



# **Digital Public Infrastructure & Finternet**

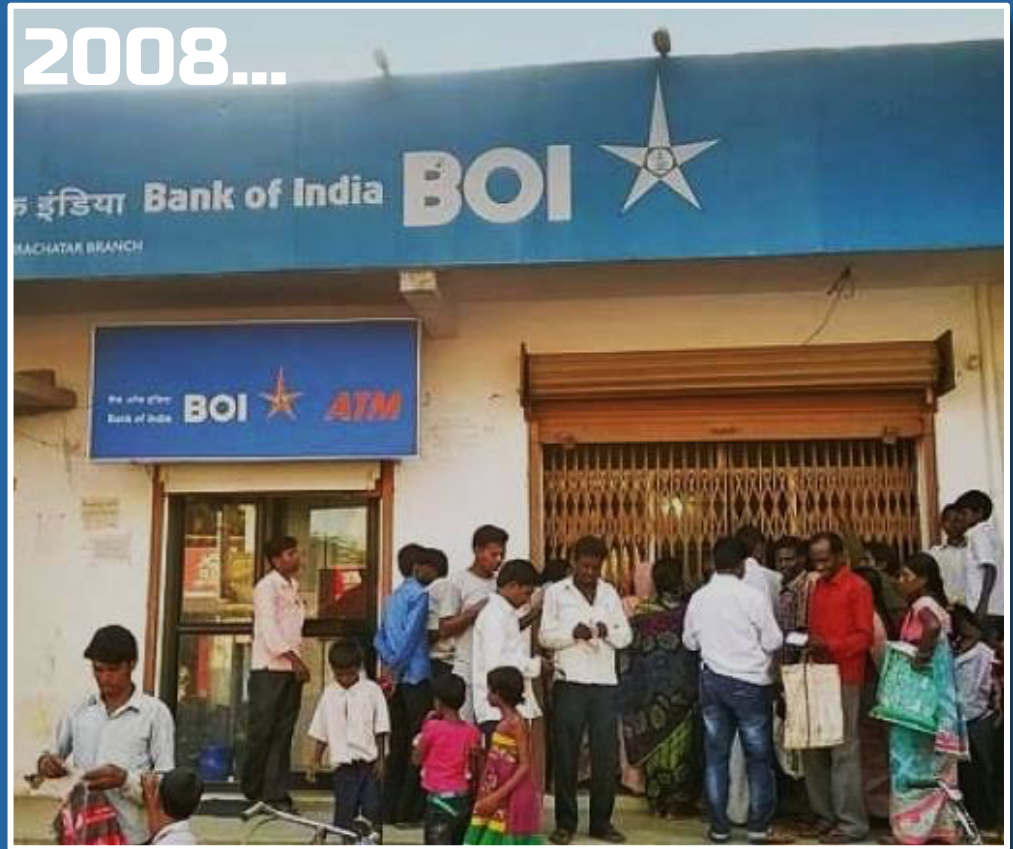
Siddharth Shetty, September 2024

In India, back in 2008...

