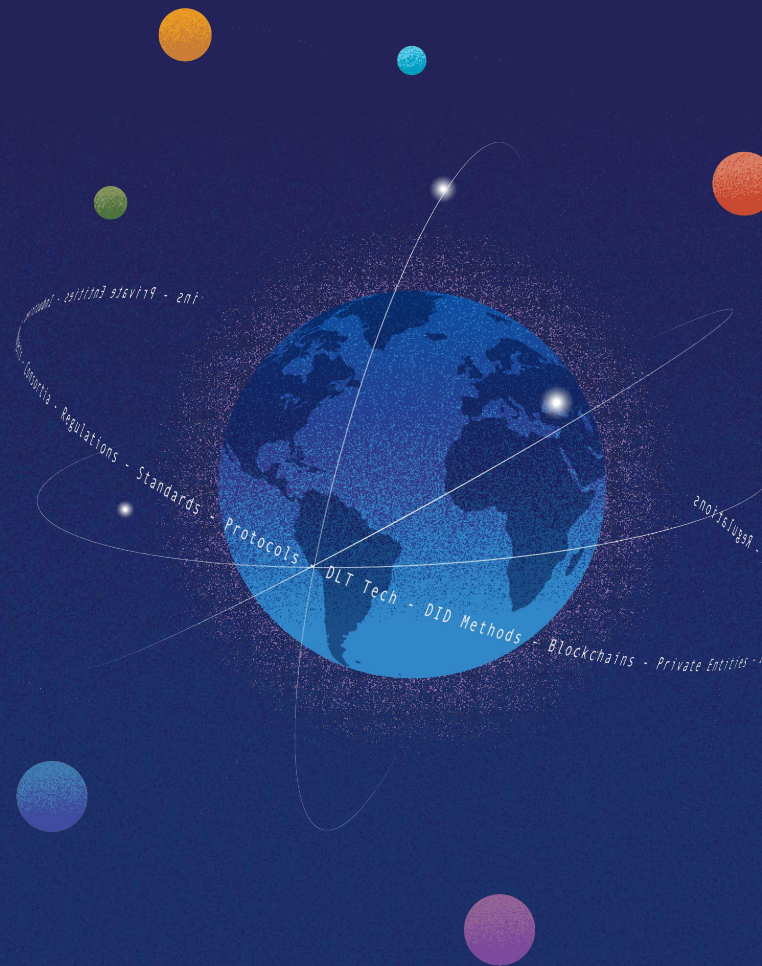




KEY STATE CAPITAL

Decentralized Digital Identity in the last 5 years & where we stand today



The multi trillion dollar problem

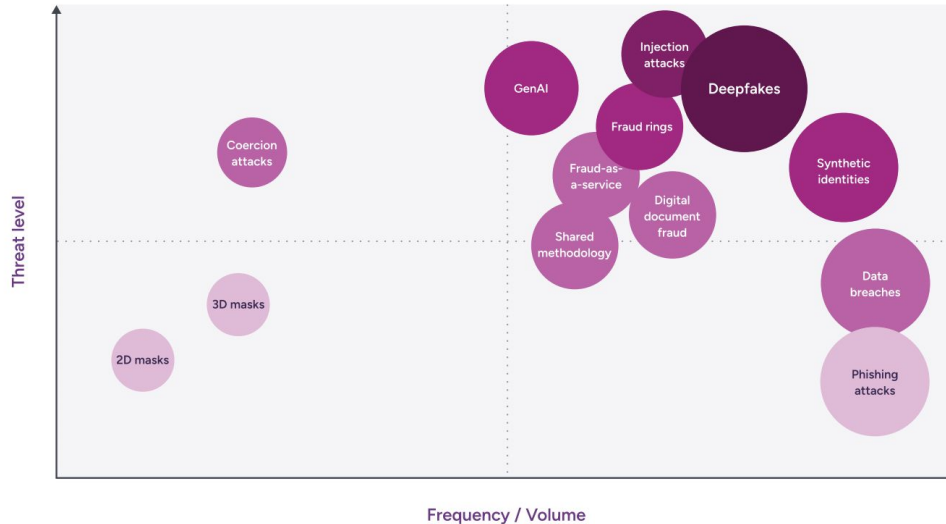
Identity Fraud

91% of organizations reported an identity-related breach in the past year.

