

# Digital Identity Standardization for Trade Facilitation

UN/CEFACT Forum  
eData Domain Meeting

10 May 2023, 9:30-12:30 CET

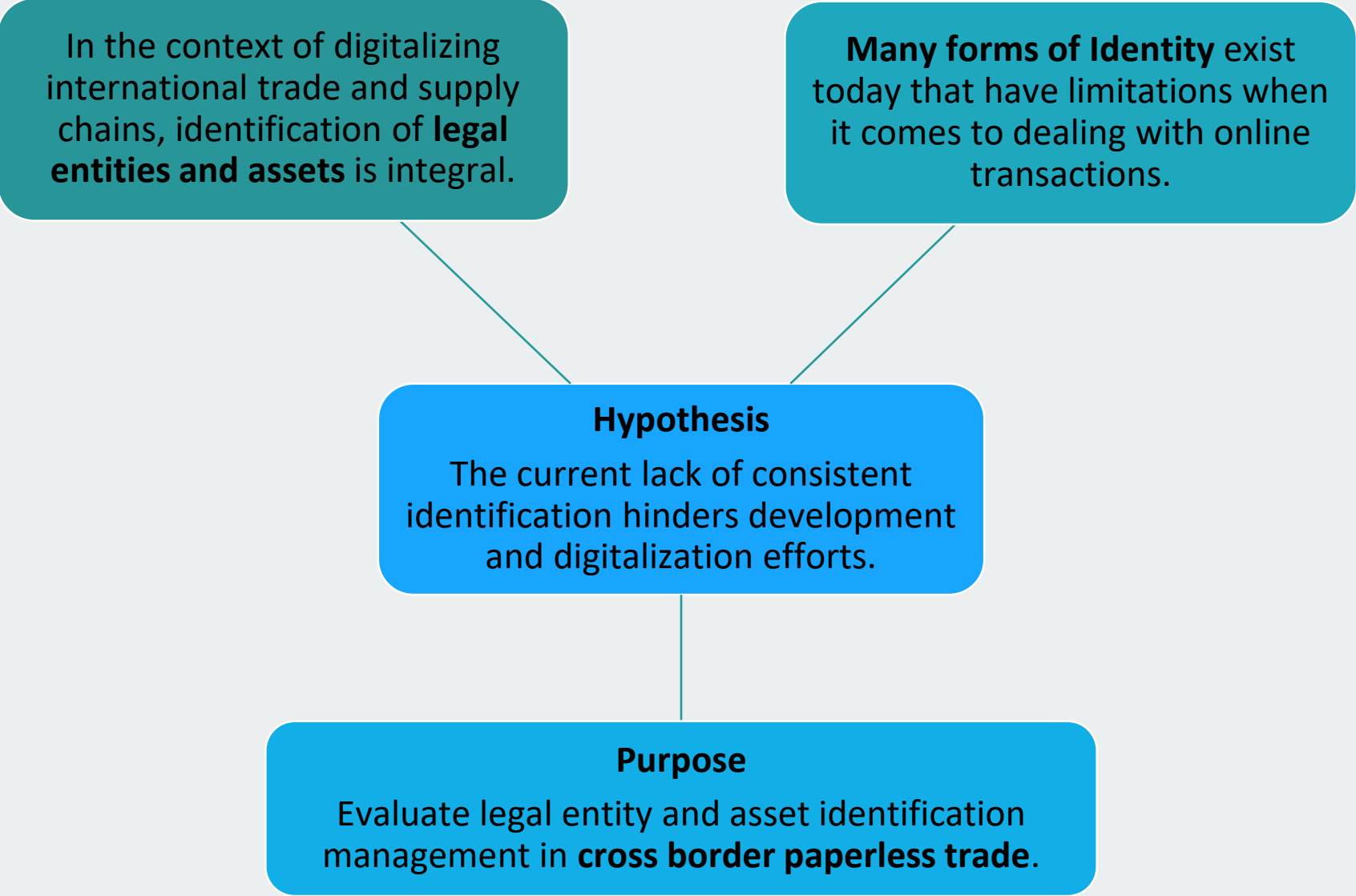
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# Agenda

- **10 May 9.30-12.30 CET**
  - Opening: Vice-Chair Tahseen Ahmad Khan and Domain Coordinator Kaushik Srinivasan
  - Introduction of project: what have we done and achieved to this point
  - Feedback from initial interviews
  - Required characteristics of global identifiers for actors involved in cross-border movement of goods and services
  - Presentation of table of contents
  - Conclusion

# Introduction of the Project: what we have done and achieved to this point

# Project Proposal



## Project Scope

- How existing UN/CEFACT deliverables could be used by Digital ID systems?
- How trust services could be used to facilitate trade and related processes?
- Possible/required changes to existing UN/CEFACT deliverables to support authentication and Authorization?



