

**December 2021**

# **Electronic Document Reliability; What to Look For and How to Achieve it!**



# House Keeping Stuff

- This presentation is being recorded
- Your hosts
- Use the Q&A feature during the presentation
- Thanks to our sponsor
- If we have time, there will be a Q&A session at the end

# Agenda

- Who is Notarius
- Current Transformation Context
- Legal Requirements & Document Reliability Ingredients in Alberta
- Different Types of Electronic Signatures
- Professional Digital Signatures in Alberta & ASET's requirements
- Why
- The benefits of choice for members, businesses and relying parties
- How to subscribe & what's included
- Software Demo & Q&A

# Who is Notarius?

## Our Expertise & Mission

25 years of experience in providing trusted digital signatures to professionals, governments, organizations and systems.

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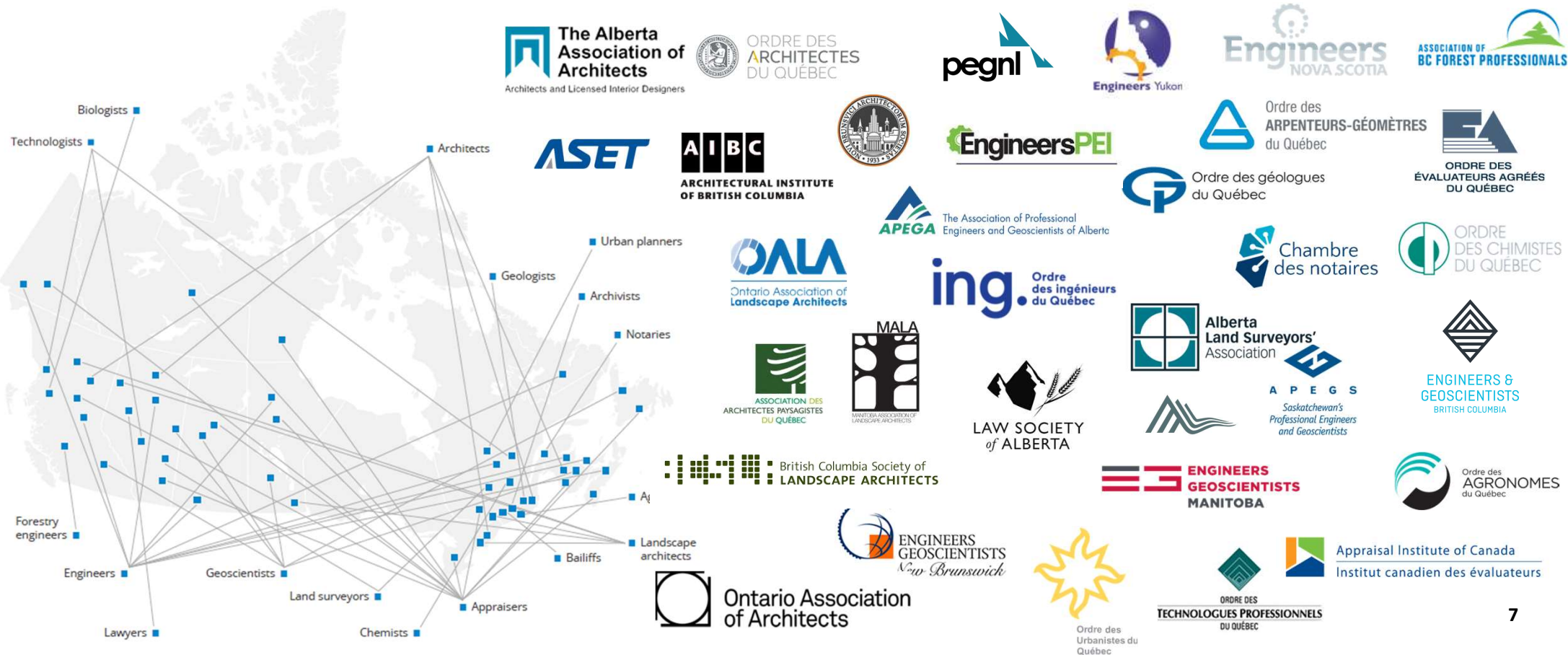
We enable the production and issuance of legally reliable electronic documents that can be opened, read and authenticated over decades.

# Certifications & Recognition

- Certified ISO 9001, 27001, **AATL** and **eIDAS**
- Recognized by multiple government entities
- Advocate of PDF/A – ISO standard 19005
- Owned by the *Chambre des notaires du Québec*, a registrant of the Federation of Law Societies of Canada
- registrant of DIACC (Digital ID & Authentication Council of Canada)



# 47+ Regulators Across 16 Professions in Canada



# The Changing Business Landscape



# Economic Context

Cloud adoption growing rapidly:

- From anywhere, at any time, on any device, as a Service

Application-based economy

- How we engage with employees, customers and suppliers
- Our smartphones have outcompeted the toothbrush!