Average time to identify+contain a data
breach ~ 258 days (~9 months)

Global cybercrime cost projected to
reach **US\$ 10.5 trillion** in 2025

Fraud Landscape



Deepfake attempts occurred at a rate of one every five minutes in 2024

Deepfakes account for 40% of all biometric fraud

Most vulnerable document type:
National ID cards

National ID Cards Remain Top Target for Fraudsters

Across all document fraud, 40.8% target national ID cards.

Not all national ID cards are designed for international travel (unlike passports), which means they don't need to adhere to International Civil Aviation Organization (ICAO) guidelines. With fewer security features and less robust guidelines, they are easier targets for fraudsters.

Documents from The Philippines, France, and Italy were top targets for fraudsters in 2024. French and Italian documents both have older versions of documents in circulation, which make them prime targets for fraudsters. They've also been around for long enough that there are likely many templates available online.

Fraud by document type

40.8%
National ID Card



25.1%
Driving License



16.3%
Passport



9.9%
Tax ID



4.5%
Residence Permit

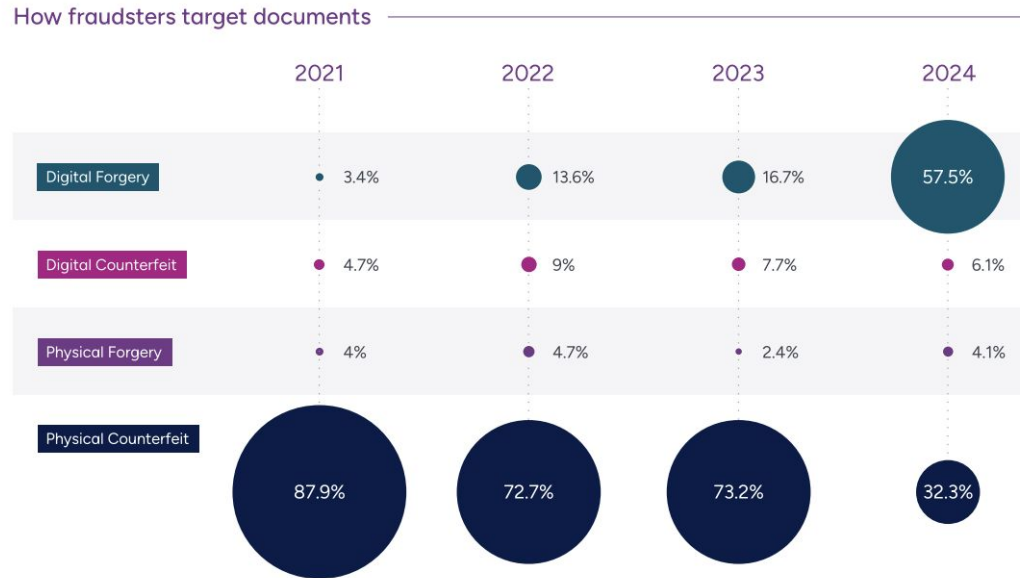


1.6%
Voter ID

1.8%
Other

Source: 2025 Identity Fraud Report, Entrust Cybersecurity Institute

For the first time ever, fraudsters are creating more digital forgeries than physical counterfeits, with digital forgeries accounting for 57.46% of all document fraud



