# Electronic Signatures

**Integrate on-premise electronic signature processes into web applications.**

**TEXT CONTROL**

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**About the Author**

As a VP of Product Management, **Bjoern Meyer** is passionate about coding and web technologies and is the interface between users and our engineering teams.

**Brought to you by Text Control**

Text Control is an award-winning vendor of document processing and reporting components for Windows, web, cloud and mobile development technologies. Digital transformation changed every process in today's business world. The number of e-commerce transactions skyrocket and supply chains are fully connected. In nearly any business process, documents and reports need to be designed, created, shared and archived.

Our technologies help companies to integrate document processing to client, web and cloud solutions to gain the largest competitive advantage.

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In a recently published paper[1], Forrester Consulting analyzes a survey with 450 senior IT and business decision makers based in the United States, Western Europe and Asia Pacific with responsibilities for digital document processing at their organizations.

Digital document processes such as electronic signatures enable companies to serve their customers and positions companies with a digital strategy to gain a drastic competitive advantage over others. 56% of respondents say that they see accelerated workflows based on digital documents as the key to keep businesses running. And 55% describe that these improvements are the most important benefits after this pandemic.

Electronic signatures will become the standard in future business transaction processes. Typical industries for an accelerated adoption are "document-heavy" industries such as financial services, insurance and title management, education and government.

**46% of respondents say that this is becoming a standard protocol that will be offered to customers and business partners to accelerate these transactions.**

Together with technology leading clients, we added all essential parts of a document signature technology platform to our libraries to provide a complete set of tools that helps to integrate electronic signature processes into business applications.
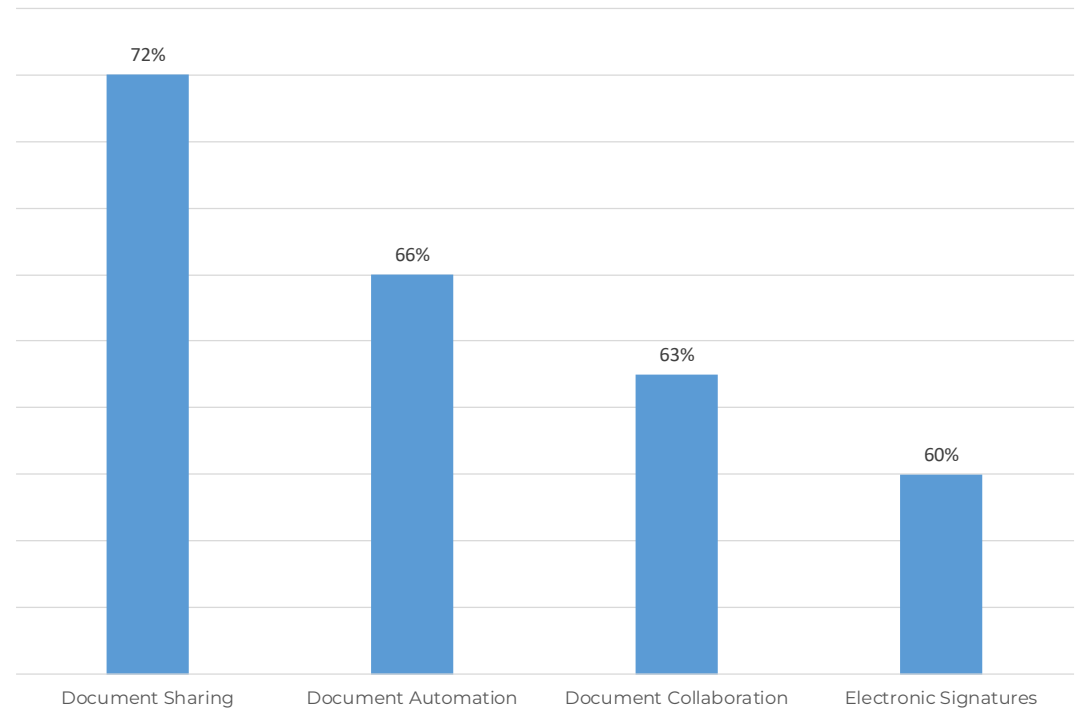
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1          How Digital Document Processes Are Shifting From Best Practice To Business Necessity, Forrester Consulting, 2020

# The Importance Of Digital Document Processes

Having digital processes implemented in business workflows has a huge impact on how successful a company is and will be - not only during a pandemic. The main motivating argument to implement digital document processes was saving costs, but the current situation shows that those processes have a strategic impact on businesses.