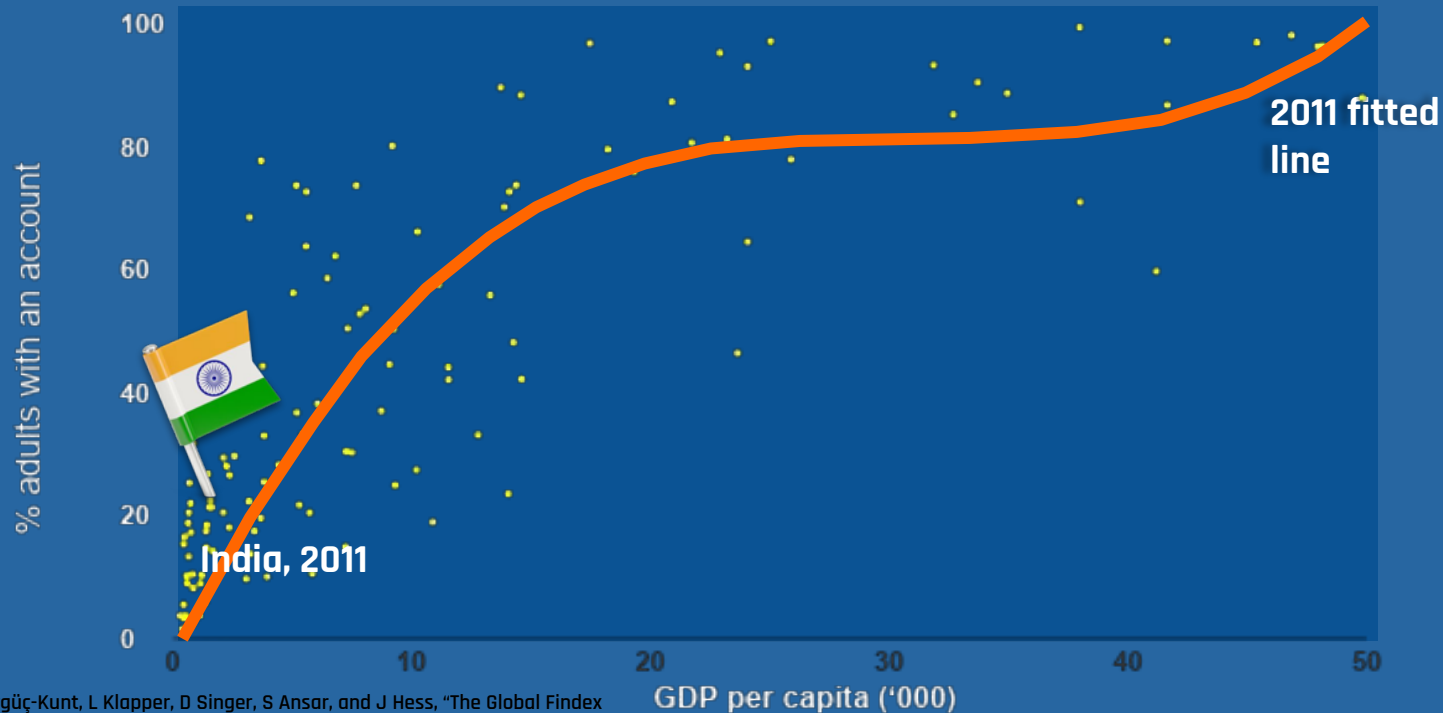
17%

had bank accounts

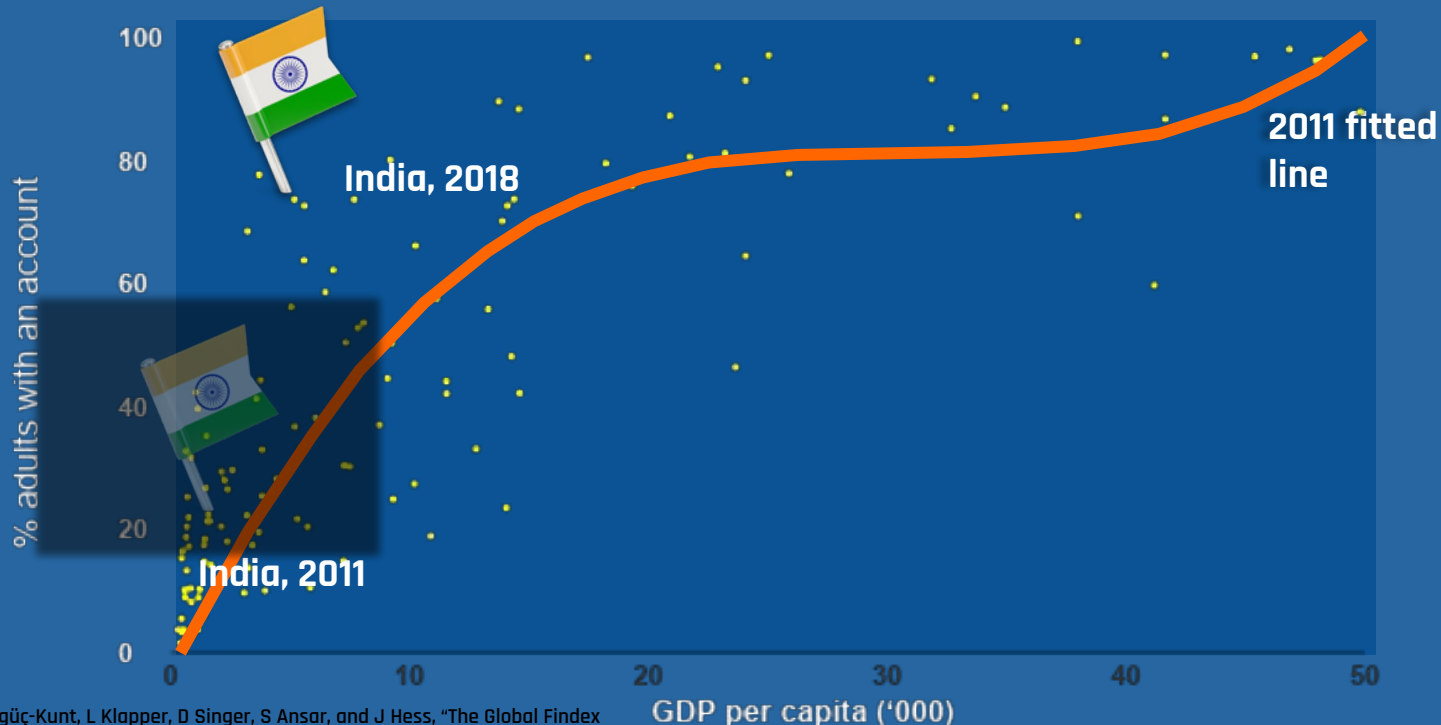
Financial exclusion  
was rampant



# The unbanked number in 2011 was in line with the global scenario

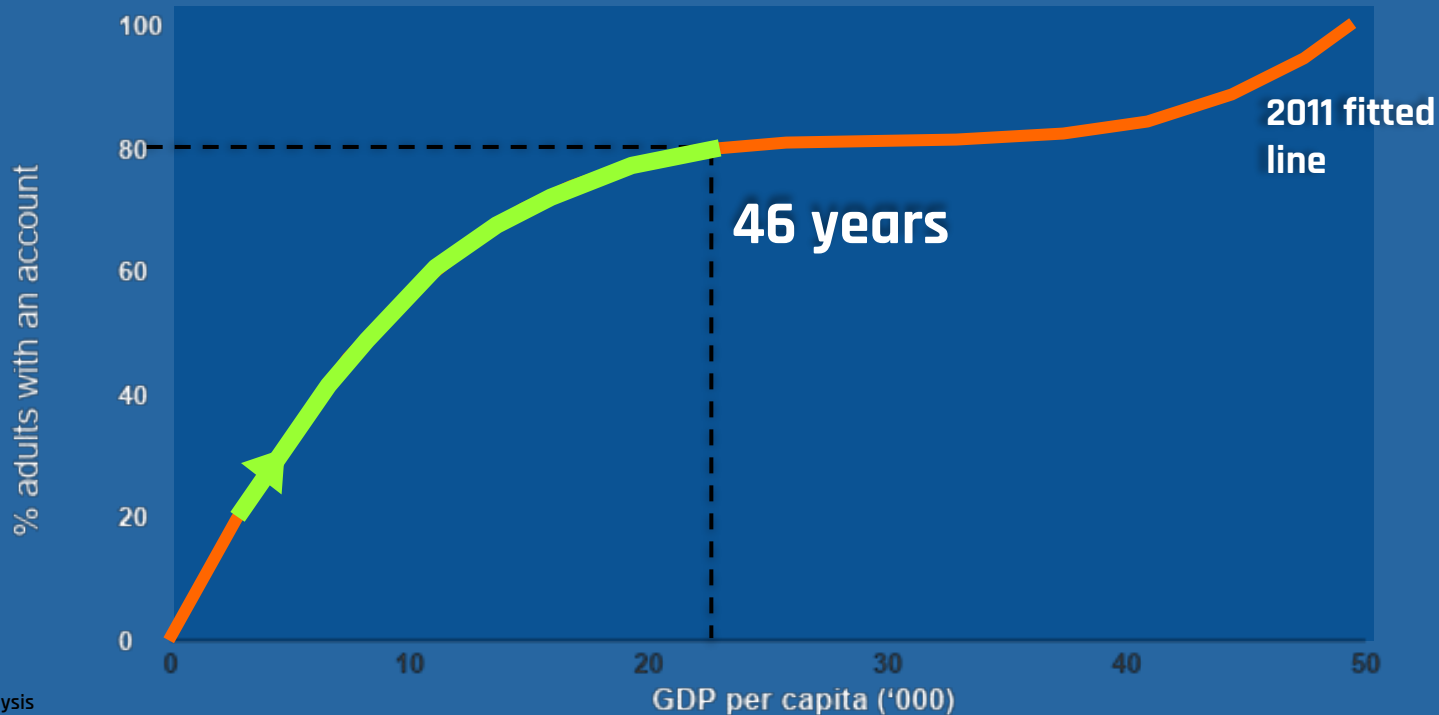


# By 2018 India had massively jumped ahead in financial inclusion



Source : A Demirgüç-Kunt, L Klapper, D Singer, S Ansar, and J Hess, "The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution", World Bank, 2017

