The Public Sector Profile of the Pan-Canadian Trust Framework (PCTF) Version 1.0

Consultation Deck v0.5
(for Discussion Purposes Only)

(This contents of this document have not yet been endorsed by either the IMSC or DIACC)

2019-05-30

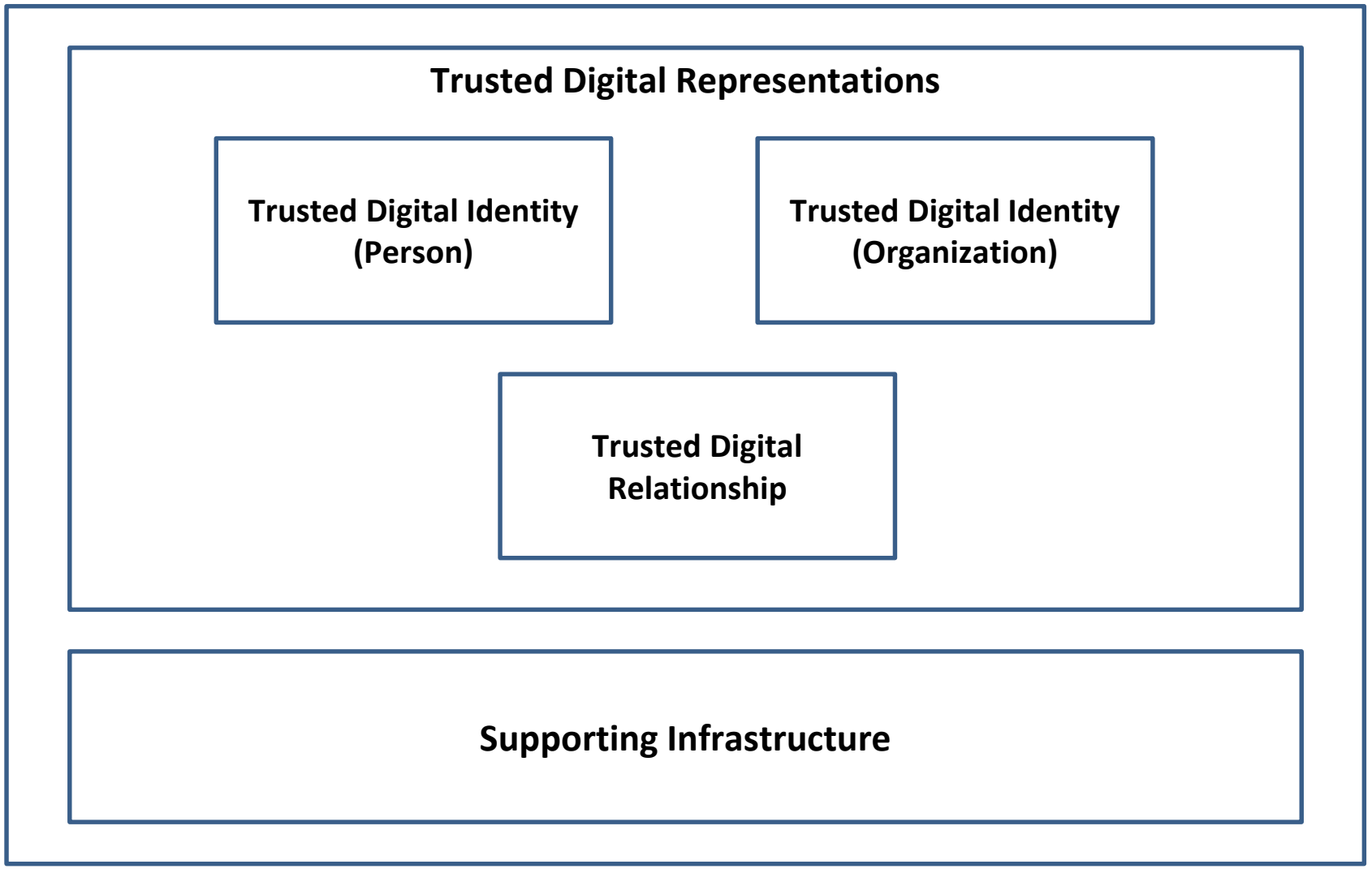
Characteristics of the PCTF

1. **A simple and integrative framework** that is easy to understand yet capable of being applied in a complex environment
2. **Technology-agnostic**: provides flexibility and logical precision in assessing the trustworthiness of digital identity solutions and digital identity providers
3. **Complements existing frameworks** (security, privacy, service delivery, etc.)
4. **Provides clear links to applicable policy, regulation, and legislation** by defining conformance criteria that can be easily mapped
5. **Normalizes (standardizes) key processes and capabilities** to enable cross-sector collaboration and digital identity ecosystem development

Trusted Digital Representations and Trusted Processes

- Currently, the PCTF recognizes:
  - 2 types of trusted digital representations
  - 24 *atomic* processes
- Atomic processes can be grouped together to form various *compound* processes such as:
  - Identity Assurance
  - Credential Assurance
  - Informed Consent
- The PCTF is extensible and interoperable:
  - additional atomic processes can be added as required
  - the atomic processes can be mapped to various conformance criteria qualifiers

Pan-Canadian Trust Framework Model



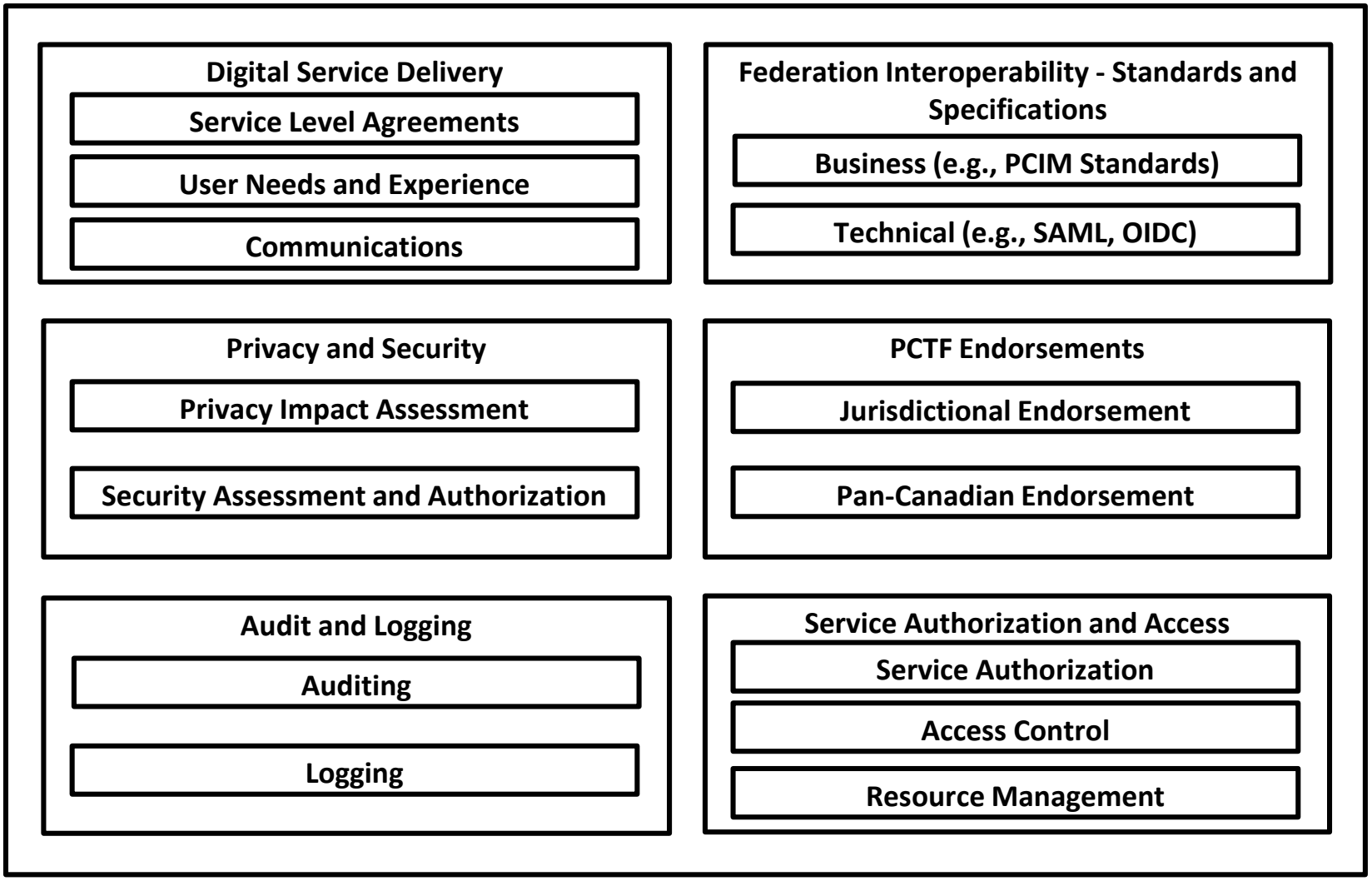
Trusted Digital Representations

Trusted Digital Identity (Person)

