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E-Invoicing / E-Billing

Opportunities in a challenging market environment

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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. This report will give the reader useful information for achieving these results.

Mainly private sector businesses and numerous solution providers developed the market during the last years. They were partially supported by public sector initiatives, but just in a handful of countries.

The growth rates for electronic exchange and archiving of bills/invoices are impressive, but the potential is still tremendous.

Recipient segment	Annual bill & invoice volume estimated to be at least		Estimated electronic proportion of total volume in 2012		Estimated annual volume increase of electronic bills/invoices	
	World	Europe	World	Europe	World	Europe
Consumer	200 billion	17 billion	5%	12%	20%	25%
Business & Government	150 billion	16 billion		18%		30%

Today's market environment is very challenging. This is on the other hand also a great opportunity to optimise one's own environment and collaboration with trading parties. The invoice forms a key component and is the catalyst to optimise the procurement process and Financial Supply Chain.

With at least 10% of the market invoice volume, the public sector belongs to the "Top 3 industries". Measured by the number of trading parties, it is the clear leader: 45-65% of all companies in a country are suppliers to the public sector and send invoices to it. 100% of enterprises and households receive invoices/bills from the public sector. That is why E-Invoicing initiatives by the public sector are key for the development of the whole country. Unfortunately, this sector often belongs to the laggards, despite the huge saving potential.

> If electronic invoices replaced a major proportion of paper invoices, the saving potential in Europe's public sector could be at least 40 billion Euro (for inbound and outbound invoices). Today, less than 10% of it is exploited.

Brasil, Chile and Mexico belong to the leading countries not only in Latin America, but worldwide. This is despite very stringent legal requirements. The main reason for this is the early leading role played by the government (Chile) or obligation for E-Invoicing (Brazil and Mexico).

Denmark is the leader in Europe, mainly due to an obligation for suppliers to send invoices only in electronic format to the public sector.

The challenging economy and the debt crisis generate much uncertainty. The crisis may also be seen as a chance for the private and public sector to change and to take a huge step forward!

1. Introduction

1.1 The purpose of the Report

E-Invoicing / E-Billing is a rapidly expanding technology. Whereas Latin American and many European 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 all the 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, banks, 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; the author 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 150 customer consulting projects in 40 countries
* Consolidation of the above information

1.3 Terms and definitions

The term "E-Invoicing" is used for the Business-to-Business (B2B) and Business-to-Government (B2G/G2B) segment. Reporting and validation files from Business-to-Tax authorities are not considered as E-Invoicing.

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

All statistics and forecasts are based on a very strict definition of E-Invoicing: Transported and archived fully electronically from end-to-end and in a tax compliant manner. Not considered are invoices which are transferred electronically, but violate legislation for some reason and all "semi-electronic" invoices (printed E-Invoices, scanned paper invoices, etc.).

Other terms and definitions see Glossary in Appendix B.

2. Improving the invoice management & supply chain

2.1 Your trading parties are anticipating the E-Invoice/E-Bill

For many years, strong buying organisations (e.g. in the retail, automotive and healthcare sectors) have been pushing their suppliers towards electronic exchange of messages along the supply chain. Until recently, the focus was on large suppliers. They generated the highest volume and they were the only ones able to integrate their environment in a VAT compliant manner at a reasonable cost. For some years, the situation has also been improving for smaller companies:

- Since 2004 E-Invoices have been legally accepted in EU member states and in most other countries
- An extensive range of solutions and services allows even smaller companies to process invoices electronically
- E-Invoicing has become "state-of-the-art" in many industries and countries

A short survey by the author amongst some customers showed that each of them has dozens of trading parties expecting to send or receive an electronic invoice instead of paper. In the past, the smaller customers expressed this as a "nice to have" option, whereas larger businesses described it as a mandatory requirement for future business relationships. Due to increased cost pressures and competition in coming years, the "nice-to-have" option will in most cases become a mandatory requirement with a short deadline for reaction and implementation.

A proactive approach and a well structured project where users can define their own objectives and implementation roadmap is much better.

Your trading parties are awaiting the E-Invoice/E-Bill, because it is an interesting business case for them. The optimisation potential and the business case will also be very interesting to your organisation, if the past and future costs of all relevant processes relating to the invoices are compared.

2.2 Related processes and optimisation areas

Figure 1: Processes and optimisation areas for invoice/bill issuers

Issuer Process	Manual work and problems with paper based processes	Optimisation with E-Invoice & automated processes
Print, Envelope Send	- High costs - Paper with negative impact on pollution - Long delivery time - No control over whether customers have received the invoices - Customer may reject the invoice weeks later if key data is missing from it	- Send electronic invoices securely via the net - Contributes an improvement of up to 0.8% to the Kyoto protocol requirements - Real-time delivery with receipt/download confirmation - Validation of key data as soon as sent

Issuer Process	Manual work and problems with paper based processes	Optimisation with E-Invoice & automated processes
Payment Reminders	• 10-15% of invoice volume requires a payment reminder as recipients have time-consuming workflows and payment release systems for paper invoices	• Is reduced, as many of the clients process the electronic invoices automatically (below a certain amount and matching with order)
Remittance & Cash Management	• Time-consuming and costly manual processes • Data quality problems	• Automatic payment remittance • Due to faster electronic feedback regarding payment status, the Cash Manager has full control of all invoices, affording him optimised Cash Management
Archiving	• Hundreds or thousands of folders with paper invoices with high demand for storage capacity • High costs for manual search	• Automated archiving • Easy finding of the original invoice via various keywords • Quick access to the electronic archive in a decentralized environment • Instant on-screen auditability of invoices with unprecedented levels of integrity and authenticity guarantees • Millions of invoices only require the space of a hard disk

Figure 2: Processes and optimisation areas for invoice recipients

Recipient Process	Manual work and problems with paper based processes	Optimisation with E-Invoice & automated processes
Receive	• Opening mail • Check and remove undesired attachments • Entrance stamp • Forward to AP department	• Fully automated
Entering Codification	• Entering to AP system • 10% of entered data statistically viewed with errors • Delayed entering during peak season or permanently • Alternative Scanning solves just a small part of the problem	• Automated import to AP system • Real-time import, independent of volume • 100% correct data

Recipient Process	Manual work and problems with paper based processes	Optimisation with E-Invoice & automated processes
Validation & Matching	• Discrepancy in VAT compliance is detected at a (too) late stage • Line items in an invoice quite often contain a discrepancy with the order or contract terms. Manual matching is time-consuming and expensive	• VAT compliance and validation of other key data can be done automatically when E-Invoice is uploaded by issuer • Line-item matching with order data and contract term is fully automated • Faster and better spend analysis, leading to 1.3% to 5.5% spend reduction
Dispute Management	• The dispute resolution with the supplier is often done today by phone, unstructured email or fax • Dispute resolution can be very time consuming	• Improved dispute handling and avoidance • Many solutions or services enable automated, structured and real-time exchange of dispute information between buyers and suppliers
Payment & Cash Management	• Time consuming and costly circulation within the company for payment release; discounts are typically missed • Manual work for payment order and risk of errors • Cash Manager without full transparency for all pending invoices	• Payment relevant invoice data processed directly and automatically into payment orders • Every inbound invoice appears on the screen of the Cash Manager immediately after receipt and affords him optimised Cash Management (by offering rebates for payment on time, working capital optimisation) • Circulation within company for payment release is automated or at least supported by electronic workflow • In larger organisations, it is not unusual to benefit of additional 1.50 Euro discount per E-Invoice
Archiving	• Hundreds or thousands of folders with paper invoices with high demand for storage capacity • High costs for manual search • Traditionally 6 copies on industry average, not all clearly stated as "copy"	• Automated archiving • Easy finding of the original invoice via keywords • Quick access to the electronic archive in a decentralised environment • Instant on-screen auditability of invoices with unprecedented levels of integrity and authenticity guarantees • Millions of invoices only require the space of a disk

3. Business Case for Issuer/Recipient

3.1 Saving potential

The Finnish State Treasury and some Finnish companies have estimated that an incoming paper invoice incurs costs amounting to 30-50 Euros for the receiving company. By moving to electronic invoicing these costs can be reduced to 10 Euros by semi-automating the invoice process and to one Euro by fully automating the process [10]. Regarding in-depth analysis of Politecnico di Milano, the net benefits are 4 – 12 Euros per invoice in case of VAT compliant E-Invoicing and up to 65 Euro per cycle in case of full integration of the trade process [2].

> Thanks to electronic and automated invoice processing, savings between 1 and 2% of turnover are realistic objectives.

As a consultant the author analysed the full costs based on traditional paper based processes and compared it with the new electronic automated solution. The example below reflects the situation in an industry company with 5,000 employees, based on calculated staff costs of 60€/hour (full costs including overhead, working place, etc.).

Figure 3: Saving potential for invoice/bill issuers (actual customer case)

	Print, Envelope Send	Payment Reminders	Remittance & Cash Management	Archiving	Full-Costs
Paper	3.90€	0.50€	4.50€	2.20€	11.10€
Electronic, automated	0	0.40€	3.00€	0.80€	4.70€*

Saving per Invoice 6.40€ = 57%

*) considered is 0.50€ processing cost by third party service provider
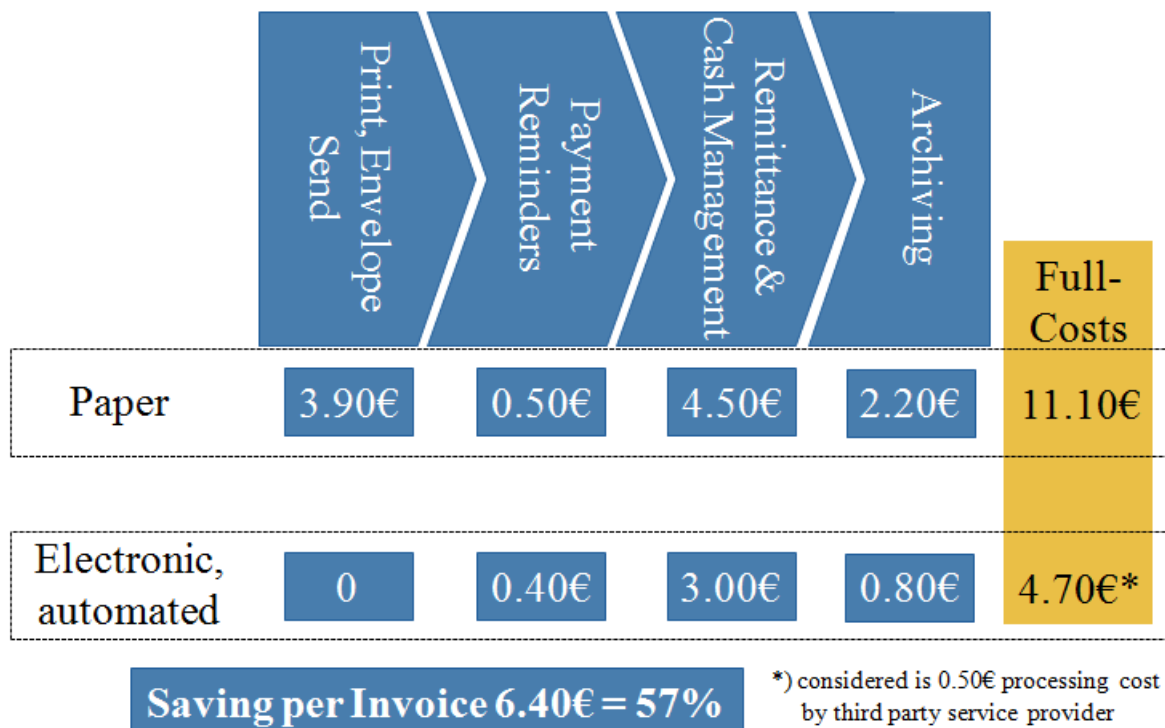
Source: Billentis

The invoices/bills in this example were relatively simple and had an average size of 1.5 pages. In most organisations, the invoices are more complex and the savings are higher.

Figure 4: Saving potential for invoice recipients (actual customer case)

Saving per Invoice 10.90€ = 62%

*) considered is 0.70 € processing cost by third party service provider

Source: Billentis
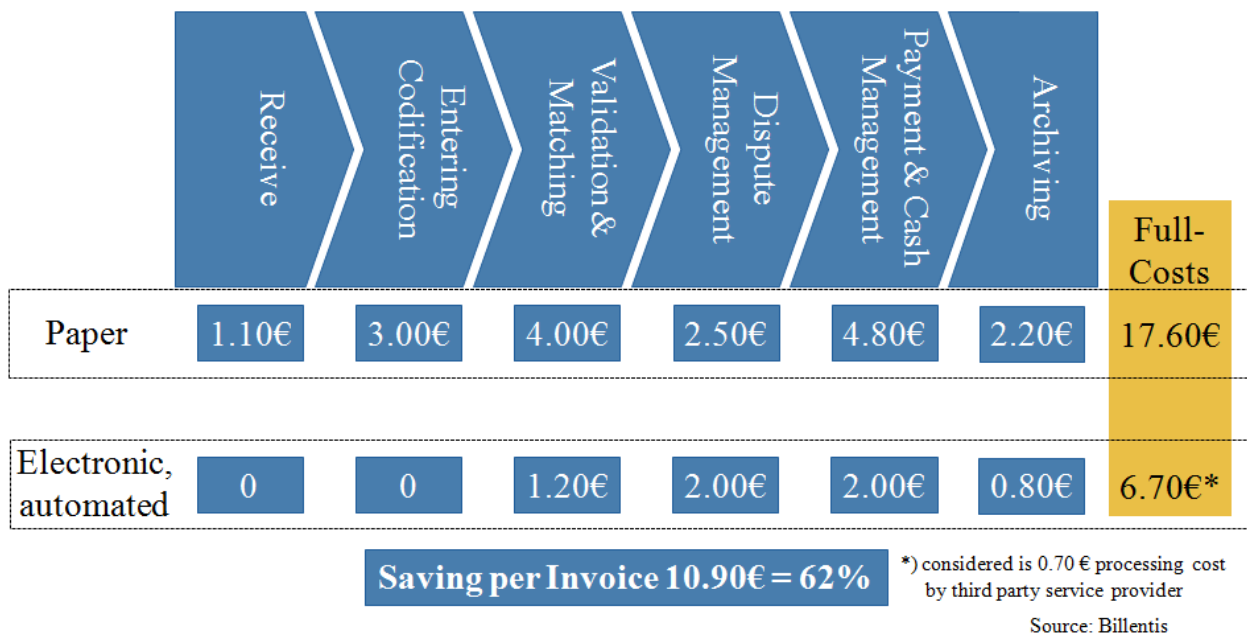
3.2 Know your volume

Sometimes, larger organisations do not know their precise invoice/bill volume. The reason for this is quite often the decentralised organisation or a heterogeneous layout of their AR and AP systems.

Over the last 15 years, the author has built key-metrics for being able to make a quick estimation of the invoice volume before the project start. Although not perfect in all cases, the key-metrics are based on the number of employees in an organisation and dependent on the industry.

Figure 5: Key-metrics for number of invoices

Indication for Number of invoices per employee in various Industries	Outbound invoices per employee	Inbound invoices per employee
Credit & Customer Cards	40,000	n/a
Mail order houses	8,000	n/a
Media	2,000	20
MRO Goods	1,400	450
Utility with direct distribution	1,200	20
Insurance	700	30
Electronic & IT	400	26
Chemicals & Pharmaceuticals	200	30
Industry independent average	200	80
Automotive Supplier	200	50
Food Supplier	200	20

Indication for Number of invoices per employee in various Industries	Outbound invoices per employee	Inbound invoices per employee
Logistics	100	77
Airlines	35	11
Services & Consulting	20	15
Banks	n/a	11
Telco	n/a	39
Industrial manufacturer	n/a	60
Catering	n/a	100
Retail	n/a	250
Buyer Clubs, Trade, Wholesalers	n/a	300
Health insurance	n/a	3,100[1]

In groups with service centres and/or subsidiaries, up to 10% can be added to the inbound volume for Intercompany Billing.

Calculation example: Utility Group with service centre structure and 5,000 employees

Outbound Volume	5,000 x 1,200	= 6,000,000
Inbound Volume	5,000 x 20	= 100,000
Intercompany Billing	10% of Inbound	= 10,000

3.3   Know your current and future costs

At first glance only direct costs appear in the organisation budget. However, this is just a fraction of all processing costs.

For a cost comparison, we have to consider
- Direct costs
- Indirect costs
- Hidden costs

3.3.1   Current costs for outbound invoices

On the outbound side, one part of the direct costs includes invoice printing and stamp costs. In a well-known telecom company, this represents just 9% of all directly related costs. Another major part is quite often well hidden and not recognised at first glance. Indirect and hidden cost items, which may be reduced by E-Invoicing are
- Sales Back office (Further inquiries in case of dispute)
- Accounting/Reconciliation manpower
- Debtor interest
- IT development and operation
- Payment fees (reduced or no fees in case of electronically and fully automated processes)
- Customer requests for copies of lost invoices

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[1] In countries with healthcare systems like The Netherlands, Switzerland etc.

- Archiving
- Query handling
- Settlement time and improved Cash Management
- Easier and faster audit

3.3.2 Current cost for inbound invoices

Even worse is the cost recognition on the inbound side. Per employee in the AP department, typically just 5,000 – 15,000 paper invoices can be processed per year. Therefore, the direct staff costs in the AP department already vary between EUR 5 – 15 per invoice. Further costs are generated in the paper-based workflow and archiving. Analysis in some organisations showed, that on average 6 invoice copies are generated and archived decentralised in the files of secretaries and heads of departments.

3.3.3 Future costs with automated processes

Small companies using E-Invoicing via website, have no implementation costs and very moderate or no running costs.

Besides the integration costs, large accounts have to consider the project costs.

In addition, third party service providers often charge a time and volume based fee for issuers and/or recipients. The level of these costs varies considerably depending on customers' requirements. It is best to summarise customers' requirements in a document (Request for Proposal) and ask for binding proposals. As an indication, third party costs of EUR 0.50 – 1.00 per invoice should be entered into the business case.

Future internal costs will probably be 40-50% of past costs depending on the individual situation (see also example in chapter "3.1 Saving Potential").

World class enterprises are able to process 125,000+ electronic invoices per year and AP employee, roughly 10 times more than paper based invoices.

3.4 Business Case

3.4.1 Small businesses

Their large suppliers and clients quite often push them to accept respectively send electronic invoices "as part of the general contract terms or business rules". Therefore, it is not necessarily the business case pushing them forward for electronic invoicing but good business relationships with their trading partner.

However, in most cases they find an easy and efficient way to practise it. This can be the use of an invoicing portal. Here invoices can be uploaded or downloaded and stored for several years in a VAT compliant manner. Either no implementation is necessary or the effort required is very moderate.

In cases with small invoice volumes, full costs for the processing of paper invoices are higher than mentioned in the example in chapter 3.1. Although rarely calculated, the business case for small companies is good.

3.4.2 Mid-sized and large businesses

Many solution providers offer an online business case calculation tool. Tools and ROI calculaters are also offered by some universities and industry portals. Please find details for some sources in the appendix [17].

As many readers of this report perhaps cannot understand the language in some ROI calculators, here is a translation of the major points to be considered.

Figure 6: Items to be considered in a business case

Item to be considered in a business case	Issuer	Recipient
Quantities and basic data - Number of electronic counterparts - Electronic proportion of total invoice volume - Interest rate - Hourly rate of employees	x	x
Customer churn rate with and without E-Invoicing	x	
Costs and Savings in the AR & archiving department	x	
Costs and Savings in the AP & archiving department		x
Cash Management, payment due period, payment discount	x	x
Initial costs (Project, implementation, hardware, software)	x	x
Operation costs internal and third party	x	x

3.4.3 Financial benefits for the public sector

3.4.3.1 Saving potential in the role as user

With at least 10% of the market invoice volume, the public sector belongs to the "Top 3 industries". Measured by the number of trading parties, it is the clear leader: 45-65% of all companies in a country are suppliers to the public sector and send invoices to it. 100% of enterprises and households receive invoices from the public sector. That is why E-Invoicing initiatives by the public sector are key for the development of the whole country. Unfortunately, this sector often belongs to the laggards, despite the huge saving potential.

> If a major proportion of paper invoices were replaced by electronic ones, the saving potential in Europe's public sector could be at least 40 billion Euro (for inbound and outbound invoices). Today, less than 10% of it is exploited.

Figure 7: Saving potential in the public sector of some European countries

Country	Minimum public sector saving potential (million Euro)	Country	Minimum public sector saving potential (million Euro)
Austria	600 [12]	Italy	3,000

Country	Minimum public sector saving potential (million Euro)	Country	Minimum public sector saving potential (million Euro)
Belgium	900	Spain	1,800
France	4,200	The Netherlands	1,200
Germany	6,500	United Kingdom	4,400

The above estimate is based on the assumption that 40% of the E-Invoices are exchanged in unstructured format (PDF) and 60% with structured XML invoices (fully automated processes). Many states insist on just structured invoice data. Their potential is higher than the figures above. As attractive as E-Invoicing in the public sector appears, it is just as challenging to implement. The public sector is not one homogenuous segment. The state administration forms one part. In addition, we find regions, cities and municipalities. Many countries have a federalist structure with high autonomy for each entity. However, Brazil has proved that it is possible to establish E-Invoicing country-wide, even with such a federal structure.

The state government has the most power regarding legislation and is preferred to initiate and steer such projects. However, the saving potential in their segment is just a small proportion within the public sector.

The breakdown of volume in the Danish public sector is known and is also likely to be applicable for other countries.

Figure 8: Breakdown of saving potential in the public sector in Denmark
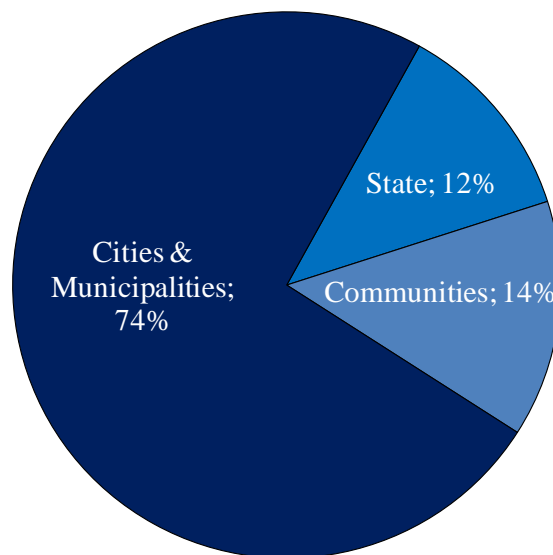
Cities are in an excellent position to push E-Invoicing/E-Billing and to save much money. The author collected various data and built key-metrics over the year. Of course, the key-metrics can vary a great deal from country to country and city to city. On average, a city receives one invoice per year and inhabitant. Cities, including all its service units (taxes, energy distribution, garbage removal, communication, etc.), issue typically 2-6 bills/invoices per year and inhabitant.

The estimated saving potential for cities is based on the assumption that 40% of the E-Invoices are exchanged in unstructured format (PDF) and 60% with structured XML invoices (fully automated processes).

Figure 9: Saving potential for cities

Population (Millions)	Example of city (or metropolis) in this category Based on population as published in Wikipedia	Minimum annual saving potential (million Euro)
0.5	Atlanta, Bradford, Boston, Bratislava, Bremen, Copenhagen, Denver, Dortmund, Dublin, Duesseldorf, Duisburg, Edinburgh, Essen, Frankfurt, Genoa, Gothenburg, Hanover, Helsinki, Kaunas, Leeds, Leipzig, Lisbon, Liverpool, Málaga, Manchester, Miami, Palermo, Rotterdam, Seattle, Seville, Sheffield, Stuttgart, Tallinn, Thessaloniki, Toulouse, Vilnius, Washington, Zaragoza, Zurich	15
1	Adelaide, Amsterdam, Asturias, Athens, Auckland, Birmingham, Biscay, Brussels, Calgary, Cologne, Dallas, Edmonton, Jacksonville, Indianapolis, Kraków, Lyon, Lille, Marseille, Milan, Munich, Naples, Nice, Ottawa–Gatineau, Phoenix, Prague, San Antonio, San Diego, San Francisco, San Jose, Sofia, Stockholm, Turin, Valencia, Wellington	30
2	Barcelona, Brisbane, Bucharest, Budapest, Hamburg, Houston, Paris, Philadelphia, Vancouver, Vienna, Warsaw	55
3	Berlin, Chicago, Madrid, Rome	80
4	Los Angeles, Montreal	110
5	Sydney, Toronto	130
7	London, New York, Tokyo	200
10	Moscow	270

Cutting costs is one part of the business case. Increasing revenues is another.

3.4.3.2 Reduction of tax evasion

Evading taxes is almost a national pastime in many countries. As this is quite often the main revenue stream for national governments, this is very painful and one of the major reasons for today's debt problems in the public sector.

Some determining factors of fiscal evasion according to different theories and models from economic and non-economic analysis are [15]:

1. High tax rates result in higher tax evasion.
2. **Probability of being controlled/audited within reasonable time.**
3. The magnitude of the sanctions (fines and privative pains of the freedom).
4. The fairness of the tributary system.
5. The social attitude towards those who do not pay; social censure of fraud and the morals of the society.

Increasing tax rates is in most countries no longer an appropriate option. The VAT rate in many European countries has already passed 22% (e.g. Denmark, Finland, Greece, Hungary, Poland, Portugal, Romania, and Sweden).

E-Invoicing not only has a major impact on point 2 (control/audit within reasonable time). Much more, it can be **the** pre-requisite instrument to significantly reduce tax evasion. Several Latin American countries went ahead by mandating E-Invoicing. One of the key parts is also to oblige enterprises to send electronic invoice records to the tax authorities in real-time or near real-time. Further details see 2011 market report [16].

One example is Argentina, which proved how tax evasion could be reduced with a bunch of actions, including making electronic invoicing mandatory for critical sectors.

Figure 10: E-Invoicing reducing tax evasion in Argentina

Breach of VAT in Argentina
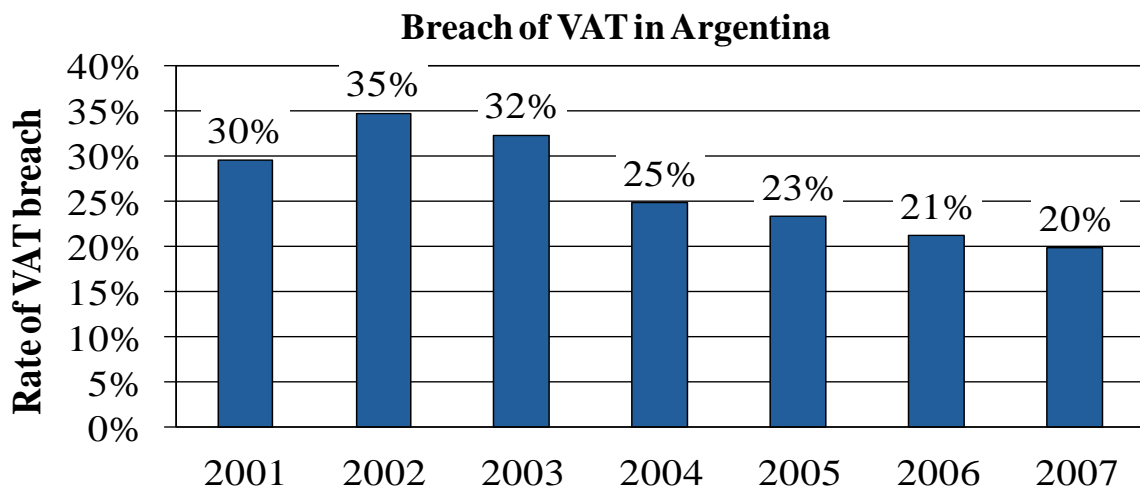
Source: AFIP

Three of the four largest global economies have a very high public debt to GDP ratio. Europe's ratio is around 90%, the ratio of the US is above 100% and Japan's is above 200%. E-Invoicing, combined with online reporting can be a significant contribution to improve this situation. Many countries in Latin Americas demonstrate how it works and what the benefits are.

4.   How to be successful with your project

4.1   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 consolidator 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

The most promising models are described in chapter 5.3.

4.2   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.

