

White Paper

How Municipalities Can Benefit from

Electronic and Digital Signature Solutions



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Electronic and digital signatures: what's the difference?


Electronic signatures and digital signatures are **both methods of signing documents electronically**, but they have distinct characteristics and levels of security.

Digital signatures offer a higher level of security, authentication and legal validity, making them more suitable for sensitive or legally binding agreements. For more detailed information on the differences between electronic and digital signatures, please refer to the Appendix.





What problems can signature solutions solve for municipalities?

Electronic and digital signature solutions can solve multiple issues that face municipalities while enhancing efficiency, security, and service delivery:



	<p>Operational Efficiency</p>	<ul style="list-style-type: none"> • Time and Resource Savings: Reduce the time and resources needed to complete administrative processes by automating document management. • Paperwork Reduction: Significantly decrease the use of paper, ink, and physical storage, cutting costs and promoting environmental sustainability. • Streamlined Workflows: Simplify processes like setting up new businesses and approving construction projects, eliminating redundancies and holding managers accountable.
	<p>Remote work and Accessibility</p>	<ul style="list-style-type: none"> • Hybrid Work Support: Enable officials to sign legally binding documents remotely, facilitating hybrid work arrangements and improving work-life balance. • Geographical Barriers: Allow for signing documents across different geographical areas, reducing delays in multi-party agreements.
	<p>Economic Development</p>	<ul style="list-style-type: none"> • Business-Friendly Environment: Simplifying processes for new businesses and construction projects makes the municipality more attractive for economic development. • Faster Approvals: Speed up permit approvals and other administrative tasks, helping businesses to act more quickly.

What problems can signature solutions solve for municipalities?

	<p>Security and Compliance</p>	<ul style="list-style-type: none"> • Document Integrity: Use digital signatures to ensure the authenticity and integrity of signed documents, preventing unauthorized alterations. • Legal Validity: Provide legally binding signatures that comply with regulatory standards.
	<p>Talent Management</p>	<ul style="list-style-type: none"> • Attracting Skilled Employees: Offering modern digital work environments can help municipalities attract and retain qualified employees who expect technological advancement.
	<p>Citizen Services</p>	<ul style="list-style-type: none"> • Improved Responsiveness: Enable faster processing of citizen requests and applications, enhancing overall service delivery. • Transparency: Provide better tracking and visibility into the status of applications and projects.
	<p>Cost Reduction</p>	<ul style="list-style-type: none"> • Operational Costs: Save on expenses related to paper, printing, mailing, and physical document storage. • Time-Related Costs: Reduce manual, time-consuming tasks, freeing up staff to focus on more valuable activities, while potentially reducing overtime or additional staffing needs.

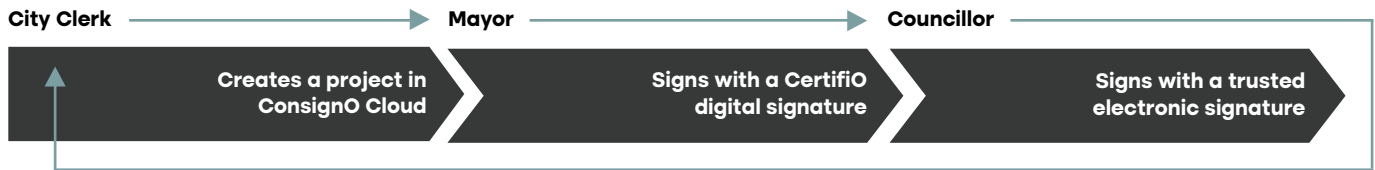
Municipal Use-Cases

Use-cases for signatures within municipalities include:

- Permits for citizens and businesses
- Sealed municipal bylaws
- Expense and purchase requests
- Employment contracts
- Signing agreements with suppliers and others
- Signing of municipal minutes of meetings

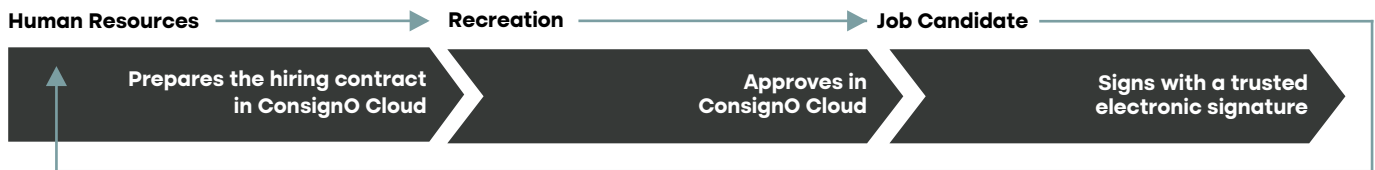
Examples of document signing workflows

- ✓ Resolution signed during a City Council meeting (Internal)



