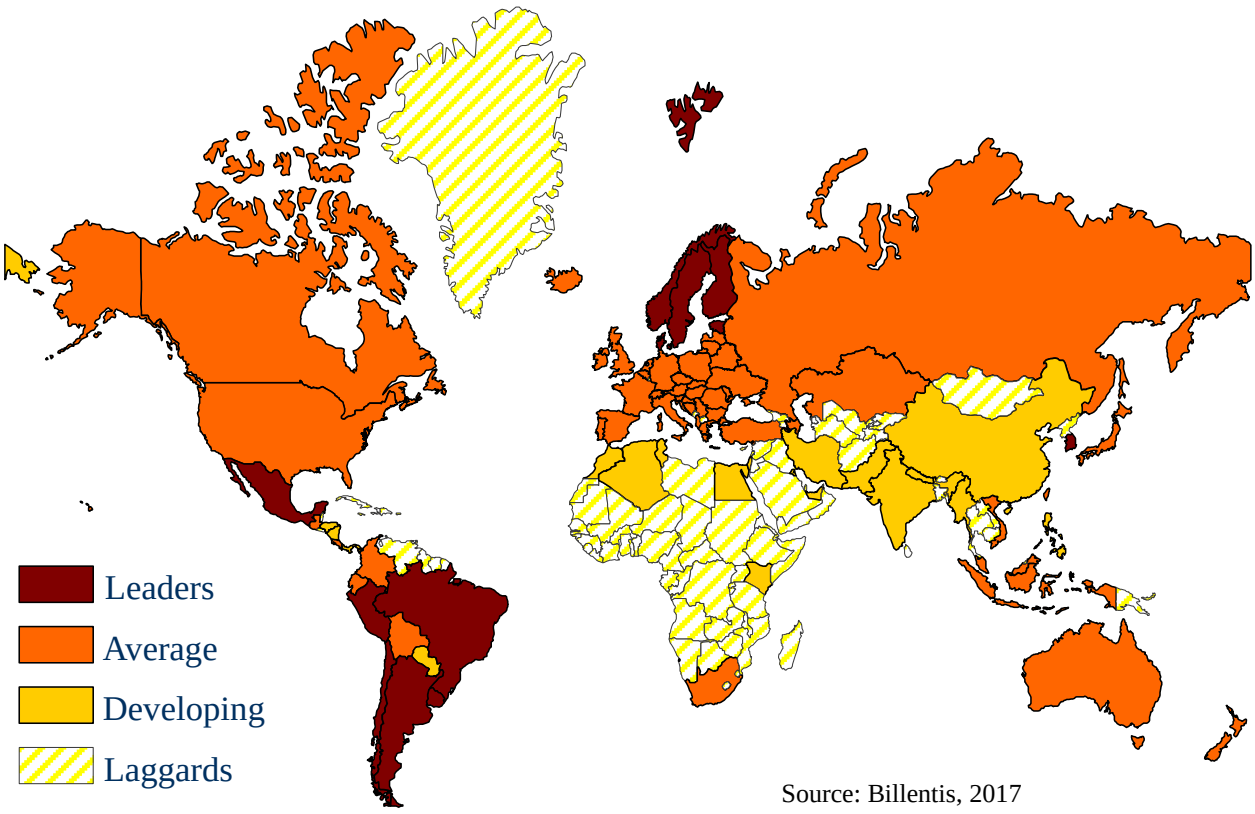
- On the positive side, e-invoices that are issued using clearance models reduce tax compliance costs by 37-39% for corporate businesses, and 8-56% for private businesses compared to paper invoices [3]. This encourages many multinational companies to push forward their e-invoice projects.
- The process is secure from the legal point of view due to mechanisms that guarantee the validity and rule out repudiation of origin. This will reduce fraud.
- Compared to the post audit systems, it ensures in real-time that fiscal documents are tax compliant. This significantly reduces the risk of fines, which could be imposed several years after the business transaction has taken place.
- Automation of tax relevant processes replaces manual and periodic reporting forms; VAT declaration & deduction are no longer required, and collection and refund can be done automatically.
- Scan and capture are eliminated, or reduced substantially.
- Where applied, it results in significant reduction of the VAT gap. This paves the way to decreasing tax rates in the future.
- Countrywide message standards are established, reducing the heterogeneity.
- Issues related to interoperability between service providers are easily solved, or become irrelevant.
- Very broad and rapid market adoption sharply increases the processed volume, resulting in much lower transaction costs compared to heterogeneous bottom-up market developments.
- Beneficial environment for the emergence of more innovative invoice and trade finance schemes.

2.3 The global landscape

2.3.1 Market maturity

The maturity of the market varies between continents and the countries on each continent.

Figure 7: Market maturity for electronic invoices/bills



Source: Billentis, 2017

The term “Laggards” in the chart above does not mean that there was no e-invoicing activity in these countries. It just expresses that they are typically in a very early stage. “Developing” means that countries have already some e-invoicing activities, typically in in the B2C segment and/or EDI between larger businesses.

It is expected that the 2017 volume for e-bills/e-invoices will achieve at least 36 billion world-wide with annual growth rates of 10-20%.

Figure 8: Estimated volume of electronic invoices/bills in 2017

Recipient segment	Europe		LATAM		North America		APAC		Rest of World	
Consumer	4	↗	6	↗	4	↗	2	↗	0+	↗
Business & Government	5	↗	9	↗	4	↗	2*	↗	0+	↗

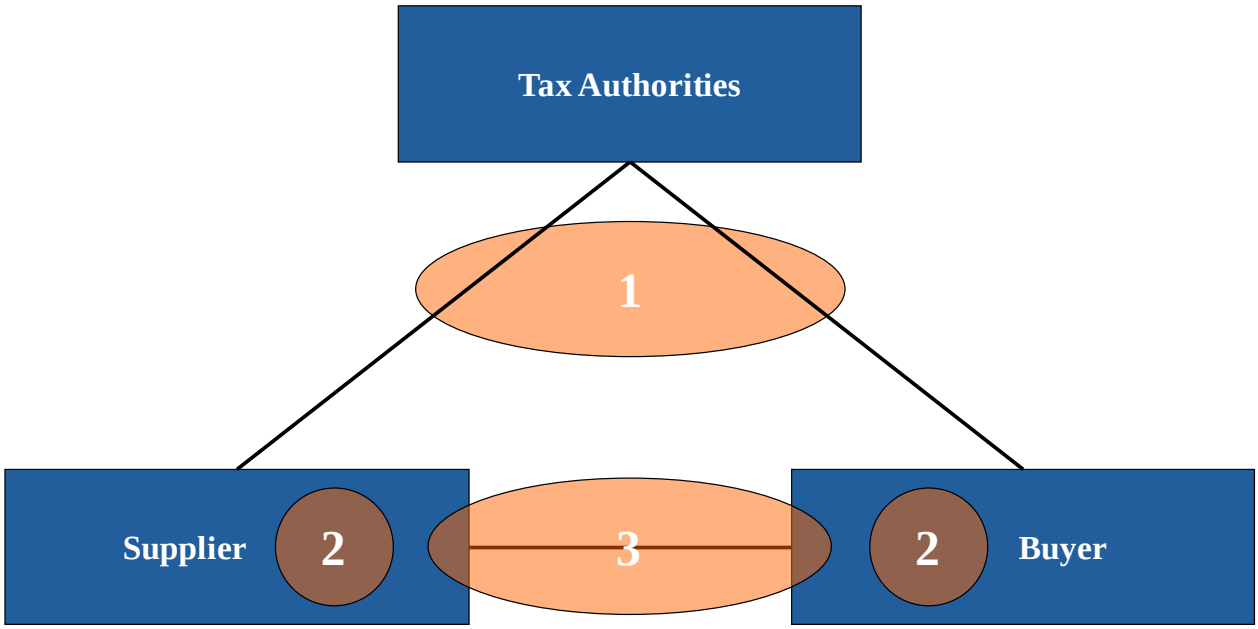
Estimated electronic invoices/bills 2017 (billions, strongly rounded) Relative growth rates ↗

*) This number could increase by several billions in case officially confirmed figures from Indonesia were contributed.

2.3.2 Current optimisation focus of geographical regions

There are many similarities as to how invoices are used in our world. The challenge to implement e-invoicing and to convince trading parties is also comparable. However, there are also major differences due to heterogeneous legislation, languages, cultures and the current optimisation focus. Although not applicable for all countries and organisations, we concluded that the optimisation focus seems to be as follows:

Figure 9: Optimisation focus of geographical regions



Focus	Description
1	**Asia & Latin America** (and increasingly some Southern and Eastern European countries): Country-wide projects are launched by the tax authorities with the aim of reducing tax evasion. Suppliers and buyers have to send either invoice data or at least reports in electronic format to the tax authorities for real-time validation & auditing. Typically, tax authorities completely disrupt the traditional paper scheme, as they design and implement a completely new system. The resulting clearance system for the trading parties is quite complex. The companies' internal invoice process efficiency and electronic collaboration between suppliers and buyers are not yet necessarily optimised, but VAT declaration and tax returns may become much easier and more efficient.
2	**North America:** Larger and mid-sized companies optimise mainly their internal processes. AR and AP automation as well as Trade Finance and Working Capital Management are a focus. However, the market becomes increasingly mature for focus 3.
3	**Major parts of Europe:** In contrast to Latin America, the conventional invoicing mechanisms and processing methods are not critically scrutinised, but replaced by a comparable working digital substitute. Suppliers and buyers can be located in various countries with different legislation. Much effort was done in EU member states to remove legal barriers. For Europeans, it is also important to build a framework, which is suitable for millions of companies of any size and from different countries. Hundreds of e-invoicing network operators offer their services, many of them interconnected with other providers. Suppliers and

Focus	Description
	buyers may in most countries use e-invoicing still on a voluntary base. Although the market is still quite fragmented, the approach in Europe can be described as relatively holistic with a strong intention to collaborate among all stakeholders.

In the long-run, all suppliers, buyers and the tax authorities want benefits with e-invoicing. This increases the chance that each continent learns from each other and adopts best-of-breed components from others.

2.3.3 Asia & Pacific region

Remark: We allocate Belarus, Turkey, Russia and Ukraine to Asia and not Europe.

E-invoicing in B2B is in some Asian countries not yet legally permitted, or only under strict legal conditions that sometimes include explicit approval from tax authorities. This does not rule out that some companies already exchange (in parallel to the tax relevant paper invoice) electronic invoice files ("commercial invoices") to improve process efficiency.

However, there are some very advanced countries. The leaders are **Singapore, Hong Kong, Taiwan and South Korea**. The government, shipping and retail industries play a key role in the B2B/B2G segment. Even though countries such as Singapore and Hong Kong have had rather lenient regulatory conditions for electronic invoicing and record keeping for many years now, adoption levels remain modest across most of Asia.

Australia and NZ are at a similar stage to Asia. Australians are embracing the electronic commerce phenomenon and are becoming increasingly more confident in electronic B2B transactions. The retail industry is already quite active regarding digital processes. Pushed by the National E-Health Transition Authority, the healthcare industry is increasingly exchanging health information and related messages like invoices electronically. A limited number of businesses achieved a considerable adoption rate regarding electronic business messages and invoices within their eco system. At this stage however, the majority of invoices in most other industries is exchanged paper-based or as PDF directly via email.

In early 2015, the Australian Government decided to actively push e-invoicing on a broad scale. As a result [4] of a consulting mandate, the author recommended a range of activities for the public and private sectors. Most of the recommendations have since been launched. A multi-stakeholder forum, the Australian Digital Business Council (ADBC, http://digitalbusinesscouncil.com.au/), was kicked off in December 2015. One of the council's first deliverables concerns a document for an e-invoicing interoperability framework [5]. First service providers have already implemented an interconnect based on this approach. The strong integration of the Australian Business Register for the country-wide rollout is worth particular mention. This should help to significantly improve invoice accuracy (issuer and receiver identification) and simultaneously reduce tax evasion.

Reducing tax evasion is also a serious challenge in Asia. **China** is no exception in that regard. To address this challenge, China launched a major fiscal reform project called the "Golden Tax Project" (GTP) which mandates the use of specific sophisticated information technologies to improve compliance with China's VAT laws. China introduced further regulations for its online invoice management system in a bid to standardize the industry and curb tax evasion. For using the online electronic invoicing system, taxpayers register at the tax authorities and open an account. To issue an invoice, they fill out the required information and issue the electronic "fapiao"

online. The issued fapiao is verified by matching the information against that in the online system. Compared to pure paper invoices, the taxpayer has the benefit that he has no longer to physically travel back and forth to the tax bureau to obtain and verify invoices. Further evolutionary steps around paperless billing/invoicing, reporting and archiving are now in progress or respectively being announced. New measures for managing accounting archives have now entered into force, thereby allowing the electronic archiving of e-invoices [6]. The new measures only treat the issue of archiving tax records, but do not regulate the e-invoicing process itself. A B2C pilot project run by the National Tax Bureau with a limited number of online retail stores is still in progress. A pilot project for B2B e-invoicing and archiving shall be extended in the near future. There are clear indications that these activities will play the first foundations towards a clearance system in the future.

India has made announcements about allowing e-invoicing more broadly; however, electronic invoicing remained rare because Central Sales Tax explicitly required paper invoices, while only about half of the states allowed e-invoicing under their VAT law. In early 2015, the legislation was changed, allowing all service-related and domestic invoices to be transmitted electronically from March 2015. India has also been working towards a national Goods and Service Tax (GST) scheme. It shall be implemented in 2017. A key component builds an IT backbone that digitizes the interaction with tax payers. The Company Goods and Service Tax Network (GSTN) [7] has been set up primarily to provide IT infrastructure and services to the Central and State Governments, tax payers and other stakeholders for implementation of the GST. After being issued their GST registration numbers, companies will be required to upload sales invoice data. This step for e-reporting builds an excellent basis for true e-invoicing between trading parties in the future.

It was announced that, from July 2016, almost all taxable entrepreneurs in **Indonesia** will be required to issue their VAT invoices (Faktur Pajak, FP) electronically and settle tax payments online only. On the buyer's side, the e-invoice they receive should be validated by the VAT input feature in the e-invoice application or by scanning the barcode or QR code list as inserted on the e-invoice. In practice, many buyers ask suppliers to provide them the Faktur Pajak in paper form before they make payments. This is to ensure that the Faktur Pajak has been reported to the Indonesian tax authority.

The administration [8] is able to estimate the size of the **Russian** market in the meaning of the definition in this report quite accurately. Around 3 billion invoices are exchanged every year in the B2B and B2G segment. E-invoicing activities started relatively late. Nevertheless, the current stage of e-invoicing in Russia may now be described as developing in a highly dynamic manner. It is predicted that the e-invoice volume in 2017 will increase by a factor of 2-3 compared to the previous year. This is also because the Federal Tax Service of Russia has established a unified data format to automate the circulation of e-documents (approved XML format for e-invoices and receipts of goods). Presently, more than 28 certified operators of electronic document flow are responsible for providing the delivery of information between taxpayers.

The size of the **Turkish** market amounts to two billion annual invoices/bills [9]. With respect to e-invoicing, the country has made huge progress during recent years. It implemented e-invoicing requirements gradually for an increasing number of industry sectors. In a first step, the Turkish Revenue Administration (TRA) established a state-owned e-invoicing platform. Third-party service providers (certified and linked to the state-owned service provider) are able to address the divergent market requirements. They are interconnected with the TRA platform and leverage market reach significantly. As the turnover threshold for using e-invoicing is decreased in 2017, the number of mandated businesses might rise to more than 100,000. All the invoices based on this e-invoice scheme are transmitted and received through the TRA system.

In addition, Turkey has introduced the e-archive scheme. The e-archive is positioned in Turkey as a new version of electronic invoicing. It paves the way for addressing new user groups, even if a recipient were not listed in the e-invoice registry. Current figures confirm that the e-archive is a very successful model to substitute paper invoices.

In the e-archive application, the invoices are transmitted to end users via electronic mail (in PDF format or structured data with an embedded 'style sheet') and invoices that are sent within the month are submitted to TRA as a report. Upon the request of end users, the e-archive invoice is printed out and can be delivered to its user as a hard copy. Fortunately, just around 10% of receivers are requiring this.

2.3.4 Africa

Most countries are in the phase when large bill issuers start with "Bill Presentment" via their company portals or mobile phones. Electronic Bill Presentment and Payment is already up and running in Egypt and Tunisia.

South Africa is the only country with a robust, albeit still nascent, market for e-invoicing on the African continent. A regulatory framework for e-invoicing has existed for many years, and was modernized in 2012.

With that exception, countries such as Morocco in the Maghreb region are slightly more advanced than the rest of Africa, however the mentality in both government and business appear to remain geared towards the use of paper in administrative processes. PDFs transmitted by email could lead the way for several years. Consumer bills are also highly accepted via mobile devices.

2.3.5 North America

Considering the annual survey of Fiserv, 24+ percent of all U.S. consumer bills are sent electronically, only with paper suppressed) [10].

In the B2B/B2G segment, the perceptions and objectives differ broadly from the European or Latin American approach. The optimisation of internal operations "order-to-cash, AR automation" and "purchase-to-pay, AP automation" is currently a main objective for US enterprises. Various surveys imply that the US is clearly past the early adoption phase of electronic invoicing and that the interest in this topic is rising sharply.

In relation to the huge size of this market, it may come as a surprise that in early 2017 there are still just around 180 e-invoicing network operators in place. Because the US does not have VAT, but a sales tax system, invoices are not considered any different from other business documents. It has therefore taken some time for the value of e-invoicing network operators to become recognized on the US market, but now the number of such operators is expected to increase steadily in the coming years. Another fact might also prove to be an accelerator for third party service providers: A high number of enterprises are interested in e-invoicing solutions, but are faced with a limited budget/funding. External services on demand instead of in-house solutions help to overcome this barrier as well.

Surveys also directly or indirectly taking consideration of the e-invoicing topic are relatively rare. Most currently focus on the AP side, and mainly with regard to very large businesses.

Considering various sources, the results/trends for larger businesses can be summarised as follows

- More than 40 percent use frontend scanning and OCR solutions for the invoice processing; trend: increasing
- Supplier portals are in place; trend: robust growth
- Commercial Cards (including purchasing, ePayment and virtual cards) are popular and common for purchases with a high volume, but a small amount. Using P-Cards is directly affecting the invoicing volume and the kind of processing; trend: moderate increase and expansion into the segment of high-value purchases
- Roughly 2/3rds of businesses issue PDF invoices via email, but less than 20% structured e-invoices via EDI
- For AP departments, e-invoicing is priority number 3-4 (behind imaging, scanning/OCR, workflow, matching)
- Third-party services like e-invoicing networks or alternatively SaaS becomes increasingly important. Using this service helps significantly reduce high in-house investments, but at the same time paves the way to exploit the saving potential; trend: increasing
- Around 50 percent of the B2B invoices are still paid by checks; trend: stays stable
- Any alternative invoice payment and cash optimisation instruments are clearly gaining momentum. Offerings for Dynamic Discounting and Supply Chain Financing vehicles are benefitting in particular.

The vast majority of US businesses, however, employ less than 500 employees. Their behaviour and their preferences are not sufficiently reflected in today's available surveys. If the market behaves in a way comparable to the corresponding user segment in other countries, we may soon expect a very solid growth of third party cloud services.

The US Federal Administration intends to make a huge step forwards. After a pilot programme which explored the feasibility and benefits of e-invoicing in the public sector, the Office of Management and Budget (OMB) released a memorandum [11] directing federal agencies to transition towards electronic invoicing. Government agencies must begin processing all invoices electronically by the end of FY 2018. They can do so either by migrating to a Federal Shared Service Provider (FSSP) and using the FSSP's e-invoicing solution, or by using an OMB-approved electronic invoicing solution such as the Department of the Treasury's Invoice Processing Platform (IPP). IPP has already been implemented at three out of four FSSPs and has nearly 80 agencies enrolled and using the service.

In 2015, the U.S. Federal Reserve identified improving End-to-End efficiencies in the U.S. payment system as a desired outcome in the Strategies to Improve the U.S. Payment System (SIPS) paper [12]. In June 2016, it published a follow up paper [13] outlining the challenges and opportunities of e-invoicing in the U.S. This paper identified several critical factors missing in the U.S., including a defined set of standards and frameworks to facilitate exchanging e-invoices, and a coordinated effort across the industry to align businesses and service providers to help develop strategies to increase adoption.

To support the desired outcome of increasing B2B payment efficiency, the Federal Reserve convened a new work group under the Business Payments Coalition [14] focused on increasing e-invoice adoption. Currently, the work group is creating a catalog of existing electronic invoice technical standards in use by U.S. businesses, and will release the catalog through Accredited Standards Committee X9 as a technical report in 2017. Additionally, the work group has established several other objectives to accelerate the adoption of electronic invoicing, including: Define what an electronic invoice is for the U.S. market; Develop a position paper on why the U.S.

market should adopt an e-invoice interoperability framework; Develop a framework for Increasing Adoption; and Develop a framework implementation guide.

2.3.6 Latin America

Chile may be identified as the root of the Latin American market model and its development. Other markets like Brazil and Mexico are among the early adopters and some of them overtook Chile due to strict mandates for the usage of e-invoicing in that country. Meanwhile, almost all other countries in Latin America are rapidly evolving.

Argentina's tax authority (AFIP) expanded the mandatory e-invoicing regime to all sectors of the economy in 2016. The AFIP requirement affects meanwhile almost one million taxpayers [15].

With very few exceptions e-invoicing is mandatory for all businesses in **Brazil** and around 1.4 million businesses issue e-invoices for goods [16]. This result was possible due to the strict implementation of its e-invoicing requirement several years ago. It is now a pleasure to see Brazil as one of the innovators for users in the retail segment. The project 'Nota Fiscal Eletrônica para Consumidor Final – NFC-e' was launched at the end of 2011. The aim of the NFC-e project is to provide an alternative to the current fiscal printers used in the retail segment in the form of a fully electronic solution, based on an XML file, including a digital signature which is authorised online before the payment at the point of sale. In addition, customers (individuals or businesses) with purchases above $ 5,000 are required to provide identification. NFC-e follows the same technical and operational model of the NF-e (B2B/B2B) used for all industry and wholesale companies in Brazil. NFC-e is already in operation in the majority of the states. NFC-e is the last frontier of electronic tax documents in Brazil. Soon all tax documents will be in the database of the Tax Administration prior to implementation. Electronic reporting and auditing plays a key role in Brazil. They consequently expand upon its reporting requirements significantly. From 2017, Brazil intends to require businesses to also submit monthly inventory and production reports. E-reporting or e-filing increasingly considers all documents relevant for tax purposes. This also includes documents regarding labour costs, employment etc.

After several years of following a voluntary approach, the **Chilean** tax authority declared a requirement for electronic invoicing. Consequently, at the end of 2016, around 420,000 businesses already issued e-invoices [17]. More than 88 percent of all invoices in the country are meanwhile exchanged electronically. The requirement to issue e-invoices forms one part of the model. On the other side, the tax authorities also offer incentives for recipients to provide electronic confirmation of received e-invoices. This shall ensure that business only consider the purchases of confirmed e-invoices in their monthly tax returns.

Colombia is also promoting the e-invoicing landscape. E-invoicing was voluntary in phase one, but it will become mandatory in the future. In October 2016, the Columbian Tax Administration DIAN officially announced [18] that the rollout for the mass market of e-invoicing has been started. For accelerating the market adoption, Columbia paved the way, changed their legislation and made the model similar to the ones in Chile and Peru. One speciality in the Columbian approach is however that factoring is officially a supported part of the model. Businesses can exchange the e-invoices via accredited e-invoicing service providers. From 2019, all businesses will be mandated to exchange invoices just in electronic format.

Combatting tax evasion is another major objective of the new system. It is the aim of the tax authorities DIAN to halve VAT evasion using this new electronic system.

Mexico is the leading country worldwide. In 2017, it will come close to its objective of digitalising all processes relevant for taxation. Electronic invoices for goods and services form a key part of this digitalisation. One of the last rollout steps for e-invoices will be the mandate for G2B and G2C invoices from mid-2017. After this step, Mexican organisations are expected to exchange just over 10 billion e-invoices on an annual basis.

Additional initiatives are being taken in Mexico beyond electronic invoicing. E-accounting has become mandatory for companies and individuals.

Besides efficiencies in the generation, distribution, archiving, collection and reduction in the use of paper, Mexico's positive results in the adoption of e-invoicing and e-accounting have paid off in the reduction of tax evasion. Mexico has already increased tax revenues by more than a third without raising tax rates and will further enhance electronic audits. This goes far beyond the reporting of accounting and invoice data. It also includes e-audit and documents regarding the relationship between businesses and their employees. For example, all the monthly salary slips must already be sent electronically.

In addition to the past and present activities regarding the domestic electronic exchange of tax relevant information, there are also projects in progress in order to consider cross-border invoices. Mexico intends to expand the international acceptance of electronic invoices across the American continent. The SAT is therefore working with tax authorities in several Latin American countries, the United States and Canada [6].

The approach in **Peru** takes international standards into consideration (UBL 2.0 as the content standard). It will enable easier integration with trading partners in the European Union as well as APEC (Asia-Pacific Economic Cooperation) countries. The Peruvian model has similarities with the Brazilian model, insofar as shipping documents are also encompassed. Either the 'Factura' or 'Boleta' should accompany the carrier in combination with the 'Guia de Remision' (signed bill of lading that forms part of the process). Around 85 percent of registered e-invoicing businesses use the system on a voluntary basis and only the remaining ones are currently mandated. However, the legislation prescribes that, by 2018, all invoices are to be exchanged by electronic means only.

In Latin America, the initiator for the market activities is in most cases the government. The driver for establishing countrywide e-invoicing is often the reduction of tax evasion through real-time or near real-time invoice validation by tax authorities. This can be achieved by mandating an electronic invoice loop between supplier, the tax authorities and the supplier.

Although the legal requirements are among the strictest worldwide, some countries in Latin America have taken over the global leadership role. Not only do some of them already have high market adoption rates, but their model is also inspiring larger countries in Asia and likely soon in Southern and Eastern Europe.

Typical characteristics of e-invoicing in Latin American countries are

- Unique/sequential invoice numbers (folio) provided by the tax authorities
- Use of digital signatures based on suppliers' certificates, issued by approved or state-run Certification Authorities.
- Imposed XML standards for tax authority clearance
- Steady reporting to the tax authorities: either in real-time prior to issuance or at least monthly.
- Consider the classical invoices, but also other tax documents like credit notes, debit notes, receipts respectively "boletas de ventas" or "tickets" as they are also named

- Increasing integration with the physical supply chain e.g. simultaneous print-out of ancillary transport documents based on a pre-approved invoice
- After review/approval of suppliers' invoices, tax authorities put a visible "stamp" to the e-invoices. It is either a country specific alphanumeric code or a barcode / QR code.
- Recipients often have to validate that the invoice was pre-approved by the tax administration
- Tax authorities validate either the invoice data real-time or data-mine to check invoices later.
- General archiving period is five years.

Service providers play a key role. In some countries, service providers are accredited to perform clearance services on behalf of the tax administration; such service providers may also offer value-added services around these regulated functions. While many service providers are local, a good number of them are active in several Latin American countries and already process a very remarkable invoice volume. They belong to the largest operators worldwide and some of them are now entering into the American and European market.

2.4 The European Market

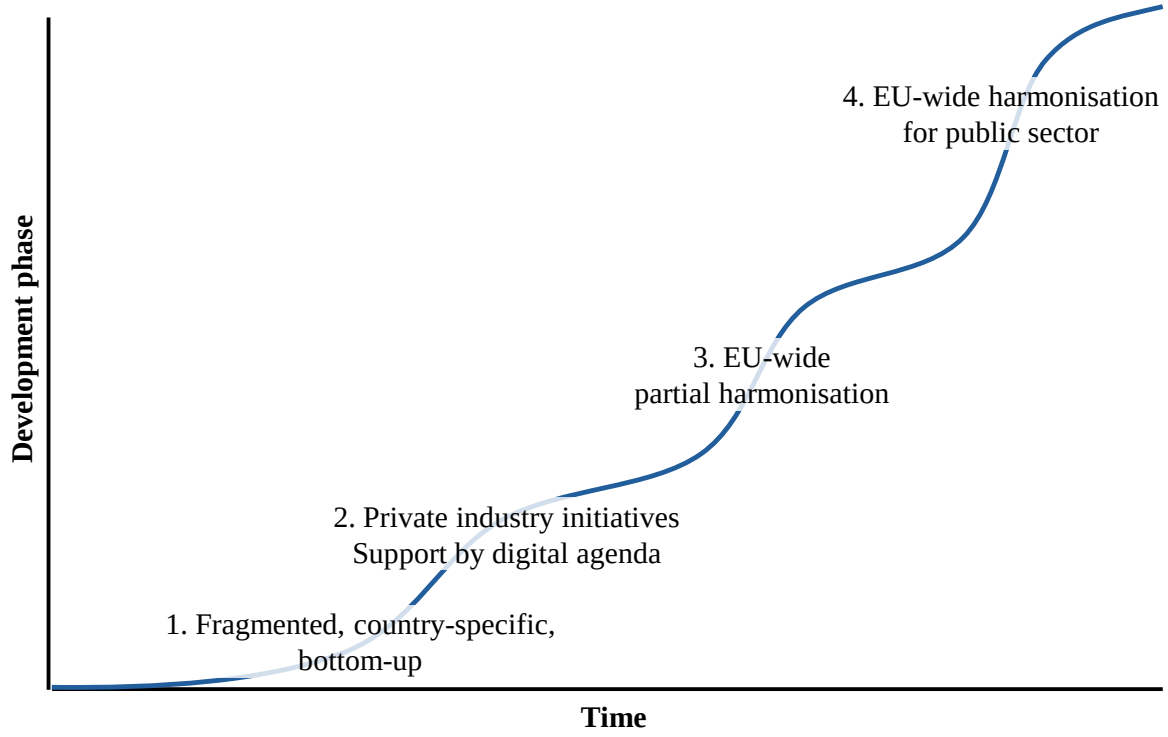
2.4.1 Market characteristics and development

The European landscape is not comparable with Latin America or the US for several reasons. Here just some facts about Europe in the narrow sense:

- 40+ countries (28 of them members of the European Union)
- 40+ legislations
- 100+ languages
- 22+ million SMEs (with less than 250 employees)

Europe has a long tradition of optimising electronic business processes, but the development happens step-by-step.

Figure 10: e-invoicing development in the European Union



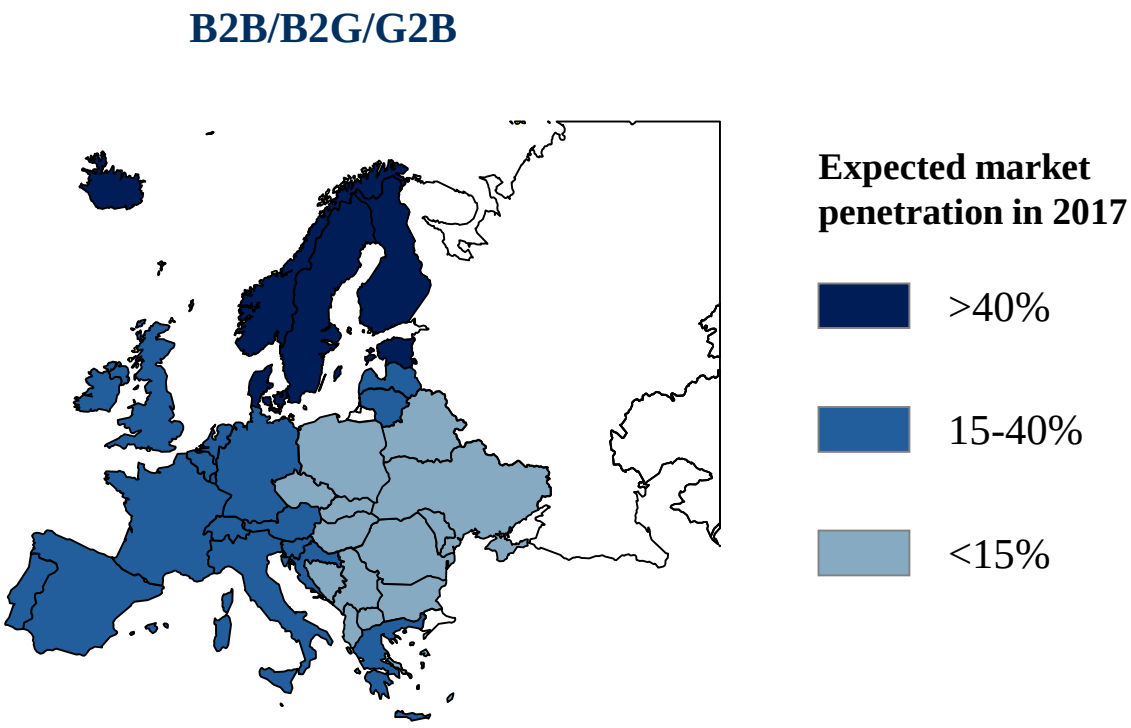
Phase	Description
1	Classical bottom-up growth in each single country, solution and service providers developed the market in the early stage, but with an isolated approach.
2	Especially the stakeholders in Nordic countries launched national initiatives for improving the collaboration. E-invoicing became increasingly a cornerstone of the digital agendas defined and pushed by the government; first national multi-stakeholder I were founded with the aim for faster market development and at least harmonisation on national level.
3	Due to the market fragmentation and growing cross-border trade, e-invoicing became a key topic also in the digital agenda and activity plans of the European Commission. It resulted in some directives, removal or reduction of barriers and standardisation work.
4	In 2014, Directives 2014/24/EU and 2014/55/EU were released. They will affect probably more than 300,000 Public Administrations in EU member states. They will be obliged from end of 2018 or 2019 to support a certain e-invoicing standard and to become able for automated processing of electronic invoices. In addition have they to change certain procurement processes towards electronic procedures. Although the obligation is valid just for the public sector is it obvious that it will have a major impact to the public sector as well as to all suppliers to the public sector.