Figure 11: Optimisation scope for organisations
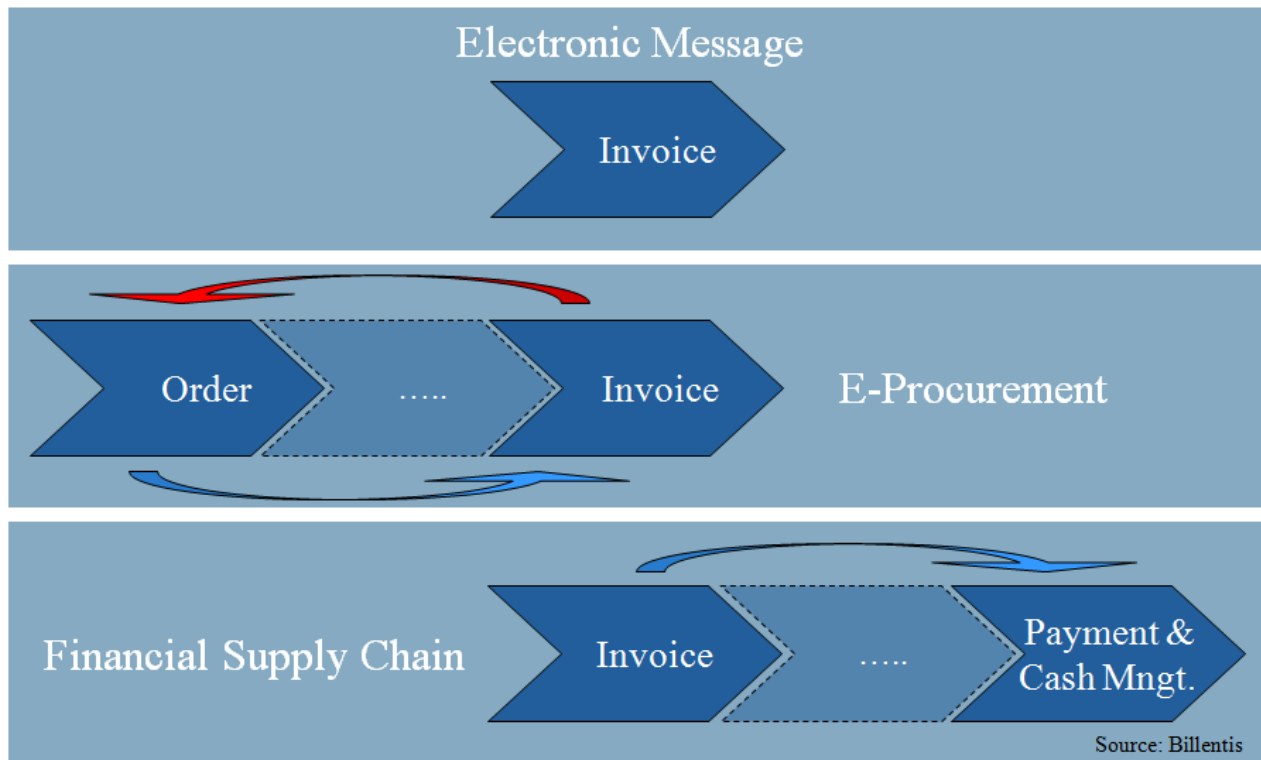
Some invoice streams are more dominant and provide higher optimisation potential. The author believes that projects should follow that potential.

Figure 12: Priorities of invoice streams
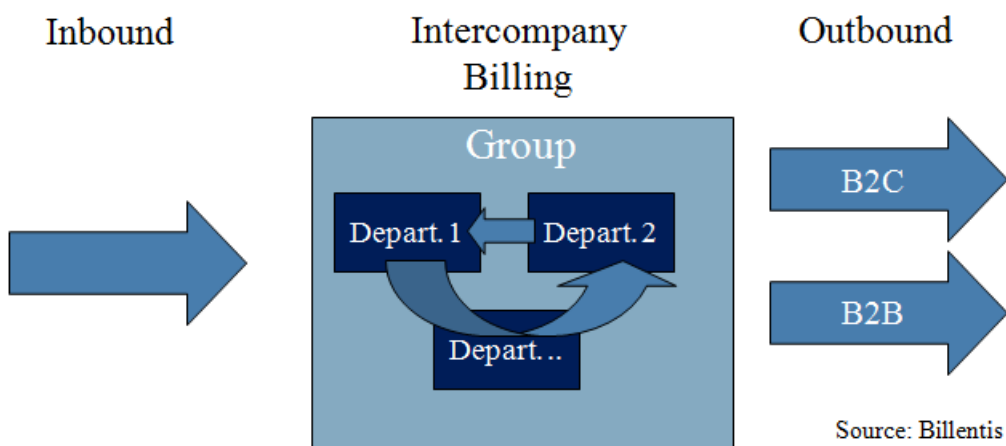
Inbound

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 to a maximum 40% of clients using it.

For increasing the electronic share, an opt-out rollout model should be practised and/or the distribution to consolidators (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. The same is true for B2B invoices for small businesses. In this case, the E-Invoices are prepared in a VAT compliant manner by the issuer (digital signature, verification and sometimes with long-term online archiving).

4.3   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, digital signature solutions and E-Invoicing

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.

4.4 Scenario for internal implementation

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

Figure 13: Optimisation steps and benefits

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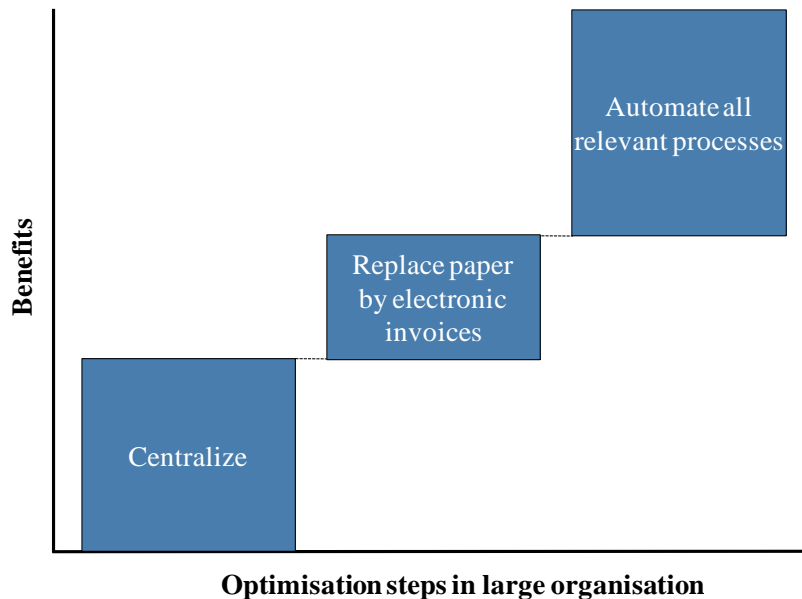
As this objective can be (too) time consuming (e.g. 2 years) a good alternative is migration within a decentralised environment. If the constraints of future centralisation are already known, they can be considered in the planning and implementation of systems and processes.

> Improve to electronic and automated processes is generally a good step. However, in most organisations, it may be adviseable to critically scrutinize and streamline first all the processes. Often, 50% of historic burdens can be removed without loosing anything.

4.5 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 14: Pattern for inbound invoices
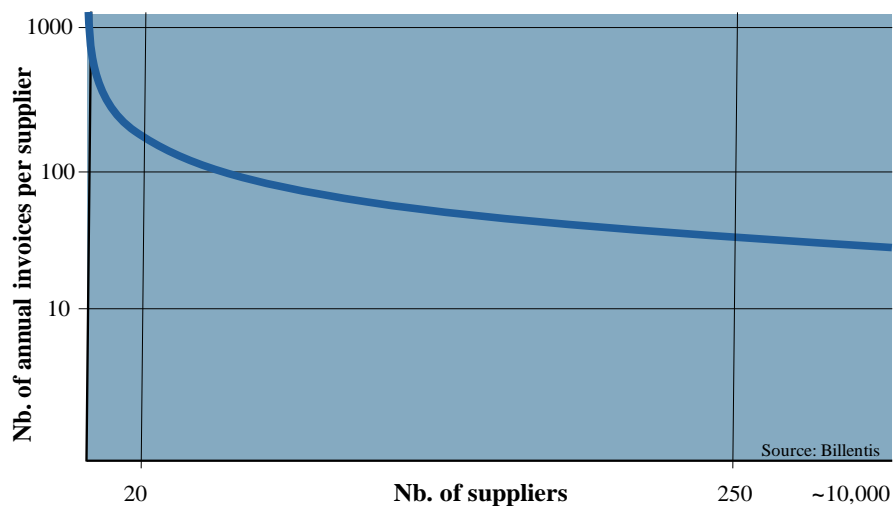
The number of suppliers sending more than 100 invoices per year is quite often just among 20-50. Perhaps another 1,000 send 10-100 annual invoices and the vast majority send less than 10 annual invoices. Large organizations have typically 10,000 suppliers and depending on the product n0,000 customers. 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 15: Requirements of organisations

Size	Issuer requirements	Recipient requirements
Large	• Full ERP integration • Two-way communication • External archive (sometimes shifted to in-house in step 2)	• Full ERP integration • Two-way communication • External archive (sometimes shifted to in-house in step 2)
Medium	• Full ERP integration • Export Tools (CSV, ...) • External archive	• Full ERP integration • Import Tools (CSV, ...) • External archive
Small	• Printer Driver • WebEDI (type in invoice on a portal) • Electronic forms • PDF • External or CD archive	• Browser presentation & download, e.g. via home banking • PDF • External or CD archive

4.6   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 16: 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 17: 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.

4.7   Solution scenarios

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 services.

Figure 18: Third-party services and applications

Services	Applications/Solutions
- SaaS (Software as a Service) - Signature service - E-Invoicing consolidator service - Invoice management service (including digitalisation and data capture of remaining paper invoices) - E-Procurement, E-Marketplace	- E-Billing/E-Invoicing applications for automated or semi-automated issuing and 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

Services	Applications/Solutions

• Archiving Service	circulating within an organisation)
	• Invoice management
	• Workflow
	• E-Procurement
	• Interface software
	   o data conversion and mapping tools
	   o printer driver with E-Invoicing, signature and 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.

4.8   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 19: Indication for project and implementation time

Scenario	Centralised, homogeneous environment	Decentralised, heterogeneous environment
Key-in/upload invoices via 3rd party Web portal or printer driver Receive/download invoices via 3rd party Web portal Archive operated by 3rd party	0.1 – 1 days	1 month
Invoice export/import via AR/AP application Archive operated by 3rd 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

4.9 Project Checklist

Analysis
- Internal
    - Involved and related processes, systems and divisions/branches/subsidiaries
    - Invoice streams
    - 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

5. The market

5.1 Market volume

5.1.1 An estimate for the global volume

5.1.1.1 Bills/Invoices

Whereas the volume (paper + electronic) in Europe is relatively well known, figures for other continents may just be guessed. There are clear indications that the number of bills/invoices per entity (enterprise or household) in Asia and America (North and South) is higher than in Europe. This seems to be especially the case for recurring bills (monthly telco, utility and other bills).

Figure 20: Guess for global bill/invoice volume

Segment	Estimated volume to be at least
B2C/G2C	200 billion
B2B/B2G/G2B	150 billion
Total	**350 billion**

Source: Billentis

In most industrialised countries, invoices/bills represent 16-30% of the total (addressed) letter volume and up to 50% in less industrialised countries. (Local organisations in an increasing number of countries meanwhile have their own mechanisms to make qualified guesses about their invoice volume.) Several service providers processing invoices (paper and electronic) confirmed to the author that economic cycles do not have a noticeable impact on the invoice volume.

There are several indications that the bill/invoice volume increases 2-3% every year. This is for several reasons:
- Increase of the population, the number of households and enterprises
- Suppliers improve their working capital and are no longer willing to give credit to their clients due to low billing/invoicing frequency; by sending bills/invoices every two months instead, they do it after each delivery
- Legal reasons; some countries (especially within the European Union) are mandating suppliers to send bills/invoices within 15-30 days of their performance or goods delivered
- Electronic invoices are cheaper and allow suppliers to send invoices more frequently

5.1.1.2 Invoice-like documents and messages

Additional volume of "invoice-like documents and messages" can also be tremendous (likely **many times over the invoice volume**). Invoices are different from receipts. 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. Invoices differ from receipts in that invoices serve to notify customers of payments owed, whereas receipts serve as proof of completed payment. The message content can be quite similar to bills/invoices and, for that reason, some press releases translated from any language to English also use the term "Bills/Invoices" for this kind of document/message. The author keeps that number outside of its statistics. Classical examples of these "invoice-like documents and messages" are
- Invoice data sent to the tax authorities just for validation or audit reasons

- Digital replacements of "fiscal printers producing payment receipts". Electronic 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.

5.1.2   The European bill/invoice volume

Due to the annual increase, the European volume may have meanwhile passed the 33 billion and could increase to **35 billions in 2015**. Approximately half of the volume is send to consumers (B2C), the other half to enterprises and the public sector (B2B/B2G/G2B).

Figure 21: Invoice/Bill volume breakdown by industry (issuer view)

Source: Billentis
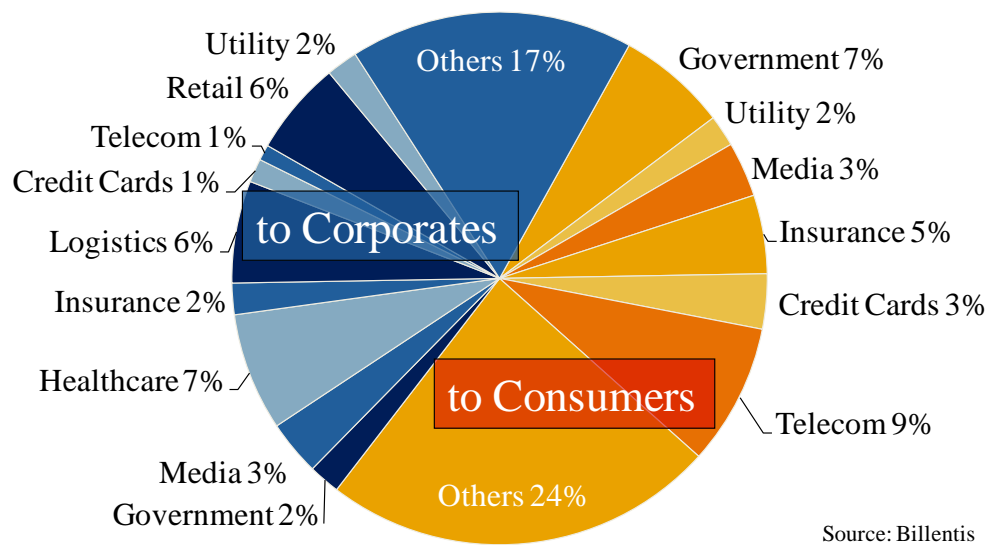
There are just few segments receiving a very high invoice volume. The industries with the highest inbound volumes are:

Figure 22: Invoice volume breakdown by industry (recipient view)

Industries with high inbound volume	% of all B2B invoices, indication
Healthcare	5-13%, depending on the country
Retail	10%
Public sector: National Government, regions & municipalities	9-15%
Buyer Clubs, Trade	5%

Source: Billentis

All the industries above, except the public sector, were early adopters of EDIFACT or other electronic invoicing channels. The remaining volume of 60%+ is spread out across the other industries.

5.1.3   Relevance of cross-border traffic

Only a relatively small fraction (1-5%) of all invoices is sent and paid abroad. The larger countries in particular are much more focused on the domestic markets. In Germany, there are 7 billion domestic payment fund transfers compared with just 16 million cross-border transactions to EU countries (<0.3%). In small countries like Luxembourg, the share of cross-border invoices is above 30%.

From a statistical point of view, it appears that E-Invoicing projects could focus on the domestic traffic. In reality, this isolated focus can be a risk for the project, especially if the foreign trading partners are anticipating electronic invoices. Large organisations and even SMEs should consider their international situation from the beginning in order to avoid selecting the wrong solution provider.

Globalisation is in progress and sharply increases cross-border transactions. The author's experience in customer projects: E-Invoicing is typically an international project immediately after project start.

5.2   Motives for replacing paper bills/invoices

Organisations start projects for various reasons:
- External pressure (Suppliers, Customers)
- Internal cost pressure
- Process innovation and automation
- Quality improvement
- Public sector initiatives (with the aim to reduce fraud and increase tax income and to optimise their own invoice processes)

Promoters can be found in various divisions
- Management
- Financial Department
- IT
- Sales
- Procurement
- Workflow
- Archive

5.3   Evolving market models

5.3.1   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 operated by professionals.

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)
- Consolidator Model, 3rd party Service, E-Invoicing networks
- Hybrid Model
- Total Invoice Management (in-house or outsourced)

Figure 23: Overview about main market models
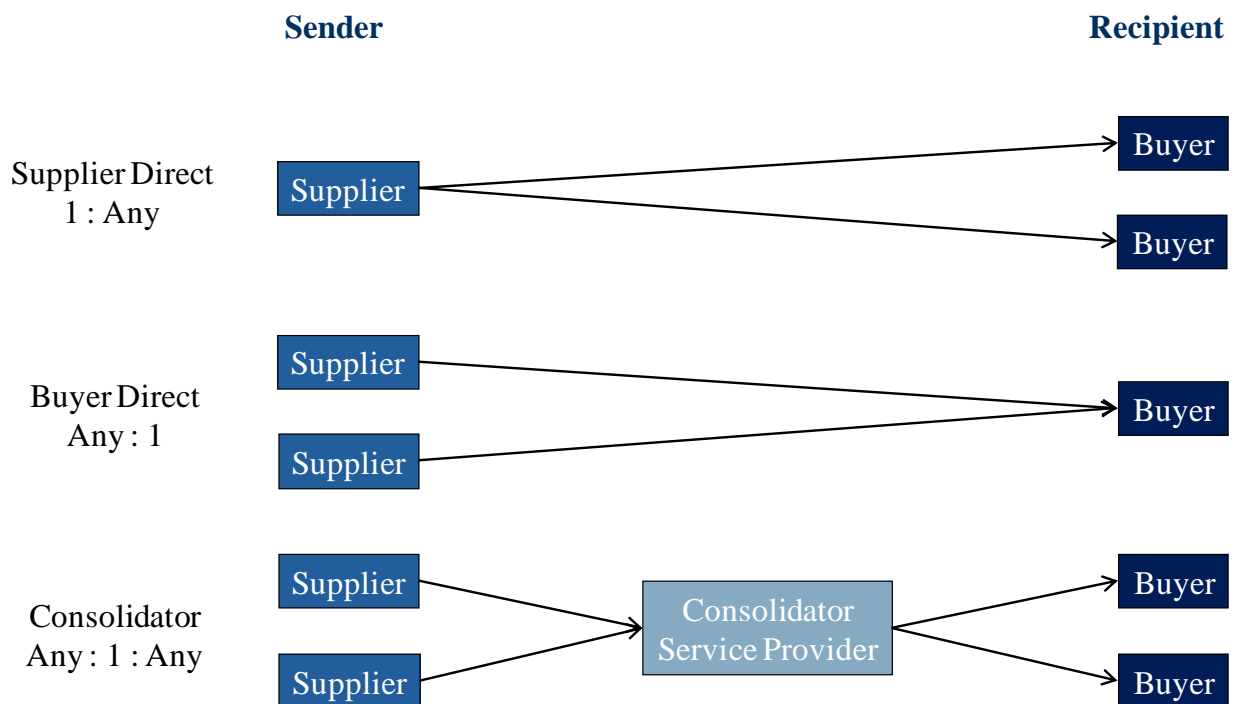
5.3.2   Supplier Direct Model

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 etc.
- Provides the E-Invoices on his Website; Customers can login, view and download them

This model is quite popular in telecom, utility and card companies issuing a high volume of bills. As the behaviour of small and micro companies is comparable to consumers, it plays also an increasing role in the B2B.

Figure 24: Supplier Direct Model
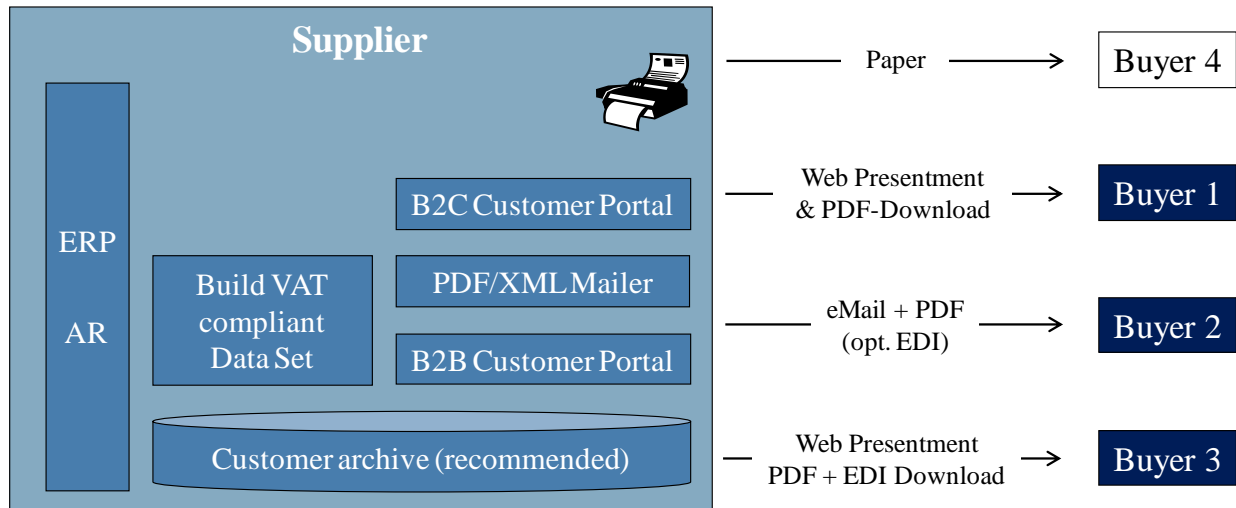
Source: Billentis

The classic market launch is done with a B2C Customer Portal. Customers can login, view, analyse and download the electronic invoices. Due to the login process on each suppliers' site, this route is not always popular. Therefore, customers should at least receive an email notification regarding a new invoice, including a hyperlink to the portal. Much more popular is to push the bills/invoices to the clients as email attachments.

B2B invoices must be VAT and tax compliant. That is why issuers in most countries have to sign the invoices digitally. To improve market acceptance, they should also provide

• The most common structured invoice data for download (attachement to PDF invoice)
• Long-term and VAT compliant online archive for the customers' invoices (as smaller customers quite often do not have the required environment for doing this)
• In case of signatures: Verification tool for customers, reporting the result in a log file (must also be archived)

Figure 25: Advantages and disadvantages of Supplier Direct Model

Advantages	Disadvantages
+ Direct contact with customers, chance for cross-selling and interaction + E-Invoicing functionality directly influenced by supplier; e.g. a telecoms operator offers analysis tools with CDRs (Call Detail Records) + Chance for very close integration with back office environment and automation of processes	− First part of solution development and maintenance seems not to be too expensive, but this changes dramatically over the years (upgrades; accumulation of maintenance costs) − Customers dislike logging on to various websites of different suppliers or making multiple integration projects − Customers only get a limited number of formats to download and have to convert them for import into their back office systems − SME customers don't get a centralised, efficient and VAT compliant E-Archive for E-Invoices of all their suppliers − Overall, customer acceptance will be limited

In most market sectors, the customer adoption is lower than expected, except where the rollout strategy "Opt-Out" including the email channel can be practised.

Many disadvantages can be reduced/eliminated if this model is operated by a third party (SaaS, Software as a Service) or if it is practised as a complement to a consolidator model → see Hybrid Model.

5.3.3 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

Figure 26: Buyer Direct Model
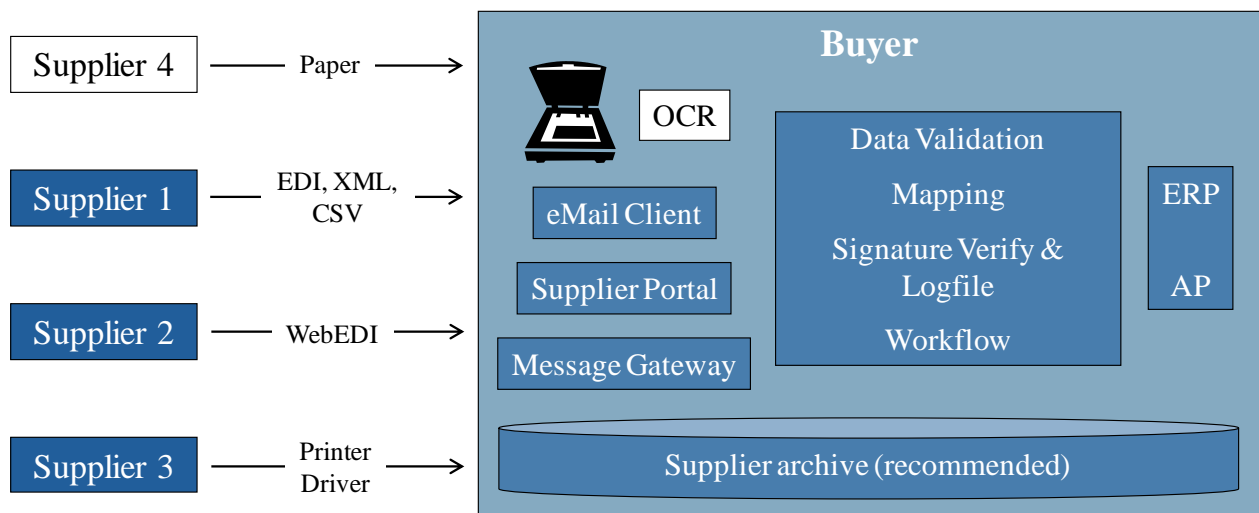
Source: Billentis

This model is preferred by larger organisations, especially if their suppliers are in strong competition with others (e.g. retail, automotive, trade).

Some providers offer E-Invoicing and Invoice Management solutions just for buyers, whereas others cover both sides: software for suppliers, already preparing and sending a compatible invoice format perfectly matching the requirements of buyers.

If suppliers are located in countries requiring digital signatures, they have to sign the E-Invoices in a VAT compliant manner. To succeed with smaller suppliers, it is of key importance to offer them good tools for this process and most probably a long-term supplier archive too.

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.

Figure 27: Advantages and disadvantages of Buyer Direct Model

Advantages	Disadvantages
+ Direct contact with suppliers, chance for interaction + E-Invoicing functionality directly influenced by recipient + Chance for a very close integration into back office environment and automation of processes	− First part of solution implementation and maintenance seems not to be too expensive, but this changes if mid-sized and smaller suppliers must also send electronic invoices; much legal clarification is necessary, especially in cases of cross-border exchange − Suppliers dislike converting their electronic invoices into the various formats requested by the buyers; they also dislike making multiple integration projects (with each buyer) − SME suppliers don't get a centralised, efficient and VAT compliant E-Archive for E-Invoices for all invoices sent to various customers − Overall, supplier acceptance will be limited but some pressure on suppliers is helping

5.3.4   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 in the UK, the Netherlands, Finland, France, Germany and other countries started to offer white-label services for them. They run a direct model on behalf of large issuers and recipients of invoices. The software is typically developed, maintained and operated by these providers. Customers pay just a fixed integration fee and a volume/time based fee.