Covid-19 has drastically accelerated this transformation with work from home

# Legal Context & Document Reliability; What to Look For

# Canadian & Provincial Context

In Canada, the Uniform Law Conference endorsed the Uniform Electronic Commerce Act.

- Each province has adopted its own laws based on the same principles (Electronic Transactions Act of Alberta)
- They **all** recognize the legal value of electronic documents and electronic signatures

## 2 principles

- **Functional equivalence:** Documentary media are interchangeable and the requirement of a written word does not imply a specific medium (physical or logical)
- **Technological neutrality:** The document whose integrity is assured has the same legal value, independent of the document's medium/support

The laws passed by each of the provinces at the turn of the millennium take up these principles and have the effect of unambiguously recognizing the legal value of the electronic document.

# Electronic Transactions Act of Alberta

## Functional Equivalency Rules

### Legal recognition of information and records in electronic form

**10** Information or a record to which this Act applies must not be denied legal effect or enforceability solely by reason that it is in electronic form.

### Legal requirement re original records

**14(1)** Subject to [section 21](#), a legal requirement that a person provide an original record is satisfied by the provision of the record in electronic form if:

- (a) there exists a reliable assurance as to the integrity of the information contained in the record in electronic form, and
- (b) the record in electronic form is
  - (i) accessible by the person to whom it is provided so as to be usable for subsequent reference, and
  - (ii) capable of being retained by that person.

**(2)** A legal requirement that a person retain an original record is satisfied by the retention of the record in electronic form if there **exists a reliable assurance as to the integrity of the information contained in the record.**

# Electronic Transactions Act of Alberta

## Legal requirement that record be signed

**16(1)** Subject to subsection (2) and section 22, a legal requirement that a record be signed is satisfied by an electronic signature.

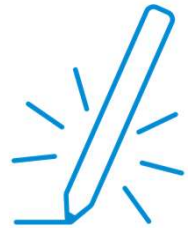
**(2)** If a record is prescribed for the purposes of this subsection or belongs to a class prescribed for those purposes, the legal requirement that the record be signed is satisfied by an electronic signature only if in light of all the circumstances

- (a) the electronic **signature is reliable for the purpose of identifying the person**, and
- (b) the association of the electronic signature with the relevant record is reliable for the purpose for which the record was created.

# The End Goal: Document Reliability



# Key Ingredients for Document Reliability



## Identity

Know who's signing!



## Integrity

Document alterations are traceable.



## Authenticity

Proof of identity and integrity **embedded** in the electronic records.



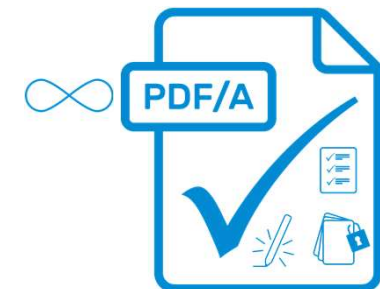
## Longevity

Readable and valid for decades.

Official records require a high degree of reliability

- even if the technology used to sign, or its provider, no longer exists
- even if the audit log cannot be found

Uncompromised reliability





# Terminology

A Signature is;	Electronic Signature	Digital Signature Based on Public Key Infrastructure
<p><i>Permanent mark bonded to static documents that is traceable, exclusive and personal to an individual. It constitutes evidence of implicit or explicit intent.</i></p> <p><i>Permanent – Binding – Static Traceable – Exclusive – Intent</i></p>	<p><i>Signatures in the electronic medium. They cover a vast array of use cases and are of varying reliability.</i></p>	<p><i>Electronic signatures in which reliability characteristics have been reinforced with asymmetric key encryption and insures electronic record reliability.</i></p>
	<p><b>Certificate Authority (“CA”)</b> Notarius</p>	<p><b>Registration Authority (“RA”)</b> ASET</p>
	<p><i>Organization operating one (or several) Public Key Infrastructure(s) and managing the lifecycle of digital signature certificates.</i></p>	<p><i>Registration Authority is a company or organization that is responsible for receiving and validating requests for digital signature certificates and public/private key pairs.</i></p>



# What are the Key Elements of a Certificate Authority?

## People

Naming and training staff with specific and mutually exclusive roles & responsibilities (there is no God in a C.A.)

## Processes

Logical and physical security, business continuity, I.D. verification processes etc.

