

# Global vLEI Hackathon 2025

## Overview



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## 1. Introduction: Trust as the Cornerstone of the Agentic Revolution

The business landscape is undergoing a profound transformation: **autonomous agents** — intelligent, self-directed systems — are rapidly becoming the backbone of **B2B interactions**.

In the coming years, these agents will not only **execute tasks**, but also **collaborate, negotiate, make decisions**, and **co-create value** across a dynamic mesh of interconnected enterprises.

They will **create innovative business models, establish strategic partnerships**, and **transform how organizations interact** — at *machine speed* and *global scale*.

But this revolution introduces a critical challenge: **trust**.

When decisions, transactions, and relationships are delegated to autonomous agents, **traditional mechanisms of trust** — such as human judgment, reputation, and manual oversight — become insufficient.

*Who are your counterparts?*

*Do they align with your expectations?*

*Are they genuinely capable of doing business with you?*

These questions, once answered through human intuition and experience, now require **automated, verifiable mechanisms**.

Establishing trust between autonomous agents means ensuring that each participant in a transaction is **authentic, competent, and aligned** — not just technically, but strategically.

In this new paradigm, **trust is the currency** that enables **frictionless collaboration**.

Without it, the entire agentic ecosystem risks **fragmentation, inefficiency, and vulnerability**.

Imagine a world where agents can confidently:

- **Verify identity**
- **Validate intents**
- **Ensure compliance**

— instantly and transparently.

A world where trust is:

- *Programmable*
- *Measurable*
- *Portable* across networks.

This is not just a technical necessity; it is the **foundation for sustainable growth** in an economy driven by autonomous interactions.

This is where a trust layer becomes **indispensable**: enabling agents to assess and confirm the credibility of their counterparts in real time, fostering confidence and accelerating collaboration.

Our solution addresses this exact problem: **creating a trust layer** — a backbone for **agent-to-agent interoperability**.

By embedding:

- **Verifiable credentials**
- **Decentralized identity frameworks**
- **Real-time trust scoring**

into the fabric of agentic communication, we **empower enterprises** to unlock the full potential of **autonomous collaboration**, securely and at scale.

## 2. TrustSphere: The Global Trust Ecosystem Around vLEI



### 2.1. Foundations: Digital Identity

A robust identity system is essential for anchoring certifications in the agentic economy. The GLEIF verifiable Legal Entity Identifier (**vLEI**) offers a **globally recognized, cryptographically verifiable** identity framework that ensures each autonomous agent represents a legitimate, accountable organization.

By binding **certifications** to vLEI-based identities, enterprises can guarantee the provenance, integrity, and trustworthiness of credentials — enabling agents to transact with confidence and compliance across borders and ecosystems.

GLEIF plays a pivotal role not only in providing the technological infrastructure for trust, but also in shaping the **governance framework** that ensures its integrity and sustainability.

GLEIF serves as a **neutral, standards-based authority**, ensuring that the trust ecosystem operates transparently, securely, and in alignment with global regulatory and ethical standards.

### 2.2. vLEI Infrastructure Upgrades

Powered by GLEIF's vLEI solid foundations and enriched by distributed certification authorities, *TrustSphere* develops as an **extensible, AI-friendly trust ecosystem**.

Inside *TrustSphere* the vLEI infrastructure is complemented with two new core components:

- **Trusted Certifiers Registry:** A catalog of certifiers officially recognized within the ecosystem. For each certifier, the registry records the **types and number of digital badges** they are authorized to issue. Before inclusion, every certifier undergoes a verification process conducted by the admitting authority (GLEIF). Upon approval, they are granted a unique digital badge — the *Trusted Certifier ECR* credential — allowing them to be instantly identified as legitimate badge issuers.
- **Trusted Applications Registry:** A comprehensive catalog of certified, trust-enabled applications that play a key role in operationalizing trust within the ecosystem. Each registered service contributes **new capabilities**, implements distinct business use cases, and supports a variety of sectors — including finance, healthcare, trade, and more. These applications make **trust operational and dynamic**, enabling autonomous services and organizations to interact securely and reliably. Even for applications, a *Trusted*

*Application ECR* credential is issued to each admitted service, enabling it to operate as a self-validating entity within the ecosystem.