Source: 2025 Identity Fraud Report, Entrust Cybersecurity Institute

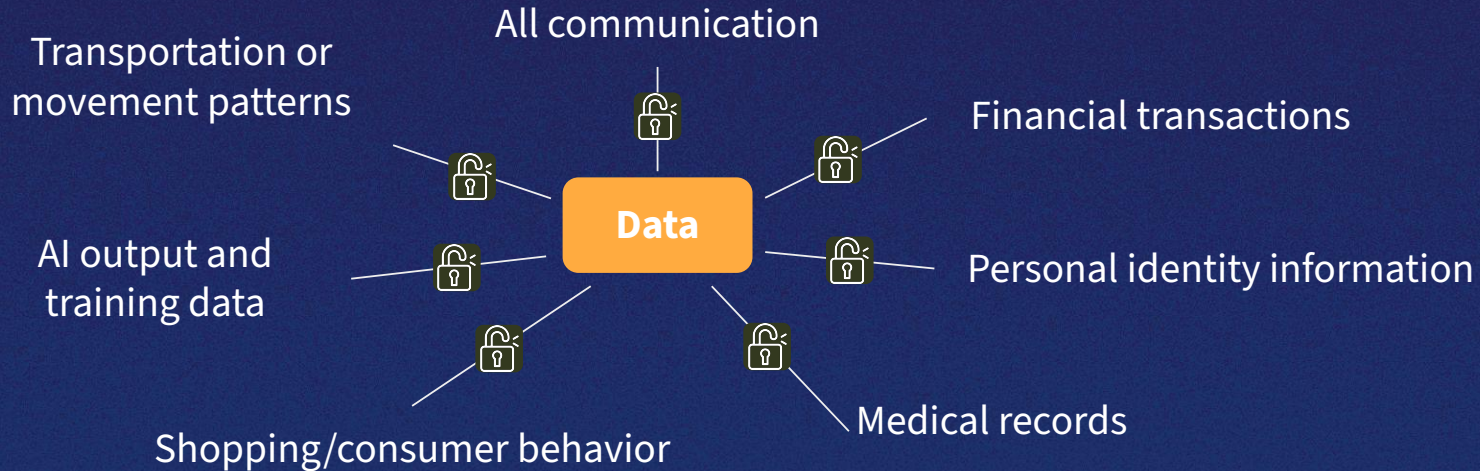
By 2029, the global cost of cybercrime is estimated to reach **\$15.63 trillion**.

Source: 2025 Identity Fraud Report, Entrust Cybersecurity Institute

The internet is
missing a
trust layer.



**There is currently no way to create globally
verifiable data in a truly secure way**



Insecure Key exchanges & shared secrets are everywhere

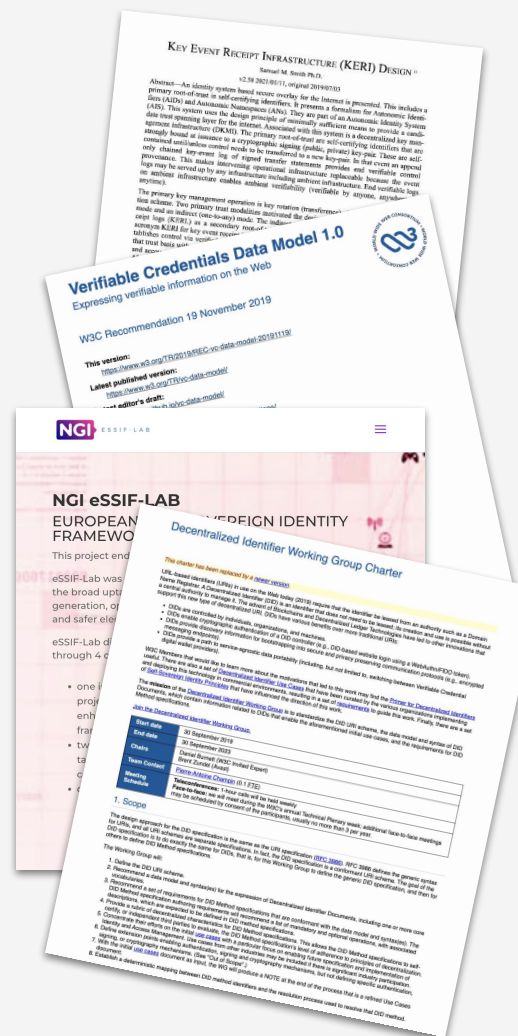


Decentralized Digital Identity in the last 5 years & where we stand today



The state of SSI before 2020

- Sovrin Foundation, Decentralized Identity Foundation, and Evernym were already founded
- W3C Verifiable Credentials and Decentralized Identifiers Working Groups were already established
- W3C had already published Verifiable Credentials Data Model 1.0 as Recommendation
- KERI (Key Event Receipt Infrastructure) White Paper was published
- eSSIF-Lab was the broad uptake of generation, and safer elements
- Hyperledger codebase had already been created
- EU launches eSSIF-Lab, introducing the European Self-Sovereign Identity Framework (ESSIF) as an innovation program
- Internet Identity Workshop had already discussed decentralized identity for years



