



E-Signatures in Europe: Understanding the legal requirements for proof of intent.

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Process used and survey demographics

The survey results quoted in this report are taken from a series of AIIM Industry Watch reports with survey results taken from individual members of the AIIM community surveyed using a web-based tool. Invitations to take the survey were sent via email to a selection of AIIM's 193,000 registered individuals.



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Special Recognition

This paper was written with assistance and expert guidance provided by Stephen Mason, Barrister, and Jörg-M. Lenz.



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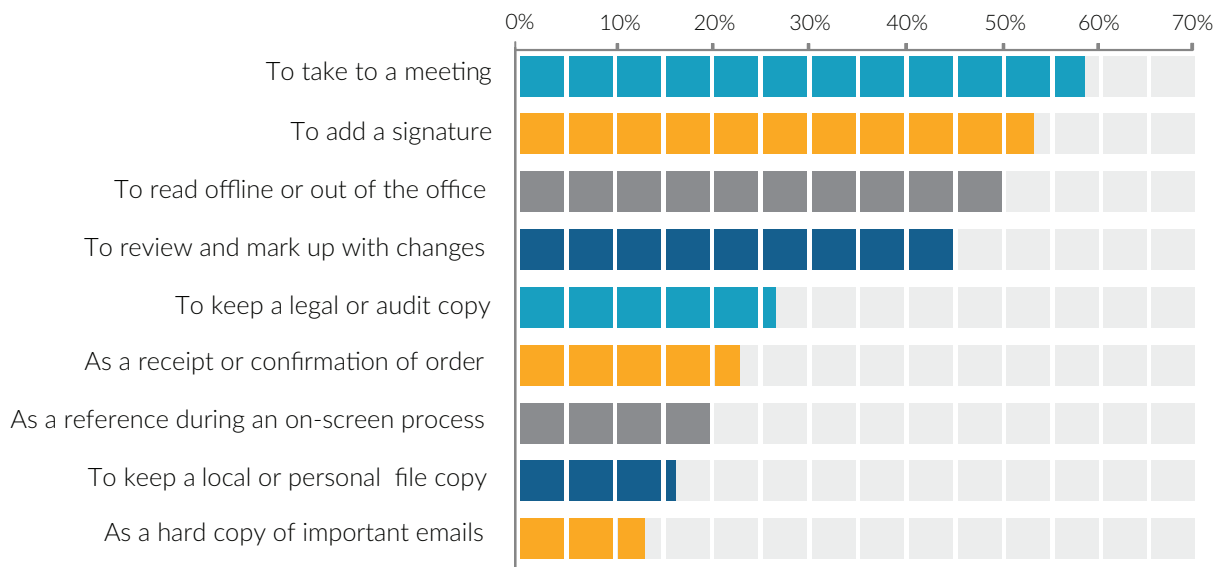
Introduction

Most business organizations have to meet the increasing expectations of today's connected, mobile-savvy customers who want to interact on all channels. From their perspective, business transactions should be executable anytime, anywhere and must be simple and straight. Employees increasingly expect the same from internal workflows. For both customers and employees, printing a document to capture a signature for proof of intent feels increasingly odd and is seen as slowing the business process to a crawl. AIIM Research finds confirms this to be the most common reason to print paper.

Despite the fact that E-Signature technology is more than two decades old, with the first European Union E-Signature Directive in place since 1999, the adoption of signing without paper in the private sector has been slow for various reasons. Multi-national businesses seeking a standardized E-Signature approach across their various regions quickly found substantial disparities of E-Signature regulations across Europe. This caused Enterprise Architects in the UK for example, to struggle in understanding and addressing the legal and regulatory compliance requirements in Germany and vice versa.

There is also a cultural challenge related to the human factor. Though it may seem generational to some, there is a lingering sense that a "wet ink" signature, one that is handwritten on a physical piece of paper at times with the use of colored ink like blue, is more trustworthy and valid than an E-Signature. AIIM Research validates this human challenge. According to a study on how organizations are moving to be less paper intensive in their processes, more than 50% of respondents cite that they print documents solely for the reason of adding a signature. (Figure 1)

Figure 1. For which of the following purposes do you personally resort to printing paper copies?¹



This paper presents some of the reasons why users still heavily rely on paper. For many, it is still a lack of trust, comfort and confidence in electronic processes. As is true for most change management challenges, addressing the human element and reluctance to adopt E-Signatures as part of business through education is key. The majority of users are likely to be familiar with the benefits of E-Signing, and also aware that signing on paper is contrary to the goals of digital transformation. The missing component to drive the change up to now is the lack of trust. Trust is created through a series of compelling user experiences. One example might be to sign something of personal importance like a contract for a life insurance. In part, it is the ceremonial gesture and experience that helps to create a confident user experience.