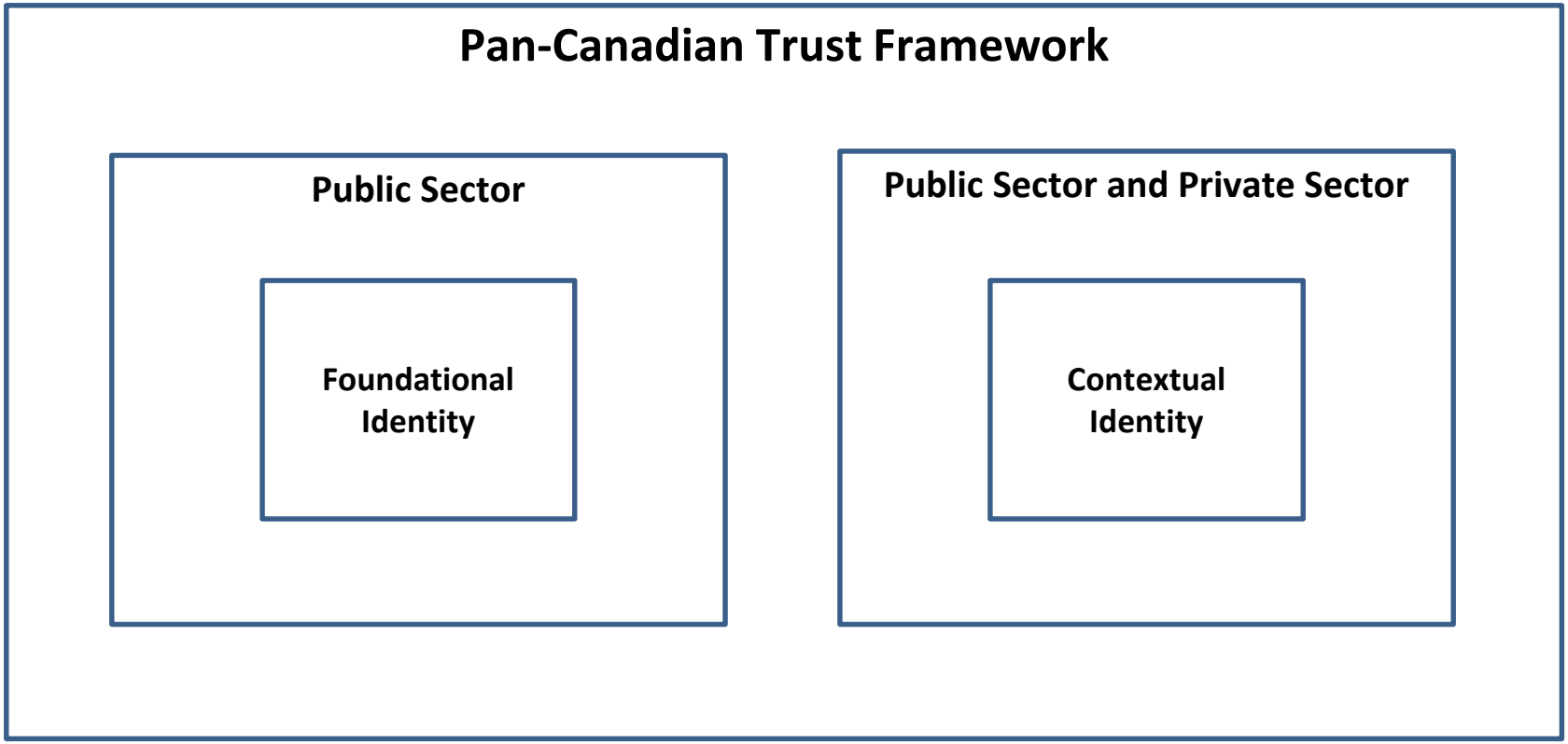
Trusted Digital Identity (Organization)