# Traditional development would have taken half a century



# This acceleration was due to 3 things



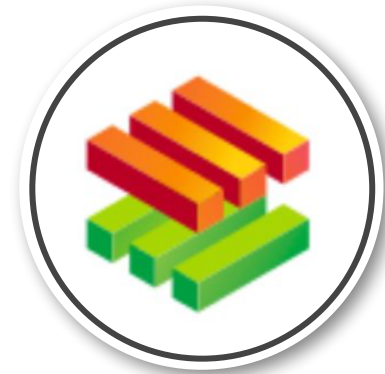
**Political Will**



**Proactive Central Bank**



**Digital Public Infrastructure**





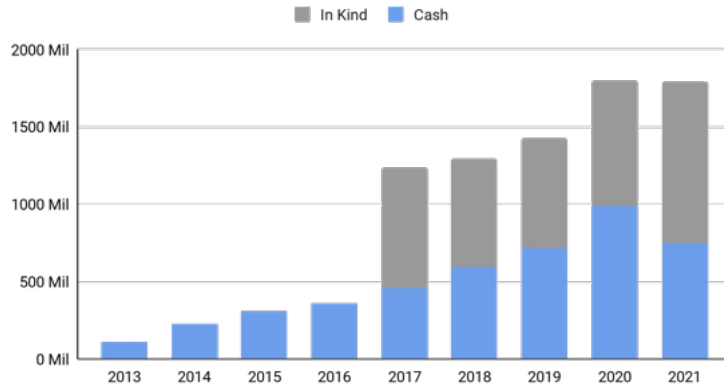
01

# Foundational DPs

The stack that enabled India's rapid rise in digital

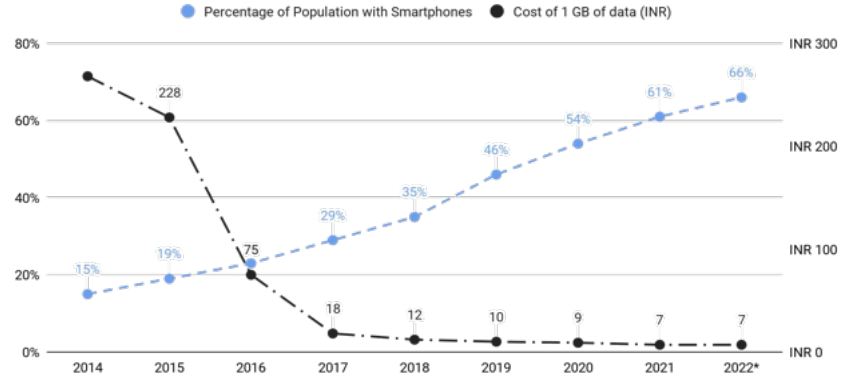
# Biometric ID led to a dramatically lower onboarding cost. Bringing hundreds of millions into banking & online