2020-2021

Acceleration

2020-2021: Acceleration

- COVID changed everything
 - How do we verify something about someone digitally, across borders, without centralized systems?
- Use-case exploration:
 - IATA Travel Pass for airline verification
 - IBM Digital Health Pass implementation
 - COOV in Korea, one of the largest SSI deployments ever
 - EU Digital COVID Certificate at continental scale
 - IBM Digital Credentials
 - Hyland Credentials
- Industry growth of 109%



AOK
Pass

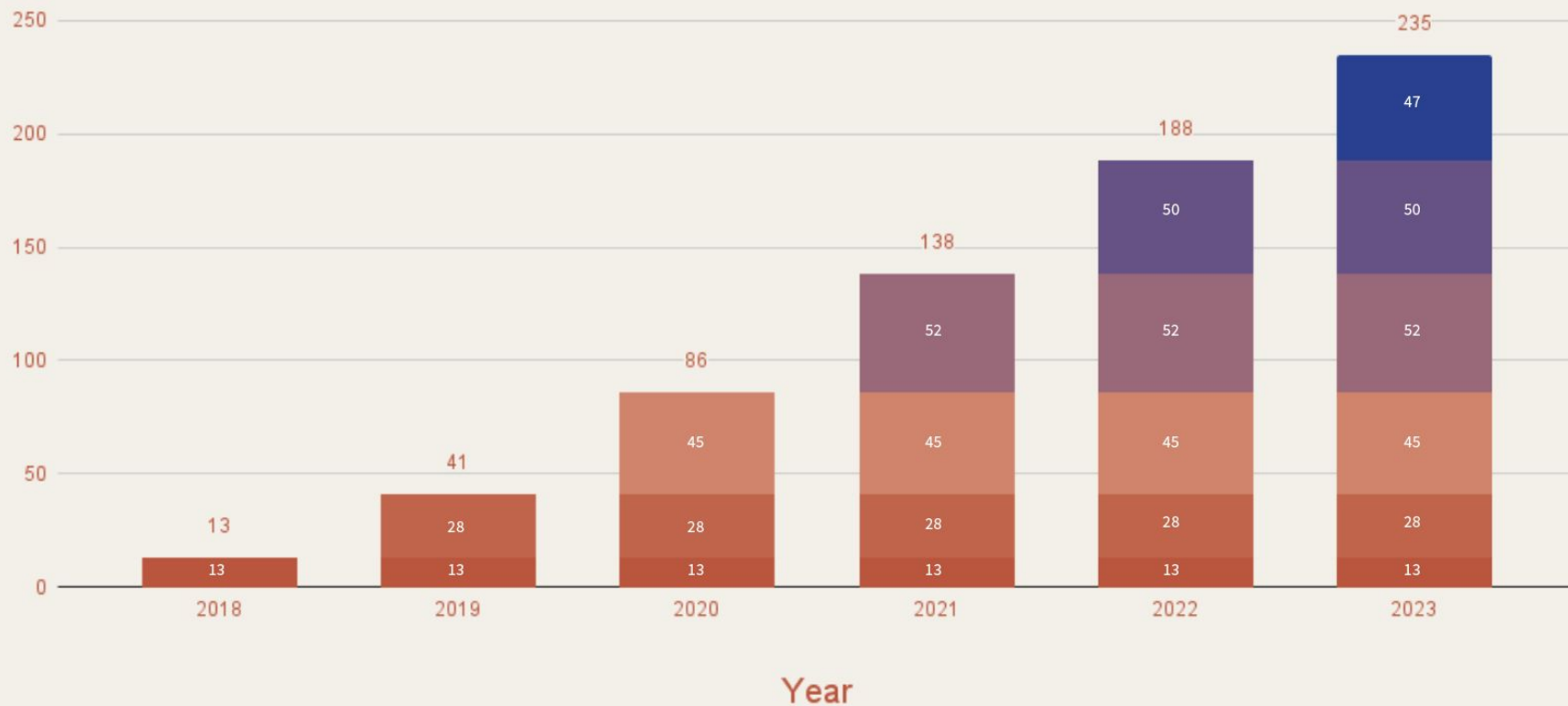


IATA
Travel
Pass



Coov

PROJECT LAUNCHED PER YEAR CUMULATIVE (JAN. 2018 - JULY 2023)