Trusted Digital Relationship

Supporting Infrastructure

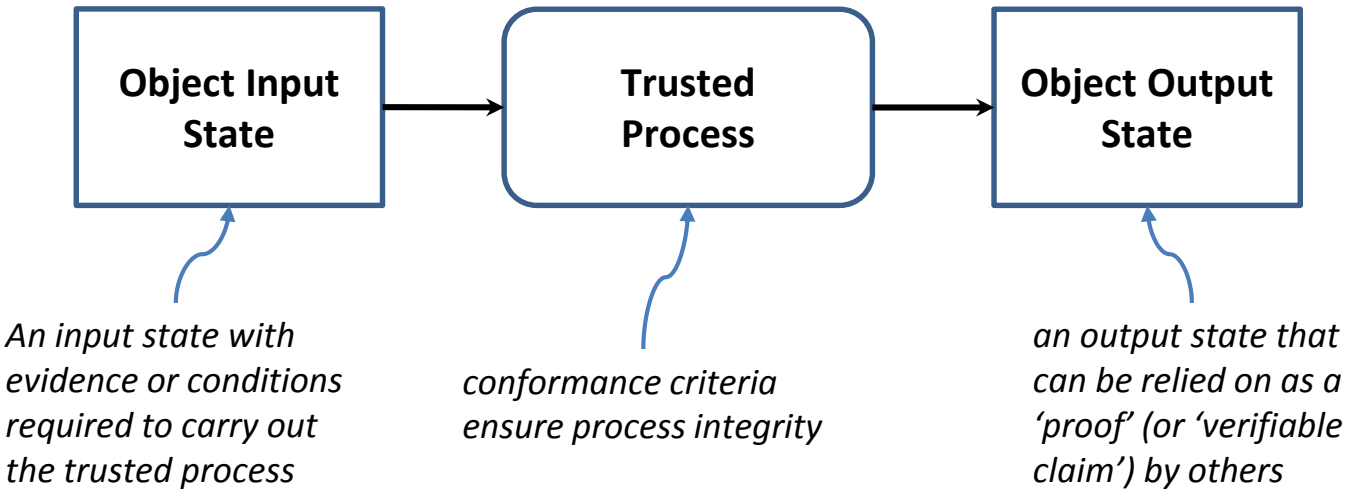


Identity Domains



Trusted Process Model

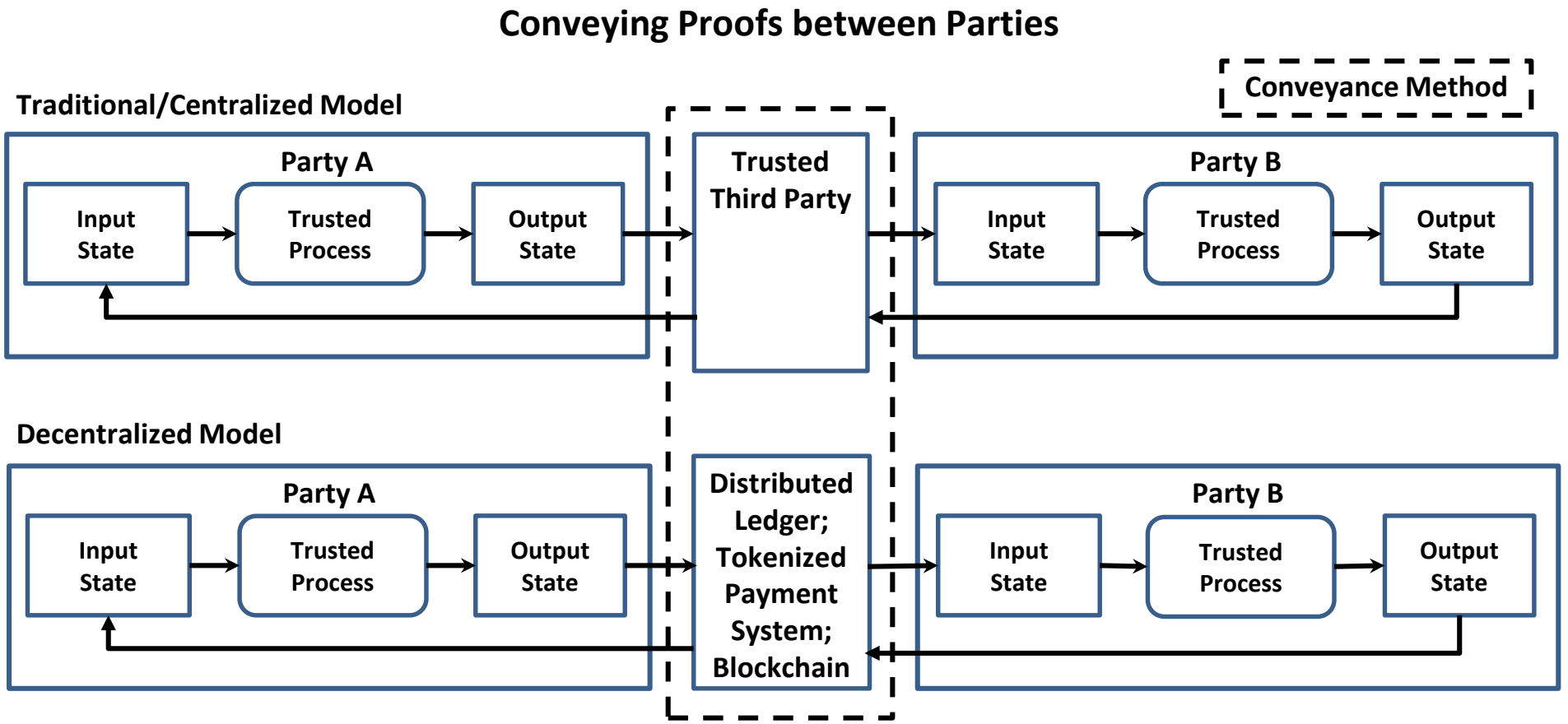
A trusted process is a set of activities that results in the state transition of an object. The object's output state can be relied on as a 'proof' by other processes.



*Formalizing (and standardizing) the **trusted processes**, the **input states**, the **output states**, and the **conformance criteria**, is the essence of defining the trust framework.*

Trusted Process Proofs and Conveyance

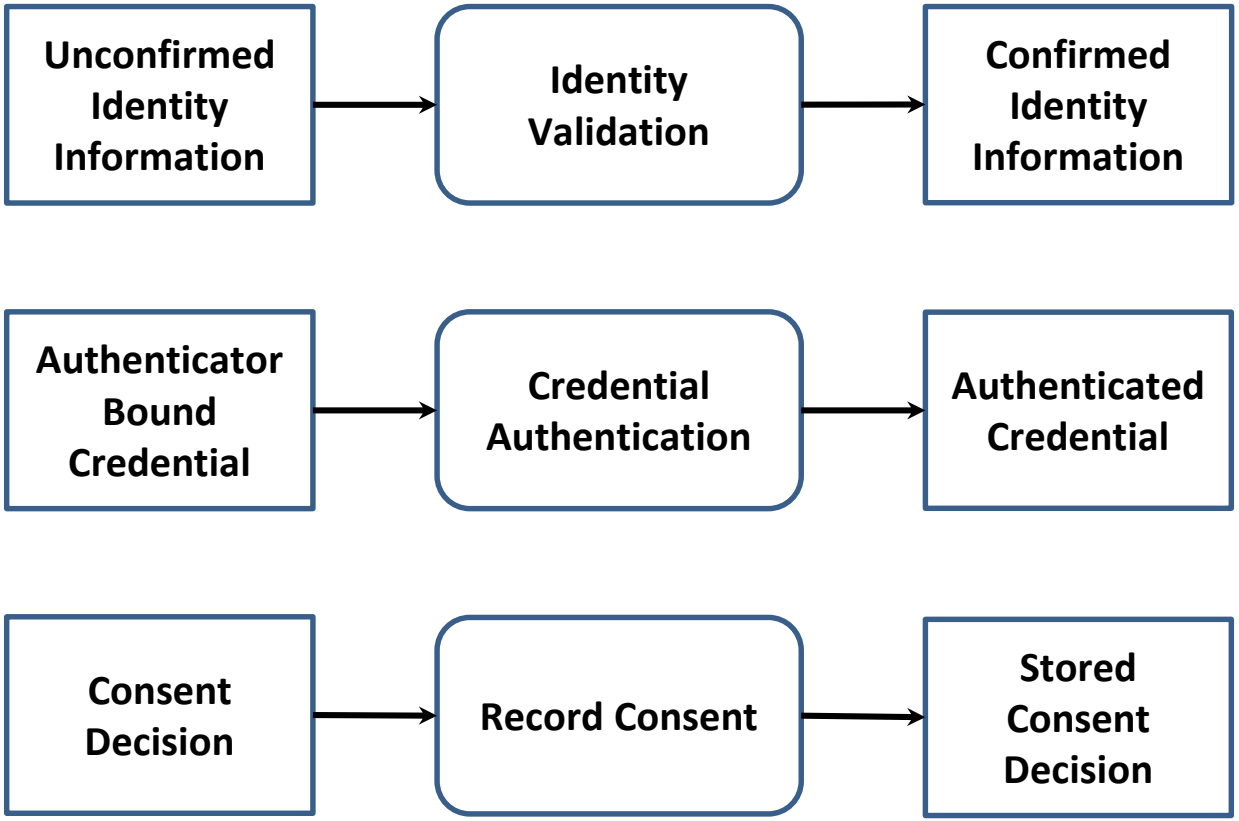
*Trusted process inputs and outputs (i.e., proofs) are **independent** of the conveyance model.*