Figure 28: Advantages and disadvantages of Direct Model as a Service

Advantages	Disadvantages
+ Direct contact with counterparts, chance for interaction + E-Invoicing functionality directly influenced + Chance for very close integration into back office environment and automation of processes + Lower costs, as application development and maintenance is shared with others + No negative surprise with the costs, as provider offers a fixed integration fee and a price per transaction or user + Complexity regarding VAT compliant processing (and optional archiving) can be outsourced	− Counterparts dislike logging on to various websites or making multiple integration projects − Counterparties only send/receive a limited number of formats − Overall, acceptance by counterparts will be limited

5.3.5 Consolidator Model

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

Figure 29: Consolidator Model
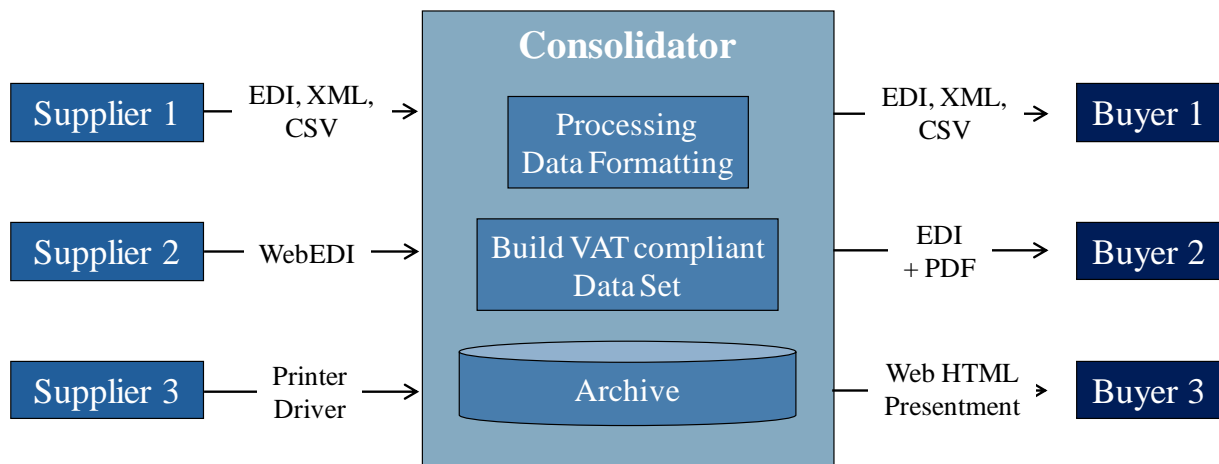
Source: Billentis

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.

Figure 30: Advantages and disadvantages of Consolidator Model

Advantages	Disadvantages
+ Easy and efficient integration to a single point of contact + Lower costs as application development and maintenance is shared with thousands of other participants + No negative surprise with the costs, as provider offers a fixed integration fee and a price per transaction or per user + Complexity regarding VAT compliant processing (and optional archiving) can be outsourced + Easy to use: Technical and legal requirements can be outsourced to consolidators + Counterparts like logging on to just one	− Indirect contact with counterparts, chance for interaction possible, but limited compared to direct or SaaS model − E-Invoicing functionality is fixed and can't be influenced

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[2] In some countries, the terms "operator", "service provider", "network operator" or "supplier network" are more common

website, making one integration project with just one invoice format	

5.3.6 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 consolidator.

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

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

5.3.7 Total Invoice Management

Even at best, there will always be a remaining percentage of paper invoices in tandem with the increasing electronic volume. At worst, this can result in two different workflow and archiving processes. This can be avoided in most cases with innovative solutions for supporting and handling various invoice formats, including paper. If practised as a direct model, such invoice management solutions can be purchased on the market and implemented into the company's own environment. Organisations not yet using scanning solutions quite often prefer using the complete service of a third party. Ultimately, this means that issuer and recipient can exchange invoices 100% electronically.

Figure 31: Total Invoice Management
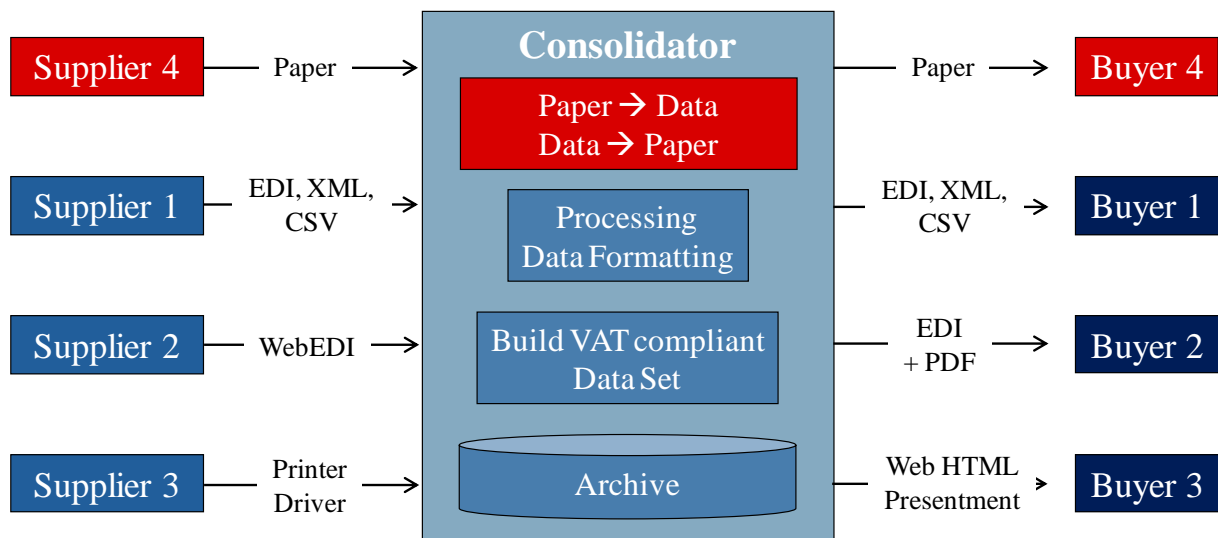
Source: Billentis

Figure 32: Advantages and disadvantages of Total Invoice Management

Advantages	Disadvantages
+ 100% solution + Harmonised processes, independent of invoice medium used	− Pressure to move very quickly from paper to electronic channel is limited; as a result, paper can survive longer than desired

5.4   The global landscape

5.4.1   Market evolution and maturity

Figure 33: Classical evolution pattern in most countries

Phase	Description
1	Large organisations (telcos, utility sector, card issuers, etc.) have tremendous expenditures for printing and mailing bills. Due to their competitive industry, they are pushed to reduce their costs significantly. They offer the bills electronically to their clients, often on their portals for download after log-in. The rate of acceptance by clients is limited, except if clients receive incentives for changing to E-Bills, if they are punished with penalties for paper bills or if they are pushed to accept the bills via email. This phase is the first experience with E-Billing for most countries.
2	Relatively soon, users of Supplier Direct services will recognise that their clients will not wish to log-in to each supplier's website. They prefer a single point of contact (aggregating website, online banking) for bills of all their suppliers. The acceptance of a B2C consolidator service can be higher than with the Biller Direct model (Web-based) and the on-boarding costs per user are shared with other billers. Many billers recognize in this second phase that Bill Presentment on their own portal is not sufficient. They enhance their scope by using in addition a consolidator service or switch to a push-model (send bills as PDF email attachments).
3	Enterprises can benefit most with electronic and automated processes in their role as issuer as well as recipient. As soon as legislation permits paperless invoicing (in most countries, except some in Africa and Asia), large organisations are typically the innovators for E-Invoicing. They push their large trading partners, followed by mid-

Phase	Description
	sized and small ones. Due to the high benefits for issuers **and** recipients, E-Invoicing in the B2B and B2G segment is typically more successful than in the B2C. However, it is still a challenge for large organisations to push a high number of mid-sized and small trading partners to exchange invoices electronically.
4	The public sector is in an excellent position to initiate the breakthrough in the mass market. In many countries, 2/3 of local enterprises are suppliers to the public sector. The government has the power to push these suppliers to send invoices electronically. They are also in the position to modify the legislation in a user-friendly way if necessary. Even in countries where the public sector is inactive regarding E-Invoicing, the market does move forward rapidly. An increasing number of providers meanwhile offer a broad range of solutions for all types of users and for fair conditions.

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

Figure 34: Market maturity for electronic invoices/bills

Leaders
Average
Developing
Laggards

Source: Billentis, 2012
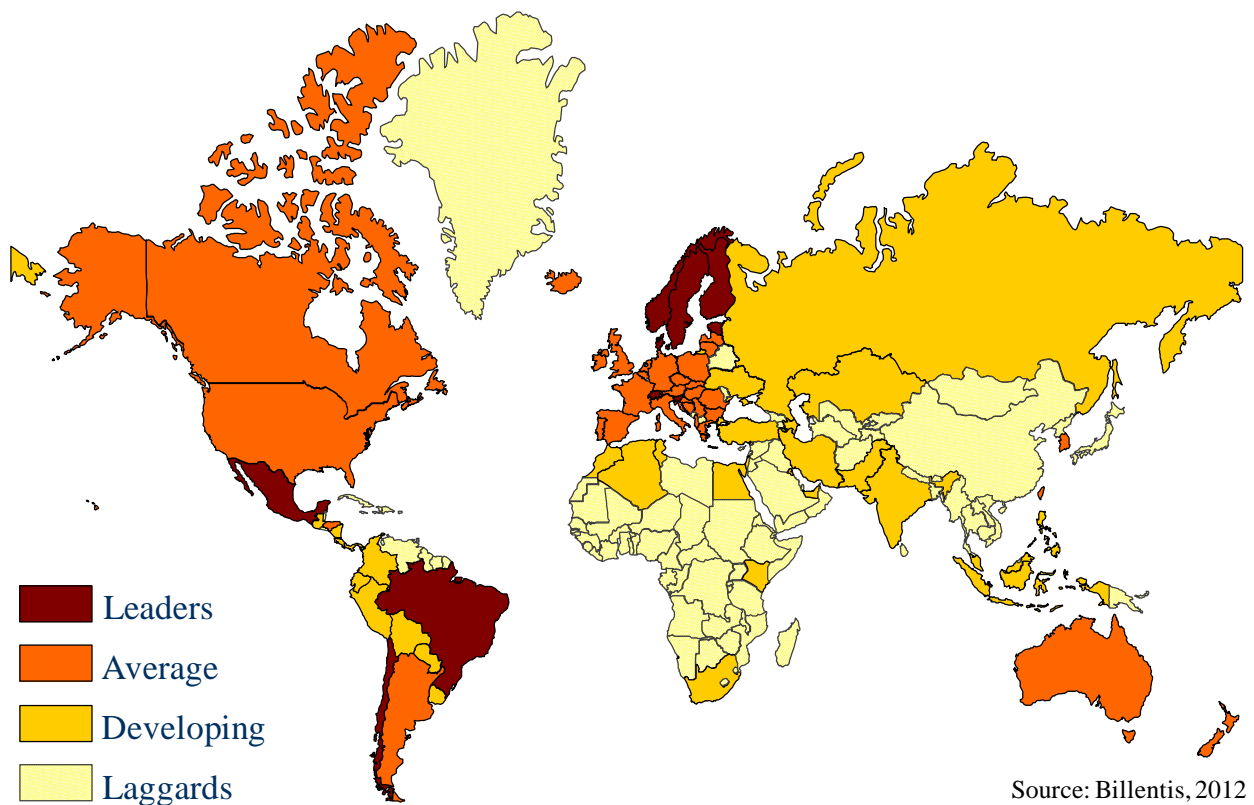
The term "Laggards" in the chart above does not mean that there was no E-Invoicing activity in these countries. It just expresses that they are typically in evolution step 1 or 2. "Developing" means that countries are typically in evolution phase 3. Either they are preparing their legislation for B2B E-Invoicing as well or, if already in place, the E-Invoicing volume is still very low.

It is expected that the 2012 volume for E-Bills/E-Invoices will significantly exceed 15 billion worldwide with annual growth rates of at least 20%.

Not considered above:

- Invoice data which are just copies in parallel to the paper-based original (e.g. EDI messages complemented with collective paper invoices or invoice data as result of paper scanning and OCR process)
- Invoice-like electronic messages as defined in chapter 5.1.1.2

5.4.2   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, the author concluded that the optimisation focus seems to be as follows:

Figure 35: Optimisation focus of geographical regions

Focus	Description
1	**Asia & Latin America:** 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. The system for the trading parties is quite complex. As a benefit, suppliers and buyers have electronic invoices, but just because the government is demanding or mandating it. The company' internal process efficiency is not yet necessarily optimised.
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.
3	**Europe:** 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

Focus	Description
	operators offer their services, many of them interconnected with other providers. Suppliers and 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.

5.4.3   The Service Provider landscape

Organisations offering exchange & transaction services are founded either as start-ups or often originate as
- Print shops (invoice printing as third party service)
- AR and collection service
- Post
- EDI Clearing centres
- Archiving service
- Scanning service
- Electronic marketplace, procurement platform
- Banks or financial clearing services
- Payment service providers
- ERP integrators
- E-Business operators
- Software houses
- Consultants
- Digital signature service provider

Some very large operators have their roots and headquarters in Latin America (especially in Chile). The early market evolution, combined with the quite demanding legal requirements have obviously built an ideal environment to succeed with the service approach. Soon, the pioneers expanded into neighbouring countries. The language was the same and the practice model was quite similar, or at least inspired by the Chilean approach.

In North America, consolidators have mainly been established in the B2C segment and often in form of payment networks with support for bill presentment. Compared to the size of the market, there are very few players covering the B2B segment. However, this is expected to significantly change during the coming years.

5.4.3.1   Service providers in Europe

In early 2012, more than 500 consolidators are active in the European market. No single player has reached a dominant position in the E-Billing/E-Invoicing market. Most of them have an extensive and balanced product range for issuers and recipients of any size. Others are more specialised for either issuers or recipients and for the B2B or B2C sectors. Around 80 of them have an international range (often supporting tax compliance in 30+ countries). An increasing number improve the international scope by linking partner platforms abroad and roaming E-Invoices. Still, many operators are well established as pure players (focussed on E-Invoicing), whereas others have already enhanced the support for further messages and process automation along the supply chain.

5.4.3.2   Inter-operability among different E-Invoicing network operators

In the mobile phone area, we have many operators in a domestic market which are connected to each other in the local market and with most others abroad.

For electronic invoicing, we can see a similar market development, but slower, and with much higher heterogeneity regarding legal constraints, invoice contents etc. Although there is not yet a single standard for exchanging E-Invoices across the various networks, more and more consolidator platforms are linked together for building inter-operable networks with a broad range.

Domestic roaming of E-Invoices is already quite popular in many countries. One quarter of operators also practice roaming with international partners.

Interoperability among operators is also pushed by initiatives of the European Commission and some associations in the private industry (EEIF/European Electronic Invoicing Framework, EESPA/European E-Invoicing Service Providers Association [20], German E-Invoicing Alliance [21], PEPPOL [13] etc.).

5.4.3.3   Redefining the role of the Financial Service Provider community?

Although some banks also intend to serve large organisations with E-Invoicing, the focus of an average bank is still more in the B2C sector and the SME market. Conversely, the non-bank operators have traditionally been successful in aiming their services at large companies and SMEs. Businesses require more value-added services (e.g. integration to ERP applications, workflow processes and archiving). Thus (measured by processed European volume in 2011), non-bank consolidators currently have a dominant market share of roughly 84%.

Does this allow the conclusion that banks will have more to win than to lose in this transaction business by occupying the mass market? Maybe that is true in a few countries and mainly in the consumer business, but questionable in the small business segment. Except some very successful providers from the Financial Service Providers community in Nordic countries, Spain and, to some extent, in Benelux and Switzerland, they do not play a significant role in the whole of Europe. This is especially valid in the largest European countries.

No international comparable statistics exist about the number of users practicing E-Invoicing via banks or related organisations. The most transparent development is reflected in the Finnish user directory. Remarkable is the fact that the SME segment in particular strongly preferred non-bank service providers in 2011.

2011 increase of companies in the Finnish public user directory:
- 20% increase of users on banking platforms
- 60% increase of users on non-banking platforms

To some extent, this is also visible in the mid-term.

Figure 36: Number of businesses using Finnish service providers

Statistics from public Finnish user directory

Number of businesses using E-Invoicing Services (y-axis): - / 5'000 / 10'000 / 15'000 / 20'000 / 25'000 / 30'000 / 35'000 / 40'000

x-axis: 2006 / 2007 / 2008 / 2009 / 2010 / 2011

– – Non-Bank Providers   —— Bank Providers

Source: Tieke
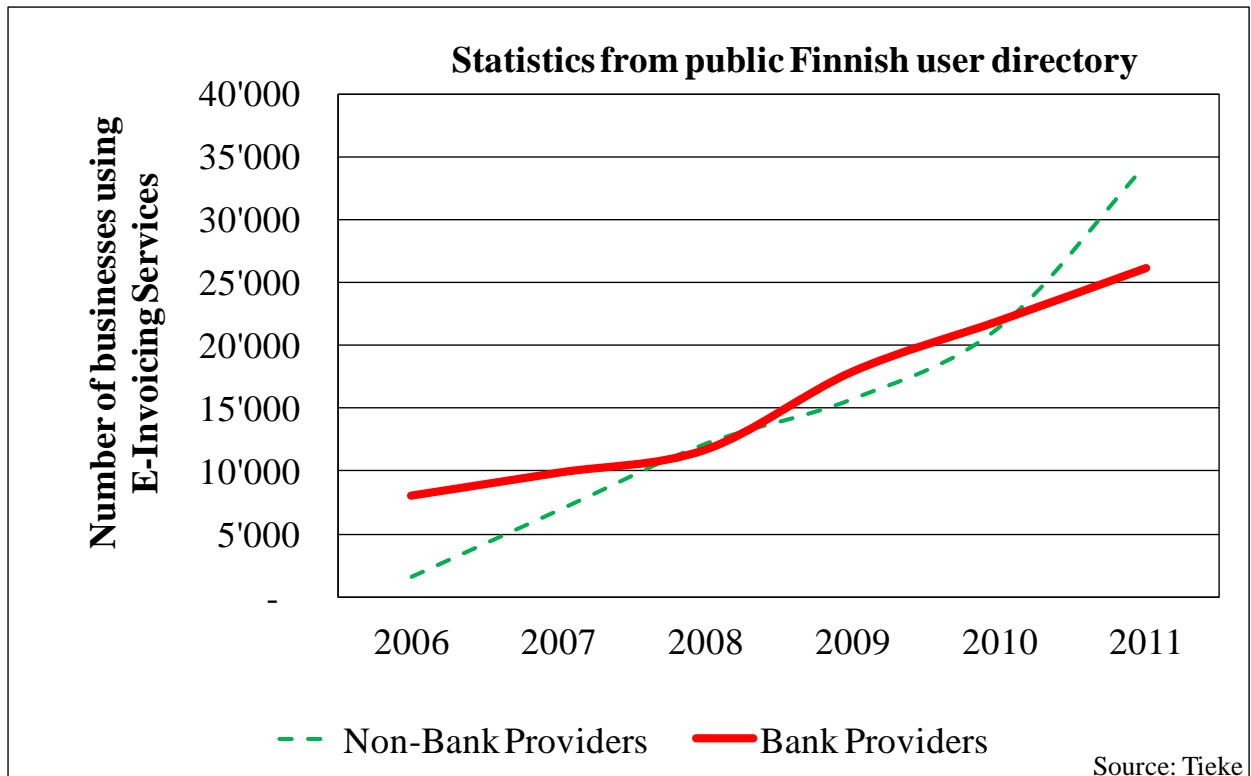
Banks are unlikely to keep the pace of non-bank service providers outside Nordic countries. Non-banks might follow their customers' demand regarding coverage of new countries, new functionality and new technology including components of social networks and cloud computing more quickly. The last two points in particular could also cause some security concerns within a bank's IT environment, but are increasingly important for a dynamic E-Invoicing market development.

> For all European banks which do not yet have a significant E-Invoicing customer base and profitable transaction volume, a shift in focus of their services could be a promising new strategy.

Figure 37: Strategic options for banks

Option	Strategy description
1	**Stay outside the E-Invoicing transaction business** Monitor market development. Do not participate in costly initial work. Enter into the market in a later stage by acquiring a successful E-Invoicing network operator.
2	**Participate with a low cost model** Offer such services mainly in the role as re-seller of a white-labelled service (platform developed, maintained and operated by an E-Billing/E-Invoicing service provider outside the banking community); variable costs with the option to participate in future market opportunities.
3	**Compete with national & international non-bank E-Invoicing operators** This means to keep the pace of the non-bank provider community. As we are in middle of globalisation, a domestic service is not sufficient. Instead, international support could be required regarding languages and tax compliance. To cover the automation of the full supply chain, functionality for the procurement process could

Option	Strategy description
	also be required soon (e-Catalogues, e-Orders, purchase order flip, order matching …).
4	**Complementary services for non-bank E-Invoicing operators and their clients** Offer only the typical bank products: Trade Finance, Supply Chain Finance. Stay off the E-Invoicing transaction business or exit it if your bank is already in that business with a moderate and unprofitable volume. As the bank does not compete in the E-Invoicing transaction business, collaboration with several dynamic non-bank operators is possible with a win-win situation for both parties. See details in chapter 6.5 about a possible collaboration model for Trade Finance services and E-Invoicing network operators.

5.4.4   Asia

<u>Remark:</u> The author allocates Belarus, Russia and Ukraine to Asia and not Europe.

Most Asian countries are in evolution phase 1 and 2 (Figure 33): Large bill issuers start with "Bill Presentment" via their company portals or internet banking.

E-Invoicing in B2B is often not yet legally permitted, or only with the explicit approval of tax authorities. This does not rule out that some companies already exchange (in parallel to the tax relevant paper invoice) electronic invoice files to improve process efficiency.

However, there are some countries in phase 3: Leaders are Singapore, Hong Kong, Taiwan and South Korea. The government, shipping and retail industry play a key role in the B2B/B2G segment.

Even the government of Kazakhstan announced that the country would migrate on a stage-by-stage switch to E-Invoicing. The national companies will start the process from July 1st 2012, while all others taxpayers have to support E-Invoicing from January 1st 2013.

Electronic trade (and financing) is more in the foreground than just E-Invoicing.

The exchange of electronic business and reporting documents is already quite common in Russia, but there was no legislation permitting E-Invoicing as well. The Russian legislation was changed in summer 2010 with the aim of supporting E-Invoicing. However, some more steps have been necessary to really permit E-Invoicing. In spring 2011, a decree from the Ministry of Finance approved the E-Invoice issue and receipt procedure followed by a Government decree "On forms and filling rules for documents used in value added tax calculation" in December 2011. The last legal step for E-Invoicing is the approval of the electronic data format. While writing this report, a draft version of that format was already published on the website of tax authorities with the aim of gathering notes and comments from market participants until February 16th (done). This implies that E-Invoicing should be a reality in practice from April 2012.

Reducing tax evasion is a serious challenge not only abroad, but also 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. Although the Chinese GTP requires the use of information technology and some considered it as a form of "E-Invoicing", the author would describe it much more as a validation system for ensuring and controlling VAT compliance.

Legal changes and government projects are also in progress in India.

Among the few government initiatives currently in progress, there is a tendency similar to the Latin American approach: In the foreground is the online invoice reporting process through the tax authorities rather than E-Invoicing between trading parties or the optimisation of processes and costs for them.

5.4.5   Africa

Most countries are in evolution phase 1: Large bill issuers start with "Bill Presentment" via their company portals. Electronic Bill Presentment and Payment is already up and running in Egypt and Tunisia.

The northern and southern parts of Africa are slightly more advanced than the other parts. PDFs transmitted by email could lead the way for several years.

5.4.6   Australia and Pacific region

Australia and NZ are at a similar stage to Asia. Today, we have seen phases 1 & 2 through direct and independent development by Australian companies. Australians are embracing the electronic commerce phenomenon and are becoming increasingly more confident in electronic B2B transactions. At this stage, the majority of invoicing is direct via email or presented online for the user to either download or print.

The legislation is very moderate. Australian Taxation law supports the issuing of electronic invoices and the requirements regarding storage timeframes for possible audits are much the same as paper. Australia places more responsibility on businesses themselves to confirm the identity and tax status of the entity using free government look-up services such as the Australian Business Register [18]. Under Australian law, businesses are required to check this information before finalising the transaction and are required to withhold tax should the other entity not be suitably registered. Penalties can be applied to both parties should these laws be infringed.

5.4.7   North America

North America started in the nineties with EBPP (Electronic Bill Presentment & Payment, consumer focus) and with EIPP (Electronic Invoice Presentment & Payment, business focus). Regarding a study conducted by NACHA CEBP, 5.1 billion E-Bills were delivered in 2010 in the US. The study states that E-Bills will overtake paper in 2016. In February 2012, NACHA published a white paper adding the information that nearly 30% to 40% of consumers who receive their financial statements and bills online also receive paper versions. However, even if the same strict definition of the term E-Billing is used as the one by the author, it seems that the US is still 3-4 years ahead of Europe (in the B2C segment only).

As expressed in the abbreviations EBP**P**/EIP**P**, payment is an important driver for electronic invoices. This has to do with the inconvenience of paying invoices (e.g. by checks), a pain which is less relevant in Europe with the high share of convenient Electronic Fund Transfer and Direct Debit payments.

In the B2B/B2G segment, the perceptions and objectives differ broadly from the European or Latin American approach. The optimisation of the full supply chain "order-to-cash" and "purchase-to-pay" is a main driver for the US E-Invoicing market development. The legal requirements are clearly lower than in the rest of the industrialized world. This is one reason that the invoicing costs are likely to be below the European level. As many companies are giants,

they also have significant scale effects and the budget to implement solutions in-house for direct electronic message exchange with their trading partners. However, on-boarding of smaller counterparts is not yet very advanced and practiced models rarely support a mass adoption in the market. In addition, the public sector is much less active in this segment than other continents. Hopefully, the ongoing project of the US treasury, the Internet Payment Platform (IPP), will inspire cities and other parts of the public sector. In the 2013 fiscal year, the US Treasury will require that its commercial vendors submit their invoices electronically via the IPP.

Considering many local publications, the Northern American E-Invoicing market seems to be 2-3 years behind Europe and some Latin American countries. The annual growth rates of about 25% are increasing, but are still below European rates. On the other side, Trade Finance and Supply Chain Finance are discussed much more than outside of the continent.

In relation to the huge size of this market, it may come as a surprise that there are very few E-Invoicing network operators in place. However, the number of operators is expected to sharply increase during the coming years. Among the entrants are also several providers coming from Latin America and Europe.

5.4.8   Latin America

Chile may be identified as the root of the Latin American market model and its development. Other markets like Argentina, Brazil, Costa Rica, Guatemala and Mexico belong to the early adopters and some of them overtook Chile due to strict obligations for the usage of E-Invoicing in that country [19]. Meanwhile, almost all other countries in Latin America are rapidly evolving.

In contrast to the rest of the world, most Latin American countries do not focus too long on evolution phase 1 and 2. Instead, they go straight ahead to phase 3 (e.g. Chile) and phase 4 (Brazil and Mexico). The initiator for the market activities is in most cases the government. The driver for establishing country-wide 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 good market penetration rates (Brazil with 90%), but their model is also inspiring larger countries in Asia and likely soon in Southern Europe.

Typical characteristics of E-Invoicing in Latin American countries are
- Unique/sequential invoice numbers provided by the tax authorities
- Use of digital signatures
- Nationwide XML standards
- Steady reporting to the tax authorities: "E-Invoices exchanged" at least monthly respecting real-time in Brazil (before shipping goods)
- After review/approval of suppliers' invoice, tax authorities put a visible "stamp" to the E-Invoices. It is either a country specific alphanumeric code (Mexico) or a barcode (following the standard CODE-128C in Brazil and PDF417 in Chile).
- Tax authorities validate either the invoice data real time or data-mine to check invoices later.

Service providers play a key role. Many 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.

Some low hanging fruits have been harvested and the government has achieved a significant reduction in tax evasion. Invoice issuers and recipients also have some benefits, as most invoices are no longer paper-based. However, they made this first step under a great deal of time pressure and many of them did not have the chance to first start a company internal process optimisation process. There is also still much to do to generate the maximum benefits for the enterprises and the economy. In many cases, it could also be advisable to look to Europe and the US to reduce the complexity of the model.

5.5 The European Market

5.5.1 The Business-to-Business & Business-to-Government market

5.5.1.1 Market penetration

VAT compliant B2B E-Invoicing has been legally permitted in Nordic countries since around the millennium and in Switzerland since 2001. EU member states have had to accept it since 2004. Potential EU users required some time to interpret the new laws and started their projects fairly quickly. As these were mainly large organisations, the projects took some time. Therefore, Europe was in first gear in 2004/2005 and progressed to second gear in 2006/2008 and gains momentum now in third gear.

Figure 38: European market penetration in the B2B/B2G/G2B segment

B2B/B2G/G2B	2008	2009	2010	2011 (E)	2012 (E)	2013 (E)
Electronic share	6%	8%	10%	14%	18%	23%

Status and market development differ from country to country.