2.4.2 The Business-to-Business & Business-to-Government market

2.4.2.1 Market penetration

Status and market development differ from country to country.

Figure 11: B2B/B2G/G2B: Estimated market penetration 2017 per country



2.4.2.2 Transition from large innovators to mass market

For almost a decade, solution providers, large billers and invoice recipients have shaped the market. Meanwhile, the vast majority of larger companies practice e-billing/e-invoicing.
The market development follows the decreasing size of the invoice streams:

1. Due to high volume and low legal barriers in the B2C sector, organisations with high outbound volume were first, offering electronic bills to consumers via their customer portals. This development started in most European countries before the millennium. In a second step, this "Electronic Bill Presentment" channel was enhanced with email delivery of PDFs, causing a huge jump in the number of users.
   In the B2B market, the e-invoicing market was initiated by large purchasing organisations, pushing their large suppliers to deliver electronic invoices.

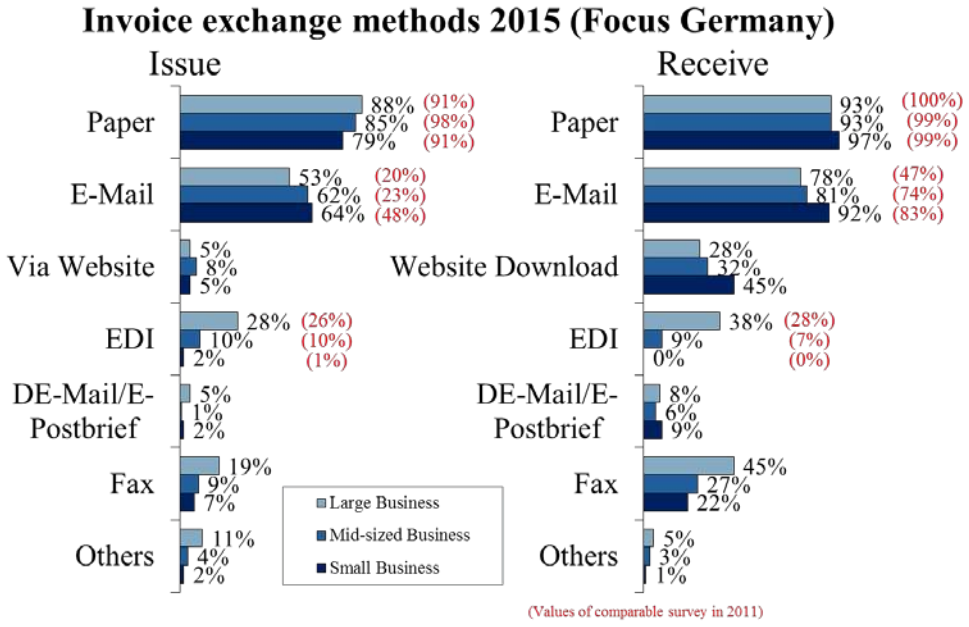
2. Due to the fragmented invoice situation, even large organisations did not achieve satisfactory electronic volumes just with their large trading partners. That is why we are now in the middle of the next evolutionary step: Addressing the SMEs. However, there is a limited but sharply increasing number of SMEs issuing and receiving electronic invoices. In most cases, SME projects have been initiated by large trading partners having pushed them to do so.

3. The next evolutionary step will be e-invoicing on the mass market. The various initiatives by the national public sectors and the European Commission could result in the break-through in this sector.

2.4.2.3 Exchange formats

The usage of formats and channels differs a great deal depending on the country and the size of companies. It is extremely rare for companies to issue or receive invoices just in one electronic format. Unfortunately, no international survey gathered such data on a comparable base. That is why we share here the results of a study done with survey participants in German-speaking countries in 2011 and 2015, with a focus on the largest European country.

Figure 12: Multi-channel invoice exchange methods in German speaking countries



Source: ibi research [19]

Multiple answers were possible. The majority of companies interviewed are located in Germany and are enriched with a few survey participants from Austria and Switzerland.

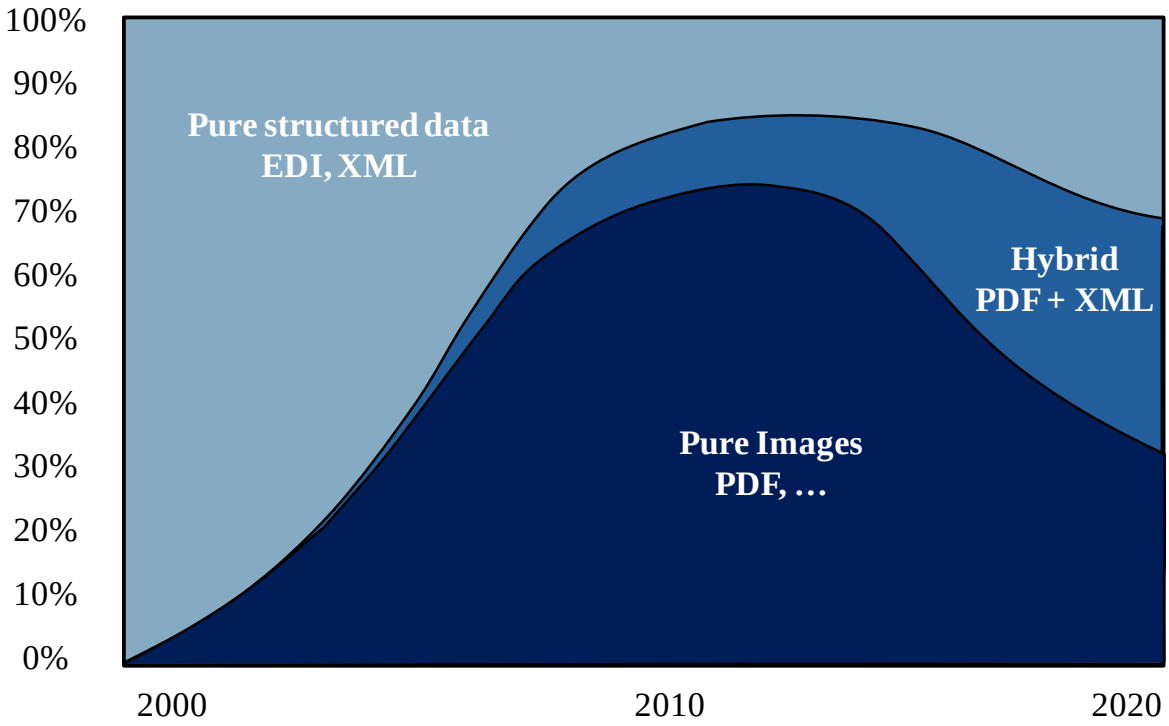
Conclusions for the European market

- Multi-channel exchange strongly dominates the landscape
- There are already some suppliers offering invoices exclusively in electronic format (e.g. online shops, subscribed services)
- Exchange via E-Mail is more popular than via EDI
- E-Mails are preferred by SMEs, but are also often accepted by larger companies

The long-term intention of most stakeholders is to exchange, process and archive most electronic invoices in a structured format. The high-volume industries (e.g. retail, automotive) were able to establish this in the first stage of market development. EDI, and in later years XML, dominated the e-invoicing landscape. Trading parties were typically larger enterprises. The more the mid-sized and smaller companies entered into the e-invoicing market, the more the PDF volume increased. The benefits of image-based PDFs are mainly limited to cheaper transport and archiving, but process automation does not really happen and cost savings stay limited.

In recent years, a combination of PDF+XML invoices gained ground. Either this happens with two separate files, or a XML data set is embedded in the PDF. This seems to be an appropriate way to simultaneously fulfil the requirements of large, mid-sized and small enterprises. It could be a way to reduce the current dominance of just image-based PDFs.

Figure 13: Proportion of various invoice formats



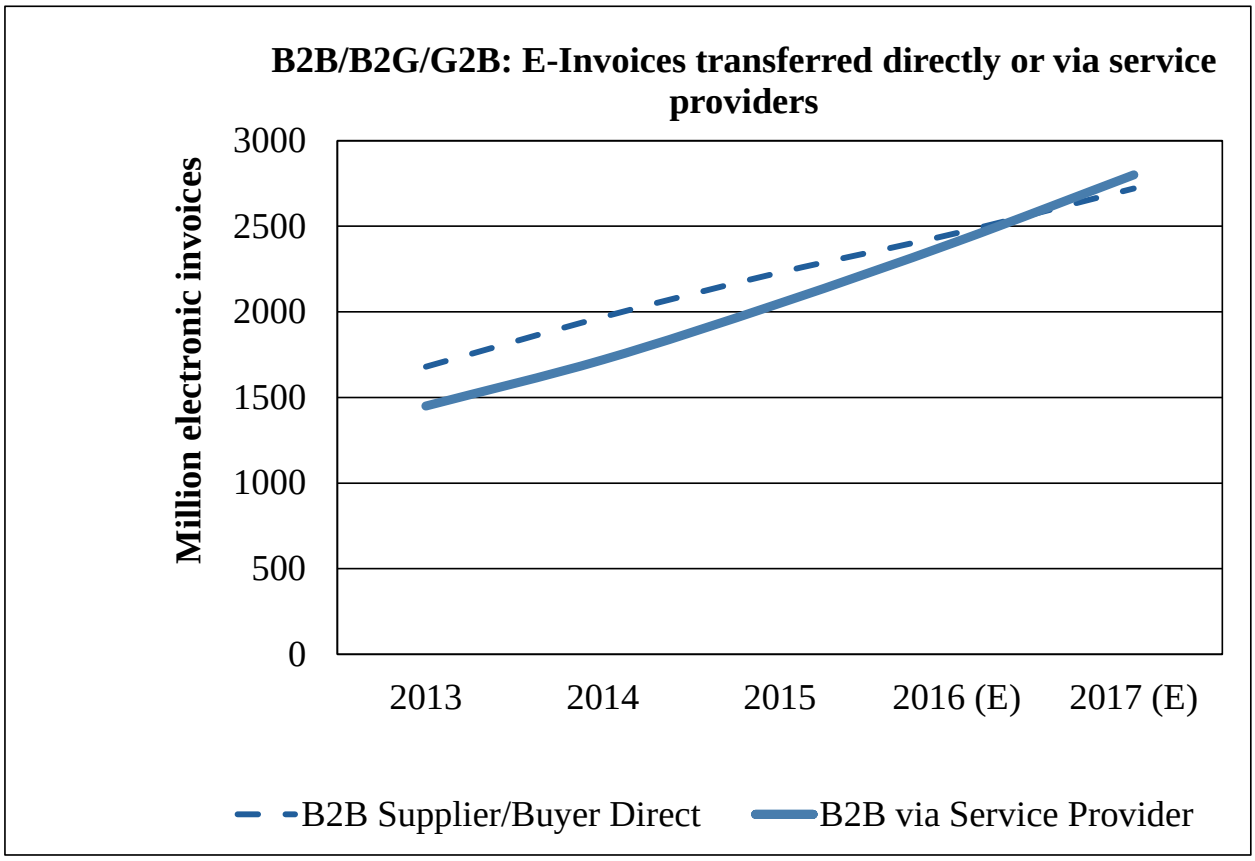
Recent surveys in countries like Austria, Estonia, Germany, Spain, the UK and the US indicate that in 2016, the proportion of PDF invoices was around 70% of all electronic invoices.

The public sector is definitively in the position to change the picture completely for the benefit of structured e-invoices. This is at least in progress in some countries. Governments mandating its suppliers to send invoices just in electronic format typically ask for XML and do not permit PDFs (e.g. Austria).

2.4.2.4 Distribution channels

The supplier direct model is currently dominating in many countries like Austria, Germany and the UK. Smaller pioneer countries intend to have a clear preference for e-invoicing network operators: Belgium, the Nordic countries, Slovenia and Switzerland.

Figure 14: Invoices received by European enterprises according to delivery channels



Source: Billentis

Some larger network operators are focussed on slower growing industries (retail, healthcare). In addition, some Nordic countries are already very advanced with a relatively high market penetration. Due to this basis effect, exponential growth is a challenge. Nevertheless, exponential growth rates are not out of reach. This could happen as soon as mid-sized or larger countries would start government initiatives for pushing electronic invoicing and procurement (high probability between 2018-2020 due to EU digital agenda and new directives).

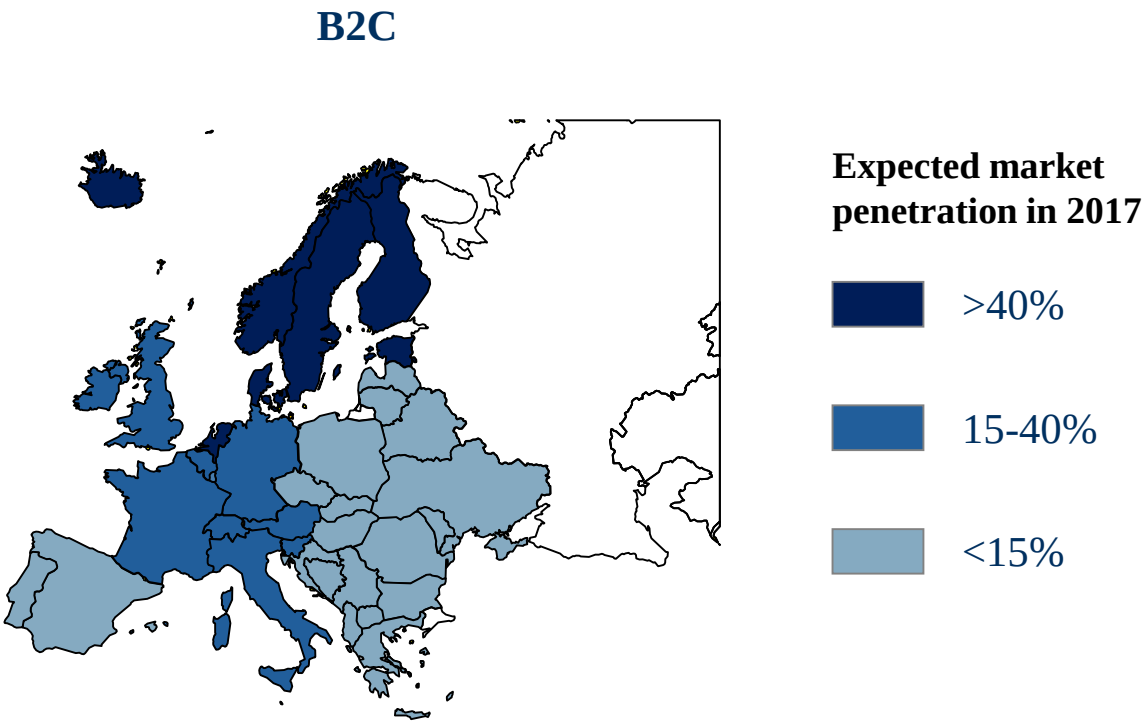
2.4.3 The Business-to-Consumer market

2.4.3.1 Market penetration

In the intercontinental context, the European payment options are in most countries relatively convenient. Collective payments, Electronic Fund Transfers and Direct Debits are quite popular bill payment methods. Payment did not turn out to be a driver for e-billing in Europe. There are also indications that European households receive (relatively) fewer bills than the consumers in most other continents do. Thus, e-billing is not yet very advanced in most European countries and the market penetration lags behind the development in the B2B segment.

Status and market development differ from country to country.

Figure 15: B2C: Estimated market penetration 2017 per country



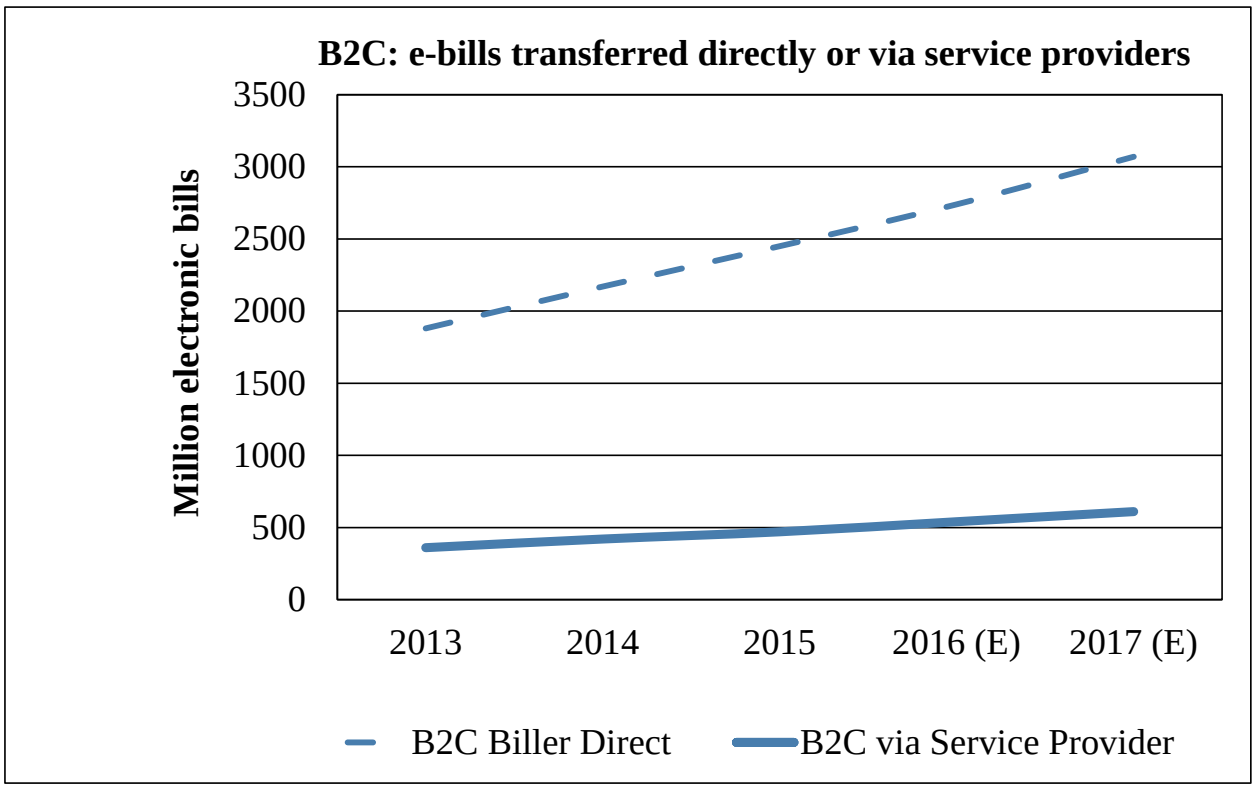
2.4.3.2 Transition from large innovators to mass market

Most large billers have meanwhile an acceptance of 25-90% for e-bills with a majority of around 35-50% of their customer base. The few available surveys confirm that still mainly younger consumers use e-billing. Obviously a paradigm shift, a new approach and some more years are needed to achieve the mass market.

2.4.3.3 Distribution channels

Most consumers prefer to receive electronic bills via email. Email is still gaining ground in many larger countries and could be the preferred delivery channel for 2/3 of European consumers in the mid-term. Bill presentment on the supplier portals and via internet banking does not yet play a major role in most European countries. An exception build the Nordic countries, where the exchanged e-bill volume via online banking portals is almost as high as the one distributed by other channels.

Figure 16: Electronic bill volume B2C, direct and via Service Provider



Source: Billentis

2.4.4 Supporting initiatives

2.4.4.1 Overview

The private industry is typically the catalyst for almost all digitalisation and automation projects. Although the solution providers are in competition with each other, as well as often the users in specific industries, they frequently build supportive initiatives and associations with the aim to standardise and promote the new technologies. Classic examples include OASIS, UN/CEFACT, GS1, CEN, EESPA (European E-Invoicing Service Providers Association), OpenPEPPOL and many national or industry-specific organisations.

The public sector supports development through a variety of activities

- Considering the topics in the digital agenda and supporting it in various ways
- EU directives and implementation into national legislations
- E-Government Action Plan 2016-2020
- Launching/supporting standardisation initiatives
- Mandating public administrations to prepare their systems and processes for e-invoicing and e-procurement
- Promoting or mandating its suppliers to communicate exclusively by electronic means

2.4.4.2 Standards

In many cases, standardisation initiatives have failed to convince stakeholders to use them. A lack of information about existing standards combined with the pride of some introverted organisations has resulted in the re-invention of dozens of niche standards (domestic or industry focus) even during the last years. They can probably only survive if they build a subset of one of the most popular global standards (Oasis UBL, UN/CEFACT) or if they are based at least on the same standard model.

An estimated 10,000 ERP and accounting solutions are used in Europe. Integrating various e-invoicing standards is outside the scope of the ERP providers. That is why many e-invoicing network operators offer any-to-any-data-formatting services. Besides legal challenges and the networking idea, these formatting services are another main reasons that third party providers play a major role in e-invoicing in most countries. As a result, issuers and recipients of invoices using such services are independent of any standards and they have no longer to wait for a market dominant standard.

Some global and industry independent standards for invoices and directly related pre- and post-processes are:

Figure 17: Global and industry independent standards for invoices and business messages

Standard	Description
ebXML	ebXML (Electronic Business using eXtensible Mark-up Language), is a modular suite of specifications that enables businesses of any size and in any geographical location to conduct business over the Internet. Using ebXML, companies have a standard method for exchanging business messages, conduct trading relationships, communicate data in common terms, define, and register business processes.
OASIS UBL 2.x ISO/IEC 19845:2015	UBL, the Universal Business Language, is the product of an international effort to define a royalty-free library of standard electronic XML business documents such as purchase orders and invoices. UBL v2.1 has now been approved for release as ISO/IEC 19845:2015 Standard. UBL provides the standards for the PEPPOL (Pan European eProcurement Online) platform and public procurement initiatives in several countries.
UN/CEFACT	UN/CEFACT, a United Nations body, has a global remit. It encourages close collaboration between governments and private business to secure inter-operability for the exchange of information between the public and private sector. It has developed: • The UN Layout Key for Trade Documents, which is the foundation for the EU's Single Administrative Document (SAD) • UN/EDIFACT, the international standard for electronic data interchange • numerous trade facilitation recommendations and • UN/CEFACT XML
PDF/A-3 ISO 19005-3	PDF/A is an ISO-standardized version of the Portable Document Format (PDF) specialized for the digital preservation of electronic documents. PDF/A differs from PDF by omitting features ill-suited to long-term archiving. This is a key requirement for business documents which have legally be archived in long-term. PDF/A-3 adds a single and highly significant feature to its predecessor PDF/A-2 (ISO 19005-2) specification, to permit the embedding within a PDF/A file a file, or files, in any other format and of any type, e.g. XML files. Germany and France jointly developed a common e-invoice format based on the PDF/A-3 approach with embedded XML data. It is conform to the requirements of the EU Directive.

CEN/PC 434	The Directive 2014/55/EU requires the development of a European standard for e-invoicing in public procurement with the aim of removing cross-border barriers. The deliverables of the project group will include a European standard on the semantic data model for the core elements of an electronic invoice, a technical specification on a limited number of invoice syntaxes and other components. Two syntax formats approved by CEN are UBL and UN/CEFACT. The standard will be transposed to Member State level and is intended to be supported by all EU public administrations. The core invoice is also intended for B2B use.
CEN/PC 440	The main objective of the committee will be to develop standards to support and facilitate the electronic public procurement processes and their underlying accompanying information flows in the physical and financial supply chain (for all other document exchanges in electronic public procurement). The committee will work in close collaboration with the CEN Project Committee on Electronic Invoicing (CEN/PC 434).

Industry specific standards are

- ETIS: Telecom invoices
- GS1: EANCOM, GS1 XML and GS1 UN/XML standard mainly for various sectors including retail
- ISO 20022: Financial industry
- LITIG/LEDES: Law firms
- PIDX: Oil and Gas Industry
- Rosetta Net: vehicle manufacturers

Some country specific standards are

- Austria: ebInterface
- Belgium: BMF
- Czech Republic: ISDOC (based on UBL)
- Denmark: OIOXML (based on UBL)
- Finland: Finvoice
- Germany: ZUGFeRD
- Italy: BTW, FatturaPA
- Spain: facturae
- Sweden: Svefaktura, SFTI
- Switzerland: swissDIGIN
- Turkey: UBL-TR (based on UBL)

2.4.4.3 Impact of new government initiatives

Almost every quarter, we read in the press that another country declares e-invoicing as compulsory. Often, these press releases are translated from the national language into English, and they do not always mean the same thing. This has to do with different usage of the terms “e invoicing” and “mandate”, and there is a big discrepancy between intentions and reality. Such projects in a public sector environment are quite complex. Objectives within a state’s administration may

already vary broadly. In addition, we have many federal states with great autonomy of local authorities.

The common denominator is usually that an announcement making e-invoicing mandatory includes preparing all departments of a central state's government to upgrade their systems and processes with the aim of receiving and/or issuing e-invoices. Municipalities are typically in an observer role and do not necessarily act, but they are encouraged to do so. The suppliers are still free to exchange invoices with the public sector in paper or electronic form.

In a second step, suppliers (or at least larger ones) are mandated to send the B2G invoices electronically. Denmark is a pioneer in this segment (obligation since 2005). Austria, Finland, Italy, Norway, Slovenia, Spain and Switzerland belong to the early adopters.

Some countries in Latin America, Asia and Europe mandate businesses to report electronic invoice data to the tax authorities mainly for reasons of validation and/or calculating taxes. This is increasingly combined with real e-invoicing between suppliers and buyers.

From the end of 2018 or in 2019, Public Administrations (PAs) in EU member states will be obligated to support a certain e-invoicing standard and to develop the ability to carry out automated processing of electronic invoices. In addition, they have to migrate certain procurement processes towards electronic procedures. The schedule is quite tight for the PAs affected. This means that most of them are starting their projects now. They are developing strategies with the aim to achieve broad-scale market adoption rates for electronic processes. The directives shall increase the proportion of electronic invoices and pave the way for cross-border interoperability.

We estimate that the new directives will affect 300,000+ public administrations / agencies in Europe. They have to enable their systems and processes with the aim to receive and process invoices electronically.

This step paves the way for a broad-scale market adoption. Several countries are also expected to declare a mandate for Business-to-Government electronic invoicing in addition.

Government e-invoicing initiatives are certainly not limited to Europe. More than 50 countries around the world are pushing e-invoicing and other paperless processes.

3. Significant market transition lies ahead

3.1 Catalysts for a new era

A powerful market transition and transformation is taking place in our industry. This period of movement from one stage to another creates new opportunities for innovative and forward-thinking companies, which are ready to take advantage of this shift.

In view of the rapidly changing environment, we believe that these topics are in the foreground as market accelerators and game changers for the three years ahead of us:

- The regulators are increasingly fighting the VAT gap[3]. Many new government initiatives resulting in B2B and B2G e-invoicing, e-reporting, e-filing, e-auditing, and compliance requirements are prompting almost all organisations to act.
- The business models and IT systems of most organisations have evolved in times characterised by the use of paper-based processes. Businesses are required to become more agile. They are required to replace their traditional models with disruptive innovations, and to re-engineer their processes.
- Pure e-invoicing services are no longer sufficient. The demand to support additional documents, processes, and value-added services is increasing substantially.
- A paradigm shift regarding the way to collaborate between different stakeholders is in progress.
- New emerging technologies are more mature, and are ready to be used in practise.

3.2 Regulatory requirements catapult market into new dimension

3.2.1 VAT gap as main accelerator for the digitalisation of all fiscal documents

The private industry was the main driver for the market development in phase one; however, it is now being increasingly supported by the governments. The VAT gap becomes more and more the main accelerator for the digitalisation of any business, fiscal, reporting, inventory, trade, and logistic documents.

To understand the development of e-invoicing in general, and the influence of the governments in particular, it may be helpful to understand the impact of the VAT gap.

Globally, the VAT Gap may be 20-30% of the public revenue, or about 500bn EUR p.a. [20]. The fight of tax authorities against this VAT gap has become a major trigger for the digitalisation of most business and tax processes. Before going into details, is it crucial to understand the areas where the VAT gap may occur, and the digital vehicles with the potential to reduce this gap.

Figure 18: Some causes of VAT gap and the digital vehicles to reduce it

Area / Cause	Digital vehicle
Cash payments without receipts and tax declaration	Require non-cash payments above a certain amount and/or withdraw banknotes from circulation if they exceed a certain amount. Require certified cash registers that are linked to the tax authorities to submit real-time reporting. Encourage or require customers to demand receipts / invoices.

[3] Difference between the amount of VAT actually collected and the VAT Total Tax Liability

Area / Cause	Digital vehicle
	Apply the clearance model.
Carousel fraud and invoicing between phantom partners, or involved parties winding up before tax audit	Require e-invoicing. Require real-time lookup routines to make sure that all trading parties are registered in the national business directory. Apply the clearance model.
No invoicing or invoicing using wrong amounts	Require e-invoicing via clerance model.
Goods are not supplied after an invoice has been issued	For physical supplies: Digital link between the virtual and physical world; transport documents shall be valid only with evidence that transported goods have been declared with the tax authorities. Digital inventory reporting between businesses and tax authorities.
Smuggling and domestic fraud with physical supplies	E-customs; digital trade facilitation; digital link between the virtual and physical world.
Fictive employees and salaries	Require electronic salary statements, which are exchanged using the clearance model.

3.2.2 Electronic reporting of invoice data and other fiscal information

Governments' revenue departments combat tax evasion wherever they can. They seek to gather vast amounts of data regarding all relevant issues – following the concept of Big Data. Today, the status quo in all countries is to collect at least general ledgers and other audit data. In most countries, this is still only required periodically, after transactions have already occurred, and paper-based reporting is in most cases still permitted. This likely has no real influence on reducing tax evasion. Big Data may become the new gold to combat the tax evasion.

Considering all fiscal documents, it is the invoice which provides the most complete information for tax authorities. Invoices are therefore moved to the foreground as part of a next transformation step. In this phase, tax authorities mandate the organisations in a country to exchange invoices in electronic format only. The invoice data also have to be sent to the tax authorities (clearance model) before or after the shipment of goods. E-audit and data forensics help the tax authorities to detect anomalies sooner. As we see in a number of countries, these steps significantly facilitate a reduction in tax evasion.

Nevertheless, tax evasion is still possible, for instance, if goods are sold over the counter, or if paid salaries are declared wrongly or not declared at all etc. Consequently, countries that in particular exhibit a level of tax evasion above the international average are currently attempting to completely close the electronic loop between tax payers and the tax authorities. All data of fiscal relevance will be reported to the tax authorities electronically in the future. Real-time or near real-time audits will become a matter of course.

This concerns several fiscal documents, which are increasingly required to be exchanged with tax authorities, trading partners and employees in an electronic format only, including:

- Invoices
- Bill of lading or delivery note, to ensure that a supply follows an invoice (such as Brazil)
- Goods received notes (such as Manifestacao do Destinatario in Brazil)

- Payment slips to cover revenues made over the counter (fiscal document issued by tills at the point of sale)
- Export/import, trade facilitation documents
- VAT declarations
- VAT deduction documents
- Salary statements (such as in Mexico)
- Bank statements (such as in Mexico)
- …

As the electronic gaps from the taxation perspective will be closed, tax declarations, deductions and the traditional audits will no longer be required in the future.

The results for the tax authorities are remarkable:

- Brazil has seen a $ 58 billion (USD) increase in tax revenue as a result of plugging gaps in invoicing and reporting.
- Mexico increased tax collections by 34% in the first wave of its e-invoicing rollout, before mandates on reporting even went into effect.
- Colombia found that it could reduce 50% of the country's tax evasion by applying these forms of models.

To achieve this, it is necessary to completely disrupt the conventional paper-based models. Not all countries have this capability or the political support for the strict replacement of traditional models.

Most countries in Latin America, as well as some countries in Asia are forerunners with respect to the digital reporting model. Southern and Eastern European countries are now following this trend, although they use different models. Spain is one of the countries that require reporting of invoice data not only from suppliers, but also from buyers.

3.2.3 Digital link between virtual and real world

Documents and information related to the transport, delivery, customs, and even manufacturing of goods are directly related to the fiscal documents as mentioned in the chapter above. Therefore, are they expected to become a mandatory part of electronic reporting in the future.

In many countries, solutions already exist; however, most of them work with just a fraction of data, or they are isolated systems that do not match information between the virtual and the physical world.

In the **EU**, the Excise Movement and Control System (EMCS) is in place. Under EU legislation, excise duties are paid on alcohol, tobacco and energy products at the final point of consumption. While in transit to their final destination, these goods are in duty-suspension i.e. no excise duty has yet been paid on them. The EMCS provides Member States with an electronic system to monitor the movement of these goods in real-time, in order to ensure that the duties are properly levied at the final destination. [21]

Brazil is already quite advanced. The tax authority requires that invoices are issued before goods are shipped. Brazilian tax authorities send the signed invoice / bill of lading back to the supplier, and ensure that goods are supplied following invoicing. In addition, the system Brasil-ID [22] allows tracking goods on certain corridors, based on the RFID technology.

Hungary operates the Electronic Trade and Transport Control System EKAER [23]. The system is designed to minimize the possibility of VAT fraud, and has been in place since 2015. It monitors transport of goods inside Hungary, and also goods transported on public roads between member states of the European Union. Hungary is also making a big step forward regarding electronic reporting of invoices. Hence, the tax authority will eventually have real-time data about the virtual and physical world.