## Policy

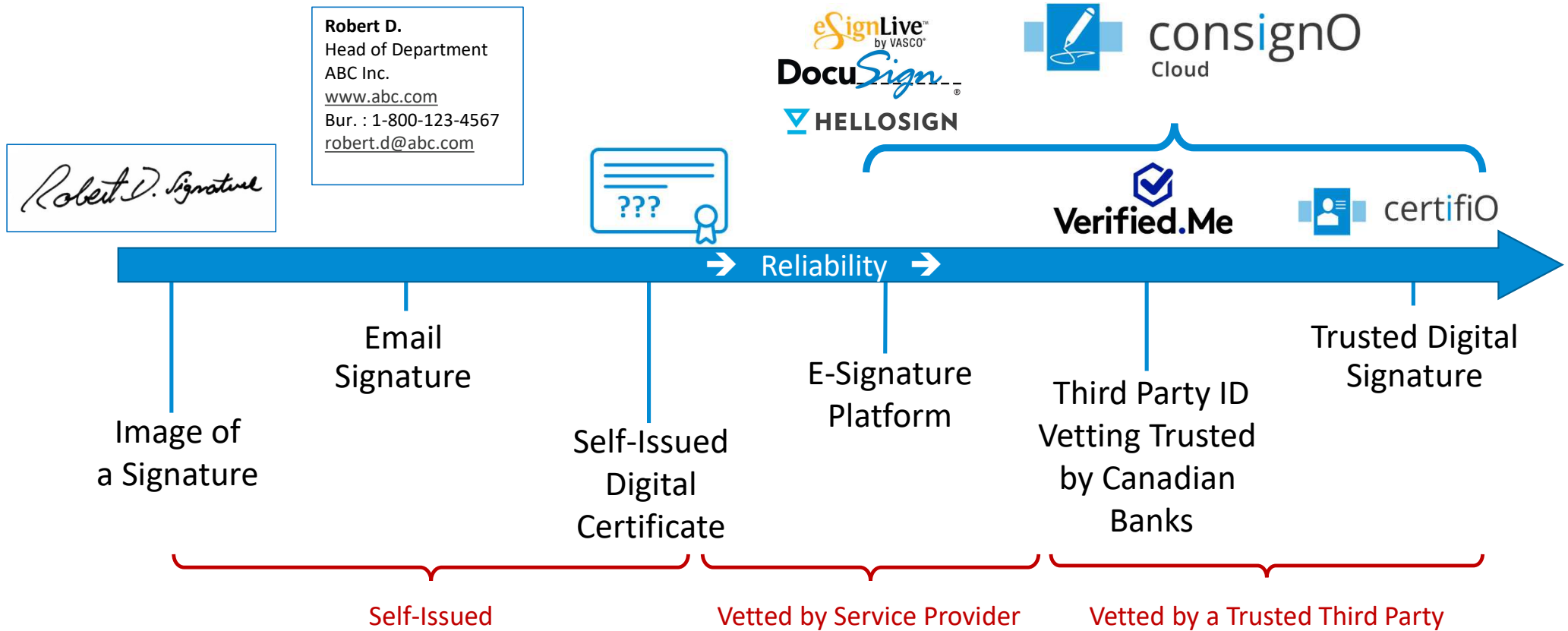
The Certificate Policy governing the lifecycle of all digital certificates from creation to revocation and beyond

## Technology

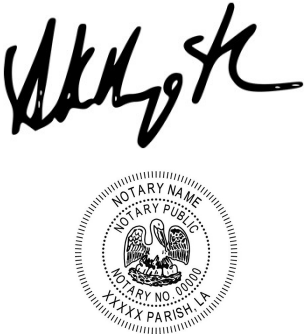

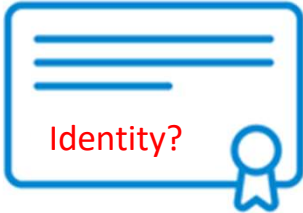

Software, encryption, computing, networking, security etc.