Since **accessibility and agentification** are key pillars of our infrastructure, the ecosystem itself must be agentic by design. This means incorporating an **agent** capable of guiding the user—or the user's agent—toward effective navigation within the ecosystem.

The agent proactively identifies functionalities and applications that address the user's needs, simplifying interaction by facilitating seamless access and operability through credential management.

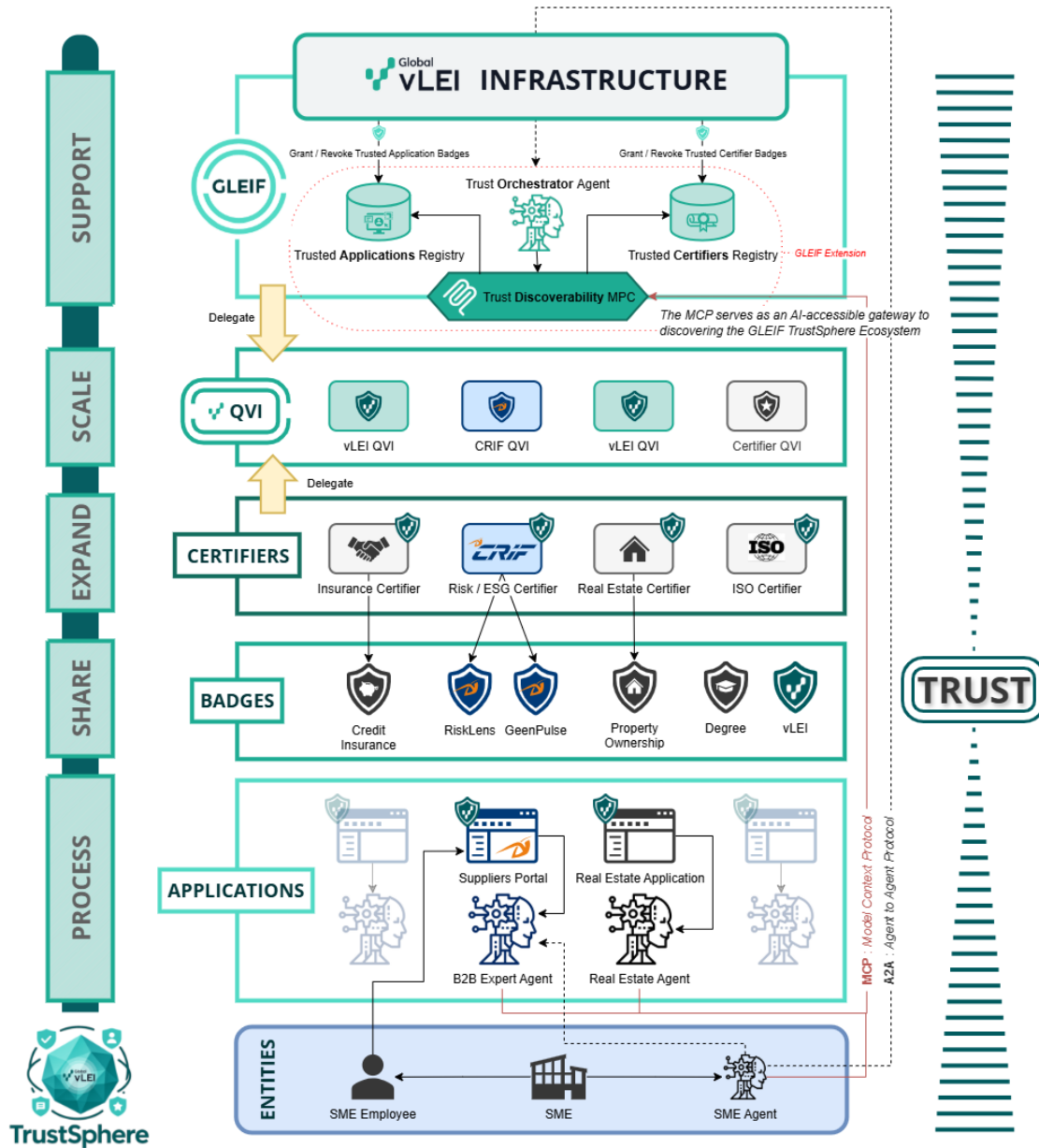
Applications serve as the tools—the hands and executors—of the system. They form a **constellation of specialized agents** designed to meet customer needs, operating within a trusted and certified network of secure connections.