Figure 39: B2B/B2G/G2B: Estimated market penetration 2012 per country
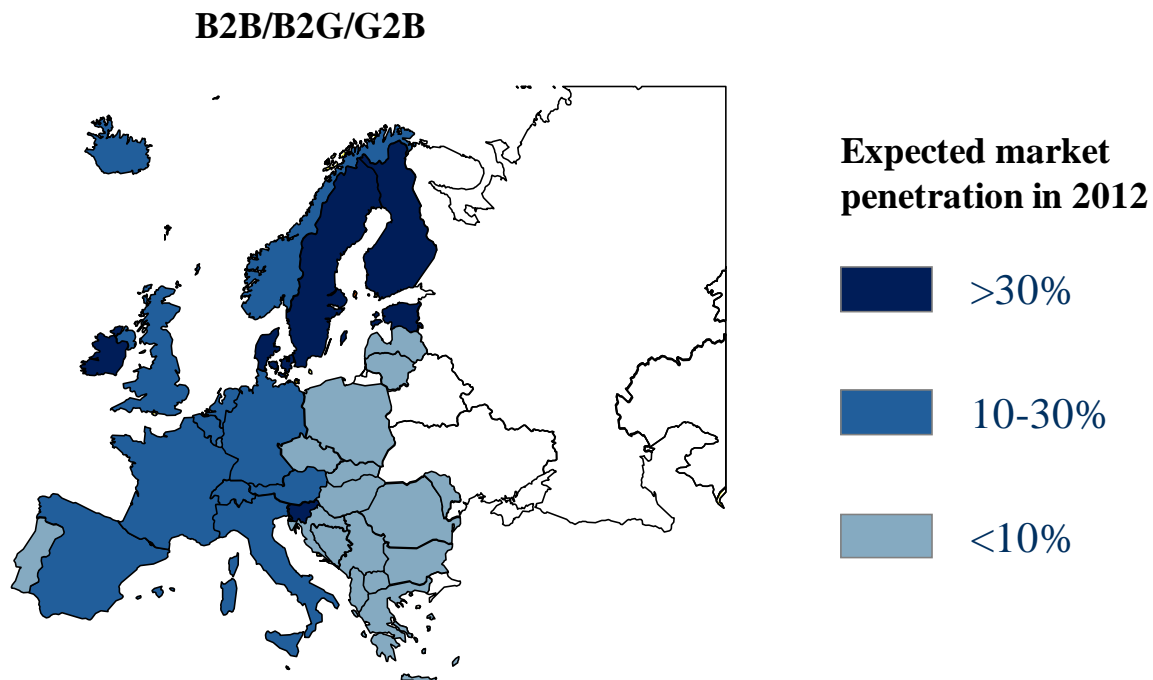
5.5.1.2 Transition from large innovators to mass market

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. Around 2001, 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.

5.5.1.3　Adoption and differences in various market segments

Figure 40: Portion of European E-Invoicing users

E-Invoicing users (issue and/or receive)
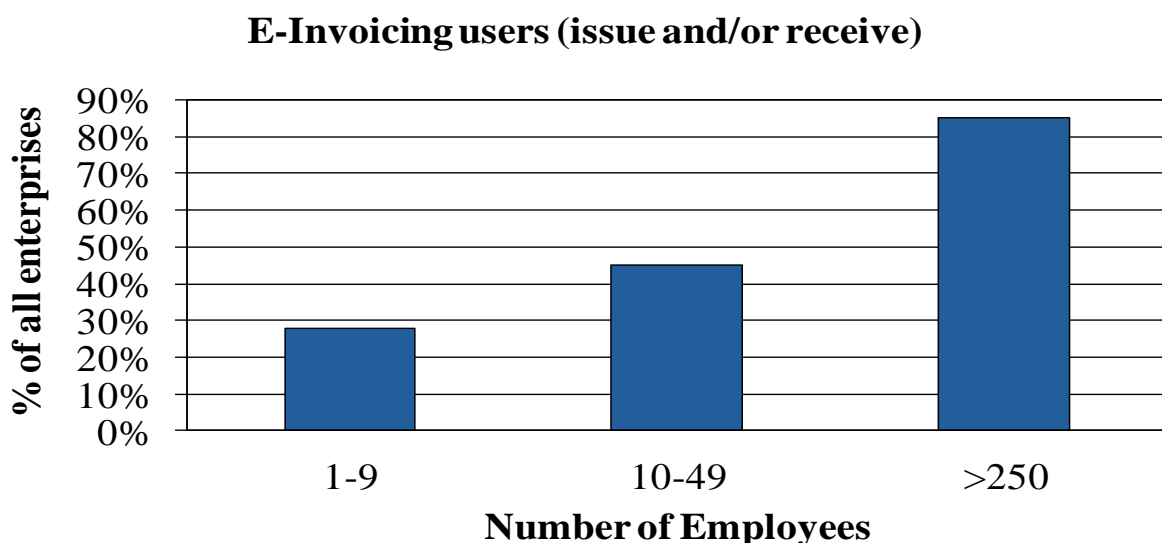
Source: Several country surveys, mainly [1][3][4][5] & Billentis

Figure 41: Portion of E-Invoices received within European companies

Share of Invoices received electronically
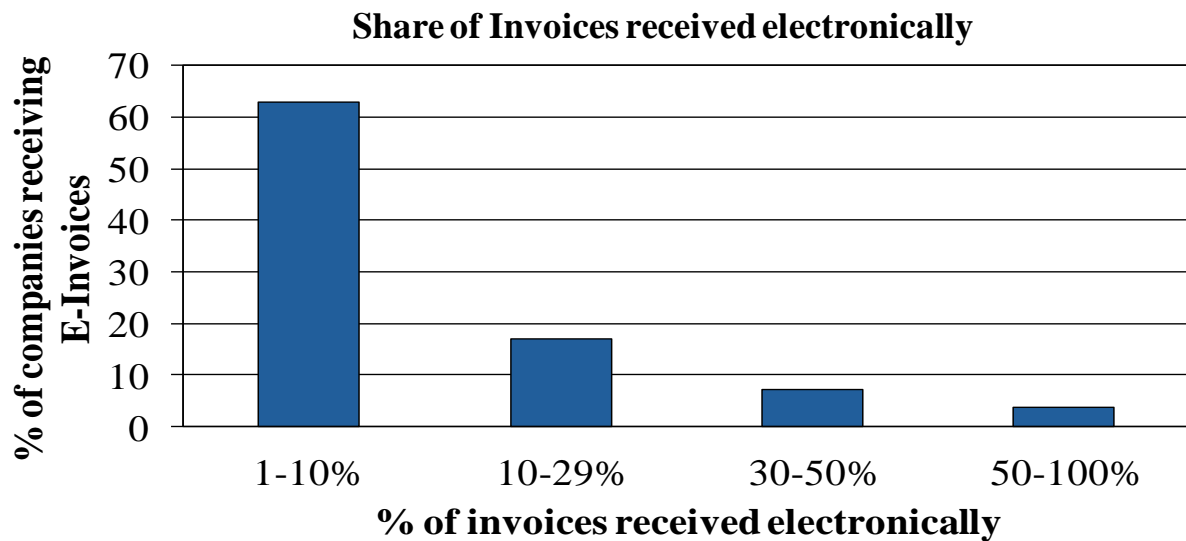
Source: Several country surveys, mainly [1][3][4][5] & Billentis

5.5.1.4   Delivery 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 electronic format. Unfortunately, no international survey gathered such data on a comparable base. That is why the author shares here the results of a study done with survey participants in German-speaking countries, with a focus on the largest European country.

Figure 42: Multi-channel invoice exchange methods in German speaking countries

Invoice exchange methods 2011 (focus Germany)

Issue	Large Business	Mid-sized Business	Small Business
Paper	91%	98%	91%
E-Mail	20%	23%	48%
Via Website	6%	1%	6%
Fax	11%	11%	7%
EDI	26%	10%	1%
Other	6%	1%	1%

Receive	Large Business	Mid-sized Business	Small Business
Paper	100%	99%	99%
E-Mail	47%	74%	83%
Website download	14%	25%	39%
Fax	28%	25%	9%
EDI	28%	7%	0%
Other	9%	1%	0%

Source: ibi research [1]
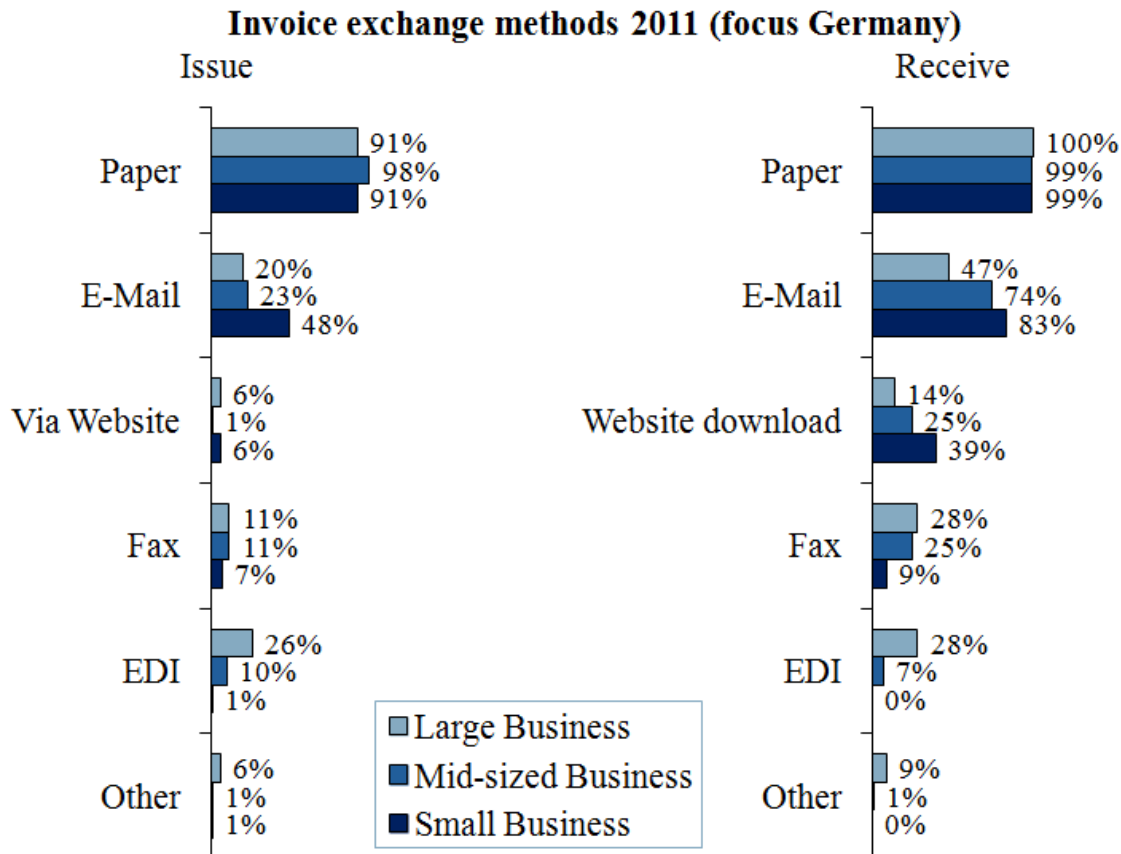
Multiple answers were possible. The majority of companies interviewed are located in Germany and are enriched with a few survey participants from Austria and Switzerland.

Conclusions for this market
- Multi-channel exchange strongly dominates the landscape
- There are already some suppliers offering invoices just in electronic format (e.g. online shops)
- 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 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 43: Proportion of various invoice formats
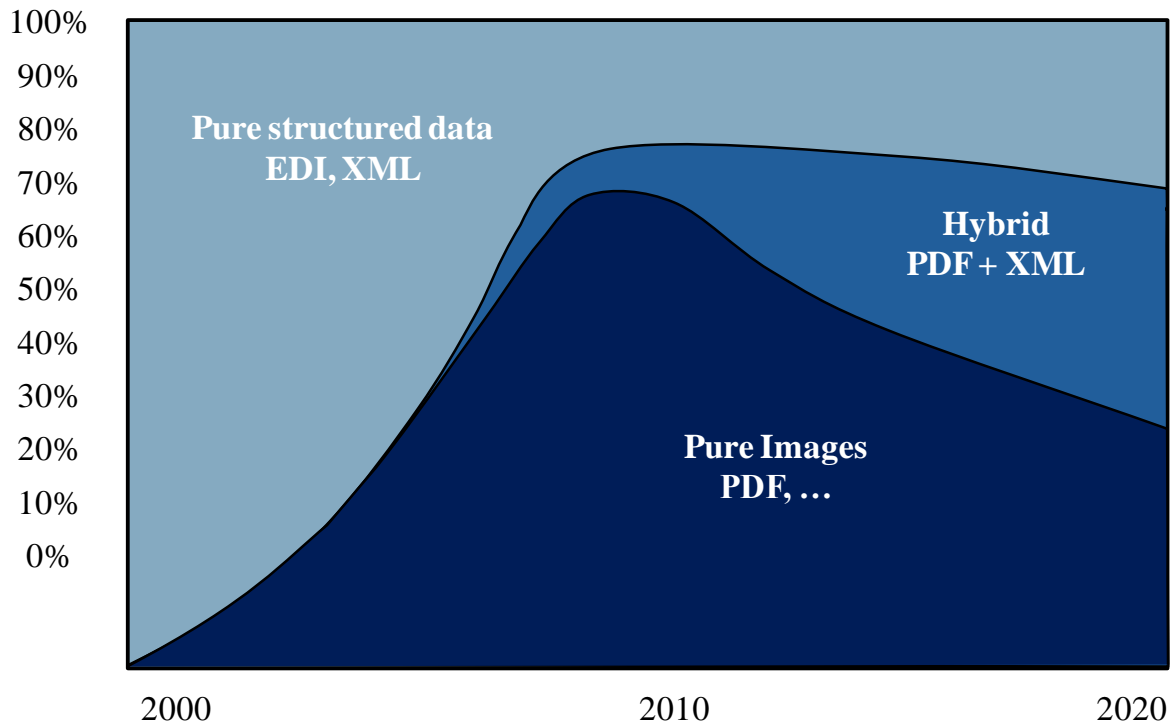
The public sector would definitively be in the position to change the picture completely for the benefit of structured E-Invoices. This is at least in progress in some countries. Governments mandating its suppliers to send invoices just in electronic format typically ask for XML and do not permit PDFs.

5.5.1.5   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, Nordic countries, Slovenia and Switzerland.

Figure 44: Invoices received by European enterprises according to delivery channels

B2B/B2G/G2B: E-Invoices transferred directly or via service providers
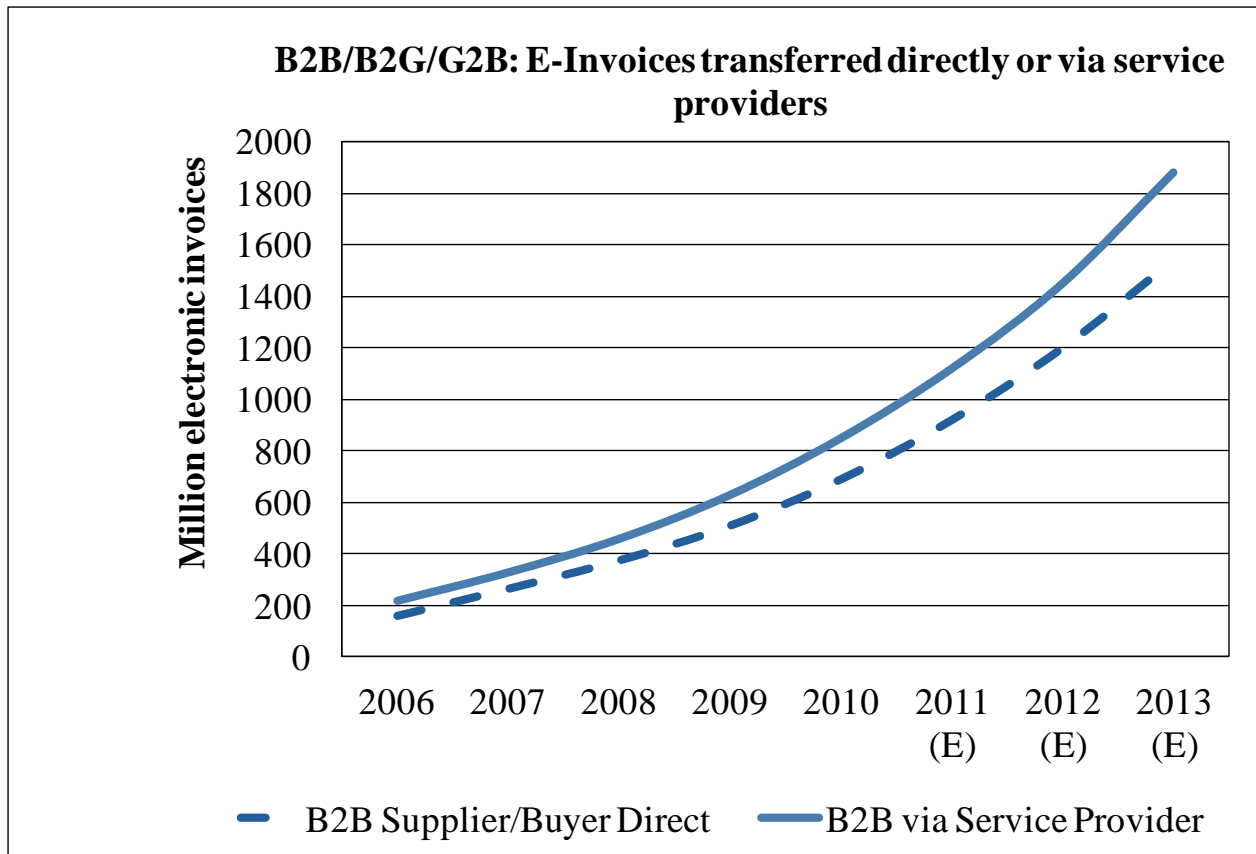
Source: Billentis

There are some arguments that the B2B volume exchanged with the direct model could in the mid-term exceed the volume via Service Providers:

- Enterprises in larger countries often intend to exchange E-Invoices directly with their larger trading parties and switch to service providers at a later stage (to address mid-sized and smaller trading parties). The invoice volume in these larger countries exceeds the one of smaller countries by factors. The European distribution channels could reflect much more the current pattern of larger countries in the mid-term.
- Due to legal enhancements in EU member states, companies could decide to practice the "Equal Treatment method" (see Appendix A). This could favour the direct exchange of unsigned PDF invoices, especially among mid-sized and smaller companies.

There are on the other hand some indications that the volume exchanged via service providers will also dominate in the future:
The service providers in Europe's largest country, Germany, built an alliance [21] and seem to collaborate quite well. This is recognized in the market and should have a positive impact for the service provider community. This could also inspire other (mainly) large countries to adopt a similar model.

5.5.1.6 Market Maturity in the SME sector

According to Eurostat, 99.8% of European Businesses are SMEs. They represent 2/3 of all employees in the private sector. Although larger organisations are the primary promoters of E-Invoicing, SMEs play a key role as the trading partners of larger businesses.

Meanwhile, in the most advanced countries, the SME segment is also mature for E-Invoicing. Despite a high number of appropriate and efficient E-Invoicing solutions and services, there is still much work to be done to prepare the field in this segment.

5.5.1.7 Current and estimated market growth

In 2012, the market is expected to grow by 30%. Sustainable annual growth rates of close to 30% are also expected for the coming years.

Extrapolating the organic market growth and with the added effect of some known initiatives (e.g. public sector declaring E-Invoicing as mandatory in some countries), the author expects a market penetration of **above 50% in 2017** for the **B2B/B2G/G2B** segment.

5.5.2 The Business-to-Consumer market

5.5.2.1 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.

Figure 45: European market penetration in the B2C segment

B2C	2008	2009	2010	2011 (E)	2012 (E)	2013 (E)
Electronic share	4%	5%	7%	10%	12%	15%

Status and market development differ from country to country.

Figure 46: B2C: Estimated market penetration 2012 per country

B2C

Expected market penetration in 2012

>30%

10-30%

<10%
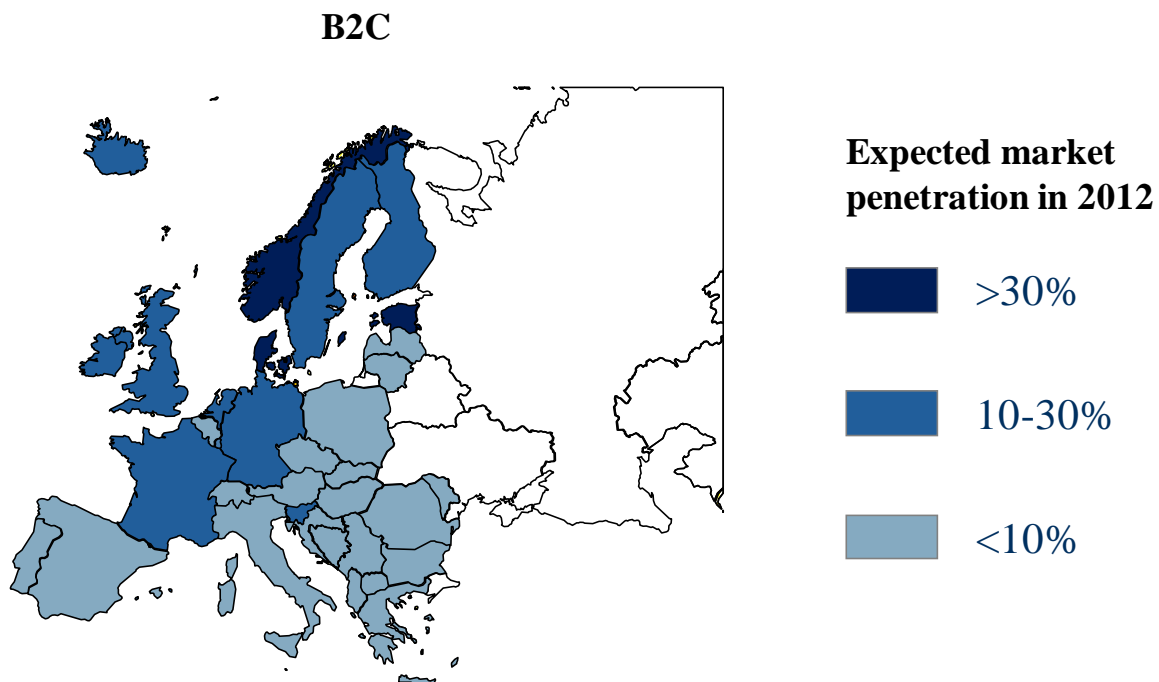
5.5.2.2 Transition from large innovators to mass market

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.

5.5.2.3   Delivery format and 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.

Figure 47: Electronic bill volume B2C, direct and via Service Provider
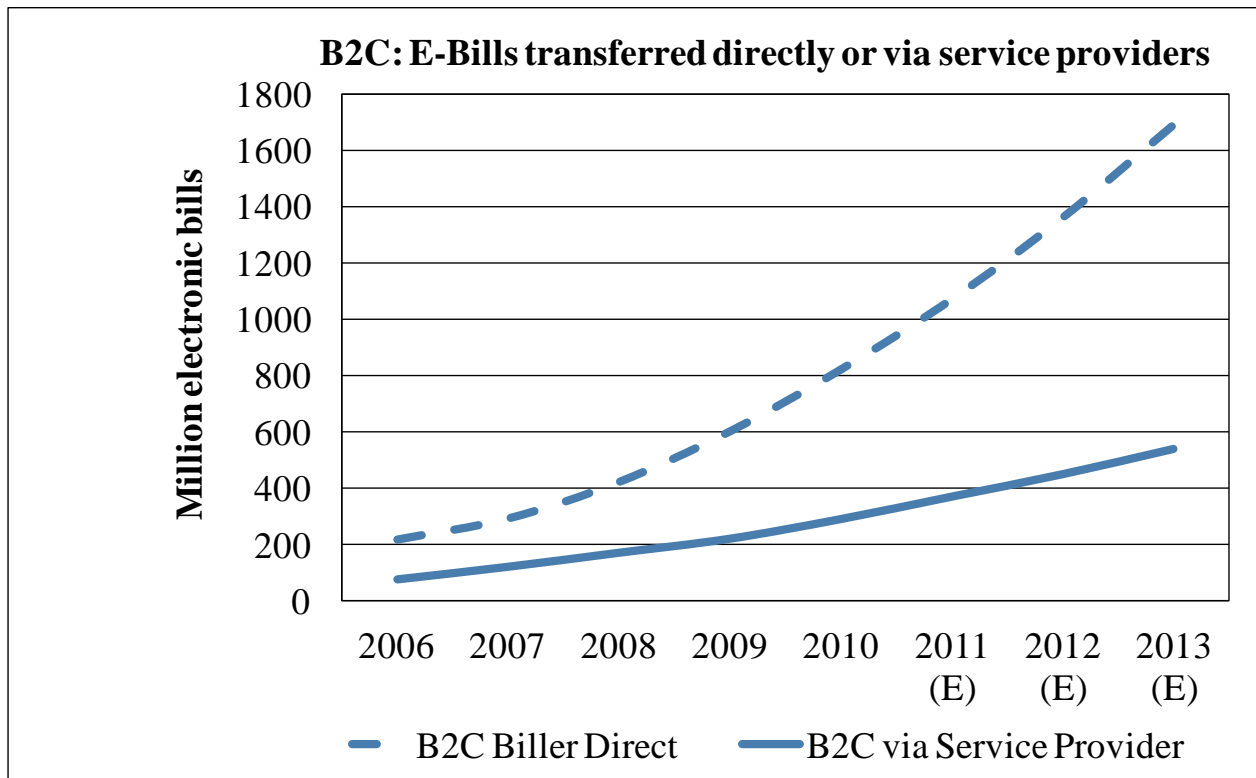
Source: Billentis

The Service Providers are in many cases banks which offer electronic Bill Presentment and Payment via their Internet banking platform. This is mainly the case in Nordic countries, Benelux and Switzerland. It also exists in Spain and some other European countries, but does not play a dominant role in the largest countries. This is also the case in Germany. ibi research [1] did a survey in 2011 with mainly German, but also a few Austrian and Swiss bill issuers.

Figure 48: Multi-channel bill exchange methods in German-speaking countries
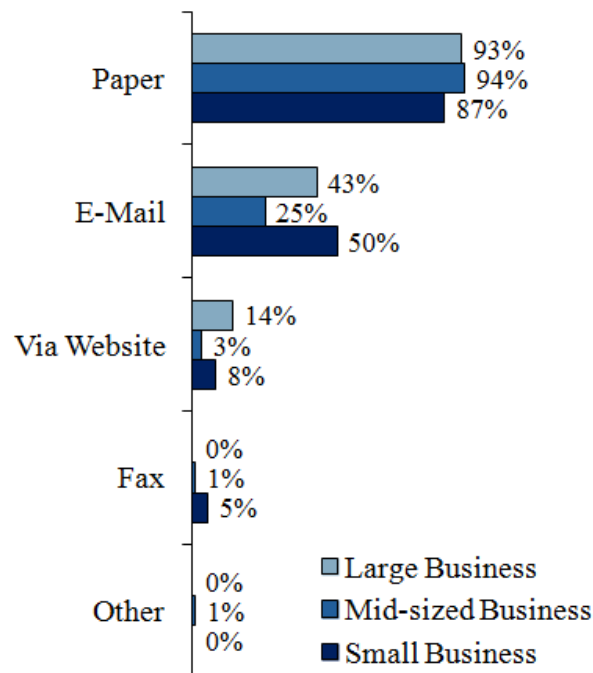
Source: ibi research [1]

Multiple answers were possible.

5.5.2.4   Current and estimated market growth

In 2012, the market is expected to grow by 25%. Sustainable annual growth rates of close to this rate are also likely for the coming years.

> Extrapolating the organic market growth, the author expects a market penetration of **above 50%** for the **B2C** segment **in 2020**. There is a high probability to exceed this mark much earlier in case of a paradigm shift and a new go-to-market approach of solution providers (e.g. intelligent PDFs, components of social networks).

5.6   Market Trends

5.6.1   Fees for paper invoices

In most countries, trading partners cannot be legally obligated to support electronic channels. Organisations in a strong position go other ways: They declare E-Invoicing as state of the art and punish counterparties insisting on paper invoices. Paper invoicing surcharges are becoming more and more popular in some countries.

> Prices/penalties[3] for paper invoices seen on the market are
> * Issuers charge EUR 1 – 3.50 to consumers and EUR 5 – 25 for businesses
> * Recipients subtract EUR 15 – 25 from a paper invoice amount and pay just the reduced rate

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[3] Legislation in some countries (e.g. Austria, Ireland) do not permit penalties for Telco bills

This behaviour mainly appeared in early 2008 and is now increasing sharply. It is expected to gain more ground, although consumer protection organisations, suppliers and corporate clients complain vociferously. The impact on market penetration seems to be significant. A German survey [1] states that 40% of small companies (already using E-Invoicing) accept electronic invoices from their suppliers due to penalties for insisting on paper invoices. A Finnish survey [14] also confirms this for the consumers. Many paper graspers stated the willingness to receive bills electronically if an extra fee has been introduced for paper bills.

