

# Electronic Signatures

GUIDANCE FOR POLICY MAKERS AND DESIGN TEAMS



Regulatory  
ReformBC

**OCIO**  
Office of the Chief Information Officer

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# Introduction

Citizens expect quality, end-to-end digital service channels. In both the public and private sectors, electronic signatures are already broadly used. Opportunities exist to explore additional ways to interact with citizens through digital channels.

The Government of British Columbia's strategy is to "Enable Digital" as a channel for delivering any government service (OCIO Strategy 2016). Achieving this goal requires that "citizens can access government information and services at the click of a button – anytime, anywhere, and from any device." However, projects considering moving the signature processes online may be hesitant to do so – primarily because of misconceptions around the requirements for a traditional wet signature on paper. In fact, for most services, an electronic signature is permissible and preferred.

The intent of this document is to draw on the lessons learned across government to provide a common starting point for policy and technical teams in navigating the requirements to build electronic signature solutions. By the end of the document, the reader should be aware of the most common options for electronic signature solutions, the risks and issues to consider, and the subject matter experts across government who can advise on an appropriate path forward.

**ELECTRONIC SIGNATURE** is a broad term for information in electronic form that a person has created or adopted in order to sign a record and that is in, attached to, or associated with the record. Electronic signatures can take a variety of forms and methods, including scanning/faxing documents or more secure solutions.



## What are the benefits to using an electronic signature?

- ✔ An **easier and faster** process for citizens, businesses, and government.
- ✔ Meets the expectations of citizens who prefer **online services** to connect with government.
- ✔ May **reduce administrative costs** and complies with the requirements for record-keeping in the *Information Management Act*.

## Are electronic signatures allowed in government?

A common misconception is that a reference in legislation to a “signature” or “signed document” refers only to pen on paper or a “wet” signature. Under B.C.’s *Electronic Transactions Act*, if there is a requirement under law for a signature, that requirement can be satisfied by an electronic signature. A record to which the *Electronic Transactions Act* applies must not be denied legal effect or enforceability solely by reason that it is in electronic form.

Electronic signatures are already being used across the B.C. government:

- ✔ **Supporting Children and Families** : The Ministry of Children and Family Development launched the AdoptKidsBC portal in 2016, moving all of the paperwork for the adoption process online, including electronic signatures. The system uses the BC government’s identity management solutions (BCeID).

- ✔ **Natural Resource Authorizations**: Since 2010, the Natural Resource Sector has supported electronic signatures on applications submitted to FrontCounterBC by relying on a BCeID. Hunting BC is a new stand-alone system that uses BCeID to allow over 180,000 hunters in British Columbia to complete all of their licencing online.

- ✔ **Internal Government Approvals**: A growing number of ministries are using eApprovals, a Sharepoint/IDIR-based electronic system for the internal approval of confidential documents. Emails sent using an IDIR account are relied upon as a form of electronic signature.

One of the most important building blocks for some electronic signatures is identity management. Identity management solutions have already been created for the B.C. government by the Provincial Identity Information Management Program (IDIM). These include the BC Services Card (for residents), BCeID (for individuals and businesses/organizations) and IDIR (for internal government use).

More information on solutions on which electronic signatures can be based can be found in Appendix A.



# 1

## Step One Evaluate the Need for a Signature

### a. Is a signature required at all?

A signature serves to identify the individual who signed the record, and to indicate the individual's agreement to the record being signed. If there will be no need to confirm the signatory's identity or the details of the record in the future, then a signature may be unnecessary and the requirement for a signature could potentially be eliminated unless otherwise required by law.

If there is no need for a signature, but it is required in legislation or regulation, contact the [Regulatory Reform](#) branch to discuss options to amend or repeal the legislation or regulation.

### b. Is there an impact on partner agencies?

Many provincial processes include information sharing agreements or memorandums of understanding with B.C. agencies or agencies from other jurisdictions, such as the federal Canada Revenue Agency. Including all partners early in the consultation process may be required to ensure the move to an electronic solution complies with existing agreements.

### c. How confident do you need to be about identity?

The level of confidence that someone is who they claim to be is one factor in assessing options for an overall electronic signature solution. However, identity verification can require upfront work, such as needing to visit a Service BC office. While upfront verification may be an initial burden, once identity is verified, it may be used for future transactions with government at that level of verification. For example, after the first transaction using a BCeID account, time will be saved with each subsequent transaction. The Office of the Chief Information Officer (OCIO) has created a [standard](#) to help identify the level of confidence about identity required relative to the types of risks involved. It is important to consult with subject matter experts when exploring these options.