- **Increased customer satisfaction**
  40% of respondents say that digital document processes increased customer satisfaction rates.

- **Electronic signatures**
  77% of respondents in the United States say that electronic signatures are important or a critical requirement.

Typical digital document processes include document sharing, document workflow automation, document collaboration and document signing. The survey rates these processes by its importance.

72%

66%

63%

60%

Document Sharing    Document Automation    Document Collaboration    Electronic Signatures

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# Electronic Signature Legality Guide

Electronic signatures are widely recognized as legally binding in the world. But what is an electronic signature formally?

**An electronic signature is a legal way to get consent on electronic documents. It replaces a wet ink signature in any transaction.**

The United States has legally recognized electronic signatures since 2000 with the ESIGN Act (Electronic Signatures in Global and National Commerce Act) and the UETA act (Uniform Electronic Transaction Act) in 1999.

That implies that an electronic signature is valid as long as both parties agree to the particular method of completing the transaction.

To qualify as an enforceable electronic signature, the signer's intent to execute the agreement must be recorded. This can be achieved by requiring signers to type their name or to draw their signature using the mouse or touchscreen. All of the above legal requirements to implement a fully legally binding and enforceable electronic signature solution are fulfilled by TX Text Control.

*An electronic signature is a legal way to get consent on electronic documents. It replaces a wet ink signature in any transaction.*

**LEGALITY GUIDE**

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# Integrate Electronic Signatures into your Applications

Using TX Text Control, you can add the complete workflow into your business applications without the dependency on third-party vendors or services. As opposed to other electronic signature service vendors, the documents stay in your environment and will not be uploaded to third-party servers to collect the signatures.

Advantages of a Text Control integration:

- **Document creation**
  Use a fully-featured, browser-based, document editor to create proposals, quotes or contracts and prepare them directly for collecting signatures.

- **Mail merge**
  Populate placeholders of created templates with data from data sources such as JSON or XML.

- **Include form elements**
  Add form fields to your documents and have your users complete those directly in a browser or PDF.

- **Keep documents in your infrastructure**
  You control the document workflow and documents are kept inside your controlled infrastructure.

## Made for Developers

TX Text Control provides an all-in-one document automation library for ASP.NET, ASP.NET Core and Angular with advanced workflow capabilities and at the same time an easy to use interface.

