

# Verana

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## The Open Trust Layer for the Internet.

Own your identity, your data, and your digital services.

## Ecosystems Use Verana to Build Their Own Trust Networks

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Verana empowers **ecosystems**, from governments to industries, to establish **sovereign, verifiable trust networks** that they fully control.

Each ecosystem leverages Verana as a **trust anchor** to define, enforce, and evolve their credential-based governance rules.

### Who Can Build an Ecosystem?

- 🏛️ **Governments:** issue and verify digital IDs, business credentials, regulatory licenses...
- 🏥 **Healthcare:** manage professional certifications, patient access, cross-border mobility...
- 📶 **Telecommunications:** verify customer onboarding (KYC), issue proof of mobile phone number, proof of address,...
- 🏦 **Banks & Finance:** establish verified credit, KYC/AML compliance, and financial trust frameworks.
- 🎓 **Education:** issue diplomas, professional training certificates, and lifelong learning credentials.
- ...and countless others.

### Core Building Blocks

Each ecosystem defines its governance through a **modular trust architecture**:

- 📖 **Ecosystem Governance Framework (EGF)**  
Defines the mission, rules, and policies that govern the ecosystem.
- 📁 **Trust Registries**  
Maintain lists of authorized issuers, verifiers, and schema operators.
- 📄 **Credential Schemas**  
Establish standardized formats for verifiable credentials (identity, training, licenses, etc.).
- 👤 **Onboarding & Delegation**  
Onboard issuers and verifiers directly—or delegate this task to **trust registry operators**.

### Privacy-Preserving Business Models

Ecosystems can activate **new business models** that:

- Reward issuers, verifiers, and service providers for their contributions.

- Ensure privacy by default: payments and rewards are processed without exposing personal data.
- Eliminate dependency on centralized intermediaries.

## Looking Ahead

With Verana, ecosystems move beyond **centralized control** to build **autonomous trust networks**.

They gain the tools to **self-govern, incentivize participants, and enforce trust at scale**, while keeping data ownership and privacy in the hands of individuals and organizations.

## Organizations and Individuals Use Verana to Build Decentralized Verifiable Services They Truly Own

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With Verana, **anyone**, from global organizations to individual creators, can deploy their own **Verifiable Service (VS)**.

Unlike centralized platforms, Verifiable Services are **self-sovereign**, meaning you fully control your data, identity, and audience relationships.

## Why Verifiable Services Matter

Owning a Verifiable Service means:

- 🗝️ **Full Data Ownership** — you control your data and connections.
- 🛡️ **Privacy by Design** — no intermediaries exploiting or mining user interactions.
- ✅ **Proof of Authenticity** — prove ownership of your service to your audience.
- ✍️ **Signed Content** — integrate with **C2PA** so all published content is cryptographically signed by your DID.
- 🏠 **Deployment Freedom** — host anywhere: cloud, self-hosted, or migrate freely at any time.

This is a radical departure from today's platforms, where your content and connections are **rented** rather than **owned**.

## Examples of Verifiable Services

- 📢 **Decentralized Social Channels** e.g., the official channel of an influencer who owns 100% of their reach.
- 🤖 **Decentralized AI Agents** e.g., a personal AI assistant that runs under your DID and respects your privacy.
- 💬 **Decentralized Messaging & Chatbots** e.g., a customer support chatbot for a mobile operator, verifiable and portable.
- 🎬 **Decentralized Content Delivery Channels** e.g., a film catalog directly published by a studio, with provenance guaranteed.
- ...and many more innovations waiting to be built.

## The Big Picture

Verifiable Services give individuals and organizations **true digital sovereignty**.

They are not bound by the rules of a centralized platform, cannot be de-platformed arbitrarily, and can move freely between hosting providers, all while maintaining verifiable trust and privacy.

## Verifiable Service Controllers Register their Services in the Verifiable Service Directory

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Anyone can register a **Verifiable Service** in the **Verifiable Service Directory**. Once registered, services are automatically crawled, their credentials dereferenced and verified, and then indexed in the **Verana Trust Resolver**. Think of it as the **yellow pages of verifiable data**, but cryptographically guaranteed.

With this index in place, users, services, and apps can perform **advanced trust-based queries**, such as:

- 🔍 *Where is Alice's AI Assistant whose attached **AI Assistant Credential** shows the owner name "Alice"?*
- 🌐 *Which social channels hold a **Blue Network Credential** from **Ecosystem DEF** and have an avatar credential containing **@bob\_influencer**?*
- 🛍️ *Which services in Bristol, UK present an **E-commerce Credential** from issuers of the **Ecosystem Ecommerce Global Alliance** and sell **baby shoes**?*
- 🏨 *List all services with a valid **Hotel Credential** from **Ecosystem PMS Vendor ABC** located in **France**.*
- 🛠️ *Show certified plumbers who hold a **Plumber Credential** from **Ecosystem Verified Workers** in **Bogotá**.*

The **Trust Resolver** ensures search results are based solely on **verifiable data** contained in verifiable credentials—not arbitrary or opaque ranking algorithms.

This fundamentally **disrupts today's economy** of advertising-driven visibility (Google Ads, Facebook Ads, etc.) and replaces it with a **decentralized economy of trust**, where:

- ✅ Ecosystems certify claims and issue credentials.
- ✅ Results are transparent and verifiable.
- ✅ Businesses and individuals compete on **trust and authenticity**, not ad budgets.