Early on, E-Signature solutions gained a reputation of being complicated to implement and too complex to use; a perception that remains in the minds of many potential users. This, like with most technologies, can be attributed in large part to too much focus on technology, and too little focus on user education and user experience, causing a lack of trust building. Arguably, these are the reasons why many approaches to introduce E-Signing in Europe failed severely.

Changes and advancements in technology indicate it is time to have a new look at E-Signature options for proof of intent in Europe. The focus of introducing E-Signing should no longer be on replacing handwritten signatures, but rather the focus should be on integrating them into a digital workflow where and when it is possible. The heavy adoption of smartphones and tablets offers additional options to incorporate E-Signing into a process in support of proving intent and create trustworthy E-Signatures.

Finally the legal framework in Europe is reflecting these changes as well. In 2016, we see a significant progress in harmonizing the requirements for E-Signing across Europe. Decision makers interested in starting digital transformation initiatives can select various E-Signing solutions with an appropriate balance of ease of use and provision of security with a proven track record in everyday production on large scale for several years.



Understanding E-Signature Regulations

Today the use of trustworthy E-Signatures is an acceptable business practice that is admissible in times of litigation and audit. The key to success is to identify and understand regulations based on particular business processes for E-Signing.

This paper is intended to provide some guidance on the assessment of regulations and identifying requirements for E-Signature use. Presented here are examples of some of the regulations, characteristics of trustworthy E-Signatures, and options to achieve compliance with particular regulations where required.

In order to understand the relevance of regulations the first step should be to understand the intended purposes for signing, which is either one purpose or multiple purposes of the following:

- *Associate the signer with a document*
- *Prove involvement in the act of signing*
- *Provide proof of the signer's involvement with the content of the signed document*
- *Provide endorsement of authorship*
- *Provide endorsement of the contents of a document authored by someone else, e.g. witnessing*
- *Prove a person was at a given place at a given time*
- *Meet a statutory requirement that a document is signed to make it valid*

This kind of assessment is required to understand the use case(s) of a wet ink signature on paper and to identify the corresponding requirements of an E-Signature associated to an electronic document. Note that there may be several signature fields in a particular document fulfilling different purposes. A good example for documents with multiple purposes are account opening documents of banks and telecommunication companies where customers are typically requested to sign multiple times throughout the on-boarding process.

Questions you may ask when trying to identify and understand related to the role of signatures in your business process and their associated risk may include:

- *Why is something (e.g. contract) signed and by whom (e.g. customer)? Potential answers: Legal Requirements; Operational Reasons – e.g. evidence; Sales Reasons – e.g. confident experience of a conclusion*

- Which operational risks do you need to consider?
- How many and to what extent did your organization experience claims or challenges related to signatures in the paper-based process?
- What are realistic attack scenarios for the electronic signing process?
- How likely and how often is a dispute to occur in relation to the signature?

Wet ink signatures on paper are visual acknowledgements and validation of intent. When it comes to E-Signatures, requirement sets and levels of functionality were created to ensure trustworthiness. In the European Union E-Signature requirements can vary considerably from country to country. Understanding what is allowed and what is not used to be a huge challenge for multi-national companies operating in the various countries across Europe.



The Impact of eIDAS

Effective July 1st 2016 the [EU Regulation 2014/910](#), also known as eIDAS², is in force. This particular Regulation on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market replaces the [EU Directive 1999/93](#). Being a Regulation and not just a Directive, it is directly applicable in all 28 EU member states without need of being transposed into local laws. It will replace the overwhelming part of all national signature laws associated to the 1999 Directive.