Explore how global identification schemes could be integrated into the Core Component Library and supported by mapping.

## Project Deliverables

### Whitepaper (including Annex)

- Inventory of existing identification schemes, authentication, and Authorization approaches.
- Assessment of integration into core component library.
- Cost/benefit analysis.
- Description of necessary mapping.

### Guidance Material

- Implementation guide for standardizing the identity layer in the international trade supply chain.

# Important Reference Materials

## Global Identifier Schemes:

- ICC Identity Management Guide: Standards Toolkit for Cross-border Paperless Trade
- ICC DSI Key Trade Documents and Data Elements

## Functions of Identifiers:

- UN/CEFACT Whitepaper Integrated Track and Trace for Multimodal Transportation
- World Trade Organization and World Economic Forum: The promise of TradeTech: Policy approaches to harness trade digitalization
- Bank of International Settlements (BIS): Corporate digital identity: no silver bullet, but a silver lining
- Financial Stability Board: A Global Legal Entity Identifier for Financial Markets

## Objects in Supply Chains:

- UN/CEFACT Whitepaper Integrated Track and Trace for Multimodal Transportation
- BRS Integrated Track and Trace for Multi-Modal Transportation

## Verifiability:

- White Paper: eDATA Verifiable Credentials for Cross Border Trade
- ICC DSI Trust in Trade

# Activities so far

## Achievements

- Approval of the project
- Kick-off meeting (8 March)
- Interviews with participants
- Alignment meetings (18 May)
- Identification of participants in the role of Contributors and Reviewers
- Table of Contents Proposal
- Participation in 40th UN/CEFACT Forum