It may surprise the readers, that we mention **Kazakhstan** in this text. Institutional reforms of the President of Kazakhstan have resulted in a long list of step-by-step implementation action plan. One part of it builds the clearance system for many fiscal documents, including e-invoices, that is already up and running. The government has other ambitious plans regarding this project. As a next step, a Virtual Warehouse Module will be developed for end-to-end monitoring of goods from the moment of their import into the Republic of Kazakhstan, or their production on the RK territory, to the moment they are sold. The virtual warehouse will also make it possible to track the process of pricing at each stage of goods movement, from production or import to sale.
E-invoice exchange will require mechanisms of cross-border e-invoice exchange, in transactions with Eurasian Economic Union member countries and with other states. [24]

The new module will be integrated with related information systems. Therefore, it may become a very interesting example of a digital link between the virtual and the physical world. It is still unknown to us which technology will be used for tracking of goods, and connecting to the virtual world, but we assume that the “Internet of Things” and perhaps the blockchain technology could play a key role in this process.

3.3 Private industry evolution

3.3.1 Trends to increase business agility

In today’s erratic economy, business agility is more important than ever before. According to the concept of business agility, organisations seek to approach their operations and resources in a flexible manner. The concept also concerns the ability to rapidly adapt to market and environmental changes in a productive and cost-effective way. Next-generation technologies lay a strong foundation as strategic drivers. Cloud computing allows scalability and adjustable costs per transaction, while mobile devices enable employees to work more easily away from traditional office environments, as well as providing a new form of interaction between people and machines.

Today’s business models evolved during decades which focused on conventional paper processing. In the northern hemisphere, businesses and governments are typically taking a gradual approach to replacing this paper-based systems with digital substitutes. Small steps can only create incremental improvements. A number of Latin American and Asian countries are instead developing disruptive models that are optimised for a fully digital world on a broad scale. These developments on a national level also make sense on a company level. The time is right to critically question the use of traditional models and shift to disruptive technologies.
Some innovative organisations have already realised the need to change and are therefore replacing their existing solutions with next generation technology (see chapter “Emerging technologies”).

3.3.2 E-procurement and automation of business processes

Invoices are an important part of the entire procurement process. Many recurring invoices are the result of contracts without a termination date (e.g. leasing, phone, IT hosting, or maintenance). Several goods and services are ordered in a simplified form by phone, online, or by email. Formal and structured purchase orders (PO) in the proper sense are issued only in a small number of cases. Hence, we estimate that only 6-7% of all invoices are currently based on an existing PO.

Since invoices are issued for 100% of supplies, they are quite often the entry point for the digitalisation and automation. This approach is promising in case of horizontal markets (industry-independent). It is also appropriate for businesses of all sizes.

Large businesses, in particular well-established vertical industries and businesses in the Anglo-Saxon countries prefer to start the digitalisation with a real procurement process. The same evolution has taken place in some Nordic countries, and in Portugal.

In many countries, e-invoicing is much more visible on a broad scale than e-procurement. One reason for this is that e-invoicing was pushed by tax authorities around the world as a top priority and e-procurement was mainly an issue of the private industry. According to Eurostat [25], 17% of all businesses with ten or more employees in the EU received at least 1% of its orders electronically in 2015. Considering this statistic, Belgium, Croatia, the Czech Republic, Denmark, Germany, Iceland, Ireland, Norway, Portugal, Sweden and the United Kingdom are more advanced than average. Sweden maintains a nationwide index on the growth of e-invoices and e-orders. In Q2 2014, the ratio was 11.4 e-orders for every 100 e-invoices. The absolute growth rates of e-orders are clearly below the values achieved for e-invoices. [26]

3.3.3 Improve the data accuracy of tax-relevant documents

3.3.3.1 Brief analysis of challenges

Recipients particularly understand the problems of poor data quality in invoices. This starts with differences in the master data and other data fields mandatorily required by the tax legislation. Inaccurate invoice data result in expensive exception handling and payment delays.

As many businesses optimise taxes through illegal and legal methods, tax compliance is increasingly put into the spotlight. The OECD and G20 countries agreed to increase the requirements for reporting and the tax compliance of any business documents. The Panama papers scandal might further strengthen and accelerate this trend. Businesses have to provide more precise evidence that trading partners really exist and that business documents are based on a supply of goods or services. The current accuracy of invoices and related business documents may no longer be sufficient.

Invoice issuers and recipients also have tremendous costs associated with inaccurate invoices. This is well reflected in a survey. Atradius [27] analysed the main reasons for payment delays by domestic B2B customers. Incorrect information on invoices was the reason for 25.7% of these delays in Asia Pacific, 26.3% in the Americas and 15.1% in Europe. Even worse is the fact that in 19.2% of the cases in Asia Pacific, the invoice was sent to the wrong person. The value in the Americas was 21.4% and in Europe 11.6%.

Higher invoicing accuracy can be achieved by improving the address data of issuers and recipients, and all data related to the underlying supplies (goods and services).

Phantom trading partners (fictitious corporate entities) and supplies (never delivered) are also a main reason for AP fraud. According to a 2015 APN survey, 44% of organisations have been affected by fraud in the last three years [28]. According to the 2014 Report to the Nations on Occupational Fraud and Abuse, the typical organisation loses five percent of its revenues to fraud each year [29].

Not all, but many of these challenges can be overcome with an appropriate measure to improve data accuracy and validate the data on a real-time or near real-time basis. E-invoicing based on accurate data lays an excellent foundation to this end.

3.3.3.2 Accurate addresses and master data

Tax compliance requires that both trading partners really exist, and that their addresses are correct and in line with the entry in the business register.

Digital certificates can be one tool that may be used to unequivocally identify trading parties, at least on the technical authentication level. They are already in use in some countries with this objective. However, this unique identification does not necessarily guarantee that the issuer and recipient addresses on the invoice will correspond. This can rather be ensured by a synchronisation of the master data with accredited registers. Such accredited directories may be the national business registers. In addition, public sector registers – including the public administrations/agencies on all federal levels – may be established and maintained. The data of these directories are sometimes not yet fully public, mainly for privacy reasons. If this is the case, the legislation can be changed to pave the way for easy online access to them. For practical reasons, registers are required to support a number of specifications regarding hierarchies such as for headquarters and branches, subsidiaries etc. If these prerequisites are fulfilled, the market participants can use lookup routines to dynamically synchronise key parts of their master data in their ERP solutions or respectively the user directories of e-invoicing network operators. Australia might be one of the first countries going this way with dynamic lookup routines [4][5]. Some Nordic countries, Austria, Italy (public administrations) and a number of others are also quite advanced in this respect due to their use of public registers in the context of e-invoicing.

Direct data synchronisation between the systems of trading parties will still play an important role in many high volume industries, but might in the medium term be complemented or replaced by synchronisations with national registries.

Some projects are paving the way towards the identification of trading parties in the future, including for cross-border transactions. The EU has initiated eIDAS [30]. Mexico is also very active regarding unique cross-border identifiers for trading partners in Latin American countries, the US and Canada.

3.3.3.3 Accurate product and service information

Due to compliance requirements, businesses have to provide the evidence that business documents are based on a supply of goods or services. Tax optimisation by over-invoicing (fraudulently increasing the price of a good or service) or under-invoicing (decreasing the prices) shall thereby be avoided.

Businesses also have their own interests in accurate goods or service descriptions in invoices. For standard or mass goods and services, especially in regulated market segments, such data can be synchronised with a central data base. One example is TARMED, the tariff structure in the Swiss healthcare industry. The supplies in the invoices are matched with these standardised data. Most businesses are operating in a less standardised environment. For them, good options for increasing the accuracy of such invoice data are also available. Integrated purchase-to-pay solutions are leading to catalogue data matching.

The GS1 organization promotes GDSN (global data synchronization network), which enables trading partners to share product data globally.

We expect that data synchronisation services will play an increasingly important role in the future. However, at present most organisations prefer to issue orders predominantly by electronic means, and to receive e-invoices. In many cases, the content of these two documents can be automatically matched.

3.4 Emerging technologies

3.4.1 Current issues, and the need to act on the part of end-users and solution providers

In the invoice processing cycle, there is a high proportion of repetitive and time-consuming tasks, both for issuers and recipients. Nevertheless, more than 90% of all invoices worldwide are still processed manually. Of course, some invoices are scanned, and key data is extracted; some invoices are exchanged only electronically. Invoice data validation happens on the e-invoice exchange platforms and in some processing systems, mainly at invoice recipients. These tasks permit to reduce the proportion of manual exception handlings, typically to a rate of 20% or slightly below. Some third party service providers offer better values, but users complain that they have to pay high transaction fees. Many end-users would therefore prefer to bypass service providers. Considering the drive towards cost-effectiveness by third party providers, the ability to significantly reduce end-user prices is quite limited, except if the providers disrupt the old business model. Hence, the market is looking for emerging technologies to solve these issues.

The following is a brief assessment of some relevant topics:

- Blockchain
- Cloud Aggregation Platforms
- Robotic Process Automation
- Machine learning
- Advanced Analytics

3.4.2 Blockchain as the next game changer?

Many readers may be familiar with bitcoin. Not everyone may be aware that this was one of the first applications based on blockchain technology. This is now changing. Enthusiasts are convinced that this will be the new basis for many future solutions with the potential for killer-apps.

A blockchain is an open ledger, in which every transaction is recorded in a decentralized database (several nodes and computing platforms). Each block in the ledger records an executed transaction. The blockchain allows direct and secure transactions between parties in the same network, without the need for intervention by traditional intermediaries like payment service providers. Once information is recorded in the blockchain, it is considered immutable, because it is strongly protected.

Many major financial and technology organisations are exploring the benefits of blockchain, and some payment solutions that are based on it are already up and running. Many e-invoicing and B2B network operators have also launched proof of concepts. But is the e-invoicing industry comparable to the payment industry, or is the blockchain in this area rather a short-lived illusion? Is it a real game changer or something else?
Blockchain is used to solve problems that cannot be solved otherwise, or to solve problems significantly better and cheaper than is possible using other technologies.

The ideal application areas for blockchain include mainly the following scenarios:

- Many different involved parties
- Sequence of transactions/processes
- Other processing solutions are time-consuming and costly
- Security and integrity of transactions is important
- Irrevocability of transactions is important
- Trading parties prefer to exchange information on a peer-to-peer basis (bypassing the traditional intermediary service providers)

How well does the business process automation environment match the ideal environment in which blockchain can be used? It fully matches the items listed above.

However, there are further demands from market participants and regulators:

- Any-to-any data formatting and multi-channel support
- Tax compliance for domestic and cross-border invoices and business messages, both formal and in terms of content. This may include requirements regarding transparency of processes, location of processing, privacy for trading parties etc.

Our conclusions

- Good chance for e-invoicing related value-added services like payment, trade financing, contracts recording, pre- and post-processing of invoices on supplier/buyer side that is legally less demanding than e-invoicing, working capital optimization, etc.
- The blockchain technology may be also of relevance for new topics related to e-invoicing, and hybrid models that combine blockchain components with other technologies like tracking of shipments etc.
- The blockchain technology might have some chance in legally very liberal countries in North America, parts of Europe, Japan, and the Pacific region. It might be of particular interest for new market participants.
- The chance might be limited in Latin American and Asian countries that are already practising the clearance model. On one hand, service providers in these countries already have transaction prices in the low single-digit USD region while using their current model. This is just slightly higher than the public blockchain transaction fees. Last but not least, their systems have already been tested in the field, and are up and running.
- It is unlikely that the blockchain technology has the capacity to substitute up and running B2B networks and clearance models within the next five years. Rather it could complement them using a hybrid approach.

Analysts estimate that the global blockchain market size will grow from USD 210.2 Million in 2016 to USD 2,312.5 Million by 2021 [31] respectively to reach USD 7.74 billion by 2024 [32].

3.4.3 Cloud Aggregation Platforms

Organisations can meanwhile use different cloud services from various sources, e.g. ERP services, archiving, e-reporting of fiscal information, clouds to exchange business documents, and B2B networks. Organisations benefit from these cloud services by using and paying based on need. End-users acknowledge that they should not re-invent everything by themselves; instead, they should employ field-tested solutions and cloud services. Unfortunately, using different cloud services complicates aggregation, integration, customization, and maintenance. However, is it still difficult to find a single source for various cloud service requirements.

For about two decades, B2B cloud service operators have been trying to invent everything on their own at least for the business process automation. The result is quite often a relatively monolithic platform, which would not be very flexible, should a significant market transition take place. The low margin, in combination with steady demand from customers for new services and technological opportunities, may result in the implementation of new models. One method to improve the situation is to divide services/solutions into modular components, and to evolve towards a Cloud Aggregation Platform. The traditional operators with solutions based on the architecture from the previous decade may increasingly substitute their solutions with such platforms. New market participants may use them already at the start. They may become Cloud Services Brokers (CSB). A CSB aggregates hybrid cloud services from various sources, and creates a new bundled service for the customer [33].

We expect that many of today's solutions will be scrutinized, disrupted, divided into modular cloud components, and rebuild, based on the approach of a CSB. The new cloud is already visible on the horizon, building interesting opportunities for Cloud Aggregation Platforms.

Modular cloud components and open cloud services are already present on the market, e.g.:

- E-invoice exchange
- Any-to-any data formatting for at least the most common formats
- Mapping setups for data formatting and roaming, either provided as a cloud service, or by a shared service centre or independent cloud workers
- Tax compliance services
    - Validation services regarding tax compliant master data of issuer and recipient; lookup routines with public and private directories for businesses and public administrations
    - Validation services for other legally required invoice content
    - Ensuring and/or validating formal compliance of invoices and other business messages
    - Long-term archiving
- Synchronisation services for product data
- Software robots for specific tasks
- ERP in the cloud
- ERP connectivity services
- Country localization services
- Tax reporting
- Virtual server and data centre
- Open-source cloud computing services
- Web services
- Data base
- Data extracting
- Analytics, including spend management
- Payment and Supply Chain Financing
- Procurement
- Trade facilitation

Associations such as EuroCloud [34] and others are also encouraging this development. As a result, we expect that the number of platforms featuring reliable cloud components (portals, shops, directories with catalogues of various cloud components) will increase. This will allow end-users and service providers to consolidate cloud services into one complete package.

Ideally, industry-specific associations would start an information market place for related cloud services around e-invoicing, e-procurement, financial supply chain and business process automation. This would increase transparency, and pave the way to re-use field-tested services.

This development is still in its early stages, but it may have the momentum to disrupt conventional models. By using these services, organisations will have the chance to become more flexible in the future.

Gartner and others identify three areas within which cloud service brokers operate.

Figure 19: Activity areas for Cloud Services Brokers

Area	Description
Aggregation	Management and administration tasks, including provisioning, user access and authentication, monitoring SLAs etc. for different cloud services, which are provided by multiple cloud service operators. Providers also develop a unified interface to all these services.
Integration	Integration ensures that the different cloud services communicate and work properly with each other.
Customization	System configuration to meet the requirements of the specific operating environment.

We anticipate new opportunities for B2B cloud operators. On the one hand, they might substantially improve their cost structure and flexibility by using modular cloud components. Another opportunity might arise if they offer parts or the entire cloud service to current Cloud Service Brokers. Last but not least, they could enhance their existing portfolio with further cloud components, and could become Cloud Service Brokers themselves.

The estimates of MarketsandMarkets Research [31] are very promising. They predict that the cloud services brokerage and enablement market will grow from USD 7.44 Billion in 2016 to USD 26.71 Billion by 2021, at an estimated CAGR of 29.1% from 2016 to 2021. According to the Transparency Market Research [35], the global cloud service brokerage market was worth US$3.3 Billion in 2015, and is expected to reach US$22.4 Billion by the end of 2024.

3.4.4 Robotic Process Automation

Academic studies [36][37] predict that Robotic Process Automation (RPA) might start a new wave of efficiency gains. Oxford University [36] speculates that many jobs in the area of invoice processing may become automated by 2035, especially New Accounts Clerks, Data Entry Keyers, Order Clerks, Procurement Clerks, Claims Adjusters, Examiners and Investigators, Bookkeeping, Accounting, Auditing Clerks, Credit Authorizers, Checkers, Billing and Posting Clerks, Surveying and Mapping Technicians, Bill and Account Collectors, Accountants, and Auditors.

The common feature of all these positions is a high proportion of repetitive work in the area of invoice processing.

RPA solutions automate repetitive and rule-based processes, which are usually performed by humans. The tools or robots replicate the actions of a human, interacting with the user interface of a computer system. For example, entering data into an accounting system would be a typical activity for software robots. They are configured or “trained” using demonstrative steps, rather than programmed using code-based instructions. Robots can login to relevant legacy systems (role-based directory authorization), and to work as virtual workforce. They are also able to collect data from various input sources, such as files or VAT business and public administration registers for master data synchronisation. They can interpret data, perform all the necessary validations, including crosschecking against other systems and messages, and feed this data into the target systems. When they encounter process exceptions, they can either rule them out or transfer them to a cognitive agent which will make a decision, update the system, and complete the process.

About 50% of back-office processes are expected to be substituted by RPA solutions in the coming years. Depending on their strategy, Business Process Outsourcing providers face both an opportunity and a threat.

The global RPA market is expected to achieve a size of USD 8.75 billion by 2024 [32], resulting in grow at a CAGR of over 60% from 2016 to 2024.

Implementation of RPA already brings significant benefits. Furthermore, it is fast to configure and to implement without disrupting the existing systems. It is appropriate for many of today's business processes that run according to rigid rules. Often, these processes involve highly repetitive work, such as processing invoices. Nevertheless, much of the remaining saving potential cannot be exploited only by using RPA.

3.4.5 Machine learning

Many organizations have to deal with judgement-based, complex processes and problem-solving. Consequently, cognitive robots are required. This is where Artificial Intelligence and Machine Learning as an application of it come into play. It is based around the idea that we should be able to give machines access to data, and let them learn for themselves. Machines learn directly from both structured and unstructured data, recognize patterns, and build their own business rules using learning algorithms. With this approach, business systems will reach a new level of intelligence and efficiency. Machines learn from what they have done in the past, improve performance based on experience, and are able to infer solutions.

Organizations may benefit from machine learning in numerous ways. They will be able to accelerate and optimize their business processes in general, and invoice processing in particular. Machine learning may simplify user interactions with devices, reduce human intervention, support fraud detection, forecasting liquidity, dynamic pricing, customer complaint resolution, trading partner scoring, and spend management.

An analyst [31] predicts that Machine Learning as a Service Market will grow from USD 613.4 Million in 2016 to USD 3,755 Million by 2021, at a Compound Annual Growth Rate (CAGR) of 43.7% from 2016 to 2021.

3.4.6 Advanced Analytics

Businesses are steadily required to be more customer-focussed, to focus on key initiatives that lead to entering new markets, to create new business models, and to improve operational performance. These are key factors driving advanced analytics, big data, and business intelligence investments today. This also concerns the finance and procurement departments.

Dashboards and reports are quite often the first steps towards more transparency; however, advanced analytics goes far beyond this. Gartner estimates that the business intelligence and analytics market is mature for a multiyear shift from an IT-led, system-of-record reporting to a business-led, self-service analytics. The reasons for this positive shift are multi-layered. End-users and business networks have learned to use big data in an intelligent manner. This is strongly supported by models, algorithms, and solutions that have not been available in this form only five years ago. Last but not least, less expensive computer power helps to accelerate this trend.

The list of applications on offer is rapidly increasing, and includes a broad range of features, from basic to very advanced.

- Invoice content
    - Anomalies, e.g. items higher than the normal price, or price differences between identical products

  - Incorrect tax allocations
  - Tax compliance
  - Contract and policy compliance
- Real-time spend analysis
  - Intelligently classified with drill-down options
  - Price fluctuations
  - Real-time and historical price variance analysis
- Benchmarking, comparison with the industry average
  - Payment terms
  - DPO, DSO
  - Early payment discount rates
- Business trends and predictive analytics
- Detecting and avoiding fraudulent invoices

B2B networks for the financial supply chain operate using big amounts of data. They are in an excellent position to help end-users to apply advanced analytics in an efficient manner. Forbes predicts that cloud based big data and analytics market will grow 4.5x faster than spending for On-Premises Solutions.

According to an analyst [38], the entire global advanced analytics market was valued at around USD 10.70 billion in 2015, and is expected to reach approximately USD 60.44 billion in 2021.

3.5 Improvement from pure transactions towards measurable values

Before the turn of the century, there were less than 15 specialised e-invoicing service providers worldwide. In the early days, network operators were typically able to serve only their domestic markets in a tax compliant manner. Soon may the number of e-invoicing network operators reach 1500. Many of them are meanwhile required to support formatting wide range of data formats, and to process several business and fiscal messages. The fees the network operators charge to customers today typically include initial, time-based and transaction based fees. Usually, they charge these fees regardless if the customers get very accurate and structured invoice data, or data of poor quality. Fortunately, the progress done during the previous years is impressive. The geographic coverage of network operators is steadily increasing. The quality of services is also rapidly improving, and we benefit from an increasing number of value-added services. Nevertheless, this might not be sufficient in the future.

We can see first signs of a paradigm shift. Some providers, most of them based in the US, are addressing the market with a new approach. They do not only sell technology, or help with implementation and transactions; instead, they promise quantifiable added value. They promise to deliver customer solutions that will bring measurable improvements. This is particularly interesting for the automation of business processes and spend management.

Examples of quantifiable measures and outcomes:
- Amount of savings
- Proportion of straight-through invoice processing
- Proportion of exception handlings
- Proportion of tax compliant invoices
- Proportion of contract compliant invoices
- Number of trading partners that have been on boarded within a defined time-frame; guarantee for a certain proportion of e-invoices after a defined time period
- Exploited early payment discounts
- Benchmark against the best in class or industry average

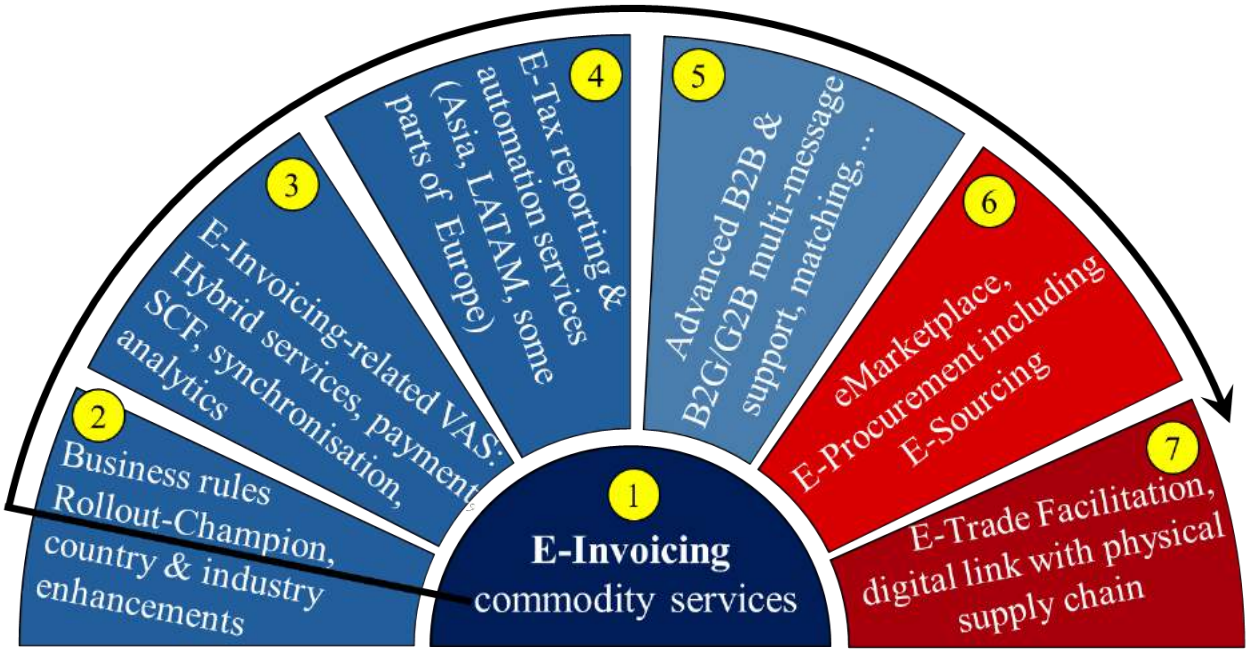
Consequently, the target achievement is combined with a chance/risk sharing model between the provider and the customer.

3.6 Solution providers challenged by diversified demand

Even for larger businesses it is often too difficult to comply with the rapidly changing requirements using in-house solutions. Therefore, it is even more important to involve third-party solutions and service providers to support them through this transition phase.

Specialised solution providers are experienced in this area and they have the business focus to handle this level of complexity. Nevertheless, it is also quite challenging for them to support their customers through the transition phase. The competition between solution providers is now quite tough. Customer-oriented offerings and innovations are in demand more than ever. A suitable and affordable long-term strategy for managing future business may become a key issue for these service providers.

Figure 20: Future Markets Radar for Service Providers – Future Management



Phase	Description
1	The commodity service could include any-to-any data formatting, tax compliant e-invoice preparation (domestic and cross-border), transport/distribution and archiving. Cost leadership is required for being competitive in the future. Providers unable to increase the processed invoice volume above the market average growth should think about mergers with competitors for achieving the critical mass. Evolve towards a Cloud Service Broker is an alternative.
2	We expect that in the provider community the “wheat will be separated from the chaff” based on the capacity to be a champion in these disciplines: Specific business rules are applied at least for validating the mandatory data fields in invoices. Data accuracy is a cornerstone for significantly reducing the costly exception handling of invoices. Electronic invoices can become the catalyst for this improvement.

Phase	Description
	A few service providers have developed excellence to engage and on-board a high number of users in a short time. In just a few years, the most attractive market segments in advanced countries might be occupied. In today's globalized world it is no longer sufficient to support just the domestic requirements. Country- and even industry-specific enhancements should also be supported.
3	Value Added Services (VAS) are increasingly an important differentiator to other competitors. In the spotlight today are hybrid services (processing of paper and electronic invoices in parallel), instant payment features, any kind of Supply Chain Financing & Trade Financing, Dynamic Discounting, data synchronisation services (master data, product data), analysis of invoice, processing and spend related data.
4	The tax authorities are increasingly demanding with regards to the reporting of any tax documents in electronic format. In the past this was often limited to general ledgers and VAT declarations. Increasingly taxpayers are also requested to send electronic data of audit files, invoices, credit notes, debit notes and even the payment receipt data produced by fiscal printers at the point of sales. Service providers mainly acting in Latin America, Asia, South and Eastern Europe are affected by this development. The IT challenges for many taxpayers are too high and they prefer to involve a service provider doing this on behalf of them.
5	A pure focus on processing solely electronic invoices is no longer sufficient. Meanwhile, more than 50% of service providers offer also support for other related business messages (e.g. orders, order confirmations, statements). In a first step they transport such documents in an electronic envelope. Leading providers offer advance services like content validation and matching between the different messages. The most popular services are currently the matching between orders, invoices and delivery notes.
6	Traditional electronic marketplaces grow increasingly into the business area of e-invoicing networks and vice-versa.
7	Exporters and importers process many cross-border invoices, but also a high number of customs, trade and transport documents. These additional trade documents have a high degree of overlap with the commercial and tax invoice. Tax authorities and auditors increasingly demand documents approving supplies and customs documents. The first e-invoicing network operators enter into this area in order to offer a full e-document service to their customers (full service for exporters and importers). This development is still in its early stage but might gain momentum until the end of this decade. The next evolution step is already launched: The virtual and physical world are linked. A match between electronic documents of the financial supply chain and the tracking and tracing information of physical goods becomes reality.

3.7 Need to change from a reactive to a proactive approach

3.7.1 Organisations with the aim to automate business processes

According to a recent study by MIT Sloan and Capgemini, only fifteen percent of CEOs are executing a digital strategy, even though ninety percent agree that the digital economy will impact their industry. This confirms the personal experience of us that a majority of organisations do not have a strategy to implement e-invoicing and to automate the processes. Rather are they required by important trading partners or by the legislation to act. The result is typically a very heterogeneous solution, channel and format landscape. This is expensive to operate and maintain. It is in

most cases also inappropriate to optimise processes in a holistic manner. This negative scenario can be avoided by defining an e-invoicing or better a holistic business process automation strategy as soon as possible.

Below is a list of questions, organisations should ask before defining a strategy:

- What are our objectives and priorities?
- Do we do business in countries that now or soon practise the clearance model for invoices, receipts, other fiscal documents or tax reporting?
- Do we do business in countries that now or soon practise a B2G e-invoice mandate?
- How can I ensure the tax compliance in an international environment?
- Do we want to automate just the invoice processes, include the purchasing, the entire procurement and even the sourcing process?
- Is it our intention to start with the order-to-cash or purchase-to-pay automation?
- Which corporate units, systems and processes will be affected by the project and how can former solutions be migrated?
- How shall B2B networks and other cloud services be considered?

3.7.2 Solution providers

Today the solution vendors have an extremely strong tendency to develop and operate almost everything by themselves. After taking a look at the profitability of the solution provider community is it obvious that most providers do not have the financial capacity and resources to develop and process all future services by themselves. Comparison: The automotive industry today has a depth of manufacture of 20-25% and still tries to reduce it. Specialized partners do the rest. In the end we expect and recommend a similar development of the e-invoicing and e-procurement solution provider community.

Disruptive innovations should not only be considered by end-users, but also by solution and service providers. The market ultimately demands a highly holistic solution, exceeding the capability of most solution vendors. Segmentation into specific functions that are provided by specialists to other service providers could become a realistic scenario. Finally, the potential innovation models for service providers are comparable to those of end-users. Define a strategy for the next 3-5 years, scrutinize what to do inhouse, what to do via partnerships and what components to reuse out of the cloud.

3.8 The time is right for the transition

The invoice processing with its' high proportion of repetitive and rule based work is a key topic to be affected by the market transition ahead of us. This phase can mean an opportunity or a threat.

The digital transformation is no longer an option, it's the imperative. It is rather the question how to unleash the power of the digitalisation while maintaining a healthy business.

4. How to be successful with your project

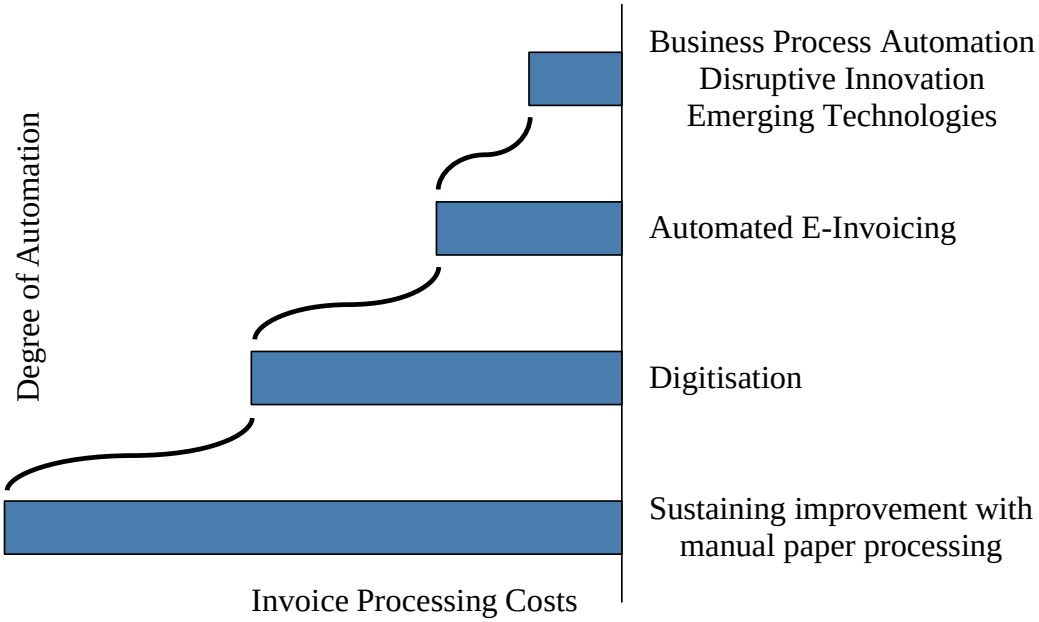
4.1 From gradual evolution to innovative business process automation

4.1.1 Evolution steps

Remark: In order to simplify the description, we focus on the invoice recipient side in this chapter. The steps for improvement are accordingly also valid for the invoice issuer side.

Organisations typically follow an evolutionary path and gradually improve their processes in 10-20% steps. Substantial savings are possible with this approach. Besides the introduction of these classic steps in this chapter, we will also encourage the readers to assess a more revolutionary model for business process automation based on disruptive innovation with the aim to improve to 90%.

Figure 21: From gradual evolution to innovative business process automation



4.1.2 Sustaining improvement with manual paper processing

In most organisations, conventional paper processing is not optimised. Invoices are often received decentrally by many departments. Cash managers do not have an overview of all invoices in the workflow and therefore only have limited opportunities to improve the working capital.

A first step of improvement is to centralise inbound invoices. From the very beginning, they can be processed more efficiently in a shared service centre. Offshoring such shared service centres can again reduce the processing costs substantially.

Nevertheless, the classic shortcomings caused by the paper format remain, such as:

- The accuracy of the invoice content remains a problem; typically 20-30% of all invoices have to be treated as exceptions in one form or another, resulting in very high processing costs.
- The data are validated and matched with related documents manually; this is time-consuming and costly. Delayed payments are often caused as invoice errors are detected very late during the processing cycle. Potential discounts are missed and the DPO stays too long.
- The master data have to be updated manually, resulting in high trading partner administration costs.