# Varying Levels of Reliability



# E-Signature Spectrum

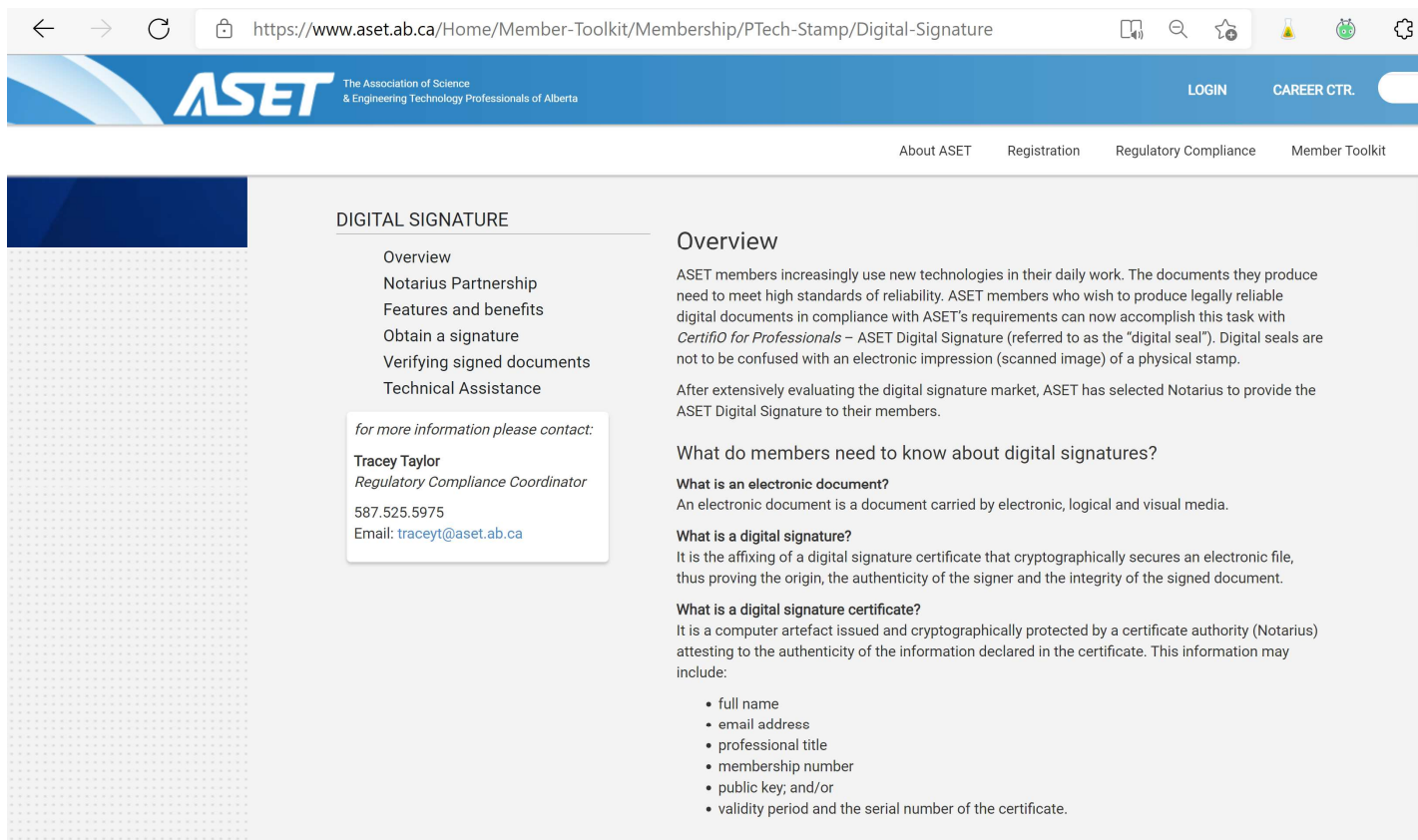
Wet Ink Signature/Stamp Scan	E-Signature	« Self-Issued » Digital Signature	Professional Digital Signature Certificate
 <p><i>? Integrity</i> <i>? Identity</i> <i>? Authenticity</i></p>	 <p><i>✓ Integrity</i> <i>✓ Identity</i> <i>✓ Authenticity</i></p>	 <p><i>✓ Integrity</i> <i>✓ Identity</i> <i>✓ Authenticity</i></p>	 <p><i>Civic Identity Verified</i> <i>+ Professional Affiliation Confirmed</i></p> <p><i>✓ Integrity</i> <i>✓ Identity++</i> <i>✓ Authenticity++</i></p>

# Professional Digital Signature Use in Alberta & ASET's Requirements

# Alberta Regulators That Issue Digital Signatures



# ASET Requirements Summarized



<https://www.aset.ab.ca/Home/Member-Toolkit/Membership/PTech-Stamp/Digital-Signature>

**ASET** The Association of Science & Engineering Technology Professionals of Alberta

[About ASET](#)
[Registration](#)
[Regulatory Compliance](#)
[Member Toolkit](#)

## DIGITAL SIGNATURE

- Overview
- Notarius Partnership
- Features and benefits
- Obtain a signature
- Verifying signed documents
- Technical Assistance

*for more information please contact:*

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 Regulatory Compliance Coordinator  
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 Email: [traceyt@aset.ab.ca](mailto:traceyt@aset.ab.ca)

### Overview

ASET members increasingly use new technologies in their daily work. The documents they produce need to meet high standards of reliability. ASET members who wish to produce legally reliable digital documents in compliance with ASET's requirements can now accomplish this task with *CertifiO for Professionals* – ASET Digital Signature (referred to as the "digital seal"). Digital seals are not to be confused with an electronic impression (scanned image) of a physical stamp.

After extensively evaluating the digital signature market, ASET has selected Notarius to provide the ASET Digital Signature to their members.

### What do members need to know about digital signatures?

**What is an electronic document?**  
 An electronic document is a document carried by electronic, logical and visual media.

**What is a digital signature?**  
 It is the affixing of a digital signature certificate that cryptographically secures an electronic file, thus proving the origin, the authenticity of the signer and the integrity of the signed document.

