



# Global Legal Entity Identifier and verifiable credentials

CA-Day

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## Who is Global Legal Entity Identifier Foundation (GLEIF)

- GLEIF is a not-for-profit Swiss foundation, founded by the Financial Stability Board (FSB).
- GLEIF is overseen by the Regulatory Oversight Committee (LEI ROC) with
  - **71 regulators** and
  - **19 observers**
  - from **50 countries**, **11** from Northern Americas
- GLEIF Board has **18 independent directors**
- **39 accredited Partners** for LEI issuing (**LOUs**) and growing
- **> 2,075,867 issued LEIs** to date, available as open data without IP or copyright protection



# The LEI

- The LEI is a life-long identifier **owned** by the respective legal entity.
- It points to the associated reference data.
- The LEI is an ISO standard ISO 17442

**Nestlé S.A.**

LEI Code KY37LUS27QX7BB93L28 Hide

(Primary) Legal Name	Nestlé S.A.
Transliterated Names	Nestle S.A.
Registered At	Commercial Register (Ministry of Justice) Handelsregister (Eidg. Amt für das Handelsregister) Switzerland, Switzerland RA000549
Registered As	CHE-105.909.036
Jurisdiction Of Formation	CH
Entity Legal Form	Aktiengesellschaft MVII
Entity Status	● ACTIVE
BIC Code	NESNCH22XXX

Level 2 Data: Who Owns Whom

Parents

NATURAL\_PERSONS (Direct Parent Exce)

Direct children (69)

Nestlé S.A.

- [Maggi-Unternehmungen AG](#) (Direct)
- [Nestle Marcas S.A.C](#) (Direct)
- [네슬레코리아 유한책임회사](#) (Direct)
- [Nestle Waters Brasil - Bebidas E Alimentos Ltda.](#) (Direct)
- [Nestle Brasil Ltda.](#) (Direct)
- [Nestle de Colombia S.A.](#) (Direct)
- [Nestle Türkiye Gıda Sanayi Anonim Şirketi](#) (Direct)
- [Nestle Middle East FZE](#) (Direct)
- [Nestle Dubai Manufacturing L.L.C.](#) (Direct)
- [Nestle Middle East Manufacturing LLC](#) (Direct)
- [Nestle Lanka PLC](#) (Direct)

Sections

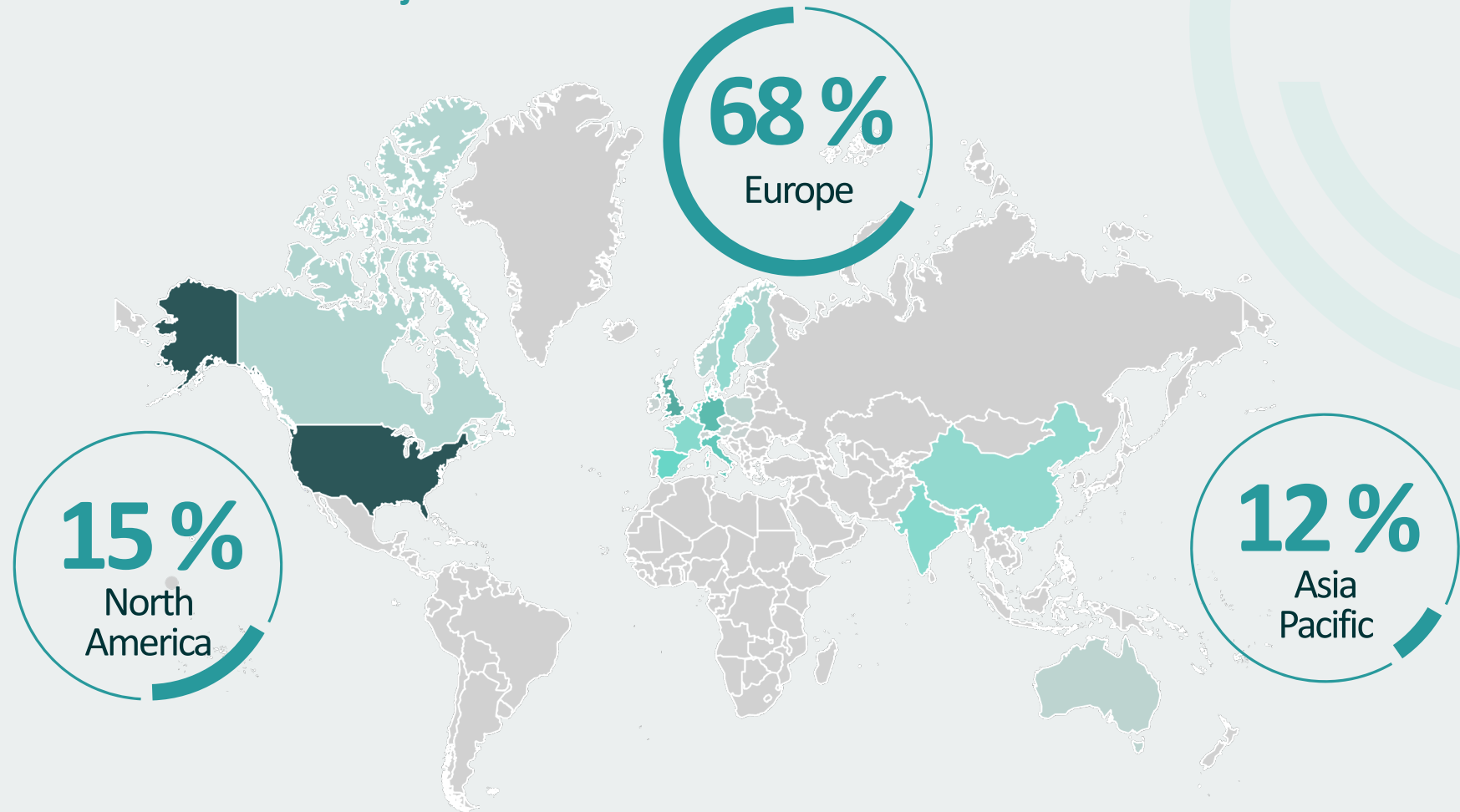
- Empty fields
- Entity details
- Addresses
- LEI Registration details
- LOU details
- Level 2 Data: Who Owns Whom

