Tax-compliant global electronic invoice lifecycle management

White paper, March 2013

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IMPORTANT LEGAL NOTICE

Foreword

Dear reader,

I am pleased to sign the foreword of this 2013 edition of this TrustWeaver compendium of e-invoicing facts and figures. Although it feels like yesterday, the previous version was dated October 2011. The intervening period has been one of change in many ways: Europe anticipated –and finally implemented– a new legal regime while other geographies have either introduced e-invoicing frameworks or perfected existing ones. A comprehensive white paper such as this one is immensely useful as a reference work containing much of today's wisdom on e-invoicing in a single document, but it is also a snapshot in time. As such, it cannot fully do justice to the change which is still more rule than exception in the world of electronic invoicing. Therefore, I recommend you use this white paper as a way to understand history and take stock of where things are at across the globe, but also continue to pay attention to the updates I and other analysts in this space regularly produce and share.

There are many things that can be said about the current state of electronic invoicing worldwide, but one thing is for sure: it is an unstoppable force that is slowly transforming administrative automation for businesses and governments alike. My foreword in 2011 still addressed the then-current misunderstanding that e-invoicing was merely nascent and not yet ready for mainstream adoption. There is no longer any need for explaining this to business executives. If e-invoicing adoption still does not meet the ambitions of politicians and trade facilitators, it is often due to unclear legal rules or lack of government promotion.

There is still much to be done to pass this critical frontier to a real-time economy. The good news is that there is a growing group of advisers and service providers that understand both the big picture and the country-specific details sufficiently to enable any enterprise to launch into electronic invoicing without any hesitation. Costs are in all cases a fraction of the savings you can make with going paperless. If you choose a solution from a responsible vendor, the risks are lower than with paper invoicing.

I hope this white paper will help the reader navigate the electronic invoicing universe, and that as such it contributes to accelerated uptake of compliant and cost-effective electronic invoicing.

Bruno Koch
Billentis

1 Introduction

This white paper is meant for tax and invoice process managers who need to take critical investment or design decisions for the cost-effective compliance of an e-invoicing system. Vendors of software or services facilitating the issuing, receipt or archiving of invoices can also benefit from this white paper. While this document aims to avoid tax, legal and IT technical jargon and abbreviations without prior explanation, some basic knowledge of business processes, typical legal structures of multinational companies, business information systems, tax compliance and Internet-related technologies is required.

This document does not provide a comprehensive inventory or interpretation of legal requirements in the countries addressed; rather, general information is provided on readiness and regulatory approach to e-invoicing as a first outline that users and vendors might need to judge the feasibility of exchanging invoices electronically within or with these geographies.

Readers who are interested in a shorter overview are referred to the executive summary in section 3.

2 Terminology

This document uses the term Value-Added Tax (VAT) to describe the category of consumption taxes that most frequently include specific requirements for electronic invoices or invoicing generally. This often includes consumption taxes such as Goods and Services Tax (GST). We do not enter into the general tax-technical differences between VAT and such similar types of taxation.

3 Executive summary

Converting paper-based invoice flows to electronic channels is an efficient way to cut costs and enhance supply chain integration. However, most countries require invoices to be processed and stored in such a way as to enable tax authorities to determine, even many years later, that they are the exact same invoices as issued, by an identifiable source, at the time of the transaction.

Electronic invoicing (e-invoicing) is the sending, receipt and storage of invoices in electronic format without the use of paper invoices for tax compliance or evidence purposes. Scanning incoming paper invoices, or exchanging electronic invoice messages in parallel to paper-based originals is not e-invoicing from a legal perspective.

Tax authorities generally reserve the right to audit taxpayers. Most organizations that are liable to pay VAT will be audited with a certain frequency. Tax audits may focus on formal (were specific legal requirements e.g. in relation to the invoice document met?) and material aspects (e.g. does the invoice refer to a real business transaction?) of compliance. Tax audits mean real people assessing real compliance, far away from the realm of politics and formal law.

While audit practices around paper invoices can to a certain extent rely on the intrinsic features of a physical object, electronic invoices are by definition impalpable. Moreover, many tax administrations consider that the undeniable benefits –to businesses and tax administrations alike– of well-controlled electronic invoicing are matched by an equally increased risk of undetected and larger-scale mistakes or fraud where business controls are substandard or not easily auditable. Many countries therefore offer taxable persons a number of defined ways in which companies can ensure adequate invoice auditability and legal recognition of digital invoices.

Different regulatory models are emerging around the world. Given the significant differences in approach across countries worldwide, one should not have too many illusions about the potential for global harmonization or even coordination. The two regulatory models that are currently the most in use are *ex-post* audit systems and transaction pre-approval (real-time reporting audit) systems.

– ***Ex post* audit systems** (which are found in e.g. the European Union) generally have few or no specific requirements on the way e-invoices are exchanged, but taxable persons must be able to prove the integrity and authenticity of invoices for, on average, seven years after the invoice was issued or booked. Naturally, invoices must also be intelligible to the tax administration. Some countries have very prescriptive requirements, ranging from a choice among legally defined auditability methodologies to a single method to be implemented by all. Other countries leave the way in which e-invoice auditability is guaranteed free for taxable persons to choose themselves.

  Even in countries with *ex post* audit regimes that do not have prescriptive requirements around the form of invoices or the method by which they are created or exchanged, it is important to remember that the invoice is often the ultimate and sometimes the only transaction proof companies have. Freedom of choice does not mean a weakening of the requirements for proving integrity and authenticity, or that such requirements no longer apply to *all* mandatory elements of an invoice: it means taxable persons can choose *how* to comply. In all cases, evidence of integrity and authenticity of all mandatory components of an invoice must be maintained during the mandatory archiving period – and there is no such thing as partial evidence.

  Companies that fail to meet prescriptive formal requirements or that do not otherwise maintain proper evidence of their invoices can build up significant risks of tax sanctions including fines and the possibility of buyers losing their right to deduct (or having to repay –with interest– already deducted) VAT, which averages 20% of the transaction value[1].

  The cost of an evidence deficit or scattered, hard to retrieve evidence is often underestimated or not even measured. Just in the area of VAT compliance, the costs of complicating an audit (e.g. internal and external expert support, document rooms, system access and general process interruption) can be substantial. Reducing the risk of audit intrusion by ensuring high standards of unequivocally recognized digital evidence across the extended enterprise can bring significant savings and gives companies certainty that they will not find themselves with several years' worth of tax risk on their books.

  Most companies want to be as certain as possible that a tax audit performed in, say, 6 years from now at a trading partner or a subsidiary can be quick and clean to avoid tax risks including: protracted audits, trading partner audits, lengthy mutual assistance procedures between tax administrations from different countries, administrative fines, loss of right to deduct VAT, and having to pay VAT over fraudulent invoices. If a transaction is deemed non-compliant for VAT purposes because the veracity of an invoice cannot be established, this can generate important spillover effects into other areas of tax and accounting compliance – for

[1] The EU average standard VAT rate is just over 20%.

example, it may undermine the credibility of a company's annual accounts or deductible expenses under corporate income tax. These risks typically lead companies to adopt a low-risk strategy for tax compliance.

- **Real-time reporting audit systems** (which can be found in e.g. Latin America and Russia) are very different from *ex post* audit systems. In real-time reporting audit systems, the legal life cycle of an e-invoice is typically comprehensively regulated. The tax administration directly intervenes in the process by requiring e-invoice data to be submitted (directly or through approved service providers) to and pre-approved by their services. There is a simple recipe for compliance in countries with real-time audit regimes: follow the rules that are, in most cases, clearly presented by the tax administration.

  In most cases, the real-time audit rules include using specific electronic signature-based submission and approval processes. The extensive use of electronic signature technologies in such countries makes it possible to use a single platform for compliance across *ex post* and real-time audit systems.

4 The opportunity

The Internet has created expectations of a friction-free future in which more business processes can be automated more cost-effectively. Many larger companies are now seizing the opportunity to streamline their business-to-business (B2B) processes and consolidate data flows. While most B2B messaging – such as purchase orders and delivery confirmations – can easily be automated, companies have been reluctant to embark on paperless invoicing. This has been partially due to interoperability and security concerns, but the greatest obstacle has been legal uncertainty. After all, the invoice is not just an important document in the business process and the principal input to most companies' accounts; it is also essential in governments' collection of VAT– important sources of revenue for many countries. Non-compliance with VAT requirements can lead to significant financial penalties and other sanctions.

Figure 1: massive paper archives - a thing of the past?

Recent progress in the areas of interoperability, security and legal requirements has, however, brought paperless invoicing within reach for most businesses. Many countries today accept –and a growing number of countries legally require– electronic invoices for tax purposes, provided certain legal conditions are met. New technologies and services have emerged to enable such compliance without compromising business processes. Many companies now seek to implement compliant e-invoicing on the back of existing B2B strategies. Significant benefits are immediately available for companies that can avoid the twin pitfalls of over-simplification and over-complexity.

In addition to significant environmental and macro-economic benefits, e-invoicing provides many direct advantages to businesses:

- *65% reduction of per-invoice costs, which can range from 0.35 to 60 USD*
- *Better spend analysis, leading to a 1.3% to 5.5% spend reduction*
- *Enhanced contract performance analysis*

- *Better track/enforce internal and trading partner compliance with commercial terms and objectives*
- *Error reduction and faster error correction*
- *Improved dispute handling and avoidance*
- *Better trading partner relationships*
- *Opportunity to realize more supplier rebates/discounts*
- *Instant on-screen search and auditability of invoices with unprecedented levels of integrity and authenticity guarantees*
- *Provision of better data for regulatory compliance in adjacent fields, e.g. corporate governance and supply chain traceability*

5 Value-Added Tax (VAT) basics

This section presents a basic overview of VAT, how it works and what it represents to governments. These basics are not intended for tax experts.

The form, content and/or method of creating or exchanging invoices are often regulated because invoices are the prime source of audit for VAT. VAT was first introduced in the 1950s and quickly spread throughout European and other countries.

There are no global rules or even any attempts at creating global rules for VAT. The EU VAT system is the closest any region has come to a harmonized VAT system, but even in the EU rules are notoriously complex and diverse.

The basic principle of VAT is that the government gets a percentage of the value added at each step of an economic chain, which ends with the consumption of the goods or services by an individual. While VAT is levied until that end consumer, only businesses can deduct their input tax. Therefore, VAT requirements concerning invoices ordinarily only apply between businesses.

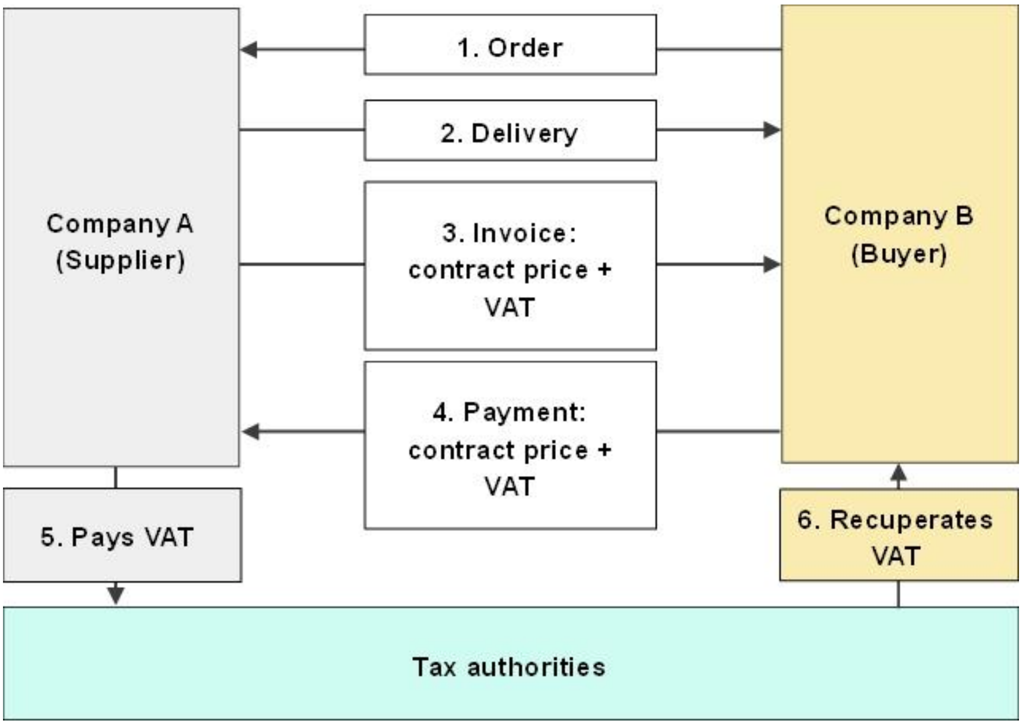


Figure 2: High-level VAT collection process

6 VAT compliance, your business

VAT as a tax method essentially turns private companies into tax collectors. The role of the taxpayer in assessing the tax is critical, which is why these taxes are sometimes referred to as “self-assessment taxes”. The proper functioning of VAT depends on companies meeting public law obligations right inside their sales, purchase and general business operations. The shorthand “VAT compliance” is often heard to describe these tax obligations as a whole, but they break down into a number of quite separate types of requirements:

- A tax administration must be able to verify that invoices they audit are real and unchanged; therefore the **integrity and authenticity** of invoices must be guaranteed. These qualities must be verifiable from the moment of issue of an invoice until the end of the mandatory archiving period.
- A tax administration must be able to interpret invoices they audit: the **legibility** of invoices must be guaranteed.
- To confirm that VAT has been correctly administered, reported and paid, a tax administration must be able to verify the nature of the supply, the consideration (fee) and relevant business terms of the transaction; therefore the **content** of an invoice must meet certain minimum criteria.

The perfect law or enforcement method for ensuring VAT invoicing compliance has not been created yet – most likely it never will. In the past decades, rules and enforcement practices have evolved in step with the evolution in business practices. Regulatory changes typically try to balance the state’s need to maximize tax revenue against the need to minimize the impact on diverse and constantly evolving business practices.

OECD statistics reveal why VAT is such a serious matter: revenue from VAT usually represents a significant portion of state income. Figure 3 shows Goods and Services (taxes) (read: VAT in relevant countries) as a portion of total tax revenue in OECD countries, which in turn represent more than a third of GDP.

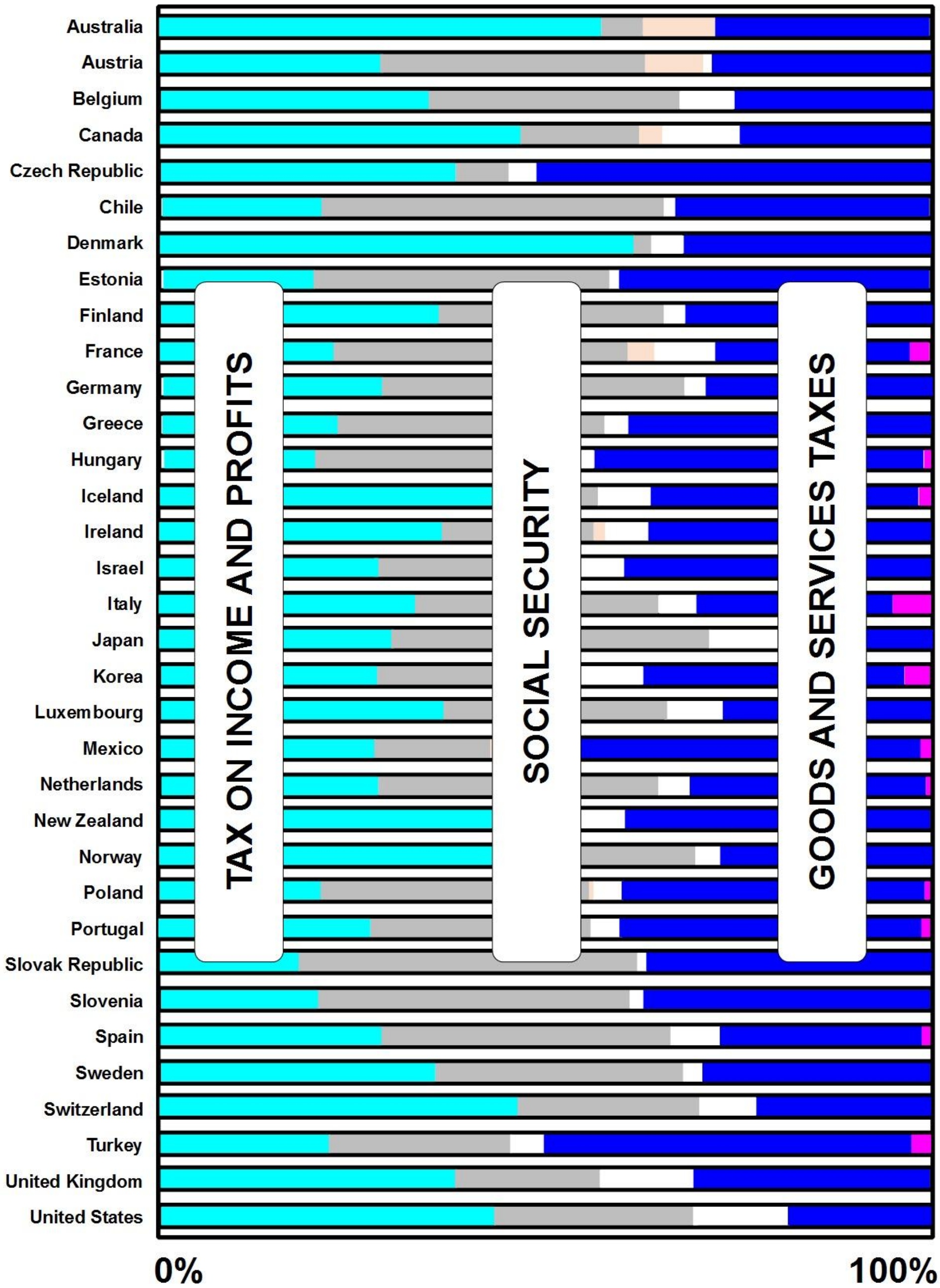


Figure 3: tax revenue in OECD countries (source OECD 2010). Goods and Services Taxes income represents predominantly VAT (except e.g. USA where it represents sales tax)

Tax laws that impose specific requirements on the form or method of invoicing attract more attention than those that leave businesses more freedom. However, regulatory approaches differ significantly among geographies and it would be a big mistake for any company to worry about e-invoicing auditability and controls only in countries with explicit requirements. Indeed, most countries that have relatively little legislation about the method or form to be used in e-invoicing are still very serious about the need for proper evidence in case of an audit. The bottom line in an e-invoice process design should therefore be to achieve not only compliance with explicit requirements but also –and perhaps more importantly– to provide excellent auditability for any tax administration in any country.

Some –but unfortunately still relatively few– tax administrations now publish public versions of their tax audit guidelines. While every tax authority's audit practices are influenced by local specifics, including local tax law, there is a great deal of similarity as regards the basic conditions for a successful tax audit.

Tax auditors are people with by definition limited means to determine in as cost-effective a manner as possible whether a company complies with legal requirements. Tax audit is concerned with real-life evidence of compliance, which, contrary to political statements that may lead companies to believe that a country has a "liberal" regime as regards legal compliance, is by definition binary: either it is credible or it is not. There is no such thing as partial evidence. Therefore, while frequency, techniques and tools for audit can differ from country to country, in the end an audit is about real evidence that can be comprehended by real people.

A common objective of tax audits (especially when the primary audit purpose is VAT compliance) is to verify that transactions recorded in a company's books actually took place. The extent to which the invoice is viewed as the sole or primary information platform in this context varies from country to country, but it is generally true that a well-managed invoicing process and archive, including credible evidence of integrity and authenticity of invoices during the storage period, can be a determining factor in a strategy to keep audit time and compliance risks to a minimum. Enabling tax authorities to easily ascertain the trustworthiness of stored invoices can therefore be a key strategy for rolling out low-risk electronic invoicing across an extended enterprise or service environment.

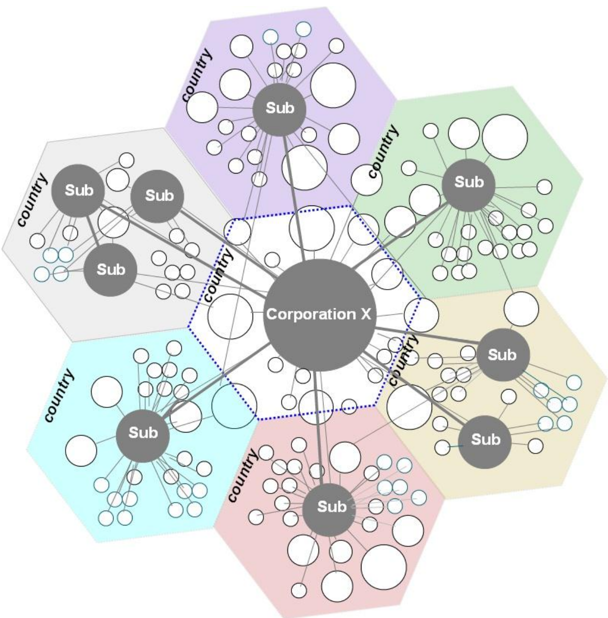


Figure 4: a typical transaction environment for an international company. Some 5-25% of invoices are cross-border, the rest are multi-domestic; however many corporations increasingly manage invoice flows from one or a few central locations. Managing technical and process changes in such a way as to ensure historical auditability across heterogeneous trading relationships requires a single robust auditability strategy.

The design of an e-invoicing system that adopts this low-risk strategy should always keep in mind that multiple legal entities (subsidiaries and trading partners, whether customers or suppliers) will need to rely on the evidence level of invoices produced in the system for a long time. An evidence strategy should also take into account the fact that trading partners may range from very large to very small, and that each trading partner must ensure long-term evidence regardless of its size. Another factor to take into account is the many changes that evidence related to an invoice is subjected to during its legal life cycle: the average storage period for invoices in countries with VAT is 7 years –

a period during which many companies change staff, processes, systems, legal structure, physical establishment, production, distribution and management several times.

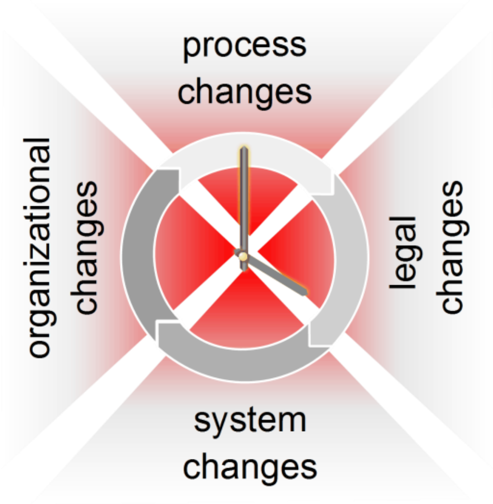


Figure 5: Principal categories of changes that affect a company's evidence position during the legal life cycle of an e-invoice.

It is not particularly challenging for most companies to prove the veracity of an invoice from days, weeks or even months ago: the overall administrative control environment and many elements of the sales or purchase process (physical elements, warehouse data, trade documents etc.) will still be demonstrably in place. However, such circumstantial evidence often erodes with time; what is “obvious” trading context one day is quickly forgotten in today’s fast paced business environment. Change is systemic in most modern enterprises:

- Legal structures vary due to M&A activity, reorganizations etc.
- Processes are adjusted constantly as trading partners, production methods etc. evolve.
- Legal requirements (tax, commercial law, corporate governance, privacy etc.) are continuously modified in increasingly complex and interdependent national and international policy processes.
- Information systems are subject to perpetual change with tactical software updates, hardware and operational adjustments as well as large-scale strategic overhauls becoming more and frequent in response to very rapid advances in information and communication technologies.

The consequences of non-compliance with VAT requirements can be significant. As a result, most companies want to be as certain as possible that a tax audit performed in, say, 6 years from now at a trading partner or a subsidiary can be quick and clean to avoid risks including:

- **Protracted audits** – audits should generally take only a few days but many companies are audited for weeks or even months. This eats up precious expert resources and creates risks of more processes and documents being scrutinized and, potentially, found flawed or lacking.
- **Spillover effects into other areas of taxation or accounting**: once a tax administration has established that a sales transaction cannot be evidenced, a company may also face sanctions in other areas of taxation. For example, non-recognition of an invoice for tax purposes may *undermine the credibility of a company’s annual accounts* or deductible expenses under corporate income tax.

- **Trading partner audits** – the tax administration may have no choice but to verify the records and original documents of the audited company's trading partners. This can negatively affect a company's relationship with business partners.
- **Mutual assistance procedures** – auditors may need to call on their counterparts from other countries to obtain evidence about certain aspects of the company's operations. Such procedures tend to be long and can tie up expensive expert resources within a company for months or even years.
- **Administrative fines** – if a company cannot prove the veracity of invoices, it may be fined. Trading partners who have been drawn into an audit that leads to this conclusion may also be penalized.
- **Loss of right to deduct VAT** – A company that does not have sufficient evidence of purchases – that cannot prove it was in control of its processes at the time of the transactions – may need to pay back input VAT it reclaimed on such purchases. With an average VAT rate of 20%, this means a high risk of that company retroactively losing more than its profit margin.
- **Obligation to pay VAT over fraudulent invoices** – If a fraudster can easily forge invoices that are not reasonably distinguishable from a supplier's normal invoices, a tax administration that has no credible evidence to the contrary may consider such invoices to have been issued by that supplier's invoices and claim VAT if the buyer reclaimed the corresponding VAT.

7 Types of VAT law enforcement

Traditionally, countries with VAT have placed the emphasis of law enforcement on the *ex post* (after the fact) audit. In most such circumstances, actual audits generally take place with a low frequency. Consequently, evidence must be provided for supplies from (many) years ago.