*"In a joyful world—like the most enchanting fairy tales—where trust flows freely among all its inhabitants, only wonder and prosperity can flourish."*

To support this vision, **discoverability** is added on top of the trusted registries using two services:

- **Trust Discoverability MPC:** A Model Context Protocol endpoint serving as an AI-accessible gateway to discovering the *TrustSphere* Ecosystem. provides querying capabilities across the catalogs of verified applications and trusted certifiers.
- **Trust Orchestrator AI Agent:** A true subject-matter expert within the *TrustSphere* ecosystem, this AI agent understands how to create new digital badges, identify which certifiers are authorized to issue specific credentials, and determine which trusted applications best fit various business needs. It knows the tools, where to find them, and how to use them effectively — acting as the **ultimate trust concierge** that guides users and agents with precision and confidence.

The following diagram shows the principal building blocks of the *TrustSphere* Ecosystem:



### 2.3. Certifiers: The extensibility layer

The true first-class-citizens of *TrustSphere* ecosystem are the **certifiers**. In this growing network of distributed certification authorities, each node acts as a **dynamic extension point** - issuing verified claims and credentials that define the capabilities of ecosystem participants.

These certifiers form the backbone of trust within the system, enabling **scalable, decentralized validation** across diverse domains.

## 2.4. QVI: The scalability layer

A crucial component in scaling the vLEI infrastructure is the role of Qualified vLEI Issuers (QVIs), who are authorized to issue vLEIs to legal entities on behalf of the GLEIF central authority.

*TrustSphere* adopts a similar model, allowing certifiers to delegate badge issuance to QVIs. This delegation mechanism enables certifications to be distributed and managed efficiently.

## 2.5. Badges: The new trust currency

In a world driven by trust, *TrustSphere* badges are your company's digital passport to credibility. *TrustSphere* transforms your business identity into a verified, global badge of trust.

Whether it's *RiskLens*—your certified risk profile—or *GreenPulse*—your ESG heartbeat—each badge is a proof of capability, instantly verifiable and universally recognized.

*TrustSphere* credentials are not just a badge. They're your company's trusted voice in the global digital economy empowering faster deals, safer partnerships, and a new era of business confidence.

Each *TrustSphere* badge is formally defined by its JSON **schema**, which describes its properties and their validation rules.

Standardization is the cornerstone of **interoperability**. GLEIF defines and maintains the taxonomy of available badge types, enabling applications to rely on a consistent classification of identity claims and capabilities. This shared framework ensures **seamless integration and understanding** across diverse services within the ecosystem.

## 2.6. Applications: Autonomos trust processors

Applications are the beating heart of the *TrustSphere* ecosystem. They extend its capabilities and enable the inclusion of an **ever-growing range of business domains**.

The introduction of new credential types paves the way for the development of innovative services, allowing trust to evolve dynamically alongside emerging market needs. Each application within the system possesses a *Trusted Application ECR* credential, enabling seamless and frictionless integration.

Through *GLEIF* certification, the central authority acts as a **guarantor** for the application, ensuring that it will use the information contained in the badges it processes in a legitimate manner.