**What is a digital signature certificate?**  
 It is a computer artefact issued and cryptographically protected by a certificate authority (Notarius) attesting to the authenticity of the information declared in the certificate. This information may include:

- full name
- email address
- professional title
- membership number
- public key; and/or
- validity period and the serial number of the certificate.

## Source

<https://www.aset.ab.ca/Home/Member-Toolkit/Membership/PTech-Stamp/Digital-Signature>

# ASET Requirements Summarized

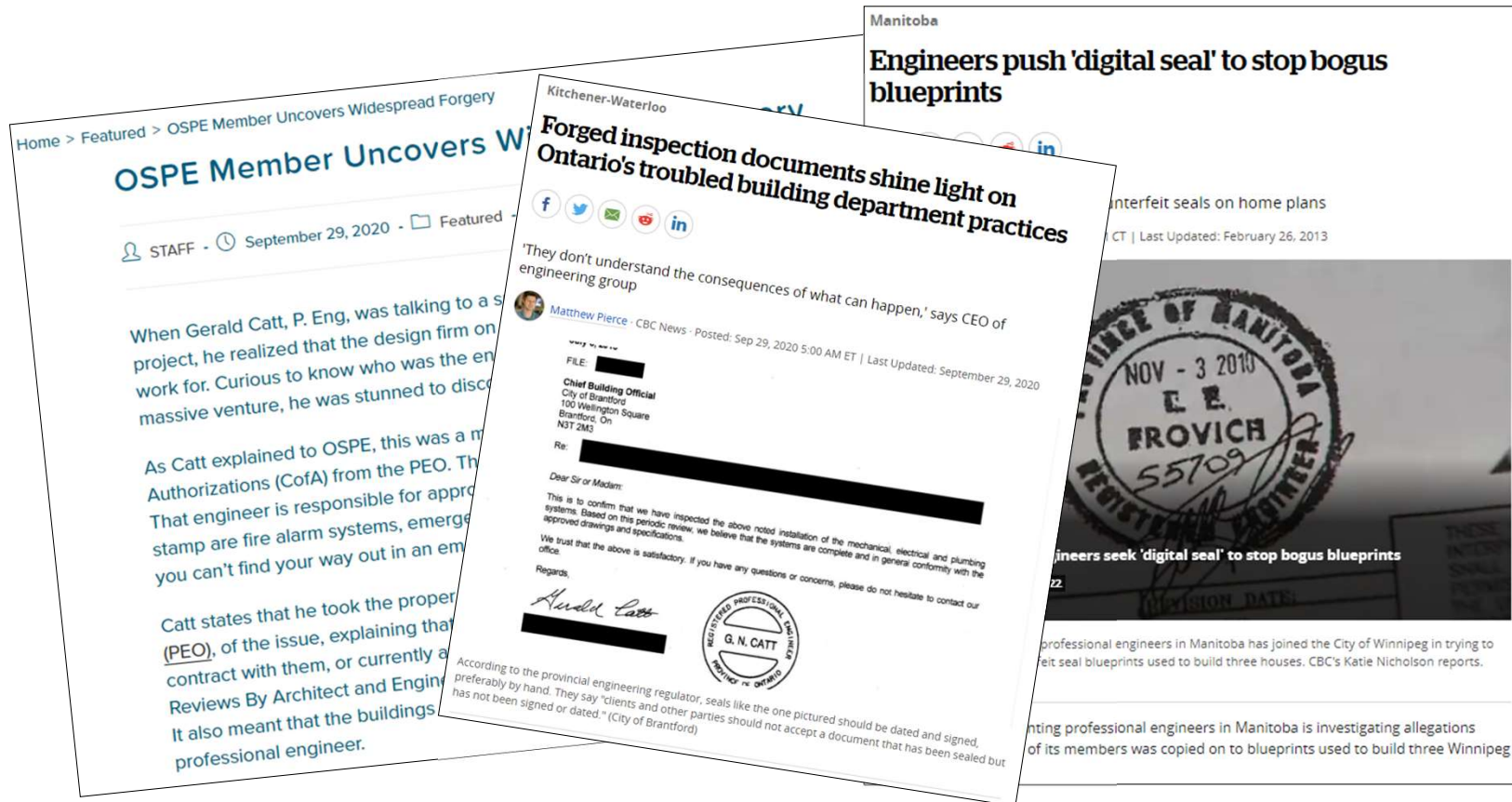
Excerpt taken from the Stamping Guidelines and Section 34 of the *Professional Technologists Regulation*:

- A professional technologist shall not acquire a stamp from any source other than the ASET Registrar
- A professional technologist shall only use a stamp while they registered pursuant to this Regulation
  - Stamps are the property of ASET and a person in possession of a stamp shall surrender it to ASET on demand
  - In accordance with industry standards, recreating the stamp is not permitted. However, to create a digital signature/stamp, or to authenticate an electronic document using a digital signature, you may sign with Notarius.