Direct Benefit Transfers



Direct Benefit Transfer to low-cost Bank Accounts

Smartphones and Data Costs



Deep penetration of 4G Connectivity & Smartphones

eKYC



Sources: dbtbharat.gov.in & Blume research



# DigiLocker makes transactions paperless



**249 Mn**

Users of Digilocker as of  
February 2023

**6.3 Bn**

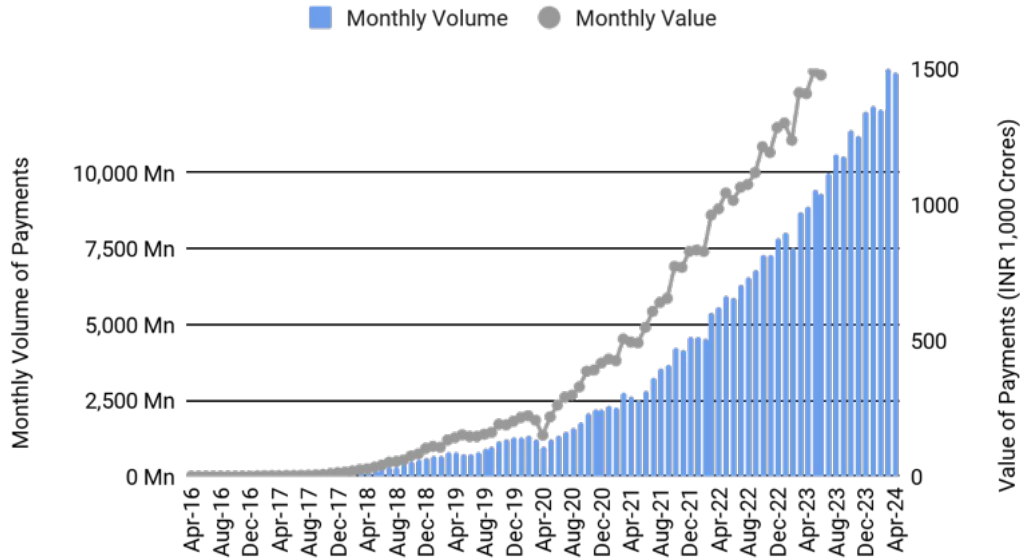
Issued Documents

**1684**

Document Issuers

# UPI brings “Handy” QR payments for everyone

UPI Growth

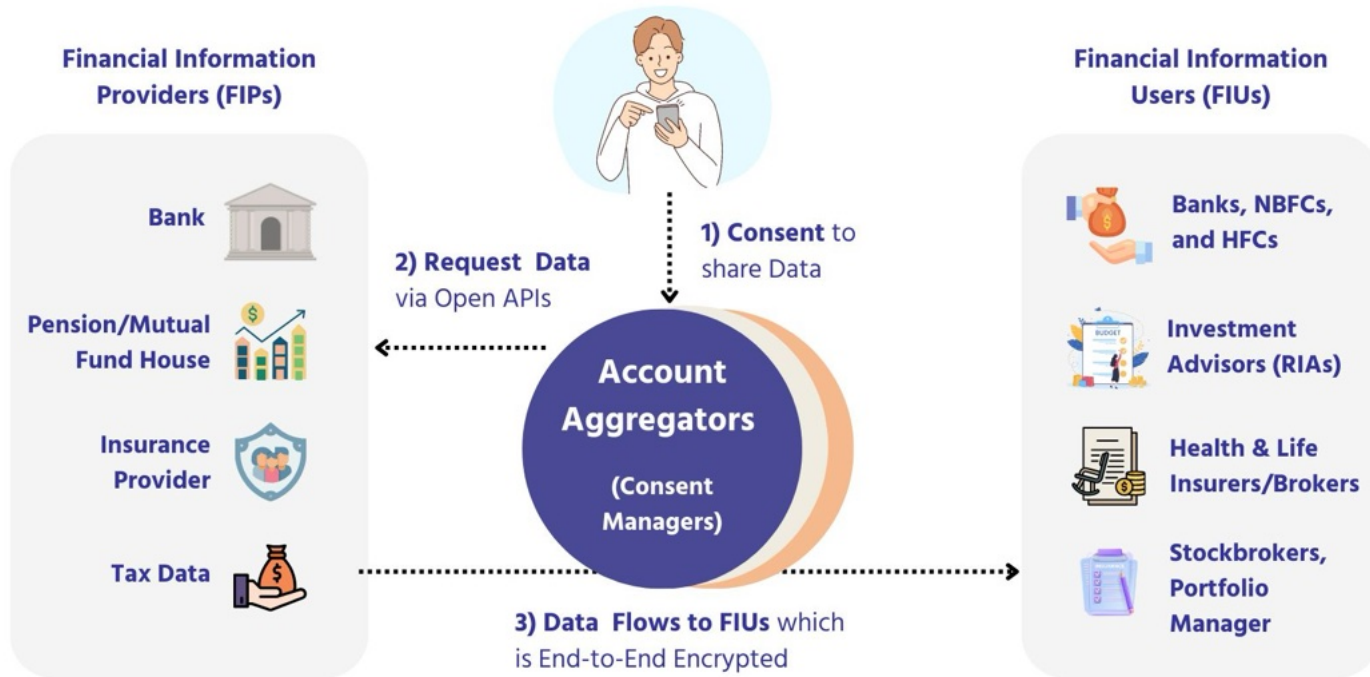


**DPIs create data as a  
natural byproduct**

**With Data Sharing DPIs,  
this can be unleashed as  
powerful Digital Capital**



# The Account Aggregator ecosystem – India's DPI for consent-based data sharing



**2.12 Billion financial accounts across banking, securities, insurance, pensions, & tax**

# Population-scale Rollout of the Account Aggregator Ecosystem

**103 Mn+**

cumulative consents fulfilled

**1 Bn+**

Cumulative Data Pulls

**84 Mn+**

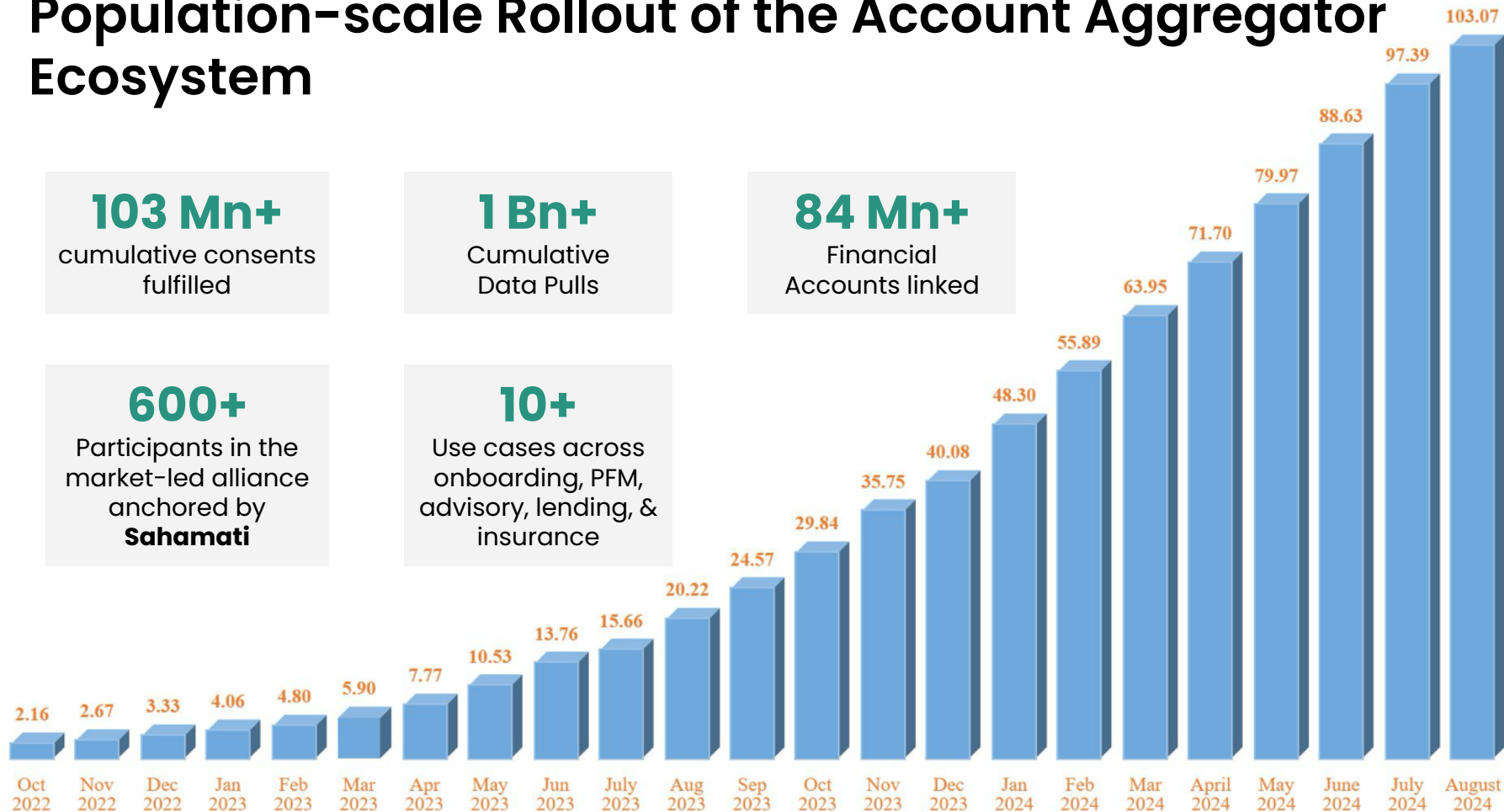
Financial Accounts linked

**600+**

Participants in the market-led alliance anchored by **Sahamati**

**10+**

Use cases across onboarding, PFM, advisory, lending, & insurance



# DPI creates valuable startups





02

# Finternet

Imagine an interconnected financial ecosystem that empowers individuals and businesses



# Financial **innovation and inclusion** has progressed around the world

Money

Digital Banking

Open Finance

Payments

Exchanges

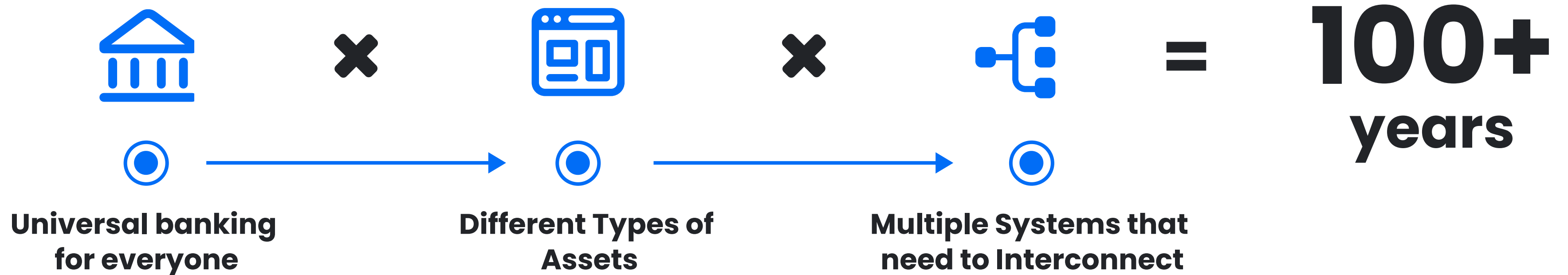
Data Sharing



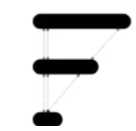
and many more...