Only recently have tax administrations started experimenting with different methods for enforcing VAT law. In the Netherlands and Australia, for example, a voluntary partnership model is proposed to certain companies with the aim of building a transparent trusted relationship that reduces the potential for friction. The feasibility to set up such *ex ante* (in advance) programs and their effectiveness depend on cultural factors; it is unlikely that a partnership model will be viewed as meaningful in countries that traditionally have a tougher tax culture or high levels of evasion or fraud.

A different, more technology-oriented and control-focused model based on real-time reporting audit has been introduced in a number of countries. Chile and Brazil were among the first to experiment with such a model, albeit in very different ways; meanwhile, several countries are implementing variations on the real-time reporting audit model. These efforts almost always go together with the introduction of –often compulsory– electronic invoicing. In nearly all cases, both the invoice itself and the communications channel to the administration are technically secured. While one obvious benefit of real-time reporting is that tax administrations can gain much more detailed insight into a company's transaction environment and could therefore reduce or even eliminate the need for *ex post* audits, we are not familiar with any cases where the tax administration has simultaneously waived its right to perform such historical audits.

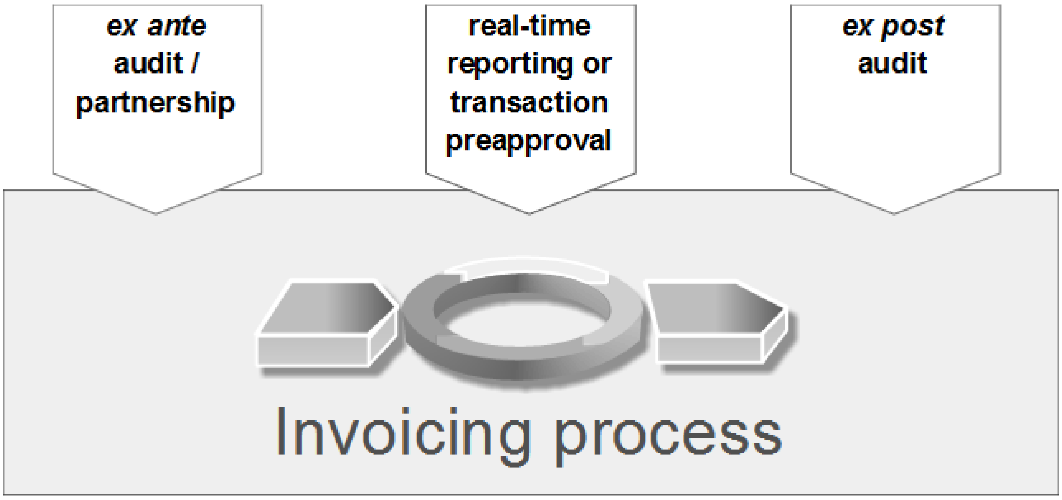


Figure 6: different audit models known today, and where they intervene in an invoice lifecycle.

8 Optimizing auditability in *ex-post* audit systems

An auditor wishing to ascertain VAT compliance of a taxable person over a past period must always make a judgment as to the reliability of a company's accounts, which form the basis for a company's VAT declarations.

The objective of an *ex post* audit is to establish that a company's accounts accurately reflect all the actual sales/purchase transactions based on which VAT, if applicable, is calculated and reported. Such evidence is based on historical information that, within the limits of applicable law and practical parameters, can be obtained from the taxable person being audited.

8.1 Key role of the invoice

Historical information is trustworthy as evidence of accurate accounts when it can be established that its origin is real (authenticity) and that it has not been modified (integrity). These trust attributes are interdependent: if the integrity of records cannot be established, they are logically not authentic, and if the authenticity of the data cannot be established their integrity is of no interest. Before looking at different types of trustworthiness in section 8.3, it is important to clarify why VAT laws and audit practices single out the invoice as the primary focus of enforcement.

When the auditor does not have other reasons to assume that a company's accounts and VAT administration are impeccable, his primary source of evidence is ordinarily the invoice. The invoice is a logical candidate for this star role, because it usually contains all or most of the information required to judge the reliability of a company's accounts and VAT administration. The law in countries with VAT typically obligates suppliers to issue invoices with a minimum set of content so that all relevant information for this evidence is structurally present in the invoice exchanged between the parties. Often implicitly, the buyer is held to verify this invoice upon receipt and reject it in case of errors. Both parties must store the invoice for a period prescribed by law, during which the invoice must also be legible. Both parties must be able to demonstrate the integrity and authenticity of the invoice.

Table 1 below shows why an invoice is such a potent concentrate of trade information. Once accepted and stored by the buyer, a reliable invoice provides much more comprehensive evidence of a supply than any other key transaction document (shown here are purchase orders, delivery notes, bank statements and contracts; other documents which have been left out include dispatch advice, remittance advice, order confirmation).

Table 1 - Comparison of tax-relevant data in key business documents, assuming reliability

	Invoice/ credit note	Purchase order	Delivery note (goods receipt, time-sheet etc)	Bank statement	Contract
Who were the parties?	Yes	Yes	Only if actual contract parties named	Often	Yes
What was the nature of the supply (quantity of goods or extent of services)?	Yes	No, supply could differ from order	Often	No	Infrequently; most contracts are frameworks
What was the consideration (price) of the supply	Yes	No, final supply could differ from order	Sometimes	Yes	If no point discounts, currency or commodity fluctuations
Was the consideration actually performed (supply paid)?	Can be reasonably presumed	No	No	Yes	No
Was tax correctly calculated?	Yes	No	Sometimes	No	No
Was the supply actually performed?	Can be reasonably presumed	No	Yes	Can be reasonably presumed	No
When did the supply take place?	Yes	No	Yes	No	No
From where was it supplied and where was it delivered?	Yes	No	Yes	No	No

If an invoice is deemed reliable but a tax auditor nevertheless wishes to ascertain for himself that an actual supply took place, a company would on the basis of the above analysis be able to provide conclusive evidence of a supply relatively easily e.g. by producing a reliable bank statement. A purchase order (even if reliable) does not add valuable information if the invoice itself is reliable. If the invoice is not reliable by itself, however, multiple sources or records (see below in section 8.3) will in all cases be required to corroborate a supply.

8.2 Source data and records

To prove the reliability of its accounts, therefore, a company must traditionally retain its source documents, which typically leads to distinct administrative subsystems with different functions:

1. **Accounting <u>records</u> – the thing to prove**: in most cases (where a company does not use cash basis accounting), a company's accounts must accurately and completely record invoices when issued or received. These bookings are not invoices themselves, even if accounting staff may sometimes call them that. In modern times, these records are retained in a company's accounting system – either a software

package or online service or a more complete Enterprise Resource Planning (ERP) system for larger companies.

2. **The invoice: primary <u>source</u> of evidence**: in case of doubt concerning the veracity of a company's accounts or correctness of the VAT treatment of supplies, an auditor will typically turn to the invoice source document and ask himself the question: are these the invoices exactly as exchanged at the time of the supply or have they been erroneously or fraudulently created or modified? If the invoice is deemed reliable and there are no other reasons to suspect fraud or misconduct, the auditor can ordinarily conclude that the accounts and VAT administration are reliable. In other cases, an auditor may review complementary sources of evidence.

3. **Complementary <u>sources</u> of evidence**: in most countries, tax law also requires companies to maintain an orderly and auditable administration, which in practice often means that companies must meet general requirements under applicable accounting law. These requirements, in turn, may include a general obligation to retain all records that may be required to substantiate a company's accounts. Trading partners are not explicitly obligated to *exchange* formalized trade data (key pre-contractual, contractual and transaction data e.g. purchase orders beyond the invoice), but *if* they do they should generally store these as well.

8.3 Why would a tax administration trust your accounts?

8.3.1 Intrinsic (portable) evidence

In some cases, the integrity and authenticity of the data object (paper or electronic document, or structured data) can be demonstrated without reference to other business data or processes.

This type of trustworthiness is based on intrinsic or logically associated features of the 'object' constituting or carrying the business document in question; therefore, it is always portable. The storage or carrier medium (examples: sealed envelope; tamper-proof paper; encrypted communications channel) can prove the integrity and authenticity of data between two communication or processing points, or at a specific point in time. When evidence is logically associated with the data (example: an advanced electronic signature), integrity and authenticity can be verifiable regardless of the storage or carrier medium and, in certain cases, for a very long period of time. (Note that just trustworthiness of the *storage* system and processes, or the adding of technical verifiability to an invoice at the moment of storage, is almost never by itself sufficient to ascertain integrity and authenticity because the invoice lifecycle does not begin with storage). Theoretically, where electronic signature techniques are used that benefit from a high degree of general security and legal recognition, integrity and authenticity evidence is conclusive. If this type of trustworthiness is available for the invoice, a presumption of the taxable person's accounts being based on reliable source data generally becomes justifiable. When other business data (e.g. purchase orders, bank statements) can be verified this way, they can increase the total transaction evidence to the extent inherent in their scope (see

Table 1 for examples).

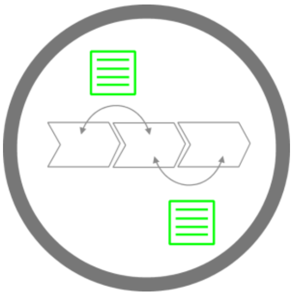
Examples:

- Point-to-point:
  - Sealed envelope and/or tamper-proof paper for paper invoices

- Encrypted communications channel
- Data-level:
  - Advanced electronic signature

8.3.2 Other types of evidence

When the business document itself does not convey conclusive evidence about its integrity and authenticity, such evidence can arise from other sources in an *ex post* audit. Each of these types of trustworthiness rarely suffices by itself – therefore a combination is often required for conclusive evidence:



Historical context data (audit trail): when the auditor has access to adequate information about the invoice process or associated business processes, he can logically reconstitute the chain of controls guaranteeing trustworthiness. This notion, however, presupposes that the historical context data (e.g. information system logs) are trustworthy themselves. Such trustworthiness must arise from one of the other trustworthiness types in this list. When the historical context data are conclusive evidence of an invoice, the taxable person therewith strengthens his evidence that the relevant supply was actually performed and paid. Alternatively, when the historical context data are conclusive evidence of a sale or purchase transaction and all mandatory details of the invoice, such evidence logically obviates the need to prove validity of the invoice as a standalone piece of business data – integrity and authenticity of the invoice are encapsulated in a broader set of evidence on the material veracity of the full invoice
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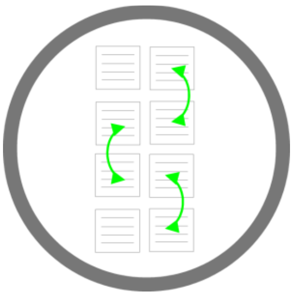
Examples:

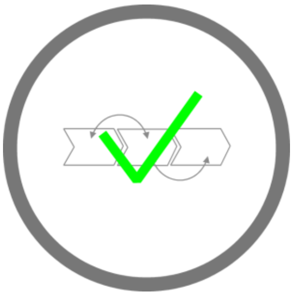
- Information system logs
- Related trade data or documents
- Approval signatures
- Process documentation
- Internal audit reports



Internal coherence of complex data: generally speaking, the likelihood of a large amount of complex yet semantically coherent data having been modified or falsified is low. What constitutes a sufficient large amount is directly dependent on the technical capabilities which allow a potential wrongdoer to generate such data within a reasonable time-frame: in a traditional paper-based environment one may more easily rely on a binder containing various types of trading documents with coherent information pointing to the occurrence of a supply at some point in history. In a computerized environment more or more complex data may be needed to prove the same thing because it is not hard to output significant amounts of complex yet internally coherent data in a short time.

Examples:

- Automated analysis of ERP system data (however note that this kind of analysis will often merely contribute to a general picture and cannot easily by itself justify the conclusion that the accounts are reliable).



Third party historical audit: Business records can be trustworthy because an independent third party has vouched or vouches for the correctness of the historical process for which a taxable person is responsible. A reliable historical audit report can guarantee that the invoicing and/or associated business processes were sufficiently controlled. Naturally, the audit report or certificate must itself be trustworthy – hence, other evidence types from this list may be required to conclude trustworthiness.

8.4 The business economics of ex post *tax auditability*

The enforcement of tax law is in nearly all countries a matter of national law without much influence from supranational bodies. In particular the actual performance of a tax audit and criteria applied to judge whether a company complies –or not– are often regulated exclusively on the national level. National tax law often provides the general framework and base rules for such activities, but in a real-life audit situation an auditor must very frequently interpret applicable legal requirements in the context of an almost infinite number of business practice possibilities. Technology and process expectations on which such practical audit decisions are made can be influenced by the often very tightly-knit local fabric of public and private law, law enforcement and business practice that has evolved over many centuries and which are much harder to influence than primary law. Naturally, negative decisions made in an audit process can be appealed in nearly all countries, but few administrative courts are sufficiently responsive for formal legal recourse to be a meaningful parameter from a business economics perspective: the time to a final decision is often measured in years. Businesses therefore generally tend to avoid taking interpretation risks in relation to tax law.

Where a taxable person has an explicit obligation to demonstrate the integrity and authenticity of an invoice, the burden of proof for such invoice validity during the legal storage period is logically placed upon the taxable person. As we have seen above, if an invoice is complete and its integrity and authenticity can be ascertained, such proof will in many countries routinely be viewed as adequate and invoices are presumed to reflect actual supplies. However, the integrity, authenticity, legibility and completeness of an invoice do not by themselves conclusively prove a supply. Therefore, despite the correct appearance of an invoice, a tax administration may in certain circumstances decide to subject a company to more pervasive audits.

If, on the other hand, an auditor does not judge the invoice as such reliable, the tax administration will *nearly always* pursue a more intrusive audit of other books and records so as to compensate for this evidence deficit.

In many countries, the tax administration can also audit a taxable person's local trading partner(s) if the evidence available at the taxable person being audited proves inconclusive. In cross-border situations, if justified due to questions about potential loss of revenue where tax liabilities could have arisen in a country but were not reported, similar trading partner audits may be organized under mutual assistance treaties.

In addition to a financial risk created by the duration and penetration level of an audit, administrative fines and/or loss of the buyer's right to deduct input VAT, companies can run a reputational risk if they do not ensure a sufficient level of auditability for VAT purposes.

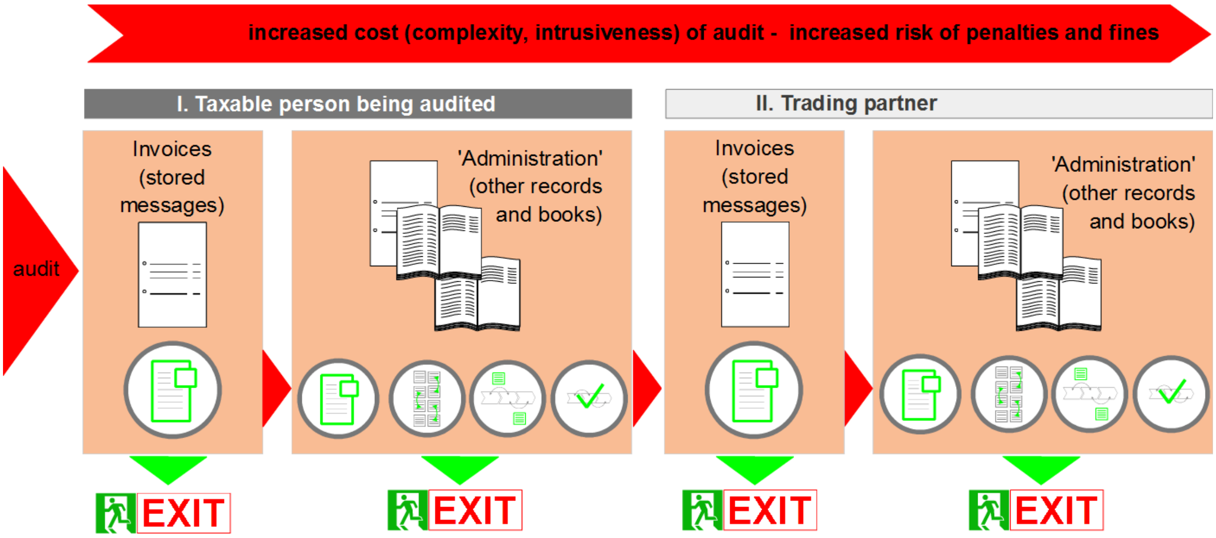


Figure 7: auditable data layers in a typical audit process where the trustworthiness of a company's accounts is evaluated.

9 A short history of *ex-post* auditability options

9.1 Before the information age: the classic evidence scenario

In the traditional paper-based world, before the advent of information systems, an invoice would be issued on a piece of paper that became the buyer's 'original' invoice. A second, identical piece of paper was stored by the supplier as proof that an invoice was indeed correctly issued. The buyer received the invoice and, upon manual verification of its content against the status of the corresponding supply, manually entered the transaction information in his accounts.

In this situation –which is still prevalent in many countries with a low penetration of information technologies –, a tax auditor who wants to verify that a company's accounts are based on real invoices will consult the binder where the original tax invoice is stored. The intrinsic evidence value of the stored traditional invoice is considerable due to the fact that typewriter fonts, invoice formatting, letterheads and other distinctive features are created in an artisanal manner; further, the weight, color and quality of the paper can be recognizable as coming from a certain supplier. Upon verification after several years, the paper might have been perforated for storage in a binder and its distinctive acid level may have yellowed it since. The envelope in which invoices were invariably transported in many cases left the paper with distinctive fold marks. The default transportation system is a state monopoly or large regulated entity. Any fraudulent modification of letters after posting –which in itself would have been a tall order due to the other features of the invoice–, is highly unlikely. Since invoices are mixed in the paper postal system rather than managed in a dedicated channel, the 'attack surface' is extremely thin.

The book-keeping of most companies in this age of traditional paper invoices was often limited to a simple separate entry into a general ledger of sales and purchase invoices in chronological order. Where present, non-invoice trade documentation (including copies of paper cheques where payment was not made in cash) would be kept as separate administrative records, far from the company's accounts, in the same relatively reliable paper form. To the extent that an invoice would not be considered sufficiently reliable, such separate records and books could be consulted – but this would not happen routinely due to the relatively high trust level of the paper invoice system.

With these inherent levels of invoice auditability, tax administrations have long been able to strike a balance between their legitimate interest in audit and businesses' need for minimum impact of VAT law enforcement.

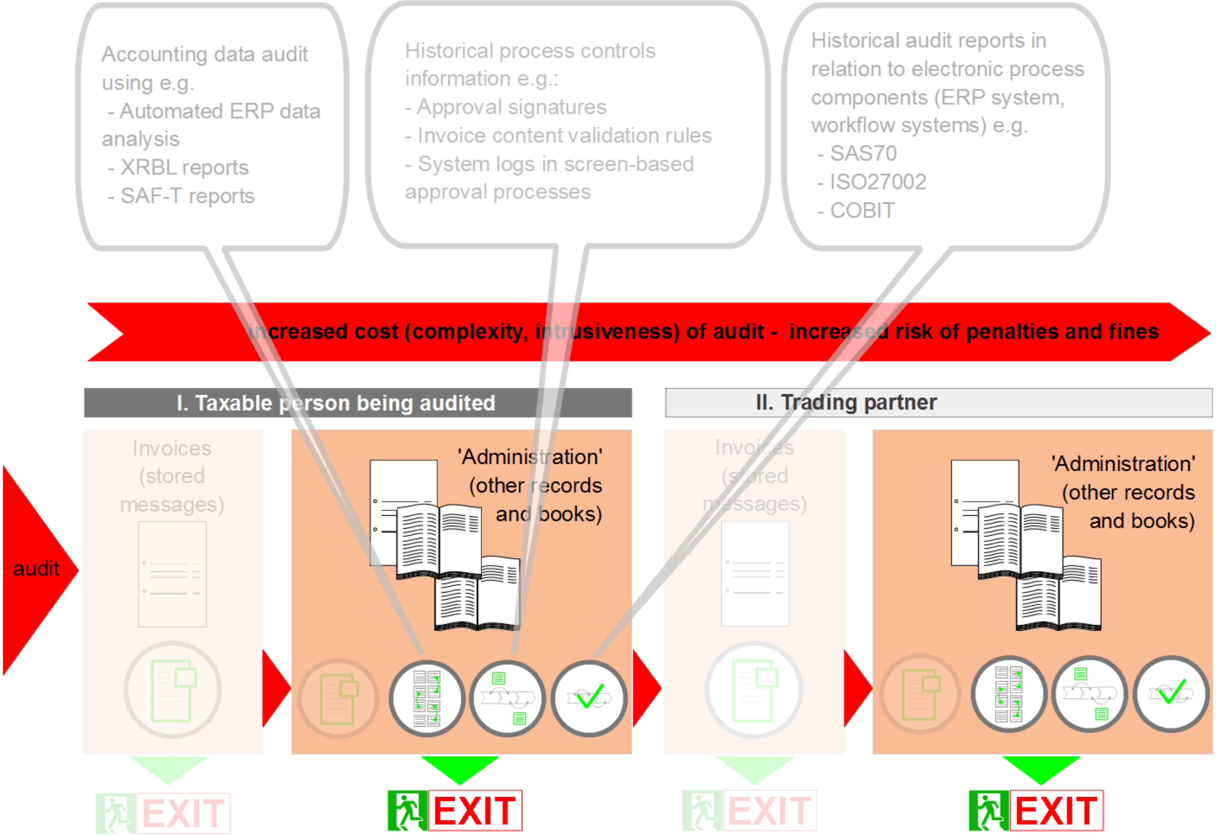
9.2 The modern paper-based world: challenges for all stakeholders

With the advent of information technologies in the 1980s, businesses' administrative practices were radically transformed. Typewriters were replaced by personal computers and printers. The invoice creation process used more standardized techniques –first using word-processing software, followed later by desktop spreadsheet software which would facilitate invoice calculations. Just like the printer paper itself, the format, fonts and layout of invoices were increasingly uniform. Anyone with simple drawing software could fake or create colorful logos and produce professional-looking invoices. Invoice models would be stored on relatively unprotected PCs and could easily be reprinted and sent with e.g. different bank account information. Similarly, new photocopiers could render near-identical copies of any document, including invoices. Physical invoice delivery could be industrialized through professional agreements which would increasingly involve private operators outside the public law sphere distributing a company's invoices in a more dedicated process resulting in a somewhat greater attack surface.

A tax auditor who wants to verify that a company's accounts are based on real invoices will still be pointed to the binder where the original tax invoice is stored. The invoice is still on paper, which may have physical qualities that can be of help in an audit process, however the intrinsic evidence value of the stored traditional invoice had been reduced from the old manual days.

Companies' accounting systems had also evolved and, especially for larger companies, quickly became subsumed into Enterprise Resource Planning (ERP) systems which would tie several core business processes into a single system that re-used data based on defined roles and controls. This development could make more information about the commercial process available to a tax auditor in a more convenient manner. While in many countries faxes may have been accepted as "original invoices" and, somewhat later, it would be allowed to scan paper documents, this world of paper "originals" and separate accounting systems still maintained a sharp legal distinction between the books and the evidence of the books.

This era and its invoice methods create various challenges for tax administrations. Neither the stored invoice message nor the accounting system by themselves provides a sufficiently reliable single point of evidence. While payment often occurs by bank transfer, this process rarely leaves reliable traces that tax auditors can easily access.



This situation effectively aligns the interests of tax administrations with those businesses that wanted to eliminate the “switch to paper” between a supplier’s and a buyer’s accounting system by transmitting and storing “original invoices” electronically.

The capabilities of modern information technologies to facilitate such fully fledged electronic invoices have also introduced a bifurcation in businesses’ administrative practices:

1. For some –very stable, high value or high volume– business relationships, large companies took advantage of emerging computer and network technologies to rapidly introduce significant levels of automation. Already in the 1980s, some companies were performing automated B2B processes based on agreed data format definitions. For legal reasons (in some countries: prohibition of e-invoicing, but in some cases also the requirement for human-readability), many such transactions nevertheless did not produce electronic tax invoices; rather, these exchanges were treated as for business convenience only and a paper tax invoice was exchanged and stored for tax purposes. With the emphasis on structured data, these systems have gradually been integrated with ERP systems and other automated or computer-facilitated business processes.
2. Many other business relationships moved much more slowly and continued to rely on human-readable documents rather than structured data. Since these images (e.g. PDF files) were created in electronic format they could easily be exchanged

electronically (e.g. via email), but such images merely served as 'copy' information while the paper continued to be the formal tax invoice.