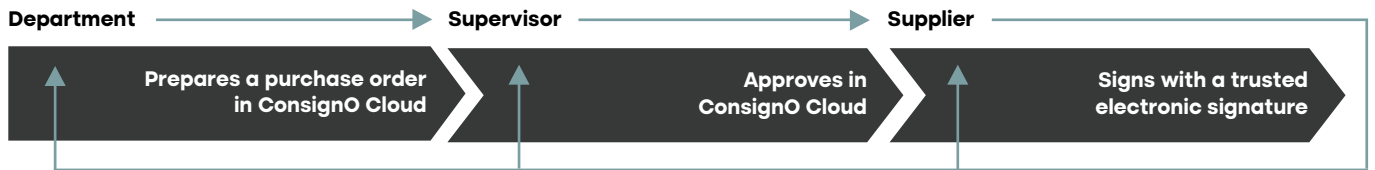
Once signed, the resolution is automatically sent to the City Clerk.

- ✓ Employment contract signed without travel being required by any of the signatories (Internal-External)



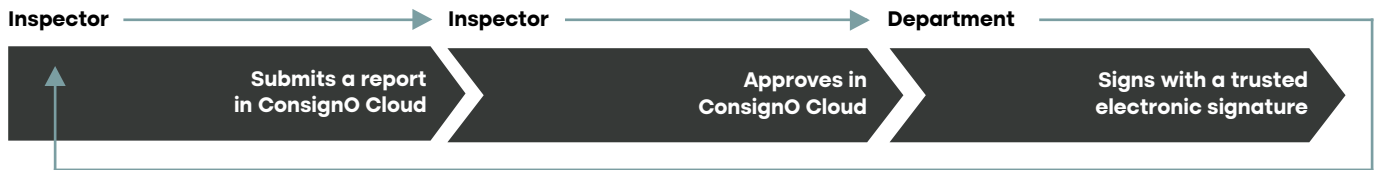
As soon as the contract is approved, it is automatically sent to the job candidate.

- ✓ Purchase order approved and sent to a supplier located outside of the municipality (Internal-External)



As soon as the purchase order is signed, the parties receive a signed copy.

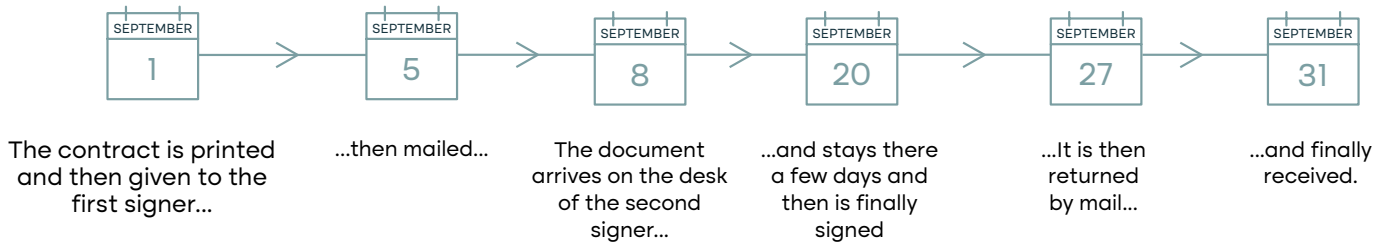
- ✓ Report signed and automatically sent to a department (Internal)



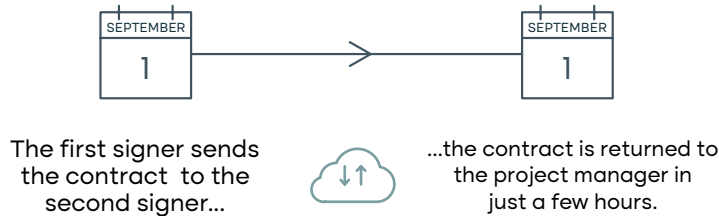
As soon as the document is signed, it is converted into PDF/A format to simplify archiving.

How electronic document signing saves time

BEFORE



AFTER



Why municipalities need multiple solutions

There is no one-size-fits-all solution for electronic document signing, as different use-cases may require different levels of legal reliability. While municipalities produce many internal administrative documents, they also act as both regulators and provide professional services which are governed by specific regulations and guidelines from their respective State Professional Boards.