# Why?



# Because Forged Documents are Real



**Manitoba**  
**Engineers push 'digital seal' to stop bogus blueprints**

interfeit seals on home plans  
 CT | Last Updated: February 26, 2013

**OSPE Member Uncovers Widespread Forgery**

Home > Featured > OSPE Member Uncovers Widespread Forgery  
 STAFF - September 29, 2020 - Featured

When Gerald Catt, P. Eng, was talking to a project, he realized that the design firm on work for. Curious to know who was the massive venture, he was stunned to discover

As Catt explained to OSPE, this was a massive project. He explained that the design firm had obtained Authorizations (CofA) from the PEO. That engineer is responsible for approving the stamp are fire alarm systems, emergency systems, you can't find your way out in an emergency.

Catt states that he took the proper steps to verify the PEO, of the issue, explaining that he had reviewed the contract with them, or currently under review. It also meant that the buildings department professional engineer.

**Forged inspection documents shine light on Ontario's troubled building department practices**

Kitchener-Waterloo  
 'They don't understand the consequences of what can happen,' says CEO of engineering group  
 Matthew Pierce - CBC News - Posted: Sep 29, 2020 5:00 AM ET | Last Updated: September 29, 2020

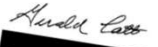

FILE: [Redacted]  
 Chief Building Official  
 City of Brantford  
 100 Wellington Square  
 Brantford, On  
 N3T 2M3

Re: [Redacted]

Dear Sir or Madam:

This is to confirm that we have inspected the above noted installation of the mechanical, electrical and plumbing systems. Based on this periodic review, we believe that the systems are complete and in general conformity with the approved drawings and specifications.

We trust that the above is satisfactory. If you have any questions or concerns, please do not hesitate to contact our office.

Regards,  
  


According to the provincial engineering regulator, seals like the one pictured should be dated and signed, preferably by hand. They say "clients and other parties should not accept a document that has been sealed but has not been signed or dated." (City of Brantford)

**Manitoba Engineers seek 'digital seal' to stop bogus blueprints**

Professional engineers in Manitoba has joined the City of Winnipeg in trying to stop counterfeit seal blueprints used to build three houses. CBC's Katie Nicholson reports.

Manitoba's engineering regulator is investigating allegations that a copy of its members was copied on to blueprints used to build three Winnipeg houses.

Sources:

<https://www.cbc.ca/news/canada/kitchener-waterloo/engineering-building-inspectors-ontario-1.5676977>

<https://www.cbc.ca/news/canada/manitoba/engineers-push-digital-seal-to-stop-bogus-blueprints-1.1359641>

<https://ospe.on.ca/featured/ospe-engineer-uncovers-widespread-forgery/>

# More examples & Illegal Practice

## CANADIAN CONSULTING Engineer

«Professional Engineers Ontario had revoked Cook's licence in 2014 ... He had surrendered his seal, but made a duplicate and had used it on plans... **A building official** who received the building documents checked the status of the engineering licence and realized the problem.»

### Ontario contractor fined \$5,000 for unauthorized use of professional engineer's seal

Dole Contracting Inc. of Woodbridge, Ontario, was convicted of breaching the Professional Engineers Act by the Ontario Court of Justice.

### Toronto-area man convicted for illegal use of "professional engineer" title

Individual was fined \$15,625 (including a 25% victim fine surcharge of \$3,125) after his guilty plea to four counts of breaching the Professional Engineers Act.

### Pickering man fined \$10,000 for illegal use of P.Eng.

Working as a "construction superintendent" the individual used the title "P.Eng." in 40 emails between May, 2016 and June 2017.

### Former engineer made duplicate of surrendered seal

Références:

- <https://www.canadianconsultingengineer.com/companies-people/ontario-contractor-fined-5000-unauthorized-use-professional-engineers-seal/1003406122/>
- <https://www.canadianconsultingengineer.com/business-professional/former-engineer-made-duplicate-of-surrendered-seal/1003401653/#>
- <https://www.canadianconsultingengineer.com/business-professional/toronto-area-man-convicted-illegal-use-professional-engineer-title/1003407082/>
- <https://www.canadianconsultingengineer.com/companies-people/pickering-man-fined-10000-for-illegal-use-of-p-eng/1003409049/>

# ASET's Professional Digital Signatures

- Confirms your identity
- Protects your documents' integrity
- Confirms that you are a registrant in good standing
- Issuance and revocation under the control of ASET
- Its use is under the sole control of the registrant
- Is easily and freely verifiable by the public & relying party

# Document Authenticity vs Document Management

- Document authenticity is a key enabler of digital transformation
- Integrity of records management system is equally important as authenticity of record
- Records management systems can be as simple as local file server with security and reliable backups or complex SaaS solutions enhanced with e-discovery feature

# What Impacts Have We Seen; The Benefits of Choice

# Paper Management Challenges

Printing – Signing – Scanning – shipping & handling - vaulting of paper documents is complex, expensive and time consuming.