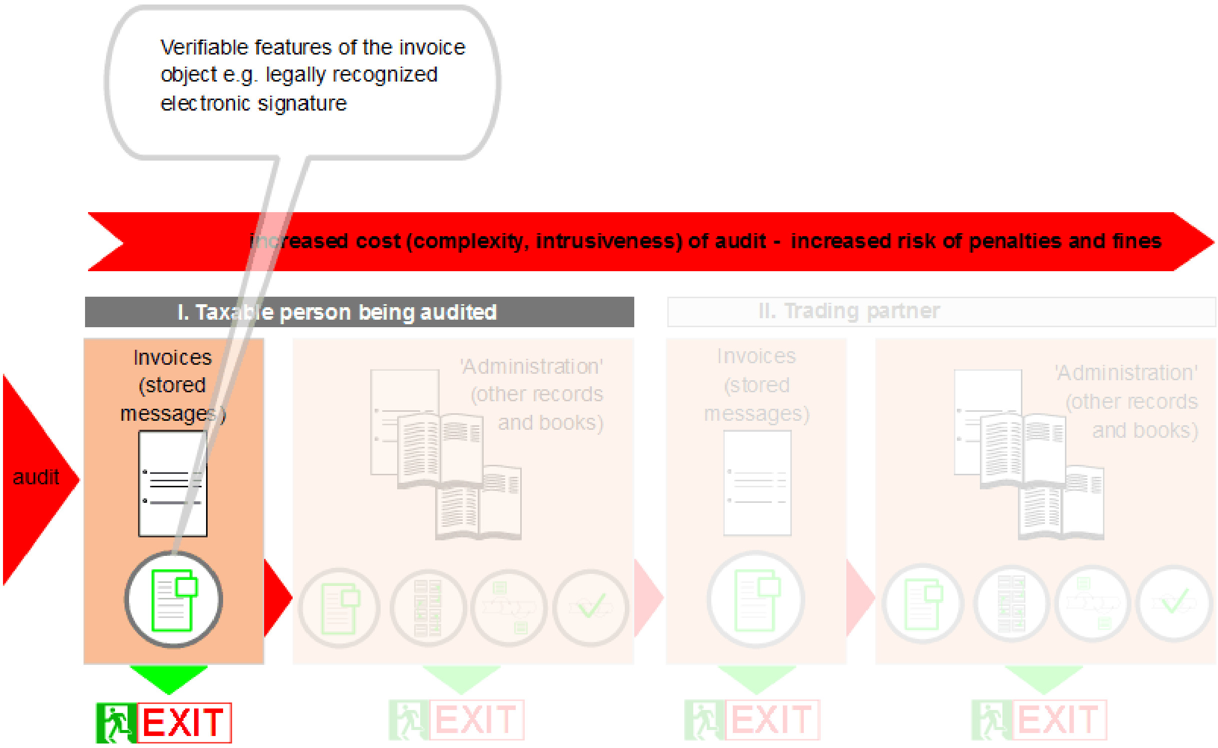
9.3 Paperless invoicing

With the introduction of fully paperless invoicing as an option under VAT laws, the bifurcation noted in the previous section created a tension between VAT law enforcement approaches. From this tension emerged two distinct approaches to VAT auditability:

9.3.1 <u>PKI-based Electronic Signature</u>: dematerializing the classic evidence scenario

This method is, in a sense, an electronic version of the classic paper-based scenario: it focuses on the auditability of the invoice as a discrete logical object. However, the use of data-level security technologies such as PKI allow for much higher levels of verifiability and, therefore, legal certainty: by building on a legal framework for the legal recognition of electronic signatures, in certain cases the burden of proof as regards the integrity and authenticity of the invoice can be reversed. The attack surface during the invoice process is negligible because any change to the invoice can be immediately detected at any moment from formal issuance until the end of the storage period.

Since many companies whose evidence strategies are in this category will also have basic or even sophisticated ERP systems as well as other (often not highly integrated) business process automation systems (e.g. order systems, inventory management or customer relationship management systems), tax auditability is further enhanced for cases where an auditor wants to investigate additional evidence that a supply actually took place – but this would not happen routinely due to the high trust level of the invoice system.

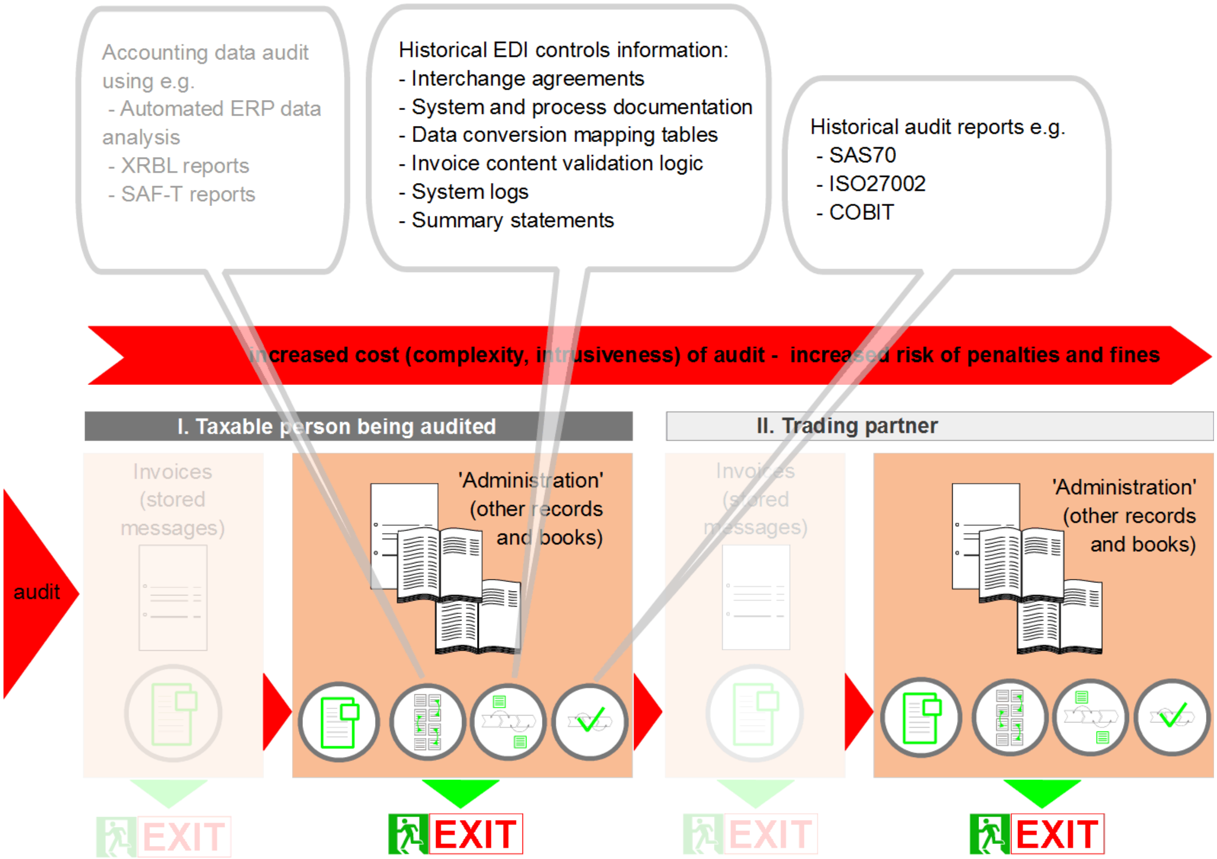


An alternative to the method whereby an electronic signature is used for this control type is the 'safe custody' method whereby the invoice is created, exchanged, received and archived in a closed environment. By using this kind of system whereby the tax invoice can only be consulted but not extracted from the safe custody environment, parties and tax authorities can be certain that invoices are trustworthy from issue until the end of the storage period. This method is similar in terms of general evidence setup, however a significant difference is that the evidence resides in the safe custody environment and is not portable.

9.3.2 EDI: deriving evidence from the exchange process

Many medium-sized and larger companies have implemented a form of integrated electronic data exchange for a portion of their transactions. These exchanges are really a next step up from situations as described in 9.2 numbered paragraph 1, whereby the structured message rather than the paper becomes the 'original invoice'. The invoice message must still be stored as received or (in many countries) sent, however the evidence of the invoice's integrity and authenticity does not lie in the invoice as an object but rather in security processes that the parties have agreed to in the underlying interchange agreement. Often, this includes strict rules concerning the technical format and content of the invoice, as well as robust transport-level security in the channel over which the invoice is carried. When modern transport security standards are used, the data may, in addition to being sent over an encrypted channel, also be temporarily signed during the transmission. Since in all cases invoices are again technically unprotected when they leave such a point-to-point connection, parties must generally ensure that no uncontrolled steps occur in the end-to-end invoicing process whereby data could be exposed to change. Laws permitting this "EDI" method sometimes require the archiving system to be directly populated from the EDI system to avoid such lacunae and keep the attack surface to a minimum. Parties availing themselves of this option must naturally still ensure that the stored invoices can be presented in a human-readable format.

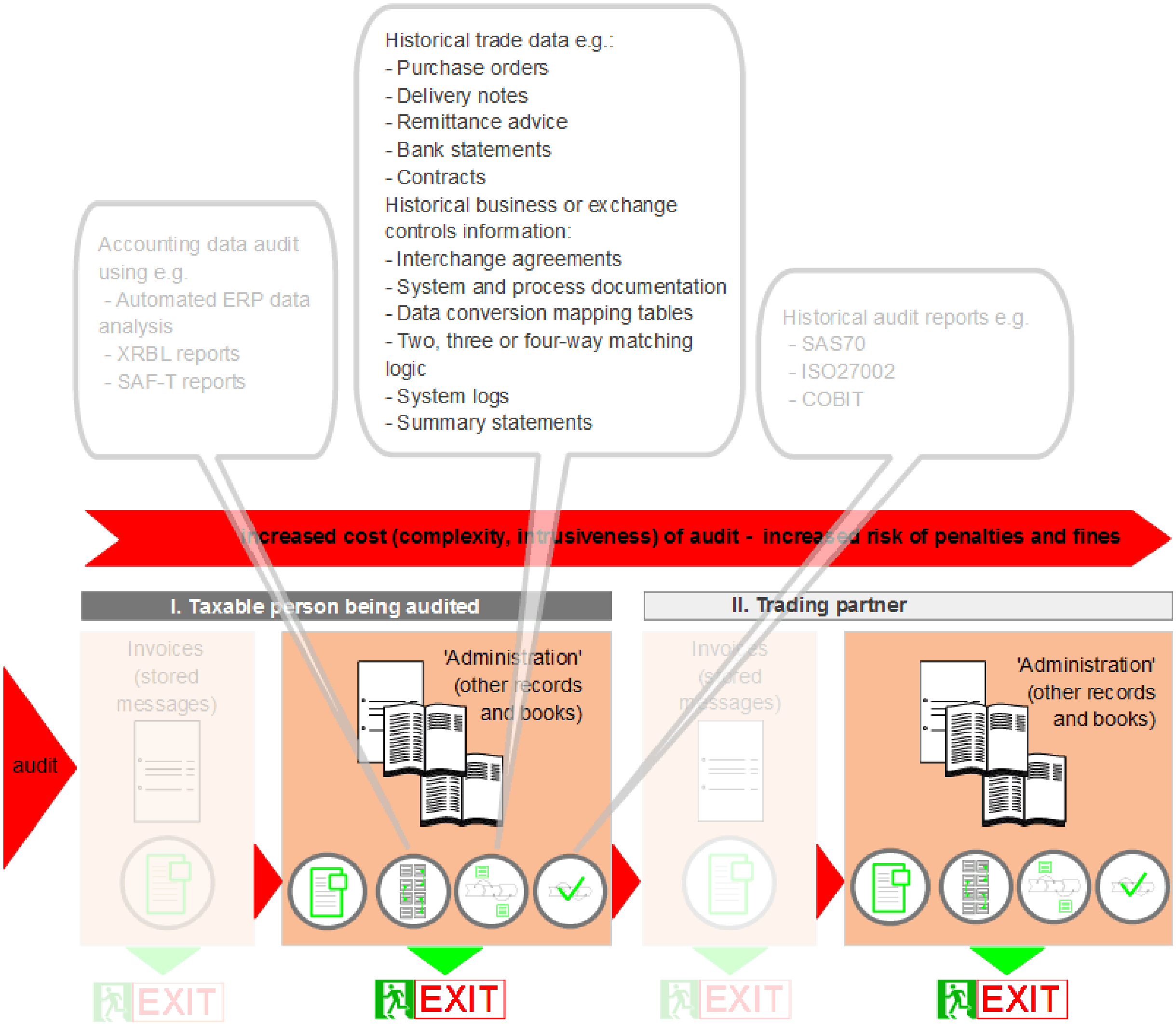
Due to the fact that the invoice object carries no distinctive features permitting its integrity and authenticity to be independently verified, this method logically also requires parties to ensure that the interchange agreement be stored. Information that is required to prove that the interchange agreement rules were followed (e.g. sent/received logs; mapping tables where invoices are converted; third party system audit reports and data validation rules) must also remain auditable during the storage period.



Since many companies whose processes are in this category will also have basic or even sophisticated ERP systems as well as other (often not highly integrated) business process automation systems (e.g. order systems, inventory management or customer relationship management systems), tax auditability is further enhanced for cases where an auditor wants to investigate additional evidence. Such verifications may take place relatively frequently where the evidence of a fully controlled end-to-end exchange process is not very robust.

9.3.3 Audit trail: the business process is the evidence

This method of paperless invoicing does not put the emphasis of the evidence in the invoice as a separate object, but rather in the integrated or transparent nature of the business processes used by the supplier and the buyer. In a sense, in this method the invoice is not just dematerialized but effectively immaterial: the invoice represents merely one step in a process whereby controls performed on the semantic level form an inextricable whole proving more than just the specific part that is the invoice. Prime examples of such processes are those where the recipient performs three- or four-way matching with purchase orders, delivery confirmations and, in extreme cases, contracts. (Reliable documentation of) the rules applied in this chain, together with logs of these control processes as effected, possibly supplemented with the trade data in its various iterations when going through the end-to-end process, form a strong audit trail that proves that a supply took place and was correctly accounted for. Third party audit reports can corroborate the process-based evidence. Importantly, *all mandatory elements* of an invoice should be sufficiently evidenced by the audit trail evidence stored for purposes of proving the integrity and authenticity of the invoice.



10 Auditability strategies in real-time audit systems

The only strategy available to businesses whose transactions are governed by such rules is to scrupulously meet each and every requirement.

Features that are commonly found in real time reporting audit systems include:

- Mandatory (structured) format of the invoice.
- Use of public key certificates issued by the tax administration or approved Certification Authorities for signing suppliers' invoice data prior to submission and, in some cases, for securing the transport channel to the tax authority portal or online service.
- Pre-approval by means of allocation of unique data such as invoice numbers, seals or other tokens that can be subsequently verified.

However, many jurisdictions whose e-invoicing rules are in this category impose additional country-specific requirements or processes.

11 A history of digital certainty

Today, most significant businesses rely, to a very large extent, on digital or digitized information throughout their global processes. Increasingly the Internet is their principal communications medium. These developments have put pressure on existing laws and regulations that assume or require the use of paper as the principal information carrier in business processes.

One obstacle to giving any legal status to electronic data is the difficulty in attributing ownership and responsibility to bits and bytes that look like any other bits and bytes, and which can be replaced, changed and copied indefinitely.

Two of the biggest questions in the legal world in the past 25 years have been: (1) medium neutrality (ensuring that electronic data are not discriminated against just because it is electronic); and (2) equivalence (treatment of electronic data on par with paper-based data).

The legal and legislative communities have been working on various instruments since the 1980s to resolve these questions. The work has often focused on re-interpreting concepts such as writing, document, record, original and signature. Initially inspired by private business rules for electronic data interchange, the UN Commission on International Trade Law (UNCITRAL) has taken a leading role in re-interpreting these concepts through a series of globally accepted model laws and guidance materials. Similarly, regional bodies such as the Organization for Economic Co-operation and Development (OECD) and the European Commission (EC) have been active in developing new concepts and regulatory frameworks in this area. The consensus positions developed in these intergovernmental organizations have been followed by the adoption of laws and directives on medium neutrality and equivalence worldwide.

It has not been difficult to write rules to ensure medium neutrality. However, ensuring equivalence is more difficult to achieve as this requires criteria to determine when electronic information can be recognized as being ‘good enough’ – for example to establish that an electronic invoice is the original tax invoice as sent or received.

These criteria have often revolved around concepts such as authenticity and integrity of the electronic data. This, in turn, has led to many discussions about the type of security safeguards that are needed to ensure such protection. This is how discussions about the legal value of electronic data have become intertwined with discussions about IT security, and, in particular, with electronic signatures. When these issues were first discussed, new technologies based on Public Key Infrastructure (PKI) were becoming mature. The legal instruments often favored high-quality electronic signatures over other security mechanisms for creating paper/electronic equivalence because electronic signatures based on PKI (digital signatures) held the promise of watertight and, above all, easily verifiable integrity and authenticity for electronic data, as well as for creating electronic equivalents of handwritten signatures (e.g. a signing of a contract). This general preference for PKI was often expressed in terms of electronic signatures that met certain criteria benefiting from the highest level of recognition – an assumption of equivalence.

While a common framework of legal acceptance criteria for electronic data has been developed, governments have generally been reluctant to include documents with a significant public character – such as customs documents, wills, and real estate title documents– in their scope. The public law use of such documents rarely raises the question of non-discrimination: the law traditionally prescribes precisely how such documents should be formed (real estate title documents, for example, often need to be notarized). The question of equivalence between paper and electronic information in this context is usually addressed on a case-by-case basis and, where applicable, involves the agencies responsible for enforcing the laws in question. The equivalence of electronic customs documents, for example, is generally decided by customs authorities.

Like many customs documents, invoices have a dual public and private character: they are both normal trade documents and key transaction evidence for tax and customs purposes.

12 “Approvals” for legal certainty

Tax authorities audit businesses when they decide to do so. Tax authorities very rarely provide approvals of systems or processes outside audits.

Tax authorities will sometimes, on a case-by-case basis, accept to informally meet with taxable persons (sometimes accompanied by their service providers) for a presentation of a specific implementation. Sometimes this may lead to an oral appreciation or – much more rarely – a ‘comfort letter’.

Some tax authorities offer formally binding procedures for *taxable persons* (not for service providers) in the form of an advance ruling.

Tax authorities sporadically “approve” or provide other types of certainty about VAT compliance aspects of *vendor* solutions.

Comfort letters, trust marks or certificates from tax consultants or external auditors may be viewed as helpful by the market but they cannot bind tax authorities. Often, such comfort letters are based on documentation-based review only and do not go beyond confirming that a solution meets the letter of the law. In obtaining such third party review services, one should always enquire if the result may be published or shared with (prospective) customers – in some cases, review results are only provided on a confidential basis, which reduces the usefulness of such investments.

13 Evidence in the Cloud

The short history set out in section 9 ends at a rather open note, whereby ultimately different paths (data-level evidence of the invoice, exchange-level evidence of the invoicing process or transaction evidence from internal business controls) can lead to the same required level of auditability. Progress in the deployment of new computing models, such as Cloud computing, is however quickly chipping away at some of the underlying assumptions. Cloud computing, in a business sense, is an extreme version of outsourcing whereby (depending on the type of Cloud used) potentially all responsibilities in relation to licensing, deploying and operating IT functionality disappear into a pay-as-you go model with much higher levels of flexibility. But not only end-users move to the Cloud for more of their IT-supported processes: also Cloud providers will be sourcing functional components from the Cloud in order to build comprehensive offerings.

One of the considerable advantages of service-oriented architecture is the low-threshold availability of standardized programmatic interfaces to well-defined blocks of service functionality. The contractual corollary of these features will be an evolution towards standardized service level agreement models with only minimal opportunity for non-core or negotiated terms and conditions. It is likely that backend Cloud services end up not only constituting long chains of sub-outsourced services, but also that such chains will be de- and re-composed over time as competition creates pressure for backend providers to differentiate through price, performance and scalability. While contractually the principal Cloud service providers will certainly still –or better than ever– guarantee overall service reliability, long-term evidence provision through process audit trails is likely to become a greater challenge in such dynamic Cloud ecosystems.

In the context of Cloud computing, questions have recently arisen in some countries as to whether using Cloud infrastructure services for storing invoices electronically will be acceptable to meet tax requirements. In principle, when there are no specific requirements concerning the physical location of the archive, the answer should be affirmative – however companies going down this path should in such circumstances nevertheless evaluate the Cloud service provider's ability and willingness to disclose the precise address of storage of the original invoice. When the law requires the invoice to be stored in a specific geography, it should be equally possible to store such an invoice in a Cloud environment when the Cloud service can guarantee that the original invoice is stored in compliance with that requirement. Some Cloud services nowadays allow the location of storage to be selected by the customer. Also in these cases, however, the Cloud service provider's ability and willingness to disclose the precise address of storage of the original invoice should be ascertained before use of the service. Prior to contracting, enterprises should evaluate the level of and conditions for government access to information stored by Cloud providers established or having physical infrastructure in certain countries.

Cloud providers will often be required by the market to be able to present a formal third party assurance (e.g. ISAE 3402 Type II) report on the design, implementation and operating effectiveness of their controls.

14 Typology of e-invoicing legal regimes

14.1 Introduction and scope

Based on its long experience with this subject matter, TrustWeaver has introduced a typology of e-invoicing legal regimes that differs from most other classifications. Rather than viewing regimes primarily as being restrictive or permissive, strict or liberal, the TrustWeaver classification works from the assumption that all regimes are more or less comparable in terms of tax authorities' desire to minimize the risk of errors or fraud. No tax authority in the world is "liberal" with that notion – however, not all countries have the same way of creating and enforcing tax law. Differences in e-invoicing legal regimes (but also any other difference in tax-related legal regimes) can be caused by a very broad variety of reasons, most of which can be placed under the general umbrella "culture". The TrustWeaver typology therefore is primarily an assessment of culture, which in addition to positive law[2] addresses such things as the degree of change that positive law is typically subject to, the maturity of positive law in a specific area, the existence and relevance of jurisprudence, the means available and general approach of law enforcement, the judicial system and the relationship between on the one hand a country's specific fabric of trade and commerce and, on the other, public administrations. As an assessment of these cultural aspects, the typology – when used for any specific geographic region – is entirely *subjective*. Nonetheless, in publishing the assessment of the countries in this document, we have tried to base our assessment on thorough research and empirical evidence rather than "feeling".

The TrustWeaver typology of e-invoicing law includes an assessment of features of a country's e-invoicing regime that are *specific to electronic invoicing*. Therefore, requirements that may prove problematic in implementing e-invoicing but that apply equally to paper-based invoicing (for example: self-billing and invoice content requirements) are not evaluated.

For information, a general overview of what people may mean when talking about "compliance" in an invoicing context is provided in the table below:

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[2] Law actually and specifically enacted or adopted by proper authority for the government of an organized jural society.

I. FORM OR METHOD REQUIREMENTS

A. Applicable to any invoice, paper or electronic	*B. Applicable only to paper invoices*	*C. Applicable only to electronic invoices*	*D. Related to the coexistence of paper and electronic invoicing*
1. Specific audit formats e.g. SAF-T 2. Constraints around the geographic location of the invoicing process 3. Registration requirements for third parties issuing or receiving invoices on behalf of taxable persons 4.Constraints concerning the geographic location of the archive 5. General archiving process and security requirements e.g. access, legibility, general auditability 6. Mandatory agreements for outsourcing tax-relevant processes to third parties 7. Requirements related to the timing of issuing an invoice 8. General integrity and authenticity requirements 9. Self-billing requirements e.g. a specific agreement or process	10. Requirements to use pre-printed or otherwise authenticated paper	11. Specific technical invoice format requirements 12. Requirements or options related to specific integrity and authenticity assurance methods 13. Electronic invoicing system accreditation or certification requirements 14. Requirements for the pre-registration of electronic invoices prior to issuance 15. Mandatory agreements for invoice recipients to express consent for receiving invoices in electronic format 16. Mandatory interchange agreements 17. Requirements for chronological invoice record binding in accounting systems when the invoice is electronic 18. Requirements related to the ability for a portal to track than an electronic invoice has been consulted	19. Constraints relating to parallel paper/electronic invoicing between the same trading partners 20. Requirements for allowing an invoice to be electronic and a credit note on paper, or vice versa 21. Rules for asymmetric invoicing between trading partners (one treating the invoice as paper, the other as electronic) 22. Requirements for printing bar-codes, hash values or other authentication data when printing an electronic invoice 23. Constraints related to the start date of electronic invoicing in order to maintain a single archive medium per fiscal year and partner 24. Scanning requirements

II. CONTENT REQUIREMENTS

A. Applicable to any invoice, paper or electronic	*B. Applicable only to paper invoices*	*C. Applicable only to electronic invoices*	*D. Related to the coexistence of paper and electronic invoicing*
25. Pre-ordered or pre-registered invoice numbering blocks 26. Language requirements 27. General VAT invoice content requirements 28. Invoice content requirements stemming from other e.g. commercial law 29. Mandatory notices to indicate self-billed invoices 30. Mandatory notices related to third party issuance of invoices	N/A	31. Content requirements wrapped into mandatory invoice format specifications 32. Mandatory notices indicating that an invoice is an electronic original	33. Requirements to use different numbering ranges for paper and electronic invoices

14.2 Maturity of the e-invoicing legal regime and market

This scale evaluates whether a legal regime and associated market for e-invoicing is relatively mature or not.

Mature | **Early days**

- Stable framework, robust adoption rate
- Smaller changes may occur with a frequency of less than once every two years
- Fundamental changes less than once per decade

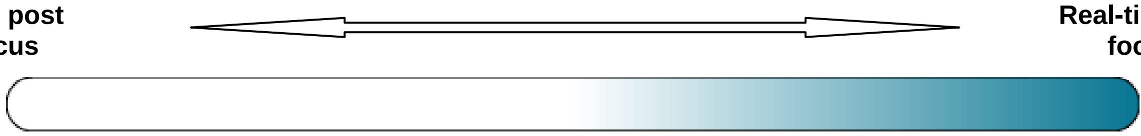
- Reasonably stable framework, decent adoption rate
- Smaller changes may occur with a frequency of less than once yearly
- Fundamental changes less than once every five years

- Framework still being defined, low adoption rate
- Smaller and fundamental changes can occur frequently

14.3 Type of audit system

As explained in section 7, the two most common types of e-invoicing regulation are based on *ex post* audit and real time reporting audit systems.

Ex post focus | **Real-time focus**



- Audits take place on a historical basis only and most taxable persons are certain to be audited periodically.

- A system of real-time reporting is in place but can be substituted by e.g. an accredited process without real-time reporting.
- Historical audits take place with a low frequency, or only for some categories of taxable persons/transactions.

- Real-time reporting is the exclusive method for enforcing tax law compliance
- If archiving of invoices is still a tax requirement, this is not used for tax audit other than in extreme circumstances.