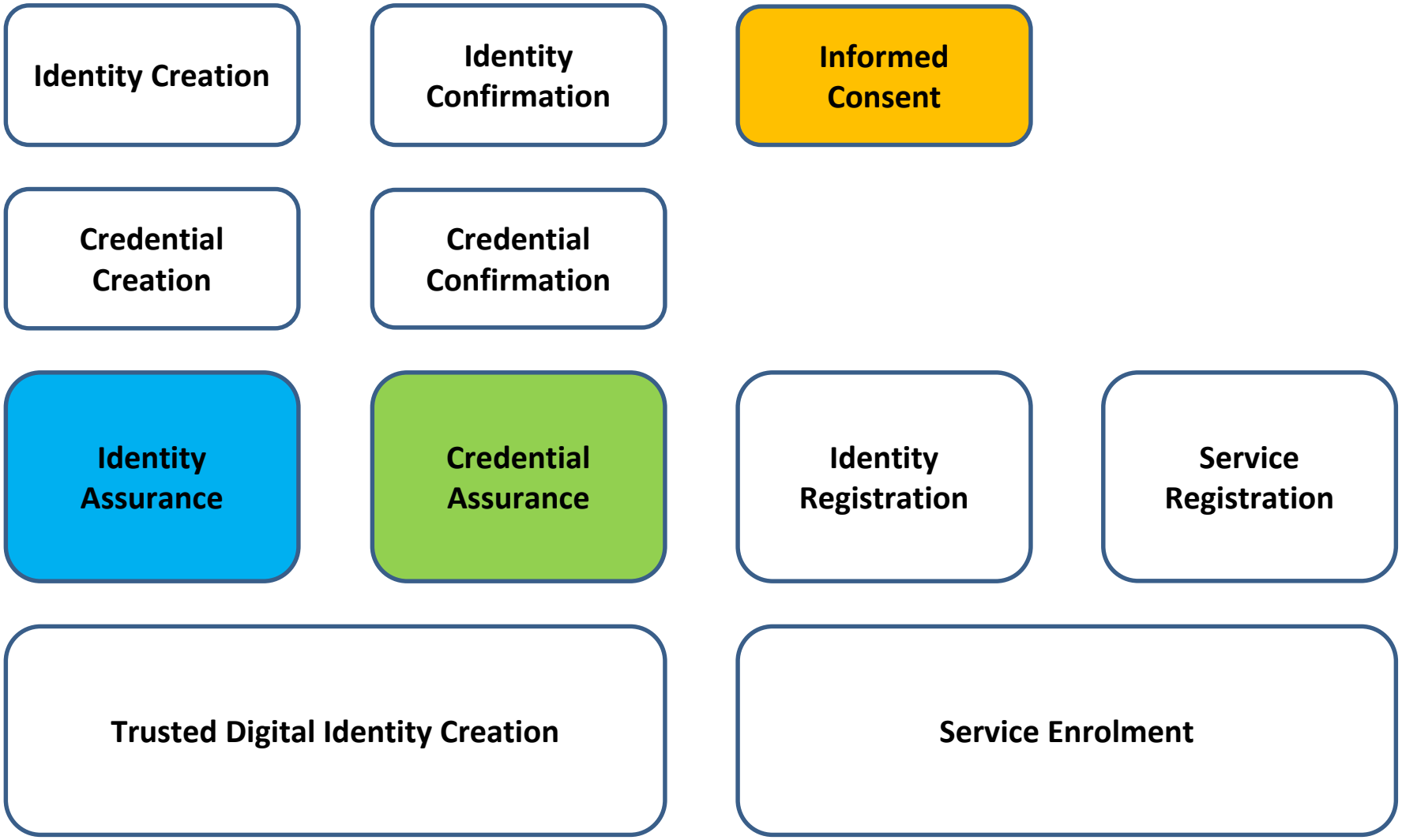
Atomic Processes

Identity Resolution	Identity Maintenance	Credential Recovery	Request Consent
Identity Establishment	Identity-Credential Binding	Credential Revocation	Record Consent
Identity Validation	Identity Linking	Credential Authentication	Review Consent
Identity Verification	Credential Issuance	Create Signature	Renew Consent
Evidence Validation	Credential-Authenticator Binding	Check Signature	Expire Consent
Identity Presentation	Credential Suspension	Formulate Notice	Revoke Consent

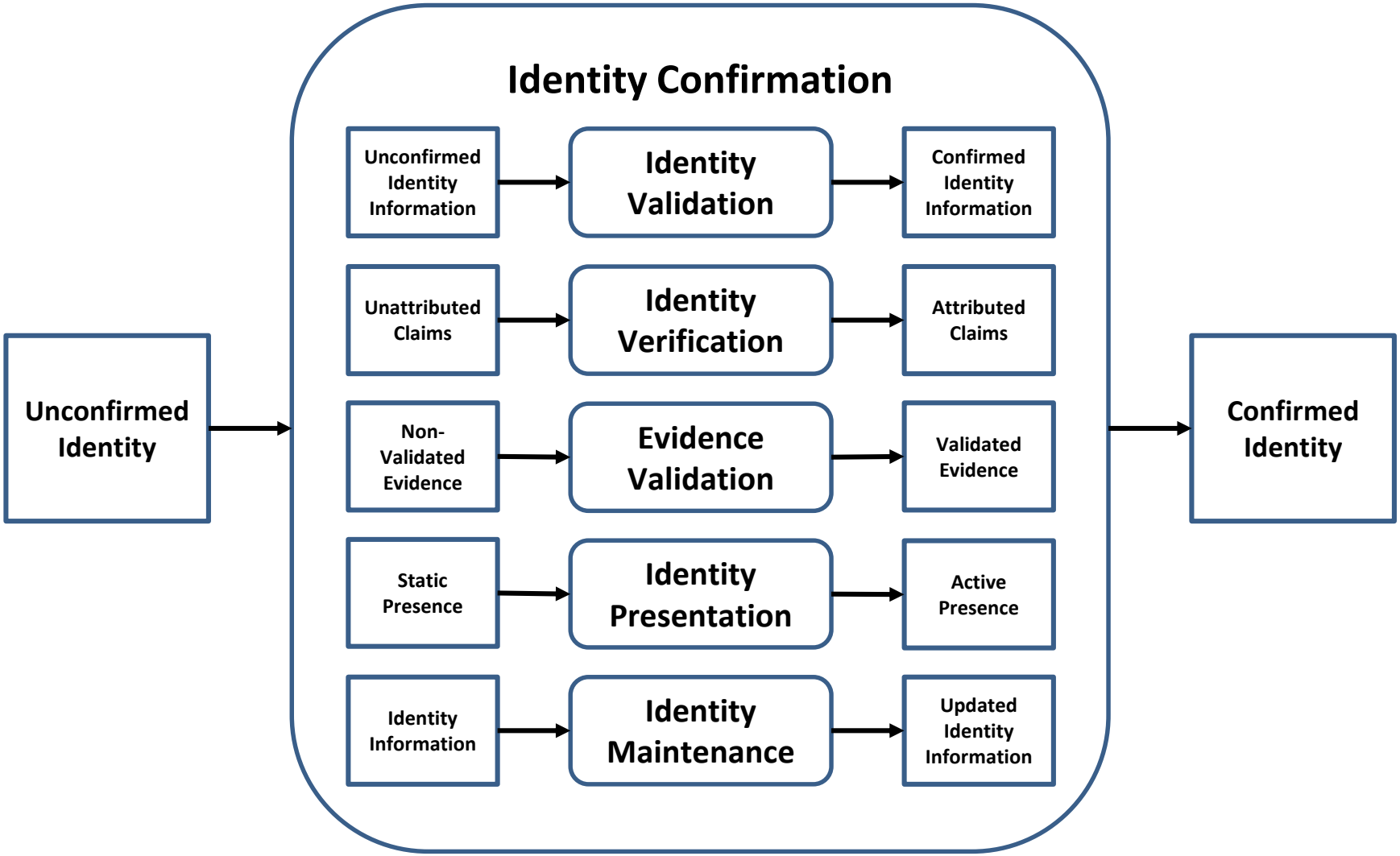
Examples of Atomic Processes (Modeled)



