



# **eData Management Domain Discussion - 37th UN/CEFACT Forum**

**Vice Chair**

**Tahseen Ahmad Khan**

**Domain Coordinator, eData Management**

**Kaushik Srinivasan**

**Date**

**October 11th and 12th, 2021**

**UN / CEFACT**



# Agenda – October 11, 2021

Time	Topic	Speaker and Comments
10.00 – 10.30	eData Management Domain Update	Tahseen Khan, Vice Chair Kaushik Srinivasan, Domain Coordinator
10.30 – 11.00	Updates on Whitepaper Project on use of IoT for Trade Facilitation	Virginia Cram Martos, Project Leader
11.00 – 12.30	Use of AI in Trade Facilitation	Sray Agarwal, Project Leader
12.30 – 13.30	Lunch	
13.30 – 14.30	Discussion on Cross border Inter-ledger exchange for Preferential CoO using Blockchain	Steve Capell, Project Leader
14.30 – 15.30	Discussion on UN/CEFACT Chain Project	Nena Dokuzov, Project Leader
15.30 - 16.00	Use of Digital ID in Trade Facilitation	Working Group

# Agenda – October 12, 2021

Time	Topic	Speaker and Comments
10.00 – 11.00	New Topic – Data Governance for Cross Border Paperless Trade	Working Group
11.00 – 12.00	eNotarization and Trusted Third Party Services	Working Group
12.00 - 12.30	Open Discussion	Working Group



# **eData Management Domain Update**

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# Domain Updates

- Action Items from last virtual forum and Programme of Work for eData Management for 2021-22
  - Ongoing Projects
    - IoT Whitepaper project – Standards whitepaper in Public review, final set of drafts for Trade IoT for TF whitepaper submitted for review
    - UNCEFACT Chain Project
    - Cross Border Inter-ledger exchange for preferential CoO using Blockchain
    - Use of AI in Trade Facilitation
  - Program of Work
    - Digital ID for Trade – focus on case studies and guidance material for developing Digital ID systems that facilitate cross border paperless trade
    - Developing information security guidelines for Trade around trusted third party services and eNotarization (proposed)
    - Data Governance for cross border paperless trade



# **IoT White Paper Project Discussion**

**Project Lead**  
**Virginia Cram Martos**

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# Use of AI in Trade Facilitation

Project Lead  
**Sray Agarwal**

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# **Cross border Inter-ledger exchange for Preferential CoO using Blockchain**

**Project Lead**  
**Steve Capell**

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# **UN/CEFACT Chain Project**

**Project Lead**  
**Nena Dokuzov**

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# Digital ID for Trade

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# Digital ID for Trade

- This project has been discussed over the last few forums where a gap and need for standardization has been identified for digital business identity management in both **B2B and B2G use cases** for facilitating cross border trade
- Discussions so far have focussed on facilitation of interoperability/standardization with emerging developments in this area (ex: Blockchain, Verifiable Credentials, Decentralized Identifiers etc) to support solving key challenges
  - Ability to develop trustworthiness between participants in the supply chain
  - During paper-paperless transition, how does one reliably verify what's claimed on paper using a digital twin
  - Managing compliance in a complex world – KYC guidelines, GDPR etc?
  - How does one extend Identity systems with IoT, Blockchain