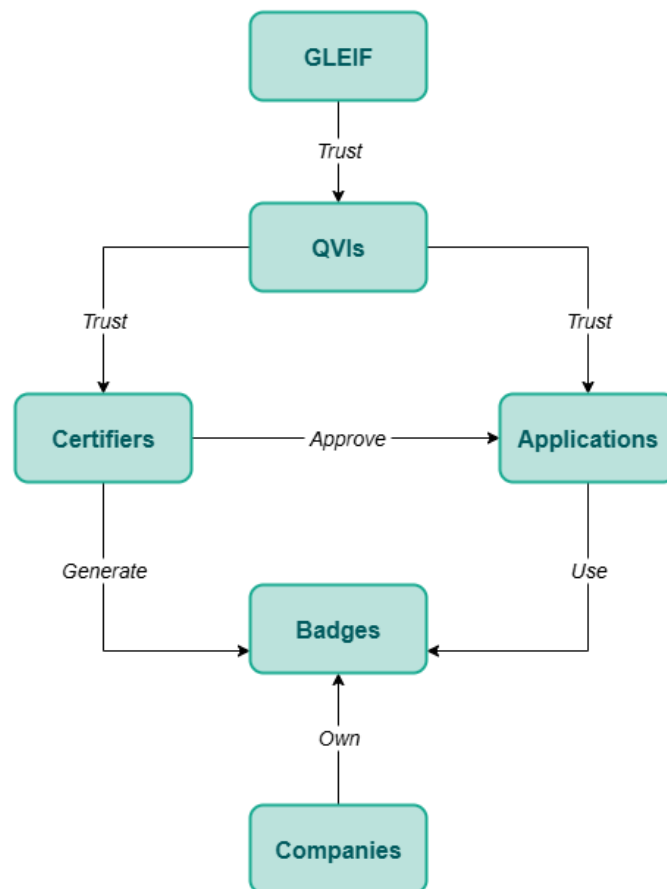
While most business participants currently rely on traditional applications—such as web interfaces, APIs, and cloud services—the ecosystem is evolving.

In the near future, these offerings will transition to autonomous agents, which will leverage **dedicated integration endpoints (MCP and A2A)** to collaborate effectively within the *TrustSphere* environment.

## 2.7. Trust Flow

This diagram illustrates the relationships between key entities—GLEIF, QVIs, Certifiers, Applications, Badges, and Companies—highlighting how trust flows through the system to enable secure and verifiable interactions in the agentic economy:





1. **GLEIF as the Root of Trust** GLEIF acts as the foundational authority, anchoring the ecosystem's integrity. It delegates trust to Qualified vLEI Issuers (QVIs), empowering them to act on its behalf.
2. **QVIs as Trust Delegates** QVIs extend the trust network by certifying both Trusted Certifiers and Trusted Applications. This ensures that only verified entities can issue credentials or operate within the ecosystem.
3. **Certifiers as Credential Authorities** Certified by QVIs, these entities issue standardized digital badges to companies. Each badge represents a verified capability, such as creditworthiness or ESG performance.
4. **Companies as Badge Holders** Companies receive and manage these badges, which serve as portable trust artifacts. They present them to applications to prove their credentials and capabilities.
5. **Applications as Trust Consumers** Applications use the badges to validate business participants, enabling secure, automated interactions. This ensures that services operate with verified data and trusted entities.

### 3. System Benefits Overview

The TrustSphere ecosystem delivers a transformative approach to digital trust, enabling secure, scalable, and intelligent collaboration among autonomous agents.

The system ensures that every participant is authenticated, authorized, and aligned with ecosystem standards. This architecture eliminates traditional friction points in B2B interactions, replacing manual verification with automated, cryptographically secure trust mechanisms.