5.6.2   More innovative rollout models

Traditionally, counterparts are invited and persuaded to send or receive electronic invoices instead of paper. This friendly (Opt-In) approach was common for a decade and is in line with the culture of most countries. The results are quite often below expectations.

Innovative (and more aggressive) issuers and consolidators have changed their strategy in cases where they know the electronic addresses of their clients:
- In stable business networks where clients already use electronic channels, either by email or Extranet (Online Shops, ASP Portals, Payment Networks, Networks using electronic orders/order confirmations/payment advice etc.); the "Opt-Out" rollout is applied: Trading parties have to send/receive E-Invoices per default; only few can resist and Opt-Out
- Online Banking and Payment Service Providers; if customers type in payment data, they receive a pop-up message inviting them to receive the invoices electronically (customers can activate this enhanced service with a simple mouse-click)

5.6.3   Increasing cost pressure as an accelerator for E-Invoicing

Due to strong competition in most industries, cost pressure is increasing. Investments will be made in a very selective manner, following criteria such as
- Promising business case with good ROI
- Reduce fixed costs and replace them by variable (volume based) costs
- Increase transparency of invoices in company-internal workflow and reduce circulation time
- Increase customer retention
- Future technology
- Buy instead of Make, external solutions or services

These are the exact ingredients for E-Invoicing and automation of the supply chain.

5.6.4   Wide range of solutions offered for any size of organisation

Whereas in the past it was difficult to find any suitable solutions for smaller companies, the challenge today is more in selecting the right one from a wide range. There is sufficient competition amongst providers to get an attractive price. Almost all solutions offer tax compliance and many also format flexibility (any format in / any format out).

For more advanced organisations already using E-Invoicing, the leading providers offer the next upgrades for electronic and automated E-Procurement and Financial Supply Chain processes.

5.6.5   Public sector becomes E-Invoicing user

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 to English and they do not always mean the same thing. This has to do with different usage of the terms E-Invoicing and "obligation" and 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 obligation for E-Invoicing announcement 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. Examples in this category are France and Switzerland. The Irish government has recently partnered a number of local stakeholders to roll out an E-Invoicing pilot within the public sector. The pilot will provide proof of concept to all Government departments and agencies of the significant savings that are readily realizable through adoption of e-business best practice.

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

Others also have plans and at least some of them announced similar steps. Unfortunately, insiders were not able to confirm that the planned roadmap would still be realistic (e.g. Canada, Greece that announced it for 2012).

PEPPOL [13] is the **P**an-**E**uropean **P**ublic **P**rocurement **O**n**L**ine project which aims to expand the market connectivity and interoperability between eProcurement communities. PEPPOL enables access to its standards-based IT transport infrastructure through access points, and provides services for eProcurement with standardised electronic document formats. The segment which is primarily addressed is the European public sector, but, generally, PEPPOL is an open and standardised platform that might also be used by private industry. Several state governments in Europe are already committed to support this platform.

Some countries in Latin America and Asia mandate businesses to send electronic invoice data to the tax authorities mainly for validation reasons. In the best case, they also push their own suppliers to send invoices electronically to the state administration.

Surprisingly, it is often the public administration pushing this process towards obligation, but ultimately the politicians struggle to smooth the way in legislation due to a lack of understanding about the topics they are debating about.

5.7   Supporting initiatives

5.7.1   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 consolidators 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 49: Global and industry independent standards for invoices

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	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. Besides ebXML, this standard is the most important one for E-Invoicing in Europe. It is the base of several country specific standards and it is the intention to merge it into UN/CEFACT. UBL is the first standard implementation of the ebXML (see above) Core Components Technical Specification.
UBL Northern European Subset (NES)	The Northern European Subset (NES) defines the specific use of UBL electronic procurement documents domestically and between the member countries: Denmark, Sweden, Norway, Finland, Iceland, and the UK. NES documentation includes profiles describing business processes and scenarios, profiled UBL documents, and guidelines on the specific usage of UBL entities, as well as schema and schematron validation tools.
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 • The UN/CEFACT CII (Cross Industry Invoice) provides not only standard XML schemas, but also globally consistent invoicing processes and data that are common across a wide range of industries.

Industry specific standards are
• ETIS: Telecom invoices
• GS1: EANCOM standard mainly for Retail sector
• ISO 20022: Financial industry
• LITIG: 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
- Spain: facturae
- Sweden: Svefaktura, SFTI
- Switzerland: swissDIGIN
- Turkey: UBLTR (based on UBL)

5.7.2 Electronic invoicing on the EU agenda

5.7.2.1 Digital agenda

The Digital Agenda is Europe's strategy for a flourishing digital economy by 2020. It outlines policies and actions to maximise the benefit of the Digital Revolution for all [8].

The European Commission is focusing its efforts on removing barriers to the broad-scale adoption of electronic invoicing in Europe and the four key priorities on this topic are:
- Ensuring a consistent legal environment for E-Invoicing
- Achieving mass market adoption by getting SMEs onboard
- Stimulating an environment that creates maximum reach between trading partners exchanging invoices
- Promoting a common E-Invoicing standard

For each of these priorities, the Commission Communication sets out a number of specific actions, for example:
- The Commission proposed a revision of the e-signature Directive to provide cross-border recognition of secure e-authentication systems.
- The European Committee for Standardization (CEN) [9], a major provider of European Standards and technical specifications, developed a Code of Practice including consistent terminology and clearly defined roles and responsibilities for actors involved in E-Invoicing.
- In 2011, the Commission set up the "European Multi Stakeholder Forum on Electronic Invoicing" [8]. The aim is to bring together key actors from the private and public sector of all Member States. It provides a unique platform to exchange experiences and best practices that can pave the way to the broad-scale adoption of E-Invoicing at both national and EU level.

To facilitate the monitoring and implementation of these actions, the Commission pushed Member States to act as well. National fora have been formally set up in AT, BE, CZ, DE, DK, EE, ES, FR, HU, IE, IT, LU, LV, NL, PT, SE, SF, SK, UK and some countries outside the European Union.

5.7.2.2 Combat late payments

The new EU directive 2011/7/ EU [22] will have to be transposed into national law by 16 March 2013 at the latest. One of the priority actions of the Commission: Ensure that, as a matter of

principle, invoices, including to SMEs, for supplies and services are paid within one month to ease liquidity constraints. Invoices trigger requests for payment and are important documents in the chain of transactions for the supply of goods and services, inter alia, for determining payment deadlines. For the purposes of this Directive, Member States should promote systems that give legal certainty as regards the exact date of receipt of invoices by the debtors, including in the field of E-Invoicing where the receipt of invoices could generate electronic evidence.

5.7.3   Operators' associations

E-Invoicing network operators played and still play a key role for the development of the European market. Whereas competition between each other was in the foreground in the past, they have since come together and increase collaboration among each other.

On national level, they have already collaborated for many years. Examples are mainly in Nordic countries, but also other (smaller) pioneer countries. Some years ago, it was a pleasure to also see a German association appearing on the screen. The Association for Electronic Invoicing (Verband elektronische Rechnung e.V. – 'VeR') [21] pools the expertise of Application Service Providers (ASP), consulting companies and other market participants. With this knowledge, the VeR provides an information platform that supports interested companies with the planning and implementation of their e-billing projects. Around 50 organizations are members of the VeR.

In 2011, operators also founded an international/European association: EESPA [20] is the European E-Invoicing Service Providers Association. EESPA is composed of more than 40 Service Providers.

EESPA's key objectives for the benefit of this evolving market include:
- Promoting interoperability and the creation of an interoperable eco-system
- Advocating and supporting the wide adoption of e-invoicing and its benefits
- Representing the industry, engaging in the public policy debate and recommending best practice within appropriate European forums
- Providing services to its members

6. E-Invoicing opportunities in a challenging market environment

6.1 Overview

There are of course several reasons to start an E-Invoicing project, but one is the strongest driver: Even during a period of robust economic growth, organizations state that the major drivers for process automation were the improvement of financials. This is especially valid during today's challenging economy.

The author sees a set of parameters where E-Invoicing has a major impact on the optimization of corporate finance.

Figure 50: Optimise corporate finances with E-Invoicing
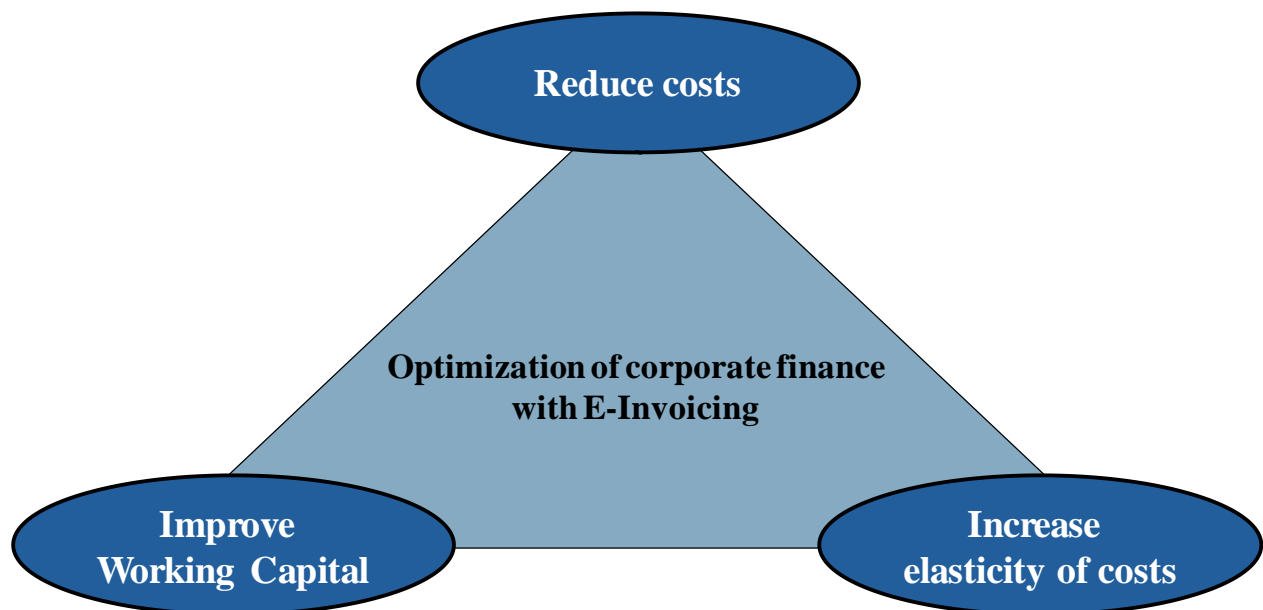
6.2 Reduce costs

Chapter 3 describes in detail how the Business Case might look like – and that is already very promising. The author intended to apply today's reality to those calculations: Organizations replace a portion of its paper invoices with electronic ones and only partially optimize their processes.

The next chart describes the classical evolution in most organizations. Today, just low hanging fruits are picked. Very few enterprises also challenge their processes in general and streamline, re-design and optimize them. It is likely that it will take some more years until the market is mature for this next step. Thus, this chapter focuses on the migration path options.

Figure 51: Migration path to exploit the full optimization potential
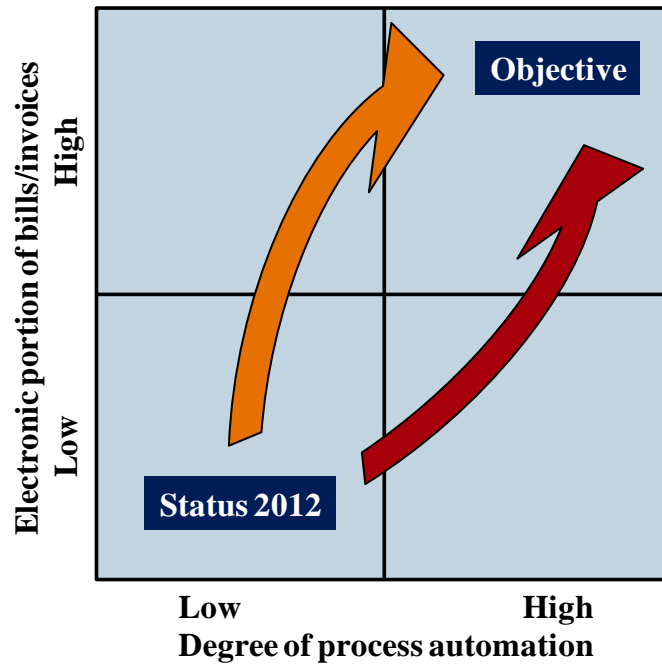
6.2.1 Increase electronic proportion

By monitoring the international markets for 15 years, the author analysed the differing developments in organizations. The success rates and electronic proportions differ greatly.

Figure 52: 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.

Phase	Description
	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 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 (15% in the US, Paystream Advisors [7]). 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 more organizations do not switch to more promising on-boarding methods.

6.2.2 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.

More advanced organizations might have a broader objective than just to optimize the invoice processes. This is indeed worthwhile: The automation and optimization of the invoice process is typically only 1/3 of the total potential. Considering this, the full purchase-to-pay and order-to-cash process might be pushed to the foreground during the coming years.

Figure 53: Exploit the full optimization potential
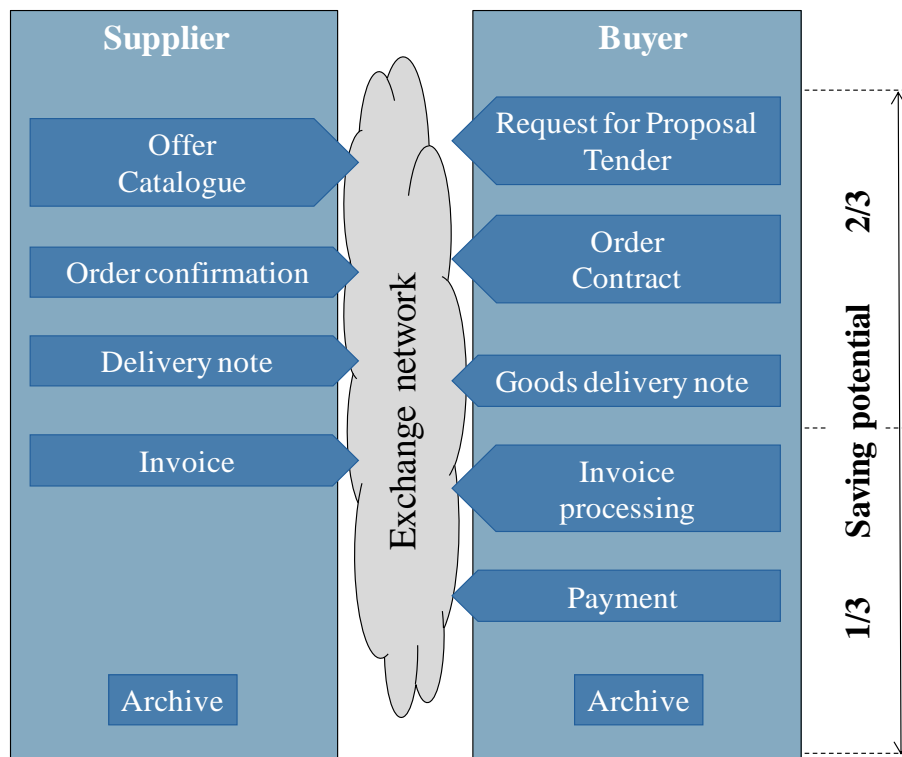
6.3 Increase elasticity of costs

6.3.1 Inhouse developments vs. 3rd party solutions

Businesses in smaller countries intend to use solutions proven on the market. Such solutions are indeed available in high numbers (hundreds) and of good quality. From this perspective, it is surprising that mainly businesses in larger countries still intend to re-invent things and develop inhouse solutions. This is not only the case with large organizations, but even in companies with

less than 20,000 employees. In such scenarios, it is the IT staff who often drive projects. Clarifying legal requirements for all trading parties (located in dozens of countries) is extremely challenging or almost unsolvable for them. Such projects typically never succeed. Companies eventually switch to state-of-the-art third party solutions.

6.3.2 Shift fixed costs towards variable costs

Customer demand today is becoming more and more erratic and the turnover is subject to considerable variations.

Thus, most companies try to reduce fixed costs and to shift them towards variable costs. Providers of E-Billing/E-Invoicing solutions reacted at a very early stage and offer suitable products for any kind of demand.

Due to investment freezes in many companies and attractive on-demand pricing, numerous businesses are expected to change from inhouse operated solutions to SaaS (Software as a Service), white label or consolidator services offered by third parties.

It is therefore scalable regardless of organization size and, most importantly, businesses only pay for the services they use.

6.4 Improve Working Capital

6.4.1 Challenges and today's options for organizations

The crisis in the global financial markets, a corporate credit squeeze, combined with weak economic growth, all change financial managers' minds on working capital optimisation. Invoice automation is a key component to achieve this objective!

There is a growing demand for financially efficient supply chains, with customers and their suppliers under conflicting pressures to improve payment terms, reduce prices and improve cash flow efficiencies.

A number of related buzzwords currently dominate the mass media
- Optimize cash flow and working capital
- Decrease DSO
- Accelerate processing and workflow cycle to benefit (dynamic) discounts
- Payment guarantees; Reduced risks
- Trade Finance; Supply Chain Finance
- Access to liquidity; Reduce capital outlay
- On-demand SCF (not full turnover, just some invoices)
- Enable suppliers to keep pace with buyers' growth.

These topics reflect the market demand, but also what providers of such finance tools and instruments increasingly offer.

The major challenge for solution providers is to offer a balanced product portfolio appropriate for suppliers and buyers, regardless of company size and the location of the trading party.

There is also a major part, which is directly under the control of suppliers and buyers and their internal processes and whose improvement may not be outsourced.

6.4.2 Improving company internal processes

6.4.2.1 Increase transparency for inbound invoices

Typically, 30-40% 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.

6.4.2.2 Accelerate internal invoicing cycles for inbound invoices

Suppliers of goods and services suffer from the credit crunch. This is especially valid for SMEs. For that reason, they increasingly offer discounts to their clients. Despite these discounts, the effect is very limited and the payment period (e.g. 15 days to benefit from discounts) cannot be improved significantly.

The reason is primarily that many larger invoice recipients are just unable to process paper invoices faster than within 23-25 days.

> A recent consulting customer of the author confirmed to have missed discounts with a value of EUR 1.50 per paper invoice. The discount benefits alone more than compensate the project costs and investments for the E-Invoicing in this project!

An efficient workflow and archive solution is in most cases another result of an E-Invoice project. This enables real-time monitoring of the invoice processing and permits an optimisation of the working capital.

6.4.3 Trade Finance / Supply Chain Finance (SCF)

Supply Chain Finance refers to the set of solutions available for financing specific goods and/or products as they move from origin to destination along the supply chain. It shall improve the Working Capital for suppliers and buyers. This is of special relevance during the challenging economy and the fact that an increasing number of trading parties is located abroad.

The market opportunity for a SCF solution is significant. The total worldwide market for receivables management is US$1.3 trillion. Payables discounting and asset-based lending add an additional US$100 billion and $340 billion, respectively. Only a small percentage of companies are currently using SCF techniques, but more than half have plans or are investigating options to improve SCF techniques [Wikipedia]. Some 43% of German companies and 61% of British enterprises are planning to monetise their receivables & payables to provide liquidity within their supply chain [11].

Some of the solutions that could be sold under the banner of SCF with relevance to E-Invoicing include, but are not limited to:
- Asset-based lending, e.g. mortgage, factoring and reverse-factoring
- Receivables management services – Provides third-party outsourcing of receivables management and collections process. It also provides financing of those receivables and guarantees on the payment of those receivables.
- Dynamic payables discounting –Provides third-party outsourcing of the payables process and leverages a buyer's credit quality to obtain favourable financing rates for suppliers.

Suppliers are mainly interested in financing, guaranteed and early payments, whereas the focus on the buyer side is more on working capital / benefit of discounts etc. Providers should address both sides with suitable solutions and they should be appropriate for small businesses. It should also be possible to use it selectively on a case-by-case basis.

One component of SCF is currently gaining much traction and forms an ideal combination with E-Invoicing. It is therefore described in the following chapter.

6.4.4 Dynamic discounting

Dynamic discounting is a process which allows buyers and sellers of commercial goods and services to dynamically change the payment terms – such as net 30 – to accelerated payment based on a sliding discount scale. Dynamic payables discounting is "dynamic" in one or more ways. Dynamic discounting is also known as dynamic discount management, early payment discounting, or payables discounting.

It encourages suppliers to opt in for early payments. Dynamic discounting allows buyers and sellers to dynamically change the payment terms to accelerated payment based on a sliding discount scale. The buyer allocates a "pool" of liquidity, determines liquidity limits, and establishes the interest rate for early payments. Once invoices are approved, the suppliers are automatically informed about new early-payment options. Through the portal, suppliers are able to view their approved invoices and trigger payments prior to the nominal due date, accepting the corresponding discounts.

The dynamic discounting functionality may be directly implemented as a Plug-In in the ERP or accounting application of suppliers and buyers. Another smart way is a "Pay me early button" on the buyer's E-Invoice portal (in case of direct exchange) or on the portal of the E-Invoicing network operator.

6.5 Collaboration model for Trade Finance Services and E-Invoicing operators

There is no doubt that Trade Finance / SCF will become increasingly important during economically challenging times. Considering a survey by Demica [11], the top 40 European banks expect annual SCF growth rates between 10% and 30% per annum in developed markets and between 20% and 25% in emerging markets.

E-Invoicing has the potential to become a catalyst for a strong growth of SCF. The author expects that the way to enrol successful and scalable SCF solutions is to fully embed it into a single E-Invoicing platform that can then handle all information exchanged between companies and financial institutions electronically. Payment Service Providers (banks or non-banks) could collaborate in a complementary manner with technology companies operating E-Invoicing network platforms.

Figure 54: Complementary collaboration model

Role	Description & comments
Funder	Funders might be financial institutions, investment funds, private equity companies or the buyer himself. A funder establishes the rating criteria against which it elects to provide its funding capital. Funders commit to the pool and can participate in more than one pool, based on their current risk appetite. Flexible and auction-like models with coverage for international trading partners are in demand.
Open SCF Network	This might not yet exist today. Banks often operate their proprietary platforms. Customers dislike to be "captured" within a proprietary solution without a guarantee of competitive prices. Some non-bank provider platforms are slightly more open. The suggestion is a provider-neutral and open platform with price competition and multiple funders.
Payment Service Provider	May be a bank or not. He pools the various funder products and ensures communication between the SCF network and one or several E-Invoicing network operators.
E-Invoicing network operator	Millions of organisations are already using E-Invoicing operator networks. They are familiar with a variety of technology and process requirements of their customers of any size located in any country. As long it is not a commodity business, this is a key success factor of technology companies as service provider. Banks may also be the E-Invoicing network operator, but are most successful if a country has the maturity to be served with standardised commodity business products. What the Financial Service provider community definitely has as an advantage is the capability to offer SCF, and this is in increased demand on the market. As long as a bank is itself an E-Invoicing operator, it might have the potential to address up to 35% of their own user community only. If it shifts the focus and is instead a provider for SCF, it might address almost all E-Invoice users via partners, which act as resellers for them.
Open E-Invoice exchange	An increasing number of operators connect each other's

Role	Description & comments
network	platforms to exchange electronic invoices and other related messages cross-platform.

6.6 The E-Invoicing Opportunity

E-Invoicing and process automation might be THE answer for today's challenges in the market. It is the enabler to significantly cut costs, to improve the Working Capital and to increase the elasticity of costs.

The time is right for taking the next step now!

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7.1   AuthentiDate International AG

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40237 Düsseldorf
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VAT compliant E-Invoice processing guaranteed for	All EU (European Union) Countries (27 member states), all other European Countries outside EU (e.g. Switzerland), all countries worldwide, who except qualified and/or advanced signatures (e.g. US, Canada , Hong Kong, Singapore, etc.); Latin America Countries (e.g. Mexico, Brazil, Chile, Argentina, Colombia)
Countries with highest E-Invoicing revenues	Europe
Number of employees dedicated to E-Invoicing and directly related offering	20+

Coverage	Invoices/year	Connected countries
SIGNAMUS Cloudservice & AuthentiDate eInvoicing solutions (worldwide)	50+ Million	128
SIGNAMUS Cloudservice & AuthentiDate eInvoicing solutions (Europe)	ca. 70% of worldwide	38

Kind of offering	Cloudservice, SaaS (Software as a Service) Signature Service, Verification Service, audit-compliant electronic archiving, data-conversion, imaging; "Inhouse-eInvoicing-signature-solution" also available as software license on request
Covered processes/messages along the supply chain	reporting functionalities for auditing processes
Main target market segments	➢ Suppliers and buyers in any industry ➢ Backbone services provider for other eInvoicing service providers
Supported languages (with application/service and the online-help/customer support)	English, German, (for signature verification also French)

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SIGNAMUS (www.signamus.de/en) is a service of the Düsseldorf based AuthentiDate Deutschland GmbH, a wholly-owned subsidiary of AuthentiDate International AG.

AuthentiDate International AG is an accredited certification service provider through the German Federal Network Agency and operates a Trust Center in accordance with the strict regulations of the German Signature Law and European Signature Directive.

During the last 10 years, AuthentiDate established itself as one of the leading companies in the segments of

- **Signature software & services** – for the utilization of electronic signatures in business processes and for service providers
- **eInvoicing Cloudservices** – for inbound & outbound processes
- **IT-Security-Consulting** – especially in the fields of data security and data protection, ISO 27001, ISMS, penetration testing and PKI.

eInvoicing Cloudservice SIGNAMUS

Our eInvoicing Cloudservice SIGNAMUS had been established in 2005 and provides a modular set of functionalities for outbound and inbound electronic invoicing processing.

Many well-known, international companies are using SIGNAMUS for daily secure exchange of data and invoices.

- **Signature creation** (SIGNAMUS supports the signature creation compliant to the legal requirements in the EU, Switzerland, Latin America and many other countries worldwide)

- **Signature verification** (fully automated and manual verification using a public, charge-free website)
- **Time Stamping** (e.g. for audit-compliant invoices in Italy, Hungary and other)
- **Imaging & data conversion** (XML, PDF, EDI, etc.)
- **audit-compliant long-term archiving** (incl. User specific reporting functionalities)

Each function may be selected individually or in combination with others.

International Customer References

Companies in more than 120 countries exchanging more than 50 million of electronic invoices each year by using the SIGNAMUS Cloudservice and AuthentiDate eInvoicing solution – securely and in compliance with local and national requirements.

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7.2   B2Boost S.A.

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Countries with highest E-Invoicing revenues	Benelux Countries Germany France United Kingdom Italy
Number of employees dedicated to E-Invoicing and directly related offering	20

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	200	1,000,000
Connected corporate buyers	10,000	95,000

Kind of offering	Accounts Receivable & Payable SaaS Services B2B Integration and Messaging Signature Service and Archiving Business Intelligence and Reporting Advanced Customised Portals
Covered processes/messages along the supply chain	Full Supply Chain Order: Catalogues, Order, Shipping Notices, Invoices and Payment
Main target market segments	Large and mid-sized companies in Entertainment, CPG, Retail, Telecoms and Technology industries.
Supported languages (with application/service and the online-help/customer support)	Customer Support: Dutch, English, French, Spanish and Italian. Applications delivered additionally in Danish, Finnish, German, Hungarian, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish and Czech.

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The Company has a significant presence in Europe and currently counts over 150 major European retail chains amongst its network, accounting for over 80% of the European retail distribution volume.

B2Boost E-Invoicing Services

The company delivers Business to Business E-Invoicing solutions to both invoice issuers (AR) and invoice recipients (AP), aimed at facilitating the transition to a dematerialised and digital invoicing process.

Our E-Invoicing solutions ensure that your documents are compliant in each and every jurisdiction you trade in, removing the need to send and store paper copies of your invoices.

In addition to ensuring legal compliancy, E-Invoicing will help your company reduce its cost base, minimise human errors, accelerate payment cycles and improve your carbon footprint.

Why Choose B2Boost for E-Invoicing:

- *On-Board All Your Trading Partners, Easily* – Our solution is capable of capturing and delivering invoices to/from any of your business partner including SME's, in any data format and protocol.