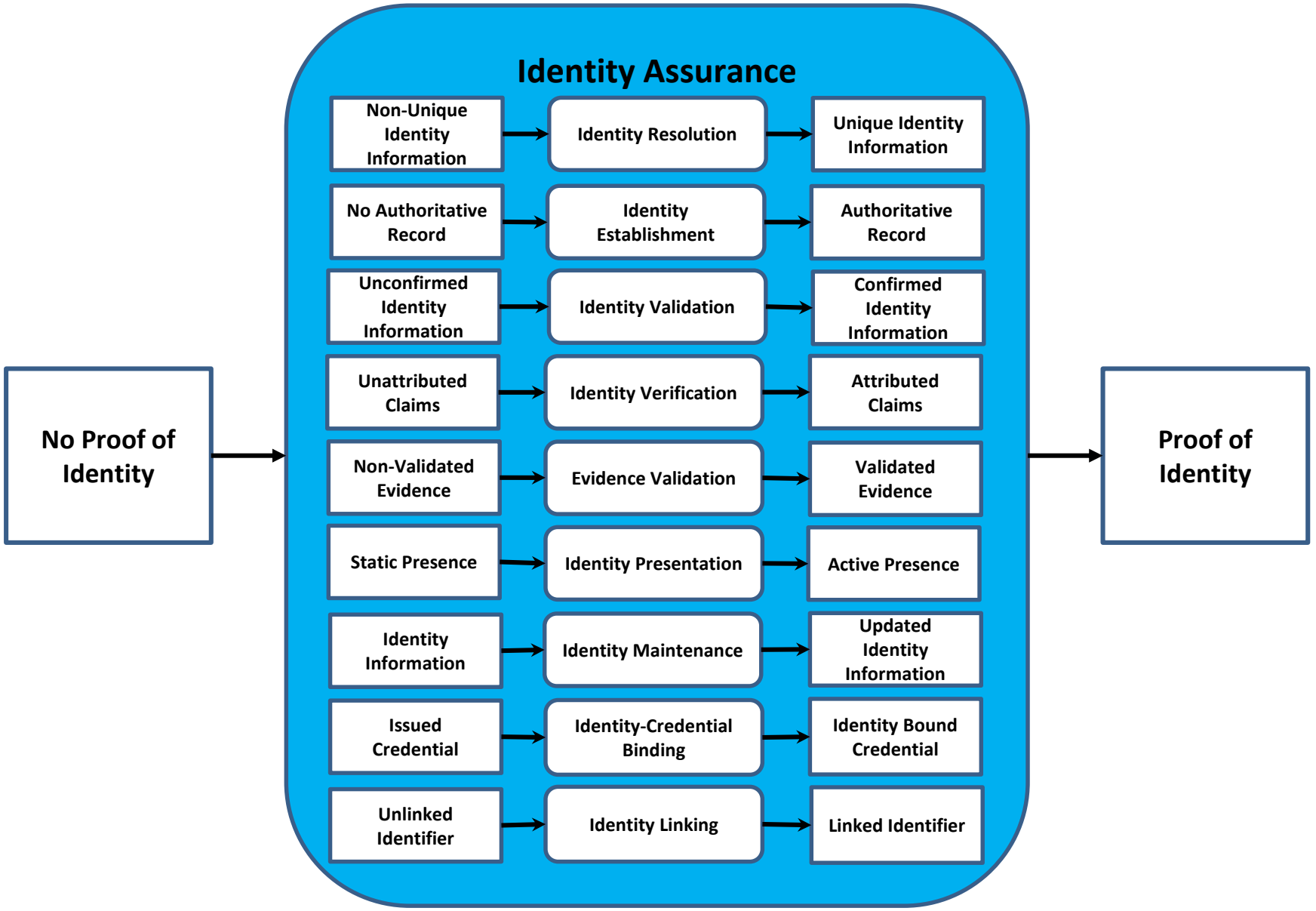
Compound Processes



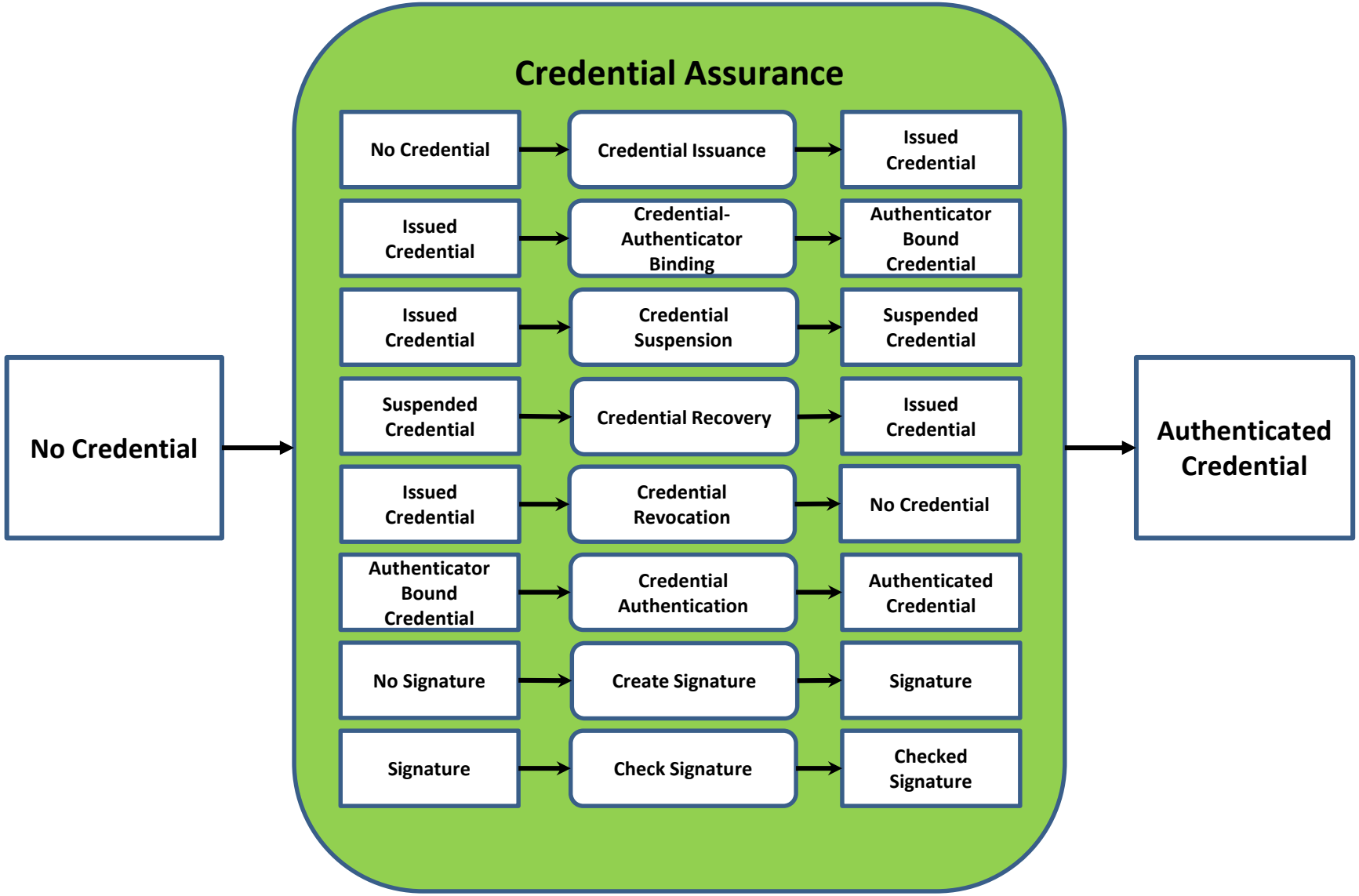
Compound Process: *Identity Confirmation* (Modeled)



