Enabling the Transition from document to data with Scalable Digital Trust

For discussion only
2 October 2023

What are we creating

ICC DSI and the Digital Governance Council (DGC) of Canada are collaborating to develop a Conformity Assessment program for systems and services that enable the electronic exchange, management, and interoperation of trade documentation in digital forms.

The scheme is being developed within the DGC's Digital Trust Conformity Assessment program which brings together standards, assessment methodologies, accreditation programs and communities to engender digital trust that is principles-driven, evidence-based and open

Evolution of Trade Documentation
From Paper through to Verifiable Data Elements

[0] Exchange of Physical Paper

[1] paper substitutes - PDF via mail, PDF on registries, central, pseudo-decentralised DLT purporting authenticity
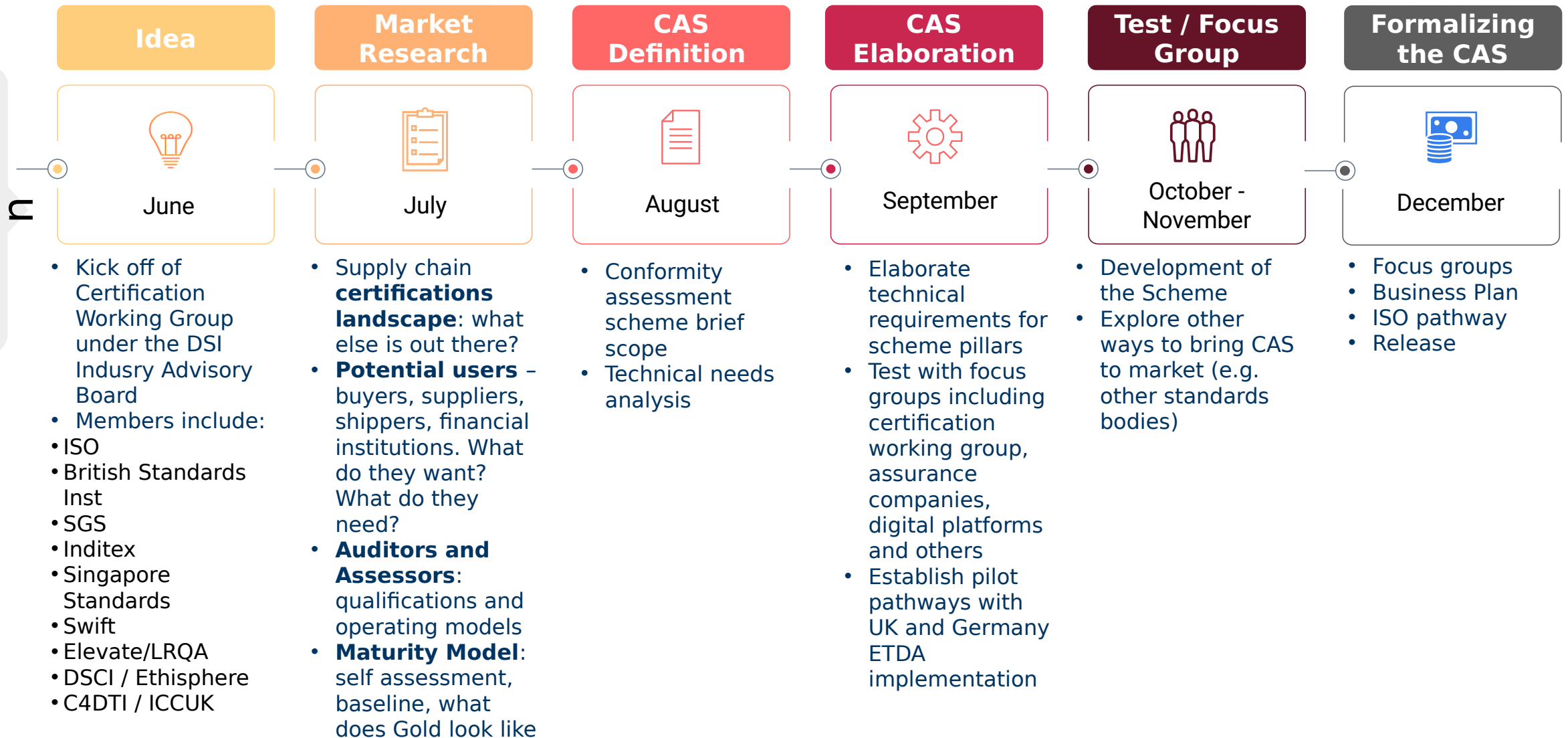
[2] structured data aggregates - documentation as key value pairs

[3] authentic structured data aggregates - documentation as key-value-pairs attributable to the aggregate originator.