Ultimate children (110)

- [Maggi-Unternehmungen AG](#) (Ultimate)
- [Nestle Marcas S.A.C](#) (Ultimate)
- [Galderma Nordic AB](#) (Ultimate)
- [네슬레코리아 유한책임회사](#) (Ultimate)
- [CPW Brasil Ltda.](#) (Ultimate)
- [Chocolates Garoto SA](#) (Ultimate)
- [Nestle Waters Brasil - Bebidas E Alimentos Ltda.](#) (Ultimate)
- [Nestle Nordeste Alimentos E Bebidas Ltda.](#) (Ultimate)
- [Nestle Brasil Ltda.](#) (Ultimate)
- [Nestle de Colombia S.A.](#) (Ultimate)
- [Nestle Middle East FZE](#) (Ultimate)
- [Nestle Dubai Manufacturing L.L.C.](#) (Ultimate)
- [Nestle Middle East Manufacturing LLC](#) (Ultimate)
- [Nestle Lanka PLC](#) (Ultimate)
- [Fondation Nestlé pour l'étude des problèmes de l'alimentation dans le monde](#) (Ultimate)
- [Nestle \(Thailand\) Limited](#) (Ultimate)



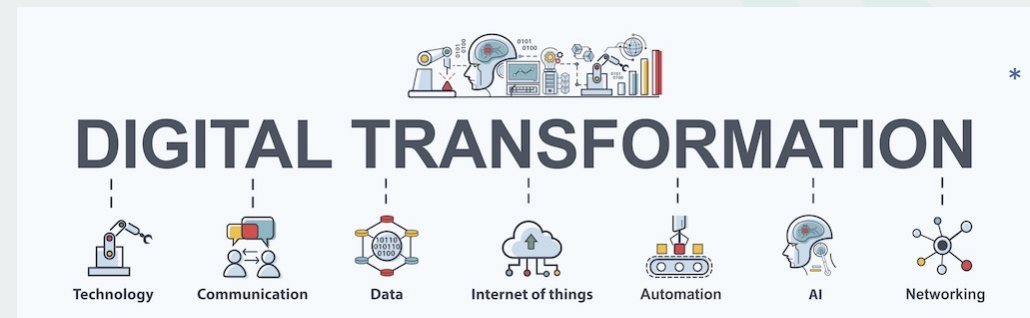
## Distribution of the LEIs across jurisdictions