- eIDAS ends some over-regulations caused by different interpretation of the directive into national laws. For many years, national signature laws in some EU countries like Germany and France, used to favor PKI-backed digital signatures in various ways. However, this is just one of various potential E-Signing technologies.
- eIDAS fills the gaps of the former directive, such as undefined obligations for national supervision of service providers, which were holding back cross-border E-Signatures, and which did not cover new technology. Given the demand for greater trust in electronics services, the European Commission opted to address these issues by an evolution to more comprehensive legislation. Hence, eIDAS encompasses topics beyond E-Signatures like: e-identification, e-seals, e-time stamp, e-documents, e-delivery service, and website authentication.
- eIDAS opens some new processes for identification and provision of certificates from qualified trusted services providers required to sign with a qualified electronic signature for business processes restricted to the use of this particular form of E-Signatures. Remote identification - via video conferencing with validation of an ID document or in connection with a smartphone - is an alternative to cumbersome physical registration (e.g. identification at a post office, also called "Post-Ident"). It delivers the basis for ad-hoc signing with qualified electronic signatures based on certificate provision on demand.

Moreover, eIDAS comes with much needed streamlining of E-Signing terminology. It makes it easier for businesses to identify those elements of E-Signature use relevant to their business goals and practices. The regulation defines three levels of E-Signatures: E-Signature, Advanced E-Signature, and Qualified E-Signature.

- *Electronic Signature is defined as data in electronic form which are attached to or logically associated with other electronic data and which are used by the signatory to sign.*
- *Advanced Electronic Signature (AES) is defined as uniquely linked to the signatory, capable of identifying the signatory, created using E-Signature creation data that the signatory can, with a high level of confidence, use under his sole control, and is linked to the data to which it relates in such a manner that any subsequent change of the data is detectable.*

- *Qualified Electronic Signature (QES) is defined as an advanced electronic signature that is created by a qualified electronic signature creation device, is based on a qualified certificate for electronic signatures, the electronic signature creation data is unique data, which is used by the signatory to create an electronic signature. The 'certificate for electronic signature' is an electronic attestation which links electronic signature validation data to a natural person and confirms at least the name or the pseudonym of that person, and the 'qualified certificate for electronic signature' is a certificate for electronic signatures, that is issued by a qualified trust service provider.*

Prior to eIDAS, legal advisors were recommending organizations providing loans to have their customers sign a separate consent to use electronic signature for closing a loan contract. This was to minimize potential risk and add evidence. In some countries such consent was considered a “good to have” and in others a “must have”.

- *“Good to have”: Loan contracts may be signed with an E-Signature. They are enforceable on their own. In order to minimize risk, financial organization were advised to consider having one separate mutual agreement with their client signed on paper to recognize that documents E-signed, like the loan contract, will have the same value as a handwritten signature. The financial organization ought to keep the signed paper file. Sample of a country with this structure: Bulgaria*
- *“Must have”: Execution of E-Signing for loan contracts requires a so-called “base contract”, signed on paper with wet ink - a formal agreement with similar content like the mutual agreement mentioned above, which must be stored in a paper file. Sample of a country with this structure: Hungary*

eIDAS allows to skip mutual agreements or base contracts: Applying a qualified electronic signature, created using a qualified electronic signature creation method (which may reside on remote server) is recognized as a qualified e-signature with equivalent legal effect of a handwritten signature.

The good news: The overwhelming majority of business processes are not subject to any restrictions which type of E-Signature to choose. For most contracts there are no formal requirements to be valid. It's up to the organization to define the level of evidential weight they want to rely on if a document is signed electronically. They may opt to apply E-Signatures on a basic level. However, they ought to consider a solution fulfilling most or all of the requirements of an Advanced E-Signature because of higher evidentiary value. The option to validate authenticity and integrity of a signed document (“Who signed what when?”) is key to classify an E-Signature solution as “trustworthy”.

Alongside the preparation of eIDAS, the European Commission has started several initiatives for harmonization on that level, too. However, those intending to roll out an E-Signing solution on a multinational level still need to assess the corresponding laws around the business process of each country.

All types of E-Signatures are legally admissible in court as evidence of the parties' agreement as long as there is no particular restriction which format of an E-Signature is considered legally binding for a particular business process. Provision of evidence is more likely to be regulated in Business-to-Consumer-processes (B2C) than in Business-to-Business-processes (B2B).

If a particular business process is restricted to the use of a Qualified E-Signature or an Advanced E-Signature or excluded from electronic execution at all - is still defined by each country in their procedural obligations as outlined in civil or commercial law ([examples see page 7](#)).

For many, business process documents signed with basic E-Signatures may be considered as valid for contract conclusion. However, the existence and content of documents signed with solutions fulfilling most or all of the requirements to create an Advanced E-Signature are more likely to be enforceable in court. Documents with Qualified E-Signatures are required as evidence for enforceability only in a minority of legal situations.