- Cost of printing
- Extensive manipulations to complete signing & sealing workflow
- Most paper originals end up being scanned and the originals lost, misplaced or damaged leaving organisations exposed (Electronic Transactions Act B.C.)
- Loss of quality if scanned multiple times & file sizes rendered by scanning paper
- Shipping and handling costs and time
- Ecological footprint of paper based document

# Impacts for Professionals

- **+50% use digital signature once a week (10% every day)**
- **+40% sign more than a dozen documents per month**
- **97% customer satisfaction (Product and Services)**
- **92% renewal rate** (most non renewals are retirements)

## Key Benefits listed by our customers:

- 1) **Security and integrity of document (94%)**
- 2) **Better environmental practice vs paper (92%)**
- 3) **Increased productivity (86%)**
- 4) **Improved visual quality of PDF (81%)**
- 5) **Cost reduction (76%)**

# Impacts for Businesses

- Enabler of digital Transformation;
  - E-document reliability vs document management
- Digital document lifecycle management
- Business continuity
- More efficient use of human resources
- Time savings
- Money savings
- Reduced liability and cyber risk



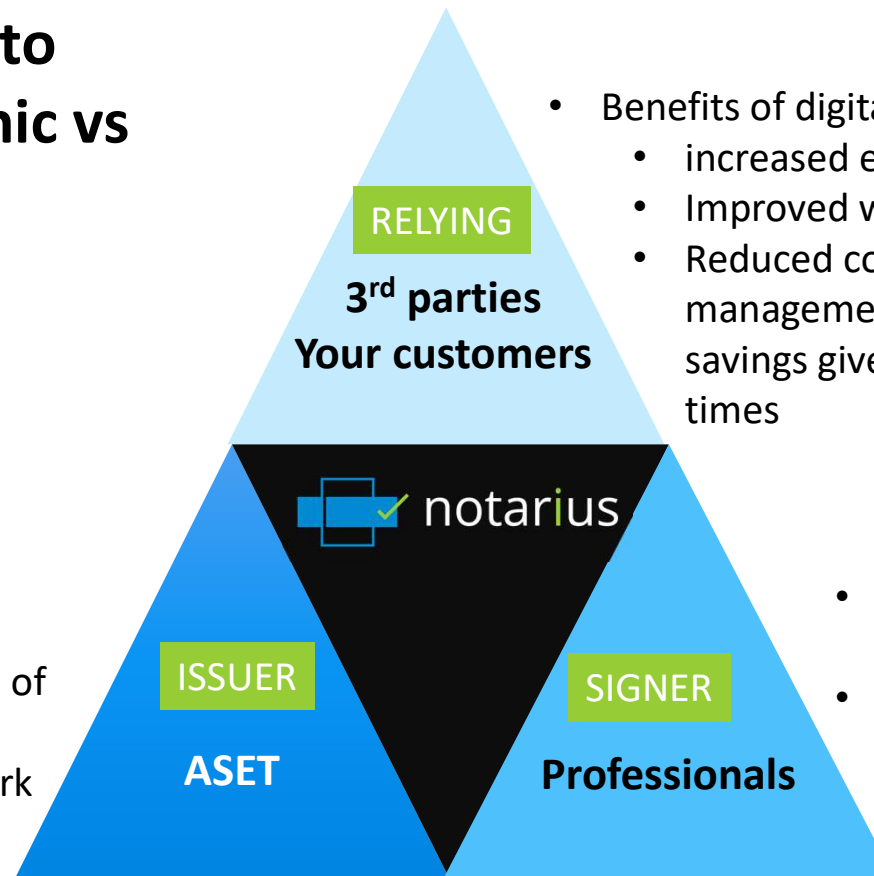
# Impacts for Relying Parties

- Automation of document management processes
- Moving away from paper management (printing, scanning, courier, handling, archiving etc.)
  - Ex: ALTO, Transport Alberta & Quebec, local governments etc.
- Security with document reliability
- Avoiding document forgery
- Benefits of instant validation
- PDF/A ISO 19005 archive standard for long term retention

# The Big Picture

## Opportunities for all to benefit from electronic vs paper documents:

- Competency profile
- Control over issuance and use of DS in real time
- Enforcing regulatory framework