## The model – fostering LEI adoption

### Digital Transformation of entire industries

- Digital transformation, e.g., Platform Economy, Artificial Intelligence, Distributed and federated Networks etc., is changing the way we interact with each other
- Digital Identity and Strong Authentication become vital for distributed systems spanning many actors
- Digital LEIs are going to address many business needs in all industries



\* Source: <https://sdlt.asia/blockchain-platforms/>

## Digitization versus digitalization

### Trade example

- In international trade many participants interact along a network of supply chains.
- The often-seen practice of **digitizing** (dematerializing) trade, which means retaining conventional processes enhanced by sped-up dispatching of information in PDFs or spreadsheet files, resembling paper, neither yield the desired effects of acceleration and effort reduction, nor can it be considered secure or deliver processes of sufficient quality, let alone in real-time fashion.
- **Digitalizing** trade will have to encompass holistic removal of process breakpoints in the form of paper or paper substitutes, like PDF and XLS. Or XLS “printed” into PDF. Wet-ink signatures on paper impede this case, and neither will Electronic Signatures placed on paper substitutes get us anywhere closer to seamlessly verifiable connectivity.

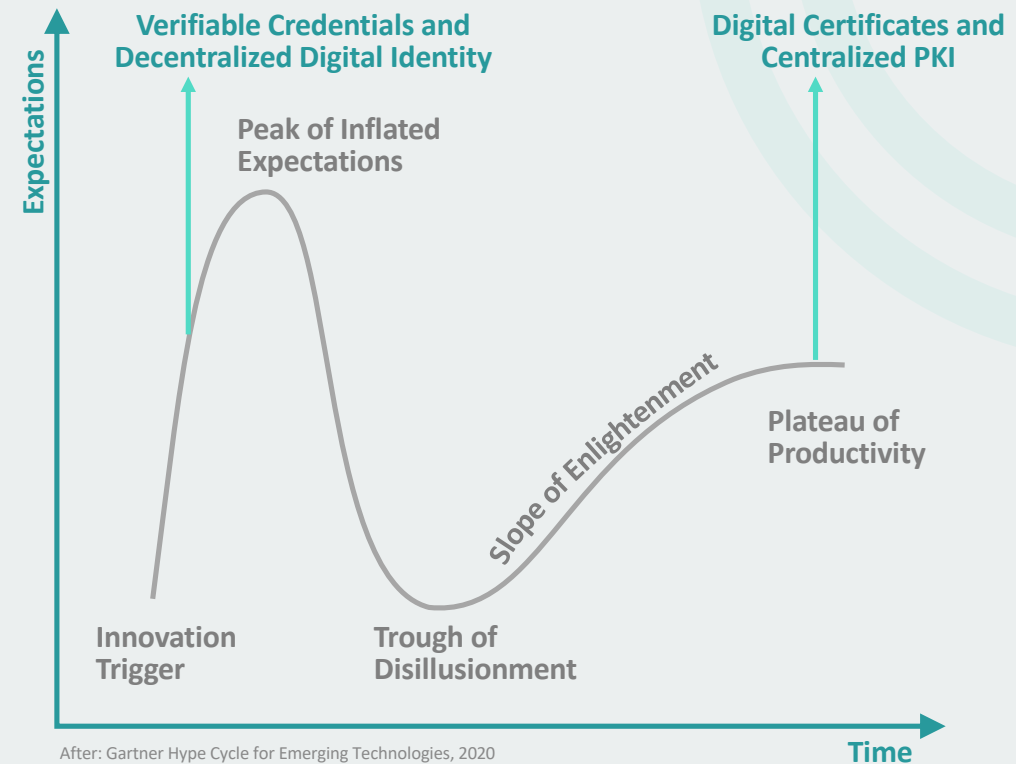
Physical Supply-Chain	Moving goods and services
Financial Supply-Chain	Exchanging financial resources
Information Supply-Chain	Exchanging data and meta data
Trust Supply-Chain	Verification of authenticity

Bridging application islands through API based connectivity is means to that end. The interactions performed between API-connected applications, require authentication (*Who am I?*) and authorization (*Am I entitled to do this?*) **on the fly.**

