

The vLEI: Introducing Digital I.D. for Organizations Everywhere

How GLEIF is addressing the global need for digitized, automated authentication and verification of organizations across a broad range of industries



Enabling global identity
Protecting digital trust

Trust: The missing ingredient in digital transformation



In today's digital world, where organizations are increasingly cooperating and transacting remotely and across borders, trust can no longer be established with just a handshake or a paper-based signature. Yet confidence in digital authenticity remains in short supply.

As innovations in IoT, blockchain, cloud computing and open APIs, among others, inspire new business propositions and redefine how organizations connect and engage with one another, the issue of trust remains outstanding. How can you be sure you are using your bank's real website? Did that invoice really come from your business partner?

Covid-19 has increased the pace of change. According to a global McKinsey & Company study, the pandemic has accelerated business' digital initiatives by up to seven years.¹

This evolution of traditional business models brings with it a huge opportunity for betterment, but only occur if the world's organizations can trust in the authenticity of their customers, partners and suppliers. Cybercrime remains big business. So big, that it cost the global economy an estimated \$6 trillion in 2021.²

For this huge leap forward to succeed, therefore, the world's economies must also modernize the methods we use to create trust. Establishing a universal way to digitally verify the legal identities of counterparty organizations and their key representatives is now critical to the future health and stability of the global digital economy.

Only then can counterparties work together in ways that will unlock the true potential of digitalization: enabling innovation and collaboration to thrive unlimited by geography, and money, goods and services to flow securely around the world faster, more efficiently, and at a lower cost than ever before.

The Global Legal Entity Identifier Foundation (GLEIF) is answering this urgent, unmet need. GLEIF is pioneering a multi-stakeholder effort to create a new global ecosystem for organizational digital identity. In February 2022, GLEIF published an Ecosystem Governance Framework, together with a technical supporting infrastructure, for a verifiable LEI (vLEI), a digitally verifiable credential containing the Legal Entity Identifier (LEI).

This is a new ecosystem with one clear goal: **to create a standardized, digitized service capable of enabling instant, automated verification, enabling trust between organizations and their authorized representatives, and the counterparty organizations and representatives with which they interact.**

The ecosystem will operate across all industry sectors, globally.



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¹How COVID-19 has pushed companies over the technology tipping point – and transformed business forever – McKinsey, October 2020.

²Cybersecurity Ventures Official Annual Cybercrime Report, Cybercrime Magazine

Orientation:

A brief recap

What is an LEI?

A Legal Entity Identifier (LEI) is an ISO-standardized 20-character code³ that uniquely identifies a legally registered organization, or 'legal entity'. It enables anyone, anywhere in the world to trust that an organization is who it claims to be.

Each LEI is unique and can represent only one legal entity. Each LEI links to a corresponding 'LEI record' which contains a range of identifying information about the legal entity, such as its registered location, legal name, and ownership structure. Because LEIs use a global standard, they are a benchmark that regulators and other legal entities worldwide recognize, agree with, and trust.

All LEI records are held in a freely available and searchable centralized repository, called the Global LEI Index. This is the only global online source that provides open, standardized, and high-quality legal entity reference data. Together, these elements comprise the Global LEI System, which anyone can use to answer identity related questions related to legal entities, principally 'who is who' and 'who owns whom'.

³The LEI is created using the ISO 17442 standard. Learn more here: <https://www.gleif.org/en/about-lei/iso-17442-the-lei-code-structure/>

What is GLEIF?

The Global Legal Entity Identifier Foundation (GLEIF) was established by the Group of Twenty (G20) and the Financial Stability Board (FSB) in June 2014. It is a supra-national non-for-profit organization overseen by the Regulatory Oversight Committee and backed by the G20, set up to support the implementation and use of the Legal Entity Identifier (LEI).



Who has an LEI?

Until recently, most LEIs have been obtained by organizations in response to a legal mandate to comply with regulatory reporting requirements. More than 200 financial regulators around the world now require companies to obtain an LEI before they go public.

As a result, the system has created unprecedented levels of transparency for all players operating in capital markets including regulators, individual companies, investors, and anyone else around the world that has an interest.