Even if you understand the implications of these requirements, the fact remains it is merely your interpretation and does not necessarily address the specific interpretations and guidelines of each separate country. Restrictions or exclusions of the usage of E-Signatures are typically not part of E-Signing Regulation, Directive or Laws. They are usually found in Civil or Commercial Laws, and some may reside in Standards by Industry Organizations as well.

Typical processes where no signature requirements are imposed by law for validity or enforceability reasons and therefore considered as “form free” in most EU countries are:

- *Banking: Account opening, modification, and deletion; broker proxies; consultation minutes; cash deposits and withdrawals; standing orders; exemption orders for capital gains,*
- *Insurance: Applications, agreements, damage reports ...*
- *Telco: Contracts (mobile, DSL, cable etc.), service reports, ...*
- *Utilities: Power Supply Contracts*
- *Retail: Receipts at the point of sale or point of delivery, merchandise return, service documentation, applications for customer reward schemes ...*

For the processes listed above, where physical signatures on paper are not required, use of physical signatures on paper is the form chosen arbitrarily to provide some kind of proof of intent; often referred to by legal experts as, “arbitrarily written form”.

A few EU countries have adopted particular processes around Advanced Electronic Signatures. The publication of the Italian “Digital Code for Public Administration” covering Advanced E-Signatures ignited Italy’s E-Signing adoption from late 2010 onwards. The “Decree on Technical Regulations for Advanced Electronic Signature” published in May 2013 defines electronic documents signed with digitized handwritten signatures as part of a solution to create Advanced Electronic Signatures being a valid substitute to traditional wet ink signatures on paper. The decree is authorizing the use of Advanced E-Signatures in the signing of any type of document with legal force between all stakeholders: individuals, businesses, state administration, citizens, healthcare, and accountants.

In some countries, a few business processes are only considered legally binding if Qualified E-Signatures are applied. Contracts to apply for a consumer loan or to sign a leasing contract are subject to this restriction for example in Germany, Switzerland and Austria. Interestingly enough there is an exception to the rule: If no interest is imposed on the consumer loan (Zero-Percent-Financing) the contract does not fall under the regulations of a consumer loan and may be categorized as form free.

Total exclusions from a process to be signed electronically are sometimes based on a formal notarization requirement. Under German law such requirements exist for example for a few Human Resources documents like termination of employment and the written reference at termination of employment. Additionally, documents to transfer real and intangible property as well as contracts for marriage, inheritance (and waving and sales of thereof), acknowledgment of debt; life annuity commitment, contract of surety-ship, promise to fulfill an obligation and acknowledgement of a debt may also fall into this exclusion element. The corresponding paragraphs may be found in the German Civil Code (Bürgerliches Gesetzbuch, ‘BGB’).



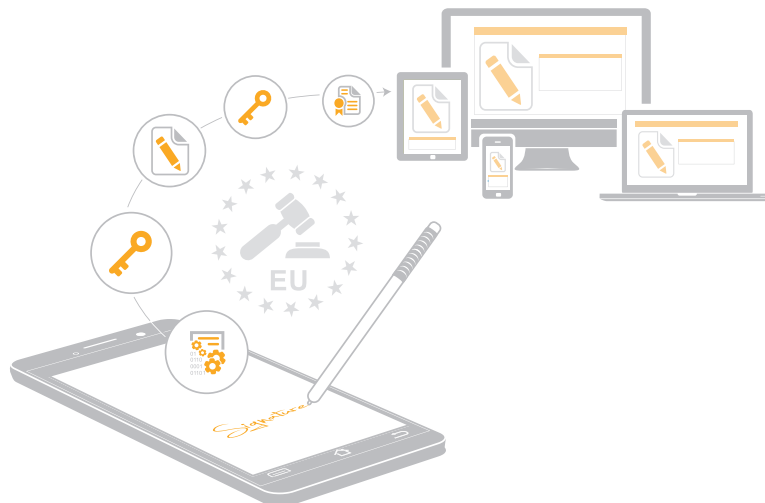
Characteristics of a Trustworthy E-Signature

Selecting the appropriate E-Signing method is important, and requires an understanding of the characteristics and best practices supporting a trustworthy E-Signature. While there is a common understanding in Central Europe that E-Signature solutions fulfilling most or ideally all requirements of an Advanced E-Signature deserve the classification as being trustworthy, organizations wishing to implement E-Signatures must align their technology, culture, and processes to meet the challenges of E-Signature use.