## LEI Digital Strategy

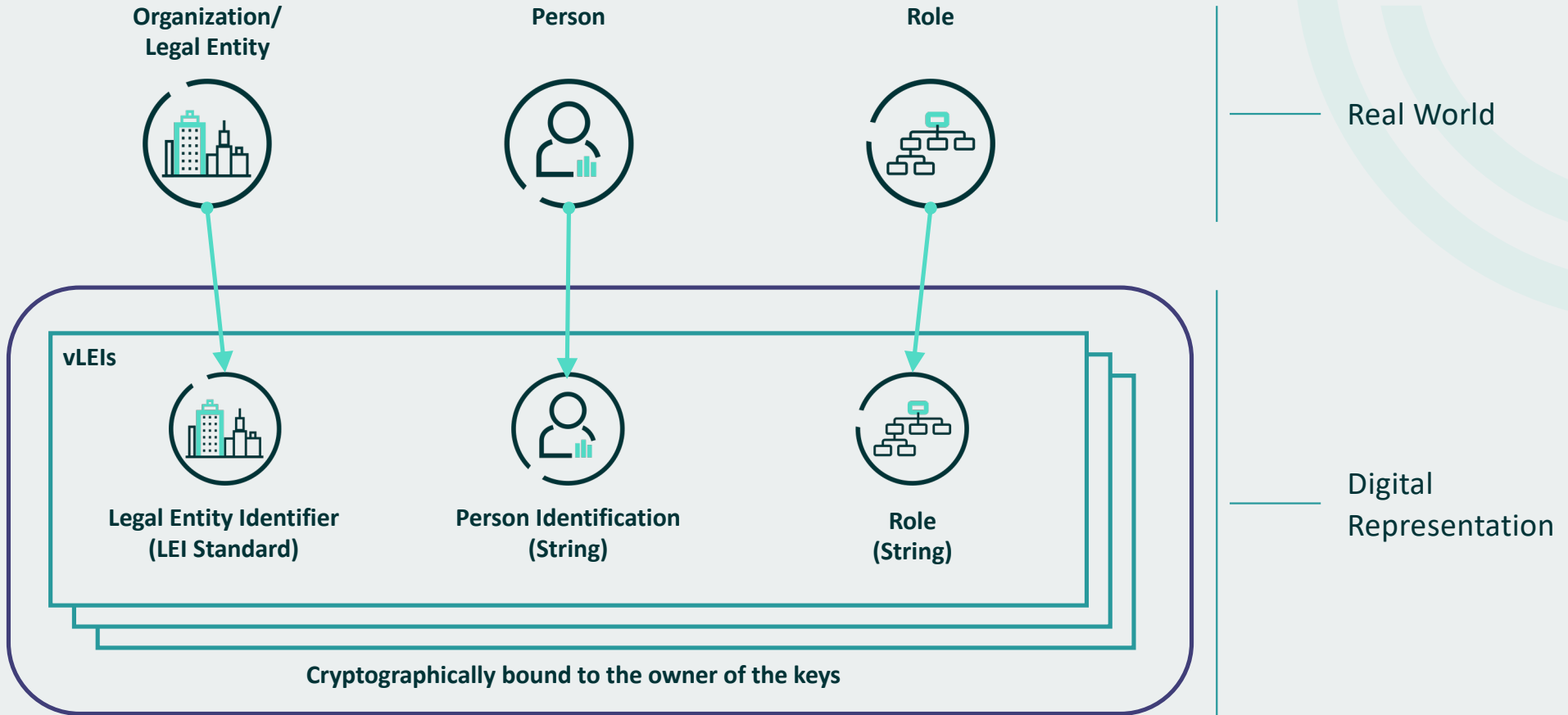
### Digital Certificates as well as Self-Sovereign-Identity Networks

- The LEI has a critical role to play in today's digital world through its ability to provide organizations with unique, permanent identification globally. This especially is important in the context of **identifying legal entities involved in digital transactions.**
- LEI delivers value to both the more mature product – Digital Certificates – and the more recent innovation of **Verifiable Credentials.**