At the start of 2022, there are over two million LEIs in use around the world.

Orientation: A brief recap

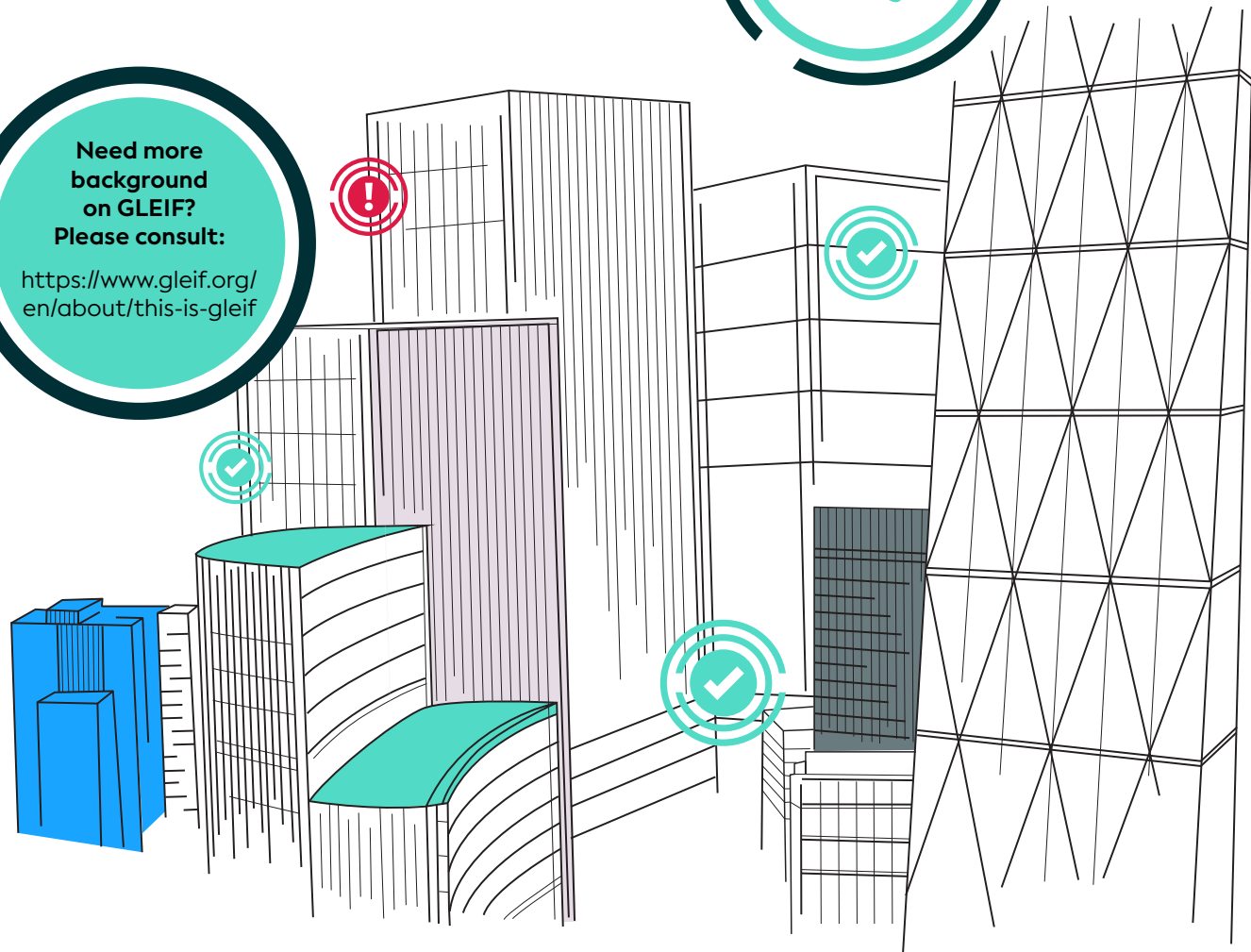


An independent, international, not-for-profit system

Importantly, the Global LEI System is set up as a public good.