Use a complete set of tools to add eletronic, legally binding signatures to documents including Adobe PDF and to digitally sign those documents with certificates.
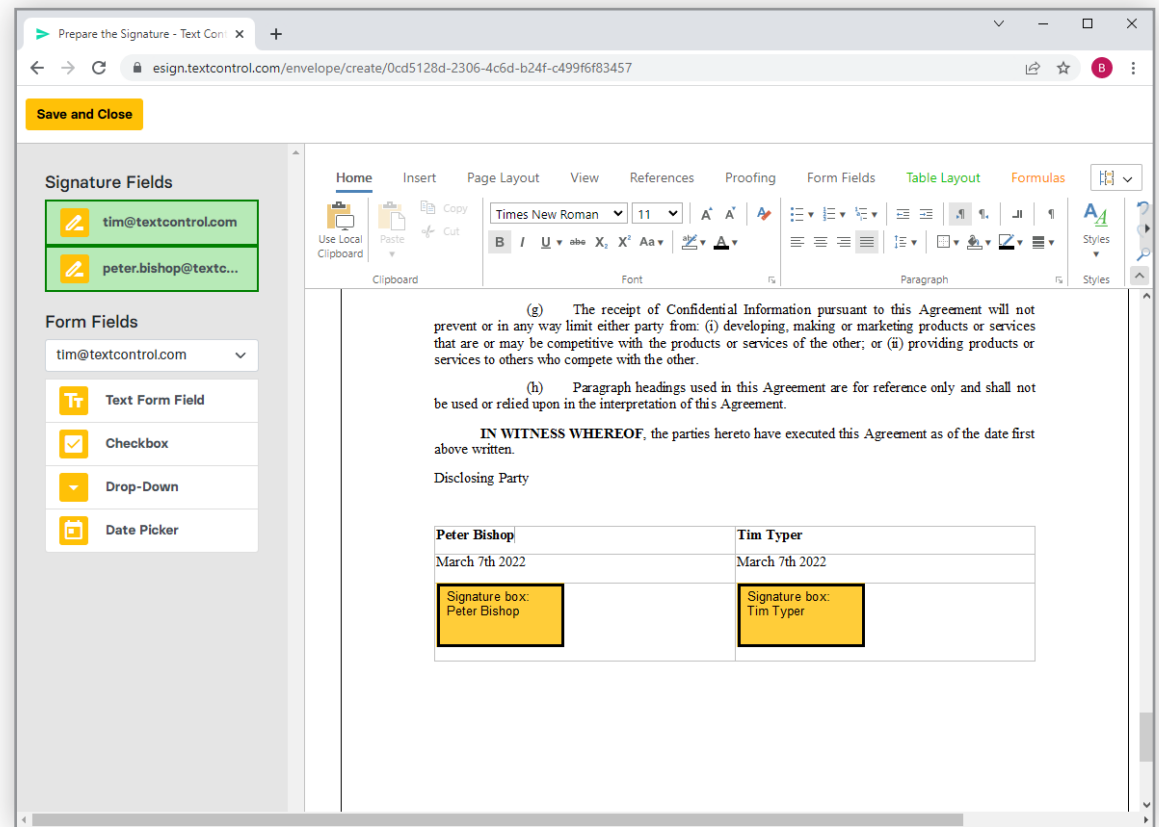
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# Fully-Featured Document Editor to Prepare Documents

Provide your end-users an MS Word inspired, customizable editor to create proposals, quotes, invoices and contracts based on templates directly in your web application.

Prepare documents for signatures by adding signature fields for all signers, adding form fields and custom field logic.

The document editor is fully embedded into your web application and can be used for the following workflows:

- **Document collaboration**
  Share documents and work with other authors on documents.

- **Contract negotiation (track changes)**
  Integrate document "red-lining" into your workflows.

- **Template design**
  Create reusable templates and merge them with data from various data sources.

- **Document generation**
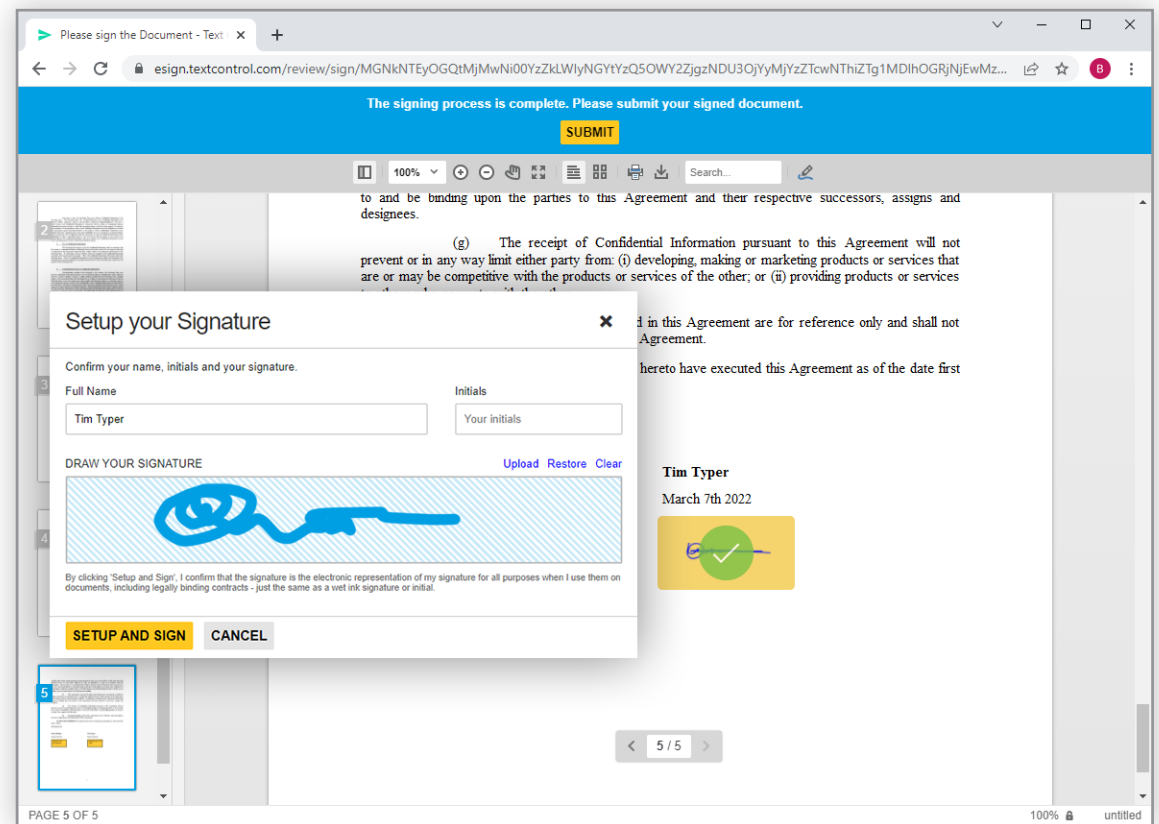  Automate document creation processes.