# Embedding the LEI in digital tools

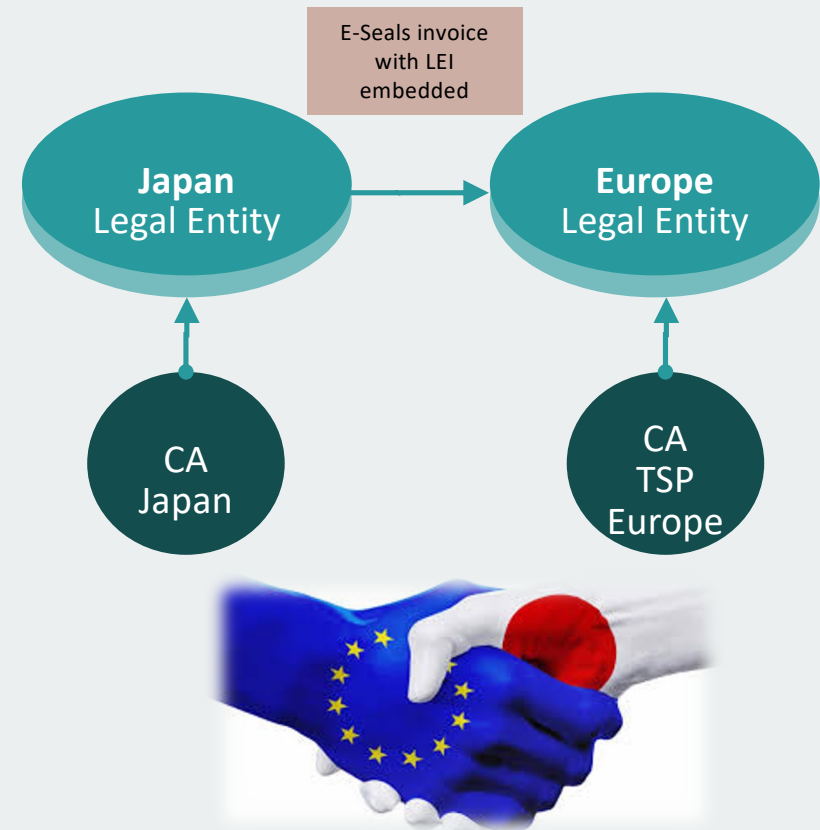
## Representing Organizations, Persons and Roles





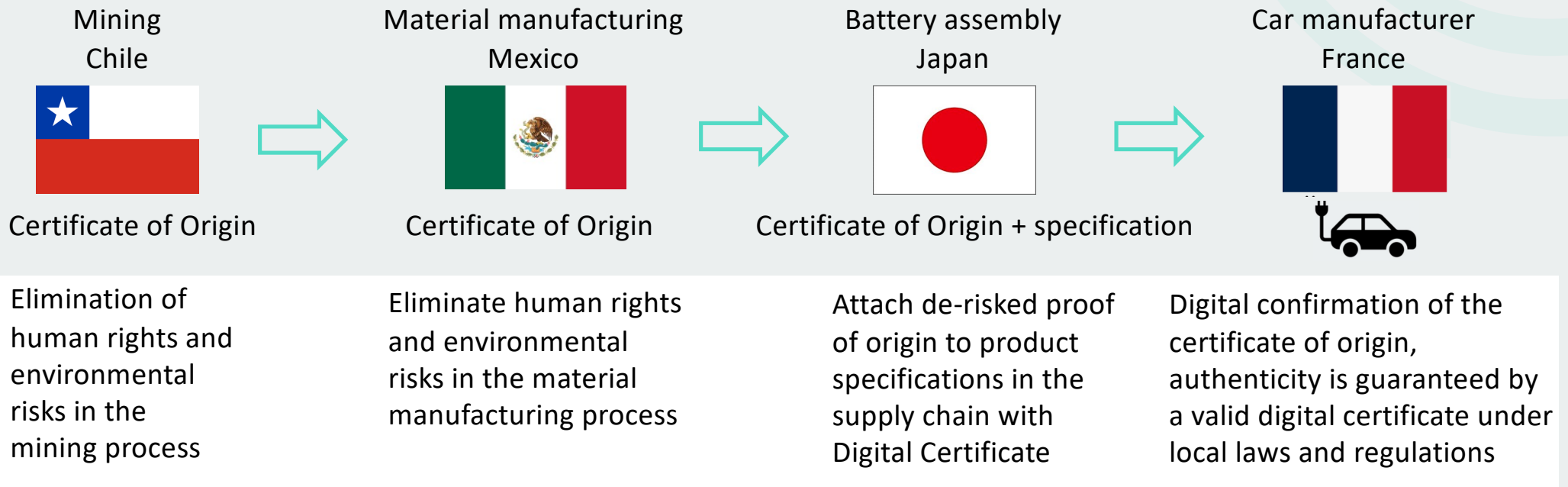
## JAPAN trade digitalization project: eSeal with LEI embedded into Certificates

- Japanese Cabinet of Science, Technology and Innovation approved the "Integrated Innovation Strategy 2020".
- The pilot project between Japan and Europe has been launched for the establishment of mutual recognition of trust services in order to facilitate **easier cross-border trade verification** for digital documents using eSeals with LEI embedded.  
ISO 17442-2 / ETSI TS 119 412-1
  - Avoids developing business registry specific checks for each country
  - Enables verification automation
  - Automates life cycle checks of the company
  - **Lingua franca** among different world regions
- Participants @ Japan: Hitachi Japan, SECOM/SEIKO CA.
- Participants @ Europe: SITA Europe, InfoCert CA.