# Feedback from Initial Interviews

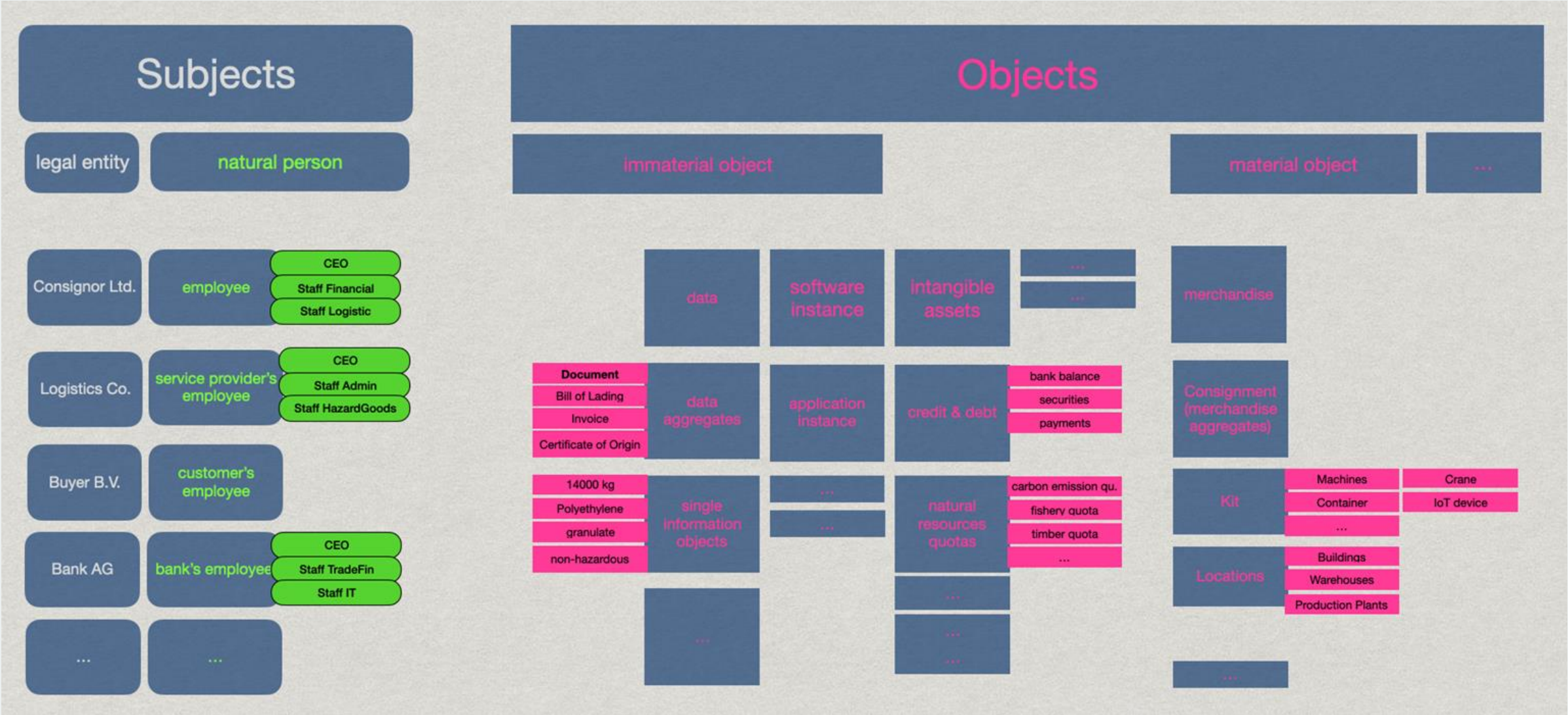
# Feedback from Initial Interviews

## Topics for this project

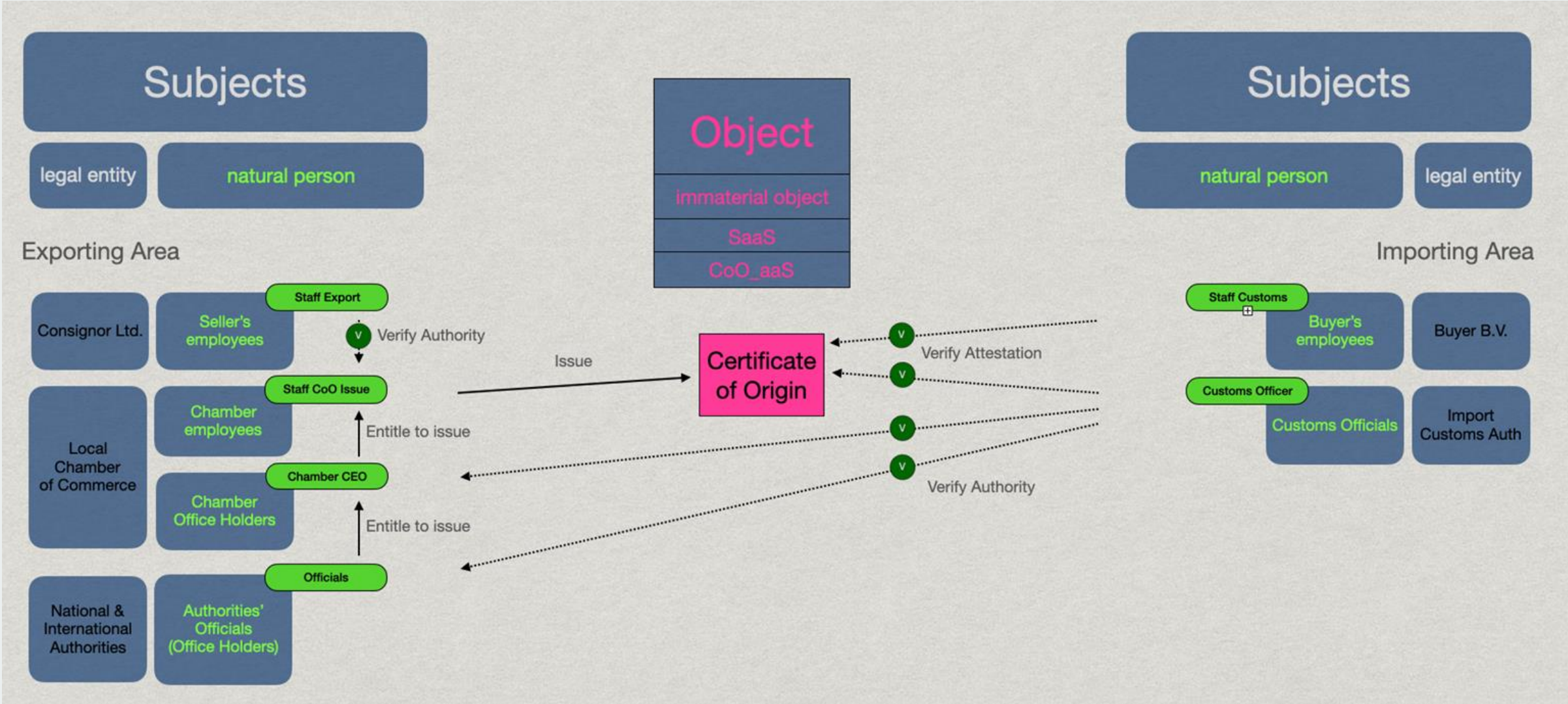
- Subject and object relations in Supply Chains
- Legal Entity Identification most pressing need
- Customs and Air Cargo Use Cases to illustrate
- Identifiers in the transfer of exclusive control of negotiable instruments (eB/L)
- Options to rendering schemes of Legal Identity identification interoperable
- Trusted parties and their role in Supply Chains
- Survey on existing identifiers for legal entities

