

Response of the Global Legal Entity Identifier Foundation (GLEIF) to the Ministry of Electronics and IT India Digital Ecosystem Architecture (InDEA) 2.0 Consultation

February 2022

The Global Legal Entity Identifier Foundation (GLEIF) is pleased to comment on the Ministry of Electronics and IT India Digital Ecosystem Architecture 2.0 Consultation. GLEIF will focus its comments on the use of the Legal Entity Identifier (LEI) in the consultation. GLEIF suggests that the LEI could be added to the “core building block” of the InDEA Master Plan and InDEA Domain Architecture Pattern architecture as the LEI supports digitization, interoperability, reusability and consistency of legal entity identification across borders. The inclusion of the LEI has the potential to support InDEA Common Building Blocks, State Digital Ecosystem(s), State Core(s) and InDEA Reference Building Blocks (Applications).

First, some background information on the LEI and GLEIF.

The Legal Entity Identifier (LEI) itself is a 20-digit, alpha-numeric code based on the ISO 17442 standard developed by the International Organization for Standardization (ISO). The code connects to key reference information that enables clear and unique identification of legal entities participating in financial transactions including their ownership structure. The LEI and its associated reference data are accessible to all as open, public data.

Following the financial crisis of 2008, financial supervisors were unable to reconcile positions and dependencies across financial marketplaces easily. Supervisory authorities can now identify parties to transactions across markets, products, and regions for regulatory reporting and supervision in a consistent and systematic way with the introduction of the LEI.

The private sector, particularly financial institutions, use the LEI as part of their data-driven approach in their client management procedures for being able to identify their clients in a standardized way and connecting internal and external databases through the LEI; so as to speak the same language in entity identification and verification.

Established by the Financial Stability Board in June 2014 under the mission of improving financial stability and transparency due to the aftermath of the financial crisis, GLEIF is tasked to support the implementation and use of the LEI. Even though the primary and initial usage and adoption of the LEI was around financial markets and financial instruments, the LEI is use case agnostic and therefore has been embraced by different industry sectors and regulators since its introduction by the Regulatory Oversight Committee (ROC) and the Financial Stability Board in 2012. Further details on the use of the LEI in regulatory initiatives is provided [here](#). India is represented by Mr. P. Vasudevan Chief General Manager, Department of Payment and Settlement Systems from the Reserve Bank of India, as the Vice-Chair of the [ROC Executive Committee](#).

There are 5 rulemakings in India which include the LEI. These rulemakings are in the area of payment services, insurance, derivative transaction reporting, securities/securitization and supervision. At end of fourth quarter 2021, almost 80,000 active LEIs had been issued to Indian legal entities with approximately 60% annual growth.

GLEIF would like to comment particularly on the “Digital Identities” section of the InDEA 2.0 consultation. As rightly stated in the consultation paper, Aadhaar seems to have answered the question of “who I am” for natural persons. However, unique and unambiguous identification of businesses, responding to the question of “Who is this business?” and an interoperable scheme based on a common identity is still not possible. Moreover, “trust”, an integral part of any transaction, is becoming more important in a digital and globalized economy – as the number of legal entities one transacts/interacts with is only increasing and will continue to do so.

The LEI has the potential to solve the trust challenge by making the verified and validated national registry, GSTN codes globally available. GLEIF has already included the local registration sources for entities in its [Registration Authorities List](#). Considering a global digital identity for businesses is crucial in designing the InDEA Master Plan, the LEI seems like a natural addition. In India, for example, the Legal Entity Identifier India Limited (LEIL) is an organization accredited by GLEIF to provide LEIs to businesses in India. Further, LEIL has been recognized by the Reserve Bank of India as an “Issuer” of Legal Entity Identifiers under the Payment and Settlement Systems Act 2007 (as amended in 2015).

Here you can find a LEI example of a multinational Indian company “Mahindra and Mahindra Limited”: <https://search.gleif.org/#/record/3358003B573EV4KB4Z02>. The LEI code of the company allows data users to see basic reference data regarding Mahindra and Mahindra Limited and information regarding its subsidiaries overseas.

GLEIF welcomes the preference of interoperability, use of open standards and open APIs and adoption of “once only” principle in this new framework. That being said, reusability of data, for example in B2B and B2G contexts, will depend on its interoperability and standardization. When it comes to operationalizing those two fundamental principles of interoperability and standardization, we suggest that a critical question for authorities in India will be how to securely standardize the identification of entities looking to access/share data from/with other entities. Given InDEA 2.0 is about empowering the entities, making the LEI as a building block has the potential to support InDEA Common Building Blocks, State Digital Ecosystem(s), State Core(s) and InDEA Reference Building Blocks (Applications):

Open & non-proprietary - The complete database of LEIs and the associated LEI reference data is available free of any charge or barrier to anyone on the web. GLEIF operates under the Open Data Charter terms, which means all users can use the data without limitations.