- For archiving paper invoices, a great deal of space is required. It is also costly to retrieve paper invoices in the event of audits or queries.
- The demand of trading partners for an electronic channel is not satisfied.
- Last but not least, paper invoices are harmful to the environment.

4.1.3 Digitisation

Digitisation is a huge step forward. Currently, two methods are in the foreground:

- Paper scan and capture
- Image-based PDF invoices

Digitisation requires organisations to establish invoice workflow and archiving solutions. As a consequence of this improvement, many disadvantages of conventional paper processing disappear, but several still remain:

- The accuracy of the invoice content remains a problem; typically 20-30% of all invoices have to be treated as exceptions in one form or another, resulting in very high processing costs.
- The master data can be updated on a semi-automatic basis, but the risk of redundancies of master data with minor differences could increase.
- The demand of trading partners for an electronic channel is not, or not fully, satisfied.
- Last but not least, paper invoices are harmful to the environment.

Image-based PDF invoices are for many organisations a first step towards paperless invoices. Invoice issuers favour these as they have an immediate positive impact on costs. Larger invoice receivers are more sceptical towards exclusively image-based digital invoices. Nevertheless, it is even an improvement for them compared to paper invoices. Transport is much faster. They have access to a quick, digital channel for feedback and rejects. For internal processing, recipients can feed the PDF invoices into the scan and capture process. The resulting data quality of this is slightly better than with paper invoices.

4.1.4 Automated e-invoicing

The legislation in many countries (in Europe, North America, Pacific etc.) considers paperless invoices in any electronic format to be e-invoices. This includes structured electronic invoices as well as image-based PDFs. Depending on the country, up to 50% of all businesses use office programs to generate invoices. They often neither have AR nor AP modules for their accounting. Many of them have outsourced invoice-related processes to third parties. For them, it is challenging to practically automate e-invoicing processes. For most others, however, a key objective is to fully automate these processes. Terms like ‘touchless e-invoicing’, ‘zero touch e-invoicing’, ‘true e-invoicing’ or ‘automated e-invoicing’ are used in this connection.

Suppliers and buyers use structured invoice data and typically establish direct two-way communication or increasingly use a service provider for the bilateral exchange. This results in many benefits.

E-invoicing is typically practiced in a centralised manner for all outbound and inbound invoices. This results in increased transparency and builds an excellent basis for the optimisation of cash management.

A major shortcoming of any paper and digital image-based approach is that the accuracy of invoice data is not guaranteed. With the appropriate approach, this problem can immediately be eliminated or at least improved (see chapter 3.4). The unique identification of trading partners

based on compliant master data is a prerequisite and becomes the norm for automated e-invoicing.

True e-invoicing paves the way for real-time or near real-time data validation. The earlier an incorrect invoice is rejected, the sooner a new one can be sent. As a result of the improved invoice accuracy, the approval and processing time can be reduced significantly. The DSO can in most cases be shortened by several days[4].

Dispute handling can be conducted in a more structured way by using the same electronic communication channel. As a result of the increased electronic interaction, the trading partner administration costs can be reduced substantially.

Compared to conventional paper invoice processing, the automated e-invoicing will result in cost savings of 60-80% in most cases.

Structured e-invoices build a good starting basis for value-added services and the easier implementation of trade financing services.

4.2 From the scratch to the rollout

4.2.1 Define the best Scope for your organisation

Many organisations already exchange some electronic messages along the supply chain with their counterparts. For them, e-invoicing is just an enhancement and a next step towards automating the whole supply chain.

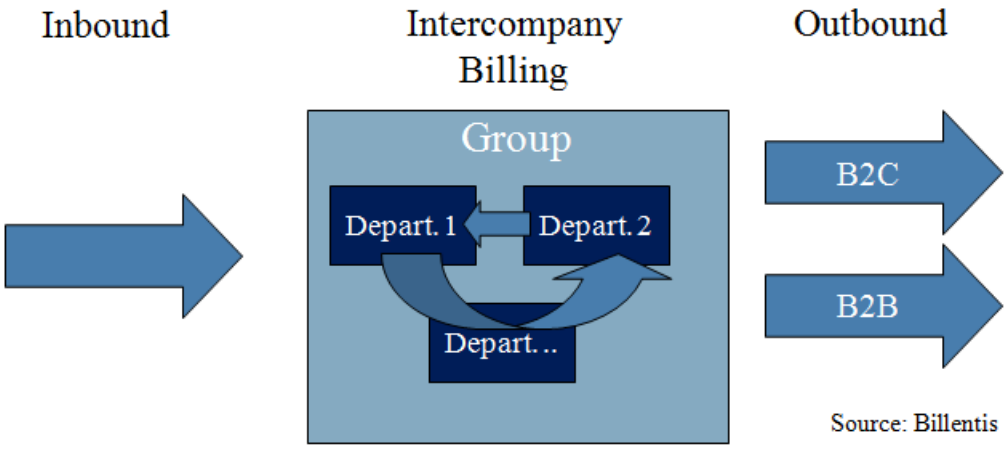
For a vast majority, e-invoicing is the first step towards the electronic supply chain. That is why many organisations start with the “queen of all messages”. In most cases, it is a good approach starting with “just” the invoice message and aggressively increases the electronic share within your environment. E-invoicing alone will already be an interesting business case! However, more future savings are possible with a fully automated supply chain.

In mid-term planning the next optimisation steps to take should be considered: Either in the pre- or post-processing of the electronic invoice.

Some invoice streams are more dominant and provide higher optimisation potential. We believe that projects should follow that potential.

[4] A survey in Germany confirmed 5.4 days for example.

Figure 22: Priorities of invoice streams



Inbound

Organisations in a strong buying position may decide to replace inbound invoices first, as they are in a strong position to push their suppliers to deliver invoices in electronic format.

Intercompany Billing

Volume and optimisation potential is quite often under-estimated. It is the only invoice stream fully under the control of each organisation. In one scenario, these invoices can quite easily be processed electronically or via account transfer. This is the case if all departments, branches or subsidiaries belong to the same tax entity in the same country. Wherever that is not the case, it can make sense to handle internal electronic invoices as for the external ones, with identical methods guaranteeing authenticity, integrity and legibility.

Outbound

High volume organisations in the B2C sector already provide electronic bills to consumers with direct models. However, the success is limited in most cases. If 50% of clients are using it, it is already a good value. Most send electronic bills just to 35-50% with best in class to 75-90%.

To increase the electronic share, an opt-out rollout model (as defined in figure 29) should be practised and/or networks should be distributed (e.g. online-banks or other favourite portals of consumers). Delivery of PDF invoices via email or portal has become very popular in many countries. However, many large billers made a more significant step forward by practising the push method rather than a portal based approach. The same is true for B2B invoices for small businesses. In this case, the PDF invoices are ideally much more than just a paper replica. Instead, the PDF files can include – alongside the invoice image – also a layer with structured (XML) data and the ability to include forms and components for dynamic interaction such as dispute, payment etc. e-invoices are prepared in a VAT compliant manner by the issuer (digital signature for at least relevant parts of the PDF container, verification and sometimes with long-term online archiving).

4.2.2 Know your environment

In many projects in larger organisations, it was interesting for the author to see the heterogeneity of customer environments, e.g.:

- High number of different ERP systems
- Decentralised issuing and/or receiving of invoices
- No control and overview regarding paper invoices in the workflow

- No transparency concerning all the invoice streams, volume and the different ways in which they are processed
- Various decentralised long-term archives
- Unclear as to which document is the invoice original and which is a copy
- Parallel and isolated projects in different departments for scanning, workflow, archiving, tax compliance and e-invoicing

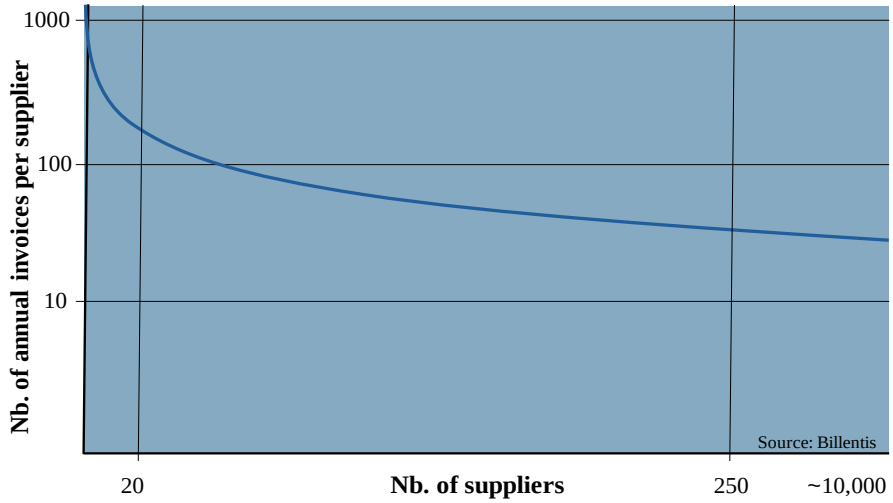
An efficient workflow and archive solution is in most cases another result of an e-invoice project. Cleansing of redundant and inaccurate master data before going into operation is strongly recommended.

If the reader is working in a large organisation, it is helpful to clarify the points above and summarise the current environment and the mid-term target environment.

4.2.3 Know the capabilities & constraints of your trading partner

Although valid in many sectors of our environment, the 80:20 rule is not applicable regarding invoice streams, except in very few industries. The pattern below for inbound invoices in a mid-sized or larger organization is much more likely.

Figure 23: Pattern for inbound invoices



The number of suppliers sending more than 100 invoices per year is quite often just among 20-50. Perhaps another 1,000 send 10-100 annual invoices and the vast majority send less than 10 annual invoices. Large organizations have typically 10,000 suppliers and depending on the product n0,000 customers. The vast majority of suppliers and customers are SMEs with highly fragmented IT landscape and limited capability for import/export of structured invoice content and electronic archiving. In addition, these counterparties can be located in various countries with different legal constraints regarding tax compliant invoices, archiving, language and cultural behaviour.

E-invoicing projects can just be successful, if the situation of trading partners is strongly considered in the project. This includes also thinking about what the incentives for them are and how they can easily be connected in a VAT compliant manner.

Whereas large issuers and recipients fully integrate electronic invoice processing into their environment, the requirements of mid-sized and small enterprises can be different.

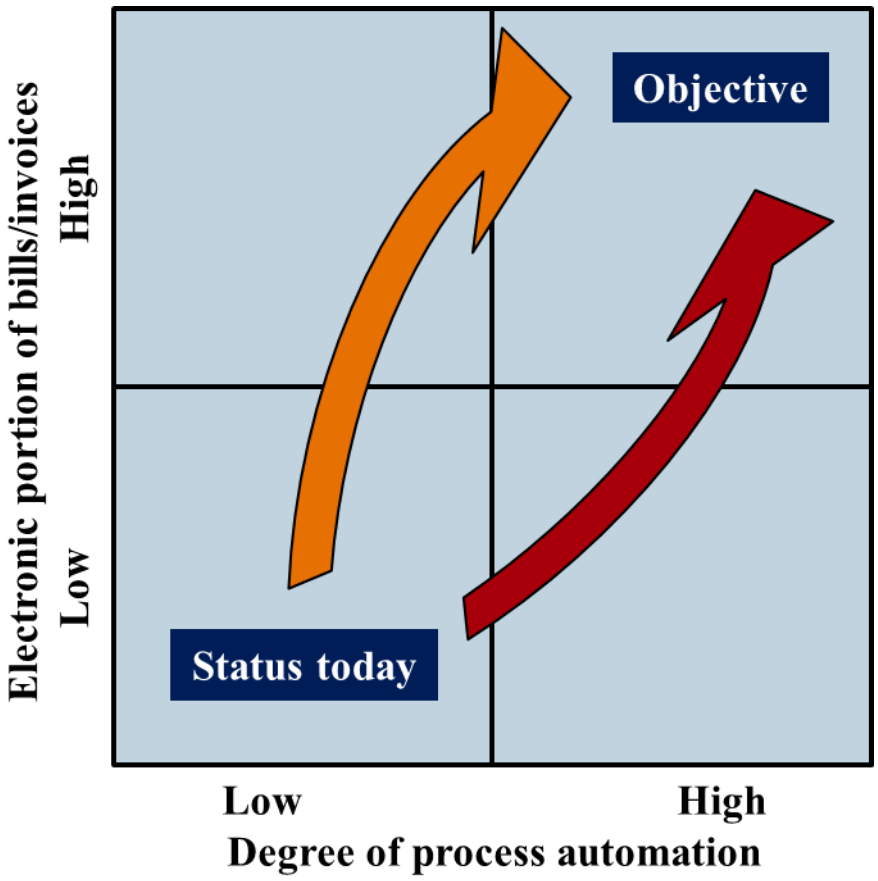
Figure 24: Requirements of organisations

Size	Issuer requirements	Recipient requirements
Large	• Full ERP integration • Two-way communication • Cloud archive (sometimes shifted to inhouse in step 2)	• Full ERP integration • Two-way communication • Cloud archive (sometimes shifted to inhouse in step 2)
Medium	• Full ERP integration • Export Tools (CSV, ...) • Cloud archive	• Full ERP integration • Import Tools (CSV, ...) • Cloud archive
Small	• Printer Driver • WebEDI (type in invoice on a portal) • Electronic forms • PDF (including several layers with image, XML data and other features) • Cloud archive	• Browser presentation & download, e.g. via home banking • PDF (including several layers with image, XML data and other features) • Cloud archive

4.2.4 Choose the appropriate migration strategy

This chapter focuses on the migration path options.

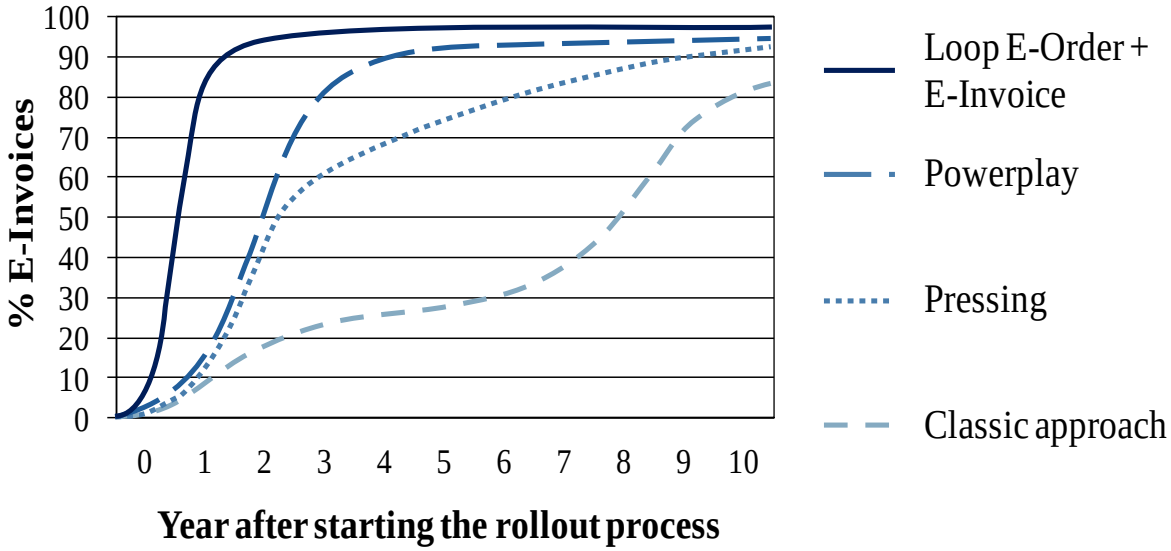
Figure 25: Migration path to exploit the full optimization potential



4.2.4.1 Increase electronic proportion

By monitoring the international markets for 20 years, we analysed the differing developments in organizations. The success rates and electronic proportions differ greatly.

Figure 26: Success rate dependant on practiced on-boarding methods



Phase	Description
Classic approach	Mainly large companies are innovators for e-invoicing. They push their larger trading partners to send and receive the invoices electronically. The Opt-In on-boarding method is practiced (convince one by one to enter into the electronic community). For the vast majority of organisations, the achievable share of e-invoices with large trading partners is just 25-30% after several years. In a next step, the large innovators also try to push their mid-sized and small trading partners to support electronic invoices. Even by increasing the marketing activities, a large organization does not have the power to make the market alone. They are dependent on the maturity of the mass market. The annual growth rates are limited. This market evolution was common in the past and is still in progress today in most countries. It did not cause a broad break-through in the markets up to today.
Pressing	For most large companies, it is possible to achieve an electronic invoice share of at least 60% after 3 years. This will not happen automatically with a smart and friendly approach towards trading partners. Instead, powerplay and marketing is necessary for increasing the share of e-invoices. In addition, the general contract terms should be enhanced to provide the contractual instrument to force trading partners towards e-invoicing. Although the rollout is strongly based on powerplay, this is still a fair method if the promoter or its service provider offers appropriate solutions for any kind and size of trading partner and for fair conditions. Registration and usage barriers shall be as low as possible. This can happen, for example, by taking the first step using only the internet. An account shall be pre-defined for each trading party

Phase	Description
	and can be activated with just a click of the mouse, followed by completing the user's master data. An increasing number of large companies are practicing this method.
Powerplay	For most large companies, it is also possible to achieve an electronic invoice share of at least 80% after 3 years. The "Pressing" method is enriched with penalties for counterparts which insist on paper invoices. Electronic invoice exchange is declared as the default channel, but penalties are applied for paper invoices: • Suppliers charge typically EUR 1 – 3.50 to consumers and EUR 5 – 25 to companies per paper invoice • Buyers reduce the paid invoice amount typically by EUR 15 – 25 per paper invoice if the suppliers are not willing or not able to send the invoices electronically
Closed electronic loop for orders and invoices	In many large companies, at least 40% of the invoices are based on Purchase Orders. This rate is steadily increasing. Enterprises have the chance to receive all PO-based invoices electronically within just a few months. Suppliers are keen to get purchase orders. If they only get the chance to receive them electronically in the future, they will accept the new channel rapidly. In addition, they also have the chance to return invoices electronically. This model results in a quick win-win situation for suppliers and buyers.

Considering these known facts, it is surprising that many organizations do not switch to more promising on-boarding methods.

4.2.4.2 Enhance the degree of process optimization

Today a major bulk of electronic invoices is just digital images of paper. This is not really a surprise, as people are familiar with PDFs and the barriers to start with are quite low. However, the benefits are mainly on the supplier side and buyers are keen to move towards the next steps.

Improvements, which can be noticed on the market

- PDF Images → Intelligent PDFs including images + structured invoice data (+ interactive components, digital signatures, logfiles, workflow functionality); PDF invoice becomes interpretable by both humans and computer systems
- PDF Images → structured XML invoices
- Scanning of images only → Scanning + OCR + Workflow

Any development as mentioned above helps to increase the degree of automation on the recipient's side as well. The weak economy might accelerate the next evolutionary step towards fully automated processes and to tap the full potential in the mid-term.

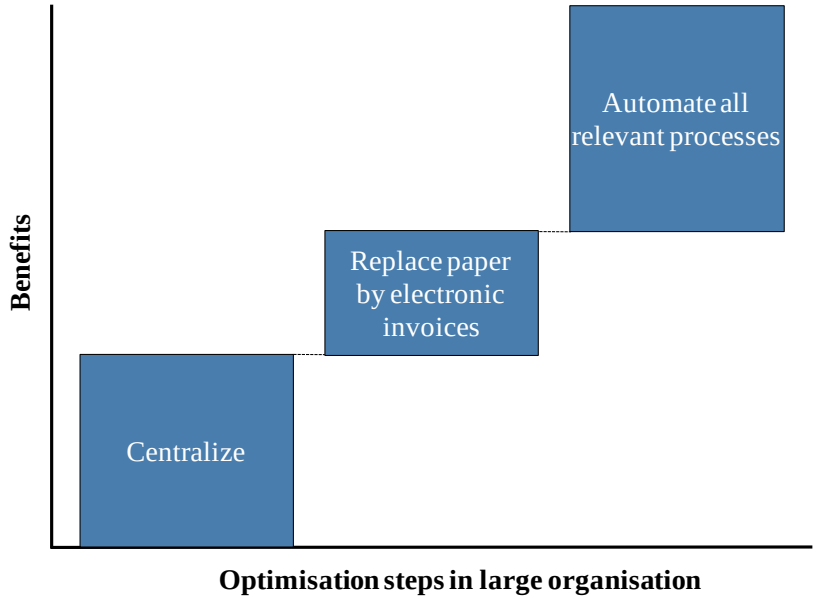
4.2.5 Scenario for internal implementation

Typically, 30% of larger companies still manage the invoices decentralised. Almost all of them use several ERP and accounting systems. This environment does not allow the financial manager the required transparency about the number, the total amount and the status of invoices.

E-invoicing often results in a central outbound and inbound gateway, aggregating all invoices. This significantly increases transparency for finance managers and is a pre-requisite to optimise the working capital.

In a fragmented and large environment, the highest benefits can be achieved by following these steps.

Figure 27: Optimisation steps and benefits



As this objective can be (too) time consuming (e.g. 2 years) a good alternative is migration within a decentralised environment. If the constraints of future centralisation are already known, they can be considered in the planning and implementation of systems and processes.

Improve to electronic and automated processes is generally a good step. However, in most organisations, it may be advisable to critically scrutinize and streamline first all the processes. Often, 30% of historic burdens can be removed without loosing anything.

4.2.6 Potential involvement of third party solution providers

Complete in-house developments are no longer a realistic option

- No chance for a good business case due to high project/development costs and very high follow-up costs
- Too time consuming
- No reason to re-invent solutions which are already offered by hundreds of solution providers and which are up-and-running already in other companies

Therefore, the real alternatives are purchasing third-party applications or using external cloud services.

Figure 28: Third-party services and applications

Services	Applications/Solutions
• SaaS (Software as a Service) • PaaS (Platform as a Service)	• e-billing/e-invoicing applications for automated or semi-automated issuing and

Services	Applications/Solutions
• E-invoicing network service (single-point-of-contact; any-to-any-to-any connection) • Any-to-any data formatting • Rule based data validation • VAT tax compliance service • Invoice management service (including digitalisation and data capture of remaining paper invoices) • E-Procurement, E-Marketplace • Archiving Service • Supply chain finance • Advanced analytics • E-reporting • Others	receiving electronic invoices, including handling of various output/input formats • Signature software or devices, Public Key Infrastructure (PKI); Signature verification tools and portals • Invoice cockpit (monitor all invoices circulating within an organisation) • Invoice management • Workflow • E-Procurement • Interface software o data conversion and mapping tools o printer driver with e-invoice transfer features • Archive

The scenario chosen from the above will depend on
- Make or Buy policy of each organisation
- Own IT and processing environment
- Invoice volume
- Business Case
- Internal requirements
- Requirements and capabilities of counterparts

Larger organisations quite often analyse 2-3 scenarios, compare them and decide on one of them. This step is then followed by a Request for Proposal (RFP), sent to 2-4 providers.

4.2.7 Compliant rollout model for your counterparts

Technique is just a small part of an e-invoicing project. Much more important for the success and a high electronic share is the rollout strategy (on boarding of trading partner).

Figure 29: Different rollout models in use

Opt-In	A issuer or recipient upgrades his environment for electronic invoice processing. He informs his counterparts about this new opportunity and invites them to send and/or receive invoices electronically. Each participant has to be persuaded to change to electronic invoicing. This can be done with strong arguments, incentives and/or slight pressure. The traditional and friendly method of taking companies on board was used in the past, but is more often replaced by the Opt-Out model where possible.
Opt-Out	A issuer or recipient upgrades his environment for electronic invoice processing. He informs his counterparts about this new opportunity and explains that after a certain deadline, invoices will only be exchanged electronically. If anybody wants to “opt-out”, they have to give notice. In many cases, it means also a (penalty) fee for keeping to paper based invoices. The Opt-Out model results in very quick results and a high electronic invoice volume. It can be practised by any larger organisation, but is mainly at the forefront for organisations in a steady interaction with a stable base of counterparts (e.g.

	Leasing companies, Transport & Logistics, Telecom, Utility, Credit & Customer Cards, Office Material, Suppliers of MRO articles and customer packaged goods, Online Services and any communities using Extranets or standard client software). Today's issuers who use this model quite often use signed PDF invoices with or without additional XML data. This guarantees immediate readability by the recipient, although the benefits for them can be quite limited in the case of PDFs.

Figure 30: Success rate for an organisation and the electronic proportion one year after launch

Model	Electronic proportion of all invoices
Issuer driven "Opt-In"	1-5% with free market range 5-50% within existing supplier-buyer networks
Issuer driven "Opt-Out"	85-90%
Recipient driven "Opt-In"	1-5% for organisations without much purchasing power 50-70% for organisations in strong purchasing position
Recipient driven "Opt-Out"	Up to 90% for organisations in strong purchasing position and providing electronic orders

The majority of businesses in Europe do not have an ideal environment for using an Opt-Out approach. However, the model should be tailored to its practicability for each environment. Certainly, it will be practised eventually by some of your counterparts, with a direct impact on your situation.

4.2.8 Potential barriers and how to overcome them

The barriers differ greatly for enterprises in various countries and depending on the company size.

Figure 31: Main barriers in many European countries

Barriers (European mass market)	Possible actions to overcome them
Legal requirements are unknown or confusing	The multi-stakeholder fora and/or federal administrations are privileged to actively provide appropriate information to the mass market. Some of them organize information events & road-shows or engage evangelists. Many others (e.g. Austria, Belgium, Germany, Switzerland, United Kingdom) operate an information portal with the most important information.
Missing market transparency about the solutions offered and the collaboration among various service providers	The multi-stakeholder fora and/or federal administrations are privileged to actively provide appropriate information to the mass market. Some of them already provide a broad overview on information portals. The best-in-class offers segment specific information (small company selects "I am a small biller" or "I am a small invoice recipient" etc. and guide the visitor through an interactive dialogue to provide exactly the appropriate information (lean).

Barriers (European mass market)	Possible actions to overcome them
Change/adoption of internal organisation processes (40% of larger organisations)	It is human nature that old habits die hard. This is especially valid if very numerous departments are affected by a project and have to change. Management attention and decisions are required.
Divergent requirements of trading partners regarding formats, methods and processes	As this is especially painful in case of bi-lateral (direct) exchange of structured electronic invoices, using standards can help. E-invoicing network operators are also capable of significantly reducing the complexity for end-users.
Not recognizing the business case	Further market communication is required, especially by showing very concretely the individual saving for a certain outbound or inbound invoicing volume.
Trading partner does not support the electronic invoice	Viewed statistically, there is a relatively high chance that your trading partner already supports e-invoicing. It could more likely be a lack of information. Some federal administrations or multi-stakeholder fora already maintain public user directories. By far the best running example is from Finland, http://www.tieke.fi Besides increasing transparency, often the trading partners just need inspiration to do it now and some guidance on how to do it.
Task sharing for accounting and invoice processing with external parties (trustee, tax consultant, commercial auditor, etc.); is in some countries practised by up to 50% of (smaller) enterprises.	Third party service providers have fears of or limited interest in substituting labour-intensive (paper based) work with efficient, electronic and automated processes. It could be a major task for multi-stakeholder to clarify and show the risk of resistance to the opportunities of new electronic methods.

Figure 32: Main barriers for mid-sized and larger US companies

Barriers (mid-sized and larger US companies)	Possible actions overcome them
Lack of budget	In-house developments cause high initial and follow-up costs. Field-tested applications and services from third parties are typically significantly cheaper. If services on demand or SaaS are preferred, the initial investments are moderate.
Belief that there will not be an ROI	Publicly available calculation tools / ROI calculators will probably show the reader within 5 minutes that there definitely will be a good ROI.
Lack of understanding of current available solutions	Some market analysts make the market more transparent with their publications and events. Solution providers are encouraged to make great market communications.
Lack of resources to manage automation	Shift e-invoicing to the enterprise's number 1 priority.

Barriers (mid-sized and larger US companies)	Possible actions overcome them
Supplier resistance	Do not attempt to press all suppliers into the same scheme and require just one certain data format following your business process. The capabilities and requirements of suppliers differ greatly. If invoice recipients (or the e-invoicing network operators involved) support various invoice formats, any-to-any data formatting and benefits (e.g. trade finance, early payments), acceptance by suppliers can significantly increase.
Current processes work	Complacency is a risk. It is likely that competitors are already implementing e-invoicing, reducing the invoice processing costs and achieving a competitive advantage.

4.2.9 Roadmap

Small organizations can technically become up-and running within just a few days. More time consuming will be the onboarding of the counterparties.

In large organizations, the project and implementation time can strongly vary, depending on existing environment and degree of integration.

Figure 33: Indication for project and implementation time

Scenario	Centralised, homogeneous environment	Decentralised, heterogeneous environment
Key-in/upload invoices via third party Web portal or printer driver Receive/download invoices via third party Web portal Archive operated by third party	0.1 – 1 days	1 month
Invoice export/import via AR/AP application Archive operated by third party	0.5 – 2 weeks	3 months
Scenario above including analysis, re-design, workflow and archive implementation	6 months	1 – 1.5 years
Scenario above, including integration of invoices with related messages along the supply chain (order, delivery notes, payment, remittance etc.)	up to 1 year	up to 2 years

4.2.10 Project Checklist

Corporate digital strategy

Analysis

- Internal
  - Involved and related processes, systems and divisions/branches/subsidiaries
  - Invoice streams
  - Old burdens from the paper world to be removed, disrupt, reengineer

  - Obstacles and how to solve them
  - Structure, capability and legal constraints (especially in multi-national companies)
- Of your counterparts
  - Volume
  - Technical capability
  - Willingness to adopt
  - Legal framework
- Strategic focus and priorities

Concept
- Solution scenarios
- Decision Make or Buy
- Step-by-Step approach (division by division) or “big-bang” (company-wide project)
- Implementation scenario
- Required investments and operation costs
- Rollout strategy

Request for proposal (RFP)
- Top 20 requirements
- Other “nice to have” requirements

If solution or service is to be purchased
- Provider evaluation
- Benchmark
- Contract
- Test

Implementation
- Internal adoption
- Test
- External adoption with suppliers and customers
- In countries where legally required (Germany, Switzerland, …): Document everything in a “procedure documentation”

Rollout
- Concept with scenarios for each sector of counterparts
- Dialogue with key suppliers and customers
- Mass-rollout

During the whole project: Communicate at least twice as much as you believe is necessary – you can never over-communicate!

4.3 Success factors and benefits

4.3.1 Success factors

Although we have a high number of innovative people in our world, the majority of human beings change their behaviour only under slight pressure. That is why a simple invitation to your trading partners to support e-invoicing may not automatically result in a quick success.
The weak economical situation results in high cost pressures and will probably become an accelerator for changes in the invoice processing. Readers are not recommended to wait for pressure

from their customers or suppliers. Instead, it is wise to start an e-invoicing project proactively. Only then is it possible to clarify everything without too much time pressure and to move seamlessly from paper to electronic invoices.
Main reasons why e-invoicing projects have not always succeeded immediately in the past are

- Underestimating the significance of the project for the many related processes and departments involved
- Poor project management
- Too technical focus (the more important challenges are the process automation and taking on board a high number of suppliers or customers within a short time)

Success factors in e-invoicing projects

- Awareness by senior executives about the potential of E-invoicing in a broader sense (the value is much more than just eliminating printing and stamp costs or entering invoice data into the ERP system)
- Management Support, as many divisions within an organisation are involved
- One very active project owner
- Defining a three year objective/strategy, but implementing it step-by-step including a quick-win result for step 1 (best is just one invoice stream in one division of a big company)
- Internal and external communication to key persons affected
- Being a rollout champion with an excellent strategy for taking on board a high number of suppliers/customers (opt-out strategy if possible, combined with active marketing)
- Being realistic regarding mid- and long-term technical capabilities in your organisation including workflow and archiving → right decision for make/buy and direct or network model
- Don't re-invent and develop solutions which are already available for a fixed price and which have been well tested in other companies
- Being realistic regarding technical capability of your counterparts to send, receive and archive electronic invoices (this is quite often dramatically lower than you expect); simple and economical interfaces and possibly a third party archiving service are essential

4.3.2 Benefits and Business Case

For about two decades, the private industry was the only driver for the market development of e-invoicing. Users decided to migrate to electronic processes to take advantage of several benefits such as

- Process innovation and automation
- Improve operational efficiency; reduce the high proportion of discrepancies and manual exception handlings
- Improve accuracy of master data and the invoice content respectively the compliance with orders and contracts
- Increase tax compliance
- Optimise cash management
- Increase business agility
- Reduce invoice fraud
- Increase transparency
- Environmental improvement
- Satisfy the demand of key trading partners for digital interaction
- Reduce costs

The implementation of e-invoicing is partly an IT project. Due to this fact, especially larger businesses had to calculate a business case in the past.

These business cases roughly confirmed this generic rule: Electronic and automated invoice processes can result in savings of 60-80% compared to traditional paper-based processing. Projects typically result in a payback period of 0.5-1.5 years.

According to many surveys, about 80 percent of the larger companies in advanced economies are meanwhile users of e-invoicing, although some may exchange just a small proportion in electronic format. Nevertheless might they have achieved a good business case. By experience are there just a few reasons that the result was not fully satisfying. A typical example is if the internal operation of the old paper-based invoice processing is remained in parallel to e-invoicing instead of migrating internally completely to digital processes. A further example is if businesses try to develop everything in-house instead of using field-tested solutions of third parties. Another reason is quite often that organisations follow just a reactive approach instead of proactively define a strategy and implement in a planned and coordinated manner. They suffer of the heterogeneous IT, process and compliance environment that appears over the years.