Key benefits include:

- **Seamless Integration:** Applications operate as self-validating entities, ensuring effortless onboarding and interoperability.
- **Scalability and Extensibility:** Through distributed certifiers and *QVIs*, the system supports rapid growth and domain-specific customization.
- **AI-Readiness and Discoverability:** With services like the *Trust Discoverability MPC* and the *Trust Orchestrator AI Agent*, the ecosystem is designed for intelligent agents to navigate, assess, and act autonomously.
- **Global Compliance and Governance:** Anchored in the GLEIF vLEI framework, TrustSphere aligns with international standards, ensuring regulatory compliance and ethical integrity.
- **Dynamic Trust Enablement:** Digital badges serve as portable, verifiable trust artifacts, enabling real-time validation of capabilities, risk profiles, ESG credentials...
- **Self-Referential Capability:** The system allows users to discover which applications can fulfill a specific business need, starting directly from the need itself.

Together, these features position TrustSphere as a **foundational infrastructure for the agentic economy** — one where trust is not just established but operationalized, enabling faster, safer, and more intelligent business interactions.

## 4. Evolution Roadmap

As the TrustSphere ecosystem matures, its evolution will be driven by the convergence of decentralized identity, AI autonomy, and global interoperability.

Future developments will focus on **expanding the network of Trusted Certifiers and Applications**, enabling more granular and domain-specific credentialing.

The integration of advanced AI agents will evolve **from guided orchestration to full autonomy**, allowing agents to dynamically negotiate, compose services, and establish trust-based collaborations without human intervention.

Cross-ecosystem interoperability will be a key priority, ensuring seamless trust portability across industries and jurisdictions.

Next steps:

- [Trust Registry Query Protocol](#) - Adopt this emerging *ToIP* standard within *TrustSphere* ecosystem.
- **CaaS (Certifier As A Service) Solution** - In order to help SMEs integrating seamlessly in the *TrustSphere* ecosystem, a ready-to-use white label certifier implementation can be offered on major CSP (Azure, AWS..) marketplaces.

## 5. CRIF Contribution to TrustSphere Ecosystem

CRIF stands out as a trusted and data-rich provider of business information and credit risk assessment. Its platforms and scoring models are designed to support credit managers, financial institutions, and enterprises in making accurate, timely, and strategic decisions. Here's a focused review of why CRIBIS is a valid and valuable partner for business information, risk scoring and ESG performances:

### 5.1. The Proprietary Global Business Information Network (GBIN): Scope and Scale

CRIF's ability to deliver a consistently reliable global score is underpinned by its expansive and meticulously integrated data architecture.

The proprietary **Global Business Information Network** spans **more than 246 countries** and jurisdictions. This unparalleled jurisdictional reach is a critical structural advantage in the global market, allowing clients to maintain uniform risk and compliance standards worldwide.

The network's core strength lies in its **comprehensive compliance screening capabilities**: it offers automated workflows for entity verification and checks counterparties against constantly updated lists, including:

- Sanctions
- Politically Exposed Person (PEP)
- Anti-Money Laundering (AML)
- Counter-terrorism lists.

Furthermore, the system provides precise analysis of **global corporate ownership structures**, identifying the individuals and shareholders behind a company.

This rigorous, end-to-end process delivers **real-time, audit-ready compliance documentation**, ensuring clean legal data and mitigating financial and reputational risk across global supply chains.

### 5.2. ESG Compliance and Market Differentiation: The Synesgy Ratings Framework

CRIF has strategically organized its sustainability offering through the launch of **CRIF Synesgy Ratings S.r.l.**, a technology-driven spin-off explicitly designed to meet evolving market demands and the rigorous standards of the new EU Regulation 3005/2024 on ESG rating activities.

This proactive approach ensures CRIF's ratings are **positioned for longevity and regulatory acceptance globally**, with a strong focus on the EU.

By establishing an **EU-based agency that draws on 35 years of credit rating expertise**, CRIF has committed to defining new ESG rating standards and delivering legally compliant ESG assessments, including certifications for regulatory fulfilment.

This immediate alignment with the stringent 3005/2024 regulation provides the Synesgy ratings with a crucial **"regulatory-proof"** status for financial institutions operating in Europe.