- *Scalable* – Our E-Invoicing systems are founded on leading edge technical components and partnerships, providing us with virtually unlimited transaction volume capability.

- *Light* – Enables companies to implement E-Invoicing without having to invest and allocate substantial resources.

- *Self-Service* – Using our B2Boost Connector and patented Print2EDI solutions, your SME partners are able to exchange electronic invoices with you in the space of a few clicks, by simply downloading a self-installed package onto their desktop.

- *High Value Add* – Our solution includes Business Intelligence & Reporting as well Advanced E-Invoicing portal functionalities.
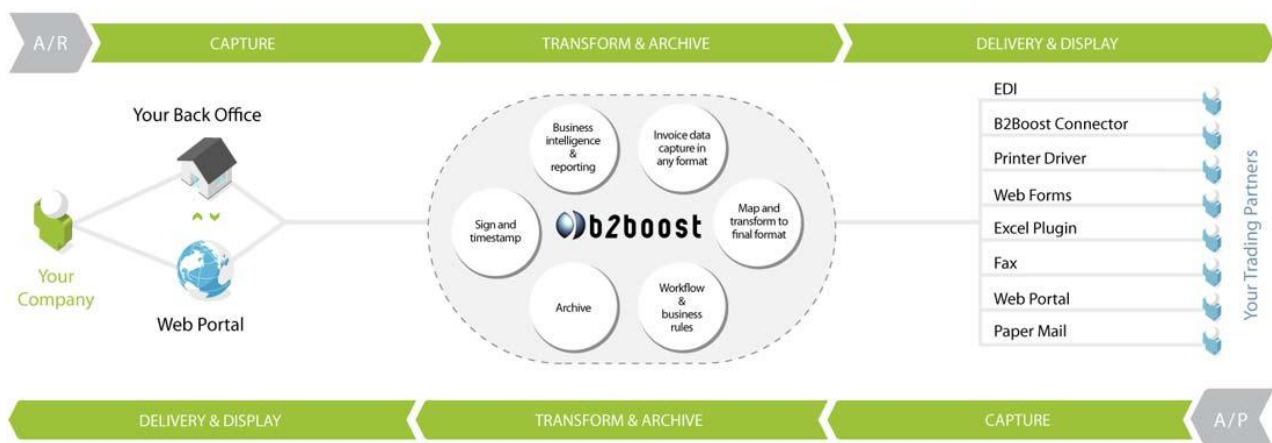
Visit us at www.b2boost.com for more information or speak to our General Manager: Gilles Collet (+32 (0)2.629.60.00; Gilles.Collet@b2boost.com)

7.3   Basware

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

VAT compliant E-Invoice processing:	Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Costa Rica, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Guatemala, Greece, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Latvia, Lithuania, Liechtenstein, Luxemburg, Mexico, Morocco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America.
Regions with highest E-Invoicing revenues	Finland Europe Scandinavia
Number of employees dedicated to E-Invoicing and directly related offering	300 (including offshore operations)

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	24,000	490,000
Connected corporate buyers	11,000	120,000

Kind of offering	Services for sending and receiving e-invoices, purchase messages and catalogue exchange. Solutions for invoice automation and procurement.
Covered processes/messages along the supply chain	Purchase-to-Pay and Order-to-Cash
Main target market segments	All companies in any industry, also public organizations.
Supported languages (with application/service and the online-help/customer support)	Basware Transactions Service supports all languages. Customer service is available in English, Finnish, Swedish, Norwegian, Danish, Dutch, German and French.

E-INVOICING IS EASY INVOICING

Basware e-invoicing turns all your paper invoices into e-invoices from day one. No matter how many invoices you send and receive – we have a perfect solution for you.

Our service packages for sending and receiving e-invoices are designed to meet even complex needs for e-invoicing. You can start small and scale up as your business grows. Connecting to our service is easy and usage even easier – you do not have to make any changes to your legacy systems or processes to get started. Basware takes care of invoice validation, format conversions, compliance, monitoring and e-invoice routing.

Sending e-invoices

There are multiple ways to connect to our service and start sending e-invoices. You can simply send e-invoices as **PDF attachments via e-mail** or **print invoices virtually** to our service. Naturally you can send us **invoice data direct from your invoicing system** or ERP. We will convert all these invoices into e-invoices and deliver them to your customers via the Open Network, the world's largest open e-invoicing network.

If your customer cannot receive e-invoices directly to their invoice processing system, we can e-mail the invoice data or allow invoice retrieval from an on-line portal. Also, Basware offers a **Printing Service** for those invoices that cannot be delivered as e-invoices. This range of options ensures our customers benefit from 100 % e-invoices from day one. Basware Activation Services provides global **Customer Activation** programs designed to ramp the ability for your customers to receive e-invoices ensuring paper volumes decline rapidly, saving costs with every e-invoice sent.

Receiving e-invoices

Basware offers invoice processing solution packages optimized for organizations of any sizes and with any invoice volumes. E-invoices can be received through **direct integration with your invoice processing system**. Invoices arriving as e-mail attachments can also be converted to e-invoices and received directly into the system.

With Basware's **Scan & Capture Service** all incoming paper invoices are converted to electronic invoices – a service key to the ability to deliver to our customers 100 % e-invoices from day one. This service can be augmented with **CloudScan**, a downloadable application allowing Basware users to locally scan occasional paper invoices themselves. CloudScan enables tactical in-house scanning for those who do not wish to, or cannot, fully outsource scanning across all sites.

For low invoice volume suppliers, Basware offers its **Supplier Portal** for the sending of e-invoices. Basware's dedicated Activation Service teams allows all such suppliers to be targeted as part of a **Supplier Activation** program, designed to rapidly on-board suppliers into adopting true e-invoicing practices.

Purchase messages and catalog services

An e-invoice is only one category of business document exchanged within Purchase-to-Pay and Order-to-Cash processes. Purchase messages (like orders) can also benefit from being automated. In addition, the collaborative creation, management and publication of e-procurement catalogs forms another point of interaction between trading partners that can be facilitated through Basware's Business Transactions Service.

The Open Network

The Open Network is the world's largest open e-invoice operator network with 130 interoperable network partners and over 550 000 participating organizations actively trading today. The Open Network is able to automatically convert and route all business documentation, ensuring the widest possible transaction network coverage for our customers.

Visit us at **www.basware.com** for further information.

7.4 Celtrino

Headquarters:
Celtrino
Unit 5, Parnell Business Centre, 125 Parnell
Street
Dublin
Ireland

VAT compliant E-Invoice processing guaranteed for	All EU countries
Countries with highest E-Invoicing revenues	Ireland UK Germany
Number of employees dedicated to E-Invoicing and directly related offering	29

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	980	20,000
Connected corporate buyers	6,500	10,000
Connected consumers	-	-

Kind of offering	Consolidator Service and SaaS (Software as a Service) Signature Service
Covered processes/messages along the supply chain	Smart Admin for the full trade cycle to include e-Invoicing, e-payments, business process automation, ERP integration, exception handling workflow, dispute resolution, on-boarding, transaction and aggregate reporting, e-document archiving.
Main target market segments	Retail Grocery, Pharmaceutical, FMCG, Agri Foods, Food Manufacturing. Logistics, Travel, Public Sector.
Supported languages (with application/service and the online-help/customer support)	Currently English, with in-house language capability in French, German, Spanish, Czech and Polish.

Celtrino

Celtrino delivers business process and supply chain management solutions, and eInvoicing is a key specialty. With over 20 years of successful trading, Celtrino has consistently delivered outstanding business value to our customers, close on 1,000 companies of all sizes, from multinationals to SMEs.

Central to our continued success is our industry leading Celtrino Platform. The Celtrino Platform comprises a suite of outsourced supply chain management services, each designed to individually save money and improve the effectiveness and efficiency of how companies manage their B2B trading activities. We refer to this optimal way of doing business as Smart Admin™.

Smart Admin™

Smart Admin™ underpins the effective and efficient management of B2B intercompany transactions. The Smart Admin™ opportunity is primarily related to back office activities. It facilitates greater productivity and use of a company's intellectual capital without overloading individual, team or departmental capabilities.

As a pioneer in the provision of outsourced managed EDI services and eInvoicing, Celtrino has long championed and delivered innovative reliable e-services via the cloud. At Celtrino, we are dedicated to harnessing technology developments to economically deliver a secure reliable and integrated suite of feature rich on-demand supply chain solutions.

There is no doubt that the pace of adoption of supply chain business process automation is accelerating across Europe. Celtrino's eInvoicing success stories are well documented and proven. Celtrino also has a clearly stated goal to be the European leader in the delivery of Smart Admin™ trading solutions in the 21st century. We will achieve this goal by leveraging our best-in-class technology, superior talent pool and commitment to customer service.

Next step, contact Celtrino today to speak to one of our Smart Admin specialists and discover how we can help reduce your operating costs and generate more profit for you.

Celtrino, a European leader in the delivery of eInvoicing solutions **now provides a PEPPOL Access Point that enables invoicing of government organisations and institutions across Europe.**

Visit us at www.celtrino.com for contact information.
Optional: Ken Halpin, phone: +353 1 8739900, email: info@celtrino.ie

7.5   Certipost

Headquarters:
Certipost nv/sa
Ninovesteenweg 196
9320 Erembodegem
Belgium

VAT compliant E-Invoice processing guaranteed for	Belgium, The Netherlands, Luxembourg, France, Germany, Spain, Portugal, Italy, Austria, Great Britain, Ireland, Denmark, Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Greece, Cyprus, Malta, Sweden, Finland, Estonia, Latvia, Lithuania, Slovenia
Countries with highest E-Invoicing revenues	Belgium The Netherlands
Number of employees dedicated to E-Invoicing and directly related offering	100+

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	85,000	100,000+
Connected corporate buyers		

Kind of offering	Consolidator Service / Archiving Supplier Portal SaaS (Software as a Service) Self-Service Portal End-to-end business integration services Scan&Capture and Print&Post (hybrid solution)
Covered processes/messages along the supply chain	Supplier Portal (web portal) Outbound Invoicing (paper & electronic) Inbound Invoicing (paper & electronic including self-billing) Web presentment Full Supply Chain Order-Invoice-Payment
Main target market segments	Large & midsized organisations/companies in any industry
Supported languages (with application/service and the online-help/customer support)	Dutch, French, English, German, Italian, Polish, Spanish, Danish, Swedish, Norwegian, Finnish.

YOUR TRUSTED PARTNER FOR THE EFFICIENT, CORRECT & SECURE EXCHANGE OF DATA BETWEEN COMPANIES

Certipost develops end-to-end solutions to manage document flows. It allows organisations to automate their processes, cut costs and be more efficient.

Every day we deliver thousands of invoices, pay slips and other administrative documents to the right person or organisation. The corner stone of our document exchange services is an open platform to which your business partners can be connected quickly and easily.

Outstanding service delivery is our starting point to deal with the complexity of the implementation, integration and deployment of Invoicing (electronic combined with paper) and e-Supply projects.

With **Certipost Inbound Invoicing** you are able to outsource the inbound invoice flow entirely. Labour-intensive and time-consuming activities, such as entering data, making corrections and archiving invoices are a thing of the past. You receive the digital data of both the electronic and paper invoices directly in your ERP or accounting system and the invoices can be automatically entered in your administrative software. Approval and release

for payment require minimal manual intervention.

Why paperless AP with Certipost Inbound Invoicing?
- Receive all your inbound invoices, including paper ones, through one electronic channel;
- Take full advantage of cost savings with paperless invoicing;
- Boost your efficiency thanks to a crystal-clear overview of your inbound invoices.

Certipost Outbound Invoicing completes your electronic flow. It offers a solution to automate your outbound invoicing. Whether you want to deliver your invoices on paper or electronically to your customer, Certipost ensures the distribution in the correct form to the correct customer. Your invoices can be delivered electronically, in a secure mailbox or as digital invoicing data that can be processed directly in the accounting or ERP system. Customers who prefer paper invoices, receive their invoices by post.

Why paperless AR with Certipost Outbound Invoicing?
- Outsource the complexity of different outbound invoice flows;
- Take full advantage of the cost savings associated with paperless invoicing;
- Save time by outsourcing the printing, folding, addressing and stamping.

Certipost, subsidiary of bpost, the Belgian Post Group, was founded in 2002. The company is established in Belgium and is also represented in The Netherlands.

Visit us at www.certipost.com for more information or send a mail to info@certipost.com

7.6   crossinx

Headquarters:
crossinx GmbH
Hanauer Landstr. 521
60386 Frankfurt
Germany

VAT compliant E-Invoice processing guaranteed for	More than 40 countries worldwide, including all European countries and North America.
Countries with highest E-Invoicing revenues	Germany Austria Spain
Number of employees dedicated to E-Invoicing and directly related offering	20

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	3,000 +	200,000 +
Connected corporate buyers	2,000 +	100,000 +
Connected consumers	-	-

Kind of offering	Consolidator and Cloud Service SaaS (Software as a Service) Signature Service
Covered processes/messages along the supply chain	Consolidator and Cloud Service SaaS (Software as a Service) Signature Service Scanning
Main target market segments	Balanced offering for suppliers and buyers in large and mid-sized organizations in any industry
Supported languages (with application/service and the online-help/customer support)	German, English, Spanish, Portuguese, French, Russian, Romanian, Persian, Hurdu

crossinx

crossinx offers a full service worldwide for the exchange of electronic invoices and document based business processes. The company is based in Frankfurt, Germany with subsidiaries in Spain and Moldova and is one of the leading e-Invoicing service providers in Germany and Europe. Customers like Bayer, Beiersdorf, DPD, Enercon, Evonik, Fresenius, Gildemeister and VWR can use the tax compliant services in over 40 countries worldwide.

Modular and carefree services

crossinx uses one of the most secure and scalable platforms based upon the latest technology, which makes the exchange of all financial supply chain documents (invoices, orders, delivery notices etc.) possible without having to change the existing IT infrastructure of the participating business partners.

Small companies without their own IT infrastructure, as well as companies with complex book keeping solutions, can use the crossinx solutions. As part of our service, we manage connection to your accounting and ERP systems, the addressing of business partners, their technical conversion, the securing of an international tax compliant solution, as well as support and operation in several languages.

Our 100% solution covers all aspects for a short term and successful implementation with all your business partners:

- Any format in, any format out
- Manual and automatic data processing
- Content verification of the data
- Electronic signature and verification
- Different options for Archiving
- Scanning

Inbound e-Invoicing
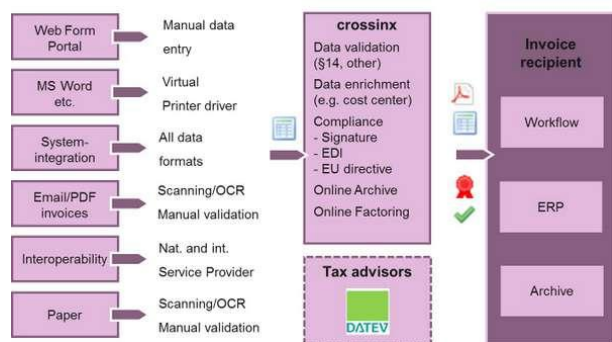
Outbound e-Invoicing
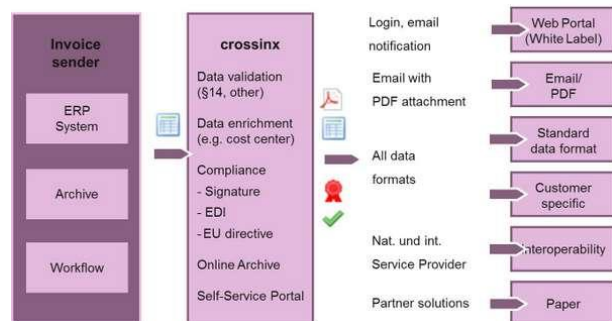
International connections

Our membership in the European Association of e-Invoicing providers "EESPA" and the e-invoice alliance Germany "VeR" allows the interoperability with more than 40 service providers worldwide.

Visit us at www.crossinx.com for more information or contact us directly at info@crossinx.com or +49 69 4800651-0

crossinx.
the international document exchange.

7.7   Esker

Headquarters:
Esker
10 rue des Emeraudes
69006 Lyon
France

VAT compliant E-Invoice processing guaranteed for	More than 40 countries around the world: all European countries, Australia, Canada, Hong Kong, Israel, Liechtenstein, Morocco, New Zealand, Singapore, South Africa, Switzerland, United States.
Countries with highest E-Invoicing revenues	Spain France USA
Number of employees dedicated to E-Invoicing and directly related offering	200

Number of customers	Customers on own platform
Connected suppliers	300
Connected corporate buyers	30,000
Connected consumers	20,000

Kind of offering	Document Process Automation SaaS (Software as a Service)
Covered processes/messages along the supply chain	Sales Order Processing Accounts Receivable (paper and e-invoicing) Accounts Payable
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

ESKER ACCOUNTS RECEIVABLE SOLUTION:
100% AUTOMATION OF CUSTOMER INVOICE DELIVERY WORLDWIDE

Esker is a worldwide leader in document process automation solutions, helping organisations around the globe eliminate paper and improve business processes.

Esker offers a single platform, best-of-suite solution (on-demand and on-premise) to automate any business information exchange. Thousands of Esker solutions enable businesses to significantly reduce costs and document processing time at least 40%, reduce days sales outstanding (DSO), greatly increase competitive advantages, gain valuable and immediate operational efficiencies, and realise measurable ROI in three to six months.

Esker Accounts Receivable cloud-based solution for paper and electronic invoices
Esker Accounts Receivable is the first Software as a Service (SaaS) solution to offer 100% automation of customer invoice delivery worldwide. The Esker AR solution seamlessly integrates with invoicing applications, completely automating the sending and archiving of customer invoices — paper and electronic. Capable of delivering both invoice formats based on customer preference, Esker adapts to customer needs and facilitates the move to e-invoicing on the customer's terms and timeframe. The Esker AR solution complies with tax regulations in over 40 countries applying appropriate signatures, time-stamps and verifications. Esker ensures the integrity and authenticity of each electronic invoice during transmission and archiving.

Network of on-demand mail facilities
Esker processes millions of pieces of mail each month for organisations around the world, making traditional business mail completely electronic for the sender. With this on-demand service, mail is securely submitted to the worldwide network of Esker production facilities where documents are printed, folded, and stamped and put into the postal stream in less than 24 hours. Customers benefit from least cost routing via the facility nearest to the recipient and a significant reduction in mail delivery time. The pay-as-you-go billing model (with no job set-up fee) offers cost predictability and control.

E-invoicing customer success story
After implementing the Esker AR solution to automate invoice delivery, specifically electronic invoices, a large international customer reduced invoice processing time by one-third (from six to two days), and significantly improved its productivity and DSO. More than 20,000 monthly invoices (over 82,000 pages) from 22 subsidiaries are sent automatically from Esker facilities requiring no manual intervention and benefitting from improved invoice tracking and sending guarantees.
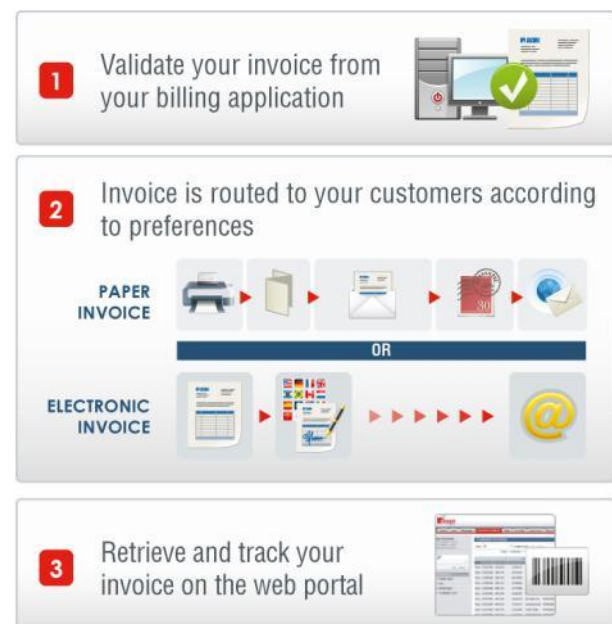
For more information, visit www.esker.com/einvoicing

7.8   **Fundtech FSC Ltd** *(fomerly Accountis Europe Ltd)*

Headquarters:
Fundtech FSC, Parc Menai,
Bangor, Gwynedd, UK LL57 4EZ

VAT compliant E-Invoice processing guaranteed for:	Global capability, experience and coverage including; Austria, Baltics, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK, Israel, USA, Canada, Australia, New Zealand, and APAC.
Countries with highest E-Invoicing revenues:	UK & Ireland, Italy, Germany, Belgium, Netherlands, Spain, France, Denmark.
Number of employees dedicated to E-Invoicing and directly related offering:	75

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers & buyers	Around 300,000 live connected corporate	
Connected consumers	Volumes mostly B2B	

Kind of offering:	- Consolidator service & signature service - SaaS (Software as a Service) or Licensed - White label for corporates and financial institutions - Multiple languages & currencies - Supplier & customer functionality via branded portals - Geographical and numerical visualisation of document data
Covered processes/messages along the supply chain:	E-invoicing, e-billing, integrated payments, mobile, EDI, secure document exchange, customer portals, any-to-any format, e-dunning, print and post, supplier and buyer portals, AP workflow integration, online expense management, global compliance, multi-entity and multi-regional.
Main target market segments:	Balanced offering for suppliers and buyers in any sized company and all vertical market sectors. Direct or white label for corporates and financial institutions.
Supported languages (with application/service and the online-help/customer support):	All major European and character based languages.

INNOVATIVE AND FLEXIBLE EIPP SOLUTIONS FOR ALL ORGANISATIONS ACROSS THE GLOBE

Fundtech is a global leader in the Electronic Invoice Presentment and Payment (EIPP) market. With our Accountis EIPP solution, we offer full Enterprise AP and AR functionality and a comprehensive suite of e-invoicing, invoice automation, procurement, integrated international payments and outsourced scan, print, post and capture services. Our solutions work together to deliver value by improving operational efficiencies, providing compliance and control, and substantially lowering costs and days sales outstanding. The product is multilingual, multicurrency and caters for a global customer base.

Accountis EIPP solutions are available as licensed, hosted, or Software as a Service. They can be deployed as a complete solution or phased in a modular approach. Our innovative and flexible solutions eliminate the most common barriers to e-invoicing entry, such as trading network adoption and technology integration. Users can immediately access our growing **Global E-invoicing Directory of around 300,000** corporate connections, which enables faster rollout across the supply chain. Once enrolled, customers can immediately exchange documents with other businesses in the network. Fully managed, outsourced supplier onboarding capabilities and project management is offered.

Compliant solutions that integrate with existing ERP or invoicing systems. We specialise in delivering bespoke e-invoicing solutions for large organisations with complex processes and high transaction volumes. Use Accountis AR to consolidate invoice data from disparate billing solutions into one manageable location. An ideal service for automating complex billing processes that require additional workflow functionality. Accountis Enterprise AP makes it easy for suppliers to send you e-invoices, and for you to manage your payables process online and drive down costs. Both AR and AP services have robust reporting capabilities that offer a real-time view of all your documents and transactions.

Incorporate invoice capture capabilities from day one. When it comes to the submission of invoices, Fundtech offers a range of options. Users can enable suppliers to login to an E-invoicing Portal to view, file and manage their purchase orders and invoices online. They can also import data from their existing ERP or finance systems or utilise Fundtech's ebPrinter capabilities to send e-invoices directly from their billing system. Fundtech also provides an outsourced scan and capture service for paper invoice management.

Optimise with payments for a complete end-to-end process. Collecting invoice payments online in real-time drastically speeds up the settlement process and helps to improve cashflow. Fundtech operates its own payments platform which processes more than 2 million transactions daily. The platform supports multiple options including: Credit/Debit cards, Direct Debits and Credits (Bacs), SWIFT, CHAPS, online gateways and regional specific payments mechanisms.

Eliminate repetitive tasks and optimise processes with customisable workflow.
Fundtech offers a full range of workflow capabilities. They can include rules-based data or validation, approvals, manual or auto enrichment and supplier and buyer interaction points, query management and outbound data formats. The model supports both fully automated and portal-based supplier/customer interactions.

Visit us at www.accountis.com for more information.
Richard Cogswell, Director of Sales and Marketing.
richard.cogswell@fundtech.com.
Tel: +44 (0)845 120 8050

7.10   GXS

Headquarters:
GXS
9711 Washingtonian Blvd
Gaithersburg, MD 20878
United States of America

VAT compliant E-Invoice processing guaranteed for	Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Liechtenstein, Lithuania, Luxemburg, Mexico, Morocco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, South Africa, Singapore, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.
Countries with highest E-Invoicing revenues	France, Germany, United Kingdom, United States
Number of employees dedicated to E-Invoicing and directly related offering	500

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	400,000	1,000,000+
Connected corporate buyers	40,000	95,000+

Kind of offering	SaaS e-invoicing Consolidator Service; e-Invoicing for Corporates, SMEs and Banks; Saas Procure-to-Pay; SWIFT Service Bureau
Covered processes/messages along the supply chain	Full physical/financial supply chain such as: forecasting, logistics, purchase orders, advance shipping notices, invoices and payments.
Main target market segments	**Large Enterprises** – simple to complex e-invoicing scenarios, such as Direct Store Delivery, Pay on Scan, Consolidated Invoicing. **Banks** – partners with financial institutions to offer e-invoicing solutions, including all above. **SMEs** – cost-effective solutions for SME's to integrate with trading partners.
Supported languages (with application/service and the online-help/customer support)	Czech, English, French, German, Italian, Spanish, Japanese, Korean, Portuguese, Chinese.

GXS

GXS has been offering electronic invoicing solutions globally for 25+ years, originally as an EDI-based service with non-repudiation, guaranteed through the GXS EDI network.

In recent years, new EU tax compliance regulations have emerged which clarified e-invoicing requirements regarding data content, digital signature and archiving. With the growth of SaaS and cloud-based solutions, GXS has introduced regulatory compliance services in the cloud for EDI and digital signatures that supports both the direct and indirect materials markets.

Today, GXS provides e-invoicing services for hundreds of thousands of corporate, SME and banking customers via a wide range of e-invoicing solution options to suit customers varying e-Invoicing needs.

1. **E-Invoicing for Large Enterprises** – Since the early 1980's, GXS has enabled companies to exchange electronic invoices via EDI. Companies create electronic invoices directly from Oracle (Peoplesoft), SAP or other G/L accounting applications and GXS extracts information from enterprise systems, subsequently converting data into the buyer's preferred electronic invoicing format for straight-through processing to their ERP system.

   As of 2001, many countries, particularly in Europe, enacted VAT legislation to regulate electronic invoicing. GXS provides digital signature and EDI services to shield customers from compliance complexity by providing:
   - **Content Validation**
   - **Authenticity and Integrity**
   - **Electronic Archive**
   - **Invoice Image Creation**
   - **Range of B2B Integration Options**
   - **Community Management**

   - **Supply Chain Finance**

2. **E-Invoicing for SMEs** – GXS offers a range of cost-effective connectivity solutions for SMEs to integrate with their trading partners.
   - **Web Connectivity**
   - **Excel-Based Connectivity**
   - **Software and Service Solutions**
   - **A Range of Payment Models**
   e.g free to Supplier, pay-as-you-go

3. **E-Invoicing for Banks –** GXS partners with financial institutions to offer e-invoicing applications, including all the services listed above for Large Enterprises. Several banks white label GXS applications as part of their traditional factoring, supply chain or trade finance offerings.

4. **Procure-to-Pay –** To extend our e-Invoicing services, GXS offers products and services that combine to automate customers' full physical and financial supply chains.