It has no commercial, technical, or governmental dependencies that influence its decisions and direction. GLEIF, which oversees the running of the system and manages its network of accredited partners, known as LEI issuing organizations, is a non-profit foundation whose activities are overseen by a group of 65 financial markets regulators and other public authorities and 19 observers from more than 50 countries. This diverse and influential group is called the Regulatory Oversight Committee.

Fundamentally, GLEIF exists to enable smarter, less costly, and more reliable decisions about who to do business with by supporting the implementation of the LEI and the availability of the Global LEI Index.



The next chapter in the LEI story

Having successfully proven the power of the Global LEI System to deliver transparency in capital markets, GLEIF is now broadening its ambitions and is working to drive voluntary LEI adoption by organizations everywhere.

GLEIF's new vision is that every organization worldwide should have only one global identity, which can support its participation in an increasingly digital economy.

The Global LEI System is the structure through which this vision can be realised. Happily, it is already well established. The next step is to ensure that 'the one identity' should incorporate a digital identity.

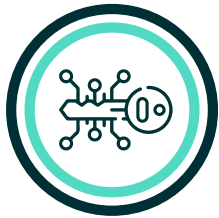
This is where the vLEI comes in.



How the world will benefit: A new dawn in organizational identity

The vLEI gives companies, government organizations, and other legal entities worldwide the capacity to use non-repudiable identification data pertaining to their legal status, ownership structure and authorized representatives in any kind of digital interaction, transaction, or e-signature scenario.

Early-stage use-case examples include:



Digitally signing regulatory filings and reports.



Expediting supply chain due diligence processes.



Verifying business payments.



Expediting membership and registration to payment systems.



Accelerating business entity registration and license issuance.



Streamlining and accelerating client onboarding/ Know Your Customer processes for financial and other providers of certain regulated services.



Facilitating customs and border control checks.



Confirming authenticity when applying for and vetting trusted network membership.



Securing the remote execution of business contracts.