Machine-readable – The application programming interface (API) allows developers to access the complete LEI data pool in real-time directly and perform on-demand checks for changes to specific LEI records in a convenient and easy-to-read format. The application, developed by the GLEIF, responds to the market needs of multiple LEI stakeholders, including financial institutions, regulators, fintech companies, and analysts seeking to include LEI data in their machine-readable and automated processes. The GLEIF API can easily be integrated into internal systems based on the widely supported JSON data format. The use of the API is free of charge and does not require registration.

Mapping with other identifiers - GLEIF has established a free of charge certification process – the GLEIF Certification of LEI Mapping service - to ensure that organizations that map the LEI to their own identifiers use state of the art methodologies to do so accurately. Data vendors engaging in the GLEIF Certification of LEI Mapping service provide their customers enhanced interoperability across parallel ID platforms, streamlined entity verification processes, and

reduced data management costs for data users. With the launch of the open-source Business Identifier Code (BIC)-to-LEI relationship files in 2018, GLEIF and SWIFT pioneered a cooperation model that, for the first time, enabled market participants to link and cross-reference key entity identifiers free of charge. In April 2019, GLEIF and the Association of National Numbering Agencies (ANNA) piloted the first daily open-source International Securities Identification Number (ISIN)-to-LEI relationship files that link newly issued ISINs and LEIs. The Certification of Mapping service also supports the Global LEI System's integrity by ensuring that quality controls associated with mapping identifiers to the LEI meet or exceed requirements defined by GLEIF.

All-encompassing coverage - the Global LEI System supports all forms of legal entities, including trusts, funds, partnerships, SPVs, individuals acting in a business capacity, or governmental organizations.

Globally relevant - The digital space - and data spaces – are global by nature. That is why any standard adopted in this space should be able to respond to that global nature. Considering the LEI as the standard in that space would mean the India is adopting a globally recognized and well-received standard for its data spaces.

GLEIF observes that InDEA 2.0 proposes to adopt a common electronic, machine-readable specification to represent various credentials/certificates across the ecosystem. Furthermore, for verifiable credentialing, InDEA 2.0 will leverage internationally acceptable specification W3C VC for all digital verifiable credentialing.

Likewise, GLEIF would like to provide an update on its work in [Verifiable LEI \(vLEI\) governance framework which is also based on](#) W3C standard.

vLEIs are based on the [Trust over IP Authentic Chained Data Container \(ACDC\) specification](#), based on the [Key Event Receipt Infrastructure \(KERI\) protocol](#) (an Internet Engineering Task Force (IETF) draft specification), which is a more secure, enhanced variant of the W3C Verifiable Credential specification.

The vLEI will fulfill a critical requirement of establishing trusted decentralized identification and verification of organizations and the persons who represent them officially or functionally in a digital and globalized economy.

By combining three concepts – the organization's identity, represented by the LEI, a person's identity represented by their legal name, and the role that the person plays for the legal entity, vLEI credentials can be issued and become part of organizational wallets.

vLEI Role Credentials issued by Legal Entities to Persons whose **Official Organizational Roles** ([ISO 5009 standard](#)) that can be verified both by the Legal Entity as well as against one or more public sources.

Examples:

- Legal Entity – CEO
- Legal Entity – Board Chair

vLEI Role Credential issued by Legal Entities to Persons **in the context of the engagement** of those Persons with the Legal Entities which can be verified by the Legal Entity.

Examples:

- Legal Entity – Other Employees
- Hospital/Physician’s practice – Patients
- Community/Ecosystem/Exchange/Registered Member
- Trusted Supplier/Provider/Registered Member

In December 2020, [GLEIF announced](#) its plans to create a fully digitized LEI service capable of enabling instant and automated identity verification between counterparties operating across all industry sectors, globally. GLEIF invited stakeholders from across the digital economy to engage in a cross-industry development program to create an ecosystem and credential governance framework, together with a technical supporting infrastructure, for a verifiable LEI (vLEI), a digitally verifiable credential containing the LEI. GLEIF’s ecosystem approach and the ecosystem thinking behind InDEA 2.0 largely overlaps with each other.