# Today, users want more **choice** over their life

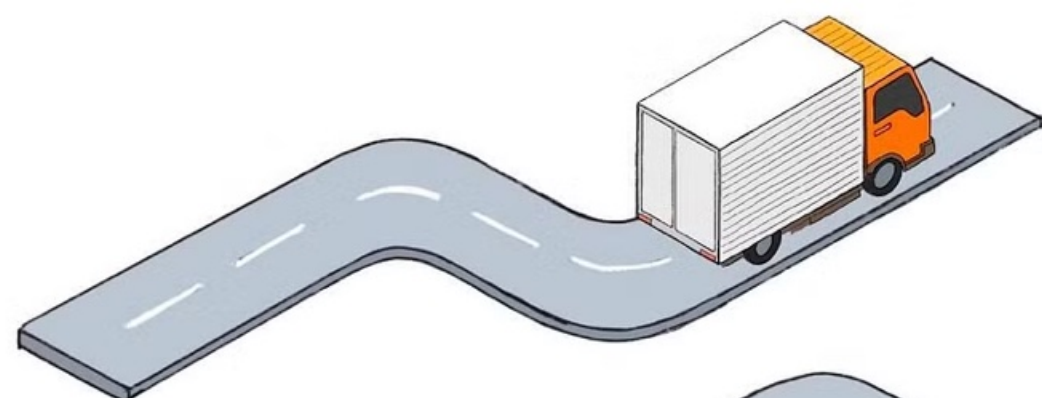


**Billions of people are being held back from opportunities**



# Today's financial infrastructure is **purpose-driven** and struggles to serve society's needs

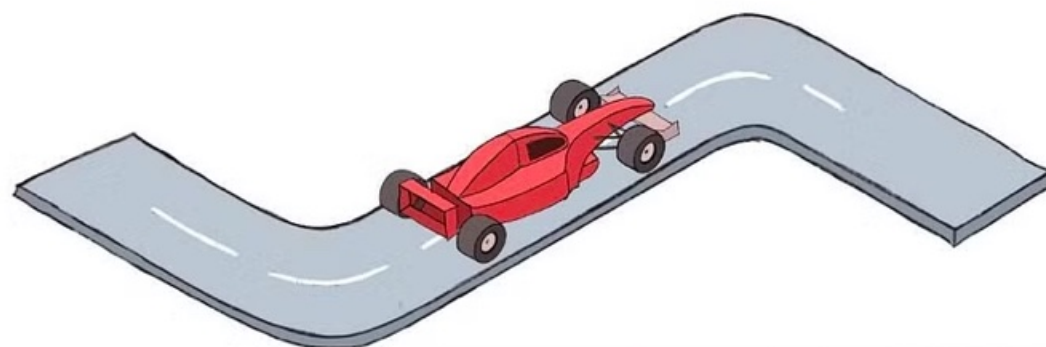
P2M



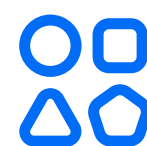
G2P



P2P



We're building a **new road** for **each** new vehicle!