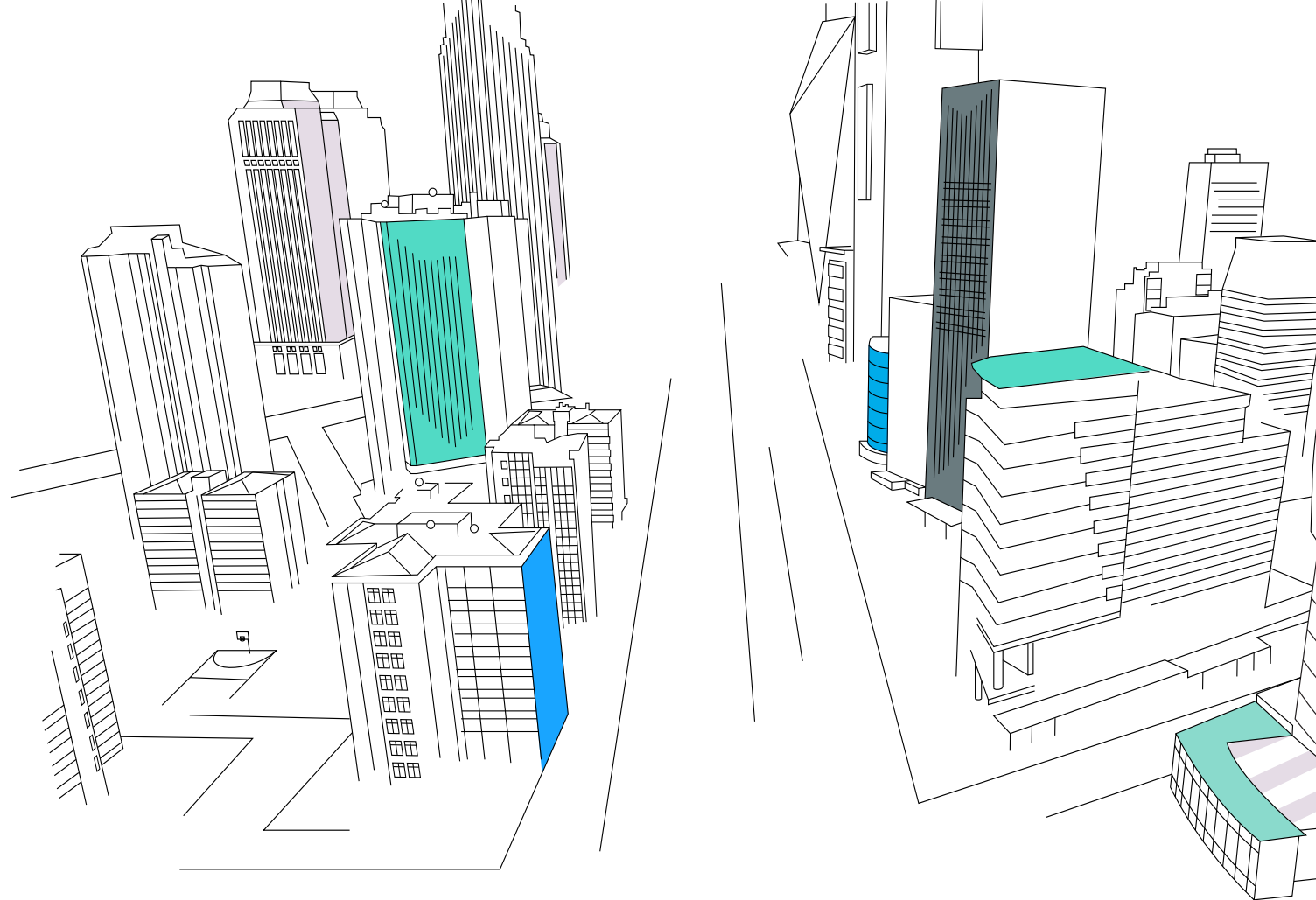


To support data protection in all use-cases, including those mandated by regulation.

This is just the beginning.

The real potential of this technology lies in its ability to unlock innovation. A wide range of vertical sector use cases have already been identified relating to pilots' licenses; smishing and e-bot calls; medical e-consent; client onboarding; secure exchange of sensitive healthcare information and more.

Only when market uptake increases and industries around the world develop new services and use-cases based on the freedom this technology provides, will the true power of the vLEI will be revealed.



Drummond Reed,
Steering Committee Member,
Trust Over IP Foundation

“ The vLEI has the potential to become one of the most valuable digital credentials in the world, because it is the hallmark of authenticity for an organization of any kind. The family of digital credentials in the GLEIF vLEI Governance Framework can serve as a chain of trust for anyone needing to verify the legal identity of an organization or of a person legally acting on that organization's behalf.



The vLEI: The digital extension of a globally recognized identity system



The vLEI concept is simple: It is the secure digital counterpart of a conventional LEI. In other words, it is a digitally trustworthy version of the 20-digit LEI code which is automatically verified, without the need for human intervention.

By wrapping new and existing LEIs in digital credentials that can be verified, the vLEI offers a digitally trustworthy version of the LEI which allows automated entity verification, thus can replace the manual processes conventionally required to access and confirm an entity's LEI data.

Because the vLEI leverages the well-established Global LEI System, which is the only open, standardized and regulatory-endorsed legal entity identification system, it is capable of establishing digital trust between all organizations, everywhere.



How does it work?

GLEIF has based the design of the vLEI on Authentic Chained Data Container (ACDC) developed within the Trust over IP Foundation (which is hosted by the Linux Foundation). ACDCs use the Key Event Receipt Infrastructure (**KERI**) protocol for more secure, enhanced key management.

The vLEI system establishes GLEIF as the digital 'root of trust' that safeguards the integrity of the vLEI trust chain. This means all vLEIs are traceable, through a cryptographically protected chain of credentials, back to their entity identity source LEI in the Global LEI Index.

GLEIF has established a formal Qualification Program to vet and monitor a network of vLEI issuers.