We estimate that today around 30%, but in 2020 already 60% of organisations will be forced either by legislation or important trading partners to exchange invoices just in electronic format. Hence, a business case can no longer be the trigger for a GO or NOGO decision. Rather could it be replaced in the future by a calculation comparing the values generated by certain solution providers.

However, if anybody still is interested in more details of a business case, some more information can be found in the document http://www.billentis.com/e-invoicing-businesscase.pdf

4.4 The e-invoicing opportunity

E-invoicing and business process automation might be THE answer for today's challenges in the market.

The time is right for taking the next step now!

5. Featured Sponsors

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JustOn

Netsend

OfficeTorque FRM

OpenText

OpusCapita

Order2Cash

Seeburger

TrustWeaver

Tungsten Network

UnifiedPost

Vereon

Remarks regarding this chapter

The following articles, profiles and case studies are fully provided by sponsors. It is not guaranteed that they used the same “e-invoice” definition for their contribution as the report author did.

5.1 B2BE

Headquarters:

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B2BE Limited
Lyndon House
62 Hagley Road
Birmingham B16 8PE
United Kingdom

Australasia:
B2BE Pty Ltd
93 Palmerston Crs
South Melbourne
Victoria 3205
Australia

Countries with highest e-invoicing revenues	Australasia and Europe
VAT compliant e-invoice processing guaranteed for	Most European countries.
Number of employees dedicated to e-invoicing and directly related offering	200
Registered users on own e-invoicing platform	Buyers >15,000 Suppliers > 40,000
Processed volume on own e-invoicing platform	60,000,000 p/a
Core offering	Managed Electronic Documents Integration (EDI) platform combined with a range of outsourced e-Invoice solutions which provide B2BE's clients with automated Accounts Payable and Accounts Receivable functionality.
Covered processes/messages along the supply chain	Full supply chain coverage across most markets which supports all message and document types within the purchase to pay environment.
Value-added services	B2BE enables the processing of documents and e-Invoices which deliver tailored solutions to B2BE's clients which include; Accounts Payable solutions, mobile solutions, multi-channel document transmission and receipt solutions.
Main target market segments	B2BE offers a range of segment and market agnostic solutions.
Supported languages (with application/service and the online-help/customer support)	B2BE supports over 15 different languages.
Competitive differentiator	B2BE offer a full range of e-Invoice solutions that are highly flexible and customisable which gives B2BE clients the solution they actually need. B2BE understands that 'off the shelf' doesn't fit everyone so the B2BE solutions are tailored to our client's specific needs.

B2BE Profile

Since B2BE's inception B2BE has grown rapidly providing to a broad spectrum of clients not only EDI solutions but complementary supply chain and supply chain finance solutions including; e-Invoicing, Purchase to Pay and Business Process Outsourcing.

B2BE now operates in a number of different vertical and horizontal markets across the Asia Pacific, EMEA and North American markets and handles >150 million transactions or business documents a year. Growth in the B2BE business has come not only in the realisation of key product development and market diversification approaches but through the ability for B2BE and its employees to be able to provide cost effective and flexible solutions which are backed by a strong support ethic and willingness to adapt to B2BE's customers' needs and requirements.

At B2BE we look at e-Invoicing from a business process improvement prospective rather than an IT perspective to reduce IT and the businesses effort, complexity and improve visibility while ensuring that what is provided actually fits and enhances our client's financial processes. We talk accounts payable and accounts receivable.

From an accounts payable perspective the key metrics your business are trying to manage are the number of Invoices processed per day, average cost to process an Invoice, exceptions of the total and average approval time to pay an Invoice. Without automation these metrics are very difficult to reduce.

The B2BE accounts payable solutions mean you can receive all your Invoices electronically from day one. B2BE combines a range of solutions including; EDI, document digitization and web EDI which means your organisation can offer suppliers any number of channels to send Invoices and they can be progressively moved to a more streamlined approach.

"B2BE's automated AP workflow enables the routing and processing of Invoices automatically with minimal human involvement"

This can be combined with document validation, translation and workflow processes to remove errors and increase match rates.

Going one step further by adding the B2BE outsourced accounts payable solution, B2BE can manage your accounts payable to further enhance process flows, improve throughput, reduce errors, provide much better match rates (e.g. Invoice, Goods Receipt & Purchase Order) and ultimately reduce costs improving bottom-line and profits.

If we talk about Accounts Receivable the key metric your organisation will be measured against is DSO days. Again, B2BE from day one can automate your Invoice distribution electronically. B2BE combines a range of solutions including; EDI, Email (tax compliant) mobile app, facsimile and print and post. Your organisation can manage how the documents are sent to meet your client's requirements, which always vary.

"Automated AR workflow enables your organisation to tailor Invoice distribution based on your customer's requirements"

The Accounts Receivable solution can be combined with workflows and other processes to allocate or move the Invoice around your business before it's sent to a client resulting in better cash flow.

Whether it's an accounts payable or receivable solution all parties to the transactions have access to them online or on a mobile device which improves visibility for all parties.

Website: www.b2be.com
Contact: Richard Evans, COO Europe & Americas Email: richard.evans@b2be.com

5.2 B2Boost S.A

Headquarters:

B2Boost S.A.
Chaussée de Waterloo, 1453
1180 Brussels
Belgium

Countries with highest e-invoicing revenues	France, Belgium, Netherlands, USA, UK
VAT compliant e-invoice processing guaranteed for	AU, AT, BE, BG, CA, HR, CY, CZ, DK, EE, FI, FR, DE, DR, HU, IS, IE, IL, IT, LV, LI, LT, LU, MT, MC, ME, NL, NO, PL, PT, RO, SK, SI, ES, SE, CH, GB, US
Number of employees dedicated to e-invoicing and directly related offering	35
Registered users on own e-invoicing platform	Suppliers: >50
Processed volume on own e-invoicing platform	>3 million e-invoices per year
Core offering	Multi-channel e-invoicing Services
Covered processes/messages along the supply chain	Order to Cash. Full Supply Chain: Order-Invoice-Payment.
Value-added services	Hybrid Services (electronic and paper + post), Embedded Analytics (Cash flow optimisation, Treasury Management, …), Payment.
Main target market segments	B2B Senders - Large and Mid-Sized organisations
Supported languages (with application/service and the online-help/customer support)	English, French, Dutch, German
Competitive differentiator	100% focus on senders. We know how to support senders going digital.

B2Boost S.A.

Since 2002, B2Boost specializes exclusively on B2B e-Commerce, and has developed since 2007 a specific focus on pan-European compliant e-Invoicing.

Our existing infrastructure and service levels are state-of-the-art in terms of performance, security, features and compliancy. Yet they are designed to be efficiently customized.

B2Boost vision is that e-Invoicing is not the end-goal but the mean to optimize supply chain and cash flows of suppliers.

Focus on Suppliers

At B2Boost, we know the challenges of suppliers when it comes to e-Invoicing and B2B e-Commerce in general.

The B2Boost platform, which is fully secure and uses the latest, most sophisticated tools, enables suppliers to leverage all the components needed to optimize their supply chain and cash, while meeting customers' requirements.

Compliance

TrustWeaver, the world highly respected leader in this field, is our partner for legal compliance and seamlessly integrated with our platform. This is your guarantee that any evolution of the legal requirements is closely monitored and proactively adjusted to.

Network and Interoperability

Through one single connection to B2Boost, you instantly access an operating link to all companies already using the B2Boost network in Europe, USA and Asia.

At B2Boost we strongly support the vision of interoperability amongst service providers (first adopters of the EESPA Multilateral Invoice Framework Agreement).

Through B2Boost, you immediately access a partners' networks counting hundreds of thousands of links. No other company can beat that.

Agility

Some companies have very complex requirements in a constantly evolving environment. B2Boost is not afraid of that. In fact, this is where we can show our dedication and experience. We live in the world of the cloud and no challenge is too big for us.

Website: www.b2boost.com
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5.3 Babelway

Headquarters:

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Louis De Geer, 6
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Belgium

Babelway (USA)
1 Broadway, 14th Floor
Cambridge, MA 02142
USA

Countries with highest e-invoicing revenues	United-States, France, Belgium.
VAT compliant e-invoice processing guaranteed for	France, Belgium, Luxembourg.
Number of employees dedicated to e-invoicing and directly related offering	30
Registered users on own e-invoicing platform	Do-it-yourself (DIY) integration platform with more than 400 users worldwide that together build thousands of connections with trading partners.
Processed volume on own e-invoicing platform	10 million e-invoices per year. 30 million documents per year (orders, dispatch advices, etc.).
Core offering	Babelway is a unique, cloud-based DIY integration platform that converts structured documents to any other format and transfers them via any protocol. Babelway empowers those who want autonomy and who anticipate to exchange machine-to-machine documents with an ever-increasing number of partners and technologies.
Covered processes/messages along the supply chain	Conversion of structured documents into any format, transmission via any protocol, and archival of messages processed (optional).
Value-added services	EDI, e-Invoicing, B2B integration, message archival
Main target market segments	Companies---such as fintech players---that require a DIY integration solution to exchange data flows through differing sets of formats and technologies with trading partners.
Supported languages (with application/service and the online-help/customer support)	English
Competitive differentiator	Babelway is the DIY B2B integration platform. Because it’s designed to simplify the automation of document exchanges, you don’t have to be an engineer to connect with any trading partner.

Babelway

Wouldn't it be great to make integration a business process, rather than an IT project?

Babelway is a DIY solution that can be used to complete EDI and B2B integration projects in hours or days, not weeks. You don't have to be an engineer to:

Connect anything or anyone

Get the platform that supports all the B2B connection standards---past, present, and future.

- Create a new connection in a few clicks.
- Maximize security with SSL or certificates.
- Route documents or create workflows.
- Define retry strategies for maximum connectivity.

Transform to/from any format

Deal with any format your partners or systems require.

- Choose from dozens of file format technologies.
- Build a document structure immediately by just uploading a document sample.
- Choose from an extensive catalog of transaction types or re-use what you've previously created.

Manipulate data easily

Apply any operation or logic to your data to solve any integration challenge.

- Move data using a visual drag & drop tool.
- Access hundreds of predefined formulas to manipulate data whenever necessary.
- Define data validation rules.
- Use lookup tables to replace data dynamically

Control your document flows

Get full visibility and control over your B2B Exchanges.

- Trigger notifications to specific users or external partners.
- Access all information and raw data on demand for every document sent or received
- Correct and resubmit documents from within Babelway.
- Give visibility to internal users or external partners whenever necessary.

Generate reports

View metrics of your entire B2B network.

- Dynamically create activity graphs and tables.
- Track frequency of errors by partner to identify weak points in your integration.
- Export data in Excel for further analysis.

Archive securely

All documents are stored with maximum security. Authenticity and integrity of document exchanges are guaranteed.
Choose the storage duration of message, from days to up to 10 years.
Retrieve them anytime, including their time-stamped security information. Use it confidently for any legal or tax related authenticity requirement.

Babelway is used by the highly regarded (fin)tech companies like Taulia, Tradeshift, …

Website: www.babelway.com
Contact: Benjamin Coumont, +32(0)479/98.47.18, benjamin.coumont@babelway.com

5.4 Basware

Headquarters:

Basware Corporation
P.O. Box 97
FI-02601, Espoo
Finland

Countries with highest e-invoicing revenues	Europe, Nordics
VAT compliant e-invoice processing guaranteed for	ARG, AUS, AUT, BEL, BRA, BGR, CAN, CHE, CHL, COL, CRI, CYP, CZE, DNK, ECU, EST, FIN, FRA, DEU, ESP, GBR, GRC, HOK, HUN, ISL, IRE, IMN, ISR, ITA, LVA, LIE, LTU, LUX, MLT, MEX, MCO, MAR, NLD, NLZ, NOR, PER, POL, PRT, ROU, SGP, SVK, SVN, SWE, URY, USA, ZAR
Number of employees dedicated to e-invoicing and directly related offering	1600
Registered users on own e-invoicing platform	Suppliers: > 1,000,000 Buyers: > 80,000
Processed volume on own e-invoicing platform	>100 Million per annum
Core offering	Basware Network with services for sending and receiving e-invoices, purchase orders, credit notes and catalogues. Solutions for procurement, invoice automation and analytics.
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to authorities (customs, tax administration etc.)
Value-added services	Supply chain financing, dynamic discounting, invoice archiving services.
Main target market segments	A broad portfolio of e-invoicing sending and receiving services meeting the needs of different public and private sector requirements.
Supported languages (with application/service and the online-help/customer support)	Basware Network Services supports many languages. Customer service is available in English, Finnish, Swedish, Norwegian, Danish, Dutch, German and French.
Competitive differentiator	The Basware Network is the largest open commerce network globally with over 1,000,000 organizations connected across over 100 countries.

Basware: Making electronic invoicing easier for companies of all sizes

Basware makes your entire invoicing process electronic, from day one. No matter how many invoices you send and receive or what systems and processes your customers and suppliers use – we have a solution for you.

Basware e-Invoice solutions for sending and receiving are designed to meet complex, multi-national business needs. Connecting to our service is easy and usage even easier – Basware takes care of invoice validation, format conversions, compliance, monitoring and e-invoice routing.

Accounts Receivable e-Invoice solutions
When it comes to sending e-invoices, you can deliver invoice data directly from your invoicing system or ERP and that data is converted into e-Invoices and delivered to your customers.

Alternatively, you can use PDF e-Invoicing to easily submit invoices electronically. No need for big IT solutions or projects, just send PDFs in an email to Basware and we'll convert them into true e-Invoices and send them to your customers.

For those who are unable to receive e-invoices directly to their invoice processing system, we can use e-mail to send a notification that e-invoices can be retrieved online. Alternatively, we can print the invoices if a paper copy is preferred.

Accounts Payable e-Invoice solutions
Basware e-Invoice receiving solutions lead the industry in accounts payable automation. Basware offers multiple e-Invoice receiving solutions that ensure our customers are 100% electronic from day one.

E-Invoices can be received straight into your AP or ERP. Suppliers, who are used to sending PDFs by email can continue doing so – we'll transform them into true electronic invoices for you. Basware's Scan and Capture service converts all incoming paper invoices into electronic form. This service can be complemented with Basware CloudScan, an easily downloaded application allowing users to locally scan occasional paper or PDF invoices themselves.

The user can decide to self-validate the invoice data or send them on to be validated by Basware and returned as e-Invoices.

Supplier on-boarding
Making sure suppliers are happy to join Basware Network is essential for maximizing success – so we ensure coming on-board is as easy as possible. Basware offers easy-to-use self-service supplier engagement tools that allow companies the flexibility to integrate the suppliers they want, whenever they want. In addition, Basware offers a dedicated supplier activation team to rapidly on-board suppliers into adopting true e-invoicing practices.

Value-adding financing services
Basware also offers advanced, value-added financing services through the network, such as supply chain financing and dynamic discounting. By choosing the best way and moment to take and make payments, you can use excess cash to improve your profitability, or release cash from balance sheet to reinvest back to your business. Especially for many growing businesses, receiving funds faster from customers can be a significant motivator to e-invoicing adoption.

Join millions of companies around the world on the Basware Network
Put simply, e-invoicing makes your life easier. It takes you from complex paper based processes to efficient, transparent, low-cost transactions. You can create, send, receive and manage invoices with a fraction of the time and cost of traditional paper-based methods – all with minimal changes to your current processes.

Make it easy to do business with you, optimize your cashflow and reduce bottlenecks in your processes. Join the largest open network in the world and get access to 220+ global partners and over 1 million buyers and suppliers we work alongside. Enjoy the flexibility and accessibility that working with such a vast network offers.

Website: www.basware.com Contact: tanja.rauniaho-mitchell@basware.com

5.5 Canon

European Headquarters:

Canon Europe
3 The Square,
Uxbridge UB11 1ET
London
United Kingdom

Countries with highest e-invoicing revenues	Norway, Sweden, Finland, Denmark, France, Germany, Belgium, Netherlands, UK, Ireland, Spain, Italy.
Number of employees dedicated to e-invoicing and directly related offering	+500
Core offering	Canon's Finance & Accounting services
Covered processes/messages along the supply chain	Accounts Receivable services – invoice composition and enhancement, e-billing – including hybrid invoicing (paper and electronic). Purchase-to-Pay services – e-Purchasing, Invoice Processing (including e-invoice management), Contract Management, Expense Management, Spend analysis
Value-added services	Systems integration, managed and outsourced services.
Main target market segments	Balanced offering for suppliers and buyers in mid-sized and large organizations.
Supported languages (with application/service and the online-help/customer support)	Main languages: English, French, German. E-invoice recognition technology for buyers supports +140 languages.
Competitive differentiator	Canon offers a comprehensive suite of applications for Finance & Accounting allowing you to work with a single vendor which can provide on-premise and cloud-based technology, as well as outsourced services. All options can be mixed and matched to suite the most complex customer requirements.

CANON

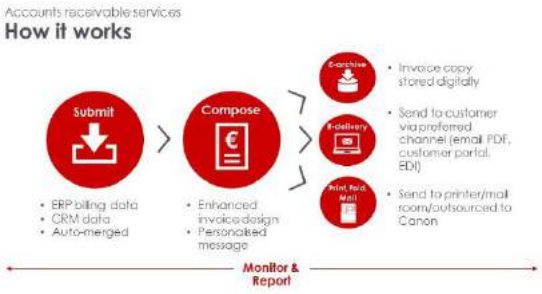
Work with a single provider who has over 75 years' experience in developing innovative technology to capture, process and deliver documents and images.

Canon provides a comprehensive portfolio of next generation Finance & Accounting services and software solutions that deliver better cash-flow management and spend control and are available in multiple delivery options, including software as a service and full outsourcing.

Accounts Receivable services (e-billing)

Canon's Accounts Receivable services provide a fully automated and integrated solution for personalisation, multi-channel distribution (including paper and e-invoicing) and archiving of customer invoices.

- **Data submission:** data from multiple sources (ERP, CRM, etc.) is automatically merged and can be viewed via a single interface for effective processing.
- **Invoice composition:** intuitive design interface using web technologies enables quick and easy creation of invoice templates when required with personalisation of content.
- **Invoice distribution:** invoices are delivered electronically or in print format, depending on customer preferences. Canon can take care of both paper and digital distribution with a hybrid service model.



- **PDF or EDI:** E-bills can be sent via e-mail as PDFs (automatically generated by the service) or in EDI format using the Value Added Network.
- **Invoice archiving & retrieval:** all sent invoices are stored digitally in a central location for fast and secure retrieval.

Purchase-to-Pay automation

Canon's Purchase-to-Pay solution provides vital control and visibility over the entire P2P process (from requisition through to payment) under a single technology platform for better spend and cash-flow visibility, also supporting compliance and costs reductions.

A suite of seamlessly integrated solutions (including e-purchasing, digital contract management, invoice processing, expense management, spend analytics and P2P reporting) which can be deployed in a phased and modular way to best suite your needs.

AP automation

Achieve more control, efficiencies, and transparencies in Accounts Payable by automating the receipt, validation and approval workflow of incoming invoices. Canon's own invoice capture technology automatically recognises invoices from multiple sources and formats (e-mail, EDI, PDF and paper) in more than 140 languages, while digital workflows put you in control of payments processes from wherever you are.

For more information: www.canon-europe.com/transform
Contact: Fabrizio Falzarano, fabrizio.falzarano@canon-europe.com

5.6 Cegedim e-business

Headquarters:

Cegedim e-business
137 rue d'Aguesseau
92100 Boulogne-Billancourt
France

Countries with highest e-invoicing revenues	France, Germany, Spain, Netherlands, UK, Australia, …
VAT compliant e-invoice processing guaranteed for	60 countries around the world on the 5 continents
Number of employees dedicated to e-invoicing and directly related offering	180 employees dedicated to electronic exchanges with a strong focus on e-invoicing
Registered users on own e-invoicing platform	120,000 connected customers (suppliers and buyers)
Processed volume on own e-invoicing platform	350 million electronic documents per year
Core offering	Multichannel e-invoicing inbound and outbound based on a major B to B network, supply chain EDI, electronic archiving, electronic payments
Covered processes/messages along the supply chain	Purchase orders, delivery notes, shipping advices, invoices, …
Value-added services	Collaborative supplier portal, enrichment and validation workflow, online signature, supplier financing, …
Main target market segments	Balanced offering for suppliers and buyers for large and mid-sized organizations in any industry
Supported languages (with application/service and the online-help/customer support)	French, English, Spanish, Dutch, Italian, Portuguese, German
Competitive differentiator	One of the largest invoicing network in Europe, combined with a complete multichannel inbound/outbound e-invoicing platform

CEGEDIM E-BUSINESS, THE ELECTRONIC EXCHANGES SPECIALIST

Founded in 1969, Cegedim is a global technology and services company committed to innovation. **Cegedim e-business**, a business unit of the Cegedim Group, has specialized in computerized data exchanges since 1989.

GIS, a comprehensive digitization offer

Cegedim e-business offers a comprehensive digitization package for all types of document exchanged between companies, in all activity sectors across Europe and worldwide.

We support companies in digitizing all their management documents and automating their processes, from contract to payment, with a specific focus on e-invoicing, through our solution GIS (Global Information Services), a single SaaS package. The platform is one of the first European electronic exchange network, with 120,000 companies connected worldwide and 350 million data flows exchanged each year.

GIS is built on several complementary services:

- **GIS e-contract :** contract digitization with online signature and workflow,
- **GIS edi :** exchange of all supply chain electronic messages,
- **GIS e-invoicing :** digitization of customer and supplier invoices,
- **GIS payments :** online invoices payment, mainly through SEPA DD,
- **GIS workflow :** documents enrichment and validation electronic management,
- **GIS sign&archive :** compliant digital signature and archiving,
- **GIS business report :** data analysis and reporting (BI).

European leader for e-invoicing

GIS e-invoicing solution includes a range of outsourced services for both inbound and outbound e-invoicing, allowing companies to:

- Significantly reduce invoice processing costs,
- Improve the quality of the processes and reduce disputes,
- Suppress all paper invoices in a tax-compliant way,
- Reduce their carbon footprint.

The inbound /outbound packages are based on several modules:

- Multi-mode (EDI, PDF, hybrid) tax-compliant digitization,
- Supplier portal (KISS) allowing small-volume suppliers to sign up for free and send their digitized invoices,
- Worldwide compliant electronic archiving service for digitized documents,
- Consultation portal with 10 years access to the original electronic invoices,
- Automatic and manual invoice enrichment tools for accounting integration and validation,
- On-boarding services to maximize the e-invoicing adoption ramp-up,
- Scanning and printing facilities to process the remaining paper invoices.

Success story : Air France KLM's global e-billing project

Cegedim e-business was picked by Air France KLM to implement tax-compliant customer e-invoicing using EDI and signed PDF for every client of the Group and its subsidiaries worldwide (150 countries).

Cegedim e-business is successfully rolling out the scope to process 3.5 million e-invoices annually, in a legally compliant way. Moreover, Cegedim e-business ensures AF-KLM B to G connection, starting with Chorus Platform in France.

"First of all, it was crucial that we ensure continuity of service for our French clients, who [were] already connected to the [previous] e-invoicing platform. In addition, we wanted to use the opportunity of switching to a new supplier to optimize service quality. Our goal was to extend the life of an efficient invoice management solution and interactive client relationships, and improve the system's overall performance while cutting costs," explains Franck Lucas, Head of Finance IT, Air France KLM.

Website: www.cegedim-ebusiness.com
Contact: Béatrice Henneguelle, +33 (0)1 49 09 23 00, contact.ebusiness@cegedim.com

5.7 CloudTrade

Headquarters:

CloudTrade Technologies Limited
2-6 Boundary Row
London
SE1 8HP

Countries with highest e-invoicing revenues	United Kingdom, US, Australia
VAT compliant e-invoice processing guaranteed for	North America, Europe, Middle East/Africa, Asia/Pacific
Number of employees dedicated to e-invoicing and directly related offering	20
Registered users on own e-invoicing platform	Buyers: 130 Suppliers: N/A
Processed volume on own e-invoicing platform	5 million
Core offering	B2B and B2G e-invoicing and order to cash network. SaaS (Software as a Service), Mapping PDF to XML/EDI, Registered PEPPOL Access Point.
Covered processes/messages along the supply chain	P2P, accounts payable, accounts receivable
Value-added services	Trade Finance, Hybrid Services (electronic and paper processing)
Main target market segments	Channel Partners, Suppliers and Buyers. Local Government, NHS, large corporates and large suppliers in any industry. Mid-sized organisations with high numbers of transactions.
Supported languages (with application/service and the online-help/customer support)	All languages for application - English, German, French for customer support.
Competitive differentiator	CloudTrade removes the barriers to supplier adoption. More paper is removed in a shorter time frame than any other e-invoicing approach. Guaranteed.

CloudTrade – E-invoicing made easy

Founded in 2010 by a team with over 25 years' experience of the e-invoice and purchase to pay market, Cloud Trade's management team have first-hand experience of the challenges faced by an organisation when moving to paper free, electronic trading.

Traditional e-invoicing creates barriers that impact supplier adoption.

Supplier adoption is key to a successful e-invoicing project. The more suppliers that move away from paper, the greater the benefits for your organisation. Traditionally the two main ways for suppliers to send electronic invoices are:

Direct Integration – High volume suppliers are asked to send an EML, EDI or a similar document straight form their billing system.

Or

Invoice Portal – At the low volume end, e-invoice service providers will often provide a portal for suppliers to create and send their invoices.

By offering these two invoice submission options, most of your suppliers will be faced with a number of barriers that stop the majority from sending electronic invoices to you.

Technical Barrier - Is the supplier willing to change their billing application and infrastructure to send XML or EDI invoices to you?

Process Barrier - Is the supplier willing to log onto a portal to submit their invoice? If they already raise their invoice in a finance application, why would they want to duplicate their effort?

Cost Barrier - Is the supplier willing to invest the time, effort and resource needed to change their systems to send XML or EDI - or even pay to send their invoice to you?

CloudTrade is different

CloudTrade removes the barriers to electronic invoicing for suppliers. More paper is removed, in a shorter time frame than any other e-invoicing approach. Guaranteed.

Email PDF Invoices

CloudTrade provides a 3rd option and the easiest way for a supplier to send electronic invoices - without having to change systems or infrastructure. Almost every finance application can generate an invoice as a PDF file - most can also automatically send the PDF to the customer via email. When a PDF is generated by an application, in almost all instances it will be a text PDF, with the invoice data items carried directly within the PDF. CloudTrade takes advantage of this and maps the invoice data direct from the PDF to an e-invoice structure. No OCR, which means 100% data accuracy.

For most suppliers, emailing their invoices to you is their preferred way to invoice. As a result, when asking a supplier to move away from paper and onto e-invoicing, the barriers to adoption are removed.

Website: www.cloudtradenetwork.com
Contact: Richard Manson, Commercial Director; richard.manson@cloud-trade.com
+44 (0)7956 441898

5.8 Comarch

Headquarters:

Comarch
Al. Jana Pawła II 39a
Cracow
Poland

Countries with highest e-invoicing revenues	Germany, France, Poland, Russia
VAT compliant e-invoice processing guaranteed for	Most of the EU countries plus Russia, Ukraine
Number of employees dedicated to e-invoicing and directly related offering	170
Registered users on own e-invoicing platform	50 000
Processed volume on own e-invoicing platform	30 million e-invoices per year
Core offering	Managed services for sending and receiving of e-invoices in various formats/channels. In addition other message types like purchase, logistic and product data
Covered processes/messages along the supply chain	Order-to-Cash / Purchase-to-Pay in the supply chain
Value-added services	Supply chain financing, master data management, B2B-commerce, other document types, content validation, archiving, reporting, on-boarding
Main target market segments	Suppliers and buyers of any size
Supported languages (with application/service and the online-help/customer support)	English, French, German, Polish, Bulgarian, Hungarian, Romanian, Russian, Turkish, Ukrainian
Competitive differentiator	One cloud-based platform to connect all partners globally regardless technological maturity and complex management of all paper and electronic documents

Comarch

The e-invoicing has become one of the key points in the enterprises' strategies. With the growing data volume the companies are looking for the comprehensive solutions providing management of the information flow and cost optimization.

Complex platform covering each link in the supply chain.

On-boarding
Most of the companies have already launched e-collaboration with biggest partners. Once the infrastructure has been prepared to exchange electronic data it should be extended to all partners. Having multilingual Service Desk with advanced tools (e.g. manuals, webinars and workshops) Comarch guarantees connection of all partners regardless technological maturity.

Multi-format support
The platform based on cutting-edge technology enables the users to convert data to/from various formats (e.g. XML, EDIFACT, IDOC, PDF). Taking an example of a manufacturer issuing invoices in XML format the platform may convert it to formats depending on the receivers' requirements (e.g. IDOC to one group, EDIFACT to second group and PDF with e-signature on behalf of the customer to the third one). Similarly to inbound traffic, the documents may be converted from many formats to one format.

Distribution channels
As the companies cooperate with different partners the documents may be delivered with Comarch EDI platform directly via the integration or by choosing a dedicated portal solution or even e-mail.

Sales/purchasing cycle
The high quality of the invoice is guaranteed, on the one hand, on legal validation and, on the other, on business data verification.

The invoice data should be verified with the reference documents like order or delivery confirmation and receipt.

This results in the significant volume decrease of credit or debit notes. Moreover, with integration of Master Data catalogue, Comarch validates the transactional data based on the data in the catalogue (e.g. actual prices, units).

Invoice processing
Besides providing electronic archive, the e-invoices are further processed within the company. Comarch EDI platform has been integrated with Comarch ECM solution improving the documents workflow. Accounts Payable ensures a decrease in the workload associated with manual processing. Use of the process engine accelerates the acceptance of documents and collects data entered at every stage of the process.

Comarch EDI e-Invoicing features:
- Compliance with international standards and legislation
- Multilingual and multicurrency
- Full AR & AP invoicing support
- Various distribution channels (e.g. e-mail, portal, integration)
- Worldwide partners onboarding
- Electronic archiving

Website: www.edi.comarch.com
Contact: info@comarch.com

5.9 Coupa Software

Headquarters:

1855 S. Grant Street
San Mateo, CA 94402
USA

Countries with highest e-invoicing revenues	Australia, Belgium, Canada, France, Germany, Netherlands, Panama, Sweden, Switzerland, United Kingdom, United States
VAT compliant e-invoice processing guaranteed for	AT, AU, BE, BG, CA, CH, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, IE, IT, LT, LV, MT, NL, NO, PL, PT, SE, SG, SK, SL, ZA
Number of employees dedicated to e-invoicing and directly related offering	Coupa is the cloud platform for business spend. Employees are not aligned by point product only.
Registered users on own e-invoicing platform	Over 2 Million Suppliers
Processed volume on own e-invoicing platform	20 million+ e-invoices per year
Core offering	Coupa offers spend management solutions through a unified cloud platform, which covers all areas of spend: e-invoicing, travel and expenses and procurement. Surrounded by our Open Business Network™ combined with supplier risk management, embedded analytics, strategic sourcing, contract management, and inventory management.
Covered processes/messages along the supply chain	Full Order-Invoice-Payment, Compliance and Reporting
Value-added services	Compliance as a Service, Early Payment Discounts
Main target market segments	From mid-sized to Fortune 500 companies across all verticals
Supported languages (with application/service and the online-help/customer support)	English, Danish, German, Swiss German, UK English, Spanish, Spanish Colombian, Finnish, French, French Canadian, Czech, Hungarian, Italian, Japanese, Korean, Dutch, Norwegian, Polish, Brazilian Portuguese, Russian, Swedish, and Chinese (Simplified and Traditional). These languages apply to both end users and administrators. Coupa has tokenized the application so we can easily add a new language within a rapid time frame to meet implementation needs.
Competitive differentiator	MEASURABLE BUSINESS VALUE through e-Invoicing Compliance as a Service - Coupa reviews all indirect tax rules AND commercial laws and builds these rules into the solution.

TO ENSURE E-INVOICING COMPLIANCE, LOOK BEYOND COMFORT LETTERS

by Markus Hornburg, VP Global Product Compliance, Coupa

Any conversation about global electronic invoicing quickly leads to compliance with regulatory requirements--VAT (Value Added Tax) rules as well as laws around accounting, trade, customs and data protection. The rules are different in every country, and achieving global compliance is central to the business case for an e-invoicing solution. But, even with an e-invoicing solution in place, the ultimate responsibility for compliance always lies with each company. So how can you be sure your solution will help you achieve it?

E-invoicing vendors have traditionally relied on "comfort letters" – official letters from tax and audit firms saying that they've reviewed the technical solution and "assume" it to meet the legal requirements of the country or countries where the customer is doing business.

An opinion letter from a Big 4 accounting firm can provide some initial guidance on whether or not a vendor has started doing their homework and is somewhat serious about investing in their compliance work. However, it's important to understand the limitations of comfort letters, and place them in their proper context in your overall diligence when considering an e-invoicing solution. Assurance of ongoing investment in compliance, and an audit of the actual solution are also needed.

The limits of comfort

Comfort letters remain relevant today, but it's important to understand that they don't guarantee anything. The advisory firm is looking at a hypothetical deployment, not at your actual deployment and use of the solution.

There's also a potential conflict of interest. Each country requires a separate comfort letter, and when you consider how many countries' regulations vendors must comply with, that can add up to a lot of money.

Another reason you can't rely solely on comfort letters is that they only offer a point-in-time assessment of a regulatory landscape that is always changing. Are all the vendors going to go back and get their comfort letters updated every time a country changes a rule? Probably not. In fact, I recently saw a vendor offering a comfort letter from 2010.