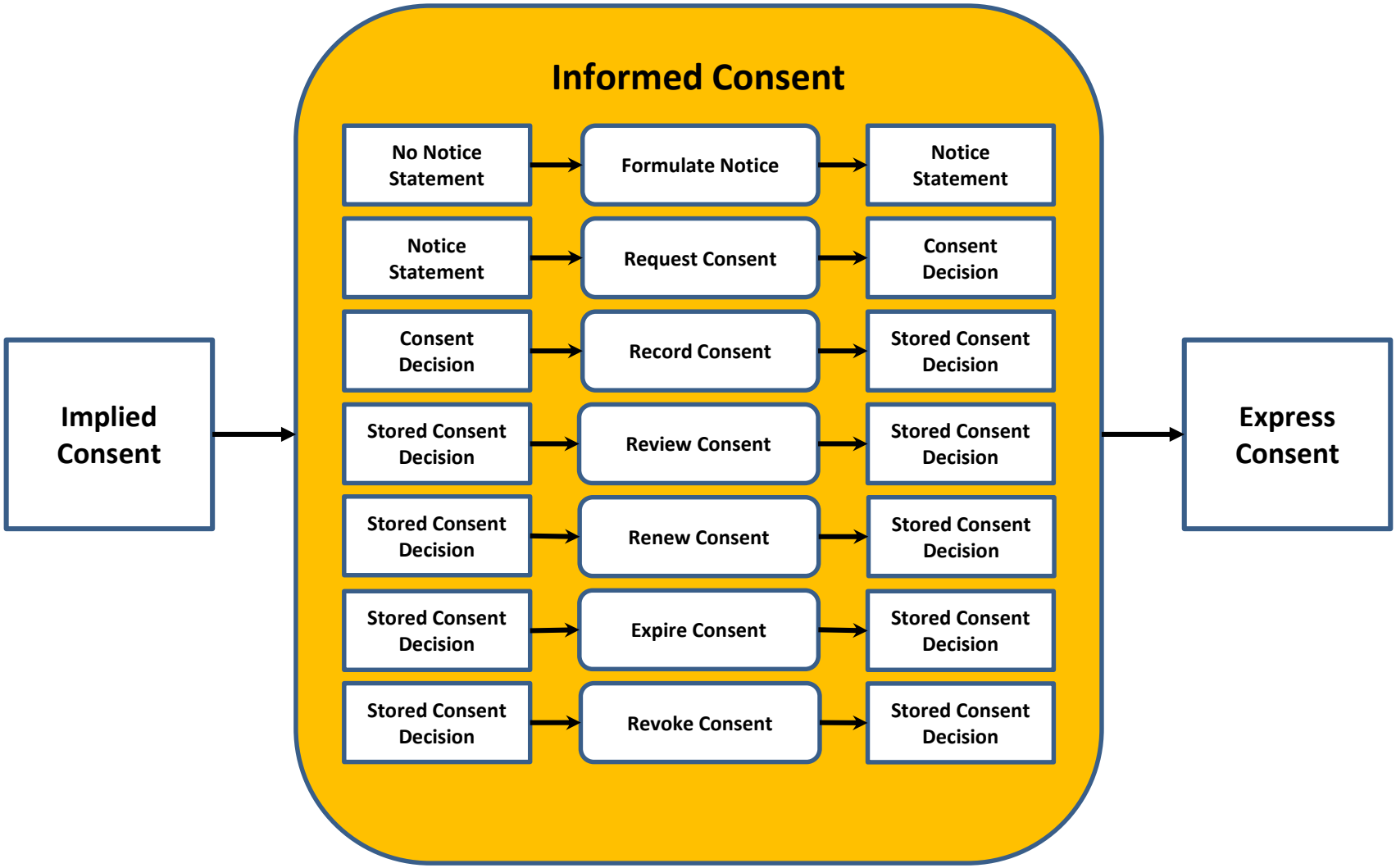
Compound Process: *Identity Assurance*



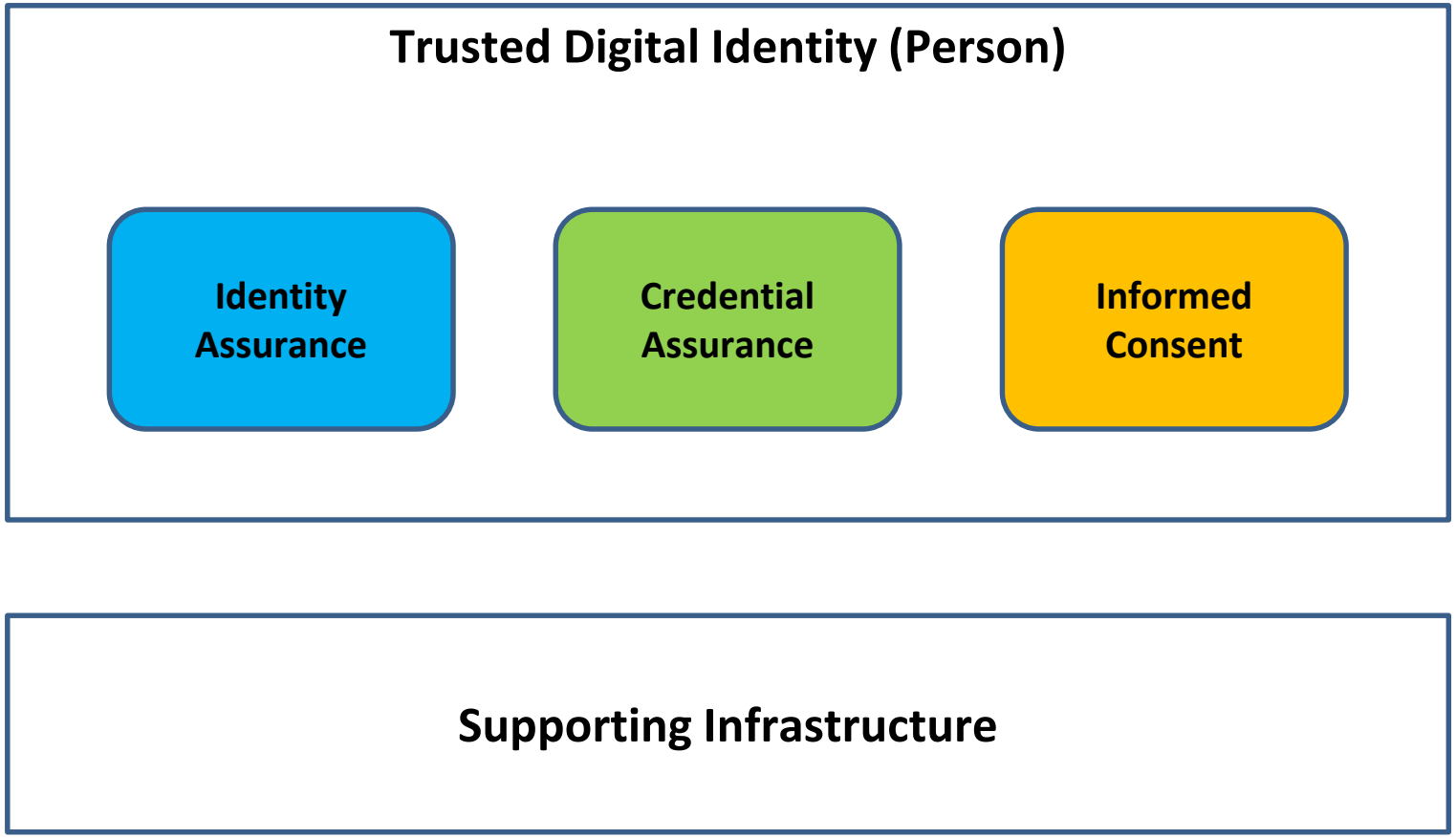
Compound Process: *Credential Assurance*