This significantly reduces the regulatory integration risk for clients and positions CRIF as an essential partner for future-proofing ESG data usage in a market where compliance standards are rapidly solidifying.

Additionally, CRIF has obtained the **GRI License**, further strengthening the reliability and rigor of its assessments through the Synesgy platform.

### 5.3. Predictive Analytics and Data Science Leadership

To maximize predictive accuracy, CRIF leverages global analytical talent and a deep understanding of business processes.

The company maintains a **dedicated, cross-country team of more than 200 data scientists** worldwide focused on data-driven research and innovation. The scale of operation is considerable, with CRIF's predictive analytics tools **generating hundreds of millions of score calculations and risk decisions every year**, spanning over 18 countries.

CRIF's expertise is recognized by independent research firms such as *Gartner*, stemming from its ability to develop "augmented" analytical models that integrate diverse data sources: proprietary, open, web, alternative (like the use of alternative credit scoring data), and big data.

This extensive data input **enhances the objectivity and coherence of the resulting credit policy**. CRIF also develops specialized scorecards tailored for various business functions, including credit bureau scoring, credit risk scoring, collection scoring for debt maximization, and fraud scoring models.

### 5.4. Technology

CRIF is not just a data provider—it is a strategic technology partner capable of co-developing advanced AI systems. Its combination of deep domain expertise, cutting-edge platforms, ethical AI governance, and a collaborative innovation culture makes it a compelling choice for organizations seeking to build or enhance AI capabilities.

CRIF, through its Global Technology division, stands out as a valid and forward-thinking technological partner.

Here's a detailed articulation of why CRIF is well-positioned in this domain:

#### 1. Proven Track Record in AI Innovation

CRIF has been integrating AI into its solutions since the 1990s, starting with Credit Analytics and evolving through:

- Machine Learning and Big Data (2013)
- Computer Vision and Text Mining (2017–2018)
- Deep Learning (2019)
- Generative AI (GenAI) (2023 onward)

This long-standing commitment demonstrates CRIF's ability to adapt and lead in the AI space across multiple industries, especially financial services.

2. **CRIF GenAI Factory: A Dedicated AI Hub**

Launched in 2023, the GenAI Factory is CRIF's strategic initiative to:

- Develop, test, and scale generative AI solutions
- Integrate GenAI into core products and workflows
- Enhance operational efficiency, risk modeling, and customer experience

It brings together data scientists, engineers, product innovators, and solution architects to create scalable, ethical, and high-impact AI systems.

3. **Recognized Leadership in AI Decisioning**

CRIF was named a Leader in AI Decisioning Platforms by Forrester in 2023, thanks to its StrategyOne platform:

- Enables no-code decision automation
- Supports credit scoring, fraud detection, and business rule management
- Used in over 30 countries for real-time, reliable decision-making

This recognition affirms CRIF's technological maturity and relevance in enterprise-grade AI solutions.

4. **CRIF Global Technologies: Human-Centric Innovation**

The Global Technologies division emphasizes:

- Empathy-based management to foster innovation
- Inclusive and agile work environments
- End-to-end solution development using state-of-the-art methodologies

This culture supports sustainable innovation and attracts top talent, crucial for AI system development.

5. **AI-Powered Business Information Tools** CRIF recently launched the first conversational AI agent for business information:

- Delivers verified insights from CRIF's proprietary data
- Enables natural language interaction for due diligence, prospecting, and analytics
- Sets a new benchmark for secure, fast, and intelligent data access

This showcases CRIF's ability to productize AI in real-world, high-value applications.

6. **Ethical and Scalable AI Principles**

CRIF's AI development is guided by:

- Ethical governance and bias mitigation
- Data mastery leveraging vast proprietary datasets
- Scalability and adaptability for diverse client needs
- Continuous benchmarking and improvement

These principles ensure that CRIF's AI systems are robust, compliant, and future-ready.