**Siloed**



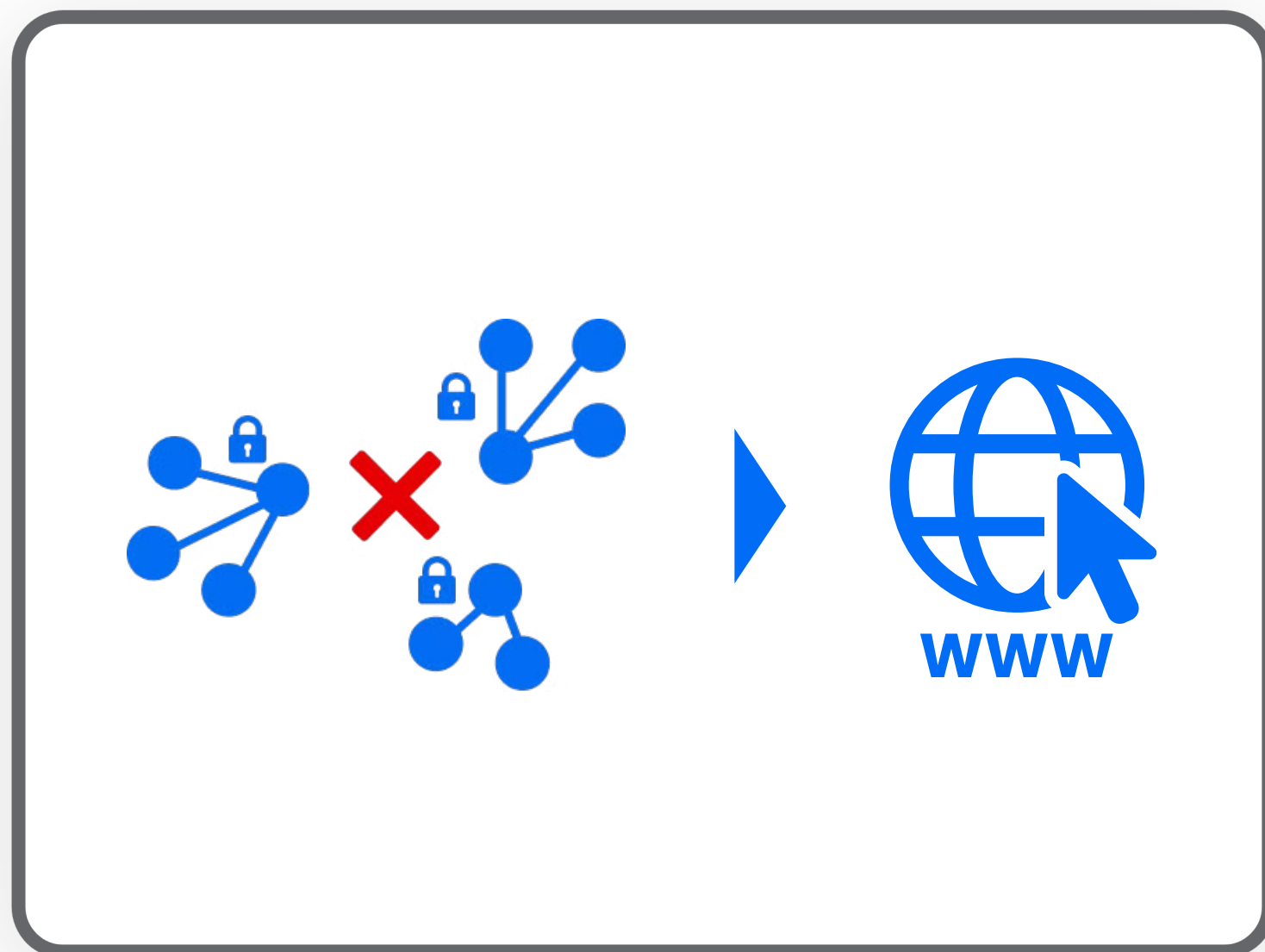
**Slow**



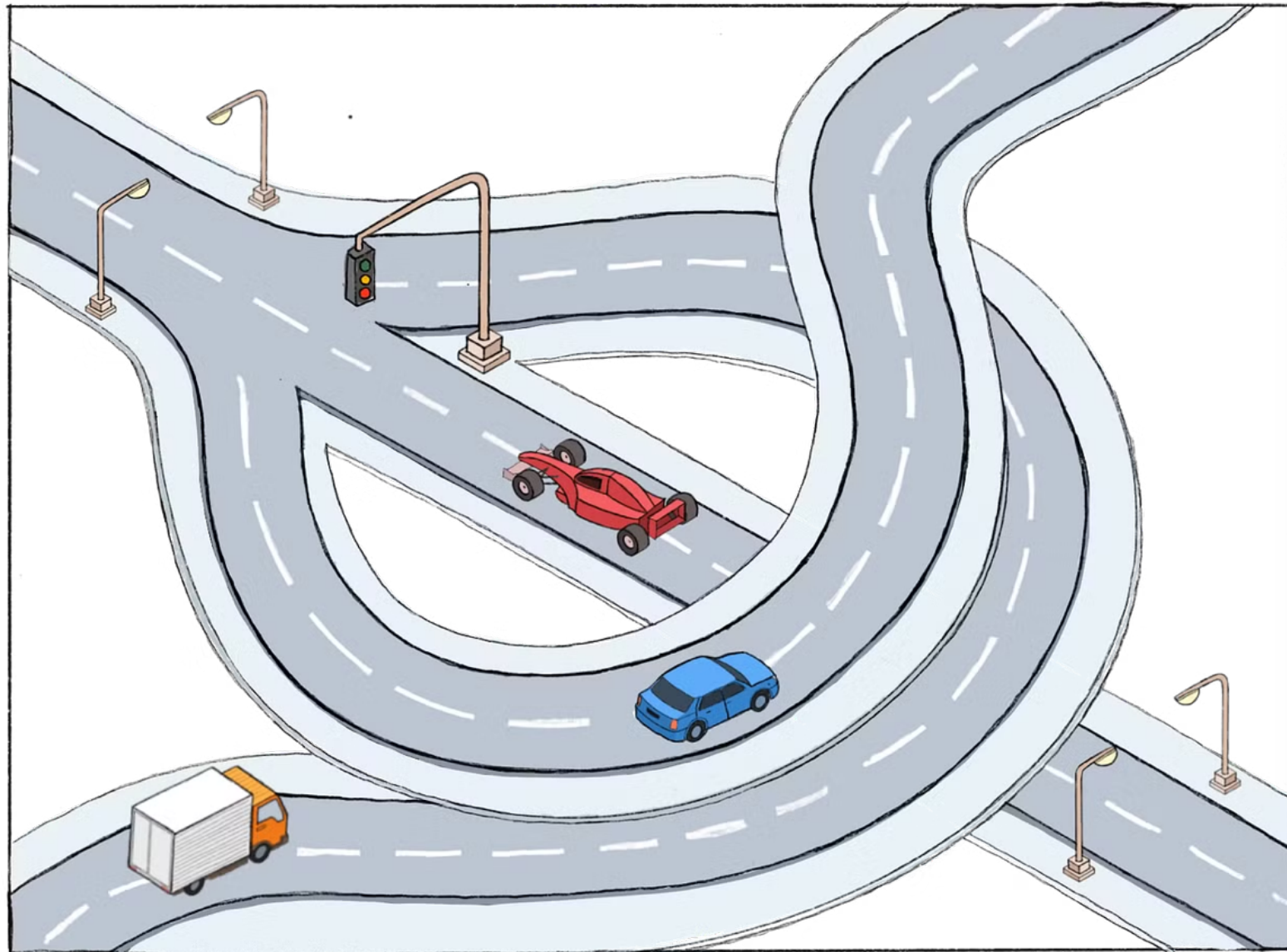
**Expensive**



# Technology starts purpose-specific, but it eventually **converges** to unlock exponential value



# The Finternet is a **user centric, unified & universal** approach to finance



## The **3U's** of Finternet



**User-Centric**



**Unified**



**Universal**



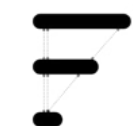
# Tokenisation & Cryptographic Technology are taking us **back to the future**



Tokens are **self-describing** and **self-contained packets** that can be attached together



Cryptographic advances in **cross-organizational trust, portability, immutability, verifiability, security, and privacy**