There must be a clear vision of why, how and when E-Signatures are considered appropriate and what technologies will be used to support this initiative. There should be a framework or set of guidelines put into place and taught to those authorized for E-Signature use. These guidelines should include but are not limited to the following:

- *A means of providing and validating the authenticity and integrity of signed documents*
- *Creation and regular maintenance of the documentation related to the systems used to create the records that contain electronic signatures*
- *Monitoring to ensure all records that include electronic signatures are created and maintained in a secure environment that protects the records from unauthorized alteration or destruction*
- *Establish standard operating procedures for the creation, use, and management of records that contain electronic signatures and maintain adequate written documentation of those procedures.*
- *Train staff in the standard operating procedures, use of technologies methodologies related to use of E-Signatures*
- *Identify and implement technology that includes signer validation capabilities like capturing biometric signature characteristics in support of regulatory, legal and industry compliance*

An E-Signing process in general and the signature ceremony in particular may be considered trustworthy if the process is capable to fulfill the requirements of a paper-based wet ink signature process: The quality of proof, the evidential weight, is based on functions to cater for conclusiveness (non-repudiation as much as it is possible), integrity (resistance against manipulation) warning (protection against haste, time to recognize content to be signed) and last, but not least identity. These requirements for a written form are for example outlined in German Civil law, not in particular for E-Signing but for signing processes in general.





E-Signature Examples in Europe

This section presents several use case scenarios to put the previous discussion in context. These scenarios will include but are not limited to the Finance, Insurance, Retail, and Telco industries. The scenarios will present the business problem – pain points – and how E-Signature helps to eliminate the pain while supporting regulatory compliance.



Spain

A well-known Financial Institution in Spain provides one of the most prominent examples for E-Signing in Europe. Incorporating nearly 50,000 signature pads in more than 15,000 branches, over 18 million customers are using their solution per year. More than 600 million documents have been signed using signature pads, representing more than 93% of all documents used daily. Ex-ante compliance verification is easier and more reliable and the process meets the requirements from MiFID and AML Regulations. As a result, the savings realized from E-Signing is estimated at 6.27 Euro per document. This is based on a combined calculation of direct & indirect cost savings. Potential annual saving could reach a total up to 3.4 million, based on an assumed usage rate of 110 million paper sheets / year.

The biometric data captured, proving that the signatures have been provided by the authorized person resulted in litigation being resolved out-of-the-court for 37 cases.² In one instance, a fraud-forgery case about the reimbursement of an investment fund and cash withdrawal over the counter was resolved when the judge called for evidence of biometric testing and validation. As a result, a Trusted Third Party was able to prove the case and support the fraud victim.



Italy

E-Signing based on biometric handwritten signatures (“Fima Grafometrica”) has seen broad adoption in Italy in the last four years; Traditional signing on paper was gradually replaced in Banking, Insurance, Telecomms and at Energy suppliers. Italy’s leading E-Signature solution provider claims that already back in 2013 250 million documents were e-signed with its solutions. By end of 2014, 180.000 workstations or mobile devices were equipped with solutions of this vendor. The preferred choice are solutions with Advanced E-Signatures. From 40 of the largest customers of this vendor, only two use processes in which Qualified E-Signatures are created. On the other end, only 3 rely on basic E-Signature processes.



Germany

In 2011, an insurance group was one of the first in the world to recognize the potential of the iPad for business use, equipping sales staff with tablets used for presentations, consultations, and explaining products and services. Additionally, these tablets are used for E-Signing various policy forms such as the application for life insurance and the consultation minutes (as required by European Insurance Distribution Directive, IDD). Several benefits cited include instant deal closure at point of sale, and higher shadow processing rates.

In Retail, E-Signing technology supports a broad set of transactions where customers (and/or employees) must provide a signature. These transactions include Girocard debits (formerly known as EC cash process), closure of cash accounts, provision of samples for test purposes, handling of returns and last, but not least, managing repair inquiries. The main application in Germany for E-Signing in retail is EC debit (“Elektronisches Lastschriftverfahren”, ELV): The value of around 13 percent of all transactions in retail in 2015⁴ and one third of all payments were executed with direct debits. In this “sign to pay” process, direct debits are authorized through digitized signatures, collected on signature capturing devices. This process offers a cheaper alternative to the Electronic Cash procedure of payment via PIN.