14.4 Is prior accreditation, certification, approval...required?

This scale shows whether a form of government-operated or delegated general approval is required in relation to any parts of an e-invoicing system or process as a precondition for compliant e-invoicing.

Prescriptive (focus on form) ⟷ **Functional (focus on result)**

- Government-operated approval process is absolute requirement for e-invoicing
- Approval may be delegated to private organizations but remains mandatory and regulated by public law

- Prior consultation with the tax administration is a precondition or strong recommendation (sometimes only when specifically authorized controls are not used) and may lead to a binding tax authority compliance ruling
- Delegated 'voluntary' accreditation schemes may be in operation; often these become a *de facto* market entry condition

- Government explicitly allows anyone to start e-invoicing without prior authorization
- Advance ruling may still be available
- National trust-mark or market-driven voluntary accreditation may exist

14.5 Can tax-relevant processes be outsourced?

While outsourcing is a very widely accepted practice in business today, various levels exist that may or may not be of concern to the tax administration. Few laws today prohibit the use of third party data centres outsource operations or application management to specialized service providers. However, when certain tax-relevant business processes including certain key decisions and controls from a VAT perspective are completely outsourced to a third party, formal conditions may apply. Outsourcing of the issuance of an invoice to a third party is by definition highly tax-relevant and is often regulated. In practice it is not always easy to determine when outsourcing is tax-relevant.

Prescriptive (focus on form) ⟷ **Functional (focus on result)**

- Outsourcing of tax-relevant processes not allowed or only under restrictive conditions e.g. to government-approved operators only
- Usually the law is unclear about the scope of tax-relevant outsourcing – all subcontracting must be carefully reviewed to avoid problems

- Outsourcing of tax-relevant processes conditionally allowed
- Legal focus on tax-critical processes such as issuance or archiving of invoices

- It follows from the taxable person's responsibility to uphold compliance that appropriate controls are implemented whether processes are outsourced or not. Outsourcing is not specifically regulated

14.6 *E-invoicing compliance-specific agreements*

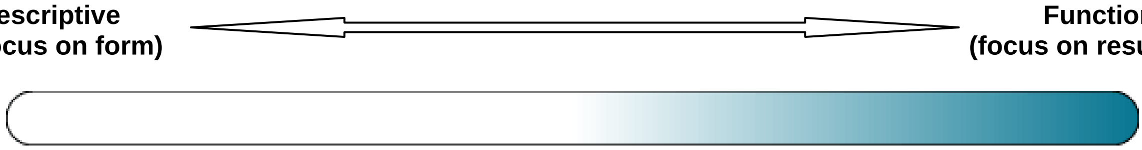
Electronic invoicing legislation often requires parties involved in transactions to execute certain agreements as a precondition; for example:

- Buyer’s acceptance to receive invoices in electronic format.
- Outsourcing of e-invoice issuance, receipt or archiving to a third party.
- Interchange or trading partner agreements.

This scale evaluates whether these agreement requirements are written or enforced with more or less emphasis on formalities and specific issues that must be regulated in such agreements.

Prescriptive (focus on form)

Functional (focus on result)



- Paper form
- Possibly notarization, filing with tax authorities or periodical renewal
- Always bilateral
- Always signed
- Specific content requirements
- Directly in tax law

- “Explicit” (paper or electronic), reliance on or reference to contract law for form and formation
- Unilateral sometimes possible
- No or mild content requirements (e.g. scope of agreement)

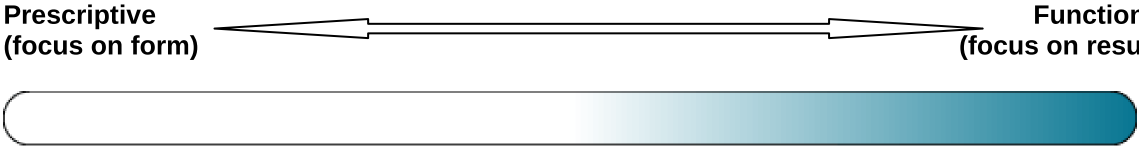
- Can be tacit or implicit in process
- Reliance on contract law

14.7 *Integrity and authenticity*

This scale evaluates a country’s attachment to form in relation to evidence of integrity and authenticity of electronic invoices over their life cycle. TrustWeaver has observed that regimes with a higher attachment to formality work from the assumption that there is an “original” invoice document, whereas on the other end of the scale the invoice is merely information.

Prescriptive (focus on form)

Functional (focus on result)



- Often focus on AdES auditability model (see 9.3.1), or use of Public Key Infrastructure in real time reporting.
- Strong concept of an “original invoice” close emulation of paper-based process
- Format may be prescribed or options limited
- Often prominent human-readability requirements
- No conversion of the

- In addition to AdES, EDI (see 9.3.2) may be conditionally permitted
- Concept of “original invoice”, but weaker analogy with VAT treatment of paper invoices; in addition to data-level measures, process-based evidence can be accepted, usually under specific conditions (contractual, syntactic and/or semantic automated controls).

- Almost never available in real time reporting audit systems
- In addition to AdES and EDI, audit trail evidence (see 9.3.3) may be permitted
- No or weak concept of “original invoice”
- All “information”, including but not limited to invoices, in any format, is acceptable as transaction evidence
- The focus on human-

original invoice: both parties must retain identical document.

- Typically the concept of a legal archive (electronic equivalent of a paper archive), separate from ERP system, exists
- Trading partner audits (verification of a taxable person's trading partner's invoices or processes) are not common

- In real time reporting audit systems, simultaneous processing of identical invoice data in a different format for convenience may be allowed
- Medium focus on human-readability
- Sometimes format preferences are expressed, but not legally imposed
- The invoice may under certain conditions be converted
- It may be permitted, under certain conditions, for the supplier to retain only ERP data
- The buyer 's ERP system may be the interface to the buyer's legal archive (electronic equivalent of a paper archive) through e.g. a link
- Trading partner audits may be required under the EDI method

readability is sometimes weaker because of reliance on audit automation tools

- A "legal archive" may be part of a taxable person's control framework, but well-managed ERP data alone are often also acceptable if the surrounding processes are demonstrably robust
- Tax authorities may resort to trading partner audits under the EDI and audit trail methods

14.8 Archiving

This scale assesses specific requirements for the technical, operational and process environment of the archive in which e-invoices are stored.

Prescriptive (focus on form) ⟷ **Functional (focus on result)**

- Explicit and detailed technical, process and/or operational requirements; no or few choices available
- When technical, process and/or operational requirements or laid down in the law, choices are available
- No or only high level functional requirements as to the archiving technology, process or operations

14.9 Cross-border (processing)

This scale indicates the level of formality of a country’s e-invoicing regime in relation to the processing of e-invoices or e-invoice data taking place outside that country’s borders.

Prescriptive (focus on form) ⟷ **Functional (focus on result)**

- All or principal processing operations must be on national soil
- Outsourcing of issuance/ processing must be to locally established or recognized service provider
- Foreign invoices that comply with the exporting country’s requirements may not be accepted, or only under certain explicit conditions (N.B. some countries in this category do not apply any criteria to foreign invoices)

- There are no explicit requirements on the topic, however a degree of local processing operations is expected or clearly preferred
- Often requirements for a processing service provider to be established in a country with which the VAT jurisdiction has a relevant mutual assistance agreement
- There may be requirements for a medium/low level of local registration for outsourcers, or certain conditions or tax disadvantages for outsourcing to a foreign service provider
- Foreign invoices that comply with the exporting country’s requirements are accepted unless there are concrete reasons to doubt a minimum or equivalent of controls were respected; in practice there may be hesitation or lack of means to easily determine the origin country’s level of legislation or actual controls performed (N.B. some countries in this category do not apply any criteria to foreign invoices)

- Processing may be anywhere
- Processing documentation is often still expected to be held locally
- Foreign invoices are in principle accepted without problems, unless there are prime facie shortcomings (N.B. some countries in this category do not apply any criteria to foreign invoices)

14.10Cross-border (archiving)

This scale indicates the level of formality of a country’s e-invoicing regime in relation to the archiving of e-invoices (depending on legal regime: “originals” or ERP records representing invoices) taking place outside that country’s borders. In addition to a country’s specific legal provisions on this topic, Conventions on cross-border assistance in tax matters (for an example see **[REF 1]**) should be reviewed for a full understanding of available options.

Prescriptive (focus on form) ⟷ **Functional (focus on result)**

- Archiving must be on national soil
- Outsourcing of archival must be to locally established or recognized service provider

- There are no explicit requirements on the topic, however local archiving is expected or clearly preferred
- Often requirements for an archiving service provider to be established in a country with which the VAT jurisdiction has a relevant mutual assistance agreement
- There may be requirements for a medium/low level of local registration for archiving outsourcers, or certain conditions or tax disadvantages for outsourcing to a foreign service provider

- Archiving may be anywhere, or prohibitions are limited to a few (categories of) countries,
- Archiving documentation is often still expected to be held locally

14.11Form or format of a B2B e-invoice

Countries have varying approaches to the form and format of invoices. In relation to paper-based invoices, very few countries still issue mandatory template or pre-numbered forms themselves. The base rule in most countries is that an invoice must be stored in the form in which it was sent or received; however, the “grey zone” between paper and electronic invoicing is not often comprehensively regulated. When can a supplier maintain only an electronic copy of a sales invoice issued on paper; when can a scanned invoice be thrown away? When regulating e-invoices specifically more countries have included requirements concerning the technical format, either in transmission or as a capability to convert to one or a limited number of prescribed formats.

Prescriptive (focus on form)

Functional (focus on result)

- Sharp distinction between paper and electronic invoicing. Sending both paper and electronic flows for the same supply represents a risk
- Supplier must store his copy of the sales invoice in exactly the same form as sent; buyer exactly as received
- If any exceptions, e.g. scanning, are allowed this is comprehensively regulated
- For e-invoicing, specific formats may be required for the original tax invoice, either for all e-invoices including B2B or only for B2G
- Specific requirements for technical presentation formats (conversion capability in case of audit) often apply for e-invoices

- A legal distinction between paper and electronic form exists but some hybrid forms are generally accepted
- Exchanging both paper and electronic invoices may be allowed during the transition from paper to electronic or vice versa between trading parties, or generally if one flow is prominently designated to be for information or convenience only
- Specific requirements for technical presentation formats (conversion capability in case of audit) may apply for e-invoices

- A legal distinction between paper and electronic form exists but this is not rigidly enforced; the emphasis is placed on general auditability including invoice content rather than specific form or format of an invoice
- Specific requirements for technical presentation formats of ERP data (not original e-invoices) may be recommended but not mandatory

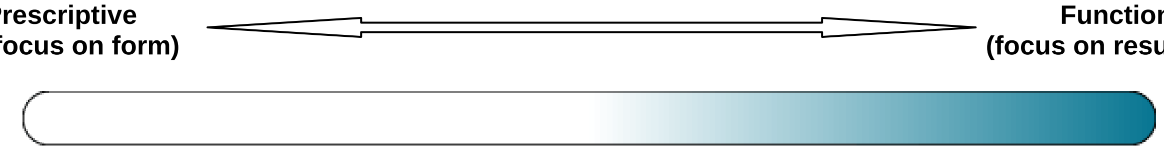
14.12Minimum content of an invoice

Nearly all countries with VAT regulate the minimum information to be contained in an invoice. While there is a base set of information that applies generally across all countries, and which generally overlaps with data that a non-tax invoice would contain for commercial efficacy, some countries require a much more comprehensive set of information. Invoice content requirements can become complex to cope with when specific notices or types of information to be included are conditional or process-specific.

Please note that this scale evaluates VAT requirements only; in some countries (but infrequently) invoice content requirements may also stem from commercial or other laws.

Prescriptive (focus on form)

Functional (focus on result)



- A significant number of data items must be included
- A number of mandatory data items may be process-driven or otherwise conditional based on commercial or administrative context
- Non-inclusion of such items is penalized as a rule; an invoice may simply not be valid due to certain formal information lacking.

- Some but not many additional data items compared to a non-tax invoice
- Relatively few exceptional data items based on process or other context
- Non-inclusion of mandatory data items is often sanctioned in accordance with the tax importance of such information.

- Requirements are either well aligned with non-tax invoices or there are no explicit requirements at all
- Where requirements are explicit, the mere absence of such data items rarely justifies sanctions

14.13 Self-billing

This document does not include an evaluation of self-billing requirements in the countries addressed below.

Self-billing is the practice whereby the buyer in a sales transaction issues the invoice for a supply in name and on behalf of the supplier. This mechanism, which is common in certain industries such as automobile and construction but occurs infrequently in most others, is often used so that parties can better exploit the processing capacities of larger buyers. Self-billing is an accepted practice in many countries but often under relatively strict conditions. The conditions for self-billing are generally the same for paper and electronic invoices: specific contractual and procedural measures often have to be taken prior to starting the self-billing process. Contractual measures often include the need for a written agreement, sometimes with specific content (e.g. as in France) which includes the description of the procedure required for the supplier to accept or reject the invoice created by the buyer. Sometimes, contracts must be periodically renewed. Rejection and acceptance procedures are sometimes regulated in great detail, including the need for the supplier to physically sign the invoice for approval. These and other compulsory measures can make it challenging to implement self-billing in an electronic environment. It should also be noted that the widespread use of service providers in e-invoicing makes self-billing less relevant due to the fact that the service providers usually becomes the issuer of the invoice – since there can only be one issuer for an invoice, this obviates the classic setup of a self-billing invoice issued by the buyer on the supplier's behalf.

15 A strategy for universal auditability and compliance

15.1 Compliance in a rules-based environment

In countries with a very formalistic approach to legal requirements, there are not many compliance strategy options. When legal requirements are clear enough to implement, compliance with the letter of the law minimizes the risks of VAT sanctions. Unfortunately, not all countries (particularly in *ex post* audit systems) that prescribe specific compliance measures for integrity and authenticity present these requirements in a manner that answers all questions that technologists or process experts may ask about them. In such cases, it is important to follow general principles of VAT law and to keep in mind the general tax law and law enforcement culture in the country in question. Local advice is in these cases often needed to avoid drawing conclusions based on concepts –regardless of how “universal” they may seem– from another legislative or business culture.

15.2 Compliance in a principle-based environment

The correct VAT treatment of sales or purchase transactions that are governed by the VAT law of countries with a functional approach to legal requirements can be evidenced in many different ways (see section 9.3). Trading partners can therefore choose the compliance strategies that best fit the nature of their business interaction. This does not mean that “normal” business processes are always a sufficient business control framework: the long-term auditability requirement that is inherent in all VAT law often means that companies have to take additional steps to ensure compliance over the invoice life cycle. While there are by definition no explicit requirements as to how such life cycle auditability management should be performed, it must not be forgotten that both trading partners must retain sufficient evidence of compliance with all legal obligations.

In these countries, the use of electronic signatures or ‘proper contract-based EDI’ is sometimes (in EU Members States: always) explicitly available as the basis of integrity and authenticity-related compliance strategies. These are tested methods that have the benefit of requiring trading partners to coordinate their invoicing processes; this promotes appropriate compliance assurance across a company’s diverse trading relationships (large and small, integrated and non-integrated trading partners, direct and indirect materials etc). Electronic signatures further have the benefit of generating legal effects based on generic e-signature law, which means that they can be relied upon without hesitation for powerful evidence assumptions even if they are not given a legal certainty status in VAT law.

15.3 Electronic signatures as the basis for a universal low-risk strategy

Many of the aspects of VAT compliance are not affected by the carrier medium of invoices. For example, requirements around the content of invoices are typically identical or to a very large extent the same for paper and electronic invoices. We have seen above that long-term auditability management imperatives can differ substantially, and that legal requirements and audit approaches vary among jurisdictions.

Every company has a different risk attitude, and regulatory risk is not fundamentally different from other risks that are accepted by an enterprise. However, the risks of non-compliance (see section 6) are in many circumstances sufficient for a company to seek to implement a coherent low-risk strategy for tax compliance. A thorough analysis of the means available to achieve this often leads to the conclusion that long-term auditability and compliance with hard requirements should be managed through a single compliance layer that can handle compliance across global markets and that is no more than loosely coupled with core business processes. This approach allows optimization of change management in response to ever-changing rules on primary long-term invoice auditability, while permitting business-to-business, financial and administrative processes to remain responsive to general business developments. Indeed, multiplying compliance approaches across different business processes can significantly increase total cost of ownership of a company's tax compliance control framework and heighten the risk of failure.

When a company does business across the spectrum of possible regulatory approaches (from formalistic to functional), the conclusion will often be that an electronic signature-based process is the common denominator. A significant number of large trading nations do not accept other methods. However, also in situations when other integrity and authenticity compliance choices are effectively available (if a company only interacts with countries to the right of the spectrum), electronic signatures are often the most commonly applicable control method guaranteeing the highest degree of legal certainty.

Today, electronic signatures can easily be implemented as a basis to meet all integrity and authenticity requirements across all countries that permit e-invoicing – no matter how diverse their legal and law enforcement cultures. Standards are mature, and solutions based on Service-Oriented Architecture are available that minimize the compliance footprint on any e-invoicing system while allowing straight-through processing in parallel to providing long-term verifiable integrity and authenticity of original invoices at a very low cost.

There are five main reasons why using electronic signatures can be a very cost-effective basis for your digital evidence strategy for e-invoices:

Reason #1: Turn the table on your tax auditor

Nearly all the world's governments award exceptional evidence status to high-quality electronic signatures. In most countries, when an invoice is sealed meeting strict requirements from e-signature law, anyone challenging the integrity and authenticity of your invoices has to prove they are not real. This unique feature provides an unprecedented level of legal certainty: you don't have to wait until the next tax audit to know if your e-invoicing investment is at risk because of legal discrepancies.

Reason #2: Get in the fast lane

When you use electronic signatures a tax auditor can verify with a single click that invoices are authentic and have remained unchanged since they were issued. Many tax administrations will reward such irrefutable evidence with a significant reduction of time and intrusion required to audit other control evidence and trade or transport documentation.

Reason #3: A single compliance strategy across disparate processes

Despite their ambitions one day to have fully automated B2B and accounting, most companies interact with many different types and sizes of trading partners in many different ways. Many trading partner relationships cannot fully formalize and automate the exchange of all procurement and transport data in such a way as to allow both parties to maintain adequate invoice evidence on the basis of process audit trails alone. By using electronic signatures you help all trading partners regardless of their size or B2B sophistication to maintain an outstanding evidence position.

Reason #4: Comply across all borders

All countries that allow electronic invoicing recognize electronic signatures as a method to meet the key requirements of long-term integrity and authenticity evidence. Electronic signature technology and practices are highly interoperable worldwide, and e-signature laws benefit from a much higher level of harmonization than any comparable method or technology for proving the integrity and authenticity of electronic data. Evidence based on electronic signatures benefits from the highest level of recognition in all countries that allow e-invoicing; in countries with real-time reporting audit systems, electronic signatures are nearly always the fundamental trust element required in the mandatory processes for tax authority pre-approval and invoice transport to trading partners.

Reason #5: Prevent fraud and image damage

Your brand reputation can be at risk because modern technology makes it easy for criminals to defraud your customers, or complete strangers, with invoices that look like you sent them. Cleverly using vacation periods, control thresholds for smaller invoice amounts or loopholes in many companies' verification of trading partner tax identification or bank account numbers, "ghost invoices" have become big business for fraudsters worldwide. But this widespread problem also presents an opportunity: if the market knows your invoices are always easily verifiable, this will add to the perception of quality associated with your brand.

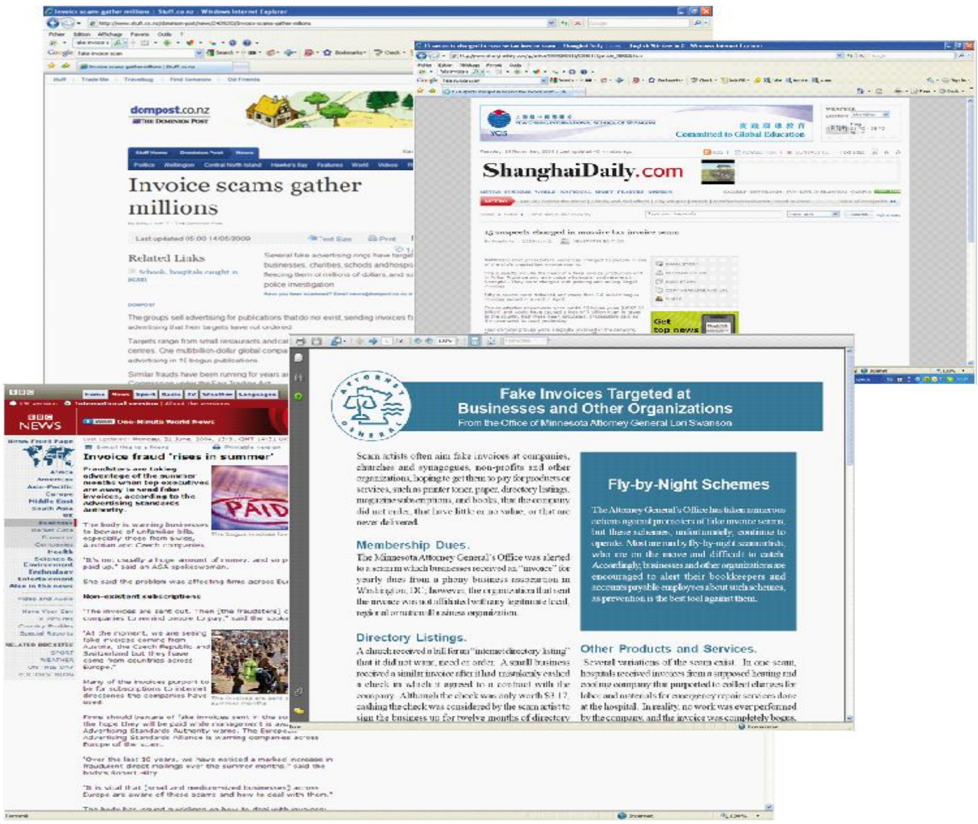


Figure 8: Fake invoice scams cost businesses billions worldwide.

16 Designing a compliant process

16.1 General

[REF 2] provides a good introduction to and structure for setting up a cost-effective e-invoicing process for EU Member States and countries with similar regimes.

Due to the variety of e-invoicing legal regimes that can now be observed worldwide, we could not maintain a generic description of a good design approach in this white paper. A company setting up a process cutting across different legal systems will generally need to obtain professional advice as to how to ensure cost-effective compliance over time.

Nevertheless, this section provides some pointers that can be helpful for companies starting a design exercise for compliant electronic invoicing. As shown in Figure 9, a company should consider regulatory requirements, business process issues and technology aspects.

REGULATORY REQUIREMENTS Issues to consider:	BUSINESS PROCESS Issues to consider:	TECHNOLOGY Issues to consider:
Hierarchies and types of rules. The entire hierarchy of applicable rules must be known, including (1) Formal legislation, secondary regulation (e.g. decrees), publications from regulatory authorities, jurisprudence etc. (2) Agreements with specific tax authorities (3) Opinions and guidelines from local industry associations, self-regulatory frameworks and experts. **Geography.** Laws frequently differ among regions, countries, provinces and states. **Types of laws to be included.** Legal areas adjacent to VAT law should be included in the analysis: other tax law, accounting law, corporate governance law, contract law, civil law, data protection law and cryptography import/export/use restrictions. **Compliance of business agreements.** Existing agreements should be reviewed and, potentially, new ones set up to easily prove the roles and responsibilities of parties involved. **Applicable law.** Establish which part of each e-invoicing transaction is regulated by which country's law.	**Types of invoicing.** Straight invoicing, self-billing or outsourced invoicing? **Roles of trading partners.** A trading partners can be supplier, customer, competitor and service provider all at the same time. Are you willing to issue invoices on behalf of your internal and external suppliers and customers? **Invoice flows.** Map out the flow of invoices, as well as how this flow relates to the flow of goods and money, in order to maintain a complete picture of key processes. Where in the flows is the invoice formally issued and received? **Value considerations.** Keep an eye on ROI and risks. Average transaction values, strategic importance, ownership ties and size of trading partners are among the many aspects that must be considered to apply an appropriate mix of compliance measures to a company's different processes. **Storage.** Should each internal entity store locally, or is a central archive more cost-effective?Outsourced or in-house? Are you willing to store for small external suppliers and customers?	**Standards and formats.** What standards do you support, which ones are critical for your trading partners? Compliance always implies ensuring an effective interface and audit capabilities for public authorities. This means that issues concerning standards and formats used in the system must be viewed not only from an internal business perspective, but also from a compliance risk management viewpoint. **Technical security measures.** A baseline level of security is required within and between system components, and choices must be made that balance the need for cost-effectiveness with regulatory compliance. As much as possible, the need for provable security must also be taken into account in the general system design; for example, transport and archival methods as well as data standards and formats must be used that allow the application of appropriate security measures. A minimum level of security documentation should be readily available at any time.

Figure 9: Examples of issues to consider in a holistic approach

Designing an e-invoicing process also requires an understanding of legal areas other than VAT. The most important ones are depicted in Figure 10.

Figure 10: Important adjacent legal areas to be included in a holistic approach

16.2 Long-term verifiable signatures

It is important to think through integrity and authenticity assurance throughout the end-to-end e-invoice life cycle, and not just within discrete solution components. When signatures are used, the basic integrity and authenticity of the invoices is guaranteed in the transmission and storage process, but the basic e-signature formats are not particularly suitable for providing such evidence over long periods of time. For example, the validity of the certificate at the time of signing or receipt will often be hard or impossible to establish once the certificate has expired.

In countries with a real-time reporting audit system, specifically prescribed signature formats must often be used in the pre-approval process performed by or on behalf of the tax administration. In such cases, long-term verifiability does not play an important role.