Broader due diligence

The only thing guaranteed in all of this is that there will be regulatory changes. That's why your due diligence should not focus so much on comfort letters, but on what processes the vendor has in place to manage change and keep your solution current, as well as performing an actual system audit. Five key areas you should look at include:

1. **Areas of responsibility**
2. **Monitoring infrastructure**
3. **Change management**
4. **Product architecture**
5. **System validation**

To be really comfortable, you need evidence of an ongoing investment. Best in class vendors will have the intelligence infrastructure in place to stay on top of rule changes, and the capability to notify you and update the system for you. Most importantly, they are willing to have the solution tested by an external auditor. That´s not just comforting, it´s better assurance of compliance.

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http://www.coupa.com/

Contact: Coupa Product Marketing productmarketing@coupa.com

5.10 crossinx

Headquarters:

crossinx GmbH
Hanauer Landstraße 291a
60314 Frankfurt
Germany

Countries with highest e-invoicing revenues	Germany, Switzerland, Austria
VAT compliant e-invoice processing guaranteed for	More than 50 countries worldwide, including all European countries, Turkey and Latin America.
Number of employees dedicated to e-invoicing and directly related offering	100
Registered users on own e-invoicing platform	Suppliers: 18.000 Buyers: 12.000
Core offering	crossinx is the leading German service provider for Financial Business Collaboration and supports more than 30.000 companies with the digitalization and financing of business processes.
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment/Financing. Compliant processes also with local authorities.
Value-added services	Trade Finance, Hybrid Services (electronic and paper processing), Invoice Workflow, EDI, Mobile Banking, Supply Chain Financing (American Express).
Main target market segments	Large and medium-sized suppliers and buyers in any industry, including authorities.
Supported languages (with application/service and the online-help/customer support)	German, English, Spanish, French, Portuguese, Russian, Romanian, Turkish, Persian, Pashtun.
Competitive differentiator	The leading German Service Provider with the largest portfolio of e-Invoicing solutions available in more than 50 countries worldwide.

crossinx - e-Invoicing und Financial Supply Chain Services

crossinx is the leading German service provider for Financial Business Collaboration and supports more than 30.000 companies with the digitalization and financing of business processes.

Based on our network we offer flexible and scalable solutions for e-Invoicing, EDI and Supply Chain Finance. Customers and their business partners use the services in more than 50 countries worldwide – regardless of existing IT infrastructure and company size.

Turnkey solutions for the cloud-based Financial Supply Chain

Built on the latest technology crossinx' services and solutions meet the needs of multi-national major corporations as well as of small and mid-sized companies. This platform fits smoothly into an existing IT infrastructure and can be adapted very easily in order to meet specific requirements of the respective companies and business partners. Based on a complete and comprehensive services portfolio, crossinx covers all aspects for a successful short-term entry into the cloud-based document exchange.

Focused on the e-Invoicing market and working with associations in Germany and Europe

Because of crossinx‘ membership in the e-Invoice Alliance Germany (VeR), the European E-invoicing Service Providers Association (EESPA) and swissDIGIN there are numerous interoperability agreements and connections to service providers worldwide. The integrated solution complies with all national and international fiscal requirements and meets the requirements of German data privacy and security.

crossinx is the first and only German service provider certified according to IDW PS 951.

With an invoice volume of nearly 25 billion Euro, a team consisting of more than 100 national and multinational operating employees, the company headquartered in Frankfurt is engaged in the European Fintech Alliance (EFA) and a pioneer in the B2B-Fintech market.

Private cloud in the Rhine Main Area

Headquartered in Frankfurt/Main, crossinx has further locations in Switzerland and Moldova. The two data centers are located in the heart of the Rhine Main Area: this is not only a geographical advantage for many customers, the two mirrored data centers also guarantee a highest degree of system reliability and data security

Onboarding's Warranty

We know every data format. We integrate any document in any ERP system - from invoice to order document. Every company can join our network - regardless of company size. We even do the onboarding. 30.000 companies are waiting for you.

Compliance Warranty

We guarantee compliance. Customers and their business partners use our services in more than 50 countries worldwide.

Liquidity Warranty

We finance customer and supplier. The supplier wants to get payed within a few days, the buyer wants a longer payment period. Our innovative Supply Chain Finance solutions reduce the potential for conflicts.

Website: www.crossinx.com
Contact: Marcus Laube, +49 69 4800651-0, info@crossinx.com

5.11 Digital Planet

Headquarters:
D.T.P BİLGİ İŞLEM İLETİŞİM VE TİC. A.Ş.
YTÜ Davutpaşa Kampüsü Teknopark -
Teknoloji Geliştirme Bölgesi A1 Blok No:
151/1C 34220 Esenler / İstanbul / Turkey

Countries with highest e-invoicing revenues	Turkey
VAT compliant e-invoice processing guaranteed for	Turkey
Number of employees dedicated to e-invoicing and directly related offering	75+
Registered users on own e-invoicing platform	6.500+
Processed volume on own e-invoicing platform	600 million e-invoices per year
Core offering	e-Invoice, e-Archive, e-Ledger such as e-Transformation, on-premise and SaaS products, on the public cloud.
Covered processes/messages along the supply chain	Full integration with Revenue Administration Department, more than 200 integrated ERP and accounting system.
Value-added services	Customer Communications Management (CCM) Solutions, e-Backup, e-Reconciliation, "CUTU" multi- format data compression unit, PARANTEZ e-Factoring, Pay All mobile payment product, Exam Automation, Question Bank and Personalised Online / Printed Booklet Generation, End to End Hybrid Mail Solution.
Main target market segments	Large enterprises and SMEs in all sectors, especially telecommunication, construction, service, food, textile, automotive, machinery.
Supported languages (with application/service and the online-help/customer support)	Turkish, English
Competitive differentiator	We have many innovation on digital business technologies. For example, we developed the first personalized documents in 2000, the first e-Archive application in 2006, the first e-Invoice in 2008, the first compression document storage technology that name called NetVault and the first hybrid e-mailing system NetPost in 2009 and we have implemented it to integrated test automation in 2012.

DIGITAL PLANET SOFTWARE AND INTERNET TECHNOLOGIES

In 2000, Digital Planet began its operations as a research and development company that produces new technology solutions in the business world. Digital Planet offers innovative services with more than 75 experienced employees.

Digital Planet has pioneered e-Transformation process in Turkey with Türk Telekom, Ttnet, Bursagaz, Vodafone in "Electronic Invoice Registration System".

When we look at the e-Invoice figures held in 2016 as Digital Planet, e-Invoice has approximately 6-7 million transactions per month and e-Archive has a transaction volume of 45-50 million per month. Throughout the year; It means that we manage over 600 million e-Invoices with 70 million e-Invoices and 550 million e-Archive invoice counts.

Digital Planet has played an active role in ensuring compliance of enterprises with e-billing, e-ledger and e-archive solutions in special integration services that integrate directly with ERP systems. e-Ticket, e-Backup, e-Reconciliation, e-Factoring, PayAll, DP- Registrated e-Mail, DP-e-Signature products and solutions in accordance with the requirements of the day.

Under the concept of “Personalized Smart Document” the first high compression technology was introduced to Turkey.

Digital Planet, with its leading Customer Communication Management Solution in Turkey, enables customers to offer personalized solutions via OmniChannel approach. Digital Planet provides Customer Communication Management (CCM) approach with Pitney Bowes Engage1/DOC1, NetVault and NetGateway solutions.

Digital Planet as Pitney Bowes‘ partner since 2001, is authorised to re-sell and support Pitney Bowes Engage1/DOC1 Suite Products. Digital Planet produce all kinds of corporate personalized smart documents (such as credit card statement, customer letter, insurance policy and invoice) easily by designing and adapting them in different formats for printing, e-mail, sms and archiving.

NetVault is a new generation archiving and compression application that compress and store documents with no loss. Netvault can compress up to %98 for PS, PDF, AFP,TIFF etc. formats.

NetGateway is an application to manage sending all kinds of data via multi channels (e-mail, sms etc.) This application is very fast and effective way to communicate with great numbers of customers.

CUTU is an application that compresses documents without a software integration. Digital Planet reveals R&D and technology power with this new product. CUTU‘s compression performance can vary according to the data format. According to the tests performed, for documents compression up to %98, audio and video files up to %40 with no loss.

Beyond e-Transformation is the understanding of service; 5G continues to work in technologies that manage today's rapidly increasing data sizes under the Internet of Objects, in Yıldız Technical University Technology Development Zone.

Website: www.digitalplanet.com.tr
Contact: info@digitalplanet.com.tr

5.12 DOCPROCESS

Headquarters:

DOCPROCESS SRL
11, Albac Street, Sector 1
Bucharest
Romania

Countries with highest e-invoicing revenues	Romania, France
VAT compliant e-invoice processing guaranteed for	Romania, France, Austria, Germany, Belgium, Bulgaria, Czech Republic, Spain, Hungary, Italy, Holland, Poland, Turkey, Slovakia. DocProcess is based in Romania and it is connected for EDI services with platforms in the mentioned countries.
Number of employees dedicated to e-invoicing and directly related offering	50
Registered users on own e-invoicing platform	20,000 users 3200 customers
Processed volume on own e-invoicing platform	Over 30 million digitalized documents per year
Core offering	Electronic documents intermediation platform DocXchange which allows organisations to outsource the EDI processes. DocProcess also facilitates the migration from paper to electronic gradually for many retailers on the Romanian market.
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to the Client (Content control - parties agreement and legal compliance control), Web Invoice by DXPortal; Workflow, Scanning/OCR; Electronic Archive, Electronic Signature.
Value-added services	e-Catalogue, Orders, Forecasts, Despatch Advices, Receipt Advices, Invoices processing – Invoice control by DX Platform; returning messages to the sender of the invoice (RECEIVED, ACCEPTED, REJECTED + the reason of REJECTION); n-way matching; master data update; validation workflows.
Main target market segments	Large retailers and their suppliers; Insurance companies, Banks, Oil &Gas companies
Supported languages (with application/service and the online-help/customer support)	Romanian, French, English
Competitive differentiator	The only company in Romania that can support the complete control of the information on the e-Invoice. The client receives a report with the e- Invoice status. If rejected, DocXchange is capable to send the reason of the rejection. The client support is entirely realised by DocProcess.

DOCPROCESS – a business for the future
EDI Services, Consultancy in Document Management

About us:
Created in 2005 in Romania, by the owner Liviu Apolozan, as a consultancy company for Document Management, DocProcess became today the largest provider of EDI services on the Romanian market. DocProcess developed its own e-invoicing platform DocXchange, capable to control the documents (legal compliance and business rules) and to return messages of status to the sender.

With 50 employees and more than 3200 clients, DocProcess remains a reference on the e-invoicing market and a pioneer of this field in Romania.

Services
Purchase to Pay Automation

Besides the classical Purchase to Pay services such as format conversion, secure document transport and archiving, web portal access for multiple users, DocXchange offers value-added services such as:

- Automated control on: syntax and content, fiscal and operational rules
- Automated and semi-automated processes to establish the final purchasing order, to send and receive notices and for invoice validation
- Messages informing the parties on the processing status of any document
- Group or individual profiling for sets of custom business rules and workflows
- Key data updating and shared references services (product catalogues)
- Services of interoperation with other platforms

Services for Purchase to Pay operators

DocProcess can fully support companies willing to add Purchase to Pay services to their offer by putting at their disposal a dedicate space for subscribers registration and management through the platform DocXchange.
DocXchange improves productivity, visibility and collaboration inside the organization and with business counterparts. It reduces costs, automates labor-intensive tasks and optimizes resources allocation by offering greater accuracy, control and speed of handling data and documents.
The platform offers the following functionalities for the operators:

- Definition of services and services catalogue
- Subscribers onboarding
- Handling of purchase orders from subscribers
- Quality Assurance processes support
- Reports on services usage and billing

Additional services: updating the client's reference (master data), reconciliation with the orders and acceptances for merchandise invoices, making available validation / approval flows to clients, electronic archiving.

DocXchange Applications

Website: www.doc-process.com Contact: Liviu Apolozan; email: liviu.apolozan@doc-process.com; phone: (+4)021 528 02 37

5.13 EDICOM

Headquarters:

Parque Tecnológico de Paterna
C. Charles Robert Darwin 8
46980 Paterna (Valencia)
Spain

Countries with highest e-invoicing revenues	Mexico, Spain, France, Italy, Portugal.
VAT compliant e-invoice processing guaranteed for	European Union, Mexico, USA, Guatemala, Costa Rica, Colombia, Ecuador, Peru, Brazil, Uruguay, Argentina, Chile, Turkey, Russia, etc..
Number of employees dedicated to e-invoicing and directly related offering	There are 150 employees dedicated directly to e-invoicing
Registered users on own e-invoicing platform	Suppliers: 13500 Buyers: 400
Processed volume on own e-invoicing platform	500 million transactions per year 95 millions e-invoices per year
Core offering	E-Invoicing Network Service, electronic market place, SaaS,Project Management,Advanced Services, Customer support center, Mapping management, Integral partner management , International support center (Global C.S.C)
Covered processes/messages along the supply chain	We covered every message, unlimited.
Value-added services	Certification authority, Van, e-invoicing, EDI, CRP/VMI, Data Catalog, iPaaS
Main target market segments	suppliers in any industry
Supported languages (with application/service and the online-help/customer support)	English, Spanish, German, French, Portuguese, Italian
Competitive differentiator	international coverage trusted service

EDICOM Global e-Invoicing Platform

EDICOM is a Spanish multinational specialized in electronic invoicing and EDI (electronic data interchange). In our company, who we are, is necessarily linked to what we do. We are a group of highly qualified professionals tackling complex international B2B2G projects.
For this reason, we have become an international leader in the development of EDI (electronic data interchange) and electronic billing software adapted to each client company's technical, legal and tax needs in any part of the world.
EDICOM markets and provides services in ASP-SaaS (Application Service Provider) mode, a model that enables businesses to outsource the complex and costly technological and human resources needed to roll out and manage an EDI solution. This business model is enabled from the EDICOM B2B Cloud Platform, a powerful technological infrastructure with its own developed software, permanently upgraded hardware and customized communication systems and management services.
With headquarters in Valencia and a physical presence in major financial centres around the world such as Paris, Milan, New York and Mexico D.F., Sao Paulo, Bogota and Buenos Aires, EDICOM is the official EDI provider for more than 14,000 businesses worldwide.

EDICOM Global e-Invoicing Platform

EDICOM's General e-Invoicing platform simplifies the process of sending and receiving electronic invoices in multinational environments. It is the solution for companies that operate in different markets from centralized management systems and have to be able to process these documents according to the legislation currently in force in each country. EDICOM develops its solutions in ASP (Application Service Provider) mode and promises uninterrupted operation of its solutions 24 hours a day. Hiring any solution gives immediate access to an international support service that deals with queries in 7 different languages (English, Spanish, French, Italian, Portuguese, German and Dutch).

EDICOM's Global e-Invoicing Platform integrates with your management system, making all the changes and adaptations required for your documents. Everything takes place transparently to the user and with no need for any changes in their IT infrastructure. The platform is currently ready to handle electronic invoices in line with the legislation in force in more than 30 states in Europe and America, and new countries are constantly joining.

Through the International e-Invoicing Observatory, EDICOM actively manages knowledge to keep your solution constantly updated in line with the regulatory changes that regularly take place in the different countries involved (formats, fiscal control processes, communications, signatures, etc.).

Certification authority (C.A.EDICOM)

The EDICOM (ACEDICOM) Certification Authority provides individuals and companies with secure electronic identification mechanisms allowing them to carry out activities where the electronic signature substitutes handwritten ones with identical legal guarantees.
Integrated within the service infrastructure offered by EDICOM, our Certification Authorisation integrates mechanisms which permit the exchange of electronic messages in a secure, integrated and confidential way.

Contact: Tel.902119228 | +34 961 366 565 Fax. +34 961 367 117 info_spain@edicomgroup.com
Website:http://www.edicomgroup.com/en_ES/home.html
http://www.edicomgroup.com/es_ES/edicom-connecting-business/offices.html

5.14 eFinans

Headquarters:

eFinans Elektronik Ticaret ve
Bilisim Hizmetleri A.S.
Mecidiyeköy Mah. Buyukdere Cad. Stad Han
No:85 Sisli / Istanbul
TURKEY

Countries with highest e-invoicing revenues	Turkey
VAT compliant e-invoice processing guaranteed for	Turkey
Number of employees dedicated to e-invoicing and directly related offering	36 sales-operations, training, communications, support; 100+ programmers, 1500+ representative agents employed by main shareholders at 600+ contact points
Registered users on own e-invoicing platform	9000+ active users (e-Invoice; including e-Ledger, e-Archive Invoice and Registered Electronic Mail users)
Processed volume on own e-invoicing platform	Over 80 million e-Invoices (2016)
Core offering	e-Invoicing; Network Service, SaaS, Licensed Software, e-Ledger, e-Archive, e-Dispatch and Registered Electronic Mail (REM)
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to authorities (customs, tax administration etc.)
Value-added services	e-Invoice based financial solutions (e-Credit), All in One Portal
Main target market segments	Both corporate and retail customers from all segments
Supported languages (with application/service and the online-help/customer support)	Turkish and English
Competitive differentiator	Free e-Invoice data storage for 10 years with QNB Finansbank assurance. e-Credit financing with e-Invoice collateral. Wide service network.

eFinans

eFinans is founded by QNB Finansbank and Turkey's leading software company Cybersoft partnership in 2013. eFinans provides its customers with innovative e-Transformation solutions such as e-Invoice, e-Ledger, e-Archive Invoice, e-Dispatch and Registered Electronic Mail (REM) with value added services. eFinans is planning to add other e-Transformation solutions to its portfolio, which are already in the agenda of Turkish Revenue Administration (GİB). eFinans adopts variant methods and applications from abroad and within Turkey and serves to its customers with an efficient technology-based infrastructure. eFinans is the first Turkish member of EESPA (European E-Invoicing Service Providers Association, E-Invoicing Platform, ETID (Turkish e-Trade Association) and a regular sponsor of the Billentis Report.

COMPLIANT e-INVOICE

eFinans is the first private integrator to provide its customers with an e-Invoice based finance solution; "e-Credit". Taking the advantage of being a subsidiary of QNB Finansbank, which is recently acquired by Qatar National Bank S.A.Q. eFinans mediates e-Credit by providing the essential collateral via eFinans Portal integration to QNB Finansbank banking system. Thus, QNB Finansbank can evaluate the e-Invoices and provide the customer with a loan via e-Invoice collateral.

Having a wide range of vendors all around Turkey, eFinans has an attainable service network. In collaboration with 150+ integrated software companies, eFinans offers online solutions to its customers in e-Invoice integration, e-Invoice service provision, storage, e-Ledger, e-Archive Invoice (e-bill), Registered Electronic Mail (REM) services as well as other financial services.

INTEROPERABILITY

eFinans is in a constant effort to extend its quality and services to a global level. On the basis of this notion, eFinans gets into partnerships with EESPA members and other decent European service providers. In the scope of these partnerships, eFinans enables its partners' customers to integrate directly to the Turkish Revenue Administration (TRA) e-Invoice System easily and issue their e-Invoices 100% compliantly with the Turkish Tax Code. Export invoices and tax-free invoices will have transformed into digital within the year 2017. These invoices will also be in the scope of service, providing both its and partners' customers to issue an encoded and %100 tax compliant export e-Invoices to the buyers abroad.

Standarts & Certificates

- ISO 22301
- ISO 27001 & TS ISO IEC 27001
- TS ISO IEC 20000 & ISO 20000
- TS ISO IEC 20000 & ISO 20000
- ITIL Certified Staff
- PSM & PSPO Certified Staff

Website: www.efinans.com.tr
Contact: Okan Murat Dönmez, +90 (212) 3704200, info@efinans.com.tr

5.15 e-Logo

Headquarters:

Logo Elektronik Ticaret Hizmetleri A.Ş.
Gebze Organize Sanayi Bölgesi
Teknopark No: 609 Gebze 41480
Kocaeli
Türkiye.

Countries with highest e-invoicing revenues	Turkey
VAT compliant e-invoice processing guaranteed for	Turkey
Number of employees dedicated to e-invoicing and directly related offering	50+ Core Team, Business, Support, IT, GA Management and 800+ Business and Solution Partners Sales & Technical Support.
Registered users on own e-invoicing platform	12.000+ active users (e-Invoice, e-Ledger, e-Archive and other e-Business solutions) (YTD)
Processed volume on own e-invoicing platform	Over 100 Million e-Invoices (2016)
Core offering	e-Government solutions; e-Invoice, e-Ledger, e-Reconcilement, Finance solutions
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to authorities.
Value-added services	e-Commerce support, Financial solutions, Connected Bank Business solutions, and so on.
Main target market segments	All business segments and business verticals, B2B, B2C, e-Commerce, Trading etc.
Supported languages (with application/service and the online-help/customer support)	Turkish, English
Competitive differentiator	Business solution partner with a 800+ sales and support network, solution oriented view with the expertise of supporting trade for many years, for many different needs with convenient and reliable products and solutions.

Logo & e-Logo

Trusted and Innovative Partner for Companies

Logo established in 1984. Today, Logo is the leading provider of Enterprise Application Software for SMEs and Enterprise level companies in Turkey, as well as a major player in the international market.

Throughout its experience over 30 years in the software industry, Logo has remained committed to investing in new business models and technologies. Logo currently provides services for more than 85,000 active customers in Turkey and the region. Logo's solutions are sold in 45 countries and are available in 11 languages and several business practices and legislations to meet the users' needs, through authorized business and distributors.

The company acquired **Logo Elektronik** (e-Logo) in 2014, which has a product and service portfolio facilitating transition to **e-Commerce in its finest, fastest and easiest way.** e-Logo has e-Invoice and e-Archive products in addition to B2B and B2C services and the company is one of the market pioneers among the e-Invoice private integrators with a **25+% market share**.

e-Logo helps business world for e-Transformation

e-Government:
In the process of transformation to electronic invoicing in Turkey, e-Logo develops applications and services that will allow Logo customers and users of other ERP solutions to adapt e-Invoice, e-Archive, e-Ledger and all other e-Solutions exist today and will launch in the future.

Create Value with innovative and result oriented approach and services. With web based e-Reconcilement service all companies could make monthly reconciliation in a few minutes.

Make business processes easier. With Logo Connect Bank solutions companies can reach to their accounts and bank services from their ERP platforms.

With a holistic approach e-Logo creates end to end processes on multiple platforms.
With mobile applications, cloud based applications and on premise services helps customers on site also.

Secure all partners business processes with implementation systems and quality assurance standards. Using ITIL standards is to improve efficiency and achieve predictable service levels, ISO standards e-Logo compatible;

- TSE EN ISO 9001 Quality Management
- TSE EN ISO 20000 Service Management
- TSE EN ISO 22301 Business Continuity
- TSE EN ISO 27001 Information Security

Website: www.logo.com.tr ; e.logo.com.tr
Contact: email, efatura@diyalogo.com.tr, yardim@diyalogo.com.tr

5.16 Esker

Headquarters:

Esker
10 rue des Emeraudes
69006 Lyon
France

Countries with highest e-invoicing revenues	France, U.S., Spain, Italy, Germany, U.K.
VAT compliant e-invoice processing guaranteed for	More than 50 countries in Europe, America, Africa and Asia Pacific
Number of employees dedicated to e-invoicing and directly related offering	420
Registered users on own e-invoicing platform	Suppliers: 650 Buyers: 680,000 Consumers: 110,000
Processed volume on own e-invoicing platform	6.8 million e-invoices per year
Core offering	Document process automation SaaS (Software as a Service)
Covered processes/messages along the supply chain	Order-to-cash cycle (order processing, accounts receivable & collections management automation) Purchase-to-pay cycle (purchasing & accounts payable automation)
Value-added services	Sending and archiving of paper and e-invoices; hybrid mail services; online tracking of customer invoices in real time; cash collection metrics and tools
Main target market segments	Large and SMBs in any industry
Supported languages (with application/service and the online-help/customer support)	English, French, German, Italian, Spanish
Competitive differentiator	One on-demand platform to automate e-invoices, as well as the order-to-cash and purchase-to-pay cycles

Take control of your AR and AP processes, using electronic delivery and archiving of paper and e-invoices, online portal tools, and more.

Esker is a worldwide leader in cloud-based document process automation software. Esker solutions help organisations of all sizes to improve efficiencies, accuracy, visibility and costs throughout a multitude of processes, including order-to-cash (O2C), purchase-to-pay (P2P) and document delivery. Easily integrated with existing infrastructures and ERP applications, Esker helps businesses optimise financial management and supply chain performance.

Esker's Accounts Receivable automation solution provides 100% invoice delivery to customers according to their preference (e.g., postal mail, fax, email, EDI, publication on a web portal). Esker's customer portal provides suppliers and customers with a collaborative workspace, invoice status information and convenient chat function.

Paper invoice delivery just got a whole lot easier and faster.
For customers not ready to receive e-invoices, the delivery of paper invoices can be automated using Esker Mail Services. Invoices are electronically submitted directly from any ERP, desktop or other business application for worldwide delivery to postal services in less than 24 hours, making business mail 100% electronic for the sender.

Bring collections into the 21st century.
Esker's collections management software helps companies modernise all post-sale collection interactions easily and electronically, without replacing their core billing and collections processes. Suppliers and their customers benefit from a faster and more transparent collections process to speed up customer payments and reduce collection disputes.

Optimise O2C performance and drive company success.
From order processing automation to customer e-invoicing to collections management software, Esker has the solutions today's businesses need to enhance their O2C performance. Automating processes in the O2C process equates to: improved end-to-end customer experience, greater cost savings, streamlined cash flow management, and increased collaboration and transparency.

E-invoicing and accounts payable.
Esker's Accounts Payable automation solution enables customers to offer their suppliers a wide range of e-invoicing submission methods, allowing them to take full advantage of e-invoicing benefits including early payment discounts and reduced processing costs.

It's a regulatory jungle out there — Esker helps you stay compliant.
Esker help businesses navigate the complex universe of e-invoice regulations and achieve global compliance by supporting any technology method a company chooses:

- Compliance via e-signatures. Through its partnership with TrustWeaver, Esker applies the appropriate e-signatures, time stamps and verifications in over 50 countries.
- Compliance via EDI. Esker provides data formatting in the appropriate format, secured exchange via any communication transport (e.g., AS2, VPN, SFTP, etc.) and interoperability with any platforms
- Compliance via BCAT. Esker's audit trail and reporting capabilities keep track of all customer orders — from receipt and posting to dispatch and electronic archiving.
- Compliance in archiving. Vendor and customer invoices are e-archived in separate locations and accessible via a secured portal. E-invoices are archived in compliance with all European Directives and regulatory frameworks like the Sarbanes-Oxley Act, and are made accessible to authorised personnel and external tax auditors.

Esker is able to generate e-invoices all types of formats (e.g., PDF, XML, EDIFACT, ANSI, UBL, etc.) and communicate with platforms from other service providers and public administrations (e.g., FACe, SDI, Chorus, Billexco, Peppol, etc.).

For more information, visit www.esker.com/einvoicing

5.17 FIT Solutions

Headquarters:

FIT Solutions | F.I.T Bilgi İşlem Sist. Serv. San. Tic. Aş.
Gold Plaza, Altayceşme Mh. Öz Sk. No: 19
Kat: 4-7 Daire: 21-22-34 Maltepe
Istanbul
Turkey

Countries with highest e-invoicing revenues	Turkey
VAT compliant e-invoice processing guaranteed for	Turkey
Number of employees dedicated to e-invoicing and directly related offering	100 +
Registered users on own e-invoicing platform	3800+ companies
Processed volume on own e-invoicing platform	180 million e-Invoices per year
Core offering	e-Invoicing & Supplier Financing, SaaS (Software as a Service), PaaS and on premise.
Covered processes/messages along the supply chain	ERP integrated inbound & outbound invoicing and Supplier Financing
Value-added services	Electronical Reconciliation, audit of transferred data, tax reporting
Main target market segments	Large suppliers in any industry, balanced offering for suppliers and buyers in mid-sized organizations
Supported languages (with application/service and the online-help/customer support)	Turkish, English
Competitive differentiator	FIT Solutions paperless e-Invoicing for B2B and B2C to its customers. In addition, FIT Solutions provides Platform Solutions including e-Ledger, e-Signature, Supplier Financing, e-Ticket, "e-Delivery Note, e-Backup, e-Reconciliation, e-Audit, VAT return and IFRS.

FIT SOLUTIONS PIONEERING FOR E-TRANSFORMATION SECTOR

FIT Solutions, launched its services in 1999 in Turkey, delivers solutions with its experiences and specialist team increasing efficiency and facilitating cost and time management in the process of transferring the accounting and finance operations of enterprises. FIT Solutions, taking the justified pride of being the first enterprise having a R&D centre regarding e-Transformation, shaping the development of corporate software and integration services market in Turkey.

FIT Solutions, developing entire e-solutions enabling the enterprises to transfer their accounting and finance oriented business processes to digital media with minimum burden, offers applications in this context such as e-Invoice, e-Ledger, e-Archive, e-Delivery note, e-Ticket, e-Signature, Supplier Financing, e-Backup, e-Audit, e-Reconciliation, IFRS and VAT return.

e-Transformation process ensured not only to establish formal economy but also to preclude problems such as counterfeiting, fraud and unfair competition. Many enterprises, rapidly adapting to transformation process by means of communiques issued, seized the advantage of time-saving, efficiency and security in their business processes as well as substantially cutting back their costs.

Invoice costs of enterprises dramatically decrease

The number of e-Invoice obligants that was 19,837 in July 2015 has reached to 62,228 as of February 2017. In the event that the annual turnover threshold for e-Invoice shall decrease from 10 million TL to 8 million TL in 2017, it is anticipated that the number of e-Invoice obligants shall exceed 100 thousand. Through e-Invoice, the printing, archiving, cargo and notary attestation costs and expenses of the enterprises are decreased, the paper invoice cost that is an average of 6 TL per unit decreases up to 2 kurus (0.02 TL). 300 e-Invoices can be sent with the cost of one printed invoice, i.e. costs of the enterprises are decreased by 1 in 300.

The notary attestation cost of around 5,000 TL of an enterprise which keeps ledger with an average of 10,000 pages in a month is eliminated by e-Ledger. As of February 2017, 59,961 registered obligants benefit from e-Ledger application. The entire invoices excluded from the scope of e-Invoice are then transferred on digital environment with low-cost e-Archive system that retains the invoices for 10 years. e-Archive is a type of electronic invoice. The processes are monitored transparently with this application while problems such as storage area and archiving obligation are no longer a burden to consider. As of February 2017, 6,773 registered obligants are using e-Archive application.

http://bit.ly/2os7QpO

e-Delivery note, transferring paper delivery note process on the digital environment, provides a substantial cost advantage to enterprises. It is anticipated that approximately 1,000 obligants in 2017 in Turkey will start to use e-Delivery note. The export invoice, functions in integration with e-Invoice system, ensures swift actions to be applied on problems that can be encountered by the obligants in export processes. The new application covers the exporter enterprises among 50 thousand enterprises with the turnovers above 10 million TL.

FIT Solutions, has ended 2016 by increasing its turnover and client number by around 25 percent, attained the success of rendering services to 60 enterprises among the first 100 enterprises throughout the world and 20 enterprises ranking in the first 25. The Corporation, as a part of its overseas operations, now focuses on Turkic Republics and Middle East countries.

Website: www.fitsolutions.com.tr Contact: info@fitsolutions.com

5.18 Global Healthcare Exchange, LLC (GHX)

Headquarters:

Global Healthcare Exchange, LLC (GHX)
1315 W. Century Drive
Louisville, Colorado 80027
USA

Countries with highest e-invoicing revenues	United States, Canada, Germany, United Kingdom
VAT compliant e-invoice processing guaranteed for	Germany, Netherlands, Switzerland, United Kingdom, Spain, Italy, Sweden, Finland, Norway, Denmark
Number of employees dedicated to e-invoicing and directly related offering	Not available
Active users on eInvoicing platform	Suppliers: 500+ Buyers: 4,000+
Core offering	Full order-to-cash cycle automation, order channel consolidation, master data management and pricing alignment, services and tools for standards compliance in healthcare
Covered processes/messages along the supply chain	Invoices, purchase order, purchase order acknowledgement, advanced shipping notice, catalogue, contract
Value-added services	Business document validation, cleansing and enrichment, business intelligence and reporting tools, inventory, catalogue and contract management, consulting services. The only GDSN certified data pool focused exclusively on healthcare.
Main target market segments	Healthcare medical-surgical manufacturers, distributors, hospitals, group purchasing organisations
Supported languages (with application/service and the online-help/customer support)	English, German, Spanish, French, Dutch, Portuguese, Italian
Competitive differentiator	Strong healthcare expertise in supply chain automation and integration technology, operating the biggest B2B network in healthcare. Our customers form the largest community in healthcare, and collectively saved over $5.3 billion since 2010 by using GHX solutions.

GHX

GHX enables better patient care and billions in savings for the healthcare community by maximizing automation, efficiency and accuracy of business processes.

Healthcare Supply Chain Automation
Supply chain is the 2nd largest and fastest growing area of spend in healthcare, accounting for 40 - 45% of operating expenses. Hospitals can reduce supply chain costs by 5 - 15% if they better analyse, plan and control the purchase and use of goods and services, gaining a profit increase of 2 - 7%.[1] For suppliers to hospitals, supply chain automation optimizes the order-to-cash cycle, reducing the effort associated with order management by up to 75%, reducing the cost of processing invoices manually by up to 40%, and the time invoices are paid by up to 30%.[2] GHX has a strong expertise and state-of-the-art solutions to help turn an inefficient supply chain into a strategic asset with reduced operating costs.