## Comments

# Subjects and Objects to be Identified

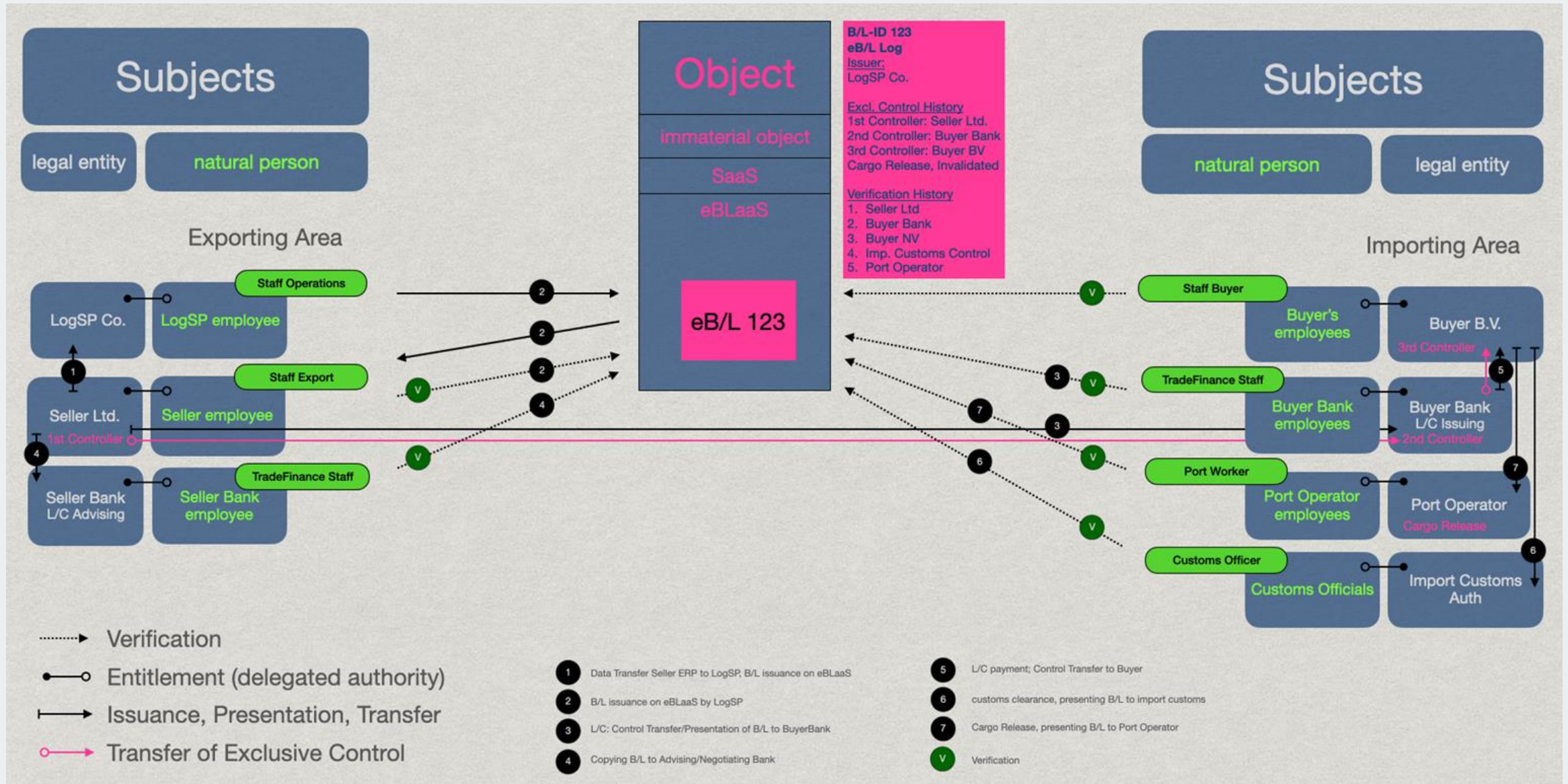


# Subjects and Objects as Credentials Allow for Global Verifiability



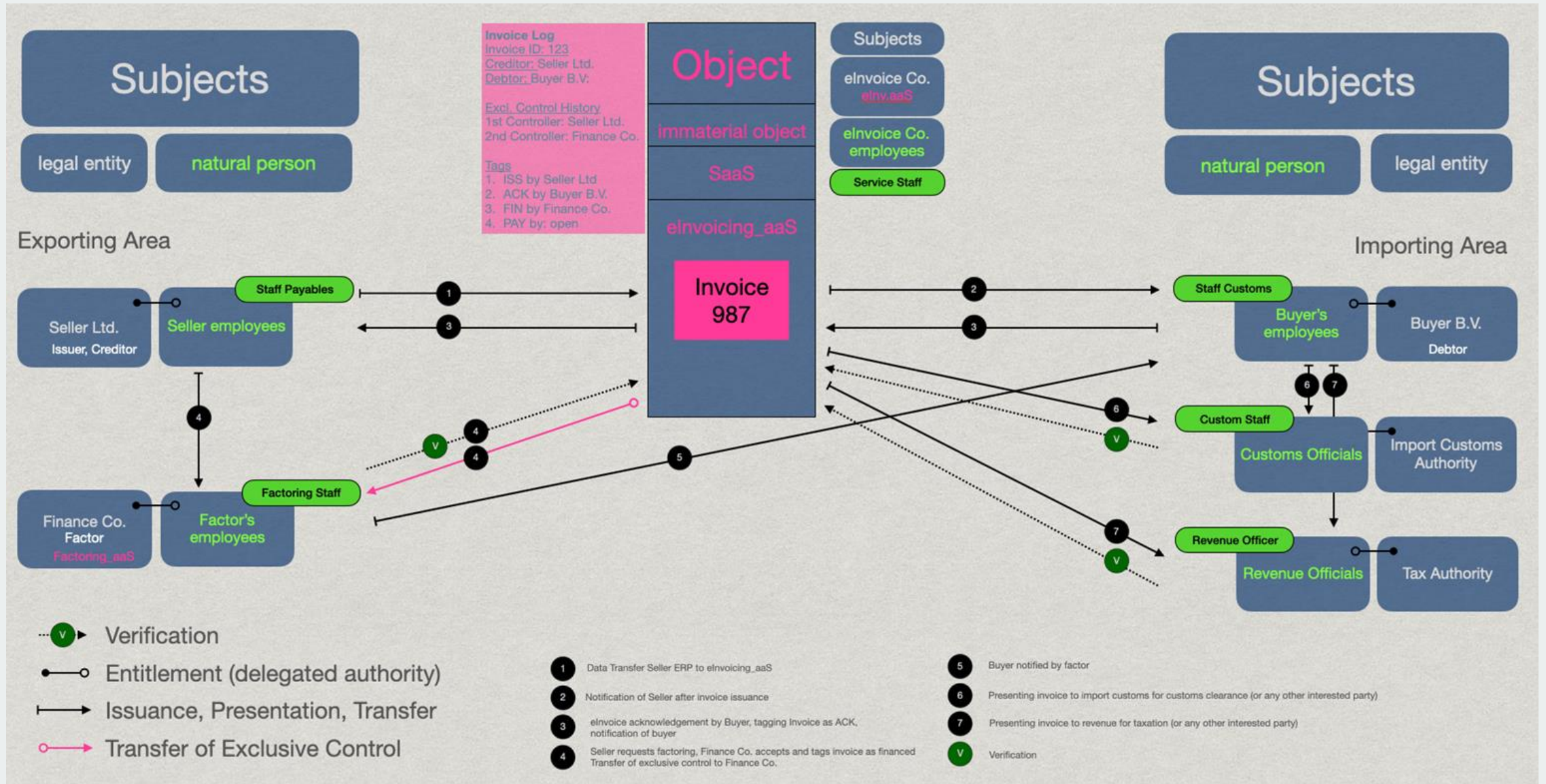


# Verifiable Electronic Bill of Lading in a Letter of Credit Transaction





# Verifiable Invoice in a Factoring Transaction



# Required characteristics of global identifiers for actors involved in cross-border movement of goods and services

## Starting Point (extract from project proposal)

### Digital ID systems that are well implemented

- Allow users to establish identity of users, businesses, and assets as part of a cross-border trade transaction
- Enable trusted third parties to verify this identity
- Provide confidence to parties to the transaction including individuals and businesses
- Ensure safe access and transfer of online information
- Facilitate compliance with required regulations

### Hypothesis

- The current lack of a **consistent identifier** for the many actors involved in cross-border movement of goods and related service **hinders the development of effective IT-support systems and limits digitalization** efforts by trade standards organizations.
- For example, digital validation of legal entity identity is a **foundational element of trust services**.



# Required Characteristics of Global Identifiers for Actors Involved in Cross-Border Movement of Goods and Services

## Identifier or Identifier System Characteristics

## Comments

- 1. Unique identification of legal entities
- 2. Code to be a unique dumb alphanumeric string
- 3. System flexibility
- 4. Strong global governance framework
- 5. Competition and anti-trust
- 6. Globally federated model
- 7. High quality data