In all other cases, modern standards such as CAdES and XAdES[3] allow companies to use electronic invoices for applications, like e-invoicing, that require integrity and authenticity verification over very long periods of time. By embedding validation data inside a standardized signature structure during the signing or validation process, long-term auditability can be achieved with a vastly reduced level of dependency on external parties such as Certification Authorities.

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[3] See ETSI TS 101 903 and ETSI TS 101 733.

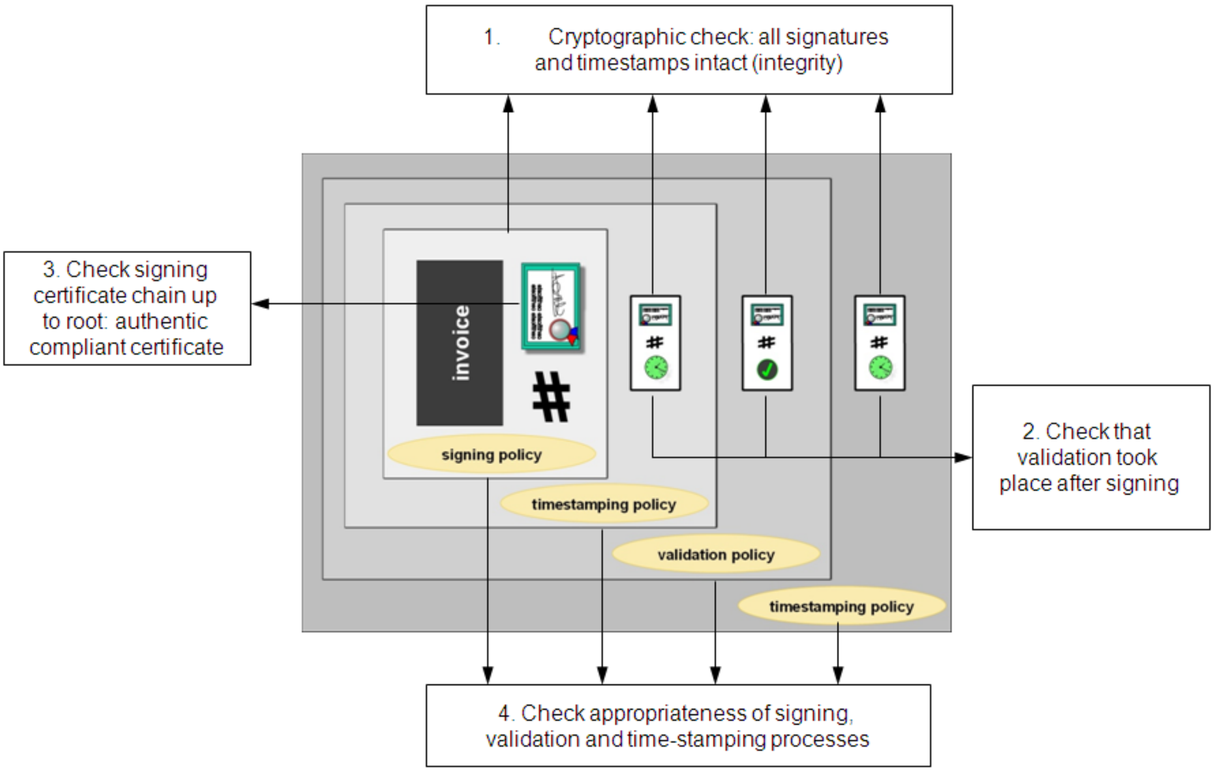

Figure 11: Using the "-A" version of CAdES or XAdES signatures, the invoice data are stored together with the signatures and certificate validity proof obtained from the issuing Certification Authority. These components are also securely time-stamped, which creates strong self-contained evidence of the signature being valid at the time of signing or validation upon receipt. Note that the poliy types mentioned (signing, time-stamping and validation) are not always used, and in some cases their use is explicitly prohibited.

16.3 Notices in invoices

A good e-invoicing system must take into account the need for certain notices to be printed inside e-invoices or related documents. For example, the outsourced issuer of an e-invoice is sometimes required to include a notice within the invoice to the effect of “issuance by X on behalf of Y”. Furthermore, copies and duplicates of invoices and credit notes may need to contain specific notices under different countries’ laws.

16.4 Managing the paper-electronic transition

Tax authorities increasingly work from the assumption that invoicing processes are either electronic or paper-based – but never both.

This means, for example, that when two parties invoice electronically for one type of transaction between them, tax authorities might expect there to be no more paper invoices between these parties. The situation, which is still widespread, whereby parties use paper invoices for compliance purposes but electronic invoices for business processes, will in future not always be tolerated.

Specifically in countries with real-time audit systems, a switch to electronic invoicing will often be considered to preclude any further processing of paper invoices. In some cases, countries in this category will allow existing stocks of preprinted or already-ordered secure paper invoices to be depleted before moving to fully electronic invoicing.

In addition to parallel paper/electronic flows, many companies in *ex post* audit systems today use hybrid or asymmetric processes where, for example, the supplier treats invoices as paper-paper while the buyer treats them as electronic. Hybrid invoicing processes – examples of which are often found in web-EDI systems – are often already today unacceptable to many tax authorities.

While general tax rules can often help analyze challenges that arise in an e-invoicing context, it is important to note that paper and electronic invoicing are different in many ways. Analogies with traditional paper-based rules must be used with caution. For example, paper-based invoices must ordinarily be stored locally whereas electronic invoices are increasingly allowed to be stored abroad.

Finally, it should be noted that companies that use paper invoices with some trading partners and electronic invoices with others should ensure that a tax inspector can easily distinguish between these forms in the accounting system, so that a request to view the "original" can be treated through reference to the right storage system.

17 References

[REF1] OECD Convention on mutual administrative assistance in tax matters and amending protocol http://www.oecd.org/ctp/exchangeofinformation/Amended_Convention_June2011_EN.pdf. For a status overview of signatures and ratifications see http://www.oecd.org/ctp/exchangeofinformation/Status_of_convention.pdf.

[REF2] EDIFICE E-Invoicing Assessment outline Issue 1, see http://repository.edifice.org/downloads/EDIFICE%20eInvoicing%20assessment%20Issue1.pdf.

[REF3] EU Trusted Lists of Certification Service Providers, see http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2009D0767:20101201:EN:PDF.

[REF4] CEN Workshop Agreement "Good Practice: e-Invoicing Compliance Guidelines" (ftp://ftp.cen.eu/CEN/Sectors/List/ICT/CWAs/CWA16460_.pdf).

[REF5] COUNCIL DIRECTIVE 2010/45/EU of 13 July 2010 amending Directive 2006/112/EC on the common system of value added tax as regards the rules on invoicing (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:189:0001:0008:EN:PDF).

Annex: country status overview

E-Invoicing in the European Union

Directive 2010/45: the new regime in effect since 1 January 2013

Six years after entry into force of the Directive 2001/115 which introduced electronic invoicing for VAT purposes in the European Union, Member States in 2010 adopted a new Directive which modifies certain provisions of the VAT Directive in relation to invoicing **[REF 5]**. This new Directive 2010/45 entered into force on 1 January 2013, which was the deadline for member state transposition. Among other things, Directive 2010/45 seeks to create “equal treatment” between paper and electronic invoices. The base requirement (unchanged from the previous Directive) of ensuring *integrity and authenticity* now explicitly applies to invoices in any format, instead of only to electronic invoices as was the case under the 2001 Directive.

There is no such thing as meaningful business compliance with an EU Directive. For e-invoicing, what matters are the local requirements applied by local tax authorities to meet the objectives set by a Directive. These requirements in local VAT laws are influenced by adjacent legal areas, jurisprudence, law enforcement practices, and industry self-regulation.

Legal definitions and requirements, for example the concepts ‘reliable audit trail between an invoice and a supply’, ‘EDI’ and ‘qualified electronic signatures’ (see descriptions below), may differ among EU Member States. Importantly, the legal and business definitions of these concepts are often not identical.

Scope of application: all invoices?

In principle, the invoicing provisions of the VAT Directive apply to all business-to-business invoices issued in the European Union, including VAT-exempted transactions. Within the EU there are two types of VAT exemptions: (1) zero-rated transactions, formally called transactions exempt with the right to deduct input VAT and (2) fully-exempted transactions applicable to certain charities, as well as postal and other services. In both cases, an invoice must, in principle, be issued, usually with a reference to the legal basis for the exemption applied. However, Member States have a right to release taxable persons from the obligation of issuing an invoice, in which case there are no invoice-specific requirements[4].

VAT-exempted transactions for which parties are released from the obligation of issuing an invoice are very rare in mainstream business, as are exemptions for VAT-able invoices[5]. Since issuing an invoice is not prohibited in either case, most companies would rather not create a system exception for these cases. Only organizations that fall under such releases for a large portion of their invoices might consider taking a system exception into account to avoid creating an invoice altogether.

Even if an invoice is issued in relation to VAT-exempted transactions, the Directive's requirements formally apply in full[6]. The reason for this broad scope of application is that most tax authorities will generally want to be able to assess whether the exemption is justifiably applied and references the correct legal provision.

I&A: freedom of evidence: the principal rule

Directive 2010/45 states that each trading partner (not: the trading partners together) determines how to meet the requirement of invoice integrity and authenticity. This language clearly departs from previous formulations which created interdependency between a supplier and a buyer. This *de iure* separation however does not mean that there is no *de facto* interdependency: in many cases parties need to cooperate and align their compliance methods to ensure a consistent process.

As we will see below, not all Member States have unequivocally transposed this freedom of evidence rule.

I&A: Business controls-based reliable audit trail (BCAT)

The principle of "equal treatment" that has been a major impetus to Directive 2010/45 is often associated with a newly introduced method for ensuring authenticity and integrity: "*business controls establishing a reliable audit trail between an invoice and a supply*". The policy argument behind this language was that this type of integrity and authenticity evidence was already permitted for paper invoices…so why would it not also be available for electronic invoices...?

The 2010 Directive in its "recitals" talks about proving that a supply actually took place; some commentators have claimed that proving an actual supply relieves a company from

[4] Member states also have the right to impose the obligation to issue invoices for transactions not covered by the scope of application of the VAT Directive (e.g. transactions with consumers). In that case, however, the VAT Directive also gives them the right not to impose its security requirements.

[5] A known example of an exemption based on jurisprudence is the Bockemühl case, where the buyer in a cross-border sale of services can deduct VAT even if not in possession of a compliant invoice.

[6] Some tax authorities have informally stated that they do not consider the requirements for domestic invoices to apply to zero-rated cross-border invoices. Such statements are not enforceable unless they are explicitly stated in a formal tax authority communication.

having to prove integrity and authenticity of an invoice. This is a misunderstanding. The Recitals merely explain why invoice integrity and authenticity are important requirements: because without these features, a tax administration cannot reasonably ascertain that an actual supply took place.

Few Member States have gone beyond high level descriptions of what they will consider sufficient BCAT evidence. This is logical, because the intent of this new option is that it encompasses many different types of business processes. Section 3.4 of the CEN E-Invoicing Compliance Guidelines **[REF 4]** provides at present the most authoritative descriptions of different types of BCAT evidence that can be used in different sales and purchase scenarios. To summarize, enterprises relying on BCAT evidence for demonstrating integrity and authenticity of invoices will generally archive the following components:

1. Internal business records generated during the invoicing processes, i.e. contracts, sales/purchase order, goods receipt/dispatch notes.
2. External documents received during the invoicing processes, i.e. purchase orders, goods, dispatch notes, bank statements.
3. Historic master data.
4. Evidence of controls to ensure data quality.

I&A: qualified Electronic Signature option

Advanced and Qualified Electronic Signatures

As one example of a method to ensure integrity and authenticity of electronic (not paper) invoices, Directive 2010/45 now only mentions qualified electronic signatures for guaranteeing e-invoice integrity and authenticity. The 2001 Directive gave Member States an option to accept so-called advanced electronic signatures – such signatures are no longer certain to be considered compliant in EU Member States that have not specifically mentioned them in their VAT legislation. These concepts refer to national legislation transposing the EU Electronic Signature Directive[7].

The EU definition of Advanced Electronic Signatures is generally interpreted as policy-based digital signatures (based on Public Key Infrastructure, or PKI). A qualified electronic signature is an advanced electronic signature that is based on a qualified certificate and applied with a secure signature creation device (SSCD). A qualified certificate is issued under a specific certificate policy with high security requirements for the Certification Authority. An SSCD is a device approved by an EU Member State on which the private and public key is securely generated and which is used to apply the signature without the private key being exposed to compromise. Member states are required to maintain supervisory bodies for Certification Authorities issuing qualified certificates. In practice, additional requirements may apply for both Advanced and qualified electronic signatures due to local legal, industrial and other specifics.

The Electronic Signature Directive gives qualified electronic signatures a specific status: they should be able to replace handwritten signatures[8] and admissible as evidence in legal proceedings. This “reversal of the burden of proof” awarded to qualified electronic signatures is rather unique in law and can only be compared with e.g. notarized

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[7] Directive 1999/93/EC of The European Parliament and of the Council of 13 December 1999 on a community framework for electronic signatures.

[8] This rule has several limitations. Most importantly, where a legal deed may not be in electronic form, an electronic signature may logically not be applied. Further, exceptions apply for example for real estate transactions or legal deeds under family law.

documents in the paper-based world. The combination of the very strictly regulated concept of qualified electronic signatures being mentioned in the VAT Directive and their special status in e-signature law means that the integrity and authenticity of an e-invoice must legally be presumed to be present unless someone –e.g. a tax administration – can disprove them.

Both qualified certificates, which are issued under a stringent set of EU-standardized policies and practices, and SSCDs benefit from internal market protection, meaning that if they are recognized by one Member State, they have to be accepted by all others. Nevertheless, cross-border recognition is not yet as smooth as this legal status suggests.

Local differences

The EU Electronic Signature Directive has been in force throughout the EU for more than a decade, and each Member State applies a somewhat different set of rules. Contrary to common perception, these differences are more a matter of variety in approach than of higher or lower security. Definitions of Advanced or qualified electronic signatures in national law reflect local laws, jurisprudence, customs, standards and industry structures. In a national context, the concept of a qualified electronic signature is often greater than the sum of its Brussels-defined parts.

Electronic signatures can be regulated differently or subject to different expectations in different countries. These differences can include:

- The content of the certificate (i.e., where to put the name of the holder, corporate affiliations, attributes such as signing authority, and what codes or identifiers to use);
- The identification procedures for issuing certificates;
- The restrictions concerning the use of certain types of certificates or signatures for natural or legal persons;
- The technical and contractual measures applied for delegation of identification procedures by Certification Authorities;
- The accreditation and approval criteria of Certification Authorities, of cryptographic software and hardware to be used for creating and validating signatures;

Cross-border recognition of e-signatures

Many people are surprised when they learn that virtually all e-signature laws promote cross-border recognition. Indeed, most governments (including all EU Member States) recognize foreign electronic signatures under conditions that may include geographical criteria (e.g. EU qualified certificates should be accepted by all Member States), cross-certification with local Certification Authorities, mutual recognition treaties, as well as substantive criteria upon which any signature must be recognized. However, in many countries it has proven challenging to turn these legal objectives into reality. Increased use of the EU Trusted List of Certification Service Providers (see **[REF 3]**) coupled with transposition (if adopted) of the proposed 2012 EU Regulation on eID and Electronic Signatures, is expected to gradually change this situation in the European Union.

- The processes for creating and validating signatures, including what-you-see-is-what-you-sign requirements, cryptographic operations and automation requirements which include time and volume window enforcement;
- Hardware, logical or legal separation for supplier and buyer signature processes;
- The type of revocation checking procedures to be used in signature processes;

- The use and publication of standard policies and practices for issuing certificates and for signature processes; and
- Time-stamping related requirements.

Mature e-signature services nowadays overcome these remaining challenges without any need for users to understand or worry about local differences in electronic signature law.

Signature validation

Validation is an important aspect of electronic signatures. Recipients of signed electronic invoices are sometimes explicitly required by law to validate the signature; however, in most cases such validation requirements are implicit since both parties have to guarantee integrity and authenticity. Validation of the certificate corresponding to the private signing key is an indispensable step in verification. Many Member States require Certification Authorities to issue validation information but this is already standard Certification Authority practice. It should be noted, however, that there exists no central location for the technical verification of certificates from different EU Certification Authorities. Likewise, not all Certification Authorities have the ability to allow historical checks of certificates to ascertain if a certificate was valid at, for example, the moment of signing. By using modern standards that allow packaging of certificate validation data (including time-stamps) with the signed invoice, both parties to the sales transaction can, at any time, prove that the signature was valid when created and received.

Secure EDI option

Directive 2010/45 refers, as another example of a method to ensure integrity and authenticity evidence for electronic invoices, to electronic data interchange (EDI) as defined in Article 2 of Annex 1 to Commission Recommendation 1994/820/EC of 19 October 1994 relating to the legal aspects of electronic data interchange. This Commission Recommendation defines EDI as follows: *"The electronic transfer, from computer to computer, of commercial and administrative data using an agreed standard to structure an EDI message."* What trading partners consider as EDI will not necessarily be viewed as EDI by tax authorities: the obvious intent of the European Commission Recommendation is to describe what may be more plainly called business-to-business (B2B) automation. While the dividing line may be somewhat artificial, it is clear that systems which are not highly automated –including invoices that are not machine-readable– will generally not be viewed as EDI. Based on the first criterion, technologies such as Web EDI (where one transacting partner manually keys in, supplements and/or approves invoice data) and manual procedures used in self-billing setups will not be eligible for the EDI compliance option in many countries, even if the trading partners involved consider the transactions in question to be part of their EDI system.

Whichever definition of EDI is used, the concept of EDI is never defined as a security technology. In modern industry definitions, security is not a necessary component of EDI at all: trading partners may very well have discontinued the Value Added Network (VAN) they originally used for their EDI system and, instead, run the same transactions over the unprotected Internet, while continuing to refer to the system as EDI.

Importantly, the fact that a system can legally qualify as EDI (which is a definitional matter) says nothing about the guarantees it provides for e-invoice integrity and authenticity (which is a compliance matter). To comply for purposes of ensuring integrity and authenticity of electronic invoices, a compliant EDI process must be based on an interchange agreement (also called trading partner agreement or EDI agreement) providing "for the use of procedures guaranteeing the authenticity of the origin and integrity of the data." What these procedures should be is not well defined in most

Member States. However, tax authorities in a number of countries have expressed their intention to use the EU-defined model EDI agreement as the basis for their assessment. Significantly, article 6 of this model EDI agreement states:

> *6.1 The parties undertake to implement and maintain security procedures and measures in order to ensure the protection of EDI messages against the risks of unauthorized access, alteration, delay, destruction or loss.*
>
> *6.2. Security procedures and measures include the verification of origin, the verification of integrity, the non-repudiation of origin and receipt and the confidentiality of EDI messages.*
>
> *Security procedures and measures for the verification of origin and the verification of integrity, in order to identify the sender of any EDI message and to ascertain that any EDI message received is complete and has not been corrupted, are mandatory for any EDI message.*

Traditional EDI systems based on an end-to-end VAN may, depending on circumstances, be considered to meet these requirements. However, systems using the Internet need to replicate such extensive security features. If the system owners do not want to use electronic signatures (which would make the system eligible under the VAT Directive’s e-signature compliance option) such security will ordinarily be ensured through use of point-to-point security mechanisms.

Due to inherent limitations of point-to-point security (most notably, it does not offer durable auditability), systems under the EDI compliance option will generally need to include additional security procedures such as frequent logs and audits in order to guarantee integrity and authenticity. In addition, in the absence of verifiable security on the data level, the archive and processing system will often need to include additional integrity-enhancing features.

Some Member States impose additional requirements in relation to the EDI method, for example:

1. Summary statements

   Some EU Member States (e.g. France) require a summary document to be stored in addition to the electronic invoice. The systems generating and storing summary statements should be directly populated from the e-invoicing system.

2. Other country-specific requirements

   Some countries have additional requirements based on explicit laws, published tax authority guidance or expectations based on pre-existing EDI practices. In France, for example, a “partner file” must be maintained that is directly populated from the invoicing system with specific details of each invoicing partner.

Choosing a cost-effective compliance method for EU invoicing

In summary, there are now four ways to meet the requirement for integrity and authenticity evidence:

	Any evidence (“freedom of evidence” rule)	Business controls establishing a reliable audit trail between an invoice and a supply (“BCAT”)	Qualified electronic signatures	EDI based on an agreement consistent with EC Recommendation 94/820/EC.
Electronic invoices	Yes	Yes (little existing guidance grounded in practical audit experience)	Yes (reversal of evidence burden i.e. the tax auditor has to prove the integrity and authenticity of the invoice are unreliable)	Yes
Paper invoices	Yes (major example: archiving the paper invoice)		No	No

To assess their compliance with EU VAT requirements, businesses should ask themselves two simple questions for any invoice:

1. *Can I prove integrity and authenticity without any additional controls or evidence?*
2. *If not, what is my “evidence deficit” and how can I cost-effectively remedy it?*

What is cost-effective varies greatly depending on circumstances. Every company and trading relationship is different. The chart below presents a diagram that can help with these choices.

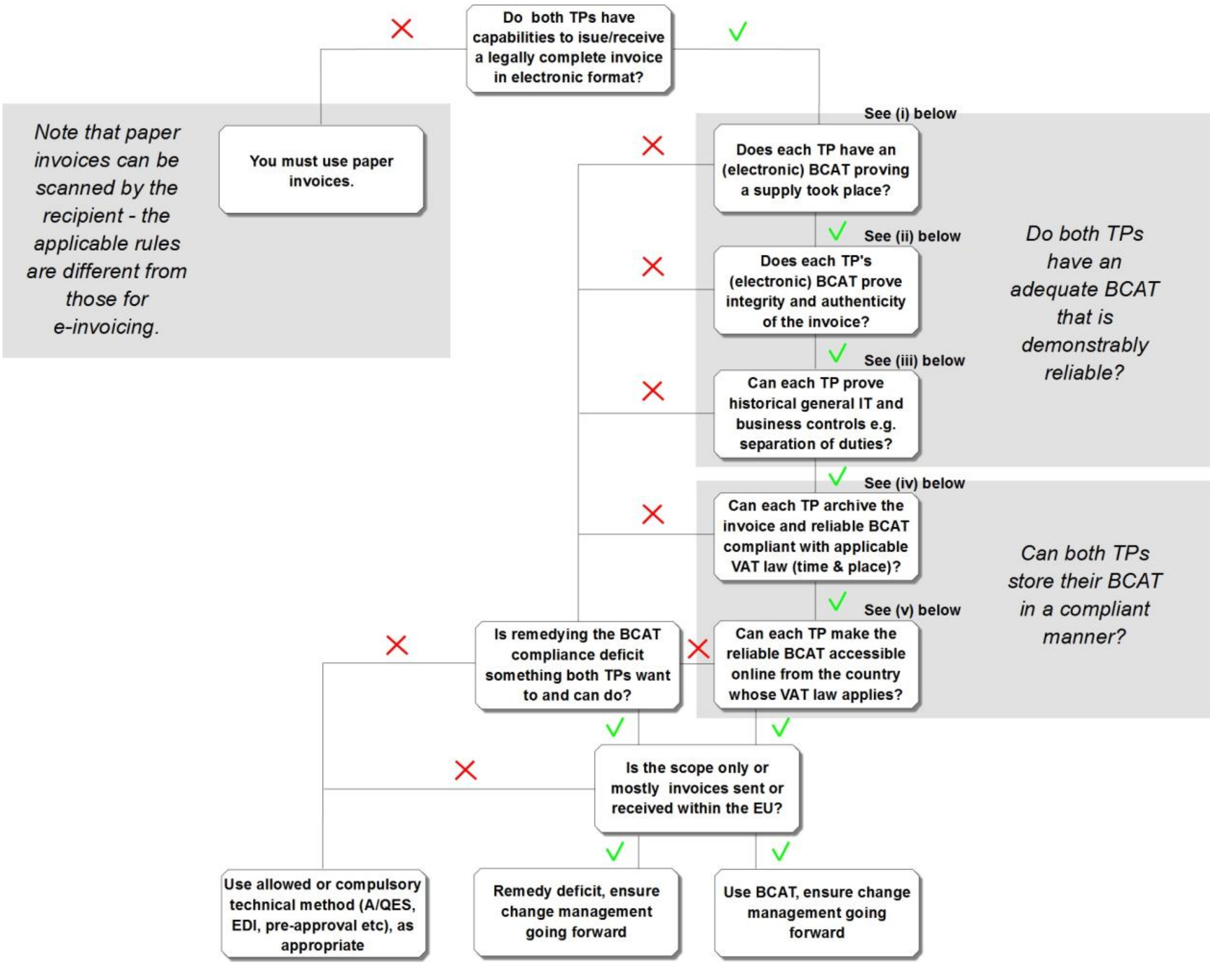


Figure 12: compliance choice diagram for companies with major trading relationships in the EU. (BCAT=business controls-based audit trail; TP=trading partner)

Notes to Figure 12:

(i) "Proving a supply took place" is not enough for compliance, but, logically, a requirement for businesses that want to avail themselves of the option to use "business controls establishing a reliable audit trail between an invoice and a supply" for proving invoice integrity and authenticity. This evidence must in many Member States be in electronic format.

(ii) In addition to proving a supply, the BCAT must actually prove integrity and authenticity of the invoice. In other words, a BCAT can prove a supply but not contain sufficient evidence of integrity and authenticity of all tax-relevant data of an invoice. The BCAT must therefore, in addition to proving a supply and being in electronic format, contain sufficient information to corroborate the integrity and authenticity of all tax-relevant data.