   - **SaaS Application**
   - **Full Service B2B Integration**

Compliant e-Invoicing Options
Ensure your requirements are met

	Data Validation	Authenticity	Integrity	Archive
EDI Network	✓	✓	✓	✓
EDI Compliance Service	✓	✓	✓	✓
Digital Signatures	✓	✓	✓	✓
Other Means	✓	✓	✓	✓

Green : Compliant
Yellow : Compliant, requires scrutiny

Visit GXS at www.gxs.com or www.gxs.eu to contact us and get further information. Also visit www.einvoicingbasics.co.uk for useful information and resources on e-Invoicing,

GXS

7.11   Invoiceware International

Headquarters:
Invoiceware International
Atlanta, GA
USA

International Offices: Brazil, Mexico, Ireland

VAT compliant E-Invoice processing guaranteed for	Brazil, Mexico, Argentina, Columbia, Chile, Guatemala, Costa Rica, EuroZone Excise Tax
Countries with highest E-Invoicing revenues	Brazil Nota Fiscal Mexico SAT Argentina AFIP
Number of employees dedicated to E-Invoicing and directly related offering	~50

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	20,000	200,000
Connected corporate buyers	200	2,000
Connected consumers	n/a	n/a

Kind of offering	SaaS (Software as a Service) Signature Service
Covered processes/messages along the supply chain	Electronic reporting to authorities (customs, tax administration etc.)
Main target market segments	Global companies looking for a single compliance platform for multiple countries: Large suppliers in any industry as well as offering for suppliers and buyers in mid-sized organizations with operations in multiple countries
Supported languages (with application/service and the online-help/customer support)	English, Portuguese, Spanish…

INVOICEWARE INTERNATIONAL

Global Compliance – Simplified

Ensuring compliance with government regulations is becoming increasingly more difficult in a global economy. As organizations look to expand their revenue and customer base into new countries, they face complex requirements that affect not only how they will run their business, but also how they design their IT systems.

Common risks:

- Country mandates are constantly changing (Brazil 2.0, Mexico transitioning to version 3.2 in July 2012)
- Criminal penalties and heavy fines for being out of compliance
- ERP solutions that require massive upgrades, installation of new patches, or even completely new bolt-on software products
- Shipping is stopped or products are confiscated by the government due to the lack of contingency processes
- Local end users are not able to get real time, local language support
- Managing multiple local providers who provide little visibility into their solutions

Company Overview

Invoiceware International operates the Global Compliance Network, a cloud-based platform that delivers financial and supply chain managers the regulatory processes that they need while eliminating ERP configurations and customizations for the IT staff. A single connection to the network, simplifies the mandates, the implementation, and the ongoing change management associated with regulations in the Americas, Europe and Asia, including Brazil Nota Fiscal, Mexico SAT, Argentina AFIP and Europe's Excise Movement & Control System. Invoiceware International is headquartered in Atlanta, Georgia with support centers in Brazil, Mexico and Ireland.

ERP – Rapid Deployment Templates

Compliance mandates, such as those in Brazil, Argentina, and Mexico are complex business processes that require process configurations to the internal ERP system. Unfortunately, this is the most underestimated part of any project. By pre-packaging the solution, integration, and operations for specific ERP systems into Rapid Deployment Templates; Invoiceware International eliminates this burden not just today, but also in the future when changes occur.

SAP ERP Compliance Dashboard for Brazil Nota Fiscal, Mexico SAT, Argentina AFIP

7.12   Itella Information

Headquarters:
Itella Information
Keilaranta 13 A
Espoo
Finland

VAT compliant E-Invoice processing guaranteed for	Finland, Sweden, Denmark, Norway, Germany, Estonia, Lithuania, Latvia, Poland, Slovakia, Czech Republic, Austria, Hungary, The Netherlands, Belgium, France, Italy, Greece, Spain, Portugal
Countries with highest E-Invoicing revenues	Denmark, Estonia, Finland, Germany, Lithuania, Latvia, Norway, Poland, Sweden
Number of employees dedicated to E-Invoicing and directly related offering	2,400

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	15,000	150,000
Connected corporate buyers	10,000	130,000
Connected consumers	300,000	2,500,000

Kind of offering	EU-level Service Provider offering, Consolidator Service and SaaS (Software as a Service), Signature Service
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment and Electronic reporting to authorities (customs, tax administration etc.)
Main target market segments	Midsize and 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)	Always local language

Itella Information – Financial Process Innovation as a Service

Itella Information offers financial process innovation as a service for more than 10,000 customers throughout Europe. For over 20 years Itella has focused on industrializing financial processes offering innovative, smarter solutions with immediate impact.

Based on this profound experience of customer projects, it is easy to predict that a strong focus in eInvoicing will continue to prevail in the market. This demand grows especially in the field of Purchase Invoice Processing where eInvoice can bring up to 80% cost savings.

Itella's roots are in the financial information logistics with vast experience about paper and electronic invoicing processes. Efficient eInvoicing process requires solid data integration between businesses. Data integration is essential to both growth and bottom-line performance, but it is challenging, complex and costly to implement and maintain — especially in today's increasing global reality. At Itella, we provide a unique integration capability and approach that shield this complexity, reduce overall costs, while also improving business performance for our customers and their partners.

Itella eInvoice is a cost-effective way to enhance customer relationship. It is an enabler for higher customer satisfaction and better process quality while lowering the transaction cost.

As the need for eInvoicing will grow further, large buyer organizations will continue putting pressure towards all their suppliers. This need can be met by Itella eInvoice B2B service.

Itella's eInvoice BtoB offers everything as a service:
- Easy service implementation
- Pan-European eInvoice network
- Legal compliancy

Itella Information in a nutshell

Itella Information's solutions improve the overall efficiency of financial and accounting processes. Our service portfolio covers all financial processes from purchase-to-pay to order-to-cash as well as accounting, payroll management and automation of cash flows. Ready-made processes based on best practices are scalable even to full business process outsourcing. Global production process offers automation, shorter turnaround times, decreased working capital and better customer service.

Due to local presence Itella has an excellent knowledge of the European market and financial transactions. Utilizing over 2,400 financial transactions specialists, the company follows international development in financial transactional processes, such as legislation and transfer to using e-services, while acting as a hub for process development and research. Itella ensures improved processes which will produce savings in both money and time.

In 2011 Itella Information acquired OpusCapita, the leading provider of cash flow automation solutions with customers in over 50 countries.

Visit us at www.itella.com/information for contact information.

itella

7.13   OB10

Headquarters:
OB10 Limited
Melbourne House
46 Aldwych
London, WC2B 4LL, UK

Compliant e-Invoicing processing guaranteed for all applicable laws in:	Australia, Austria, Belgium, Bulgaria, Canada, Canary Islands, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malaysia, Mexico, Netherlands, New Zealand, Norway, Philippines, Poland, Portugal, Puerto Rico, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, UK, US
Countries with highest E-Invoicing revenues	UK, US, Netherlands, Germany, Belgium, Canada, Australia, Denmark, France, Ireland, Spain, Italy, Sweden, Switzerland, Poland, Malaysia, Singapore
Number of employees dedicated to E-Invoicing and directly related offering	262

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	Over 100,000	Connected to more than 30 other networks
Connected corporate buyers	250	Connected to more than 30 other networks
Connected consumers	N/A	N/A

Kind of offering	B2B e-Invoicing network, SaaS, supplier enrolment, guaranteed compliance, PO services, archiving, data capture, supply chain financing, dynamic discounting, e-billing
Covered processes/messages along the supply chain	Purchase to pay, accounts payable, accounts receivable
Main target market segments	Large buyers and any sized suppliers
Supported languages (with application/service and the online-help/customer support)	English, French, Spanish, German, Dutch, Portuguese, Italian, Polish. Also Bulgarian, Mandarin, Cantonese, Malay, Hindi for enrolment and support

ACHIEVING 90% E-INVOICING AT GLAXOSMITHKLINE

GlaxoSmithKline (GSK), one of the world's largest pharmaceutical, biological and healthcare companies rolled out e-Invoicing in 2004 with OB10, transforming 60% of its UK invoices to electronic. In 2009, GSK announced plans to significantly increase productivity and reduce costs by 20%, which took e-Invoicing to the next level.

GSK selected OB10 as the most tax-compliant service with guaranteed high levels of supplier participation through its best practice programme management, supplier enrolment and technical implementation.

To achieve its efficiency goals, GSK needed to address the number of paper invoices it still processed and its high volume of supplier enquiries, 70% of which related to outstanding invoices. With a large and valuable supplier base, it is important for GSK to pay invoices on time and to agreed terms.

Focused on the company's savings objectives, GSK worked with Genpact, its BPO partner, to set a target to convert 90% of suppliers to e-Invoicing and increase its purchase order usage. OB10 and GSK developed a programme to encourage suppliers to join OB10. Soon, it was mandatory for all new suppliers to join the network.

Following the success of this campaign, GSK chose to use the OB10 supplier portal for invoice status check, which allows vendors to see the status of their invoices. It also selected PO convert to make it easy for suppliers to turn purchase orders directly into invoices.

To take its e-Invoice volumes to 90%, OB10 helped GSK develop and deliver communications to its targeted suppliers while its multinational enrolment team brought them onto the network.

Initial take up was impressive with 85% of the targeted volumes converting to electronic. GSK also saw improvements in data accuracy as non-compliant invoices are rejected for the supplier to correct and resubmit.

Ten months after introducing invoice status check and PO convert, GSK measured a 50% reduction in supplier calls to the response centre as they could now see their invoice status on the portal. Also, 50% of suppliers were converting their POs into invoices making the process simpler. In addition, suppliers were also benefitting from 95% of GSK's invoices via OB10 being paid on time.

This successful project exceeded GSK's original target to reach 90% e-Invoicing.

OB10: the most trusted e-Invoicing network
We deliver transformational e-Invoicing to 48% of the Fortune 500 through our compliant technology, proven processes and innovative service models. Work with OB10:

- Over 11 years' knowledge, data, best practices and innovation
- Trusted by the world's leading companies to deliver e-Invoicing
- Solutions for 100% of your invoices
- Flexible technology so you join once and connect to all your relevant buyers and suppliers
- Specialist skills and experience among our dedicated e-Invoicing experts
- Global capabilities, and legal and tax compliance as standard

Visit www.ob10.com for more information.

Contact: Andrew Hamilton, Head of EU Marketing,
+44 20 7632 5832,
andrew.hamilton@ob10.com

7.14   Pagero

Headquarters:
Pagero
Box 110006
SE-404 21 Gothenburg
Sweden

VAT compliant E-Invoice processing guaranteed for	Australia, Austria, Belgium, Bulgaria, Canada, Chile, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Morocco, Netherlands, New Zeeland, Norway, Poland, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, USA
Countries with highest E-Invoicing revenues	Sweden, Norway, Finland, Denmark, Germany, UK
Number of employees dedicated to E-Invoicing and directly related offering	86

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	5,000	100,000+
Connected corporate buyers	8,000	100,000+
Connected consumers	Launch Q3-2012	n/a

Kind of offering	Cloud based business network to communicate digital business messages.
Covered processes/messages along the supply chain	P2P and O2C/e-invoice, e-order, e-payment.
Main target market segments	Large, medium and small companies and organisations (tier 1, 2 and 3).
Supported languages (with application/service and the online-help/customer support)	English, Swedish, Norwegian, Danish and Finnish.

PAGERO – YOUR FINANCIAL SUPPLY CHAIN NETWORK

Pagero Online – Cloud Based Business Network

Pagero Online is a state of the art business network with a many-to-many architecture, which enables companies/organizations of all sizes to easily, securely and digitally communicate with all their suppliers and buyers, regardless of volume, location and financial/ERP/Workflow system. All communication is performed on one common platform: Pagero Online.

Pagero Online offers cloud based services such as e-invoice, e-order and e-payment. Each of these services are offered together with a number of value added services which in different ways increase efficiency and control. Examples of value added services for e-invoicing are content validation, content enrichment, e-netting, digital signature, e-print, invoice scanning, e-archive, e-factoring and extended reports.

Security and Integrity
All handling of data traffic has to be based on high security and data integrity levels. Pagero Online is built to provide the same security level as bank systems and all data is encrypted wall to wall. We also have built an extensive receipt handling function to ensure delivery.

Touchless Processes™
All our services are based on our concept Touchless processes™, where we analyze data and/or combinations of data to achieve our customers' goal of a process with minimum human involvement. We achieve the goals by combining value added services, like verification, enrichment and master data handling. Pagero has global customers reaching over 70% touchless operations by leveraging the power of Pagero's services and our Touchless processes™ approach.

Reach
To offer global reach, Pagero Online is also connected to a large group of other professional operators worldwide. With Pagero e-business locator, our customers can search and add business partners in Pagero Online, including our extended partner network, without the need for intervention by Pagero.

Glocal Service and Support
When delivering a global cloud based service, local support and multilingualism is a prerequisite for success. Not everybody speaks and understands English and the way of doing business varies from country to country regardless if the service is accessible from anywhere via the cloud. For this reason, Pagero acknowledges the importance of offering glocal service and support. Pagero Online is configured to support local business and administrative praxis. In addition, we offer multilingual support from one centralized hub covering Europe and North America.

Visit us at www.pagero.com for contact information.
Contact: Jonas Edlund, Vice President Marketing & Alliances, jonas.edlund@pagero.com

7.15   Pitney Bowes Management Services (PBMS)

Worldwide headquarters:
Stamford (CT) – USA

European Headquarters:
Pitney Bowes Management Services
Leavesden Park
Watford
United Kingdom

VAT compliant E-Invoice processing guaranteed for	27 EU countries + Norway, Iceland, Isle of Man, Switzerland, Liechtenstein North America: USA, Canada Asia: Hong-Kong, Singapore / Africa: Morocco, South Africa Middle East: Israel Australia, New Zealand
Countries with highest E-Invoicing revenues	Germany France Italy
Number of employees dedicated to E-Invoicing and directly related offering	150

Number of customers	Network of reachable partners	
Connected suppliers	450,000 connected partners amongst them 100,000 exchange e-invoices	
Connected corporate buyers		
Connected consumers	-	-

Kind of offering	AP/AR Optimisation Services consisting of: Intelligent digitisation e-invoicing AP/ e-Billing AR – SAAS model workflow e-archiving on-boarding (suppliers + customers) Transactional Print/Mail
Covered processes/messages along the supply chain	AP/AR end to end processes for various messages: Offer, Order, Order Confirmation, Delivery Note, Invoice, Credit Note, Reminder.
Main target market segments	Large organizations along with their business partners of all sizes via an attractive SME on-boarding business model.
Supported languages (with application/service and the online-help/customer support)	English, German, French, Italian, Dutch, Spanish, Portuguese (supported by PB being present in 130 countries).

PBMS: AP/AR OPTIMISATION SERVICES: WHY WILL THEY HELP YOU?

Our services ensure the efficient and effective straight-through sending, delivery and management of physical and electronic documents associated with Purchase-to-Pay and Order-to-Cash processes.

Our clients are able to improve the speed, quality, cost and control of their P2P and O2C document management processes by instantly removing the internal handling costs of paper documents and migrating communications to digital channels over time.

The solution foundation is a modular, multi-channel document processing platform, deployed globally as a service, that:

- Consolidates inbound supplier invoices and related communications – be they paper, email or EDI – and delivers images and decision ready data to your financial systems
- Takes your system outputs and generates your branded outbound multi-channel customer invoices and other communications

The platform components include:

FirstPass™ Hub; A standard interface to manage two-way communications and actionable data flows in and out of client IT systems. The highly scalable FirstPass™ Hub can:
- Efficiently manage low volume, ad-hoc and high volume multi-channel communications irrespective of document type, format or channel.
- Easily consolidate multiple data flows and deliver validated, actionable data and images directly into client ERP systems.

- Effectively create standardised, accessible process KPI information and reporting.
- Efficiently manage process administration allowing senders and receivers to define the format, channel and required delivery address for documents and actionable data.

Intelligent Digitisation Services that automatically recognise, capture and index multi-page invoices and other documents.

A global network of **Document Solution Centres;** automated document factories capable of fulfilling any physical communication requirements.

FirstPass™ connector; a simple but clever piece of software installed like a standard printer driver that enables direct electronic data transmission, via the FirstPass™ Hub, between the document sender and receiver.

Multi-lingual **On-Boarding services** designed to ensure effective adoption of our FirstPass™ Connector by your business partners.

Market leading workflow and electronic records management modules can be also added to deliver further process improvements.

In Summary
- ✓ One platform to manage two-way communications in P2P and O2C processes
- ✓ Any document, any format, any channel
- ✓ Automated, intelligent data capture
- ✓ Delivers images and actionable data
- ✓ Highly scalable: SMEs or Corporates
- ✓ Delivered as a service
- ✓ International coverage

Visit us at www.straightthroughbusiness.com for further service or contact information.

Pitney Bowes

7.16   PostFinance

Swiss Post
PostFinance
Nordring 8
CH-3030 Berne
Switzerland

VAT-compliant processing of E-bills is supported for the   Switzerland
following countries

Countries where we achieve the greatest turnover with E-bills   Switzerland

Number of employees mainly working for our E-bill offer and   20
directly associated subjects

Number of customers	Customers directly on our platform	Customers on partner platforms with whom E-bills can be exchanged as well via interconnection/roaming (estimate)
Billers	800	1,000+
Payers (companies, administration)	700	1,000+
Payers (private)	180,000	500,000+

Type of the offer   Consolidated network and signature service

Supported processes and messages   Ordering, billing/crediting, payment, archiving

Our most important market segments   Billers/payers of all industries, independently
                                                     of size

Supported languages (in the user interface of   English, German, French, Italian
the programme or service and by customer
support)

PostFinance – The right E-billing provider

PostFinance is the right E-billing provider for SMB as well as for large companies. Electronic exchange of bills reduces the administrative expenses, lowers costs and offers billers and payers only benefits.

At 2.7 million customers, PostFinance is now the fourth-largest financial institution in Switzerland. A pioneer in the E-billing area, PostFinance is able to look back onto ten years of experience and offers its business customers a number of solutions for debtor/creditor management.

PostFinance is the exclusive E-Government E-billing provider of the Swiss Confederation. Large companies like SBB or Post, as well as small operations may use the numerous benefits of E-billing due to the intense cooperation of PostFinance with software providers and other solutions

The first EBPP product in 2001

The original B2C solution was introduced after a pilot test at the end of 2001. In 2005, PostFinance expanded the service to ensure VAT-compatibility. The path for B2B processes was prepared.

Solutions can be combined

The E-billing solution by PostFinance is an industry-independent comprehensive platform that can be used no matter the size of a company. Private persons or small companies may use the system as part of their online banking for making payments. For larger companies, we offer fully integrated solutions.

Core services of E-invoicing by PostFinance:

- Conversion of data into the format desired by the recipient
- Data processing in compliance with the law
- Generation, auditing and logging of the digital signature
- Data transfer

Price information, customer lists and technical interface documentation are available at www.postfinance.ch/e-bill only.

Benefits of E-billing for B2B	
For billers	**For payers**
Reduced payment periods and faster payment receipt	No manual recording of invoice contents
High data quality (no ESR-research)	All bills are available at all times
Increasing customer demands are met and customer loyalty is increased	Automation of bill processing
Reduction of paper archives	Payments through established processes
Simple traceability of actions	Simple traceability of actions
Reduction of print, postage and process costs	Cost savings of up to 12 Euro per bill

Contact us non-committally: Phone 0848 848 848
E-Mail e-rechnung@postfinance.ch | www.postfinance.ch

PostFinance
Surpassing support.

7.17   Ricoh

European Headquarters: **RICOH**
Ricoh Europe PLC
20 Triton Street
London NW1 3BF
United Kingdom

VAT compliant E-Invoice processing guaranteed for	Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Liechtenstein, Luxembourg, Mexico, Morocco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America
Countries with highest E-Invoicing revenues	Netherlands, France, Spain, UK
Number of employees dedicated to E-Invoicing and directly related offering	200

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers & buyers	1,500,000	
Connected consumers	16,000,000	

|	
Kind of offering	i-Invoicing (Intelligent Invoicing) is a fully managed service, allowing organisations to outsource the processing of all paper and electronic AR and AP invoices to Ricoh whilst enjoying the all the benefits of invoicing electronically. Ricoh will facilitate the gradual migration of your buyers and suppliers from paper to electronic at their own speed.
Covered processes/messages along the supply chain	End-to-end Accounts Payables and Accounts Receivables
Main target market segments	Large and medium companies and public sector.
Accreditation	Ricoh has ISO27001 accreditation globally – the leading standard for Information Security
Supported languages (with application/service and the online-help/customer support)	All local languages

ISO27001 - IS85241

Ricoh's i-Invoicing Managed Service
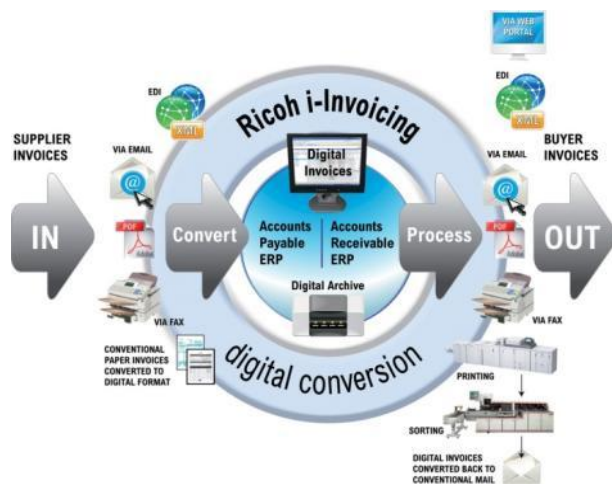
Electronic invoicing at your own pace
Despite the clear benefits of e-Invoicing, not everybody is ready to send and receive invoices electronically. Ricoh's Intelligent Invoicing (i-Invoicing) managed service offers the ideal solution. We take care of all formats of invoices, we complete the digital capture and processing, enabling you to receive and send inbound and outbound invoices electronically. You can receive all the benefits of invoicing electronically now, and your customers/ buyers and suppliers can continue to invoice in whichever format suits them (EDI, eMail, PDF or paper). We will then work with you to migrate customers/buyers and suppliers to e-invoicing at their own pace.

Accounts Payables
Invoices come in from your suppliers via EDI, email, PDF, fax and on paper. Ricoh receives these invoices and completes the data extraction. We then validate the data and convert it into an SAP table, for example, or whichever format will seamlessly integrate with your ERP system. You don't have to worry which format the original invoice is in, as you will receive all invoices electronically.

Accounts Receivables (AR)
For AR, we operate the reverse process: We take a data feed directly from your ERP system, and depending on your customer/buyer's preference, we can then either put their invoice into a portal and send them an email link so they can download their invoice, send the invoice data via EDI, in an email or as a PDF attachment to an email or indeed we can print it and send it in the traditional mail. Electronic invoices can be dispatched with electronic signatures to ensure complete regulatory compliance.

EMEA Network for faster delivery
With over 150 service delivery centres across Europe, Ricoh's network gives our customers unparalleled access to local output capability. By working with Ricoh, paper invoices can get into the hands of your customers up to 2-days earlier, or more, as a result of printing invoices in the country where your customer/buyer is located, and that's in addition to the substantial postal savings.

Information security – ISO27001
All invoices are stored in the digital archive, which meets the toughest information security standards as well as the needs of local legislation with regards storage. Ricoh is the only organisation in this field to have the ISO27001 Accreditation globally, the leading Information Security standard.

Low cost of deployment
As a managed service, Ricoh's i-Invoicing can replace your manual processes without the need for capital investment. Ricoh has already invested in state of the art infrastructure which is SAS70 compliant and you simply pay for what you use.

Global solutions, delivered locally
Ricoh is a Fortune Global 500 company specialising in technology and services that transform high volume, document intensive business processes into more efficient ones With our extensive direct global organisation, we can reach 95% of Fortune Global 500 company employees worldwide.

See www.ricoh-europe.com/i-invoicing

RICOH

7.18   SIX Paynet

Headquarters:
SIX Paynet Ltd
Hardturmstrasse 201
P.O. Box
8021 Zurich
Switzerland

VAT compliant E-Invoice processing guaranteed for	Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Morocco, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States of America
Countries with highest E-Invoicing revenues	Switzerland
Number of employees dedicated to E-Invoicing and directly related offering	30

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	Information is not published	Information is not published
Connected corporate buyers	Information is not published	Information is not published
Connected consumers	500,000+ (February 2012)	180,000 (February 2012)

Kind of offering	Consolidator services in B2B and B2C (signature, verification, archiving, interconnect etc.)
Covered processes/messages along the supply chain	Full Supply Chain Order-Invoice-Payment
Main target market segments	Balanced offering for senders and recipients in all industries in large, mid-sized and small organizations
Supported languages (with application/service and the online-help/customer support)	German, French, Italian and English

SIX Paynet – Your e-invoicing partner for Switzerland

With its PayNet service, SIX Paynet operates the largest Swiss network for the transmission of VAT-compliant, signed, electronic bills in both the Business to Business and Business to Consumer areas. Among the Swiss pioneers, SIX Paynet has taken the lead in developing e-invoicing in Switzerland. SIX Paynet offers e-billing solutions to banks as customer service providers as well as to billers and customers directly.

E-bills in e-banking

More than 90 Swiss banks are connected to the PayNet network and enable their e-banking customers to receive, check and pay e-bills directly via e-banking. At least 98% of all e-banking customers in Switzerland have access to this bill presentment and payment method, more than 500,000 e-banking customers were signed up for e-bill with SIX Paynet at the end of 2011. Most large companies and increasing numbers of smaller companies in all industries offer e-bill to their customers. One hundred new billers were connected to the PayNet network in 2011 alone. With its "E-bill Business Package", SIX Paynet offers companies that pay their bills via e-banking an all-in-one solution for VAT-compliant electronic bill receipt via e-banking, including electronic archiving.

E-bills in accounting systems/ERP

In the Business to Business area, SIX Paynet has developed a large network with participants from all major industries. Billers send invoices electronically to PayNet, where the data is verified, electronically signed and sent to the recipient. Though SIX Paynet's offer is industry neutral, it also has thorough know-how in specific industries including commerce, healthcare and utilities. The SIX Paynet service range also includes cross-border e-bill processing and interconnect services.

Large partner network

SIX Paynet works closely with numerous software partners offering standardized interfaces to the PayNet platform, as well as with well-known network partners offering service that are downstream or upstream from the billing processes.

About SIX

SIX Paynet is a SIX company and part of the SIX Payment Services Division. SIX operates the competitive infrastructure underpinning the Swiss financial center, catering to an ever increasing global client base. Its business fields provide infrastructure services relating to securities trading, securities clearing and settlement, payment transfers and financial information. SIX is owned by approximately 150 domestic and foreign banks, which are also its customers.

Contact :

Phone : +41 58 399 9511
E-mail : infocenter@paynet.ch

www.six-paynet.com

7.19   Striata Limited

Headquarters:
88 Kingsway
London
United Kingdom

Push Email Billing specialists focusing on B2C and B2SME	UK, Europe, US, Canada, South America, Africa, Asia, Australia.
Number of employees dedicated to eBilling	100+
Number of customers:	250+
Number of eBills delivered per annum	30 million
Service delivery offering	SaaS (Software as a Service) Deployed Solution
Document security options	Secure PDF (128bit RC4 / 256bit AES) Striata Encrypted (168 Triple Des)
Main target markets	Banks – eStatements and eDocuments Insurance – ePolicies & eDocuments Telcos – eBill delivery Utilities – eBill delivery Retailers – Loyalty Statements
Supported data formats	Multi-layer PDF documents Embedded data file Structured XML, CSV
Supported languages (with application/service and the online-help/customer support)	Platform – English (emails & documents can be in any language)

Striata is a global electronic communications specialist with over a decade of experience.

Striata's enterprise platform, strategy and support services:
- drive significant paper suppression
- deliver ongoing cost savings
- accelerate payments
- enhance the customer experience
- enable regulatory compliance

Our comprehensive solutions expand the digital dialogue through personalised customer lifecycle messaging, retail receipts, notifications and alerts.

We have operations in New York, London, Brussels, Johannesburg, Hong Kong, Sydney and partners in North and South America, Europe and Asia Pacific.

STRIATA DRIVES PAPERLESS ADOPTION FOR B2C AND B2SME USING PDF AS THE FORMAT AND EMAIL AS THE TRANSPORT LAYER

Electronic document delivery dramatically increases customer adoption of paperless bills, statements, policies, marketing and other high volume system-generated documents. The world's largest financial services, utility, insurance, retail and telecommunications companies achieve unrivalled results by replacing print and mail with Striata's interactive electronic documents and messages.

'Push' eBilling drives paperless adoption

'Push' email billing solutions produce triple the adoption of paperless processes when compared to web portals – the proof is in the adoption statistics. Similarly, the most logical choice for eInvoicing for SMEs is to utilise a multi-layered PDF as the format and email as the transport layer.

Why PDF is the ideal format for eBilling

Accepted standard for the exchange of documents between different parties

PDF is the perfect format for statements, bills, policies and other documents that can be dematerialised and delivered over email. It provides the option of password security and can also include electronic consent, making the move to paperless easy and seamless.