For example, some 40 State Engineering Boards currently require members to sign and stamp their electronic drawings and reports with a legitimate electronic signature solution rather than using a simple image or a 'self-issued' signature certificate. Of these, 18 Boards make the use of a verifiable digital signature certificate mandatory. Engineers, Geoscientists, Architects and other such professionals are bound to higher standards in order to protect both their profession and the public. And through their professional divisions and building officials, local municipalities play a major role in ensuring standards are met by putting out submission guidelines and accepting or refusing documents that are not compliant with applicable regulations.

Core capabilities municipalities should look for in a signature solution

Core Capabilities: Security & Authentication

Digital Signature Technology	Portage CyberTech's Capabilities
Solutions should offer digital signatures that use cryptographic techniques to ensure document integrity and signer authenticity.	<ul style="list-style-type: none">• Our Notarius Certificate Authority meets (and in some cases excels) the highest standards in the industry. We are one of only a few CAs recognized by both Adobe (Adobe Approved Trust List – AATL) and Microsoft (Microsoft Trusted Root Certificate Program).
Identity Verification	Portage CyberTech's Capabilities
The ability to verify the signer's identity and professional status is crucial for maintaining document reliability.	<ul style="list-style-type: none">• We provide a range of identity verification options depending on the use-case, from email and SMS validation through to live face-to-face ID verification for the most stringent scenarios.

Core Capabilities: Legal Compliance and Validity

Regulatory Conformity:	Portage CyberTech's Capabilities
The solution should comply with relevant legal frameworks and regulations to ensure the signatures are legally binding.	<ul style="list-style-type: none">• Our signatures fully comply with the US E-Sign Act of 2000, making them legally binding. Our Notarius Certificate Authority was the first in North America to be certified ISO/CEI 27001, and is also certified eIDAS (ETSI EN 319 401; ETSI EN 319 411-1; ETSI EN 319 411-2; ETSI EN 319 412-3), ISO 9001 and SOC 2(r) Type 2 certified.
Long-term Legal Reliability:	Portage CyberTech's Capabilities
Signatures should maintain their legal validity over time, especially for important municipal records.	<ul style="list-style-type: none">• Our Notarius Certificate Authority has been issuing certificates based on Public Key Infrastructure since 1998. Documents created or signed using our software and online services use the PDF/A format (ISO 19005), which is specialized for long-term archiving.

Core Capabilities: Workflow Management

Customizable Signing Order:

The ability to set and manage the order in which multiple parties sign documents.

Portage CyberTech's Capabilities

- Our electronic signature signing platform, ConsignO Cloud, incorporates multi-signer workflows that can be customized to suit a wide range of applications. Unlike some alternatives, we can also retain signatures on previously signed documents.

Notification System:

Automated notifications to inform signers and track the progress of document signing.

Portage CyberTech's Capabilities

- Our electronic signature signing platform, ConsignO Cloud, supports notifications via email, SMS, and automated phone calls. In addition, the platform supports Webhook notifications for advanced integrations.

Core Capabilities: Integration and Scalability

Compatibility:

Solutions should integrate seamlessly with existing municipal electronic document management systems.

Portage CyberTech's Capabilities

- The ConsignO Cloud API fully supports integrations with municipal systems allowing municipalities to fully automate signature workflows from end-to-end.

Scalability:

The ability to adapt to various departments and functions within the municipal government.

Portage CyberTech's Capabilities

- We are one of the few providers in North America to offer an integrated range of electronic and digital signatures, software solutions and support services that enable municipalities to scale from a single department to full scale adoption across the organization and covering multiple use-cases.

Fully automate signature workflows from end-to-end.



Core Capabilities: User-Friendliness and Accessibility

<p>Remote Signing Capability:</p> <p>Allow signers to sign documents from anywhere, supporting hybrid work environments.</p>	<p>Portage CyberTech's Capabilities</p> <ul style="list-style-type: none"> • Our online signing platform, ConsignO Cloud, and its API allow for multiple signers to sign documents from anywhere using your custom workflows.
<p>Multi-device Support:</p> <p>Automated notifications to inform signers and track the progress of document signing.</p>	<p>Portage CyberTech's Capabilities</p> <ul style="list-style-type: none"> • ConsignO Cloud and CertifiO Cloud provide the most versatile support for signing from different devices, including desktops, smartphones and tablets. CertifiO Desktop is compatible with Window 10/11, Intel-based Surface tablets, and the latest three versions of MacOS.