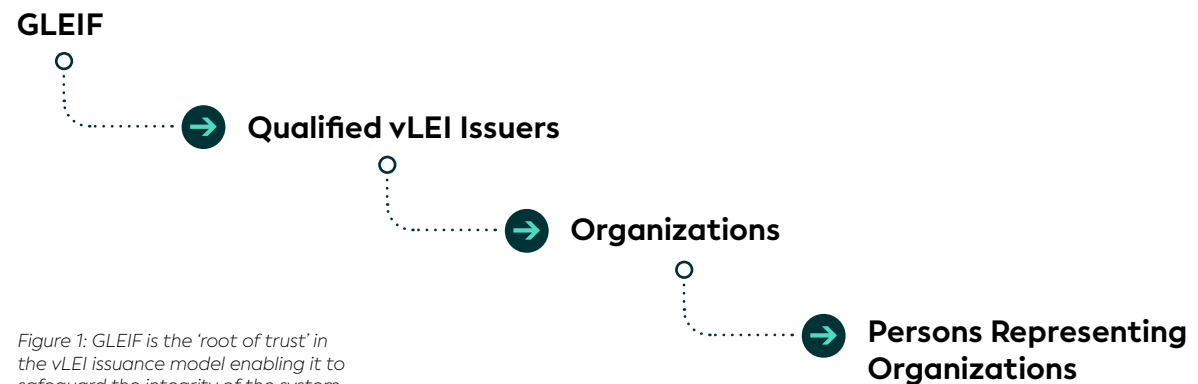


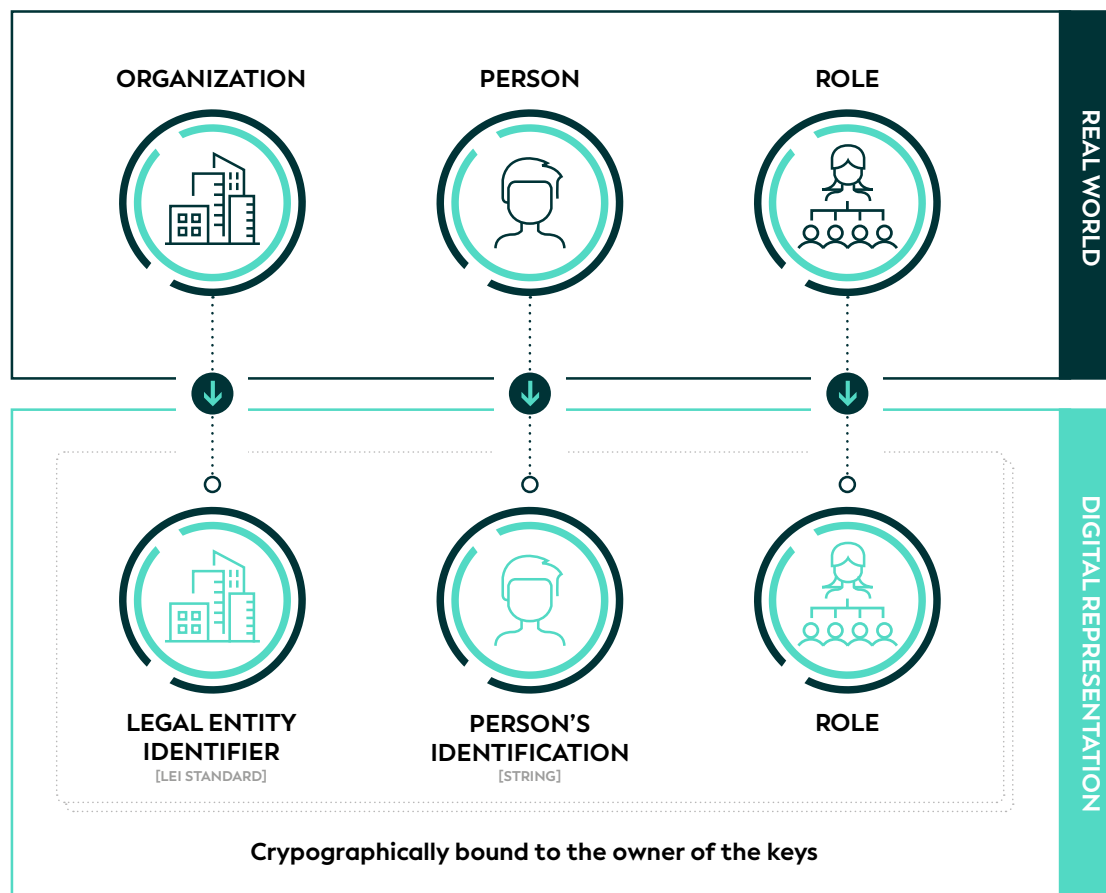
Figure 1: GLEIF is the 'root of trust' in the vLEI issuance model enabling it to safeguard the integrity of the system