- 8. Local integration
- 9. Data Validation
- 10. Sustainable funding
- 11. Intellectual property in the public domain
- 12. Open access free of charge

Source: [FSB Report Global Legal Entity Identifier for Financial Markets](#)

# Producing a Scored Inventory of Global Identification Schemes

## Approach

## Comments

- **Outset**
- Note jurisdictional identification schemes
  - Known schemes: **1,037**
  - Fun facts: max per jurisdiction **Germany (176)**, followed by **United States (60)**, **Colombia (59)**, and **Brazil (30)**.  
Average number per **jurisdiction = 4**. Mode = **2**.
- Verification is complex and costly due to the different business registration systems and standards
- **Survey**
- Stage 1: Determine which global identifiers to score
- Stage 2: Score the chosen identifiers according to the characteristics agreed upon

# Presentation of Table of Contents

# Table of Contents (proposal)

1. Executive Summary
2. Introduction
3. Definition of identification, authentication, authorization and attestation
4. Opportunities (draw picture of what identifier verifiability and identifier standardisation could enable)
5. The role of identifiers in Supply Chains
6. Identifiers (including functions & characteristics required)
7. Identifier relations
8. Verifiability
9. Identifier use cases requiring verifiability
10. Identifier interoperability and standardization requirements
11. Subject identifiers in UN/CEFACT Core Component Library and inventory of global entity identifier schemes
12. Implementation recommendations
13. Recommendations of further work to be conducted
14. Annex: Survey, subject identifiers in UN/CEFACT Core Component Library, and global entity identifier schemes