There may also be ways to mitigate the risk of choosing not to require identity verification. For example, the new Hunting BC system was implemented without a previously verified identity because B.C. hunters are subject to prior checks on their identity and can be asked to prove their identity in the field.



# 2

## Step Two Identify Potential Electronic Signature Solutions

Each ministry has a [single point of contact](#) for managing and developing ministry IM/IT solutions. If you are considering electronic signatures in the context of an existing service project, you are likely already working closely with them. This branch's subject matter experts may be able to directly assist with developing electronic signature solutions. They may also suggest how existing technical solutions and services already in use by the ministry might be leveraged. If there are existing tools, implementation of an electronic signature system may only require a reconfiguration or retrofit. If the necessary services are not already in use, a system build or replacement may need to be considered.

There are also corporate services to support electronic signature projects. The OCIO is responsible for cross-government standards and architecture for IM/IT projects.

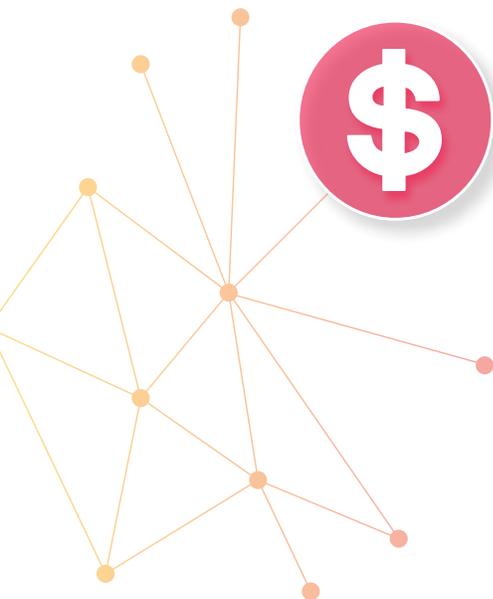
- ✔ The OCIO can provide advice on compliance with [cross-government IM/IT standards](#).
- ✔ The [Provincial Identity Information Management Program \(IDIM\)](#) manages the BC Services Card, IDIR and the BCeID identity management services. These identity management services can be integrated with a wide range of software and web applications. Contact the Provincial Identity and Information Management Program for more details: [IDIM.Consulting@gov.bc.ca](mailto:IDIM.Consulting@gov.bc.ca).

*Appendix A: Electronic Signature Solutions Table* provides additional detail about common electronic signature solutions to consider in relation to the issues discussed in this guide.



# 3

## Step Three Evaluate the Cost-Benefit of Electronic Signatures



- There are a wide range of considerations when preparing your business case for an electronic signature system. These include the cost of the current signature process, the number and frequency of transactions, the level of security required, expectations of businesses and citizens, the applicable legislative or regulatory requirements, existing agreements with other agencies, the workload associated with proposed electronic signature process, the level of reliance or evidence needed in future, and the return on investment for government.

Once you have a rough estimate of the cost of a potential electronic signature solution, the questions below will help you gather data to support the business case for implementing electronic signatures.

- **a. What are the benefits for citizens and businesses?**
  - i. What is the compliance cost for users in the current versus future solutions? How much time will be saved? Will there be cost savings? Will the workflow or processes required be easier?
  - ii. Will implementing an electronic signature solution reduce or eliminate delays? What are the benefits for businesses or citizens in finalizing their records or transactions with government faster?
- **b. What are the direct benefits for government?**
  - i. What is the expected volume and frequency of signature transactions?
  - ii. How much time do government staff spend processing paper signatures in the current process? What are the total processing costs (using a typical full time equivalent [FTE] and other costs such as registered mail and storage)?
  - iii. What is the error rate – what percentage of forms need to be re-done because of errors or missing information or require additional exchanges with a citizen or business?
  - iv. How much risk is there of someone claiming to have not signed or signing in someone else's place? Is the risk of a dispute significant from a business or legal perspective? What are the potential consequences of a dispute over a signature?

# 4

## Step Four Ensure Compliance

### a. Review Legislation, Regulations and Standards

Before meeting with subject matter experts, it is strongly recommended to review the following:

- i. **Ministry Legislation and Regulations:** Should be reviewed for any content concerning signature requirement or any other requirement regarding records.
- ii. **IM/IT Standards:** Review the most recent version of each IM/IT standard.
- iii. **The Identity Information Management Package:** A set of architectures, frameworks, models, standards and supporting documents which, when implemented together, will result in a common, secure and trusted approach to identifying and authenticating users

### b. Contact the Subject Matter Experts

Electronic signature projects should engage appropriate subject matter experts. Beginning these assessments early on is highly recommended. The following subject matter experts can provide advice on mitigating security, records management, legal and privacy risks:

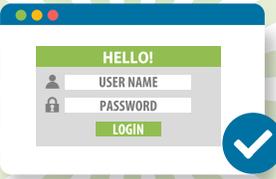
- i. **Legal:** The [Ministry Solicitor](#) should be consulted to confirm that the proposed electronic solution complies with applicable legislative and regulatory requirements. In some instances, changes to prescribed forms may be required. Any contracts with third-party vendors will need to be reviewed by legal counsel and, if applicable, the [Privacy Protection Schedule](#) should be attached.
- ii. **Records:** Consult the [Ministry Records Officer](#) regarding the storage and management of records in accordance with the *Information Management Act*.
- iii. **Security:** With support from [Ministry Information Security Officers](#), electronic signature projects will need to complete [Security Threat Risk Assessments](#) to ensure B.C. government security standards are met.
- iv. **Privacy:** [Ministry Privacy Officers](#) can provide advice to project teams to understand the [Privacy Impact Assessment](#) requirement. For projects involving more than one government agency or a third-party vendor, an [Information Sharing Agreement](#) or other acceptable form of agreement between the parties will be required.

# Conclusion

- ▶ Electronic signatures may be **preferred over paper signatures** because they:
  - ✔ **Meet citizens' and business' expectations** for seamless delivery of services; and
  - ✔ May **reduce costs** because they require **less paperwork and paper management** for citizens, businesses and government.
- ▶ Electronic signatures **can and are already being used** by the Government of B.C.
- ▶ The Government of B.C. has **numerous resources and subject matter experts** who can assist project teams in choosing the appropriate electronic signature solution.



# Appendix A: Electronic Signature Solutions Table

VERIFIED BCEID OR BC SERVICES CARD	VENDOR SOLUTION	DIGITAL CERTIFICATE SERVICE (DCS)
		
<p><b>BCEID/SERVICES CARD (IDENTITY VERIFIED)</b></p>	<p><b>THIRD-PARTY SERVICE FOR STORING AND SIGNING DOCUMENTS</b></p>	<p><b>THE DIGITAL CERTIFICATE SERVICE (DCS) ENABLES EMAIL AND FILE ENCRYPTION, MULTI-FACTOR AUTHENTICATION AND DIGITAL SIGNATURES</b></p>
<p>User must attend a Service BC office and show government issued ID to complete the process.</p> <ol style="list-style-type: none"> <li>1. User signs-in with a verified BCEID or BC Services Card prior to completing form/document.</li> <li>2. Forms requires user to “agree/confirm” to proceed, after reading the terms of the agreement.</li> <li>3. The database/document management system generates a receipt, showing that the transaction took place and allows both the user and government to store the transaction for their records.</li> </ol>	<ol style="list-style-type: none"> <li>1. Government establishes service agreement with vendor and selects a verification option (including integration with any BCEID service or BC Services Card).</li> <li>2. Document template is uploaded to the service and API frontend allows for integration with BCEID or BC Services Card services.</li> <li>3. User accesses form through a website and is prompted to login and complete form. Use of vendor is transparent to user.</li> <li>4. Transaction record sent to government and user – government stores transaction record in document management system.</li> <li>5. Ability to lock down form and content at time of ‘signing’. Content not updateable once ‘signed’.</li> </ol> <p><b>PRIVACY PROTECTION:</b> Third-party services are subject to FOIPPA’s requirements where a Privacy Protection Schedule has been included in the contract with the vendor.</p>	<p>A user will need a digital certificate with multi-factor authentication and digital signatures.</p> <ol style="list-style-type: none"> <li>1. User logs-on to service and completes transaction using DCS.</li> <li>2. Service can take different forms (web service, PDF, email) but document is secured with the DCS and cannot be modified without the correct key.</li> </ol>
<p>✔ BCEID used in combination with a document management or database system and a front-end website.</p>	<p>✔ Requires vendor software licencing and integration with government services (must still meet government standards for security, privacy and retention).</p>	<p>✔ DCS used in combination with a document management or database system and a front-end website (or email).</p>
<p><b>RECOMMENDED OPTION:</b> In most cases, this option can support electronic signature requirements and enable more integrated digital services for citizens and businesses.</p> <p>Leverages existing digital services in B.C. government. However, may be not be appropriate for clients for programs with low identity risks.</p>	<p>Integration to government applications (BCEID, BC Express Pay, websites, etc) may be required. Additional ongoing costs would apply for service based on volume and number of accounts required.</p> <p>Without integration with verified BCEID or BC Services Card, a vendor solution may not be secure.</p>	<p>Onerous, requires user training and is costly to introduce. Best used with select professional groups with very high security requirements.</p> <p>DCS is designed for internal government use only.</p>





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