# Digital ID ecosystem – Stakeholders and Opportunities

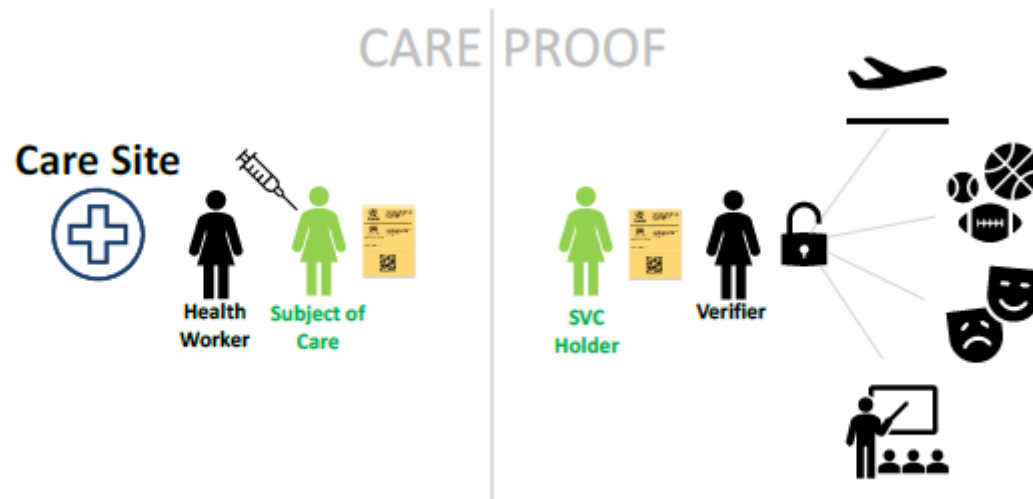


- We expect Digital ID and Verifiable Credentials/Claims to become an important building block in future infrastructures for exchange of trustworthy information
- Current gaps and opportunities
  - **Digital Identity systems do not interoperate in facilitating complete visibility across supply chain or to ensure trustworthiness**
  - **Lack of Standards for verifiable credentials/claims – Individual A as an owner of Company X operating Drone Assets**
  - **Standards that address legal, cybersecurity, privacy and mutual recognition issues in the context of cross border trade**

<https://www.w3.org/TR/vc-data-model/>

# Digital ID and Verifiable Credentials – Example - Smart Vaccination Certificates

- How does this work?



Source - <https://www.who.int/publications/m/item/interim-guidance-for-developing-a-smart-vaccination-certificate>

- Summary
  - Certificates are digitally issued as verifiable credentials using digital cryptographic identifiers by which any Member State can trust that medical documents issued by another Member State are authentic and have not been tampered with
  - WHO defines standards for issuance and reliance of such certificates
  - Focus on Equity, Accessibility, Privacy and Scalability and sustainability

More information can be found at

<https://www.who.int/groups/smart-vaccination-certificate-working-group>

# Digital ID – Benefits for Ecosystem

- Harmonization of Digital ID systems can significantly facilitate cross border paperless trade and offer the following benefits

## Privacy

Users control who has access to their attributes and how it is shared

## Security

Users attributes are encrypted and stored securely

## Transparency

Users consent to sharing data and know when data is exposed

## Ease of Use

Users can establish identity easily to complete online transactions

## Risk Mitigation

Mitigation of user risk through effective mgmt. of credentials

## Better Compliance

Better access of user data for regulators strengthening compliance

## Cost and Revenue

Opportunities to increase revenue and lower cost as a result of faster acquisition and lesser overheads

## Service Delivery

It becomes easier for governments to identify and deliver services to businesses/citizens

## Data Governance

Standardization of data collection removing friction from data aggregation

# Digital ID – Way Forward for UN/CEFACT

As part of eData Management domain, we have an approved project to look at this topic with a view to

- Provide guiding principles for adopting Digital ID systems
- Harmonize existing work done so far in the business and IoT identity, Verifiable Credential space with a focus on interoperability. For ex: GLEIF, GS1 etc
- Highlight important issues around cyber security, data privacy, mutual recognition and data governance
- Highlight the role UN/CEFACT standards and/or recommendations can play in solving key challenges around enhancing digital trustworthiness



Whitepaper to look at best practices of Digital ID systems/verifiable credentials in the context of business identities and trade facilitation



# **Data Governance in Cross Border Paperless Trade**

## **Working Group**

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# Data Governance – Cross Border Paperless Trade

- Cross border data flows are an important component of international trade
- While the adoption of commercial frameworks to the digital environment has been underway for many years, trade agreements are always playing catch up to the rapidly evolving technologies and impacts they have on the economic system. Examples of emerging technologies include
  - New age digital Identity systems
  - Electronic payment systems such as e-Wallets
  - Smart Labels for Products
  - Use of AI, Blockchain and IoT
- Digital Transformation is shifting progressively more economic and social activity into a borderless cyberspace
- In this context, governments are introducing restrictions on cross border personal data transfers and data localization legislation

# Data Localization Measures

- Number of data localization measures have doubled in four years (from 35 countries to 62 countries) and more are under consideration
- Restricting data flows has a statistically significant impact on a nation's economy and affects volume of trade, productivity and increases prices for downstream industries that rely on data
- Key concerns that drive data localization
  - Data Privacy
  - Financial Oversight
  - Law enforcement
  - Cyber security concerns
- Having said this, CoVID has necessitated sharing of data flows and highlighted its importance in terms of economic and societal responses – for ex: data sharing for medical research, or collaborating on work projects