GHX Statistics
- 14,650+ healthcare providers and 10,600+ suppliers in North America and Europe, forming the largest trading community in healthcare
- 536,750+ trading partner connections established on the Exchange (85% of market in North America and over 50% in Europe)
- 81+ million business documents processed through the GHX Exchange in the last 12 months, repre-senting $77+ billion in volume of supply spend
- $1.5+ billion in healthcare savings achieved by GHX customers in the last 12 months alone

In addition, GHX offers a number of **business intelligence and reporting tools** for customers to enable them to make informed strategic decisions. GHX is also leading provider of services that help industry **adopt and synchronise global or regional data standards**.

1.) *Supply Chain Consultants and Outsourcing Providers for Healthcare Delivery Organizations. Gartner Research; 5 July 2011.*
2.) *GHX value study*

GHX eInvoicing solution | an overview
The GHX eInvoicing solution helps suppliers navigate the complexity of the EU marketplace and complies with the invoicing regulations mandated by the member states. Through a single connection (supplier's ERP), GHX eInvoicing helps issue and distribute invoices in the correct format to the destination required. In addition, suppliers can deliver invoices to customers through an online portal, giving better visibility, reducing manual processes and enhancing the customer experience.

GHX eInvoicing solution | Why GHX?

1| Compliance throughout Europe
- Meets electronic invoicing regulations, ensuring continuation of business across EU markets
- Single sign-on and just one solution provider covers the delivery of compliant invoices in the correct for-mat for countries with an eInvoicing mandate in force

2| Visibility and analytics
- Pan-European overview of invoices with their delivery and receipt status (competitive differentiator)
- Invoice data analytics for cost and cash flow

3| Reduced costs and processing times
- Shorten invoice delivery time by removing mail de-livery and processing delays
- Leverage three-way matching of PO, delivery confirmation, and invoices to quickly identify payable invoices
- Invoices delivered electronically, leveraging email notification and a secure portal environment
- Reduces time that suppliers spend resending invoices to customers

4| Increased customer satisfaction
- Enables customers to download and print invoices
- Overview of invoices to customers in one place

Contact: info@ghxeurope.com | www.ghx.com

5.19 Gosocket

Headquarters:

Gosocket Corporation S.A
Oficentro Plaza Colonial, Oficina 2-11A
San José
Costa Rica

Countries with highest e-invoicing revenues	Latin America
VAT compliant e-invoice processing guaranteed for	Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Peru and Uruguay.
Number of employees dedicated to e-invoicing and directly related offering	150
Registered users on own e-invoicing platform	Suppliers: +50,000 Buyers: +300,000
Processed volume on own e-invoicing platform	+300 million e-invoices per year
Core offering	e-invoicing Network Service Proactive Supply Chain Finance Full web e-invoicing services e-Collection / e-Payments
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment-Finance and Electronic reporting to tax authorities.
Value-added services	Our B2b open and free electronic invoicing network that connects companies with their clients (buyers) / suppliers through their exchange of compliant electronic invoices.
Main target market segments	Large, medium and small suppliers of main industries around Latin America.
Supported languages (with application/service and the online-help/customer support)	English, Spanish, Portuguese.
Competitive differentiator	Our unique open network approach www.gosocket.net, based on compliant electronic invoices, integrating financial and operational value added services.

360° of Electronic Invoicing in Latin America through Gosocket

Latin America is the region leading e-invoicing with regulations implemented by tax authorities, with the aim of reducing tax evasion and to help improve business processes. A more connected B2b world is definitely the next step, but it will only be possible with a real open network capable of connecting companies of all types and sizes.

Gosocket www.gosocket.net facilitates the exchange of e-invoices between all kinds of Suppliers Buyers, which is a free of charge service. We connect financial entities to this business exchange, and we developed a special feature, so they can offer e-Factoring services in a proactive and automatic way, based on the information of each e-invoice, and considering many other aspects, such as the behavior between companies exchanging e-invoices. We charge to financial entities a fee for each e-invoice negotiated through Gosocket, and we suggest large buyers to invite their suppliers to register into Gosocket (at no cost) to connect with them, improving the AP process.

Gosocket also takes advantage from the exchange of e-invoices between large Suppliers and small Clients, and integrates with e-payment platforms, in order to facilitates payments of e-invoices by buyers, improving the collection and reconciliation processes of suppliers.

We charge a fee for each e-invoice paid through Gosocket, and in the first stage of this service we suggest large suppliers to invite their clients to register into Gosocket (at no cost) to receive e-invoices issued by them.

Considering the huge volume of business information stored and exchanged through Gosocket, we developed an Application Programing Interface (API) that allows integration of third party solutions (Gadgets), to add value to this information, helping companies to improve their business processes.

Gosocket users can buy subscriptions to those Gadgets through the Gadget's Marketplace, and we charge a percentage to the developers. In some cases, Gadgets are free of charge for users, but if they leverage the use of financial services at Gosocket, we can share our revenue from those services with the developers.

Contact: Sergio Chaverri
Website: www.gosocket.net
Tel: +506 2288-2386 / Email: sergio@gosocket.net

5.20 Indicium Solutions

Headquarters:

Indicium Solutions, S.A. de C.V.
Bosques de Duraznos 75-1103
Col. Bosques de las Lomas
11700 México, D. F.
MEXICO

Countries with highest E-Invoicing revenues	México, Chile.
VAT compliant E-Invoice processing guaranteed for	México, Chile, Argentina, Colombia, Costa Rica and Brasil
Number of employees dedicated to E-Invoicing and directly related offering	50
Active users on E-Invoicing platform	Suppliers: 50,000 + Buyers: 5,250 +
Core offering	In-House or Hosted Electronic Documents Systems including, e-Invoicing System, e-Accounting, and e-Payroll slips for Mexican compliance.
Covered processes/messages along the supply chain	Inbound / Outbound electronic invoicing. High performance platform for electronic stamping supported simultaneously by 5 PAC approved by SAT.
Value-added services	Management of high-volume, complex electronic document processes. Capability to meet ad-hoc business request from Companies.
Main target market segments	Large suppliers in any industry as well as Balanced offering for suppliers and buyers in mid-sized and small organizations
Supported languages (with application/service and the online-help/customer support)	Spanish, English.
Competitive differentiator	Innovative, In house and Hosted customized solutions in electronic documents, to meet a wide range of business requirements.

PROFILE OF INDICIUM SOLUTIONS

Indicium Solutions is a leading supplier of electronic invoicing, e-Accounting, e-Payroll slips and electronic documents solutions to simplify administrative processes, reduce costs and comply with the fiscal Mexican regulations.

The capability to respond to a wide range of business requirements in a customized way, makes Indicium's portfolio of solutions the preferred choice for large multinationals operating in Mexico and in the Latin-American Region.

Inbound/Outbound, In-house and Hosted systems, has also help expand Indicium presence into the mid-market and small companies.

Solutions developed by Indicium include systems for:

- Inbound/Outbound electronic invoicing
- Electronic Accounting (compliance requirement for companies operating in Mexico)
- Electronic Payroll Slips
- Tax withholding certificates (Constancias)
- Point of Sale electronic Invoicing
    - Food and Beverage
    - Pharmacy
    - Books
    - Toll-roads
    - Gasoline
    - Services
    - Air tickets
    - Air service tickets
    - Transportation
    - Electronics and tools
    - Home appliances
    - Beauty products
    - Others
- Electronic Bank/Insurance Statements
- Electronic Bonds (Fianzas)
- Managed e-mail delivery
- High performance platform for electronic stamping supported simultaneously by 5 PAC authorized by SAT
- Secure integration with major ERP's (SAP; Oracle IBS, Microsoft, QAD, BPCS, MAPICS, JD Edwards, PeopleSoft, Legacy Systems, others.
- e-factura SaaS. Cloud e-invoicing.
- GPS solutions for control of productivity

Indicium has an excellent track record of successful implementations with leading companies in industry sectors like:

- Financial and Banking Services
- Insurance
- Manufacturing
- Distribution
- Health and Pharma
- Retail
- Automotive
- Editorial
- Courier
- Packaging
- Electronics
- Food and Beverage
- Logistic and trasportation
- Education
- Others

Indicium's is based in Mexico, with a wholly own subsidiary in the United States and serves the Regional market thru Partners with local presence in:

- ✓ Argentina
- ✓ Brasil
- ✓ Chile
- ✓ Colombia
- ✓ Costa Rica
- ✓ Ecuador
- ✓ Guatemala
- ✓ Perú
- ✓ Uruguay

Website: www.indiciumsolutions.com.mx
Contact: Luis Sanchez (President), phone: (5255)5245 7093, (512)701-8755
e-mail:
luisf.sanchez@indiciumsolutions.com

5.21 INPOSIA

Headquarters:

INPOSIA Solutions GmbH
Ottostraße 18
76227 Karlsruhe
Germany

Countries with highest e-invoicing revenues	EMEA & APAC
VAT compliant e-invoice processing guaranteed for	More than 60+ countries in Europe, North and South America, Asia-Pacific and Africa.
Number of employees dedicated to e-invoicing and directly related offering	70+
Active users on e-invoicing platform	Suppliers: 90000+ Buyers: 35000+
Processed volume on own e-invoicing platform	Outside Turkey: Over 48 million Transactions per year In Turkey: 81.6 million (eInvoic = eFatura & eArsiv)
Core offering	Business Integration Service for the entire business process supply chain, E-Invoicing / E-Ledger / E-Archive, E- Dispatch (Invoicing B2C, Private Integrator for Turkey), Order2Cash and Purchase2Pay Solutions, EDI / EAI /B2Bi Service, ZUGFeRD
Covered processes/messages along the supply chain	Purchase processes, Storage and Delivery processes, Invoicing and Financial processes.
Value-added services	Dynamic payment services, Archiving, Document Digitalization, Business Partner Enablement, professional consulting services.
Main target market segments	Intersectoral, Company size not relevant (SMEs & Large companies)
Supported languages (with application/service and the online-help/customer support)	German, English, Spanish, Turkish, Russian, Italian and French.
Competitive differentiator	INPOSIA relies on economic sustainable and profound business relations, which stand considerably for the business growth of the company. INPOSIA grows nationally as well as internationally: stability and solidity are not in conflict with dynamic

INPOSIA-Business Integration

Added-value-oriented B2Bi all-inclusive service

Full compliance of all operations, specific highly skilled consultancy, international establishment of service and support – INPOSIA always unifies the requested expertise in Business Integration with an innovative and pioneering solutions portfolio.

INPOSIA
GLOBAL PROCESS EXCHANGE

- E-Invoicing
- EDI, EAI, B2Bi
- Scanning/OCR
- Document based messaging
- Archiving
- Dynamic Payment

Business Enablement - Unlimited

The services of INPOSIA are applied across all branches and processes. Complex Just-in-Time delivery processes as well as business-critical finance transactions are integrated sustainable and competently along the supply chain of our customers.

International focused E-Invoicing coverage, specific licensed service solutions, integrated B2Bi-solution, added-value-oriented solutions portfolio, cross-platform consulting, member of VeR and EESPA (European E-Invoicing Service Providers Association.

By INPOSIA's portfolio all business and trading partners can be integrated, for instance largescale customers, haulage businesses, international distribution structure as well as the entire supply chain and structure.

Solid strength

INPOSIA relies on economic sustainable and profound business relations, which stand considerably for the business growth of the company. INPOSIA grows nationally as well as internationally: stability and solidity are not in conflict with dynamic.

Data Security

With regard to the enormous importance of data security, INPOSIA carries out its services in highly secure, certified data processing data service centers. The international locations of the data centers are chosen by customer requirements, which implies that we carry out our services for German customers in German data centers; our Turkish customers for instance, are obliged, in conformity with the law, to process their electronic financial transactions via Turkish data centers.

Advantages

- International guarantee of compliance over all invoicing processes
- Significant improvement in quality / error reduction in document postings.
- Considerable minimization of input by electronical order- and invoice processes
- Remarkable higher saving potential by quicker achievement of cash discount.
- Seamless integration in Enterprise Resource Planning System.
- Maximum transparency of all Transactions.
- Less own resources (e.g. IT staff)
- Avoidance of own investments and operating expenditures for software and hardware resources.

Contact Information: INPOSIA Solutions GmbH, Ottostraße 18, 76227 Karlsruhe, Germany
Website: http://www.inposia.com Phone: +49 721 – 50955 0 E-Mail: info@inposia.com

5.22 JustOn

Headquarters:

JustOn GmbH
Mälzerstr. 3
07745 Jena
Germany

Countries with highest e-invoicing revenues	Germany, France, USA
VAT compliant e-invoice processing guaranteed for	EU
Number of employees dedicated to e-invoicing and directly related offering	15
Registered users on own e-invoicing platform	Suppliers: 100
Processed volume on own e-invoicing platform	25 million invoices per year
Core offering	Agile monetization SaaS platform Invoice management for supplier invoices Billing for subscription based recurring revenue with usage data
Covered processes/ messages along the supply chain	Contract-to-cash inclusive online payment with sophisticated agile monetization capabilities
Value-added services	Online payment services Archiving 100% Integration with Salesforce CRM
Main target market segments	Suppliers (SMBs) with an outgoing invoice volume of 50 to 50.000 invoices per month
Supported languages (with application/service and the online-help/customer support)	English, German, French
Competitive differentiator	Limitless extensibility, with very fast implementation cycles provides our clients with the fastest way to agile monetization.

JustOn – The fastest way to agile monetization

JustOn is invoice management as a service based on the Force.com platform. Users of our cloud software can invoice any pricing model and reduce process cost for creating and sending invoices electronically.

Contracting
JustOn makes it easy to convert sales opportunities into contracts. Contracts build the basis for fully automated invoicing. It is the central place for controlling and growing your business once the customer is won. No matter, if it is a subscription or a usage based pricing model, JustOn provides you with pre-configured business and pricing models.

Invoicing
Based on events, like an order or usage data have been received or a project has been finished etc., JustOn starts generating invoices. JustOn runs the tasks without any user interaction, from contract setup to sending out the invoice to its recipient. In a Salesforce CRM environment any information can be billed: opportunities, orders, contracts and custom objects.

Collection and debtor management
An overview of all transactions is provided as account balance: invoices, payments, payment attempts, late fees, pre-payments etc. With JustOn our clients can make decisions based on the customer's payment history: continue to deliver service as long as you'd like or stop it if the customer does not pay.

Dunning is an integrated part of our cloud-based monetization solution; it is more than just collecting on debt. The JustOn online dunning processes are integrated into the CRM system, such that one can use it for managing service availability for past-due accounts and closing the door on potential revenue leakage.

Force.com Platform
Force.com is the cloud platform on which the world's leading CRM system Salesforce CRM has been developed and more than 3,000 business apps are made available.

JustOn uses Force.com as a secure, stable and scalable environment to automate the electronic invoicing of its customers. More than 150,000 customers use the platform and trust the provider and its partners.

Successes
Customers appreciate the advantage that JustOn is seamlessly integrated into their own CRM processes and provides the same extensibility as their CRM system.

Global companies like AOL use JustOn for invoicing its publishing and media services. With JustOn the process chain from the allocation of consumption data to sending out the invoices are shortened dramatically.

JustOn
JustOn is a provider of B2B software for automated, electronic invoicing and implementing agile monetization strategies. The company is based in Germany and was founded in 2010.

With more than 100 customers JustOn offers an Invoicing as a Service solution that lets customers create contract-based invoices. JustOn is provided on the leading cloud computing platform Force.com.

Yearly revenues of more than 1 billion euros are billed with JustOn worldwide. Customers are companies of the digital economy such as the AOL Group or Delivery Hero, the leading provider of food delivery services. JustOn is official partner of salesforce.com – Salesforce Silver ISV Partner.

Website: www.juston.com
Contact: Marko Fliege, mf@juston.com

5.23 Netsend Ltd

Headquarters:

Netsend Ltd
Battersea Studios
80 Silverthorne Road
London
SW8 3HE

Countries with highest e-invoicing revenues	United Kingdom, France, Sweden, Germany, Italy, Spain, Austria, Australia, Brussels, Japan, USA, Hungary
VAT compliant e-invoice processing guaranteed	Globally
Number of employees dedicated to e-invoicing and directly related offering	All of them, it's what we do
Registered users on own e-invoicing platform	Suppliers: 55 Buyers: 4,000,000 Consumers: -
Processed volume on own e-invoicing platform	22,000,000 per annum
Core offering	The outsourcing of business-critical document distribution, with a focus on electronic delivery.
Covered processes/messages along the supply chain	Document creation and distribution. Multi-channel delivery options including portal, email, fax, EDI and post. Open connectivity to A.P. focussed e-invoicing providers.
Value-added services	Migration to electronic delivery methods. Integration with Credit Card portals and Credit management software. Invoice analytics. Transpromo tools.
Main target market segments	Financial, technology, media, retail, food and drink, pharmaceutical, recruitment, travel, energy, engineering and manufacturing
Supported languages (with application/service and the online-help/customer support)	Application, documents and portals supported in all languages. Customer support in English, French, Russian, Italian.
Competitive differentiator	The key to our success with major multinational clients is simple: focus. Our systems, protocols and people are 100% focused on e-billing as a competitive edge for our clients.

Netsend – Financial Efficiency Through Invoicing Simplicity

About Netsend

Netsend is at the vanguard of companies dedicated to eradicating issues of credit control. Through its management of business-critical document distribution, Netsend ensures accurate and efficient delivery of invoices to your customers in the medium which suits them.

Beyond saving time and cost through invoice automation, Netsend enables a risk-free and seamless shift towards electronic invoicing, reducing errors and driving down DSO.

Netsend also removes the classic challenges of document storage and retrieval for auditing and compliance. Global businesses depend on Netsend to provide secure online access to their document distribution history, facilitating ease of reporting, performance analysis and proof of delivery amongst a range of other document management functions.

Headquartered in the UK, Netsend has clients operating in over 52 countries.

Why Netsend?

We focus on our business, So that you can focus on yours. It's what we do, and we've been doing this since 2005.

That experience provides our clients with access not just to a mature, feature-rich and road tested solution but also a future-proofed one. Netsend is constantly evolving, as we refine processes, add new functionality and develop services based on input from clients and their customers.

In any enterprise, working capital improvement means business gain. From 20th Century Fox to easyJet, from ITV to Pizza Hut major brands are turning to Netsend to achieve this.

How Netsend Works

The key to our success with major multinational clients is simple: focus.

Our systems, protocols and people are 100% focused on outsourced document distribution for business-critical functions, such as credit management. Whether your requirements include print, email or EDI – Netsend will manage the process for you.

However your customers want to receive invoices, Netsend achieves it simply, scalably and efficiently.

Creation - Netsend creates documents by parsing data from your accounts package and combining with previously built templates.

Distribution - The heart of Netsend is a multichannel document delivery service, handling email using both push (with attachment) and pull (to portal) methods, as well as EDI (including PEPPOL), fax, post, FTP and other formats.

Portal - The Netsend portal is a feature-rich, web-based management and analytics platform; configured and branded to your requirements.

Migration - Netsend's customer migration service typically results in a shift to at least 80% electronic invoicing within 1 year.

International - Headquartered in the UK, Netsend has clients operating in over 52 countries with a variety of language requirements.

Website: www.netsend.com
Contact: info@netsend.com, +44 20 3177 1700

5.24 OfficeTorque FRM

Headquarters:

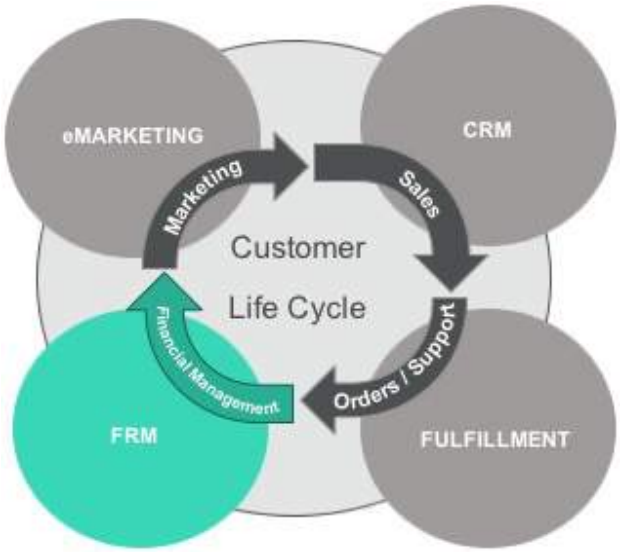
OfficeTorque Limited
Albany
Auckland
New Zealand

Countries with highest E-Invoicing revenues	Australia, New Zealand, United Kingdom
VAT compliant E-Invoice processing guaranteed for	Australia, New Zealand, United Kingdom
Number of employees dedicated to E-Invoicing and directly related offering	20+
Active users on E-Invoicing platform	Customers: 2000 + instances
Core offering	Comprehensive credit to cash cycle management solutions including: Interactive hybrid e-Invoices / e-Bills, customisable self-service Portal, segmentable AR Management system, built in multi channel communications, integrated ePayment options.
Covered processes/messages along the supply chain	Credit risk analysis; EIPP / EBPP; ePayment; AR Management; matching & allocations; business intelligence.
Value-added services	Integration to ERP, accounting, practice management and CRM systems; paperless adoption strategies; shared services strategies; AR best practice consulting; ePayment integration; document management integration; automated print file delivery.
Main target market segments	Medium, Corporate and Enterprise businesses in either B2B or B2C markets in any industry that bills and collects payment.
Supported languages (with application/service and the online-help/customer support)	English
Competitive differentiators	Enhanced customer and user experience; easy to deploy; rapid ROI.

OfficeTorque FRM – Financial Relationship Management

FRM brings automated process and communications to the "credit to cash cycle management" in a similar way that CRM does for sales and marketing.

Our web-based software connects to, and augments your existing ERP, accounting, practice management or CRM software.



Key components include:

- high function interactive hybrid e-invoices / e-bills (image plus data)
- high function Client Portal
- invoice data export
- customisable automated workflow and communications (AR and dispute Management)
- comprehensive AR Management tools
- built in multi-channel communications
- integrated PCI compliant ePayment options direct from interactive e-invoices / e-bills or Portal
- custom branding options
- comprehensive reporting and business intelligence

Typical results:

- >80% of customer self service
- >80% reduction in paper and postage cost associated with bills
- 60% reduction in billing effort
- Customer can pay within the iBill / Portal
- Payments automatically allocated and receipted to the invoice
- 60% reduction in reconciliation effort
- "Promise to Pay" ratio up to 90%
- 60-80% reduction in collections effort
- General DSO improves by >20%
- Customers and Operators alike satisfaction improves
- ROI 6-9 months

Specialist sector experience includes:

- Professional and financial services
- Distribution
- Publishing
- Trades
- Utilities
- Strata Management
- Local government

OfficeTorque FRM is available for single entity use or shared services environments.

Our fully integrated solution is easy to deploy, easy to use, easy to support, and delivers rapid results for you, and an enhanced experience for your customers.

Website: www.officetorque.com or email cashflow@officetorque.com

5.25 OpenText

Headquarters:

OpenText
275 Frank Tompa Drive
Waterloo, ON N2L 0A1
Canada

Countries with highest e-invoicing revenues	France, Germany, UK, USA
VAT compliant e-invoice processing guaranteed for	46 countries – including: AUS, AUT, BEL, BRA, BGR, CAN, HRV, CYP, CZE, DNK, EST, FIN, FRA, DEU, GRC, HKG, HUN, ISL, IRL, ISR, ITA, LVA, LIE, LTU, LUX, MEX, MAR, NLD, NZL, NOR, POL, PRT, ROU, ZAF, SGP, SVK, SVN, ESP, SWE, CHE, TUR, GBR, USA
Number of employees dedicated to e-invoicing and directly related offering	>1000
Registered users on own e-invoicing platform	Connected Businesses: >600,000 Customers: >40,000
Processed volume on own e-invoicing platform	Almost 1 billion e-invoices per year
Core offering	Active Invoices with Compliance for E-Invoicing for AP and AR, Active Orders for P2P automation, digital enablement for SME trading partners, OpenText Trading Grid®, B2B Managed Services.
Covered processes/messages along the supply chain	End-to-end physical/financial supply chain automation – from order through to invoice/payment. Support for multiple standards; can support custom messages.
Value-added services	Trading partner on-boarding services; Active Community for community management.
Main target market segments	Large Enterprises – simple to complex E-Invoicing scenarios. Cost-effective solutions for enabling connectivity with non-digital trading partners.
Supported languages (with application/service and the online-help/customer support)	English, French, German, Italian, Spanish, Japanese, Korean, Portuguese, Chinese.
Competitive differentiator	Truly global network and presence, with the world's largest business network and range of E-Invoicing solutions available to suit the needs of enterprises in a variety of industries.

OpenText

OpenText operates the world's largest business network with over 600,000 connected businesses and over 16B transactions per year. OpenText (formerly GXS) has provided electronic invoicing solutions globally for over 40 years. Today, we provide E-Invoicing services for thousands of enterprises with SaaS and outsourced options to suit each customer's specific E-Invoicing requirements.

OUTBOUND E-INVOICING
OpenText enables companies to exchange electronic invoices via EDI and other preferred methods. Suppliers create electronic invoices directly from Oracle, SAP or other G/L accounting applications and we extract information from these enterprise systems, converting data into the buyer's preferred electronic invoicing format.

We can also create and send compliant PDF invoices to smaller businesses who do not have automated ERP/accounting systems.

Business to Government (B2G E-Invoicing)
In an increasing number of jurisdictions it is now mandatory when trading with government entities like schools, hospitals and local/regional government offices to switch to electronic invoicing. OpenText supports B2G e-Invoicing in a range of countries.

INBOUND E-INVOICING
OpenText delivers your supplier invoices and other documents according to your accounts payable system's required format. As a result, invoices flow directly from suppliers into your enterprise systems without the need for manual intervention – enabling straight-through processing.

For inbound e-invoicing we also provide:
- Three-way matching of PO, shipment receipt and invoice document
- Exception alerts
- Configurable business rules for monitoring data quality, process steps, and time-based activities
- Regulation compliance in 46 countries

E-Invoicing with non-digital trading partners. We provide a range of cost-effective connectivity solutions for enterprises to integrate with their non-digital trading partners.
- Web-based portal
- Excel®-based connectivity

E-INVOICING COMPLIANCE
Our solutions are tax compliant globally, meeting legislation within the EU, North America, Latin America and Asia Pacific for both outbound and inbound E-Invoicing. Our E-Invoicing solution is inclusive of EDI, digital signature and government integrated processes as permitted/mandated.

Many countries, particularly in Europe and Latin America, enacted tax legislation to regulate electronic invoicing. We offer digital signature and EDI solutions that shield customers from compliance complexity by providing:
- Content validation
- Digital signature
- Electronic archive
- Delivery to tax authorities
- Human readable invoice creation

Website: Visit us at www.gxs.com and www.opentext.com for more information. Also visit www.einvoicingbasics.com for advice on eInvoicing adoption and implementation.
Contact: www.opentext.com/contact

5.26 OpusCapita

Headquarters:

OpusCapita Group Oy
Postintaival 7
FI-00230 Helsinki, FINLAND

Countries with highest e-invoicing revenues	Nordics and DACH Regions
VAT compliant e-invoice processing guaranteed for	+40 countries globally
Number of employees dedicated to e-invoicing and directly related offering	100
Registered users on own e-invoicing platform	Suppliers: 100,000 Buyers: 10000
Processed volume on own e-invoicing platform	220 million e-invoices per year
Core offering	eCommerce (Product Information Management), Order-to-Cash, Purchase-to-Pay, Cash Management,e-invoicing,
Covered processes/messages along the supply chain	All document types supported by EDI, plus e-invoicing, eOrders, eCatalogs, Payments, etc
Value-added services	Trade finance, robotic automation, machine learning/AI, analytics, document process outsoucing/digitization
Main target market segments	Large organizations within the B2B and B2C space. Buyers and Suppliers as well as public sector.
Supported languages (with application/service and the online-help/customer support)	English, Swedish, Finnish, German, Polish
Competitive differentiator	Complete Order-to-Cash and Purchase-to-Pay portfolio with extensive Cash Management capability and a thriving Business Network for end-to-end digital commerce.

DEVELOPMENT PARTNERSHIP WILL PRODUCE GREAT STRIDES IN DIGITALIZATION AND PRODUCTIVITY WITHIN PUBLIC ADMINISTRATION

The State Treasury in Finland, which produces internal services for public administration, is developing the financial and personnel administration processes of Finnish government agencies in collaboration with OpusCapita.

“Efficient and sound practices will help to reduce the pressure on central government finances and support improvements in productivity in government agencies and departments. The digital transformation of our financial administration will play a major role in the digitalization of Finland’s public administration in general, as the effects will extend to the agencies’ own service processes,” says Mikko Kangaspunta, Head of Division at the State Treasury’s Financial and Personnel Administration.

OpusCapita has acted as partner to the State Treasury over ten years in building electronic invoicing processes, and it now transmits the purchase and sales invoices of the government’s agencies and departments. The collaboration with OpusCapita has broadened from an invoice transmission service to a development partnership. The focus has been especially on improving efficiency in the purchase-to-payment process. OpusCapita produces also document digitization services for government agencies.

“A long-term contract gives us the opportunity to develop processes as a whole. OpusCapita is an active and broad-based partner for us. It knows how to collaborate successfully and its approach represents the leading edge in this sector.”

In 2016 Finnish government agencies and departments received a total of 1.2 million purchase invoices. Almost 90% of these were e-invoices. OpusCapita forwards all incoming invoices in electronic form for processing in the government’s Kieku information system. The system is used by the Finnish Government Shared Services Centre for Finance and HR and by the government agencies.

“Together we have developed a purchase invoice handling process that includes automated posting and automatic reconciliation of invoices with orders and procurement contracts. New practices are being introduced in the agencies, and the aim is that in just a few years 90% of all invoices received will be processed automatically,” explains Kangaspunta.

This will bring a productivity improvement of as much as 20–30%. Greater efficiency in expenditure processing is also one of the goals of the Government Program with annual saving of EUR 15 million in this area by 2019.

Government agencies send out about 9,4 million sales invoices each year. E-invoices currently account for 21% of these (up over 30% from 2016). The State Treasury is monitoring this percentage closely with the aid of OpusCapita’s reports. In the Finnish Tax Administration, for example, electronic invoicing of real estate taxes has proceeded well and the aim is to launch activation campaigns in other agencies to encourage invoice recipients to switch to e-invoices.

“Electronic purchase and sales invoices and automation are part of the infrastructure needed for the digital transformation of society. The State Treasury, the Finnish Government Shared Services Centre for Finance and HR and OpusCapita are all working together to achieve this,” says Kangaspunta.

Additional digitization throughout the public administration is expected, in part based on recent efforts with robotic process automation (RPA).

OpusCapita transmits all central government purchase and sales invoices, which amount to an annual total of more than 10 million invoices. OpusCapita also provides government agencies and departments with document digitizing services and the iPost printing service. Each year millions of letters are printed for government agencies and departments.

Website: www.opuscapita.com, Contact: karoliina.haikonen@opuscapita.com

5.27 Order2Cash

Headquarters:

Order2Cash
Joop Geesinkweg 310
1114AB Amsterdam-Duivendrecht
The Netherlands

Countries with highest e-invoicing revenues	Europe, USA, Australia
VAT compliant e-invoice processing guaranteed for	Worldwide coverage and experience; including Europe, US, Canada and Australia.
Number of employees dedicated to e-invoicing and directly related offering	50+
Registered users on own e-invoicing platform	Suppliers: 400+ Buyers: 3.1M Consumers: 21 M
Core offering	A single SAAS platform for managing the entire order to cash cycle
Covered processes/messages along the supply chain	Full end-to-end order to cash support; Credit Scoring, Digital Contract Signing, Multi-format, multi-channel E-Invoicing, Online Payments, Cash Application, Credit Management, Collections, Business Intelligence.
Value-added services	B2B/B2G Invoice Network Delivery, Print & Post Invoice Delivery, Invoice Quarantine checks, Advanced Email Tracking and Reporting features, Archiving Services (7 year invoice archive as standard), Multi-sender invoice archive for receivers, e-Document Workflow Services.
Main target market segments	Mid to large corporates and multinationals.
Supported languages (with application/service and the online-help/customer support)	Czech, Danish, Dutch, English, French, German, Polish, Lithuanian and Spanish. (Other languages available on request.)
Competitive differentiator	The only true end-to-end order to cash service provider in the industry.

Order2Cash

A single platform to manage your entire order to cash cycle.
Order2Cash is the only solution provider that can offer you full end-to-end support for the entire order to cash cycle. Accelerate your processes, streamline your workflows and improve your cashflow. Monitor, maintain and execute all of your credit scoring, digital contract signing, e-Invoicing, online payments, cash allocation, credit management and collections activities through a single platform.

Multi-format, multi-channel e-Invoicing
At the core of the Order2Cash platform sits Invoice2Deliver, our powerful and robust e-Invoicing solution.
We make it easy to distribute large volumes of invoices worldwide; instantly and cost-effectively. Send invoice data from any ERP to Order2Cash and automate the creation, distribution and presentment of all invoices you send to customers. Our extensive delivery options make it easy for you to satisfy customer demands. Deliver invoices via email with PDF attachments or mobile, including direct payment links if necessary. Make invoices available for download via the portal or upload invoice data directly into your receiver's ERP or bookkeeping system.
Hybrid print & post options enable you to outsource your complete invoicing flow; ensuring you can deliver all critical communications to customers in whatever format they require.

Hassle-free delivery to any B2B/B2G Invoice Network
Invoice2Deliver offers extensive interoperability with a broad range of B2B & B2G invoice networks. We want to ensure that you can deliver invoices anywhere, at any time, in any format and via any channel.
With active connections to more than 20 of the world's leading AP invoice networks; including Basware, Tungsten Network, Tradeshift and others we also support a growing collection of B2G platforms, including Digipoort, Chorus, FACe, SimplerInvoicing and more.