The result is a **public, verifiable database of claims**, open and searchable by anyone, that shifts value from centralized intermediaries to decentralized ecosystems.






## App Developers Create a New Class of Browsers: Verifiable User Agents

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Verifiable User Agents (VUAs) are a new category of applications that **aggregate and interact with decentralized Verifiable Services (VSs)**. Instead of relying on centralized APIs or walled-garden platforms, these apps query the **Verana Trust Resolver**, making any compatible Verifiable Service instantly visible and usable.

## What VUAs Can Be

VUAs open the door to a wide variety of decentralized applications:

-  **Decentralized Social Networks** — e.g., an X-like network built from decentralized Social Channels.
-  **Chatbot & AI Assistant Browsers** — apps for discovering and talking with official chat services and personal AI assistants.
-  **Decentralized Video Apps** — streaming apps that aggregate film catalogs published by creators.
-  **Decentralized Hotel PMS Apps** — apps where users can search hotels powered by compatible PMS software.
-  **E-commerce Aggregators** — apps that list all businesses using e-commerce Verifiable Services.

Because indexing is trust-based, inclusion is **automatic and verifiable**: no gatekeepers, no paywalls.

## Business Models for VUA Builders

VUA developers can also create their **own Ecosystem** within Verana. This allows them to:

- Define their **Ecosystem Governance Framework (EGF)**.
- Issue or sell **credentials** to Verifiable Service owners.
- Control how services appear within their VUA app.

When a service owner attaches such a credential to their Verifiable Service's DID, they **automatically become discoverable** inside the VUA.

## Example: Blue Network

Imagine an influencer running a **Social Channel Verifiable Service**. To appear in the **Blue Network VUA**:

- They can obtain a **free credential** from Blue Network, making their channel visible in the app.
- Or, they may purchase a **premium credential**, which guarantees that their content feed remains **ad-free**.

This creates a **sustainable, privacy-preserving business model** for app developers while giving service owners full autonomy over their visibility and monetization strategy.

## Why This Matters

Traditional apps depend on opaque algorithms and advertising-driven models.

**VUAs flip this model**: visibility and ranking are based on **verifiable credentials and ecosystem-defined governance**, ensuring fairness, privacy, and transparency.

## Business Models

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Verana empowers ecosystems to design and enforce **privacy-preserving business models** built on Verifiable Credentials. These models define **who pays, when, and how rewards are distributed** among participants, ensuring fairness and transparency without exposing sensitive data.

#### Examples:

- **Credential Holders** pay **issuers** to be verified and obtain a credential.
- **Issuers** pay the **ecosystem owner** when issuing credentials.
- **Verifiers** pay both the **issuer** and the **ecosystem owner** when requesting credential presentations from holders.

Business models are **fully customizable**, enabling ecosystems to tailor incentives to their unique needs. A percentage of all fees is automatically distributed to **Verifiable User Agents (VUAs)**, ensuring wallets, apps, and browsers that power user adoption are rewarded too.

## Trust Deposit

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A portion of trust fees collected in business models is allocated to **Trust Deposits** for both payers and payees.

A **Trust Deposit** acts as a **stake** that grows with participant activity across ecosystems. It reflects engagement, integrity, and contribution to the Verana Trust Network, serving as a foundation for decentralized accountability.

#### Key Purposes of Trust Deposits:

Purpose	Description
<b>Incentivize Good Behavior</b>	Participants risk losing part of their deposit if they violate governance rules.
<b>Signal Serious Intent</b>	Ensures participants have "skin in the game," discouraging fraud, spam, and low-effort engagement.
<b>Enable Slashing</b>	Deposits can be reduced or removed when trust policies or contractual roles are breached.
<b>Ecosystem-Specific Control</b>	Each ecosystem can only slash deposits linked to its activities, preventing abuse.
<b>Non-Custodial</b>	Deposits are fully on-chain, beyond the reach of centralized authorities.
<b>Rewards</b>	Deposits generate yield — the more participants engage in ecosystems, the higher their returns.

This mechanism makes governance **self-enforcing**, combining **incentives** with **accountability** in a decentralized way.

## Trust Reputation

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Trust Reputation transforms on-chain activity into a **transparent and verifiable measure of credibility**. It is built on factors such as:

- Start date of participation in Verana.
- Size of the participant's Trust Deposit.
- Ecosystems they actively contribute to.
- Number of credentials issued and/or verified.
- Governance history, including slashes.

Trust Reputation is **publicly accessible** and visible across Verifiable User Agents (VUAs). It can be verified by services, apps, and even AI agents, enabling peers to decide who they trust before engaging.

A **Hall-of-Fame dashboard** highlights leading participants and their deposits, making the reputation economy not only verifiable but also transparent and rewarding.

## Verana is an Infrastructure, not a Platform

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Verana is a **public infrastructure** designed for openness, flexibility, and decentralization:

- **100% open source**: free to audit, extend, and deploy anywhere.
- **100% decentralized**: no central operator or single point of control.
- **DID method agnostic**: compatible with any DID method.
- **Credential format agnostic**: supports all standard Verifiable Credential formats.
- **Wallet neutral**: works with any compliant digital wallet.

Protocol based. No SaaS, no subscription, **no vendor lock-in, no technology lock-in**: Verana ensures that ecosystems, organizations, and individuals own their infrastructure and remain in control.