# Types and Rules for Data Localization

- There are 3 kinds of data localization
  - Restriction of transfer of particular types of personal data – Examples include personal and health data
  - Restriction of certain commercial data – examples include financial data such as payments and other non-personal data
  - Defacto Localization – By generally making data transfers complicated, costly, a lot of firms are left with no choice but to store data locally. Further, consent requirements make it complicated for data to be moved cross border
- Rules for data localization also varies between jurisdictions with different
  - Priorities and strategies to protect personal data
  - Definition of frameworks under which data can be shared cross border
  - Approaches to opening and sharing public data

# Rules governing cross border data exchange

- There are multiple factors that influence rules for cross border data exchange
  - Trade Agreements
  - Data Privacy Acts/Laws
  - Maturity in adoption of technologies such as AI, Blockchain, IoT
- Given the rapidly changing landscape, countries are finding it challenging to adopt a framework that can address and accommodate past agreements and future trends

# Interoperability is important

- Define mechanisms for the cross border transfer of personal data with a view to provide access to firms of all sizes
- Policy interoperability to allow countries to derive their rules for data exchange from same baseline and enact legislation in broadly similar ways
- Technical interoperability to allow seamless exchange of cross border data (for ex: use of APIs)
- Regulatory interoperability through mutual recognition agreements between countries

# Data Governance – What is it?



Data Governance is the **process, and procedure organizations use to manage, utilize, and protect their data.**

**Examples include protecting and securing patient data as part of a healthcare application or data exchange or storing/transferring PII data to ensure compliance with GDPR**

# Data Governance – Benefits

- Mitigates risks around cyber attacks and security breaches through effective data management and protection
- Reduces data management costs as a result of better data quality
- Breaks down data silos resulting in increased operational efficiency
- Allows easier and faster insights through data analytics
- Makes compliance standards easier to maintain

**Lack of data governance standards or best practices in the context of cross border paperless trade and emerging technologies is proving to be a barrier integration of global supply chain**

# Data Governance – Way Forward for UN/CEFACT

To discuss the role data governance can play in facilitating cross border paperless trade with a view to

- Understand sensitive data exchanged as part of trade flows
- Explore role of standards in supporting secure and streamlined data exchange
- Look at existing guidelines to define baseline for data security, classification, meta data management, consent handling in the context of cross border trade data exchange
- Highlight the role UN/CEFACT standards and/or recommendations can play in solving key challenges around enhancing digital trustworthiness



Evaluate launching a project to highlight role and importance of data governance in trade facilitation





# **Trusted Third Party Services and eNotarization** Working Group

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# Trusted Third Party Services

- Cross Border Trade results in exchange of a number of documents such as Shipping documents, electronic bid document in e-Tendering process, Certified copies of incorporation and other documents
- Key Challenges include
  - Establishing authenticity of documents and data
  - Reliably identifying parties to the transaction
  - Mutual recognition of data and documents exchanged
- Trusted Third Party service providers such as Trust Service Providers, Timestamping Authorities and eNotaries act as important enablers in enhancing digital trustworthiness allowing parties to complete transactions within a jurisdiction
- As data and documents get exchanged cross border, standardization and harmonization of above services is required for trade facilitation in cross border scenarios



# eNotarization – An Interesting Example

eNotarization is an interesting example of a trusted third party service where the relevant parties come online over a video session and electronically or digitally sign documents in the presence of a Notary Public



- **Challenges**

- Although eNotarization is allowed in a few countries, there seems to be limited work by way of standards for supporting adoption of eNotarization globally
- Reliably identifying parties as part of a eNotary session and role Digital ID systems can play
- Ensuring document authentication and timestamping in conjunction with other trusted third party services
- Information archival standards

# Way Forward for UN/CEFACT

- Trusted Third Party Services including eNotarization present interesting opportunities for the UN/CEFACT expert community to contribute as these are integral to facilitating cross border paperless trade
- Explore launching a project that explores the following areas
  - Trusted trans-boundary electronic interactions with eNotary and Trusted Third Parties
  - Electronic data/document security and privacy in cross border exchange
  - Trust Services, Data retention and Timestamping
- Focus would be to look at select trade documents that are sensitive and explore the role of trusted third party services, eNotarization in facilitating cross border paperless trade
- Discuss with working group to seek interest in launching a project that will aim at highlighting best practices and providing guidance material

# Conclusion

## Next Steps

- Action Items
  - Work on ongoing projects
    - IoT Whitepaper project
    - Exchange of preferential CoO using Blockchain
    - UNCEFACT Chain project
    - Digital ID for Trade
    - Use of AI in Trade Facilitation
  - Launch new projects
    - Data Governance for Cross Border Data Exchange
    - Trusted Third Party Services and E-Notarization



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**Thank you**