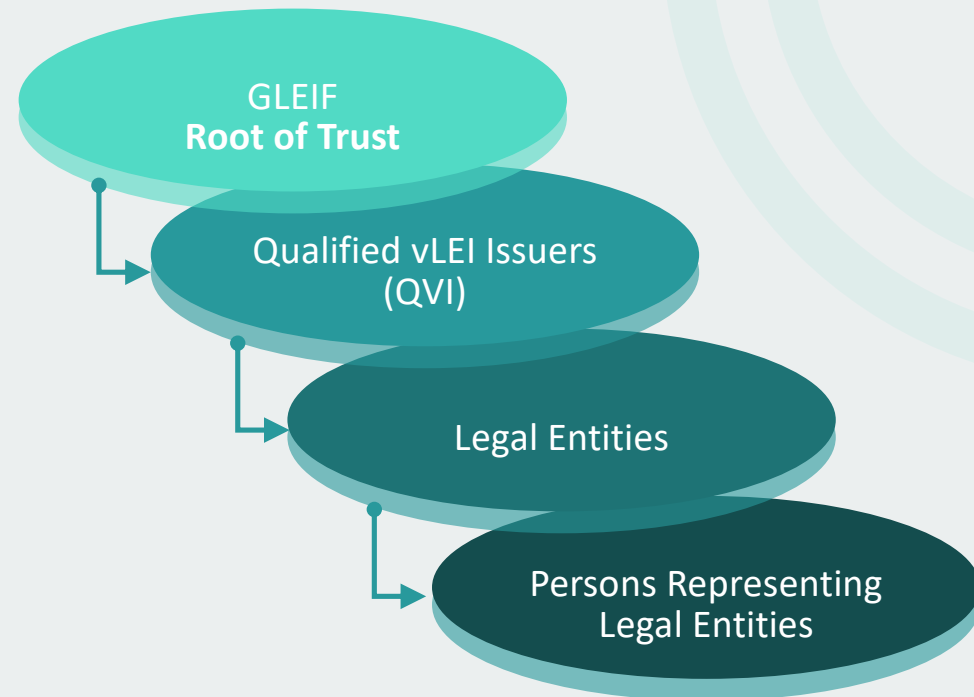
## Business Use Case - Electric Vehicle Batteries/Certificate of Origin

- Digital certificates guarantee the authenticity of EV batteries, from raw material mining to material manufacturing and assembly
- International mutual authentication between trust service platforms ensures digitally complete and valid certificates
- Since the LEI is linked to the Japanese corporate ID, the company name can be seen in English and check basic company information in English.



## The LEI as a Verifiable Credential – the global vLEI Trust Chain

- vLEIs use self-certifying and self-sovereign **AID** (Autonomic Identifier)
- GLEIF is the **Root of Trust**
  - Root AID to establish the Root of Trust
  - Delegated AIDs to issue **Credentials**
- GLEIF will establish a trusted network of **Qualified vLEI Issuers (QVIs)**
- **QVIs** are qualified to issue Entity and Role Credentials ...
  - to Legal Entities
  - to Persons who represent Legal Entities either in official or functional roles



## GLEIF Annual Report vLEI use case

- Since 2018, GLEIF has signed the pdf of its annual report with digital certificates with embedded LEIs. In the vLEI pilot, holders of vLEIs will sign the PDF of the 2021 GLEIF annual report (the 'pilot')
- The Annual Report will be signed in part by certain GLEIF officers/managers
- The entire Annual Report then will be signed by GLEIF CEO and Board chair
- GLEIF's auditors then could sign the financials of the Annual Report (TBD)
- All vLEI Credentials will be presented and verified so that any viewer of the annual report could verify the status of the vLEI Credentials and the validity of the signatures on the report



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