(iii) The word "reliable" in the definition "business controls establishing a reliable audit trail between an invoice and a supply" means that the BCAT must in addition to being complete also consist of components that are in and of themselves reliable. Data cannot be evidence of the reliability of an invoice if it is not demonstrably reliable itself. For most self-generated BCAT evidence, this means that internal control measures at the time of the supply must be proven. For externally generated BCAT evidence, access to that third party's portal could be sufficient. Such evidence may also be reliably electronically signed, or be presented together with historical transport and archive security data.

(iv) Member States are free to have their own technical, security and other archiving requirements, and different mandatory archiving periods apply throughout the EU. Invoices sent or received under the VAT law of an EU Member State must also in most cases be physically stored in either the country whose law applies or another Member States, optionally subject to prior notification to the territorially competent tax administration.

(v) The electronic invoice must be accessible online from the country whose VAT law applies to that invoice; this is a legal rule in case of archiving abroad, and a practical consequence of the applicable rules in all other cases (it is hard to imagine how a tax auditor can audit an electronic invoice that is not accessible through an electronic interface). Due to the fact that the majority of Member States have opted to require the evidence guaranteeing integrity and authenticity in electronic format when the invoice is electronic, the above equally applies to the relevant BCAT.

Transposition status of Directive 2010/45

(Green means yes; Red means no)

	Austria	Belgium	Bulgaria	Cyprus	Czech Republic	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	United Kingdom
I&A freedom of evidence transposed					Unclear							Unclear				Unclear											
BCAT mentioned																											
EDI mentioned				Not transposed yet													Not transposed yet										
QES mentioned																											
If e-invoice I&A must be electronic																		Unknown									
Exotic options/ requirements	1				2				3		4							5			6				7		8

Comments

1. Certain Advanced Electronic Signatures and invoices delivered through a "Business Service Portal" and PEPPOL are also mentioned as methods for ensuring I&A. Storage in electronic format required in the case of EDI and e-signatures but not in case of the BCAT.
2. One of the examples for ensuring A&I is an electronic "mark", based on a qualified system certificate issued by an accredited provider of electronic services (e-marks can be issued to legal persons).

3. Summary statement in EDI required, other detailed EDI requirements.
4. AES and marking by the use of special safe appliances are also the examples of means ensuring I&A.
5. I&A may be ensured by any other means approved by the Maltese Commissioner of VAT.
6. Software producing e-invoice data must be certified by the Tax Authorities (with some exceptions).
8. Prior consultation with the Spanish Tax Authorities is required in case of using other methods than QES, EDI or BCAT.
9. No examples for ensuring I&A are given in the VAT law but will be communicated in a Public Notice.

Good practice definitions in the EU

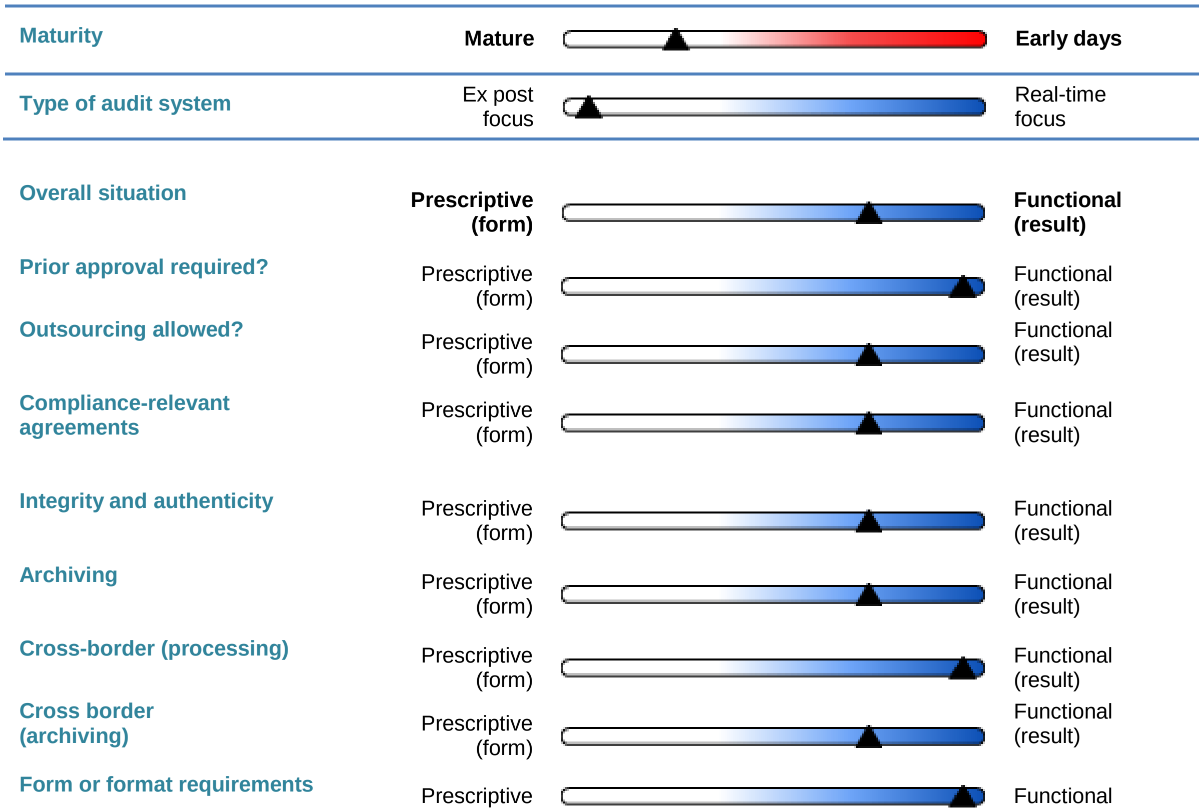
The European standards organization CEN has since 2001 worked on a variety of technical and self-regulatory standards for e-invoicing. This work has in recent years increasingly attracted participation from tax administrations.

One significant output of the Phase II of the CEN e-invoicing workshop is the CEN e-Invoicing Compliance Guidelines **[REF 4]**. These guidelines (which thanks to overlapping membership of tax administrations on both project groups have been synchronized with Fiscalis –an EU cooperation process for tax authorities– guidance materials on the subject of audit of electronic invoices) are based on a common end-to-end e-invoicing process model, whereby each step is further analyzed in terms of principal risks, requirements and control options. The guidelines can be used by users and services providers as a basis for self-assessment of the control framework in place to ensure tax compliance of their e-invoicing process.

The CEN Guidelines contain references to many other (EU and global) technical and process standards of relevance to e-invoicing practitioners.

Overview of EU Member States

Austria



(B2B)?	(form)	(result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Any means for ensuring integrity and authenticity of e-invoices are accepted in Austria.
- QES or “certain AES” when based on certificate verifiable via Signaturprüfdienst (signature audit/verification service) of the RTR or comparable foreign body, are among the examples. Secure EDI with an interchange agreement based on the European Commission 1994 Recommendation and business controls-based audit trail linking an invoice and a supply are also listed in the legislation. Invoices delivered via “Business Service Portal” and PEPPOL are also mentioned as methods for ensuring integrity and authenticity.
- Signatures can be automated and created by a legal person.

Belgium

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The law requires guarantees of the integrity and the authenticity of the e-invoice to be provided by any means at the choice of the taxpayer. Integrity and authenticity can be demonstrated for example by means of a business controls-based audit trail linking an invoice and a supply, by an advanced electronic signature or by EDI.
- Basic rules on storage have changed; now e-invoices can be stored in any foreign country without notification.

Bulgaria

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Qualified electronic signatures, EDI, business controls ensuring an audit trail linking an invoice and a supply and other means are accepted to ensure integrity and authenticity of e-invoices.
- Certain content of the outsourced issuance agreement is recommended (i.a. the process for issuance of e-invoices).

Cyprus

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)

Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Cyprus accepts advanced electronic signatures and "proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation. "Other means" are accepted for domestic transactions subject to prior approval by the Commissioner of VAT.
- Signatures can be automated and can be created by legal persons.
- Note that Cyprus has not yet transposed Directive 2010/45.

Czech Republic

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content	Prescriptive		Functional

requirements?	(form)		(result)

Highlights:

- The Czech Republic accepts business controls ensuring an audit trail linking an invoice and a supply, qualified electronic signatures (for certificates issued to a natural person signing cannot be automated), and qualified electronic "stamps" (certificate issued to a legal person; signature automation allowed). "Proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation is also allowed.
- There are regulatory requirements on algorithms for encrypting electronic signatures. Certificates must support SHA-2 algorithms. The minimum length of the cryptographic key for RSA algorithm is required to be 2048 bits.
- Formal requirements apply for electronically granting an issuance outsourcing mandate.
- Time-stamping is not legally required but viewed as important by the market.

Denmark

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Requirements for integrity and authenticity, to be achieved by any means at the choice of the taxpayer
- The integrity and authenticity of e-invoices may be achieved for example by means of a business controls-based audit trail linking an invoice and a supply.

- The storage requirements remain the same for all invoices: the invoice must be stored in its original form and format, with integrity and authenticity protection as well protection against loss or destruction.
- A description of the e-invoicing and electronic storage system has to be stored either electronically or in hard copy.

Estonia

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Estonia accepts any means that guarantee the authenticity and integrity of the invoice.

Finland

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)

Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Finland in practice accepts any e-invoicing process that meets reasonable business requirements due to the Finnish tax authorities' possibility to use means extraneous to the processes of taxable persons to monitor transaction flows. The law has as of 1 January 2013 been aligned with the other member states to explicitly include a requirement to ensure the integrity and authenticity of the invoice; BCAT is given as an example of how to meet such requirements.
- Requirements for storage exist, and the use of WORM devices has often been recommended to ensure robustness.

France

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content	Prescriptive		Functional

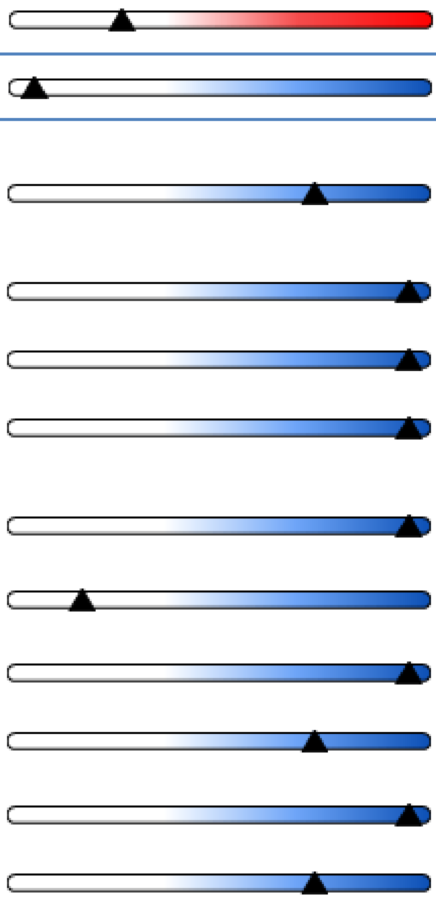
requirements?	(form)	(result)

Highlights:

- To ensure the integrity and authenticity, France accepts qualified electronic signatures, “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation as well as summary statements and “partner file” requirements, and business controls-based audit trail linking an invoice and a supply.
- The “mandate” for outsourcing issuance of an invoice is subject to content requirements. Formal evidence of a mandate is required where applicable.
- An “instruction” providing more detail on the new legal regime based on Directive 2010/45 will be issued in the course of 2013.
- Under specific conditions (WORM device or electronic signature) a supplier can archive an electronic copy of paper invoices issued to customers.

Germany

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)



Highlights:

- Germany accepts any means to ensure the integrity and authenticity of the invoice, which include the BCAT method as well as qualified electronic signatures and secure EDI with an interchange agreement based on the European Commission 1994 Recommendation.
- When using the qualified signature option, signatures can be automated under specific conditions (e.g. implementation of an explicit time- or volume window for re-entering PIN codes to activate private keys), in which case what-you-see-is-what-you-

sign requirements are waived. Qualified certificates may only be issued to natural persons.

- Specific rules apply for logging the validation of electronic signatures by recipients.
- Detailed archiving requirements apply.

Greece

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Authenticity and integrity of invoices may be ensured by any means at the choice of the taxable person. Methods listed as examples in the law are advanced electronic signature, EDI, business controls ensuring an audit trail linking an invoice and a supply as well as “marking” by the use of special safe appliances.
- An outsourced issuance agreement is required prior to invoicing (evidenced by any method, i.e. via e-mail, mail); content requirements for such agreement exist.
- It is explicitly stated in the legislation that evidence of ensuring I&A has to be stored in e-form.
- Certain tax records data must be electronically forwarded to a special database operated by the Greek Ministry of Finance (MoF).

Hungary

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Hungary accepts any method for ensuring authenticity and integrity of e-invoices. Qualified electronic signatures, business controls ensuring an audit trail linking an invoice and a supply and "proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation are given as examples in the law.
- Note that the previous requirement for time-stamping the invoices has been removed as of 1 January 2013.
- There are requirements for e-invoices to be capable of being presented in one of a number of prescribed formats.
- Signatures can be automated and can be created by legal persons.
- An agreement for outsourced issuance of invoices should include certain content.

Ireland

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive		Functional

	(form)	(result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Requirements for integrity and authenticity, to be achieved by any means at the choice of the taxpayer. The integrity and authenticity of e-invoices may be achieved for example by means of a business controls-based audit trail linking an invoice and a supply. Advanced electronic signatures and “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation remain accepted methods for electronic invoices.
- Signatures can be automated and created by a legal person.

Italy

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)

Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Italy accepts qualified electronic signatures, “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation and business controls ensuring an audit trail linking an invoice and a supply, as well as ‘other means’ of ensuring authenticity and integrity.
- The EDI option is historically not widely practiced in Italy.
- Signatures can be automated but must be attributed to a natural person.
- Storage of electronic invoices in electronic form is mandatory; it is optional for invoices which were issued in paper form and for invoices ‘created electronically’ but which do not amount to electronic invoices (i.e. invoices where the recipient has not accepted e-invoicing).
- There is also an obligation of transmitting the thumbprint of the archive to the tax authorities every year, by the end of January for the flows which took place two years earlier.
- Using a service provider not established in the EU is prohibited for suppliers that do not have a clean VAT record for at least five years.
- Outsourced issuance agreement content requirements are listed in the guidelines issued by the tax authority.

Latvia

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Latvia accepts any means of ensuring the integrity and authenticity of e-invoices. Explicitly mentioned are: qualified electronic signatures, business controls ensuring an audit trail linking an invoice and a supply and “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation.
- Signatures can be automated but must be created by a natural person.
- Storage abroad is now permitted without any constraints as to the place of storage; subject to online access (no notification needed).

Lithuania

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Lithuania accepts qualified electronic signatures, business controls ensuring an audit trail linking an invoice and a supply and “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation.
- Signatures can be automated but must be created by a natural person.
- Service providers to Lithuanian taxable persons not established in an EU Member State must comply with additional requirements.
- It is explicitly stated in the legislation that if an invoice is in electronic form, data ensuring the authenticity and integrity of the invoice must be stored by electronic means.

Luxembourg

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Luxembourg accepts advanced electronic signatures and "proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation.
- Signatures can be automated and can be created by legal persons.
- Note that Luxembourg has not yet transposed Directive 2010/45.

Netherlands

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)

Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Each party is free to decide the means by which to demonstrate integrity and authenticity; it can be demonstrated by means of a business controls-based reliable audit trail linking an invoice and a supply. Qualified electronic signatures and EDI are also provided as examples in the law.

Poland

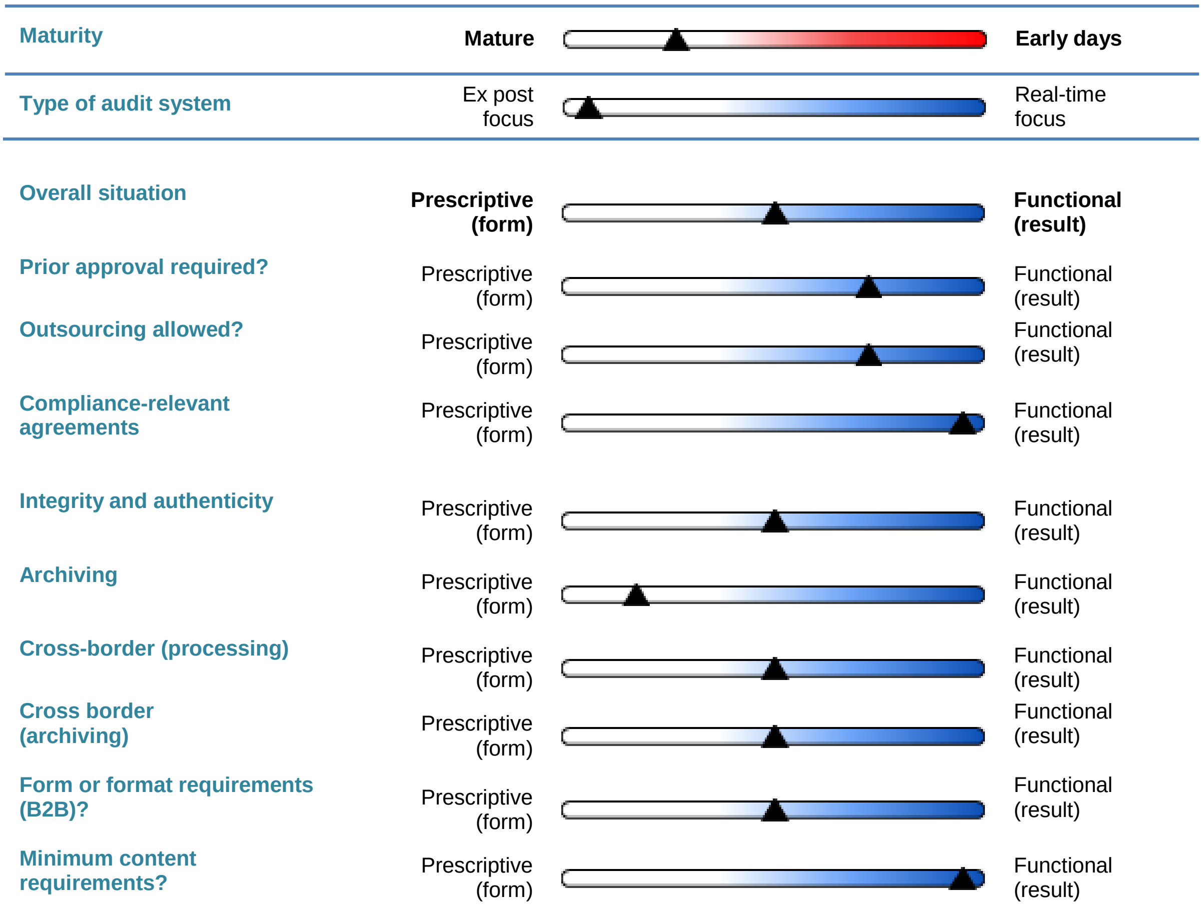
Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Poland accepts qualified electronic signatures and “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation, as well as (since January 2011) other means that can ensure the integrity and authenticity of the invoice. Business controls ensuring an audit trail linking an invoice and a supply are now also mentioned as a method of ensuring the integrity and authenticity of e-invoices.

- Signatures can be automated, subject to certain conditions being fulfilled (in which case what-you-see-is-what-you-sign requirements are waived), but must be created by a natural person.
- Only as of 1 of January 2013, issuance of invoices 'in the name and on behalf' of the tax payer is regulated, although it was accepted also previously.

Portugal



Highlights:

- To meet the integrity and authenticity requirements Portugal accepts advanced electronic signatures, “proper EDI” with an interchange agreement based on the European Commission 1994 Recommendation and any business controls ensuring a reliable audit trail linking an invoice and a supply.
- Signatures can be automated and created by a legal person.
- Electronic invoices must be capable of being presented in the Portuguese SAF-T format.
- Certification requirements exist for E-billing software that produces the invoice data.
- As from January 2013, taxable persons (established/domiciled in Portugal and who perform operations subject to VAT in Portugal) shall monthly communicate certain elements of the invoices to the local Tax Authorities. This should be done through electronic means, e.g. through the submission of SAF-T.
- Documentation describing architecture, function and organization of the e-archiving system must be maintained.

![trustweaver logo]

Romania

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Qualified electronic signatures, EDI, business controls ensuring an audit trail linking an invoice and a supply and other electronic means are accepted means to ensure the integrity and authenticity of e-invoices.
- For EDI a paper summary document is required.
- Service providers issuing invoices under Romanian law have to be established in a country with which Romania has a mutual tax assistance treaty.
- Basic storage rules have changed. Storage abroad is now permitted only in countries with which Romanian has a mutual tax assistance treaty (previously anywhere in the world); subject to notification (previously no notification was required) and subject to online access (which is a pre-existing requirement).
- It is explicitly stated in the legislation that evidence of ensuring A&I has to be stored in electronic form.

Slovak Republic

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**

Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Slovakia accepts reliable business processes control audit trails, qualified electronic signatures, EDI and other methods which ensure authenticity and integrity of e-invoices.
- Signatures can be automated but must be created by a natural person.

Slovenia

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)

Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Authenticity and integrity of invoices may be ensured by any means at the choice of the taxable person. Means listed in the legislation as examples are qualified electronic signature, EDI and business controls ensuring an audit trail linking an invoice and a supply.
- It is explicitly stated in the legislation that the evidence of ensuring the integrity and authenticity has to be stored in e-form.

Spain

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

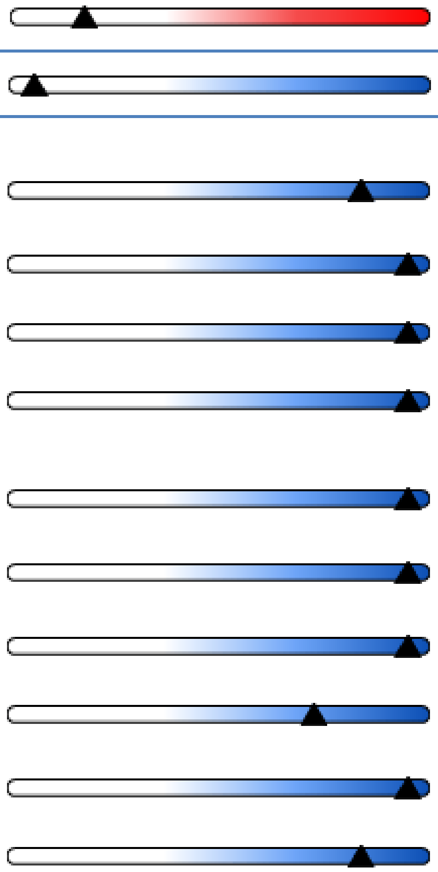
Highlights:

- Each taxable person shall determine the way to ensure the integrity and authenticity of the invoice. Business controls can be used to establish reliable audit trails linking invoices and supplies. However, to preserve legal certainty, Spanish law specifically states that EDI and QES ensure the integrity and authenticity.

- Any taxable person may submit other technological proposals for ensuring the integrity and authenticity to the Tax Agency.
- Spain formally accepts "proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation, but in practice most e-invoices are signed with a "recognized signature" which in practice is a qualified electronic signature (but a Secure Signature Creation Device may be implemented in software only). The signing certificate must be issued by a recognized CA and must contain the holder's VAT number.
- Signatures, when used, can be automated but must be created by a natural person.

Sweden

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

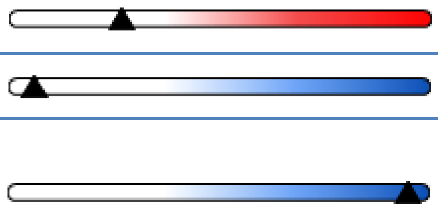


Highlights:

- The authenticity and integrity of the invoice can be guaranteed by any means. The trading partners are free under the Accounting Act rules to decide how to meet the requirements.

United Kingdom

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**



Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- UK VAT law requires invoice integrity and authenticity to be ensured through any business process including the BCAT method and. For e-invoices (to be further detailed in guidance notes) advanced/qualified electronic signatures and "proper EDI" with an interchange agreement based on the European Commission 1994 Recommendation will be accepted.
- Signatures can be automated and created by a legal person.
- Parallel electronic and paper flows are only allowed for a defined testing period.

E-invoicing in other European countries

Croatia

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive	Functional

	(form)	(result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- E-invoicing is permitted in Croatian law as 2011. The provisions are construed in line with EU Directives 2006/112 and 2010/45.
- Certified electronic signatures, EDI and any other methods are accepted means to ensure integrity and authenticity of e-invoices.
- Issuance, sending, receipt and any other action related to invoices in electronic form can be performed via third party service providers.

Iceland

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

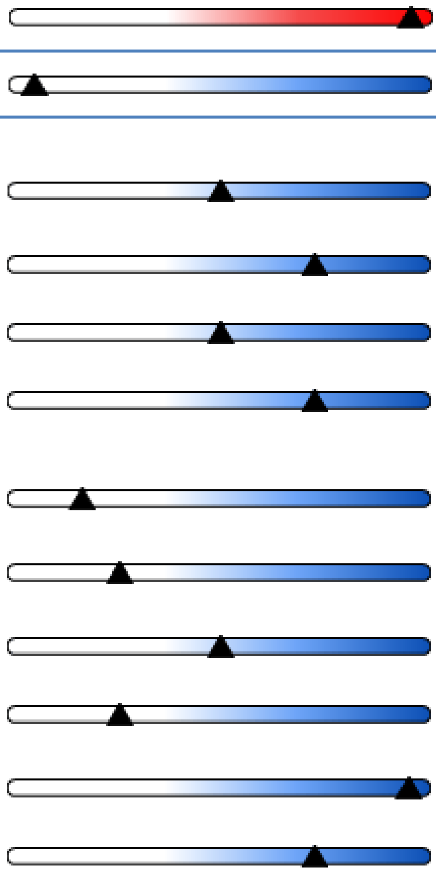
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Integrity of invoices may be ensured by any means at the choice of the taxable person.
- Storage outside of Iceland is allowed subject to derogation and online access.