Slovakia

Trustworthy E-Signing on Android tablets was pioneered by a well-known global finance group in 2013. Customers of this financial institution E-Sign on the tablets to apply for a consumer loan, e.g. to purchase electronics or furniture. A special, active stylus, which comes with the tablet, communicates with a sensor mat underneath the display enabling the capture biometric characteristics of handwritten signatures. This particular solution includes special security features for secure offline signing.

Retailers are happy as time-to-approval for financing has been cut down from 3 days to 3 hours, 91% of customers prefer signing on tablet to signing on paper in a customer survey, operational costs are down by 25%. On-boarding time is down 60% and every year, 1.6M sheets of paper are saved. The solution has been rolled out in additional countries in Central Eastern Europe.



Switzerland

One of the largest telecommunications providers in the country, with around 3 million customers, embarked on its first E-Signature initiative in 2008. Since that time, the company is processing customer contracts at the point of sale. This includes capturing customer and retailer signatures in their own shops and via selected retail channels. The most frequent use case is signing a new or updating an existing contract. Signatures are also captured for the transfer of phone numbers from former providers and the registration of SIM cards.



Conclusion

While E-Signatures are rapidly gaining acceptance and use, and regulations like eIDAS are put in place, there is no one size fits all approach when it comes to E-Signatures in Europe. Regulations are in place to provide guidance and establish a standardized approach to E-Signature use, eliminating confusion and complexity for multinational businesses. eIDAS also serves as the functional requirement for businesses seeking to implement E-Signature technology, with a comfort level that if the solution they choose complies with eIDAS, it complies with the regulations of those countries participating as part of the European Union. It also has an impact on countries with close contractual ties to the European Union like Norway or Switzerland.

Given these regulations take effect July 1, 2016, it is imperative that business organizations take time to learn and understand not only the regulations themselves, but also the impact it will have on how business will be conducted going forward, a) with a solution in place, and b) investigating usage. Those with E-Signature solutions in place today must ensure their solution complies with the new regulations. Those businesses investigating use of E-Signature must ensure the solution they choose support regulatory compliance and can benefit using eIDAS as the basis for their functional requirements in the selection process.



Recommendations

In order to best address E-Signature use, organizations must begin at the base level of where signatures are applied in the business process. If paper is currently the dominant form of signed documents, it is beneficial to document the process, identify the documents in the process, what signatures are required by whom and for which purpose, and how they are managed through the remainder of the process. At this stage, digital transformation becomes part of the discussion, identifying opportunities to keep digital documents digital, and apply E-Signature as part of an end-to-end digital process.

A sound approach to this may be the formation of an E-Signature framework and governance as a foundation that can be built upon – much like that of a Lego system, with each element being a building block. In this way, a flexible platform is created that adheres to regulatory compliance, provides flexibility to incorporate those technologies for E-Signing that are most appropriate for the business need, and delivers a simple to use interface accelerating user acceptance.

Begin by taking the following steps:

- Map and document signature processes, their purpose, associated documents, and signature activity to identify, whether they do have to meet additional legal requirements.
- Identify your required level of process security and need for evidential weight for these business processes. For a before-and-after comparison: Assess the operational risk you are facing in your paper process today as well.
- Learn and understand the new eIDAS Regulation.
- Identify the impact and challenges your organization may face as a result.
- Search for solution providers offering an E-Signature framework based on eIDAS and fulfilling your functional requirements based on your business processes.

E-Signature provides many benefits ranging from productivity to defensibility and helping organizations to achieve a much better customer experience. The key is to understand which type of E-Signature must be used for compliance reasons, and how it will be used for business benefit. AIIM Research finds that 40% of respondents feel one of the greatest benefits of mobile/capture capabilities is the speed of data availability.³ This is true of the ability to capture signatures at the first touch point with a customer, where the trigger for many E-Signing projects is the reduction of “time-to-contract”.

The time is now, the technology is here, and the guesswork and complexity is being lessened through regulation. The time is now to move forward into the 21st century way of transacting business.

Last, but not least: Think about E-Signing as an evolutionary process. In many cases a gradual shift from wet ink signing to electronic signing processes is the most appropriate approach. Signature Management solutions which also cater for paper based signatures (“P-Signatures”) which enter the digital world via scans or photo and being capable of automatic verification of signature images will provide you with best of both worlds.



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