Compound Process: *Informed Consent*

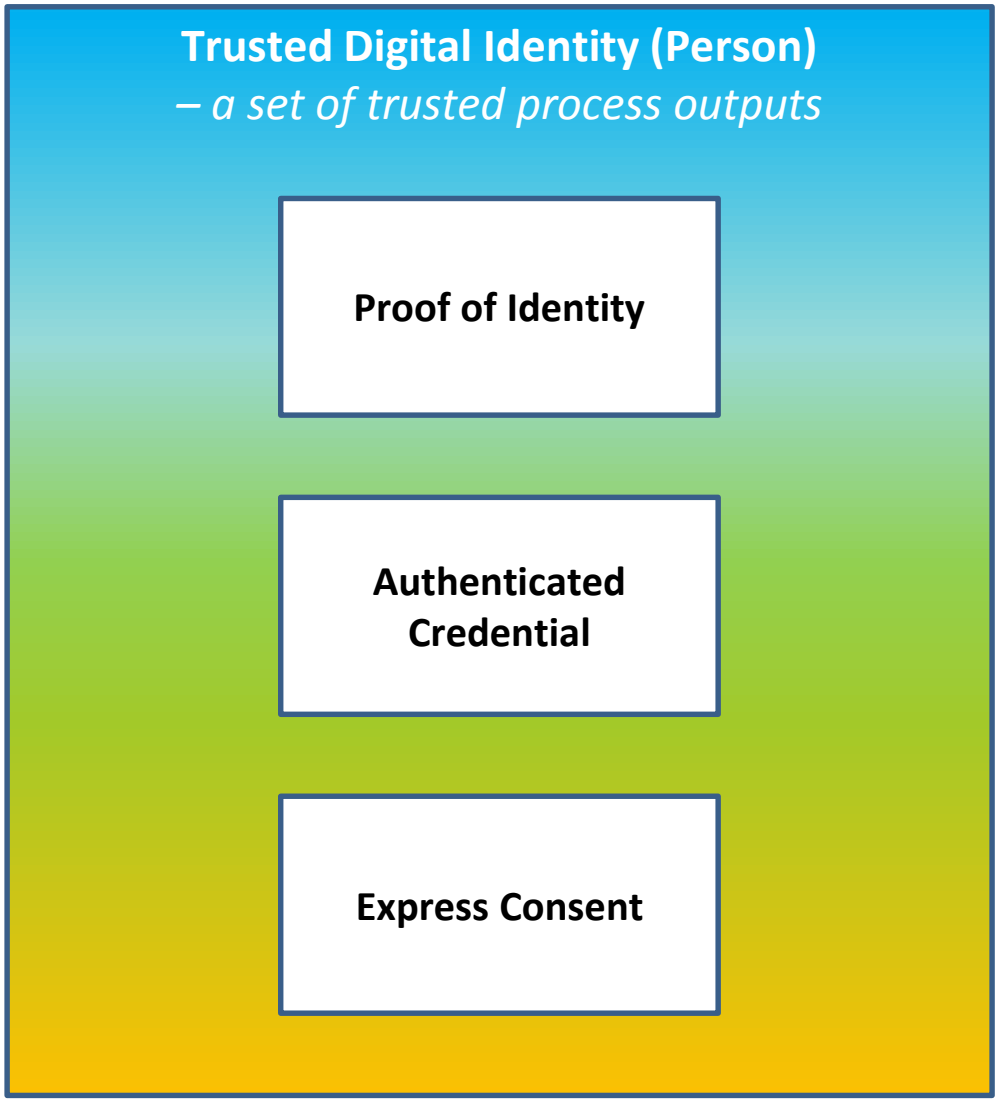


Compound Process: *Trusted Digital Identity (Person) Creation*

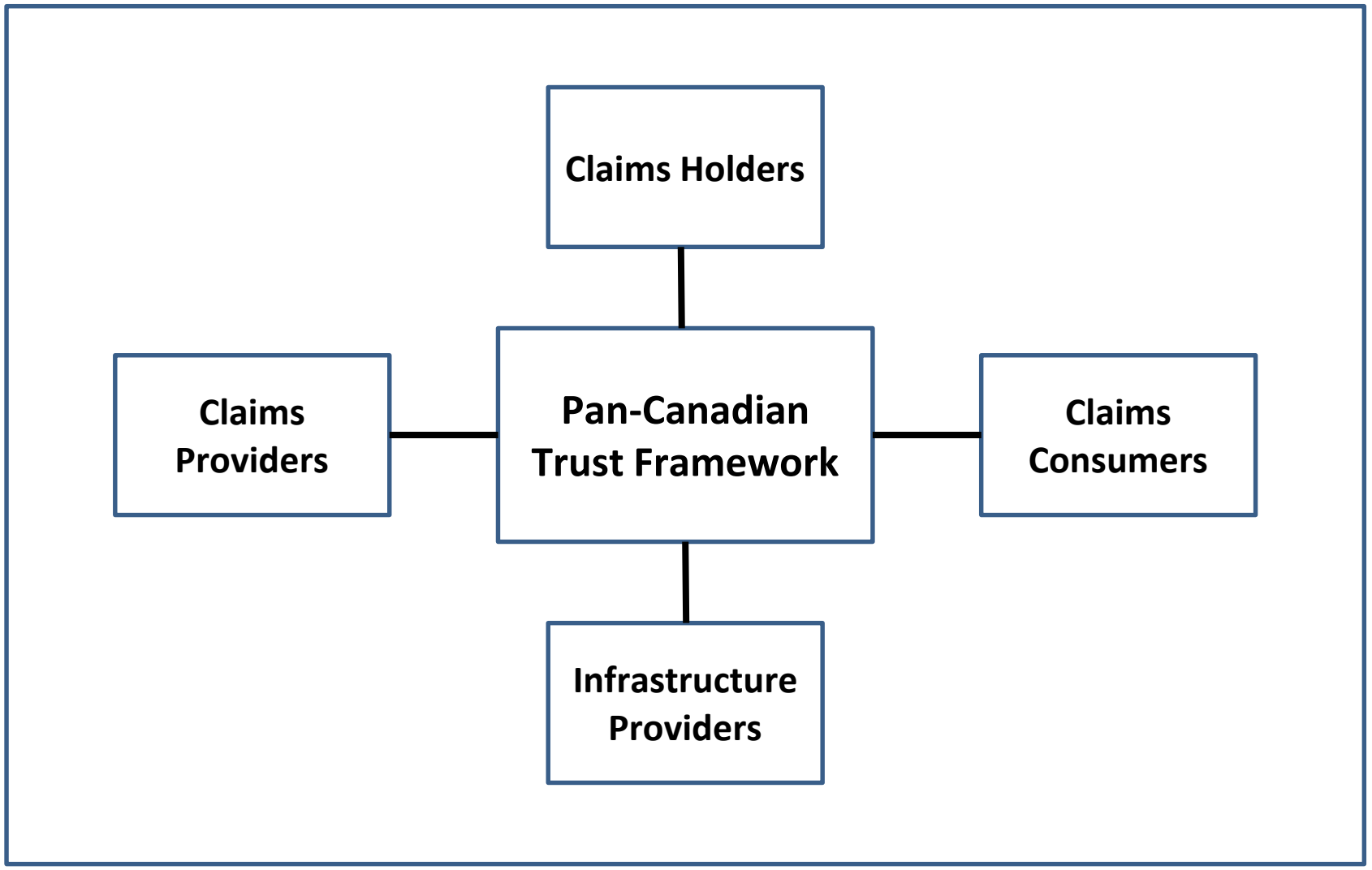


*A **trusted digital Identity** can be conceptualized as a set of trusted process outputs (proofs) that are independent of the conveyance method.*

Depending on the digital ecosystem, some of these trusted processes may be carried out by different parties at different points in time.



Canadian Digital Ecosystem Stakeholders



Participant Roles

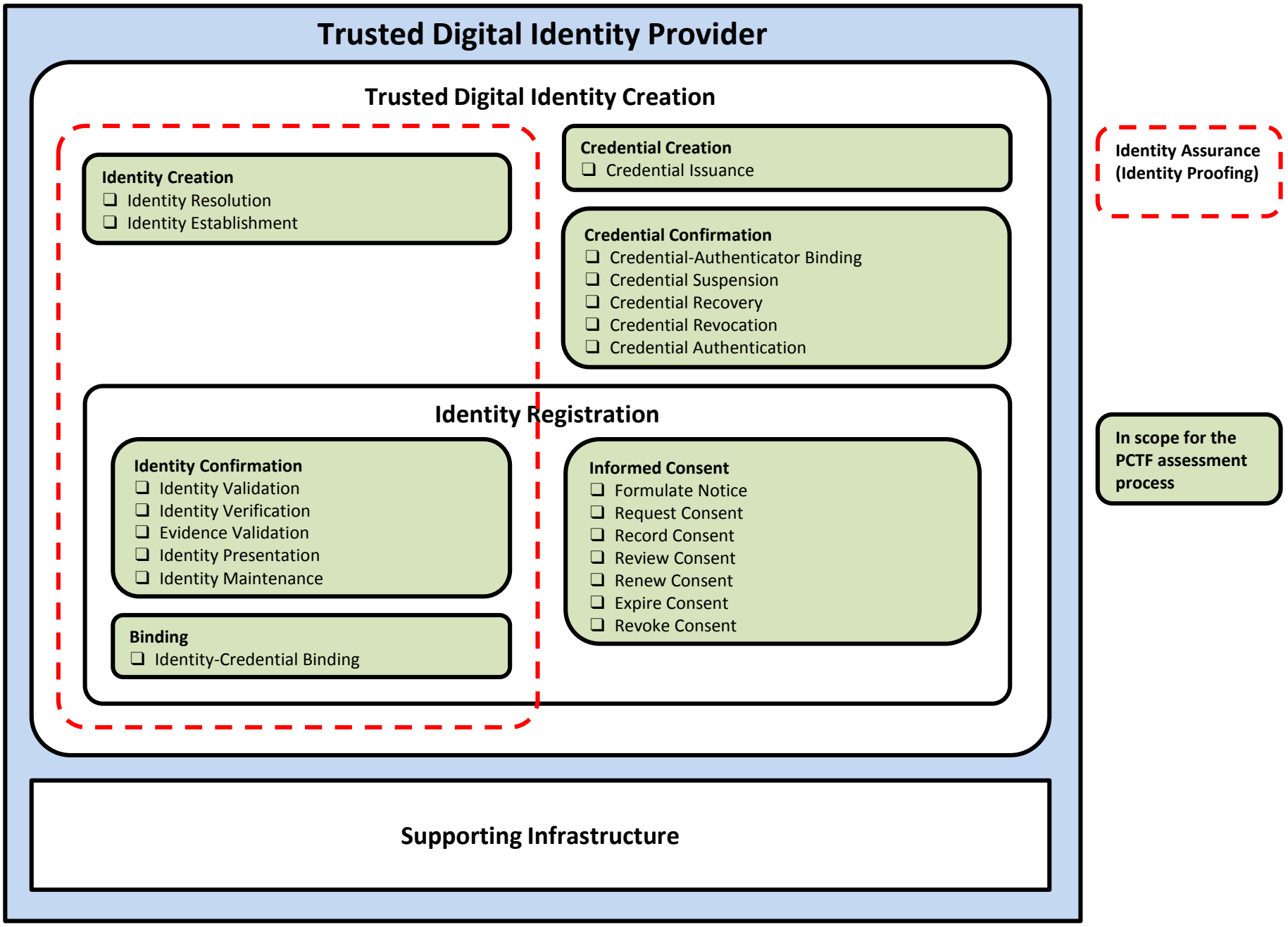
- Identity Assurance Providers
- Credential Assurance Providers
- Trusted Digital Identity (TDI) Providers
- Relying Parties (as TDI Consumers)
- Digital Identity Owners