The vLEI: The digital extension of a globally recognized identity system

How does it work? (cont.)

Once an organization has obtained its vLEI it can proceed with the issuance of additional vLEI credentials to authorized representatives of the organization, allowing them to digitally confirm their authenticity (their name and their official role) when performing sensitive business activities, such as remotely approving transactions, or e-signing contracts.

Figure 2: the vLEI wraps the LEI, a person's identification, and their role inside a cryptographically secure organization credential, enabling each component to be verified digitally



Independent, open, and universally interoperable



To fulfil its global potential, the vLEI system must interoperate seamlessly and securely with all technology models, including all DLTs (like blockchain), cloud services and APIs, by adopting a 'network of networks' approach. To accomplish this, GLEIF is leveraging the Key Event Receipt Infrastructure (KERI) protocol to develop the vLEI's technical underpinnings.

KERI provides a cryptographic development framework enabling vLEIs to be anchored and verified without requiring a self-sovereign identity, blockchain or distributed ledger utility network to operate.

Using the KERI protocol, vLEIs can be created and utilized independently of any specific organization, with the highest levels of security, privacy, and ease of use. KERI also enables GLEIF and the vLEI ecosystem to operate under GLEIF's governance framework, unencumbered by the governance of external systems, including those of blockchains and distributed ledger consortia.

The vLEI technical infrastructure will enable the vLEI's cryptographic keys to be generated and controlled directly by GLEIF, by vLEI Issuers and by vLEI holders, in accordance with the legal requirements around the world.

Each party will maintain full, independent control and portability across systems. This allows GLEIF and its vLEI ecosystem to take advantage of all blockchain, distributed ledger, self-sovereign identity, and other cloud-based public utilities to notarize cryptographic actions or transactions, maximizing interoperability and flexibility in the vLEI system.



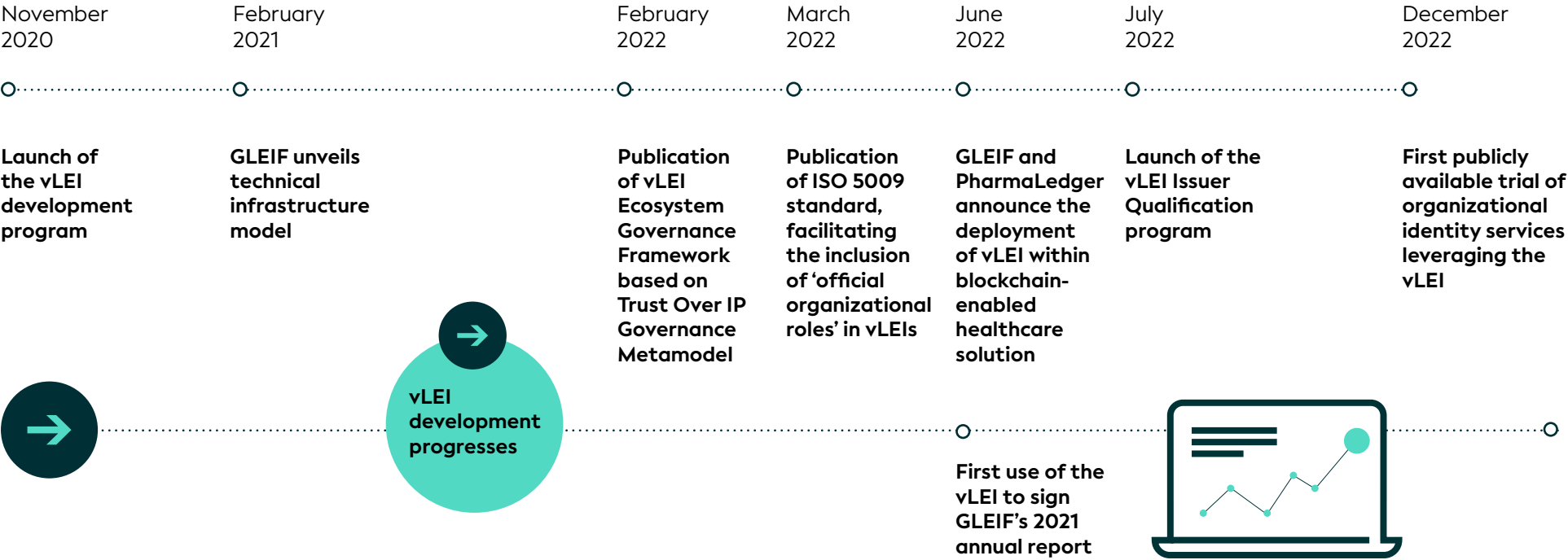
For more information on the KERI protocol, please consult:

- <https://www.gleif.org/en/vlei/introducing-the-verifiable-lei-vlei>
- <https://keri.one>

International momentum



Following the launch of the vLEI development program in November 2020, and in addition to the sector-specific use cases identified previously, GLEIF and its partners have made significant progress in a variety of other initiatives to support the creation of the vLEI ecosystem.



A digitized future for the Global LEI System

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The need for the vLEI will continue to grow as we move into an automated, digitized future for organizations. Now, they can be equipped with a universally interoperable, decentralized trust system that can operate independently, with the highest levels of security, privacy, and ease of use.

By extending the Global LEI System for use across the digital economy, GLEIF is unlocking the power of the LEI for all industry sectors to help them benefit from digital transformation.

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Stephan Wolf,
CEO, GLEIF

A handwritten signature in white ink that reads "S. Wolf". The signature is stylized and cursive, positioned below the printed name and title.

Get involved

GLEIF now invites further engagement from parties operating across all industry sectors with a view to exploring opportunities to leverage vLEI identity verification in future applications, services, and business models.



About the Legal Entity Identifier (LEI)

The Legal Entity Identifier (LEI) is a 20-character, alpha-numeric code based on the ISO 17442 standard developed by the International Organization for Standardization (ISO). The LEI connects to key reference information that enables clear and unique identification of legal entities participating in financial transactions. Each LEI contains information about an entity's ownership structure, answering the questions of 'who is who' and 'who owns whom'. It provides a universally recognized identifier paired with essential entity data, rigorous verification processes and high data quality.

About the Global Legal Entity Identifier Foundation (GLEIF)

Established by the Financial Stability Board in June 2014, the Global Legal Entity Identifier Foundation (GLEIF) is a not-for-profit organization created to support the implementation and use of the Legal Entity Identifier (LEI). GLEIF is headquartered in Basel, Switzerland.

GLEIF services ensure the operational integrity of the Global LEI System. GLEIF also makes available the technical infrastructure to provide, via an open data license, access to the full global LEI repository free of charge to users. GLEIF is overseen by the LEI Regulatory Oversight Committee, which is made up of representatives of public authorities from across the globe. For more information, visit the GLEIF website at <https://www.gleif.org/en>.

History of the Global LEI System

In 2011, the Group of Twenty (G20) called on the Financial Stability Board (FSB) to provide recommendations for a global Legal Entity Identifier (LEI) and a supporting governance structure. This led to the development of the Global LEI System which, through the issuance of LEIs, now provides unique identification of legal entities participating in financial transactions across the globe. The FSB emphasized that global adoption of the LEI underpins multiple "financial stability objectives" and also offers "many benefits to the private sector".

Source:

- Global Legal Entity Identifier Foundation, St. Alban-Vorstadt 5, 4052 Basel, Switzerland
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NEWSLETTER



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