2021-2022

Institutionalization & Standards

Institutionalization

European Commission proposes framework for European Digital Identity (EUDI) Wallet

- Validates SSI at political scale
- Creates regulatory driver for adoption
- Enforced industry alignment

Trust Over IP Foundation publishes version 1 of the Technology Architecture and Governance Framework

- A common language for the industry (shared terminology and concepts)
- Introduced a blueprint for building interoperable identity ecosystems
- Established governance as a major component
- Created a structure that allowed diverse technologies to be designed under a unified model

Standardization

- W3C approves Decentralized Identifiers (DIDs) v1.0 as a recommendation
- OpenID for Verifiable Credentials (OpenID4VC) White Paper is published
- ISO/IEC 18013-5 (mDL) was published

2022-2024

Deployments

SSI leaves the labs

- Bhutan launches first national SSI-based ID
- EU EUDI Wallet large-scale pilots begin across 27 member states
- Wider adoption of mDLs in USA
- Latin America and Oceania launched the majority of their existing projects

2023-2025

Regulatory Hardening

2023-2025: Regulatory hardening

Regulation (EU) 2024/1183 (eIDAS 2.0) is formally adopted

- Mandatory issuance of EUDI Wallet
- Technical, security, interoperability requirements
- Roll-out timelines

Swiss e-ID referendum accepted

- Creates the legal basis for a state-issued electronic identity (e-ID)