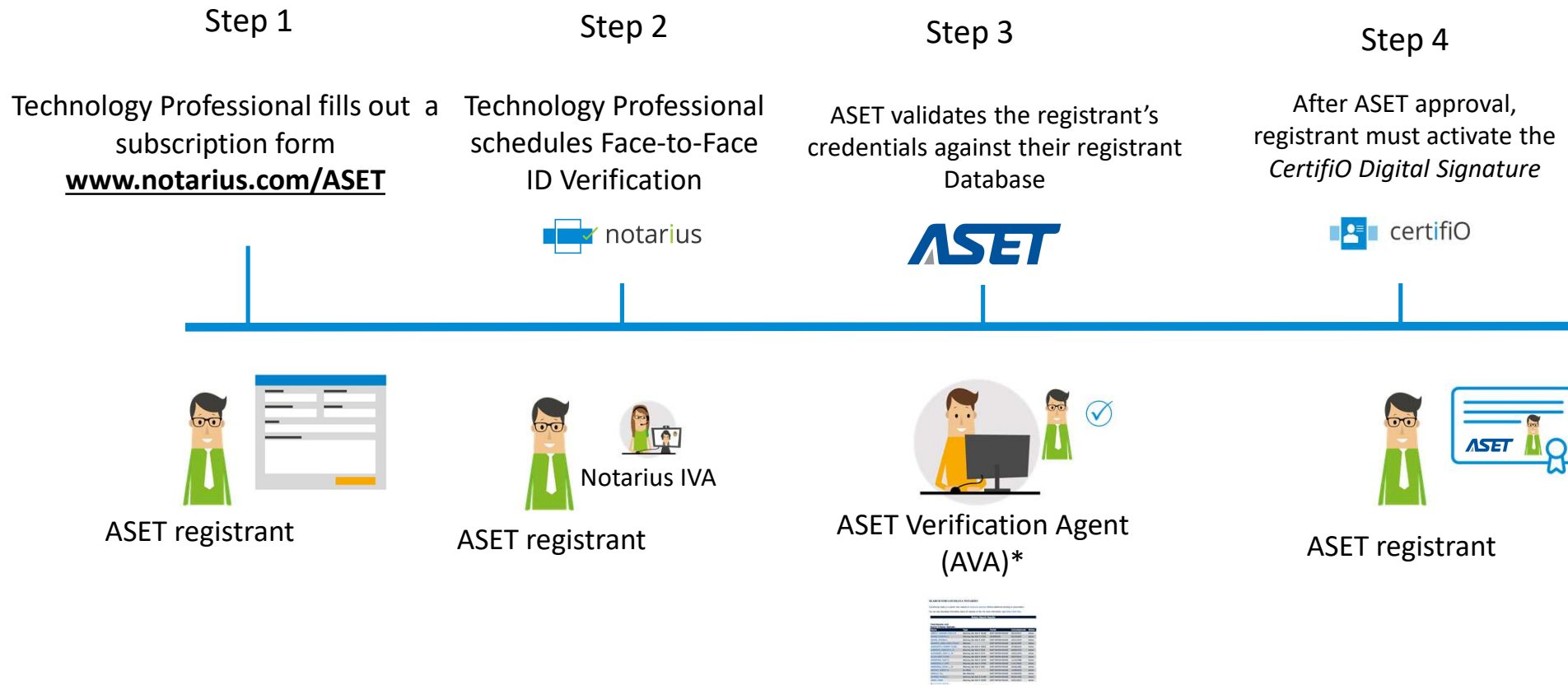
- Benefits of digital transformation;
  - increased efficiencies
  - Improved workflows and time savings
  - Reduced costs over paper management and provide substantial savings given challenging budgetary times

- Keeping pace with technology and client's needs
- Looking for increased efficiencies

# How to Subscribe and what's Included



# CertifiO – Sign-Up Workflow



# What's Included for ASET Registrants

- Certifio for Professionals digital signature certificate;
- Certifio Manager (to allow integration with business applications);
- ConsignO Desktop to generate and digitally sign PDF/A documents (Certificates will function with other PDF signing software also);
- Software upgrades & updates;
- End-user customer support and training

# Costs of the service



## ASET's Digital Signature

The digital signature held by members of ASET confirms the civic identity and professional designation of its members at the time of signing. It serves as proof that the signer is in good standing and has the right to practice in Alberta, in addition to ensuring the integrity of the signed documents and preventing their falsification.

## Pricing and Subscription

<p><b>\$140</b></p> <p>One time sign-up fee</p>	<p><b>\$185</b></p> <p>Yearly Subscription</p>	<p>Subscribe</p>
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## Working in More Than One Province?

Get a digital signature for an additional jurisdiction at a discounted price once you hold an **approved and activated Professional Signature**.\*

\*Signatures must bear the same name. The discount applies to the lower-priced signature.

**\$0**

Sign-up fee

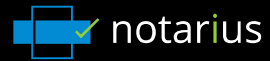
**\$75**

Yearly subscription

Subscribe

[www.notarius.com/ASET](http://www.notarius.com/ASET)

# Digital signature and Software Demo



# Q&A



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 Notarius