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# Request Signatures on all Devices

By using the TX Text Control document viewer, documents with signature boxes can be loaded to retrieve electronic signatures from users that can be applied to PDF documents.

The signature soft-pad has been designed to work with any desktop or mobile device to provide full flexibility in your document processing workflows. Lines are captured as vectors, stored in arrays and finally de-noised and simplified in a post-process. This produces pixel-perfect signature images when using the mouse or a finger on a touch screen.

Electronic signatures can be also uploaded as prepared signature images. When using a mobile phone, the camera can be used to take a picture of a signature that is inserted directly in the same process step.

After uploading an image, an eyedropper tool can be used to remove the background or any specific color. The auto correction tool adjusts the contrast, removes the background and makes all remaining pixels blacks to provide the best results for a signature.

# Digitally Sign PDF and PDF/A Documents

After the document is signed completely, the electronic signatures are applied to the document and the document can be digitally signed with X.509 certificates.

As this complete workflow is controlled by your application, all required data can be used to create a detailed document signature trail to review the signature process details.

Based on your requirements, the resulting documents can be stored, send as attachments to the signers or stored on a blockchain for verification.

## Reference Implementation

Together with technology leading clients, we added all essential parts of a document signature technology platform to our libraries.

To showcase a typical workflow and the Text Control electronic signature technology, we published a fully functional demo that can be used to create and request signatures, sign documents and to validate executed PDF documents.

**SEE ONLINE DEMO**

The reason why electronic signatures help companies to work more efficiently is that the overall signing process is accelerated. That implies that customers are potentially signing contracts or agreements faster which improves closing rates and speeds up the sales cycle.

Using Text Control libraries, the complete electronic signature process can be brought into your applications, under your control without the dependency on any other third-party service or provider.

Integrate modern digital document processing into your web applications and provide your users and clients a way to sign documents online.

**More From Text Control**

Our libraries help developers add deep functionality document processing to web, mobile, cloud and desktop applications.

Our core technologies include reporting, document editing, PDF processing, electronic signatures, document viewing and document workflow.

At Text Control, we focus on how to help our customers with the required steps to gain a competitive advantage. With our technology, developers integrate powerful document processing and automation into applications that help transforming business transactions.

## About Text Control

Text Control, with offices in the United States and Europe, is an award-winning vendor of document processing and reporting components for Windows, web, cloud and mobile development technologies. Our libraries have been deployed with millions of professional software distributions around the world. Learn more about Text Control at www.textcontrol.com or +1 855-533-TEXT.

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