[4] authentic structured data aggregates consisting of authentic data elements - every element of the aggregate can be verifiably traced back to its originator.

What have we done so far

Certification

Idea	Market Research	CAS Definition	CAS Elaboration	Test / Focus Group	Formalizing the CAS
June	July	August	September	October - November	December

Idea — June
- Kick off of Certification Working Group under the DSI Indusry Advisory Board
- Members include:
- ISO
- British Standards Inst
- SGS
- Inditex
- Singapore Standards
- Swift
- Elevate/LRQA
- DSCI / Ethisphere
- C4DTI / ICCUK

Market Research — July
- Supply chain **certifications landscape**: what else is out there?
- **Potential users** – buyers, suppliers, shippers, financial institutions. What do they want? What do they need?
- **Auditors and Assessors**: qualifications and operating models
- **Maturity Model**: self assessment, baseline, what does Gold look like

CAS Definition — August
- Conformity assessment scheme brief scope
- Technical needs analysis

CAS Elaboration — September
- Elaborate technical requirements for scheme pillars
- Test with focus groups including certification working group, assurance companies, digital platforms and others
- Establish pilot pathways with UK and Germany ETDA implementation

Test / Focus Group — October - November
- Development of the Scheme
- Explore other ways to bring CAS to market (e.g. other standards bodies)

Formalizing the CAS — December
- Focus groups
- Business Plan
- ISO pathway
- Release

What we would like to achieve today

1. Introduce principles and references for the assessment of systems ad services in four basic pillars (on next page)
   - Have we segmented the issues correctly?
   - Are the standards and legal references correct?
   - Are there any assessment criteria which are over or underscoped?

2. Gather any relevant references (standards, laws, certifications) needed to develop the scheme.

3. Identify any experts who might be able to contribute to the scheme.

Objects of Conformity

Legal Certainty

Reliability

General Reliability

Management and Operational

- As reliable as appropriate for the fulfilment of the function for which the method is being used, in the light of all relevant circumstances, which may include:
  - Any operational rules relevant to the assessment of reliability;
  - The assurance of data integrity;
  - The ability to prevent unauthorized access to and use of the system;
  - The security of hardware and software;
  - The regularity and extent of audit by an independent body;
  - The existence of a declaration by a supervisory body, an accreditation body or a voluntary scheme regarding the reliability of the method;
  - Any applicable industry standard; or
- Proven in fact to have fulfilled the function by itself or together with further evidence.

Digital Trust

- Applicable standards, specifications as required
  - AI, Security, Privacy, Data Governance
  - …

Key References

- UNCITRAL Model Law on Electronic Transferable Records (MLETR)
- ICC Trust in Trade Verifiable Trust: A foundational digital layer underpinning the physical, financial, and information supply chain

General Interoperability

- **Zero Trust Architecture,**
  - Backed by cryptographically produced verifiability
- **Digital ID**
  - For all parties transacting
- **Interoperability**
  - For all data, alignment with global standards where they exist

Technical Standards/Specs, Data Formats

- X509
- DIDs, Verifiable Credentials
- ACDC, CESR
- GLN, GTN, DUNS
- ISO 6523, 8000-116, 17442
- …

Notes:

- MLETR Articles 1, 2,3,4,5,6, 7, and 19 are provisions that relate to context, scope and application of the conformity assessment scheme, but are not used to define objects of conformity.

Commercial Predictability

Interoperability

Functional Equivalence

- **Writing (Article 8)**
  - Information is usable for subsequent reference.
- **Signature (Article 9)**
  - Reliable method is used to:
    - Identify person
    - Indicate Intention
- **Transferable Document or Instrument (Article 10)**
  - Contains required information
  - Reliable method is used for:
    - Identification of record
    - Rendering of record
    - Retain integrity of record
- **Control (Article 11)**
  - Exclusive control
  - Identify person in control
- **General Reliability (Article 12, see lefthand column)**
- **Indication of Time and Place (Article 13)**
  - Reliable method to indicate time or place
- **Place of Business (Article 14)**
  - Indication of place of business
- **Endorsement (Article 15)**
  - Writing
  - Signature
- **Amendment (Article 16)**
  - Reliable methods
- **Replacement (Article 17, 18)**
  - Reliable Methods

Digital transformation is a team sports

Educate and engage your community

- Digital transformation
- Supply chain digitalization
- Digital standards adoption

Advocate to your governments

- Adoption of global standards
- Paperless trade and trade facilitation implementa
- Alignment with global legal frameworks

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