Overall understanding of the last 5 years



**COVID
accelerated
digitalization**



**Standards
matured**



**Governments
began adopting
decentralized
identity**



**First time the
industry can be
measured**

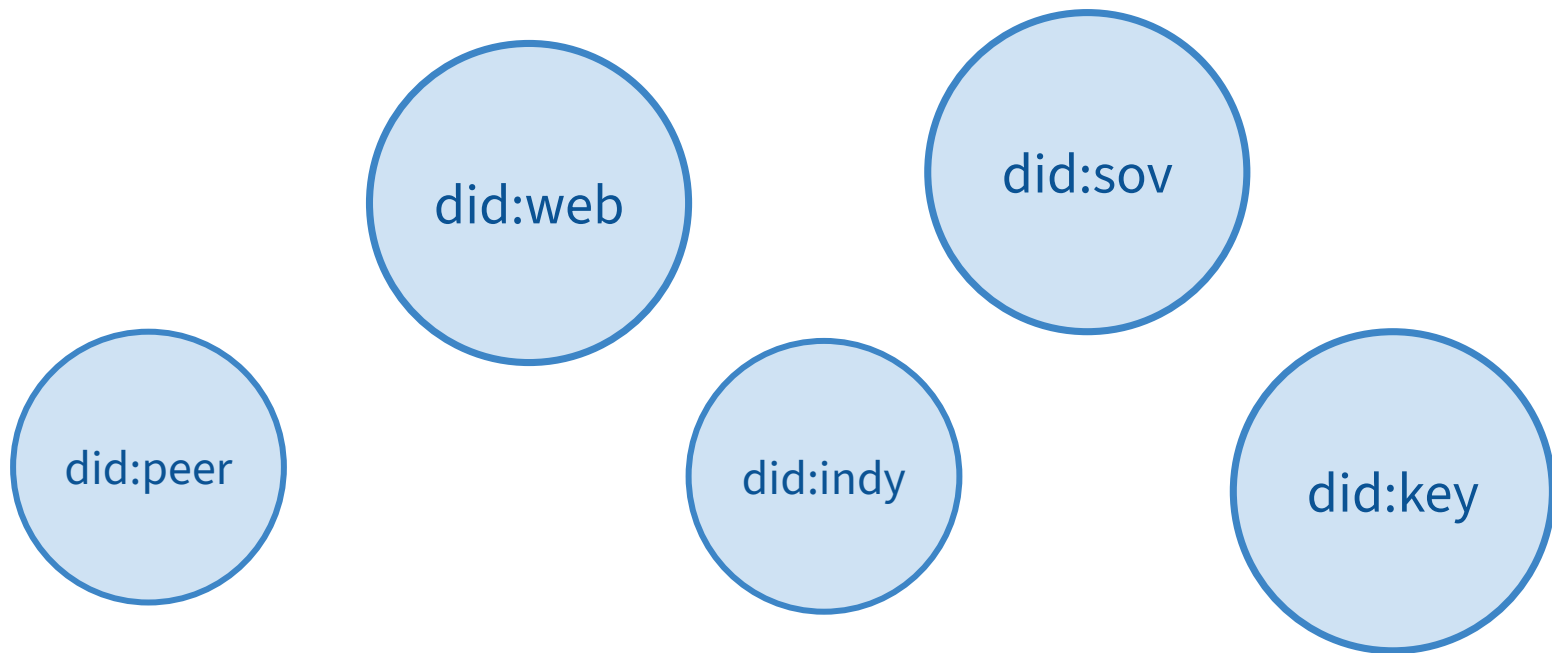
2025

Where we stand

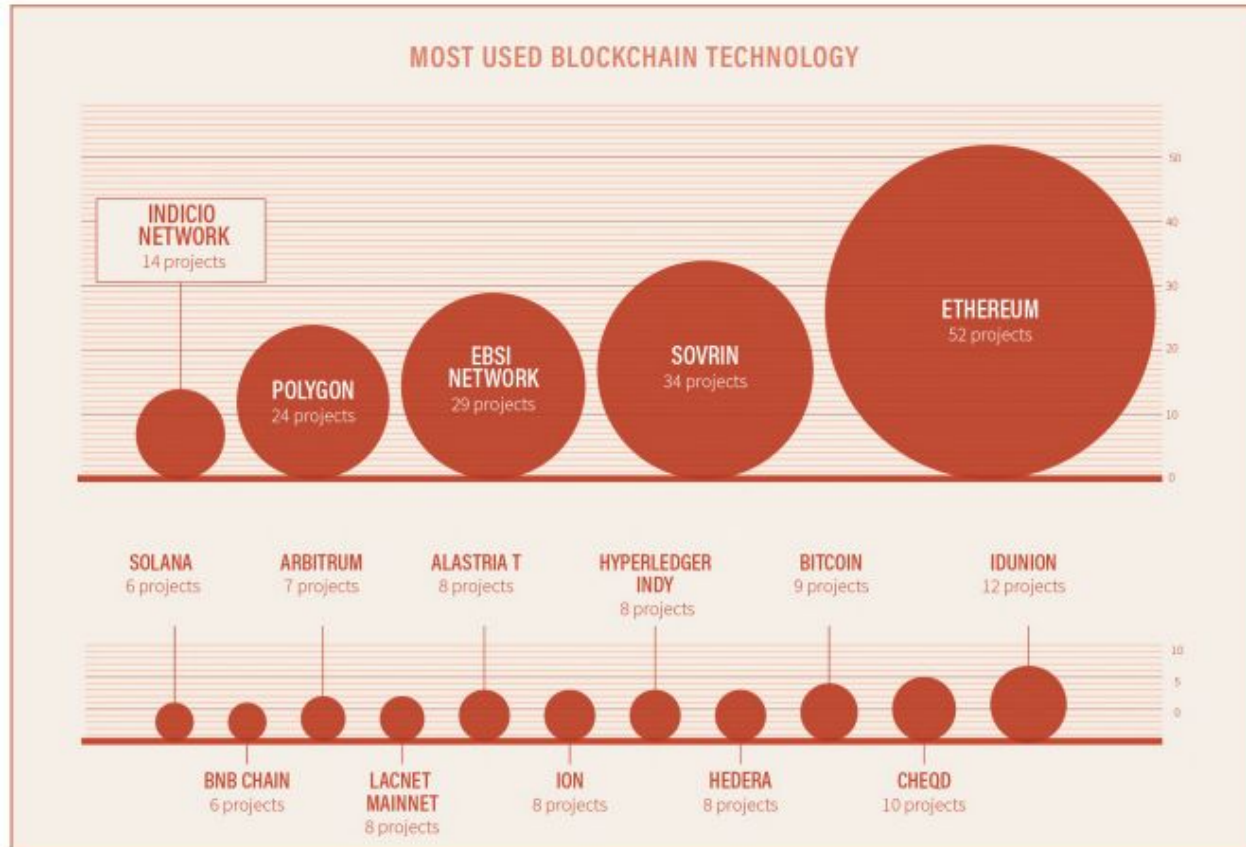


WOTM Findings: DID Method Consolidation

Over 130 did methods



Blockchain Infrastructure