# Finternet empowers people to participate in the upside of the economy

1

**User-Controlled Assets**



2

**Attested Assets**



3

**Registered Assets**



4

**Regulated Assets**

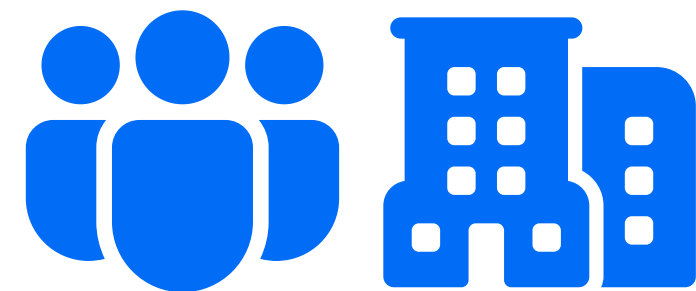


And **protect themselves** from downsides

# High Level **Architecture** of the Finternet

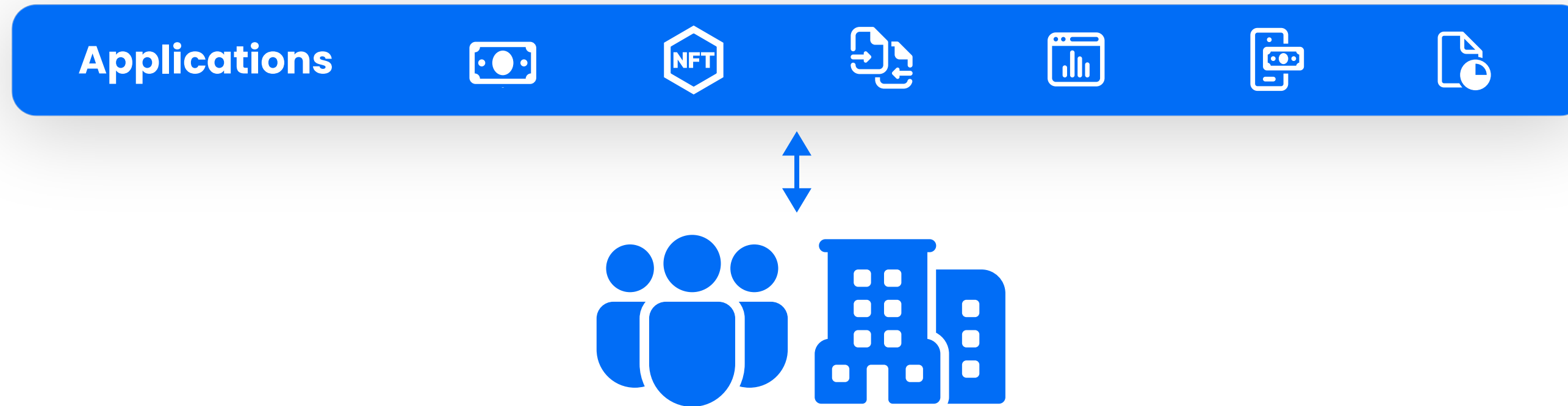