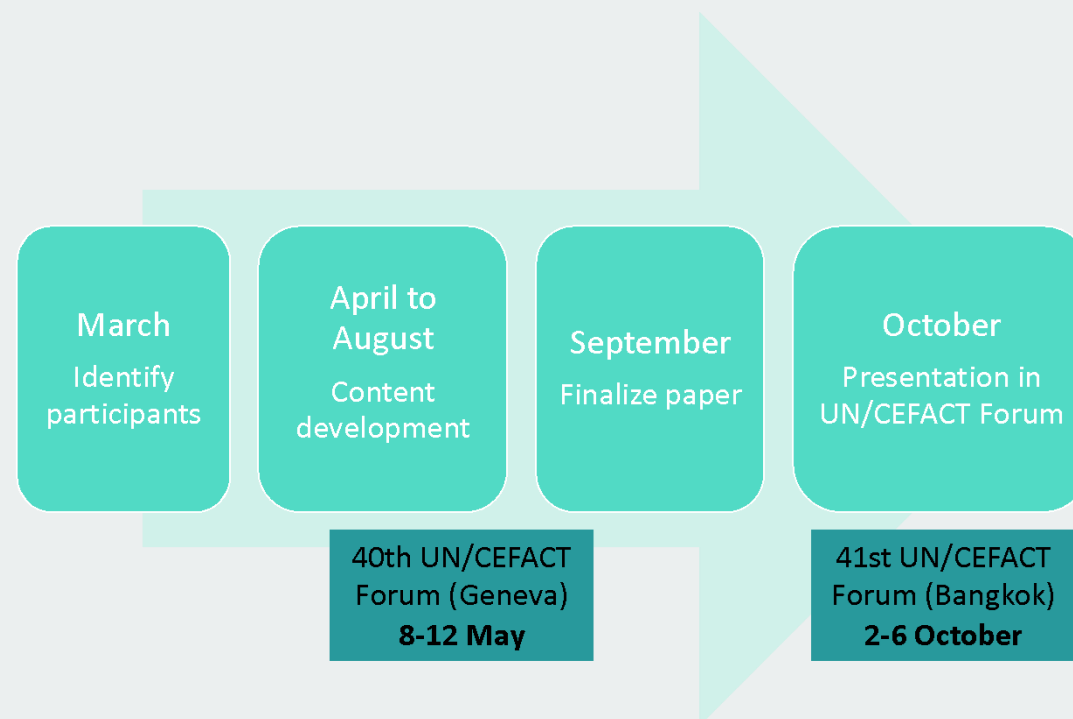
# Conclusion

# Timeline

## Next steps

- Launch survey to all experts
- Finalize list of contributors
- Draft content

## Timeline proposed at introduction webinar



# Appendix

## Summary of Contributor and Reviewer Interviews

### Experts from

Australia  
Belgium  
Brazil  
Canada  
China  
France  
Germany  
Ghana  
India  
Netherlands  
United Kingdom  
USA  
Spain  
Switzerland  
...

### Experts from areas of

Customs  
Identity  
Information Technology  
Logistics  
Financial  
Legal  
...

### Experts from Industries

Academia  
Big Tech  
Consulting  
Customs Clearance  
Freight Forwarding  
Identity Technology  
NGOs  
Textile  
...



# Initial contributions

## References from project proposal

- UN/CEFACT Core Component Library and subset data models Supply Chain Reference Data Model (SCRDM) and the Multi-Modal Transport Reference Data Model (MMT-RDM)
- ICC DSI IAB Trust in Trade
- ICC DSI IAB Key Trade Documents and Data Elements
- Integrated Track & Trace for Multi-Modal Transportation
- Smart Containers
- eDATA Verifiable Credentials (VC) for Cross Border Trade
- Product Conformity Information Exchange/Sharing
- [ICC Identity Management Guide](#): Standards Toolkit for Cross-border Paperless Trade
- [World Trade Organization and World Economic Forum](#): The promise of TradeTech: Policy approaches to harness trade digitalization
- [GLEIF vLEI Ecosystem Governance Framework](#)
- ISO [17442-1](#) and ISO [17442-2](#)
- GS1 Trade Identifiers including EPCIS and GTINs.

## Additional references

- ICAO – Moving Air Cargo Globally
- MMT RDM and Role in Transport Data
- Food and Agriculture Organization of the United Nations – Phytosanitary Certificates
- UN/CEFACT How can paperless trade contribute to Climate Goals, Webinar: UNESCAP ICC WCO ADB

## Limitations

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