Core Capabilities: Cost-Effectiveness and Efficiency

<p>Paperwork Reduction:</p> <p>Significantly decrease the use of paper, ink, and physical storage.</p>	<p>Portage CyberTech's Capabilities</p> <ul style="list-style-type: none"> • Our history and expertise in creating archive-quality signed PDF/A compliant documents backed by proactive guidance specifically for municipalities will ensure your transitions to digital signing is successful.
<p>Time-saving Features:</p> <p>Streamline processes to reduce delays in multi-party agreements and approvals.</p>	<p>Portage CyberTech's Capabilities</p> <ul style="list-style-type: none"> • We offer products with feature designed to streamline processes, including batch signing, bulk sending, signature retention, PDF/A conversion, and API for integrations into your existing systems.



Core Capabilities: Document Management

Document Preparation Tools:

Features that allow for efficient document preparation before signing.

Portage CyberTech's Capabilities

- ConsignO Desktop and Server support advanced document preparation tools such as batch processing, template creation and application, PDF/A conversion, combined actions, and support for additional document types as attachments.

Verification Tools:

Capabilities to verify the authenticity and integrity of signed documents.

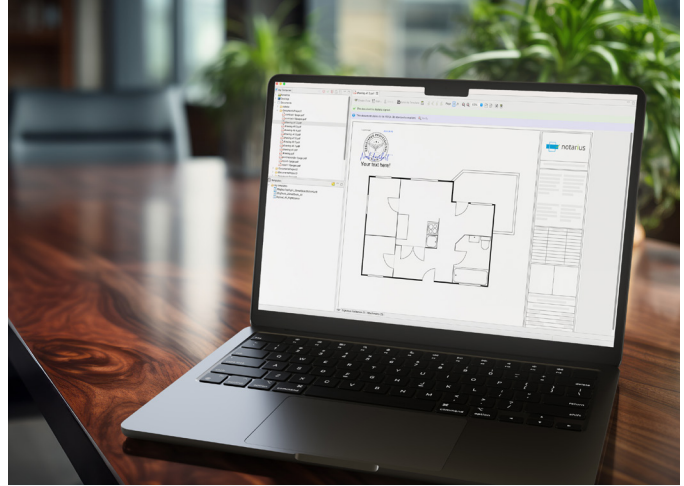
Portage CyberTech's Capabilities

- By default, our desktop and cloud signing tools allow you to verify the authenticity and integrity of signed documents. We even offer a web-based tool (verifio.com) for anyone to verify signed PDFs for free.

Our online signing platform, ConsignO Cloud, and its API allow for multiple signers to sign documents from anywhere using your custom workflows.



Portage CyberTech's signature solutions



Portage CyberTech, through its dedicated signature company Notarius, offers a range of both electronic and digital signature solutions for municipalities, governments, public sector and regulated professions.

Electronic and digital signatures

CertifiO A digital signature certificate issued by a professional association or an employer, compatible with any software with standard digital signature capabilities. Supported by an initial face-to-face verification before issuance, it certifies the signer's identity and professional or employee affiliation.

CertifiO Cloud A multi-platform digital signature certificate hosted on a secure Cloud infrastructure. Issued by a professional association or an employer, and also supported by face-to-face verifications, it certifies the signer's identity and professional or employee affiliation.

CertifiO Departments A digital signature certifying a group of signers' affiliation to a department, company, or organization.

CertifiO Organizations A digital signature designed to certify an organization's legal identity and ensure the integrity and authenticity of the PDF documents produced by its systems and applications. A software application automates the affixing of digital signatures to make signing millions of documents easier.

Trusted Electronic Signature An electronic signature with two-factor authentication (e.g., email and SMS message) for greater reliability when identifying a signer, whether inside or outside your organization. Designed for use with our ConsignO Cloud SaaS application, it automatically comes with the platform's digital signature which is applied for every signer. This type of signature ensures the integrity and authenticity of the information that a document contains without the need to rely on the separate audit journal or other verification services.

Software and Applications

ConsignO Desktop Digital signature and PDF reading software with unique productivity features like batch signing and stamping, templates, Windows contextual menu integration and conversion to PDF/A. Capable of processing extremely large documents, it allows users to sign them in a few clicks and is designed to increase productivity while ensuring a high level of legal reliability.

ConsignO Cloud A web-based electronic signature platform that manages the entire signing cycle for internal and external signature projects. Includes automatic conversion to PDF/A. Designed for both businesses and governments, it provides the opportunity to use electronic signatures according to the required level of legal reliability.