Multi-layered for presentation & data

PDFs can include a data layer or an embedded data file with relative ease. The recipient can extract the data into their accounting system or open it in their chosen tool for editing and manipulation.

Forms facilitate payment & feedback

PDF technology also allows the embedded data to be combined with user input and then reposted back to a server for processing. This is the same process that facilitates Striata's 'One-Click' bill payment directly from within the email or mobile bill, which speeds up payments and reduces debtors days.

Driving paperless adoption

Delivering a PDF document by email allows it to be forwarded immediately; electronically saved; backed up and printed if required. This makes the transition to a paperless environment less daunting to new users and drives acceptance of the new process.

Facilitates portal registration

A secure PDF process facilitates website and portal registration through trusted links that complement online portals. A single sign on to the portal enables access to self service and account history, which maximises customer convenience.

eConsent splash pages can streamline the on-boarding process

PDF documents also enable the acceptance and storage of electronic consent. Multiple layers in the PDF allow the user to be presented with a 'splash' page that requires their consent before viewing the actual document. In this way, the requesting, gaining and storing of the electronic consent is all handled as part of a seamless customer experience.

Visit us at www.striata.com for more information.
UK & Europe: Eric Darling, info@eu.striata.com

STRIATA

7.20   Syncada from Visa

European Headquarters:
Syncada Europe
De Kleetlaan 5B/5C
1831 Diegem
Belgium

VAT compliant e-invoice processing guaranteed for	All European countries, Mexico, Canada, Norway, Switzerland.
Countries where Syncada is active	USA, Canada, EU, Norway, Switzerland, Mexico, Japan, and Singapore
Annual value of invoices processed electronically and paid	USD 21+ billion
Annual value of invoices financed	USD 10.7 billion
Number of employees	600

Number of customers	
Connected suppliers	12,000+
Connected corporate buyers	200+

Kind of offering	E-invoice processing, financing, and payments network. Invoice auditing, online collaboration between trading partners and business intelligence.
Covered processes/messages along the supply chain	End to end global financial supply chain solution. Converts all invoices to electronic data to facilitate automated processing, financing and payment of invoices.
Main target market segments	Large and midsize buyers and their suppliers.
Supported languages (with application/service and the online-help/customer support)	Arabic, Cantonese, Czech, Dutch, English, French, German, Greek Hebrew, Hungarian, Italian, Mandarin Chinese, Polish, Portuguese, Romanian, Russian Spanish, Turkish
Currency Support	USD, GBP, EUR, CZK, DKK, NOK, SEK, PLN, CHF, SGD, HKD, CAD, HUF, CHF Additional currencies can be added as needed.

COST REDUCTION, PROCESS AUTO-MATION AND THE SIMPLIFICATION OF E-INVOICING WITH SYNCADA FROM VISA

Syncada from Visa partners with banks around the globe to offer a business-to-business invoice processing, financing, and payments network. Syncada provides commercial and government buyers a solution that includes e-invoicing, auditing, collaborative exception resolution, financing and payment. When required, Syncada can convert paper invoices to electronic data.

Syncada's e-invoice solution includes:

Invoice processing

Invoice financing

Invoice payment

RESULTS YOU CAN EXPECT FROM THE SYNCADA NETWORK:

Both buyers and sellers maximize operational cost savings and improve working capital with this easily implemented solution that has the option to integrate with EIPP and ERP systems.
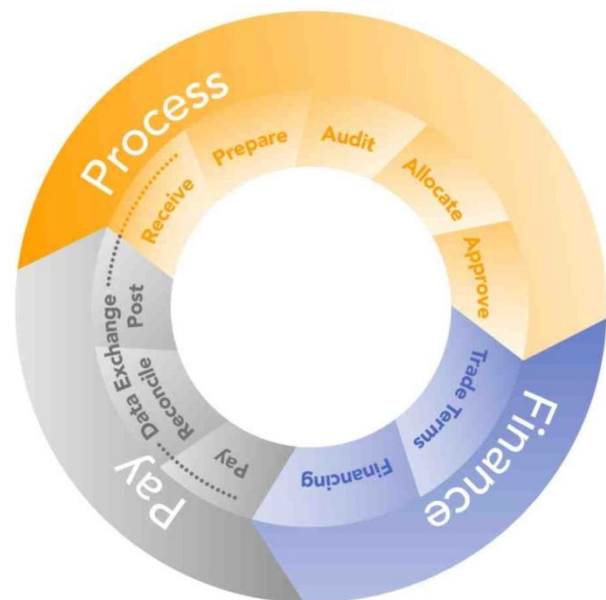
This illustration shows the invoice lifecycle. **Process:** Elimination of manual activities via e-invoicing automation reduces operational costs. Paper invoices are converted to electronic data. Electronic audit of invoices and automated contract price validation improves accuracy and reduces under-billing saving more. Trading partners can begin collaborating online to resolve any discrepancies.

Finance: Trade financing through a trusted bank allows suppliers to be paid within 3 days of invoice approval while the buyer doesn't pay until trade terms. This improves control over cash flow and working capital of both parties.

Pay: Get control of the entire financial supply chain. Real-time online visibility to e-invoice status facilitates collaboration for buyers and suppliers, decreases errors and allows trading partners to resolve differences. Corporate compliance tools ensure that payment does not go to parties on international restricted payment lists.

"Syncada's strategy is based on providing a common link between buyers and suppliers through a collaborative platform." Cedric Bru, Global Head of Sales, Marketing and Business Development.

Visit us at www.Syncada.com for case studies on how Syncada customers have successfully implemented e-invoicing, industry analyst white papers and a graphic video of how the network can work for you.

Or call us at +32 (0)2 708 88 76

SYNCADA/from Visa

7.21   Taulia Inc.

Headquarters:
100 Pine Street
San Francisco, USA

VAT compliant E-Invoice processing guaranteed for:	Australia, Austria, Belgium, Bulgaria, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Morocco, New Zealand, Norway, Poland, Portugal, Romania, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, The Netherlands, United Kingdom, United States
Countries with highest E-Invoicing revenues	N/A, E-invoicing is provided free of charge.
Number of employees dedicated to E-Invoicing and directly related offering	60+

Metrics	Jan '12
Spend on Platform	EUR 45B*
Monthly Growth in On-boarded Suppliers	22%
Supplier Distribution	50+ Countries, 280+ Industries

* Spend in 25 currencies converted into Euro.

|	
Kind of offering	Dynamic Discounting Platform including: 100% free, compliant E-Invoicing Certified SAP Add-On (buyer side) SaaS (Software as a Service) Vendor Portal Open API (invoice submission and more)
Covered processes/messages along the supply chain	Encompasses order-to-payment process: Free electronic invoicing in various formats PO delivery, ASN, PO confirmations Payment remittance Address, bank account, tax ID changes Dispute messaging
Main target market segments	Large Global 2000 buying organizations and their entire supply-bases, regardless of size. Strong demand seen in: Utilities, Healthcare and Pharmaceutical, Manufacturing, Automotive, Technology, Retail & Services.
Supported languages (with application/service and the online-help/customer support)	Support teams in Europe & US. 13 Languages including English (US), English (UK), French, Italian, Spanish, German, Portuguese, Dutch, Cantonese, Swedish, Polish.

ELECTRONIC INVOICING ENABLES DYNAMIC DISCOUNTING

Taulia provides the only SAP®-certified Software-as-a-Service (SaaS) platform spanning Dynamic Discounting, supply chain finance and e-invoicing. It enables large procurement organizations to automate and scale payment discounts to 100% of their supply base. For accounts payable, the Invoicement Suite eliminates non-productive tasks by providing suppliers with comprehensive self-services and free compliant e-invoicing.

Dynamic Discounting
The Taulia dynamic discounting platform enables buyer organizations to move suppliers from traditional payment terms, such as: "Net 45" or "2% 10,Net 30," to a sliding scale discount. Suppliers elect to receive early payment on approved invoices in return for a dynamically calculated discount corresponding to the sliding scale. Taulia enables buyers to offer on-demand dynamic discounting to all their suppliers.
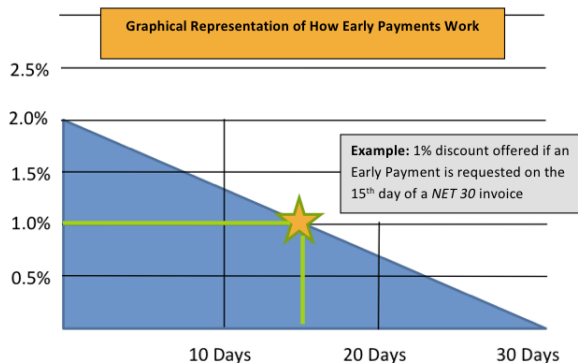
Buyers are enabled with comprehensive supplier selection and segmentation criteria as well as advanced terms and discount rates management. Suppliers can be parsed into "Early Payment Groups" and offered different interest rates, including daily-fluctuating interest rates.

Solution
The Taulia Invoicement® Suite consists of a SaaS platform and a certified SAP Add-On. The certified SAP Add-On is easily and quickly installed into the buyer's SAP system and provides secure, quasi real-time

connectivity to the SaaS platform out-of-the-box. This combination provides rapid time to value with minimal resource requirements from the buyer's IT department with no change to the buyer's existing business processes.

Electronic Invoicing
Electronic invoicing is a significant enabler of supplier adoption. Once suppliers are enrolled, they have access to powerful free e-Invoicing, compliant in 40+ countries. Suppliers may submit invoices electronically by manually submitting an invoice via the portal, converting purchase orders into invoices, EDI, or uploading invoices in various formats – using a mapping engine that allows Taulia's solution to "learn" the supplier's data format.

Taulia's e-invoice technology is characterized by complete openness and interoperability. Suppliers already connected to other e-invoicing networks, can submit e-invoices to any buying organization connected to the Taulia SaaS platform, without charge.

Supplier Recruitment
Taulia's commitment to free supplier access, free e-invoicing, and powerful cash management tools, has made the solution very attractive to suppliers. In addition, effective supplier communication and outbound messaging result in very strong supplier adoption rates. The value to the supplier is further enhanced by providing access to all historic transactions and the ability to receive remittance information.

Cash Management
Taulia's solution provides cash management capabilities to both the buyer and the supplier. The buyer has full control and flexibility for specifying liquidity limits for the program, setting rates and segmenting suppliers based on various criteria. Taulia consults with buyers to help them segment current suppliers and set rates using current and past spend, plus other relevant criteria.

Visit us at www.taulia.com for contact information.

7.22   Tieto

Headquarters:
Tieto Corporation
Aku Korhosen tie 2-6
FI-00440 Helsinki
Finland

VAT compliant E-Invoice processing guaranteed for	Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Australia, Canada, Israel, Hong Kong, Morocco, New Zealand, Singapore, South Africa, United States
Countries with highest E-Invoicing revenues	Finland Sweden Czech Republic
Number of employees dedicated to E-Invoicing and directly related offering	166

Number of customers	Customers on own platform	Customers on partner platforms, reached via interconnection & roaming (Estimate)
Connected suppliers	2,000	191,000
Connected corporate buyers	1,700	123,000
Connected consumers	170,000	1,120,000

Kind of offering	Consolidator service, Portals, Tax & legal compliance services, Invoice visualization, Presentment, Archiving, White label services for sales partnerships, Printing and scanning for 100% coverage; SWIFT e-invoicing access; Trading partner activation
Covered processes/messages along the supply chain	Full supply chain order-invoice-payment for buyers and suppliers, Electronic reporting to authorities, SWIFT Service Bureau
Main target market segments	Balanced offering for suppliers and buyers in all industries and organization sizes, Co-operation with banks in SME sector and consumer services
Supported languages (with application/service and the online-help/customer support)	English, Finnish, Swedish, German, Dutch, Czech, Russian, other languages on request

TIETO – LEADING WITH EXPERTISE

Tieto provides IT, R&D and consulting services. With approximately 18 000 employees, we are one of the top IT service companies in Northern Europe and the global leader in selected segments. Our extensive infrastructure, which includes 20 000 servers and the services of 4 300 dedicated employees worldwide, allows us to offer superior data center services.

We are also a leading business integration service provider in Europe with more than 200 integration experts in the Finland, Sweden, the Netherlands, Czech Republic, India, Russia and Belarus. Our business-to-business (B2B) transaction volumes are 2 million daily.

E-invoicing and the financial value chain

E-invoicing is part of our business information exchange offering, which includes also e-trade and financial messaging, which includes SWIFT Service Bureau for payments covering 8 500 financial institutions in 210 countries.

E-invoicing services include file/message exchange, internet portals, international invoicing in 40 countries, invoice visualization with attachments, targeted customer communications, presentment and archiving.

Community management services enable customers to reach their trading partners. This includes activation campaign management and onboarding of new trading partners, managing existing trading partner relationships and interoperability with other service providers.

Tieto and its customers have received a raft of international awards for e-invoicing and business integration services. The latest acknowledgments are Leaders in Innovation awards from Financial-I magazine (January 9th, 2012) in E-invoicing and SWIFT Corporate Access. Tieto also is rated in Gartner's Magic Quad-rant for Integration Service Providers.

Tieto's representative is the member of executive committee in European e-invoicing service provider association (EESPA), the convenor in ISO20022 Trade Services and active participation in CEN.
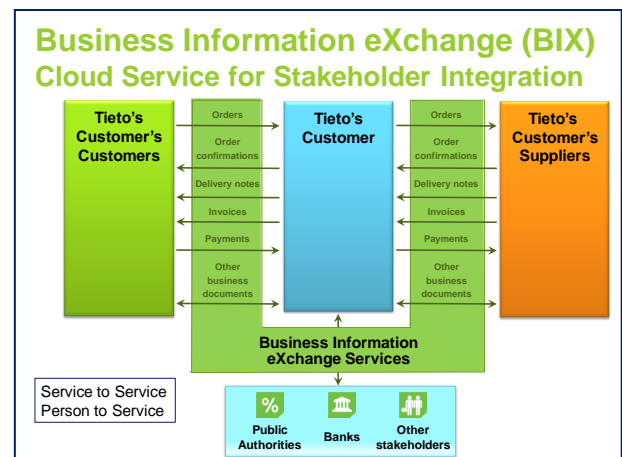
Our customers can get:

- True Purchase-to-Pay & Order-to-Cash capabilities
- Full-functionality with an on-demand service platform, easy implementation and no maintenance
- Trading partner onboarding
- Customer centric solutions
- Extensive international functionality and large-scale service provision experience
- Cost savings though automation, process streamlining, faster process execution and improved information quality

Visit us at www.tieto.com/bix for more information.

Contact Tieto

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8. Appendix A: Law and regulations

8.1 Legal acceptance of electronic invoices

Almost all countries on the world, except some ones in Africa and Asia, accept correctly processed & archived electronic invoices as originals. Therefore, from the legal point of view, there is no longer any reason to wait with an E-Invoicing project.

Only where E-Invoicing is an in-house development do users have to invest a significant amount of time and money in further legal analysis. That is why the author recommends either purchasing existing solutions or using third party services compliant with law and legislation in all countries where your trading parties are located. Experienced providers of such solutions and services will be able to inform you in more detail about the legal requirements. The following chapters will give just a brief overview for readers interested in a generic overview.

For detailed questions, the author recommends to investigate the sources as mentioned in appendix B or a discussion with your solution/service provider.

8.2 Minimum legal requirements

The legal framework of most countries includes these mandatory rules for the tax compliance of electronic invoices
- Authenticity of origin
- Integrity of the content
- Legibility (until the end of the period for storage)

These main requirements can be fulfilled with
- Digital signatures (advanced or qualified)
- EDI method with Point-to-Point security: Secure platforms (e.g. VAN) and processes among supplier and buyer
- Business Controls: Control systems of business processes on supplier and buyer side; Audit trails for two or three way matching (invoice authenticity/integrity with contract, order, delivery and/or payment data); Components of an audit trail include source records, list of transactions processed and transaction identifiers so that reference can be made to the source of the transaction.

Many countries describe rules regarding the human- and machine-readability of E-Invoices and mandatory invoice content (typical in EU member states 12-15 fields are mandatory), format, archiving and auditing. Other rules can be defined if third party service providers are acting on behalf of invoice issuers and recipients. If not stated in the original law text of any country, it is quite often described in complementary side letters.

8.3 Electronic invoice transport/processing and archiving by third parties

The EU Directive allows outsourcing of tax-relevant functions to third parties. This gives issuers and recipients of electronic invoices the opportunity to offload technical and legal complexity to experienced service providers. They then act in the name of and on behalf of the issuer/recipient. Such services can include data conversion from source to target format, digitally signing and verifying, validating invoice content, exchanges between issuer and recipient, archiving data on behalf of users, etc.

Outsourcing of tax-relevant functions never changes the fact that the parties to the underlying sales transaction are accountable to the tax authorities.

In many countries, restrictions are in place regarding the location for the archiving of E-Invoices. This is of special interest, if cloud computing is the base for archiving. Cloud computing is a very young technology. It is for sure not the objective of legislators to prohibit the usage of cloud computing, but the legislation is lagging behind the practice. Enterprises in EU member states are advised to ensure, that archiving services by third parties are done in private clouds within EU member states [6]. It likely takes several years, until the legislation will allow invoice archiving in the public and global cloud.

8.4 Procedure description

Most country regulations require a document describing the environment, the end-to-end electronic invoice transport, processing and storage. It has to include all relevant information about
- Flow of invoices & related documents
- Manual and automated process steps
- IT and communication environment, interfaces, database
- Procedures for guaranteeing invoice integrity
- How the validity of signatures is verified

Procedure description plays also a major role for users practicing the EDI method and "other electronic means".

8.5 Legislation in move

8.5.1 World splits into two groups regarding legal requirements

In the early days of E-Invoicing, legislators assumed that risk of fraud with electronic methods would be higher[4] than with paper invoices. That is why E-Invoicing legislation is stricter than for paper invoices almost everywhere on the world. These high requirements are seen as a necessity by one group and as a barrier by the other. For several years, a weighty discussion has been in progress: Should paper-based and electronic invoices be treated equally in law or not? This discussion is erroneously often reduced to the question of whether the digital signature for E-Invoices should be pushed or avoided.

Latin America and Asia have a clear preference for prior validation mechanisms by tax authorities before issuing an E-Invoice. There are no indications that the legislations in these countries will push the equal treatment method.

The VAT and tax system in the US is quite different to the European system [7]. For this reason, legal requirements for electronic invoices are lower compared to countries with the classical VAT system. Although digital signatures do not play the same role for invoice exchanges among businesses, the usage is rising for other reasons. An increasing number of E-Invoices are digitally signed by companies internally. This is for fulfilling other legal requirements, especially the Sarbanes-Oxley Act.

The author estimates that 55% of B2B E-Invoices in Europe are currently exchanged & archived by using the signature method, 40% are based on the EDI method and 5% on the equal treatment

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[4] This assumption is meanwhile proved to be clearly unfounded. Several European tax authorities confirmed in 2011 to the author, that E-Invoicing is either neutral or has a positive impact to reduce tax evasion.

method. Equal treatment is currently mainly used in smaller European countries. Other EU member states have to change their national legislation to permit the equal treatment method after January 1st 2013. The signature and EDI method will furthermore remain permitted.

8.5.2 Objectives and status of legal changes in the European Union

8.5.2.1 Objectives

Rules and regulations about E-Invoicing and E-Archiving are relatively young. In addition, new technologies generate further possibilities for electronic processing. Due to globalisation, cross-border exchange for tax-relevant business documents (e.g. E-Invoices) plays an increasing role. European and national governments intend to remove legal barriers to reduce administrative burdens. These are reasons why the legislation around E-Invoicing is currently on the move.

In 2010, the Council of the European Union adopted VAT Directive No. 2010/45/EU, which amends Directive 2006/112/EC to simplify invoicing requirements. Some articles refer to E-Invoicing. Member States have to bring their national legislation in line with the new provisions by 1 January 2013. The objective of this activity is to reduce administrative burdens for businesses [8][9].

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 the taxable person deems suitable, among which
    - A business audit trail, which creates a reliable audit trail between an invoice and a supply of goods or services.
    - an advanced electronic signature based on a qualified certificate and created by a secure signature creation device
    - Electronic data interchange (EDI)
- However, taxable persons should not be required to use any particular electronic invoicing technology.
- 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 where the supplier is established.
- Rules concerning the storage of invoices are determined by the Member State where the taxpayer is established.

8.5.2.2 Status

The legislation in some European countries already supports the Equal Treatment method to some extent and for domestic invoices, e.g. Belgium, Denmark, Estonia, Finland, Germany, Norway, Poland, Sweden, The Netherlands and The United Kingdom.

For cross-border exchanges, requirements are higher and use of the signature or EDI method is common.

8.5.2.3 Outlook

Once the national legislation is in place, businesses can choose among three options:
- Signature
- EDI
- Business Controls / Equal Treatment

Defining the legal pre-requisites for Equal Treatment in EU member states is one part; the practical use afterwards is another. A weighty discussion is in progress as to if and how the new option should be used in the future.

8.6 Which method is appropriate for organisations in the European Union?

After January 1st 2013, E-Invoicing users may choose which of the three methods (signature, EDI or business control) they want to apply. At the time of writing this report, just a minority of EU member states already adopted the VAT Directive No. 2010/45/EU into their national legislation. That makes it difficult to give good advice as to which method should be preferred. It is anyway not the intention of the author to validate the different methods. However, many interested organisations feel lost with the bulk of contradictory market information and I get quite a high number of requests from unsure organisations. The situation of each enterprise is different and close reasoning is required, considering the divergent environment of each individual. A holistic view should not only consider one's own environment for the next 3 years, but also include that of the trading parties (suppliers, customers).

Figure 55: Appropriate methods to ensure tax compliance in the European Union

Method	Circumstances to apply
Digital Signature	- Organisation is already practising it. - The major trading parties are demanding this method (probable in case of larger customers outside the Nordic countries). - You have to use the electronic signature anyway for other reasons, which might be - Participation in public tenders, requiring e-Signature for the registration process and to sign the tender letter, and hopefully the contract. - The electronic invoice is the basis for a bank guarantee[5] to fund your supplies. - For whatever reason, you have to follow the US Sarbanne Oxley Act (e.g. be a branch of an US company or have a branch there) and decided to fulfil that requirement with e-Signatures. - Organisation is mainly using a service of an E-Invoicing network, which likely digitally signs all invoices anyway per default.
EDI	- Organisation is already practising it. - The major trading parties are demanding this method (high probability in industries like retail, automotive, transport etc.).
Business Control	- The circumstances mentioned for the two methods above are not relevant in your case. - Your organization already exchanges electronic invoice data, but does not yet fulfil tax compliance in light of the current legislation.

[5] The bank has likely just a view on your isolated invoice message but not other related documents. Therefore it might ask for a tax compliant electronic invoice original.

Method	Circumstances to apply
	• Exchange of PDF invoices with smaller trading parties without ERP or advanced accounting systems. • If you concluded that this method was cheaper than the others were.

Numerous publications for the new method based on business controls are expected in 2012. This is especially valid on the European scale with the European Commission [8] and CEN Workshop on E-Invoicing [9]. It will also be a major topic in the agenda of the international E-Invoicing congress [E] and the newsletter [C] will provide updates.

9. Appendix B: Glossary, Sources

9.1 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 56: Glossary

AR	Accounts Receivable
AP	Accounts Payable
B2B Invoices	In this report: Includes all tax compliant invoices to corporate as well as to the public sector
Bill	Includes all categories of bills sent to consumers (B2C/G2C)
Consolidator	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", "network operator" or "supplier network" are more common.
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.
Invoice	Includes in this report all categories of invoices: B2B, B2C, B2G
Order-to-Cash	Supplier perspective for the processes order-delivery-invoicing-payment
Purchase-to-Pay	Buyer perspective for the processes order-delivery-invoicing-payment
Issuer	Invoice issuer, Supplier, Biller

SME	Small and Medium sized Enterprise
Recipient	Buyer, Customer; The individual or organization that will receive the invoice

9.2 Sources

Figure 57: Key sources used in this report

Ref	Document and/or hyperlink	Date or version
[1]	ibi research 2011: Elektronische Rechnungsabwicklung – einfach, effizient, sicher – Teil III: Fakten aus der Unternehmenspraxis www.elektronische-rechnungsabwicklung.de	2011
[2]	Politecnico di Milano, Alessandro Perego, Presentation "Process Optimization and Saving Potential with e-Invoicing" at the EXPP Summit in Munich/Germany	October 2010
[3]	AddValue / Itella, "Invoicing in 16 European countries"	2010
[4]	AMETIC/everis, "Las Tecnologías de la Información y las Comunicaciones en la empresa española 2011"	March 2012
[5]	The Austrian Federal Economic Chamber, "Ergebnisbericht E-Billing"	2011
[6]	T. Brand / I. Geis / S. Gross / B. Lindgens / B. Zöller, "Steuersicher archivieren" (Tax compliant archiving), ISBN 978-3-8349-2237-3	2011
[7]	EXPP Summit: PayStream Advisors, 2011 North American eInvoice Outlook - The Billion Dollar Opportunity	September 2011
[8]	European Commission – Information Society http://ec.europa.eu/internal_market/payments/einvoicing/index_en.htm	2012
[9]	CEN, eInvoicing SME enablement – Version 1.8 CEN Workshop on eInvoicing http://www.cen.eu/CEN/sectors/sectors/isss/activity/Pages/einvoicing_2.aspx	2012
[10]	Helsinki School of Economics, „Electronic Invoicing Initiatives in Finland and in the European Union"	2008, B-95
[11]	Demica, "Growth Trends in Supply Chain Finance – The view of Europe's Top40 Banks"	October 2011
[12]	Billentis, Nutzenpotenziale der E-Rechnung http://wko.at/e-rechnung	October 2011

Ref	Document and/or hyperlink	Date or version
[13]	PEPPOL, http://www.peppol.eu/	2012
[14]	Elkelä Kari, Sähköinen kuluttajalaskutus Suomessa (Electronic consumer billing in Finland)	2011
[15]	Eficiencia y Evasión http://www.econlink.com.ar/impuestos-distorsivos-iva/eficiencia-evasion	February 2012
[16]	Billentis Report: E-Invoicing / E-Billing in Europe and abroad	March 2011
[17]	Tools and ROI calculators: Industry portal with numerous tools in several languages http://www.einvoicingtoolbox.com/ Fachhochschule Nordwestschweiz (in German only) http://www.swissdigin.ch/apps/swissdigin.nsf/de/ressourcen_recommend Politecnico di Milano (in Italian only) http://www.osservatori.net/fatturazione_elettronica_e_dematerializzazione/qrat	March 2012
[18]	Australian Business Register http://www.abr.business.gov.au/	March 2012
[19]	EXPP Summit: SAT, Fernando Martínez Coss, E-Invoicing in Mexico Newton Oller de Mello, E-Invoice in Brazil - 90% Market Penetration	September 2011
[20]	European E-Invoicing Service Providers Association http://www.eespa.eu/	March 2012
[21]	The Association for Electronic Invoicing www.e-invoice-alliance.de	March 2012
[22]	European Commission, Fighting late payments http://ec.europa.eu/enterprise/policies/single-market-goods/fighting-late-payments/index_en.htm	March 2012

Figure 58: Other interesting sources & literature

Ref	Document and/or hyperlink
[A]	Some news portals, blog platforms and checklists for E-Invoicing and related topics http://boharald.blogspot.com http://www.cxofeed.com http://eeiplatform.com http://www.epractice.eu/en/news http://inza.wordpress.com/category/factura-electronica http://purchasinginsight.com http://realtimeeconomy.net http://www.paystreamvoices.com/ http://e-szamla.lap.hu
[B]	Some portals mainly with a geographical focus Europe and beyond http://www.e-invoice-gateway.net Austria http://wko.at/e-rechnung Brazil http://www.nfe.fazenda.gov.br/portal/principal.aspx Finland http://www.tieke.fi Germany www.e-invoice-alliance.de Norway / Nordic countries http://www.b2bconnect.no Spain http://www.facturae.es Switzerland www.swissdigin.ch, http://www.e-rechnung.admin.ch/
[C]	Free Newsletter of the report author with international market news: http://www.expp-summit.com/subscribenow.htm
[D]	Leading E-Invoicing solution and service providers: http://www.expp-summit.com/whoiswho.htm
[E]	Annual international E-Invoicing Congress: www.expp-summit.com
[F]	Ing. Mario Augusto Fernández, "Facturación electrónica", Overview about Latin American countries, 2010, ISBN 9781452832265