No more missing invoices
Our detailed reporting features allow you to track the full audit trail of every invoice, from creation through to delivery. Invoice2Deliver ensures you have no more missing invoices. Open up a digital archive of all invoices (both print and electronic) to fulfil legal requirements and improve your service levels to customers.

Our cutting-edge SaaS solutions empower the work of large scale and multinational organizations across the globe. Our customers cover all industries and sectors and include some of the world's leading brands; PPG, GE Oil & Gas, Hertz, Kone, Tommy Hilfiger and Calvin Klein being a few notable examples.
Order2Cash can revolutionize all aspects of your business; helping to optimize financial workflows, increase working capital and reduce costs.

Contact us today to discuss your requirements: Visit us online at https://www.order2cash.com/

Website: https://www.order2cash.com Contact: info@order2cash.com +31 205 313 900

5.28 SEEBURGER AG

Headquarters:

SEEBURGER AG
Edisonstraße 1
75015 Bretten
Germany

Countries with highest e-invoicing revenues	Austria, Switzerland, Germany, France, Scandinavia
Number of employees dedicated to e-invoicing and directly related offering	More than 30
Partner profiles available in profile library	Suppliers: more than 50.000 Buyers: more than 50.000
Operating models of own e-invoicing solution	All Options: SEEBURGER solutions can be installed on-premises or operated on-demand as a private or shared cloud solution. Hybrid forms are also available.
Processed volume on own e-invoicing solution	More than 50 million e-invoices per year (estimation, exact figures for on-premise e-invoicing solutions are unknown)
Core offering	The SEEBURGER »Business Integration Suite« is a central data platform for the secure and reliable transfer of data and the capability to automatically integrate all business processes with external business partners and internal applications.
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to authorities (customs, tax administration etc.)
Value-added services	Trading Partner Services: SEEBURGER OnBoarding, Community and Clearing Center
Main target market segments	Solutions for all industries and companies of any size
Supported languages (with application/service and the online-help/customer support)	English, German
Competitive differentiator	No “club-fees” for your business partners, free choice of the best-fitting operating model for your business and a secure and traceable invoice exchange

SEEBURGER AG - Connecting Business Partners – Integrating Processes Worldwide – Across Organizational Boundaries

E-Invoicing with SEEBURGER

The Directive 2014/55/EU for e-invoicing - Use of best practice international standards for electronic data interchange.
EU Member States must ensure that public sectors are able to receive and process electronic invoices from suppliers which follow the new European standard for an e-invoice regarding Directive 2014/55/EU. A list of syntaxes e. g. CII UN/CEFACT and UBL, which follow the European standard on electronic invoicing, the appropriate syntax bindings and guidelines on transmission interoperability will be provided and supported by e-invoicing systems.
SEEBURGER customers are using UN/CEFACT and UBL standards a long time and have found the systems and services to be extremely useful in enabling e-invoicing between internal systems as well as the their external business partners (e. g. customers, suppliers (B2B) and government (B2G).

With a holistic approach including consulting, design and implementation, our customers rapidly achieve complete automation of business processes and full integration of business partners.

- SAP-certified solution extensions “SAP Order-to-Cash” and “SAP Purchase-to-Pay” to ensure transparency, workflow approval and booking of any invoice by providing
  - Comprehensive search functionality
  - Online invoice status overview
  - Detailed performance reporting
- Secure multiprotocol communication via encrypted connections
- Hybrid formats e.g. EANCOM + PDF; PDF + XML; ZUGFeRD PDF/A-3
- Closed e-invoicing community options
- Many regional EDI invoicing requirements: Austria, Czech Republic, Denmark, France, Germany, Italy, Spain, Mexico

An all-in-one Central Platform for all Integration Tasks (B2B, EDI, API, MFT, ETL, ESB)
With the SEEBURGER »Business Integration Suite« we offer you a central data platform for the secure and reliable transfer of data and the capability to automatically integrate all business processes with external business partners and internal applications. The Business Integration Suite supports all information transfer channels with business partners such as EDI, paper, fax and the web. The Suite converts data into the required structures, runs according to configurable rules and processes to be carried out, links to all renowned ERP systems and databases while monitoring these processes. Confidential and sensitive information of all types is transferred safely and traceably, going over and above for our customers, ensuring fulfilment of compliance requirements.

Solutions for all industries and companies of any size
Based on many years of experience, SEEBURGER provides tailored solutions to handle the idiosyncrasies of every industry. The platform is designed to be scalable, suiting changing data volume demands and integration requirements with pre-configured solutions for SMEs to individually furnished and consolidated solutions for enterprises. Furthermore, to ensure fast and secure roll outs, comprehensive content is available in the form of pre-configured mappings, process workflows and extensive business partner network master data.

All Options: HYBRID
ON-PREMISE IN THE CLOUD

SEEBURGER solutions can be installed on-premises or operated on-demand as a private or shared cloud solution. Our SEEBURGER data centers are ISO 27001 certified. Hybrid forms are also available.

Website: www.seeburger.de
Contact: Gerrit Onken, +49 40 23882435, g.onken@seeburger.de

5.29 TrustWeaver

Headquarters:

TrustWeaver AB
Kungsgatan 27
111 56 Stockholm
Sweden

Countries with highest compliant processing revenues	Evenly spread across supported countries.
VAT compliant E-Invoice processing guaranteed for	TrustWeaver ensures compliance with e-invoicing integrity, authenticity, State clearance and archiving requirements in more than 55 countries.
Number of employees dedicated to E-Invoicing and directly related offering	35+
Registered user on own E-Invoicing platform	No. of TrustWeaver-enabled partners: +60 No registration concept but 100.000s enterprises use our platform every day.
Processed volume on own e-invoicing platform .	Aggregate exceeding 120 million transactions per year for TrustWeaver's shared service.
Core offering	Own 'Cloud' service for State or State agent clearance, compliant e-signing, validation, time stamping and archiving.
Covered processes/messages along the supply chain	'Original' invoices and associated business or administrative documents as required by law.
Value-added services	Knowledge services on e.g. invoice content, process integration of compliance components. Verification of e-invoice system and process compliance.
Main target market segments	Leading integration brokerage, output management, procure-to-pay, order-to-cash etc vendors. Multinational enterprises and their trading partners.
Supported languages (with application/service and the online-help/customer support)	No individual end user support but professional support for integrated hubs can be provided in English, Swedish, French, Spanish, Dutch. Archive interfaces also supported these languages.
Competitive differentiator	Legal certainty for many countries through one agreement, one liability regime, one technical interface. Geographic spread, deep compliance and business process knowledge, 100% Cloud.

TrustWeaver - Centralized Global Business Transaction Compliance

TrustWeaver

TrustWeaver's Cloud service is a comprehensive security compliance service based on a unique legal and integration concept. The purpose of the service is to provide access to a **complete but modular set of legal compliance functions through a single technical interface.** Each on-demand service is connected to a unique Compliance Map™ in which the requirements are documented for more than 50 countries.

TrustWeaver guarantees the regulatory compliance of electronic invoicing and other legally critical documents for more than 55 countries. Our modular services allow trading partners and exchange platform providers to outsource their compliance issues to a single expert service in the Cloud.

Electronic Invoice Compliance

By adding legal certainty, we allow hundreds of the world's largest enterprises to automate and consolidate business processes globally. TrustWeaver's cloud solution decouples legal compliance from the business-to-business process for scalable, guaranteed results.

The Challenge—Multi-Country Compliance

For organizations operating across multiple countries and striving to centralize business transaction management, complying with various laws can be very challenging.

The Solution – guaranteed legal certainty

In some countries, existing business solutions can be arguably compliant, but most businesses want legal certainty. TrustWeaver removes the need to argue. TrustWeaver-enabled solutions allow companies to focus on their core added value while providing state of the art VAT **compliance spanning 55+ countries**. By adding a thin, cloud-based compliance layer, TrustWeaver ensured compliant for suppliers and buyers without any footprint on their systems or processes.

Digital Certainty

TrustWeaver's **unique blend of legal and technical components** allows modern organizations to execute their ERP, workflow, archiving and B2B consolidation strategies with guaranteed respect for the multiple national and sectorial laws governing such data flows as well as their long-term retention and auditability. This unique digital certainty consolidation concept always comes with unambiguous TrustWeaver commitments to ensure the desired level of confidence.

About TrustWeaver

- Global experts in law, security, cloud and IT
- Used by 100s of the world's largest multinational companies
- 55+ countries
- 60+ leading B2B transaction automation partners
- HQ in Stockholm, Sweden
- Cloud service in operation since 2007

Website: www.trustweaver.com
Contact: Andrea Fogel, business@trustweaver.com

5.30 Tungsten Network

Headquarters:
Tungsten Network
Pountney Hill House
6 Laurence Pountney Hill
London, UK, EC4R 0BL

Countries with highest e-invoicing revenues	Belgium, China, France, Germany, Mexico, Netherlands, Singapore, Switzerland, UK, USA
VAT compliant e-invoice processing guaranteed for	AE, AT, AU, BE, BG, BR, CA, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HK, HR, HU, IE, IN, IT, LI, LT, LU, LV, MT, MX, MY, NL, NO, NZ, PH, PL, PR, QA, RO, SA, SE, SG, SI, SK, TR, US, ZA
Number of employees dedicated to e-invoicing and directly related offering	379
Registered users on own e-invoicing platform	Suppliers: 230,000 Buyers: 48
Processed volume on own e-invoicing platform	16.1 million e-invoices per year
Core offering	B2B e-invoicing Network, SaaS, supplier enrolment, e-invoicing compliance, PO services, e-archiving, invoice status service, workflow
Covered processes/messages along the supply chain	P2P, accounts payable, accounts receivable
Value-added services	Supply chain financing, real-time spend analytics
Main target market segments	Large suppliers and buyers in any industry Balanced offering for suppliers and buyers in small/medium-sized enterprises.
Supported languages (with application/service and the online-help/customer support)	Bulgarian, Czech, Dutch, English, French, German, Hungarian, Italian, Polish, Portuguese, Spanish
Competitive differentiator	Tungsten Network provides a best-in-class globally-compliant e-invoicing services and is the inaugural recipient of the TrustWeaver-verified Trust Mark, which recognises that Tungsten Network meets the highest standards of compliance best practice.

Tungsten Network – Trusted Connections, Streamlined Transactions

Tungsten Network aims to be the world's most trusted business transaction platform, using data intelligently to strengthen the global supply chain. We do this by removing friction from the supply chain, giving our customers increased control of their cash flow and greater visibility over their spending. The sheer size of the network, combined with our expertise in implementation and global compliance, mean that these solutions can be applied smoothly and effectively, whether for a locally-based SME or a multinational conglomerate.

Blue chip companies and government agencies are under pressure from shareholders and taxpayers to cut costs and improve efficiency. New cases of invoice fraud appear daily, while big companies are publically chastised for increased payment terms and delayed payments to suppliers, and SMEs are struggling to access the finance they require to grow and, in some cases, remain solvent.

E-invoicing can transform the way an organisation processes, validates and pays its invoices. It has sparked a new phase of innovation for P2P functions, and Tungsten Network offers greater value to customers through spend analytics software and invoice financing. Tungsten Network is the world's largest compliant e-invoicing platform and is leading the way with value-added services.

Tungsten Network typically eliminates two thirds of the cost of processing invoices manually, meaning savings of over 60 per cent on your AP process. Tungsten Network also typically eliminates around 60 per cent of supplier queries regarding their invoice status by offering around the clock, real-time visibility over the status of their invoices.

Tungsten Network: The stable and secure e-invoicing platform is the heart of Tungsten Network's business. Tungsten's Network is designed to connect businesses globally and remove friction from their processes. Tungsten Network reduces costs and increases the efficiency of AP processes by managing their transition from manual to frictionless, straight-through processing. Tungsten Network ensures that suppliers are able to send accurate, legally compliant invoices with minimum effort, often directly from their accounting systems in any format. And saving all that paper doesn't hurt the environment either.

Tungsten Network Workflow: Enhanced AP processing. Workflow delivers all the benefits of e-invoicing on Tungsten Network, plus enhanced reporting tools and visibility over AP processing. Workflow is customisable to the enterprise-resource planning (ERP) system of the customer, and provides a full audit trail of all invoicing and related activity across Tungsten Network for that customer.

Tungsten Network Analytics: Intelligent data analysis. Many businesses are flooded with data, but are challenged by how best to make use of it. Tungsten Network inherently gathers a huge amount of useful data by the very nature of the e-invoicing process and our compliance requirements. Tungsten Network Analytics uses data intelligently to provide customers with real-time spend analysis, giving valuable insights that can help to inform future business decisions.

Tungsten Network Finance: Get paid early. At the core of any business is its revenue stream. Too many suppliers have their invoices paid late. Tungsten Network Finance aims to mitigate this perennial source of business friction by offering a supply chain finance product, giving customers more flexible access to cash flow

Tungsten Network Global Payments: Get paid locally. Once payment for an invoice is received, international suppliers are still encumbered by the friction of foreign exchange. With Tungsten Network Global Payments, suppliers are able to convert their payments at attractive rates, all from within the Tungsten Network portal.

www.tungsten-network.com ... Ruud van Hilten, Strategic Business Development Leader, +44 870 165 7420 / ruud.vanhilten@tungsten-network.com

5.31 UnifiedPost

Headquarters:

UnifiedPost
Avenue Reine Astrid 92A
1310 La Hulpe
Belgium

Countries with highest e-invoicing revenues	Belgium, The Netherlands, Luxemburg, United Kingdom, France
VAT compliant e-invoice processing guaranteed for	All E.U. member states, Switzerland, Norway
Number of employees dedicated to e-invoicing and directly related offering	200
Active parties on own e-invoicing platform	Suppliers: > 10K Buyers: > 500K Consumers: > 10M
Processed volume on own e-invoicing platform	>100 million e-invoices per year
Core offering	Document (e.g. hybrid communications, e-invoicing, e-registered,), Payment (centralized payment hub & PSP), Identity (authentication, authorization, electronic signing) business integrated solutions all completed with value added services.
Covered processes/messages along the supply chain outgoing invoices	Contract2Cash: Contract > Invoice > Dunning > Payment (one click)
Covered processes/messages along the supply chain incoming invoices	Purchase2Pay: Purchase/orders > Supplier Invoices > Accounting > (centralized) Payments
Value-added services	Supply chain financing, credit insurance, dynamic discounting, e-archiving, dispute management, robotic accountant solutions, credit management, automated payment reconciliation, enterprise file sharing and e-signing.
Main target market segments	Organizations of all sizes, from SME's to (large) corporates, within all industry sectors. Example industries: Banking and Finance, Insurance, HR, Utility, Telecom and Media.
Supported languages (with application/service and the online-help/customer support)	English, French, Dutch, German (other languages can be added to the application)
Competitive differentiator	UnifiedPost is a One Stop Shop: we offer a total solution covering all of your business processes. The size of our member base combined with interconnectivity to the major e-invoice networks, result in unique reach, allowing members to communicate seamlessly.

UPGRADE YOUR BUSINESS PROCESSES AND CHANGE THE WAY YOU WORK

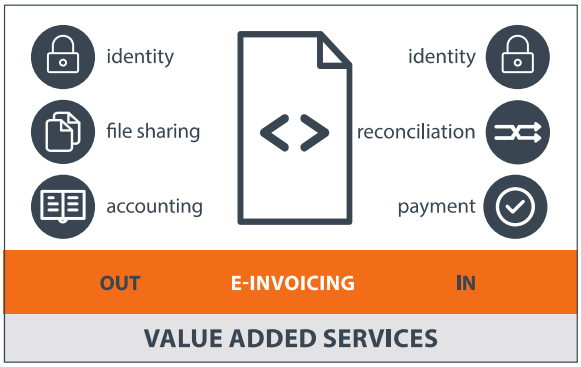
UnifiedPost offers a one stop shop for complete document delivery, reception and processing functionalities, payment offerings, fintech and secure e-identity solutions. Our mission is to create value for our customers and partners by providing them access to innovative, affordable and mature solutions, whilst ensuring the highest level of integrity, visibility and control over their processes.

ABOUT **UNIFIEDPOST**

Since its foundation in 2000 **UnifiedPost** has grown to become the largest e-invoice provider in the Benelux and a key player in Europe with worldwide coverage**.** **UnifiedPost**'s zero footprint solutions allow your enterprise to get started with e-invoicing in virtually no time with minimal requirements on your own business applications. Our main strengths are:

- A **full outsourcing** model: we take care of all your documents and transmit them in the preferred format of your business partners.
- Functional **completeness**, covering all steps in the cycles *contract to cash* and *purchase to pay*, including legal long term e-archiving.
- **Scalable adaptability**, allowing any size party from SME's to fortune 500 corporations to find value, within a pay as you go cost model.
- **Reach**, connecting millions of parties worldwide as well as all interconnecting to all the major e-invoicing networks and document hubs.

UnifiedPost group currently manages over 200 million documents yearly with a customer base across a wide range of markets and industry verticals including banking, insurance, utilities and travel companies. Our company has become an international BPaaS provider of integrated business process solutions including complete document delivery, reception and processing solutions, complemented with payment and secure e-identity solutions. On top, a wide range of value added services are offered.



CENTRALIZED **DOCUMENTS**

The **UnifiedPost** document solution is a flexible platform that enables the multi-channel exchange, processing, delivery and legal archiving of customer communications.

VERIFIED **PAYMENTS**

With **UnifiedPost** you've got all your payments centralized in one platform that provides simple and affordable invoice payment tools to your customers and offers a secure multi-bank connected payment hub for your own organization.

IDENTITY ELECTRONICALLY

UnifiedPost offers trust in a digital world where its rapidly changing nature makes security and data confidentially extremely important. Our solutions consist of e-contracting and e-signing, identity proofing and identity verifying attributes and identity/access management.

COMMUNITY SOLUTIONS

All of the **UnifiedPost** products are adjusted to your size, sector and business, perfectly fitting every enterprise's needs. With our **Value added services** you will even streamline your business processes and communications more. Examples of such value added services are: supply chain financing (dynamic financing), dynamic discounting, business oriented file sharing, credit management and e-archiving.

Website: www.unifiedpost.com
Contact: contact@unifiedpost.com, +32 2 634 06 28

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Exchange

E-Invoicing as Driving Force for Global Supply Chain Automation

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... E-Trade Facilitation: Linking the Physical and Financial Supply Chain
... Current Status of EU-Directive 2014/55 and 2014/24 and How This is Put into Practice
... How Payment and Invoicing are Linked and Potential for Further Automation
... E-Reporting of E-Invoice Data and Opportunities for Digitalisation of Fiscal Documents
... Supply Chain Financing and E-Invoicing: What mmdels are in Place for Corporates?
... Impact of Trending New Technologies on Supply Chain Automation:
Blockchain, Robotic Process Automation, Analytics and Cloud Aggregation Platforms
... Future Role of Shared Service Centers in an Automated Supply Chain
... Clearance Models for E-Invoicing and E-Reporting

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6. Appendix A: Tax compliant e-invoicing in an international environment

Appendix A written in cooperation with Christiaan van der Valk

6.1 Legal acceptance of electronic invoices

Almost all industrialised and emerging economies worldwide accept correctly processed & archived electronic invoices as originals for tax purposes. The growth of 'clearance' schemes is pushing forward broader adoption, making e-invoicing a compulsory and increasingly standardized business process in many countries. **Companies should not be asking themselves whether to adopt e-invoicing, but rather how to implement e-invoicing** while reaping all possible benefits and keeping at bay the risks associated with *ad hoc* reactive approaches. This appendix aims to provide basic recommendations to businesses seeking guidance on that challenge.

6.2 The fundamentals: be prepared for technology-focused requirements

As outlined in chapter 2.2.7, the global impetus towards different forms of 'clearance' means that tax compliance of e-invoicing processes is increasingly a matter of adopting various mandatory technologies alongside technology and process choices for business optimization purposes.

Until recently, especially in Europe and other 'post audit' countries, companies could address e-invoicing compliance as just another tax compliance matter where, logically, in-house tax experts maintained responsibility for interpreting the law and signing off on functional requirements based thereon. The shift in many countries towards models where business systems must share invoice data with government platforms requires companies to rethink this model; requirements for e-invoicing increasingly leave little or no room for legal interpretation. While the correct implementation and operation of technologies to meet e-invoicing requirements are ultimately still a matter of tax compliance, traditional tax experts with a legal and/or accounting background are rarely equipped to independently guide or judge the 'compliance' of a system with legal mandates that increasingly come in the form of technical specifications.

Does this mean that companies should delegate the implementation of e-invoicing compliance in such countries to the IT department? The author believes that this would be a grave mistake – we believe that going forward, requirements concerning the form, content and archiving of invoices and other important business and administrative documents will require a fundamentally interdisciplinary approach. Laws in 'clearance' countries will often address all these aspects as simply different dimensions of the same bundle of compulsory processes. Moreover, as we will see below, there are still many 'post audit' countries which are following their own path to optimized tax collection. Compliance with requirements in these varying and evolving regimes requires business, technical and tax/legal experts to cooperate in a well-documented change management process with ownership on the highest executive levels.

As we will see in the next section, we expect that companies will increasingly manage these challenges in collaboration with different types of third party technology vendors.

6.3 Categories of e-invoicing requirements

On a high level, the world is still divided between 'post audit' and 'clearance' models – but many countries are still on their individual journeys to their 'perfect' regulatory model to close VAT gaps and boost the economy. This section provides a snapshot of requirement categories viewed from a more pragmatic perspective.

Figure 34: Four types of tax compliance and methods of evidence

Type	Methods of evidence
Anti-Fraud compliance • Really existing trading parties • Supply behind an invoice	• Lookup with national business registers; know-your-trading partner and similar requirements. • Business Controls, Audit Trail, two/three way matching of invoice with contract, delivery notes, payment etc *These types of requirements are prevalent and often part of pre-existing generic (not invoicing-specific and not e-invoicing-specific) 'auditable administration' requirements in post audit countries; where specific measures in this category are expected in clearance countries, they are typically included in the compulsory clearance process specification.*
Form compliance	Ensure Authenticity, Integrity and Legibility of e-invoices. *Specific technical means towards meeting this type of requirements are built into the compulsory specifications in most clearance systems; they are typically a standalone requirement in post audit countries, and more often than not based on a free choice of means as to how these long-term evidence requirements are met.*
Content compliance Correct application of legal rules	Rule-based data validation either in-house or provided by third party service providers: Are all legally required data included in the invoice and in the appropriate format? Are taxes correctly calculated and associated mandatory information about tax categories correctly noted in the invoice? As invoice data becomes available to tax administrations in real-time or near-time, it becomes important to enhance the quality of individual invoice data and associated tax choices.
Clearance Compliance	For a description see chapter "Different forms of clearance models for e-invoicing and e-reporting"

6.4 Judging a platform or software vendor's compliance readiness

Increasingly, the reality of many companies is that they will rely on third party transaction and business process platform vendors to ensure continuous e-invoicing compliance on their behalf. Logically this means that also tax compliance functions must be addressed by such vendors.

In addition to vendors selected for their business advantages, in some countries with a 'clearance' model, private service providers accredited by the tax ad-ministration must be used, or their use may be among a limited number of implementation options. This is for example the case in Mexico, Russia, Turkey and Peru. In such cases, the service provider is primarily an agent acting on behalf of the tax administration (or at least performing processes that are regu-

lated and supervised by the tax administration) rather than a private vendor; however, it is common that such tax administration-accredited entities also provide non-regulated value-added services.

Outsourcing of tax-relevant functions never changes the fact that the parties to the underlying sales transaction are accountable to the tax authorities. Enterprises can seek to obtain warrantees for compliance with certain legal requirements by service providers, but this always remains a private agreement and has no impact on the taxable person's tax responsibility.

Also operationally, companies cannot simply push responsibility for e-invoicing tax compliance to a vendor and forget about it. Transactions will never be executed via or on a third party platform in a vacuum – there will always be many dependencies on a company's internal systems, processes and data. In addition, the tax compliance of invoicing and associated processes is simply too important to be left unsupervised: beyond indirect tax, historical evidence of business transactions can be critical to substantiate annual accounts for direct tax and many other purposes.

Compliance will therefore always require an effective partnership between a company and its vendor(s). Companies and vendors need to develop new approaches to managing these relationships. Over time, companies need to let go of the notion that they should have comprehensive substantive knowledge on all detailed compliance matters and rather find ways to effectively supervise the compliance capabilities and SLAs of their vendors.

What criteria can a business use to evaluate whether a prospective vendor is an appropriate partner to handle its tax compliance going forward? We believe that the following high-level categories must be addressed:

- ✓ **Compliance scope** – what category of legal requirements does the vendor ensure as part of its service portfolio? Does this correspond to the requirement categories you believe need to be addressed in your specific circumstances?
- ✓ **Contractual assurances** – are the included compliance categories sufficiently defined in your agreements with the vendor? 'Sufficient' should include an accurate description of legal requirements addressed; legal requirements that remain your responsibility; and, finally, any dependencies on your processes or data that the vendor defines as a condition for its contractual assurances.
- ✓ **Compliance monitoring** – does the vendor have processes (typically based on third party advisory retainers) in place to be notified of requirement changes within its compliance services portfolio?
- ✓ **Change management** – does the vendor have an adequate, well-documented process in place to make such adjustments to their services as required to meet new requirements defined through the monitoring system in a timely manner?
- ✓ **Compliance-oriented documentation** – does the vendor give you appropriate access to tax-oriented process and technical descriptions that you can integrate into your tax documentation model? (*Note* that maintain such documentation is an important aspect of tax compliance; it is considered good practice to performed regular joint reviews with your vendor(s) of how your internal and vendor documentation build an adequate tax compliance story).

6.5 E-invoicing in the European Union

Background

As noted above in this report, some countries in the EU (e.g. Portugal, Spain, Italy and Hungary) are transitioning to 'clearance'-type models. These models are at present geared towards reporting from accounting systems rather than strictly speaking constituting e-invoicing requirements, and they consequently don't replace e-invoicing requirements based on the EU VAT Directive; therefore they are not further described in this and the next section.

While it was stated above that the relative importance of the EU approach to electronic invoicing has somewhat diminished in recent years, it is worthwhile briefly looking back at the regulatory changes that entered into force early 2013. The primary purpose of the changes enshrined in VAT Directive No. 2010/45/EU, which creates the foundation for today's rules in EU Member States, was to give businesses more implementation choice as regards compliant electronic invoicing on the basis of a legal regime that in principle has the same requirements for paper and electronic invoices.

The key points of the Directive are

- The use of an electronic invoice shall be subject to acceptance by the recipient (remark of author: this can be a constraint for the usage of the Opt-Out rollout).
- It must comply with VAT Regulations
    - Electronic and paper invoices are to be treated equally – the administrative burden on paper invoicing should not increase.
    - The authenticity of the origin, the integrity of the content and the legibility of an invoice, whether on paper or in electronic form, shall be ensured from the point in time of issue until the end of the period for storage of the invoice.
- Proof of authenticity and integrity may be provided:
    - With any mechanism each taxable person deems suitable (setting a *freedom of evidence* rule for EU invoices, whether paper or electronic; note that evidence must still be provided within a reasonable time)
    - A reliable business controls-based audit trail between an invoice and a supply of goods or services. This method is available for paper and electronic invoices.
    - An advanced electronic signature on an electronic invoice based on a qualified certificate and created by a secure signature creation device.
    - Electronic data interchange (EDI) of electronic invoices.
- Member States do not have the option to impose other rules for e-invoices
- The rules regarding electronic invoices that apply are the rules of the Member State from which the supply is made (this relates to the complex subject of 'place of supply' rules but in practice is often the Member State of the supplier).
- Rules concerning the storage of invoices are in practice mostly determined by the Member State where the taxpayer is established.

Status

All EU Member States have now transposed Directive 2010/45, including the compliance options set out above. In a number of Member States, the tax administration has issued further guidance on each of the compliance options.

Not all Member States have faithfully transposed the Directive, and the trend today is rather towards more regulatory fragmentation:

- One group of countries have introduced additional options or requirements; this is today a strong trend where many Member States (e.g. Portugal, Hungary, Spain) introduce variations

of additional control mechanisms such as automated reporting, standard audit files, accounting software certification, data export requirements, invoice numbering requirements etc.
- Others have not implemented all elements of the Directive i.e. some have not explicitly transposed the freedom of evidence rule.
- Some countries do not mention all compliance methods, e.g. stating only one or a subset, or only the general requirement of integrity and authenticity.

6.6 Which B2B compliance method is appropriate for organisations in the EU?

The current European legislation aims to give enterprises more choice from among equivalent implementation options to meet the legal requirements of integrity and authenticity evidence. The base idea behind this new legislation is that business practice is too diverse to be caught in a limited number of compliance methods. However, more choice of means to comply also means that businesses will now have a greater *responsibility* to select an implementation option that ensures compliance. Unfortunately, the wording of Directive 2010/45 on available *methods* ("business controls" for example) is often used to justify a relaxed view of the regulatory *requirements*. This is a grave error: *businesses must still be able to prove integrity and authenticity of their invoices over a long period*, and this long-term evidence position is often not fully achieved by existing business control frameworks. Businesses should therefore analyse their ability to generate and maintain appropriate evidence across their different processes and trading relationships, and on that basis decide which mechanism is the most cost-effective to ensure compliance where gaps are identified. Since all businesses are different, no method is more or less appropriate than others are in an absolute sense.

When assessing the relative costs and benefits of available options, companies should base their ROI calculations on actual solution costing rather than preconceived ideas or popular views of what is cheap or expensive. When a service provider is involved on behalf of one or both trading partners, certain compliance methods may become more or less attractive due to this particular type of setup. One thing that has changed since entry into force of VAT Directive 2010/45/EU is that businesses, rather than mechanically adopting a technology-based compliance method, have started becoming more cognizant of the importance of high-quality end-to-end processes. This often leads to more awareness of strengths and weaknesses of existing processes, including a better understanding of the transaction evidence such processes naturally generate. Based on such a gap analysis, we see many businesses make choices for or against using technology (such as compliant EDI or qualified electronic signatures) for maintaining adequate integrity and authenticity evidence with more confidence and on a more strategic basis than previously. The worldwide trend towards wholly technology-based clearance schemes, as well as specific technological requirements for B2G e-invoices in a number of EU Member States, can be viewed as strengthening the case for a single layer of baseline technological controls that can be adapted to meet specific country requirements.

Readers more interested in a compendium about e-invoicing legislation in Europe and many other countries around the globe are recommended to read the TrustWeaver whitepaper as referenced in [1].

7. Appendix B: Glossary, Sources

7.1 Glossary

In the course of this report, a number of key notions are frequently referred to. To avoid any ambiguity, the following definitions apply to these notions.

Figure 35: Glossary

AR	Accounts Receivable
AP	Accounts Payable
Artificial Intelligence, AI	Broader concept of machines being able to carry out tasks associated with humans around learning and problem solving. It has the cognitive ability to look for and learn on certain patterns and to take appropriate actions.
B2B Invoices	In this report: Includes all tax compliant invoices to corporate as well as to the public sector; B2B & B2G/G2B
Bill	Includes all categories of bills sent to consumers (B2C/G2C)
Clearance System / Model	Legal regimes in which an electronic invoice must be sent to the tax administration or its licensed/accredited agent for authorization prior to, during or just after issuance as an original tax invoice.
DPO	Days payable outstanding is an efficiency ratio that measures the average number of days a company takes to pay its suppliers.
DSO	The days sales outstanding is a calculation used by a company to estimate their average collection period.
E-billing	"e-billing" covers in this report the electronic bills from Business-to-Consumers (B2C). Some market participants use this term alternatively for the process on issuer side in general, regardless if the customer is an enterprise or household.
EBPP	Electronic Bill Presentment and Payment; focus in B2C; this acronym is more popular outside Europe
EIPP	Electronic Invoice Presentment and Payment; focus in B2B/B2G; this acronym is more popular outside Europe
E-invoicing	Electronic invoicing is the sending, receipt and storage of invoices in electronic format without the use of paper-based invoices as tax originals. Scanning incoming paper invoices, or exchanging electronic invoice messages in parallel to paper-based originals is not electronic invoicing.
Internet of	Infrastructure of the information society. The inter-networking of physical

Things, IoT	devices, vehicles (also referred to as “connected devices” and “smart devices”), buildings, and other items—embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data.
Invoice	Includes in this report all categories of invoices: B2B, B2C, B2G
Issuer	Invoice issuer, Supplier, Biller
Network operator	Service provider respectively operator with any-to-any model; an invoice issuer or recipient needs just one interface for achieving any other counterparty in the same network; In some countries, the terms “operator”, “service provider”, “consolidator” or “supplier network” are more common.
Order-to-Cash	Supplier perspective for the processes order-delivery-invoicing-payment
P2P	Wikipedia: “The e-procurement value chain consists of indent management, e-Informing, e-Tendering, e-Auctioning, vendor management, catalogue management, Purchase Order Integration, Order Status, Ship Notice, e-invoicing, e-payment, and contract management.” Purchasing is a subset of procurement. Purchasing generally refers simply to buying goods or services (order to payment). Purchasing often includes receiving and payment as well.
PO	Purchase Order
Procure-to-Pay	Buyer perspective for the processes of selecting vendors, establishing payment terms, strategic vetting, selection, the negotiation of contracts, actual purchasing of goods, order, delivery, invoicing and payment.
Purchase-to-Pay	Buyer perspective for the processes order, delivery, invoicing and payment. Purchasing is a subset of procurement.
SME	Small and Medium sized Enterprise
Recipient	Buyer, Customer; The individual or organization that will receive the invoice

7.2 Sources

Figure 36: Key sources used in this report

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