ConsignO Cloud (API) An application programming interface that offers the possibility to integrate ConsignO Cloud's electronic signature features into existing applications. Integrations create a simplified and personalized signing experience for users and automates some or all of the signing cycle for signature projects.

ConsignO Server (API) An application made up of software libraries and APIs that integrates digital signature operations and PDF handling within a single platform. It is designed to personalize and automate the signing process for large volumes of documents.

VerifiO Server (API) An application programming interface that enables automated verifications by validating the signers' identities, designation and affiliation, as well as the documents' integrity, authenticity and longevity (e.g. PDF/A compliance, extraction of attachments). A free web tool based on this technology is available for anybody to verify signed PDFs at [verifio.com](https://www.verifio.com).

Next Steps? Questions?

Learn more about [Notarius signature solutions](#). Or [book a consultation](#) with one of our experts if you're ready to explore how our solutions can benefit your municipality.

Appendix

What are electronic signatures?

Electronic signatures, also known as e-signatures, are digital versions of traditional handwritten signatures used to authenticate and validate electronic documents. They provide a legal and efficient way to sign documents without the need for paper or ink. Electronic signatures can be as simple as typing your name into a document or as complex as using cryptographic methods to secure the signature.

Key features of electronic signatures

- **Legal Standing:** Electronic signatures have the same legal effect as handwritten signatures if they meet specific requirements, such as the US E-Sign Act.
- **Types of Electronic signatures:** Simple Electronic Signatures (SES), Advanced Electronic Signatures (AES), and Qualified Electronic Signatures (QES). Each type offers varying levels of security and authentication.

Uses of electronic signatures

- **Convenience:** Electronic signatures allow documents to be signed remotely, making them ideal for digital transactions and contracts.
- **Security:** They can provide a secure method of signing documents, especially when using advanced cryptographic techniques.
- **Legal documents:** They are used in various legal documents, such as contracts, agreements, and invoices.
- **The legality of electronic signatures varies by jurisdiction but generally requires that the signature be linked to the signer and the document, and that it be capable of detecting tampering.**

What are digital signatures?

Digital signatures are a secure form of electronic authentication used to verify the authenticity and integrity of digital messages, documents, or software.

They are a subset of electronic signatures that employ advanced cryptographic techniques to provide an extra layer of security.

How digital signatures work

Digital signatures use asymmetric cryptography, also known as public key cryptography, which involves two mathematically linked keys:

- A private key known only to the signer
- A public key available to anyone who needs to verify the signature

When a document is digitally signed:

1. The signing software creates a unique hash of the document's contents.
2. This hash is encrypted using the signer's private key, creating the digital signature.
3. The recipient can decrypt the hash using the signer's public key and compare it to a newly generated hash of the received document.
4. If the hashes match, it confirms both the signer's identity and the document's integrity.



Key features of digital signatures

- **Authenticity:** They provide proof of the signer's identity.
- **Integrity:** Any alteration to the signed document invalidates the signature.
- **Non-repudiation:** The signer cannot deny signing the document while claiming their private key remains secret.
- **Legal validity:** In common with many countries, digital signatures are legally binding (similar to handwritten signatures) in both the US and Canada.

Uses of digital signatures

Digital signatures are widely used in various contexts, including:

- Software distribution
- Financial transactions
- Contract management
- Email authentication
- Government documents

Electronic Signatures

Digital Signatures

Security and Authentication

In general, electronic signatures offer a lower level of security. They can be as simple as a typed name or a scanned image of a handwritten signature.

- Digital signatures provide a higher level of security using advanced cryptographic techniques. They create a unique digital fingerprint of the document, ensuring authenticity and integrity.

Technology

Can use various methods, including scanned images, typed names, or recorded voices.

- Utilize asymmetric cryptography with public and private keys, often involving digital certificates issued by trusted Certificate Authorities.

Legal Standing

Widely accepted but may not meet all legal requirements in highly regulated industries.

- Often preferred in situations requiring higher levels of integrity and non-repudiation, such as financial transactions or legal documents.

Verification of Signer's Identity

May not always provide strong verification of the signer's identity.

- Typically require the use of a certificate issued by a Qualified Trust Services Provider (QTSP) to establish the signer's identity.

Document Integrity

Do not inherently provide a way to detect if a document has been altered after signing.

- Include a unique hash of the document, allowing recipients to detect any changes made after signing.

Compliance

May not always meet compliance requirements in certain industries or jurisdictions.

- Often comply with strict regulatory standards and are preferred in highly regulated sectors like finance, healthcare, and legal industries.