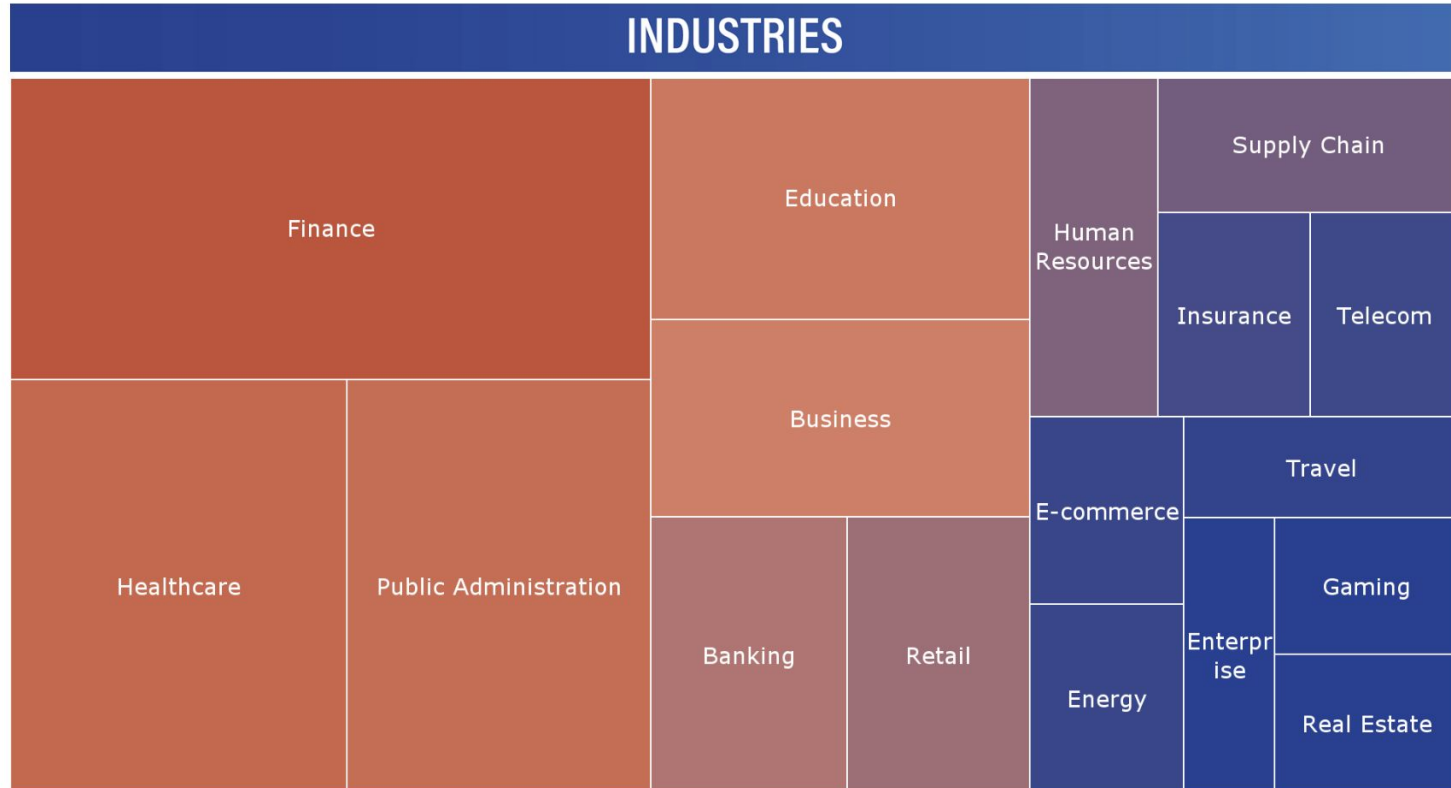
Standard Consolidation

W3C Verifiable
Credentials Data
Model

W3C
Decentralized
Identifiers

OpenID for
Verifiable
Credentials

WOTM Findings: Vertical evolution



Emerging Vertical

AI & Identity

- AI systems need verifiable identities
- Content requires provenance verification
- Datasets need verifiable lineage tracking
- AI agents require credentials