Montenegro

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

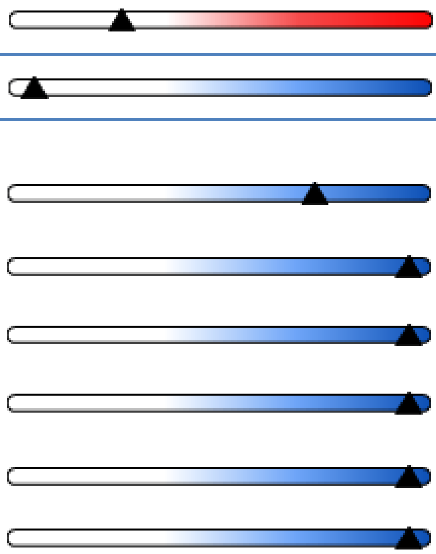


Highlights:

- Montenegro has no explicit regulatory framework allowing e-invoicing for VAT purposes, but it is also not prohibited.
- By application of various other laws, a qualified electronic signature is required for legal recognition of electronic documents.

Norway

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive	Functional



	(form)	(result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Authenticity and integrity of invoices may be ensured by any means at the choice of the taxable person; no examples are mentioned in the legislation.
- Accounting material, including invoices, should be kept in a way that protects against unlawful change or loss. It is further required that the material can be presented to a state authority during the full storage period in a form that allows for subsequent control, and that it can be printed.
- It is not allowed to store invoices outside the Nordic countries; derogations can however be requested.

Russian Federation

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

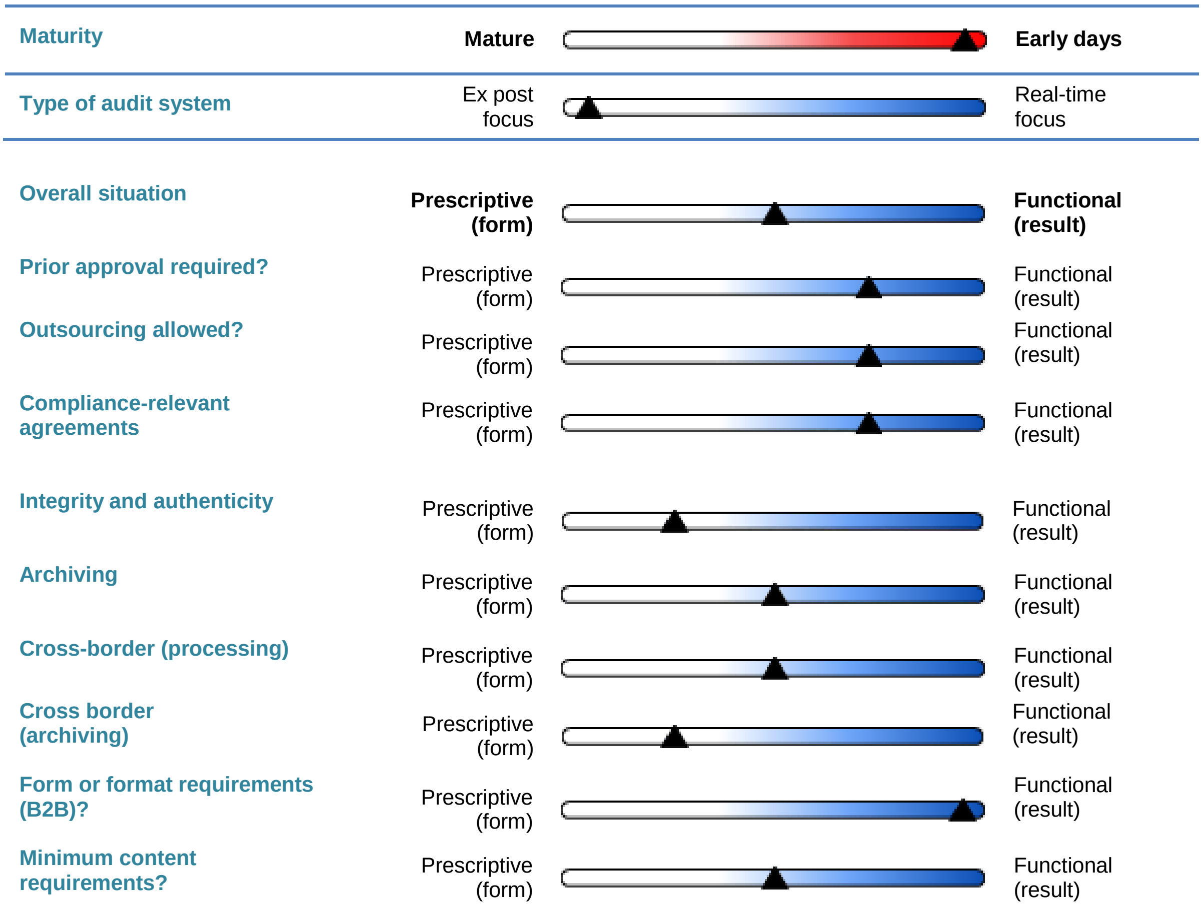
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- E-invoices have to be issued in a format adopted by the Tax Service and digitally signed.

- Use of an authorized operator (service provider) is mandatory for issuing and receipt of electronic invoices. In addition to specific technical rules for the creation and validation of an electronic invoice, the delivery of the electronic invoice must be performed and acknowledged by an authorized operator.
- Certificates underlying the electronic signatures must be issued by certified Certification Authorities. Some technical requirements are not based on international standards and subject to export restrictions.
- No restrictions as to the place of storage; foreign storage does not need to be notified.
- Requirements similar to electronic invoicing apply for other types of trade and administrative documents.

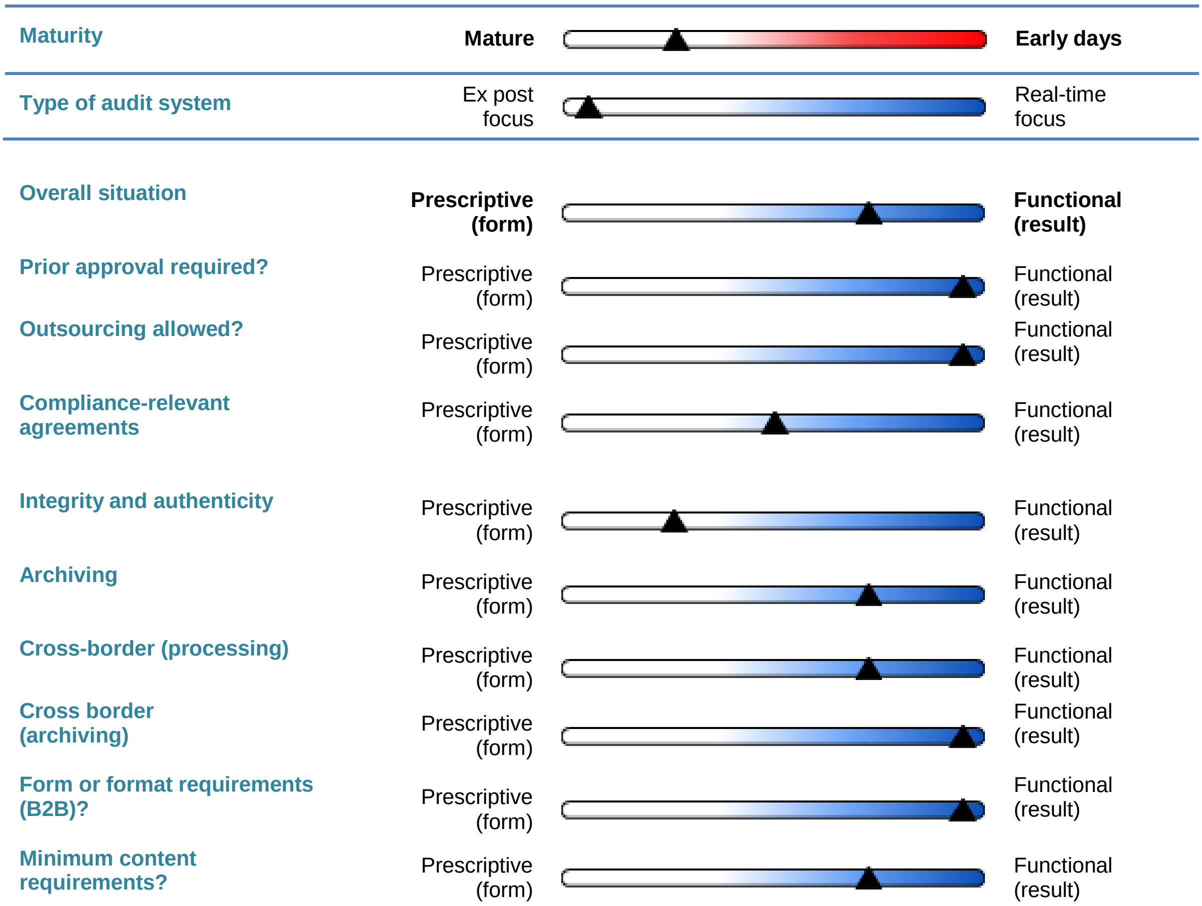
Serbia



Highlights:

- Serbia has no explicit regulatory framework allowing e-invoicing for VAT purposes, but the law on accounting and audit in conjunction with the law on electronic documents makes it possible to issue valid electronic invoices with qualified electronic signatures.
- A foreign CA may be used if registered with the relevant Serbian authorities.
- A service provider may be used upon notification of certain details by the taxable person to the tax administration.

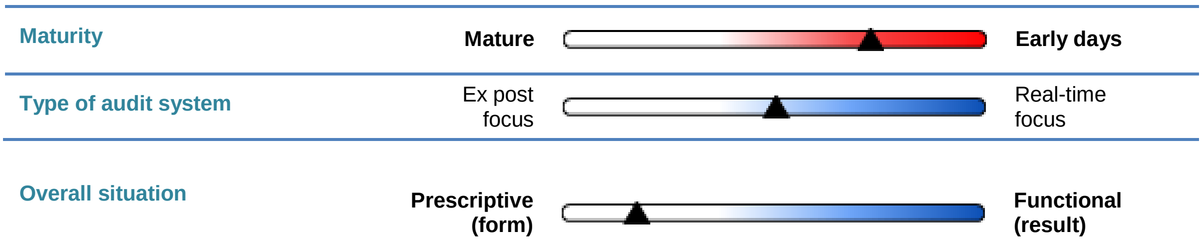
Switzerland



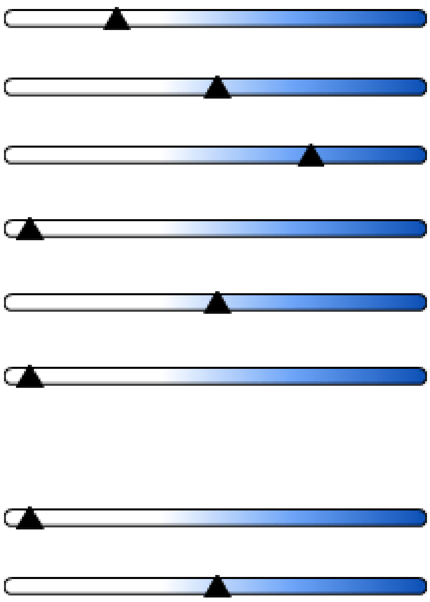
Highlights:

- Switzerland accepts only “advanced” electronic signatures (in Switzerland this is commonly viewed as nevertheless requiring a hardware signature creation device, usually a smart card). Certificates may only be issued by approved Certification Authorities.
- Third party e-invoice issuers must be registered in the Swiss company registry.
- Both outsourcing of invoice issuance and of certain receipt functions – in particular signature validation – are subject to an explicit agreement.
- Systematic validation of the signature is only required in cases where the processing of invoices at the receiving side is done automatically. In other cases random tests may be sufficient. The process/approach of the validation and the results have to be documented.

Turkey



Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)



- E-invoicing is permitted for companies that are registered with the e-Invoice Recording System (EFKS) of the Directorate of Revenue Administration of the Ministry of Finance and for private individuals.
- E-invoices issued by companies must be signed with an “e-seal”, which is a digital certificate issued by a state-approved CA. E-invoices issued by private individuals must be signed with a qualified electronic signature.
- The company can either use an official website for sending and storing the e-invoices, or establish a qualified and compatible software system on the company’s own servers, integrated with the EFKS.
- New amendments of Turkish law allow service providers which are taxable persons in Turkey and have obtained special integration permission from the Revenue Administration Office to exchange and archive electronic invoices on behalf of other taxpayers.
- E-invoicing is mandatory in Turkey from September 2013 in certain sectors and under certain conditions. It is also mandatory to exchange e-invoices when both parties are registered for e-invoicing application.

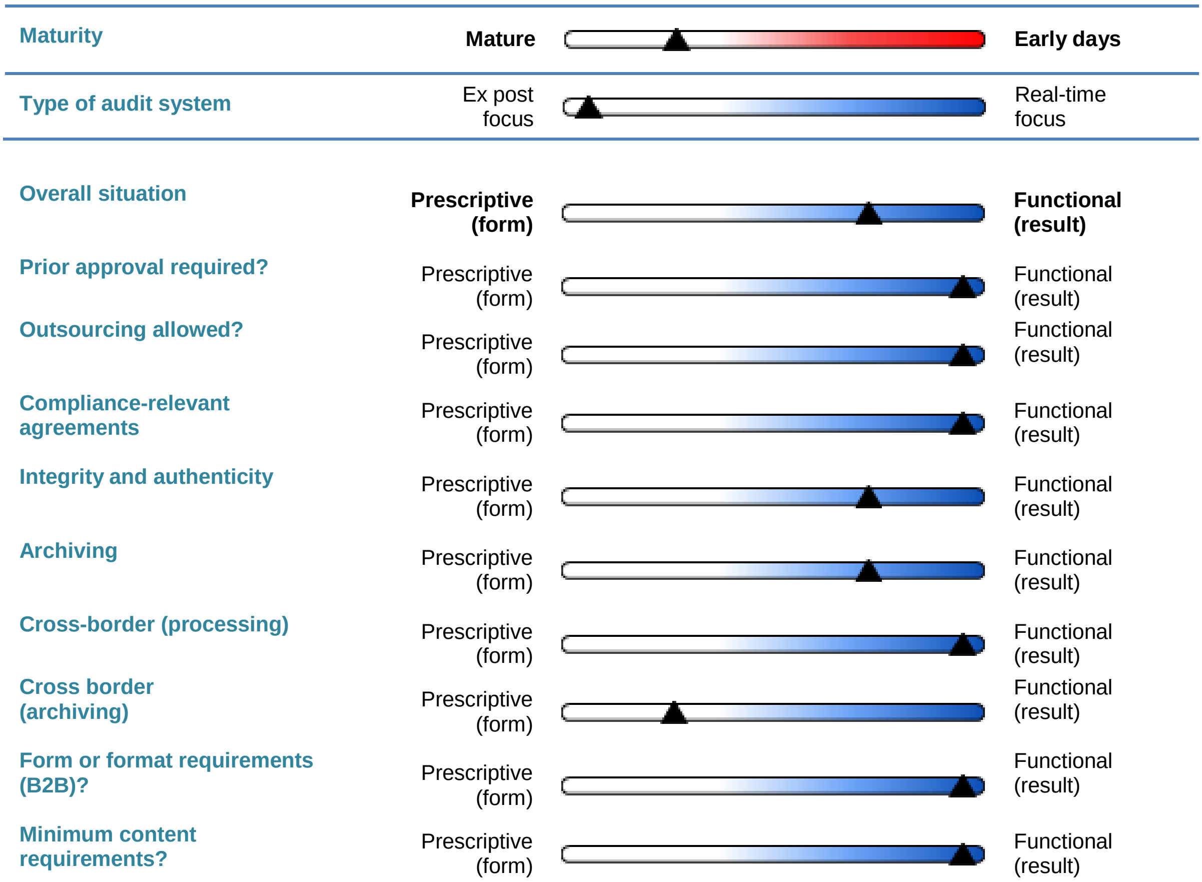
Ukraine

Maturity	**Mature**		**Early days**

- The Tax Code of Ukraine states that tax invoices can be issued either in paper form or in electronic form (with an advanced electronic signature) and that the two are equal from the tax law perspective.
- An e-invoice must be registered in the Unified register of tax invoices. The same applies to paper invoices with VAT exceeding a certain amount.
- Some tax regulations however still only refer to paper invoices which make Ukrainian companies hesitant to substitute paper invoices with electronic ones.

E-invoicing in North America

Canada

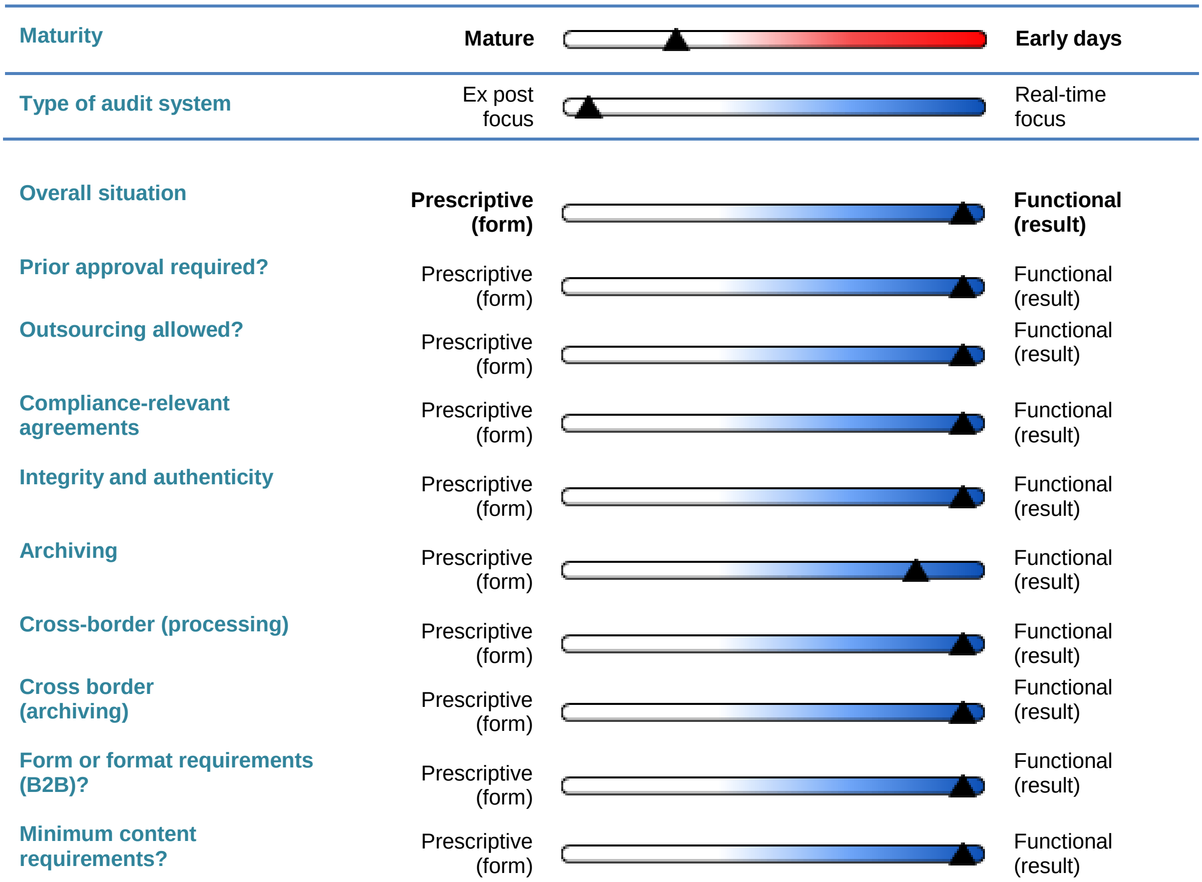


Highlights:

- The Canada Revenue Agency (CRA) has issued a series of circulars on electronic transactions and records for income tax purposes. These rules also apply to e-invoices.
- The relevant processes prior to storage must ensure adequate controls to safeguard the accuracy, security and integrity of the data processed and kept in the system.

- Documentation must be available that describes the relevant operating and business systems, including how transactions are processed and records kept and managed.
- Audit trails must be available during the storage period including electronic signatures and results from other security measures for the end-to-end process.
- Records should be kept in a manner that ensures accessibility, security, accuracy, integrity, authenticity and reliability. Records should be based on non-proprietary, commonly used data interchange standards and readable with CRA audit software.
- Back-up records are to be maintained at all times. It is considered good practice to keep back-ups at a location other than the business location for security and precautionary purpose. Storage abroad is prohibited without derogation from the CRA.

USA



Highlights:

- The sales tax levied in the US operates differently from VAT in that invoices between businesses are not taxed. Instead, the end of the production chain – the final transaction with the consumer – is subject to a tax rate that is often composed of percentages imposed by state, city, county and other administrative bodies. Enforcement of this tax does not revolve around B2B invoices, which explains why the level of e-invoicing requirements for e-invoicing between companies in the US is lower than that in countries with VAT.
- The US approach to tax recognition of electronic business documents places less emphasis on the transaction and more on record retention. The Internal Revenue Service (IRS) has published very explicit federal requirements for taxpayers that only

keep records in electronic format[9]. In addition to requirements for companies to define an inspection and quality assurance program evidenced by regular evaluations, specific requirements apply for the archive.

- Another area of US regulation that affects e-invoicing is the Sarbanes-Oxley Act, which, in general, requires companies to ensure high levels of control. The security of important business and finance information is a key enabler of such controls, and electronic signatures are among the techniques that can be used to facilitate SOX audits.
- The basic electronic commerce and electronic signature rules in the US to a large extent follow from the E-Sign Act (Electronic Signatures in Global and National Commerce Act, 2000) and UETA (the Uniform Electronic Transactions Act, 1999). Neither of these instruments is technology specific.

E-invoicing in Latin America (Mexico and South America)

The business benefits of electronic invoicing no longer need explanation: by dematerializing invoicing processes, enterprises obtain instant savings and process efficiencies. The macro-economic and ecological effect of these savings and efficiencies are also very important to politicians, who are increasingly judged on their ability to enhance their countries' economic competitiveness and environmental sustainability.

Governments are also interested in electronic invoicing for another reason: it presents a unique opportunity to suppress fraud while obtaining quality economic data in real-time.

The governments of **Latin America** have been among the first to adopt ambitious programs towards maximizing all the benefits of electronic invoicing. Other than the European Union and other regions, where the emphasis has thus far been on transposing time-honored paper-based process and compliance concepts to the electronic environment, Latin America has not hesitated to leapfrog such methods and put in place entirely new control infrastructures mandated by regulation.

- The **control infrastructures** put in place generally revolve around the concept of pre-registration of invoice data with the tax administration or agents accredited by the tax administration.
- **Regulation** has made or is making the use of such pre-registration mandatory for the vast majority of enterprises in the country.

While views differ on the pros and cons of top-down imposed use of prior control infrastructures, it is a fact that the combination of these two approaches has quickly put Latin America in a leadership position when it comes to e-invoicing adoption worldwide. Because the rules, the consequences of non-compliance and timetables for mandatory adoption are generally unambiguous, technology vendors could confidently invest in solutions for connecting to mandatory control infrastructures. Because compliance is driven by clearly specified technologies, users are not faced with the uncertainties of varying interpretations.

Non-compliance is not an option

In countries where tax audits often take place many years after the occurrence of a transaction, companies may sometimes get away with lack of formal invoice compliance if, for example, the audit focuses on other aspects of their financial administration. This is different in Latin America, where electronic invoicing compliance consists of following

[9] Revenue Procedure 97-22, 1997-1 CB 652, March 13, 1997

unambiguous technical specifications and adoption deadlines. In such circumstances, compliance becomes a rather binary proposition: an invoice is either issued or received in conformity with the rules or it is not. The consequences of issuing or receiving non-compliant invoices are therefore also in many cases much more direct and tougher than in other regions, for example:

- **Administrative penalties** for non-compliance can in certain cases exceed the transaction value. In Brazil, for example, non-compliance with certain rules can be penalized up to 150% of the value of the supply.
- Non-compliance is relatively quickly equated with **tax evasion**, which means that executives of repeat offenders may be imprisoned and their companies may be temporarily or permanently closed down.

Challenges facing modern enterprises active in Latin America

Many companies would like their Latin American electronic invoicing solutions to fit into their international IT and process consolidation strategies so as to leverage global best practices and seamlessly integrate with strategic e-business platforms. These ambitions are stymied by a number of characteristics of the Latin American electronic invoicing market.

Fragmentation abounds and solutions are predominantly local

Tax administrations in Latin America cooperate in different ways, but the fundamental architecture of the regulation and control infrastructure varies significantly from country to country. This means that a company doing business across a number of Latin American countries has to adopt processes and messages that are specific for every jurisdiction. In addition, the legislation often operates from the assumption that companies maintain their own local ERP systems and do not leverage modern network-based process consolidation strategies. These factors, compounded by the speed with which national systems have been put in place and made mandatory, has led businesses to adopt highly localized software-based solutions for integration towards mandatory tax administration-controlled pre-registration services. The deployment time for local companies to set up and operate such software components can be long due to technology integration and onboarding issues.

Solution performance is driven by legislation rather than global market metrics

Another reason why many modern enterprises find electronic invoicing in Latin America challenging is that the pre-registration requirements create a performance dependency on the tax administration –a regulatory agency with extensive powers, acting as part of a sovereign State. Even when the tax administration does not operate system components fronting tax payers, the accredited private sector vendors providing such services on their behalf (e.g. PACs in Mexico) often view the law rather than customer needs as their ultimate requirement specification. Global best practices in relation to service levels are therefore difficult to uphold in the Latin American market.