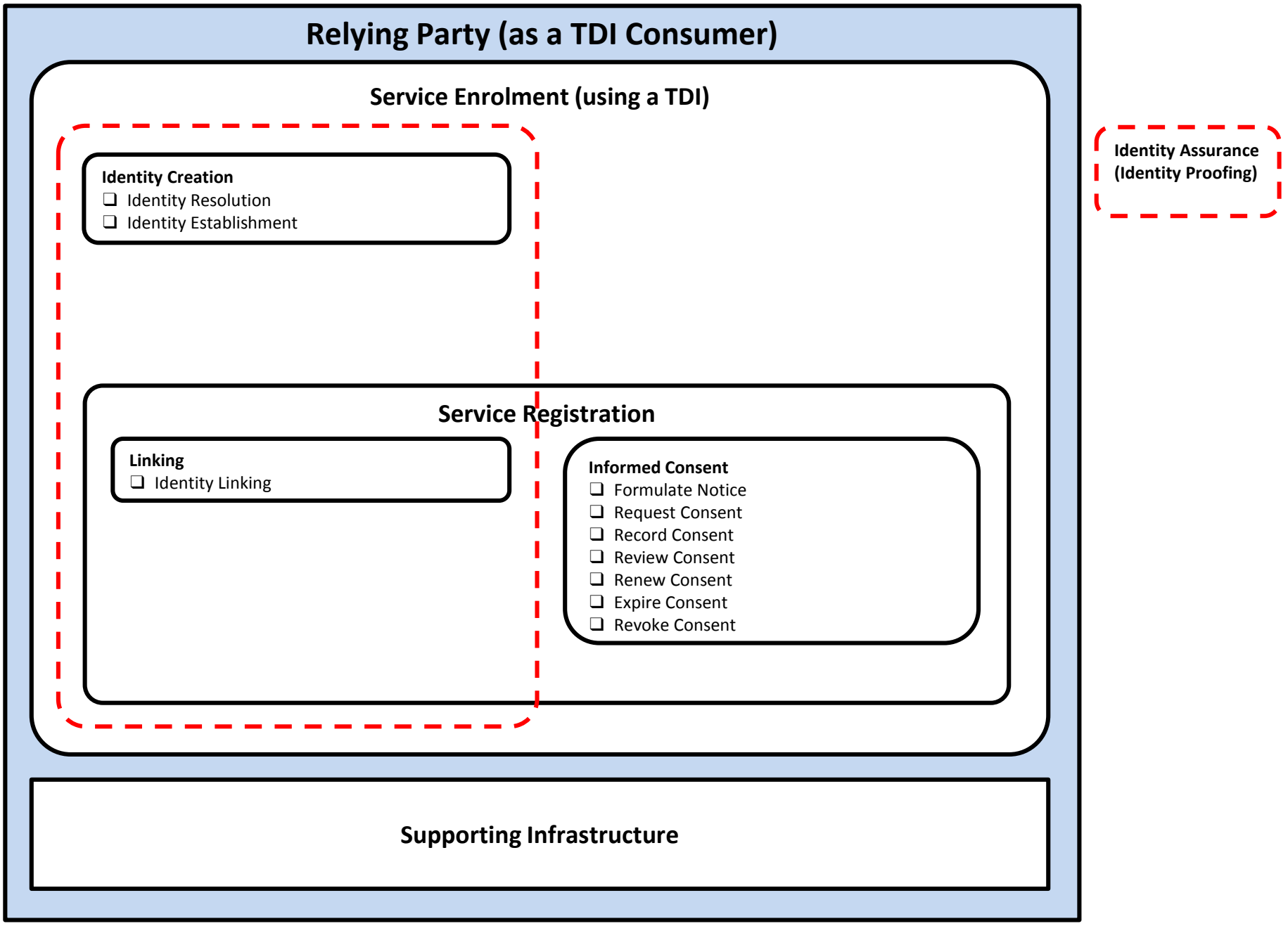
Atomic Processes by Participant Roles

No.	Atomic Process	Identity Assurance Provider	Credential Assurance Provider	Trusted Digital Identity (TDI) Provider	Relying Party (as a TDI Consumer)
1	Identity Resolution	X		X	X
2	Identity Establishment	X		X	X
3	Identity Validation	X		X	
4	Identity Verification	X		X	
5	Evidence Validation	X		X	
6	Identity Presentation	X		X	
7	Identity Maintenance	X		X	
8	Identity-Credential Binding			X	
9	Identity Linking				X
10	Credential Issuance		X	X	
11	Credential-Authenticator Binding		X	X	
12	Credential Suspension		X	X	
13	Credential Recovery		X	X	
14	Credential Revocation		X	X	
15	Credential Authentication		X	X	
16	Create Signature			X	X
17	Check Signature			X	X
18	Formulate Notice			X	X
19	Request Consent			X	X
20	Record Consent			X	X
21	Review Consent			X	X
22	Renew Consent			X	X
23	Expire Consent			X	X
24	Revoke Consent			X	X

Atomic Processes can be carried out by multiple parties
(e.g., a Provincial/Territorial Trusted Digital Identity being consumed by a Federal service)

No.	Atomic Process	Pan-CDN LOA	Trusted Digital Identity (TDI) Provider	Relying Party (as a TDI Consumer)
1	Identity Resolution	…	Province/Territory	Federal service
2	Identity Establishment	3	Province/Territory	Federal service
3	Identity Validation	3	Province/Territory	
4	Identity Verification	3	Province/Territory	
5	Evidence Validation	3	Province/Territory	
6	Identity Presentation	…	Province/Territory	
7	Identity Maintenance	3	Province/Territory	
8	Identity-Credential Binding	…	Province/Territory	
9	Identity Linking	…		Federal service
10	Credential Issuance	2	Province/Territory	
11	Credential-Authenticator Binding	2	Province/Territory	
12	Credential Suspension	2	Province/Territory	
13	Credential Recovery	2	Province/Territory	
14	Credential Revocation	2	Province/Territory	
15	Credential Authentication	2	Province/Territory	
16	Create Signature	…	Province/Territory	Federal service
17	Check Signature	…	Province/Territory	Federal service
18	Formulate Notice	…	Province/Territory	Federal service
19	Request Consent	…	Province/Territory	Federal service
20	Record Consent	…	Province/Territory	Federal service
21	Review Consent	…	Province/Territory	Federal service
22	Renew Consent	…	Province/Territory	Federal service
23	Expire Consent	…	Province/Territory	Federal service
24	Revoke Consent	…	Province/Territory	Federal service


Trusted Digital Identity Provider
Trusted Digital Identity Creation
Identity Creation
❑ Identity Resolution
❑ Identity Establishment
Credential Creation
❑ Credential Issuance
Credential Confirmation
❑ Credential-Authenticator Binding
❑ Credential Suspension
❑ Credential Recovery
❑ Credential Revocation
❑ Credential Authentication
Identity Registration
Identity Confirmation
❑ Identity Validation
❑ Identity Verification
❑ Evidence Validation
❑ Identity Presentation
❑ Identity Maintenance
Binding
❑ Identity-Credential Binding
Informed Consent
❑ Formulate Notice
❑ Request Consent
❑ Record Consent
❑ Review Consent
❑ Renew Consent
❑ Expire Consent
❑ Revoke Consent
Supporting Infrastructure
Identity Assurance (Identity Proofing)
In scope for the PCTF assessment process


Relying Party (as a TDI Consumer)
Service Enrolment (using a TDI)
Identity Creation
❑ Identity Resolution
❑ Identity Establishment
Service Registration
Linking
❑ Identity Linking
Informed Consent
❑ Formulate Notice
❑ Request Consent
❑ Record Consent
❑ Review Consent
❑ Renew Consent
❑ Expire Consent
❑ Revoke Consent
Supporting Infrastructure
Identity Assurance
(Identity Proofing)

Government of Canada Digital Standards

A Set of Guiding Principles