Regional Divergence

The evolution of decentralized identity is not a single global story. It is multi regional stories that evolved independently and only now are converging into an interoperable ecosystem.

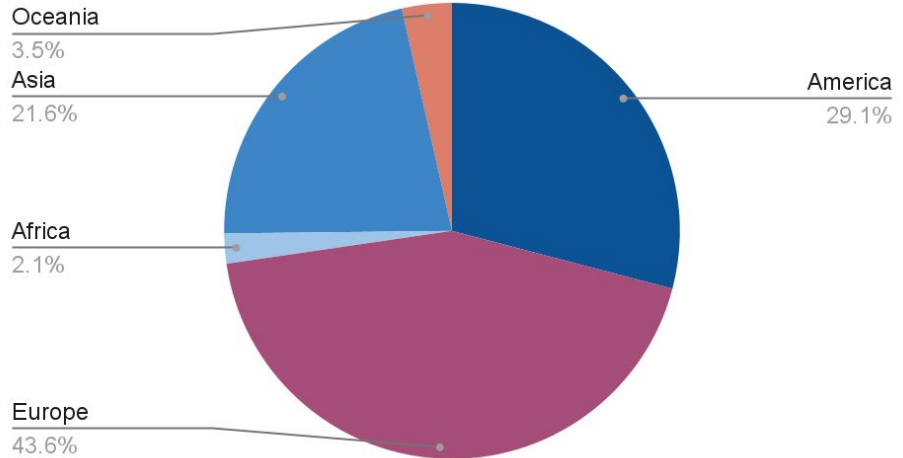
Leadership Models

- Europe → Regulation-led
- Asia → Deployment-led
- North America → Market-led

Missing adoption

- Oceania → Use-case innovation
- LATAM → Government modernization
- Africa → Humanitarian response

Projects



From fragments to infrastructure

Five years of evolution: from experiments to globally coordinated, multi-vertical ecosystem,
measured for the first time by the Web of Trust Map

Help the Web of Trust
**grow, expand and
evolve.**





Get more insights
from the report and
get full access to the
data with the API!

WEBOFTRUST.ORG/REPORT

WEB OF TRUST MAP

THE GLOBAL INFRASTRUCTURE OF DECENTRALIZED DIGITAL IDENTITY



Submit new projects



Get access to all the data with the API!

API Overview

The Web of Trust Map API offers programmatic access to our comprehensive dataset of decentralized identity initiatives. Built on REST principles, the API provides endpoints for accessing projects, entities, DID methods, blockchain instances, standards, regulations, and network visualization data.

All data is available under the Creative Commons BY 4.0 license. The API makes it easy to integrate the data into your research, applications or analysis tools.

The API base URL is `https://www.weboftrust.org/api/v1`. All endpoints support standard HTTP methods and follow RESTful conventions for resource access and pagination.

Complete Documentation: </api/docs>

Swagger UI: </swagger-ui.html>

OpenAPI specification: </openapi.yaml>

Our endpoints cover the full spectrum of data available in the Web of Trust Map:

- **Projects & Entities:** Detailed information about identity projects and organizations
- **Technology Stack:** DID methods, blockchain instances, and technical standards
- **Regulatory Landscape:** Regulations and compliance frameworks by jurisdiction
- **Network Analysis:** Graph data for relationship visualization and analysis
- **Geographic Data:** Country and regional statistics
- **Search Capabilities:** Simple and advanced search with filtering

Request API Key

To access the API, request an API key. After confirming your email, you'll receive your key by email.

[Request Key](#)

www.weboftrust.org/api

Co-contributors





Thank you!

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