Keep track of changing invoice schemas and other requirements

In a continent that has chosen to create an intimate relationship between tax requirements and technical implementation of control infrastructures, many legal changes can impact the way enterprise systems address compliance. In the past five years, the rate of change in many Latin American countries' electronic invoicing requirements has been high. It has not been easy for enterprises and their solution vendors to adapt to and test legal changes affecting systems with significant dependencies on backend accounting and logistics systems. This makes Latin American electronic invoicing challenging also from the perspective of implementing industry best practices for change management.

Close coupling with PKI drives costs and complexity

Electronic signatures based on regulated Public Key Infrastructure components are at the heart of most Latin American electronic invoicing requirements. By controlling the identity of enterprises through accredited or State-operated Certification Authorities, tax administrations can be certain to hold the right enterprise accountable for pre-registered transactions. However, for modern enterprises that want to leverage outsourcing, shared services centers, Cloud services and process consolidation strategies, the legal responsibility to maintain sole control over signing keys often creates challenges. The vast majority of available solutions are based on private keys residing in local software components that have to be installed specifically for this purpose because standard business applications are not designed for this purpose. .

Cultural diversity and varying maturity levels

While Latin America has a relatively low level of language diversity, countries' legal and business cultures as well as the maturity of their electronic invoicing systems vary significantly. Approaches to electronic invoicing appear similar at first sight, but this similarity is highly deceptive in real life. A single enterprise with sales or operations across the region needs to take these cultural aspects into account when setting up and running multiple country-specific electronic invoicing solutions.

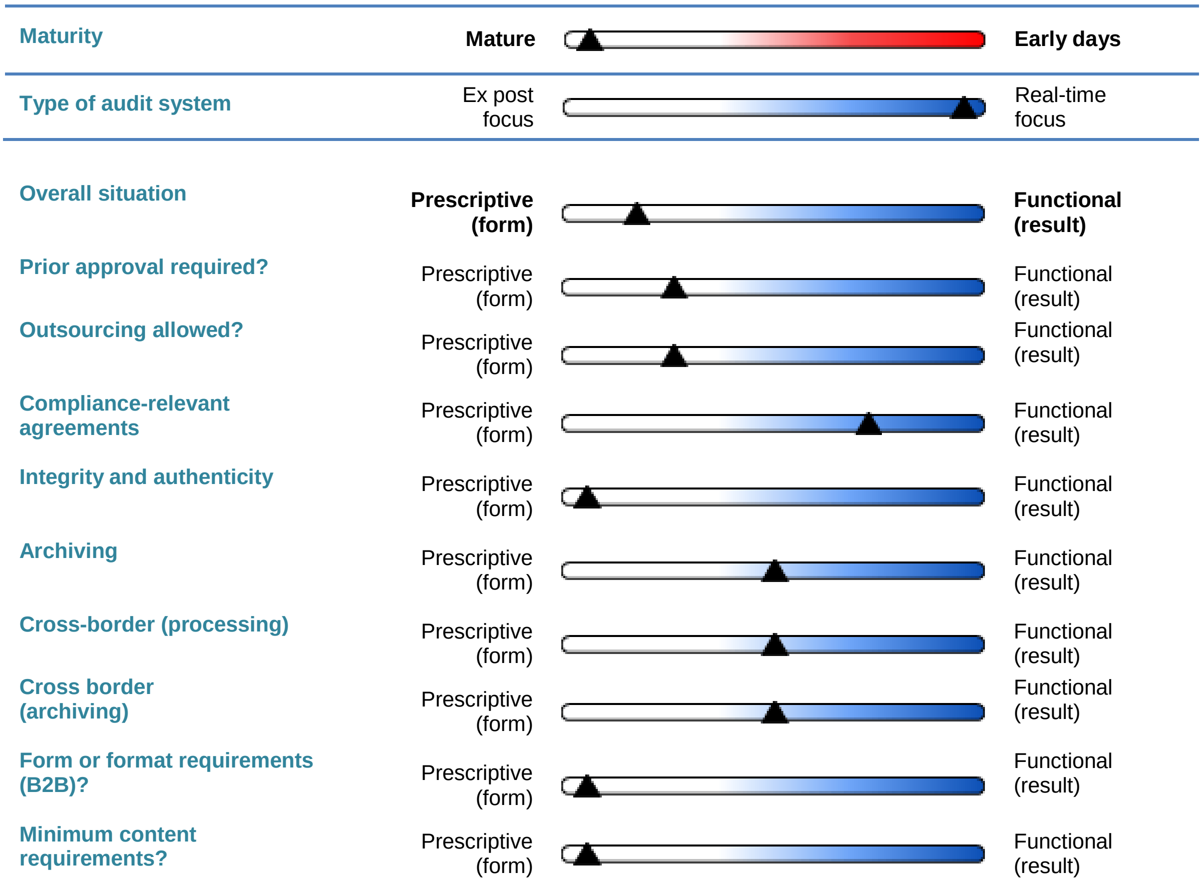
Common services in real-time audit systems

Typically a range of compliance-specific processes must be supported by an e-invoicing application in Latin America. Such processes comprise not only those required by law, but also industry best practices in countries where regulation has not provided a complete legal framework for the invoice eco-system. Such services include:

- **Issuance** – create legally compliant invoices according to declared schemes, comprising:
    - **Receipt and pre-validation** – Receipt and validation of the format, structure and contents of electronic invoices.
    - **Status and Delivery** – Obtaining the processing status of a submitted invoice or invoice event – e.g. rejected, pre-validated, approved, under contingency.
- **Service On-Boarding** – Company or branch registration in order to implement back-end services.
- **Cancelation** – Cancelation of previously state-authorized e-invoices.
- **Validation** – Validation of an electronic invoice according to a country's definition of validation when regulated, or otherwise according to the country's established best practices.
- **Confirmation** – Generation of a valid receipt on behalf of the receiver confirming the receipt of an issued invoice or its rejection.
- **Skipping** – Invalidation of invoice number(s) towards a State (agent) so that such invoice numbers cannot be used to issue invoices.
- **Storage/Archival** – For the period of time required by applicable law.
- **Retrieval** - Access to authorized invoices according to applicable legal requirements.

- **Secondary services** – In connection with the electronic invoicing process, additional services may be expected such as graphical representation, printable representation and invoice distribution.

Mexico



Highlights:

- E-invoicing is mandatory with a few exceptions.
- E-signatures required for issuing invoices; the certificates used for signing must be obtained by the tax administration's (SAT) own CA.
- A "Digital Fiscal Document through Internet" ("CFDI") is the new e-invoice format as of 1 January 2011, referred to as v3.
- An Authorized Certification Provider (PAC) must be used for a "Timbrado" (real-time pre-approval) process.
- Outside the mandatory use of a PAC, taxable persons can outsource e-invoicing processes (also to non-Mexican service providers), but remain fully responsible for these from a tax viewpoint.

E-invoicing in South America

Argentina

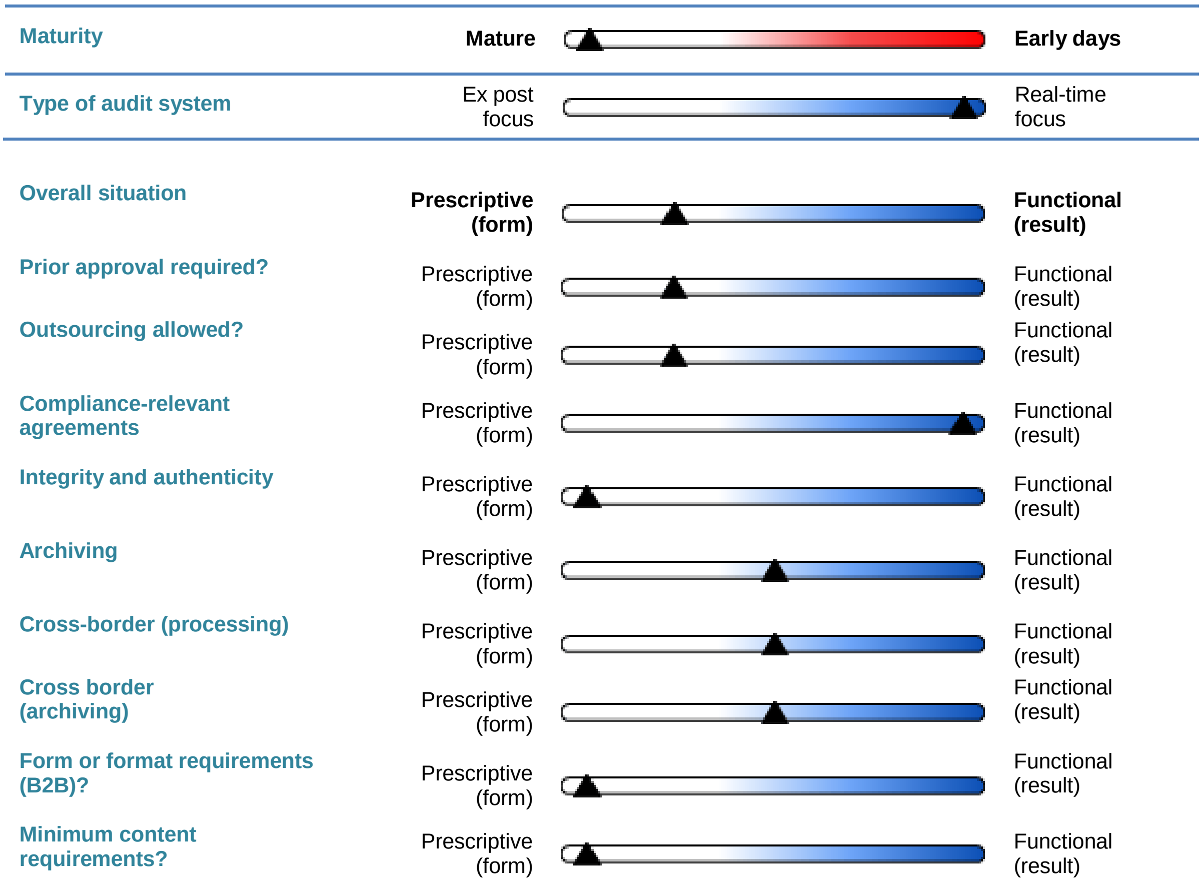
Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- E-invoicing driven by the tax administration (AFIP) since 2006.
- An electronic invoice can be issued in any format, and there are no real-time pre-approval requirements.

- A digital certificate is used by the taxable person to request an authorization code (CAE) from AFIP, which must subsequently be added to the electronic invoice or paper representation thereof.

Brazil

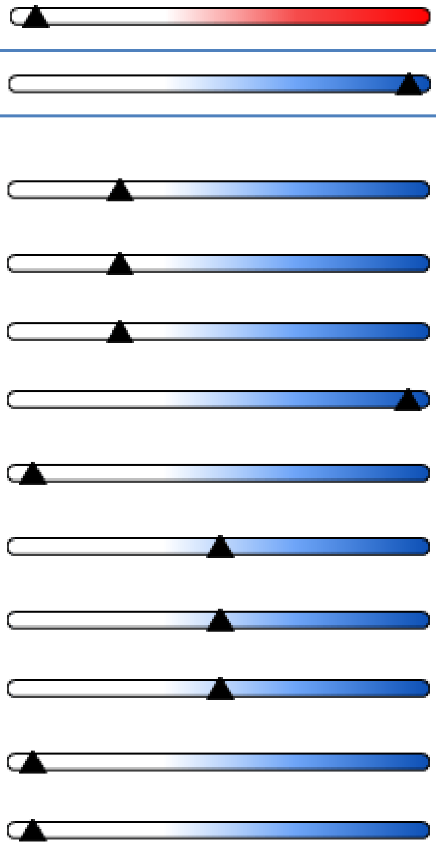


Highlights:

- E-invoicing is mandatory both for State (goods) and Municipality (services) tax invoices (although exceptions exist).
- Electronic invoices must be digitally signed; the certificates used for signing must be obtained by a government accredited Certification Authority.
- The signed invoice is sent to the geographically competent tax office interface, which performs validation and returns a usage authorization, upon which the invoice can be sent to the recipient.
- In addition to the goods invoice, a DANFE document (a simplified graphical representation of the invoice) is needed for tracking goods in transit.
- No specific regulation on outsourcing, but it is possible to use a service provider.

Chile

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

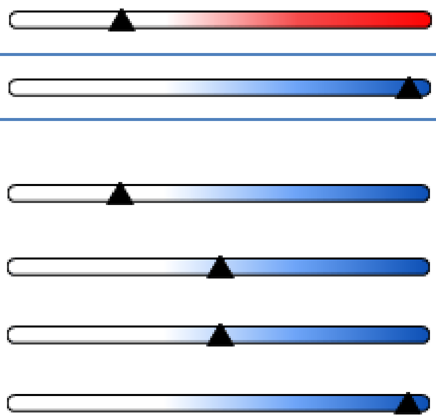


Highlights:

- Use of electronic signatures based on certificates issued by Certification Authorities under a nationally controlled root.
- The tax authority (SII) issues invoice numbering blocks that must be used and verified online by the buyer upon receipt of the invoice.
- Small companies can use software developed by the tax authorities; other solutions developed in cooperation with the tax authorities are also available.

Colombia

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)



Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The tax administration (DIAN) created the regulatory framework for e-invoicing in 2007-2009.
- The electronic invoice format is not defined by the tax authority. There is no requirement for the invoice itself to be signed or pre-approved, but monthly summaries to be validated by the tax administration must be electronically signed.

Costa Rica

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The tax administration (DGT) introduced e-invoicing in 2007.

- The electronic invoice must be in a prescribed XML format and digitally signed. There is no requirement for tax authority real-time preapproval but the invoicing system should be auditable.

Peru

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The tax administration (SUNAT) started allowing e-invoicing in 2008. Currently a nation-wide pilot project is drawing to an end, after which electronic invoicing will become generally available.
- There are invoice format requirements and the invoice must be digitally signed.

Uruguay

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)

Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Electronic invoicing was introduced by the tax administration (DGI) in 2011.
- The invoice must be in a prescribed XML format, digital signed and cleared by the tax administration which subsequently makes it available for online validation.

E-invoicing in Asia

Australia

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)

Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The Australian Taxation Office (ATO) has chosen for a light-touch regulatory approach to electronic invoicing.
- It is possible for an invoice to be in electronic format subject to the integrity and authenticity of that document being safeguarded.
- The tax authorities require good up-to-date documentation of the e-invoicing system, and, in particular, of the archival system.

China

Maturity	**Mature**	**Early days**

Highlights:

- Electronic invoicing in the sense of a private system that creates electronic tax originals of invoices is not permitted in China. The issue and storage of paper invoices remains compulsory.
- China has focused on the benefits of using information technologies for tax control. This has led to the creation of the Golden Taxation Project ("Golden Tax System") in 1994. This system is being rolled out gradually. Where the system is in place, its use is mandatory for all VAT-able invoices under Chinese law. The Golden Tax system includes the concept of a controlled printing system such as a tax-control cash register.
- In 2012 a number of Chinese government agencies adopted e-commerce guidelines to promote e-commerce including e-invoicing development. One part of these guidelines sets out to implement a pilot program for e-invoicing including setting up procedures and standards for e-invoicing, undertake research on the safety of the e-invoice system and e-invoice service platform methodology, establish a pilot program in certain model cities, etc.

Hong Kong Special Administrative Region

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus
Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- The rules published by the Inland Revenue Department in "Admissibility of Business Records Kept in Electronic Form for Tax Purposes" (2002) mainly focus on the storage aspects and general controls within companies.
- Integrity and authenticity of the electronic record must be maintained.

India

Maturity	**Mature**	**Early days**

- India has multiple indirect taxes on different regional levels: there is a federal service tax, a VAT on State level (i.e. separately regulated in 27 states) and a Central Sales Tax (CST) on Inter-State sales of goods.
  - CST e-invoicing is not permitted.
  - State VAT invoices may be emitted electronically, depending on State legislation. About half of the States permit e-invoicing. For the federal service tax e-invoicing seems to be permitted, provided these comply with the Indian IT Act, which includes requirements for PKI-based e-signatures for ensuring the integrity and authenticity of the invoice.
- Invoices need to be kept for a five-year period. There are no specific rules regarding the location of the archive; normally relevant records are maintained by a taxpayer at the address/premises disclosed in the service tax registration.

Israel

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
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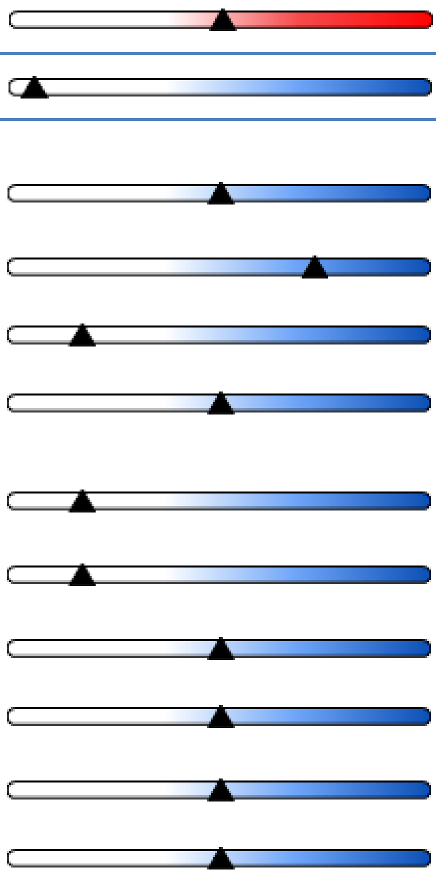
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)



Highlights:

- E-invoicing is permitted in Israel provided it is prominently stated on the invoice that it is a ‘computerized document’ and it carries a digital signature.
- The supplier must enter an invoice in its accounting system prior to issuing it to a customer.
- Outsourced issuing by a third party is not known or permitted as a concept, but exemptions to this rule may be provided by the tax administration.
- If the supplier's income is derived in Israel the storage of the accounting system including invoices must be in Israel unless a derogation has been granted. Idem for the mandatory backups (first week of each quarter of a tax year).

Japan

Maturity	**Mature**		**Early days**

Highlights:

- Electronic invoicing is not specifically regulated in law, but it is permitted in practice. It is however not widely adopted.
- The requirements for electronic invoicing have to be drawn from the general tax rules on invoicing. Japanese tax law *i.a.* requires taxpayers to keep their books in order, which results in an implicit obligation to ensure the integrity and authenticity of electronic invoices.
- Outsourcing of invoice issuance and archiving is permitted; no requirements or restrictions apply as to outsourcing agreements or third-party service provider accreditation and establishment.

Kazakhstan

Maturity	**Mature**		**Early days**

Highlights:

- The Government is in advanced planning stages for piloting of the IT system to be used for electronic invoicing. The testing will be performed by companies that are part of the National Welfare Fund of Kazakhstan. The system will be developed by the Government and will be free of charge.

Malaysia

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)

Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- E-invoicing is allowed provided permission from the tax authorities is obtained for both issuance and receipt.
- There are no technical requirements on the e-invoicing system, security etc.
- Outsourcing of e-invoice issuing to a third party service provider is not permitted.
- All e-invoices must be printed and retained in paper form by the supplier.

New Zealand

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Inland Revenue allows electronic invoicing subject to appropriate business processes and systems being used. Integrity and authenticity of e-invoices must be preserved.
- The Electronic Transactions Act contains a presumption of reliability for what would be called advanced electronic signatures in the EU, but there are no hard requirements for electronic signatures or any other specific type of technology or process to be used.

Pakistan

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
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Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- Prior approval of the Collector of Sales Tax is required for e-invoicing.
- Requirement for digital signatures based on certificate from Certification Authority approved by the Certification Council (ECAC).
- Prior approval from the Federal Board of Revenue is recommended before outsourcing issuance of e-invoices to a foreign service provider.
- In principle, storage must be at the business premises or registered office of the taxable person.

Singapore

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)

Compliance-relevant agreements	Prescriptive (form)		Functional (result)
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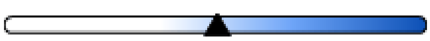
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- The rules published by the Inland Revenue Authority of Singapore in “Keeping Machine-Sensible Records And Electronic Invoicing” mainly focus on the storage aspects and general controls within companies.
- Electronic signatures are mentioned as a possible (but not mandatory) mechanism for ensuring adequate controls.

South Korea

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus
Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive (form)		Functional (result)
Archiving	Prescriptive (form)		Functional (result)
Cross-border (processing)	Prescriptive (form)		Functional (result)
Cross border (archiving)	Prescriptive (form)		Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)		Functional (result)
Minimum content requirements?	Prescriptive (form)		Functional (result)

Highlights:

- E-invoicing mandatory from January 2010.
- Registration with the National Tax Services (NTS) is needed, as well as “standard authentication” from the National IT Industry Promotion Agency (the "NIPA") for the facilities and system.
- For electronic signatures required in e-invoicing, either (i) a certificate issued by the Public CA or (ii) an e-tax certificate issued by NTS may be used.
- Outsourcing is allowed to a third party who is qualified (approved by the tax authorities) to provide such service under the VAT Act. No restrictions on establishment or nationality apply.
- A summary of the e-invoice can be submitted to the NTS in a format prescribed by NTS, in which case the tax payer no longer has an obligation to archive the invoice.

Thailand

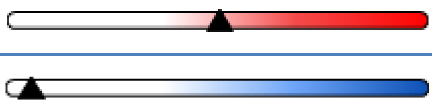
Maturity	**Mature**	**Early days**

Highlights:

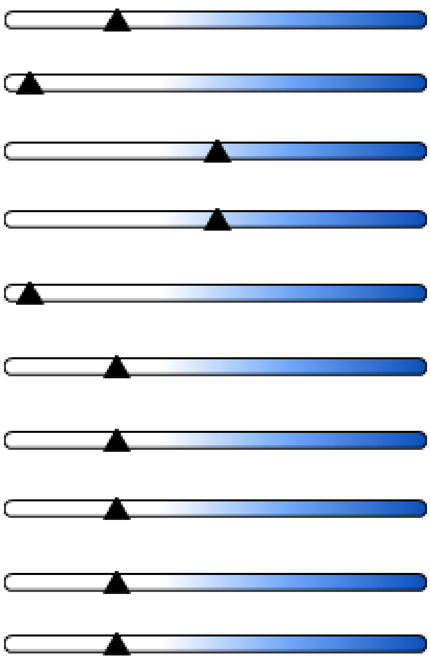
- E-invoicing is permitted. Approved VAT registrants may raise and send electronic invoices and receipts to their customers.
- Electronic invoices must be digitally signed using a certificate issued by a certification authority approved by the Thai Revenue Department.

Taiwan

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus



Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)



Highlights:

- E-invoicing is permitted; invoices should be digitally signed using local certificate.
- Mandatory formats: the government uniform invoices (GUIs) and the serial numbers for the invoices can only be allocated by the tax office.
- An e-invoicing system must contain controls to ensure that no invoice can have its serial numbers duplicated and that the serial numbers of the GUIs belong to a current VAT return period.
- Outsourcing of issuance to a third party is not prohibited.
- Providers of e-invoice services must be registered with local tax office and have certain qualifications.

United Arab Emirates

Maturity	**Mature**	**Early days**

Highlights:

- There is no VAT or comparable tax in the UAE and no e-invoicing stipulations in the law.
- There are provisions in the Electronic Commerce law that can be applicable to e-invoicing but no implementing regulations have been issued in this respect yet.

Philippines

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- E-invoicing is permitted but without requirements on the transaction and invoice document. Focus is rather on tax administration authorization to use a Computerized Accounting System (CAS), and this system being accredited and closely monitored by the tax authorities.
- Outsourcing of the CAS is possible; the service provider needs to be accredited by the tax administration.

E-invoicing in Africa

Egypt

Maturity	**Mature**		**Early days**

Electronic invoicing is currently not specifically regulated in Egypt.

Morocco

Maturity	**Mature**		**Early days**
Type of audit system	Ex post focus		Real-time focus

Overall situation	**Prescriptive (form)**		**Functional (result)**
Prior approval required?	Prescriptive (form)		Functional (result)
Outsourcing allowed?	Prescriptive (form)		Functional (result)
Compliance-relevant agreements	Prescriptive (form)		Functional (result)
Integrity and authenticity	Prescriptive		Functional

	(form)	(result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- It is permitted to raise and send invoices electronically with an electronic signature, although they must be printed and archived in paper form by both transacting parties.

South Africa

Maturity	**Mature**	**Early days**
Type of audit system	Ex post focus	Real-time focus

Overall situation	**Prescriptive (form)**	**Functional (result)**
Prior approval required?	Prescriptive (form)	Functional (result)
Outsourcing allowed?	Prescriptive (form)	Functional (result)
Compliance-relevant agreements	Prescriptive (form)	Functional (result)
Integrity and authenticity	Prescriptive (form)	Functional (result)
Archiving	Prescriptive (form)	Functional (result)
Cross-border (processing)	Prescriptive (form)	Functional (result)
Cross border (archiving)	Prescriptive (form)	Functional (result)
Form or format requirements (B2B)?	Prescriptive (form)	Functional (result)
Minimum content requirements?	Prescriptive (form)	Functional (result)

Highlights:

- Electronic tax invoices can be issued and sent electronically provided the rules for electronic documents are adhered to. A digital signature can be used to meet requirements. There are additional requirements on the archive.

- E-invoices may be stored abroad only upon obtaining derogation. One of the conditions for a derogation grant is that the e-archive be located in a country which has entered into a tax assistance treaty with South Africa.

Tunisia

Maturity	Mature		Early days

Highlights:

- No legal framework for the electronic invoicing; the law on electronic exchanges and electronic commerce is not directly applicable. In practice electronic invoices are always paralelled with paper invoices.

Comments or questions about this white paper or TrustWeaver's solutions? Mail us on info@trustweaver.com or visit www.trustweaver.com