The vLEI will give government organizations, companies and other legal entities worldwide the capacity to use non-repudiable identification data pertaining to their legal status, ownership structure, authorized representatives and employees in a growing number of digital business activities. This includes approving business transactions and contracts, onboarding customers, transaction within import/export and supply chain business networks and submitting regulatory filings and reports. GLEIF already is engaged in research partnerships and technical trials with stakeholders across the pharmaceutical, healthcare, telecom, automotive and financial services sectors.

LEI and vLEI can be bundled together to the organization that has to obtain LEI Number. vLEI could be issued to authorised person whose authority can be easily verified through digital means, thereby enhancing the speed and monitoring of transactions, especially cross border payments.

In India GLEIF is partnering with LEIL for conducting Pilot projects on vLEI. LEIL(Legal Entity Identifier India Limited) is a Local Operating Unit for issuing globally compatible LEIs in India. Other countries going through a similar data transformation programs already recognized the value of the LEI. For example, the Bank of England also recognizes the LEI as an important building block for enabling digital transformation:

The ability to identify a business quickly, easily and digitally enables a more seamless user experience as they move around the financial system. The Legal Entity Identifier (LEI) is likely to play an important role: as a 20- digit alphanumeric code, it can offer a unique identifier to every one of the 6 million SMEs in the UK, and as a globally recognized standard, it is built to support cross-border identification for trade finance. Once the entity is identified, it can be digitally authenticated in order to validate instructions, like a digital signature. That authentication could be delegated to a person’s mobile device, for example, to enable one touch permissioning.

Moreover, GLEIF is conducting a project between EU and Japan for LEI embedded eSeals to be recognized in a reliable and quicker manner. The updated LEI standard allows LEIs to be embedded in digital certificates. Digital certificates, whether issued by governments or the private sector, allow organizations and persons to accomplish authentication and authorization digitally. Certificates already are integral to many digital interactions and transactions and their usage is only set to increase. Digital certificates enable proof of identity of persons and/or entities through Public Key Infrastructure (PKI)

based on a cryptographic system of public and private keys. Further details can be accessed [here](#)¹. Digital certificates are the main method used today for digital identity authentication and authorization. For Internet Servers (TLS), over e-mail (S/Mime) and many other use cases such as code signing, digital signatures etc., *ITU-T X.509* | *ISO/IEC 9594-8*² certificates widely are in use.

Digital certificates are obtained easily from a host of different issuers. However, the growing number of issuers means that records are held in multiple silos across a variety of organizations globally. The information held within a digital certificate cannot be changed or updated due to strong cryptographic binding, meaning the information essentially is ‘frozen’ within the certificate. Limited expiration dates and revoking the entire certificate are the only ways to protect those relying on certificates for digital identification. Not all applications have access to revocation lists, however, nor are all outdated certificates revoked. Therefore, there is often no safe way to relate automatically one certificate to another. To determine the links between different parties, a unique life-long and global identifier is required within digital certificates.

GLEIF has demonstrated the power of combining the LEI with digital certificates in the [publication of its 2018 Annual Report](#). The annual report is digitally signed, meaning it is cryptographically sound, by the GLEIF CEO, GLEIF Board Chairman, and third party auditors via each party's digital certificate. GLEIF's LEI is embedded within the digital certificates of GLEIF's signing executive officers, as well as the annual report itself. This ensures the referential integrity of identity between the origin of the document and the authorized signatories. It should be noted, that this can be achieved at any time (including offline) as the trust chain is embedded in the certificate.

These certificates, for the first time, connect the role of the signatory to an organization through the LEI and can therefore be used to verify – automatically, through the shared LEI – that the filed annual report and the signatories represent the same organization. This provides reassurance on the data's reliability and confirms that the information has not been tampered with even while access to the filed document is available via any public server globally.

GLEIF suggests that adding the LEI in user-controlled environments, such as open banking or open finance frameworks, could enable SMEs to gather all their different accounts at different banks under one single identity, the LEI of the entity. Since the LEI is recognized globally, the entities can easily shop for finance within India and across borders. GLEIF understands that in a big country such as India, federated registries will continue to exist. However, interlinking the registries through a robust identifier, the LEI, would enable the once only principle, reduce costs, errors and manual reconciliation efforts and make identification and KYC processes easier and faster. Given InDEA aims to create a global framework and explore and leverage international open API specifications, GLEIF invites InDEA to work together on creating a blueprint on how to ensure interoperability.

GLEIF will remain at the disposal of the Indian Ministry of Electronics and IT for questions and any further dialogue.

¹ https://en.wikipedia.org/wiki/Public_key_certificate

² <https://en.wikipedia.org/wiki/X.509>