# High Level **Architecture** of the Finternet

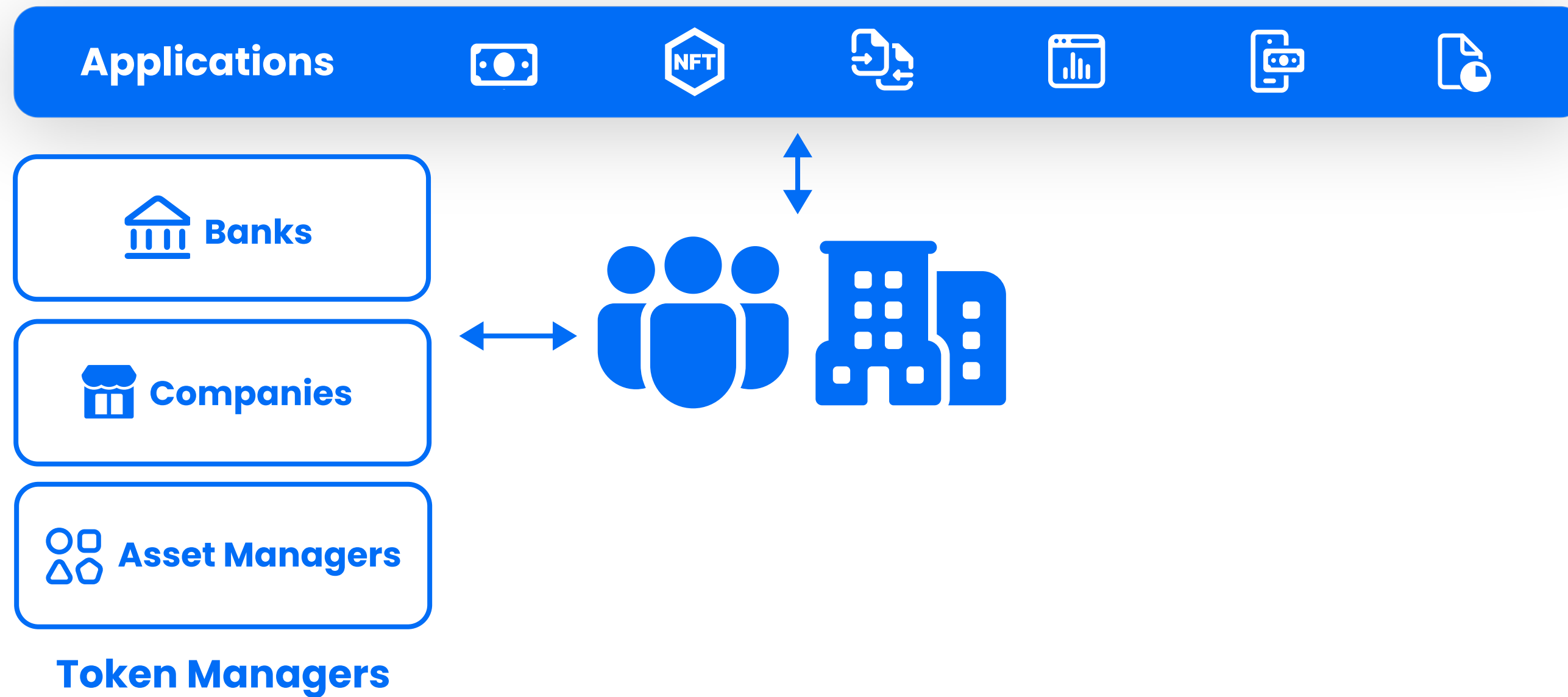




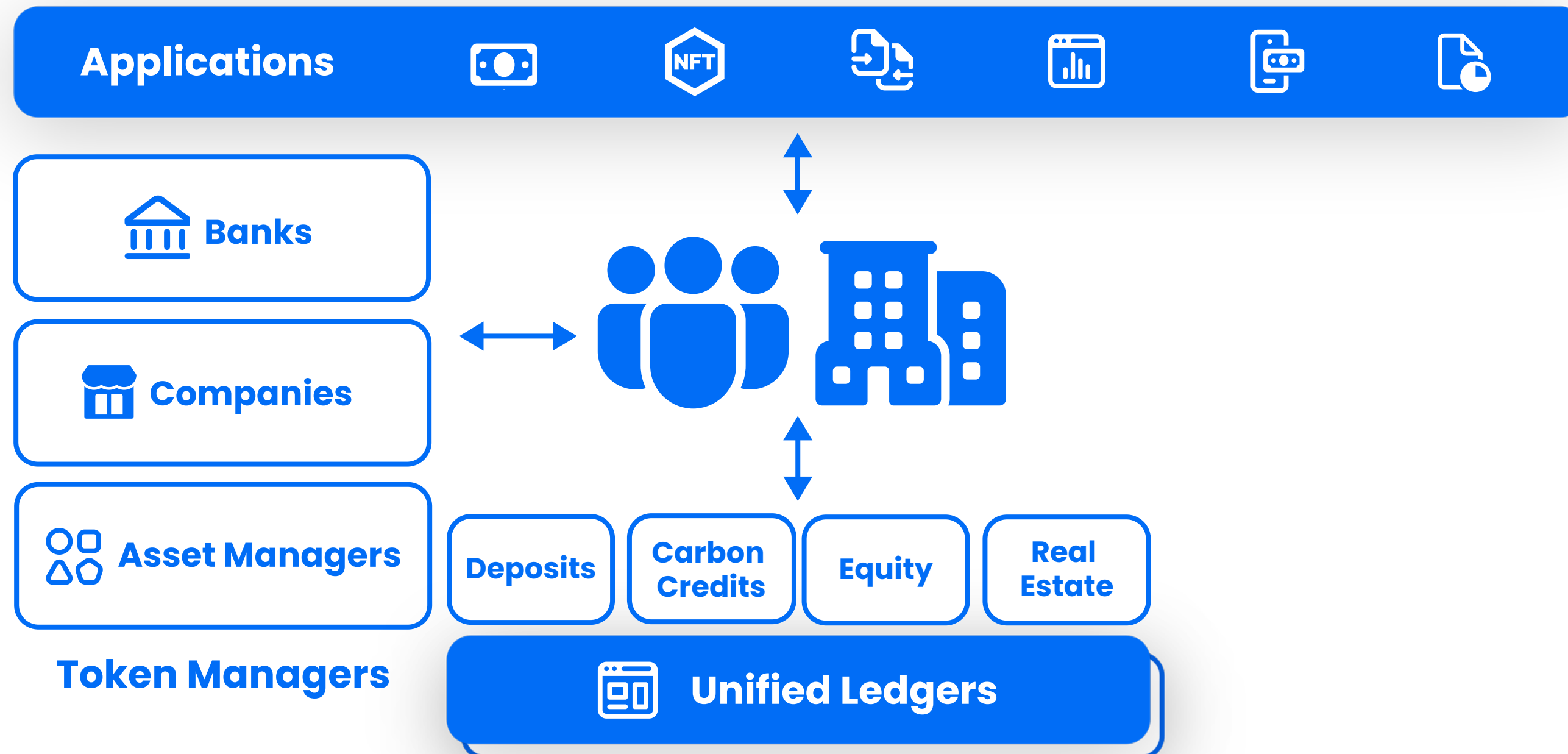
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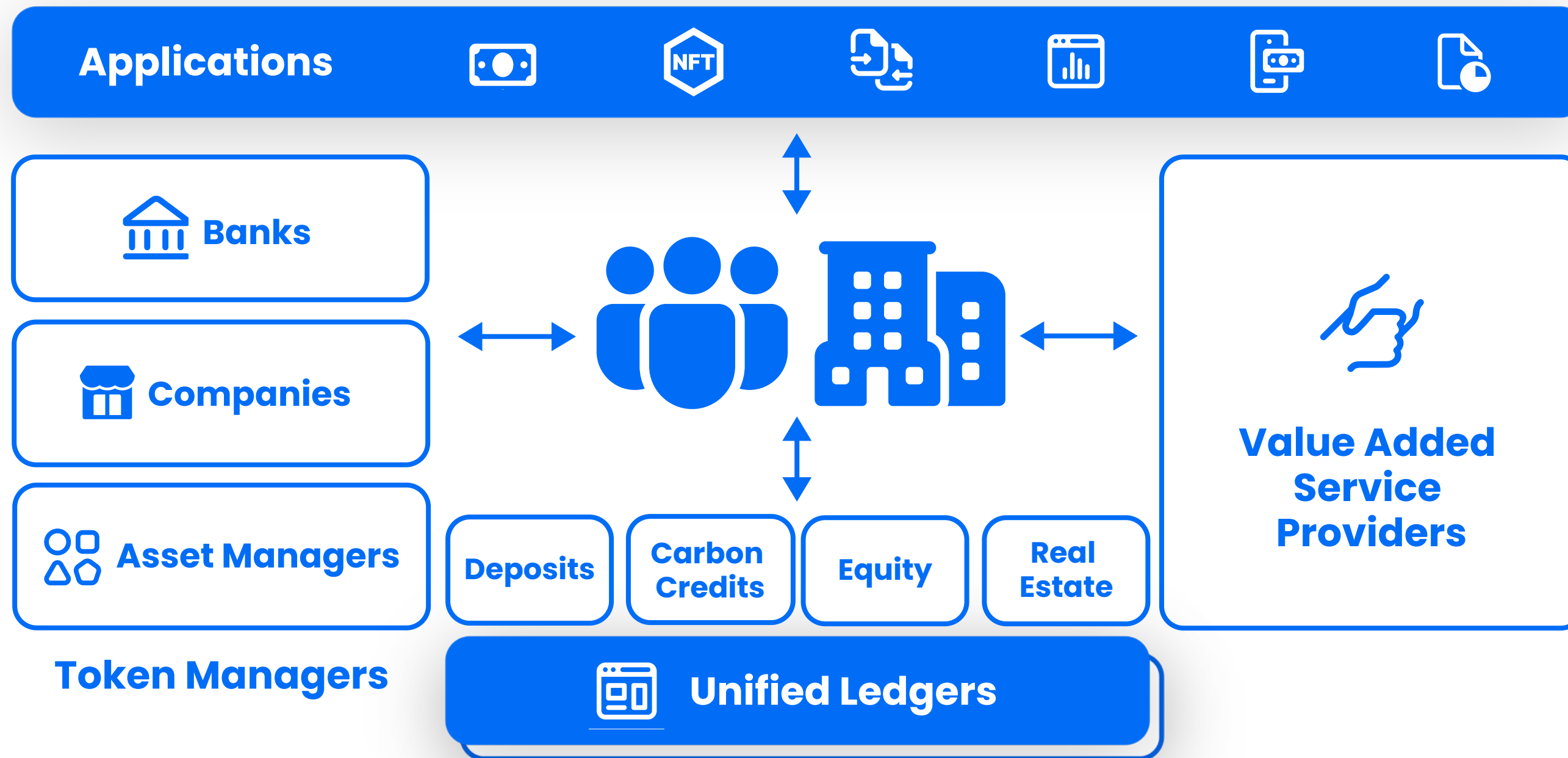
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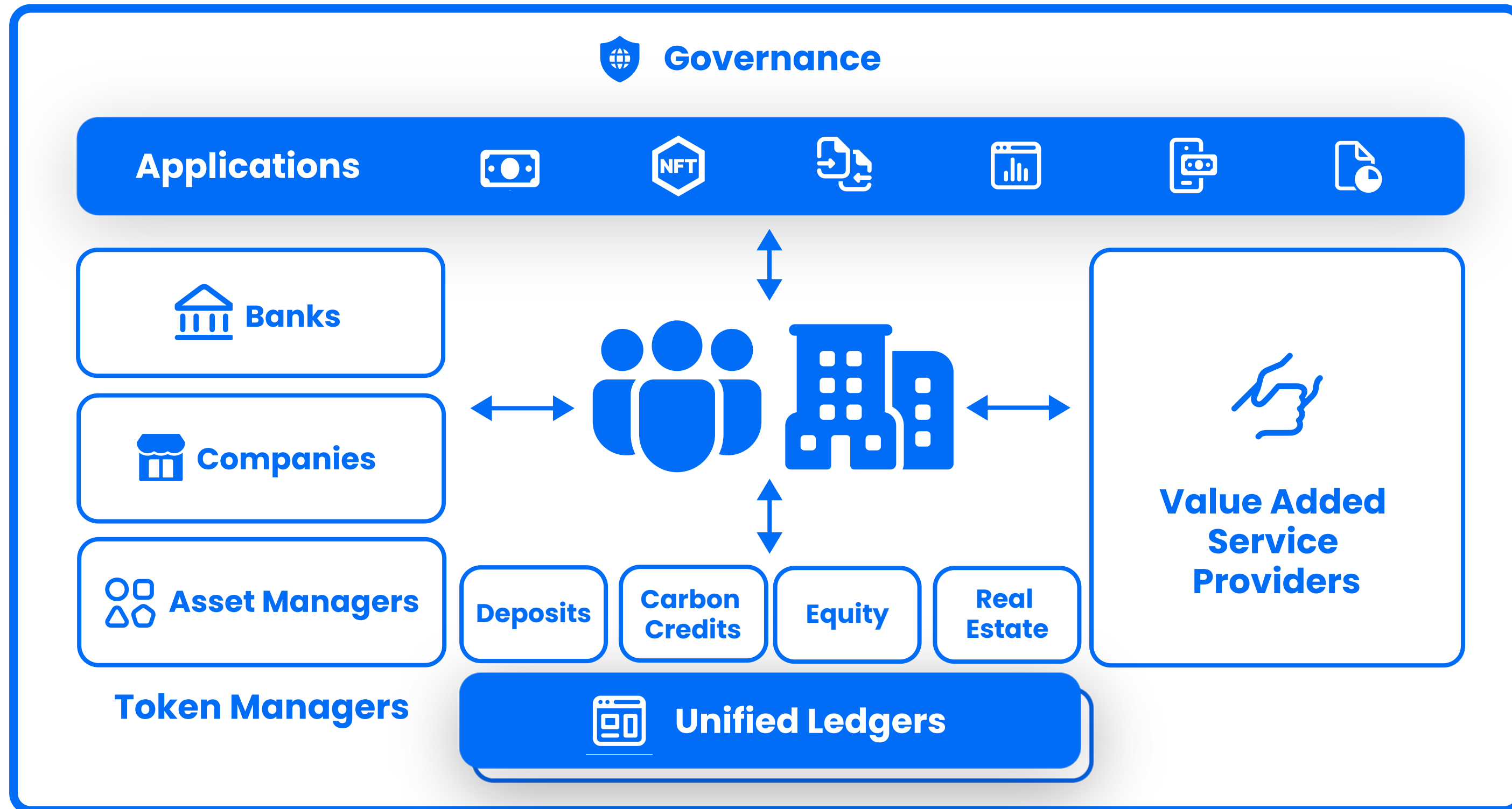
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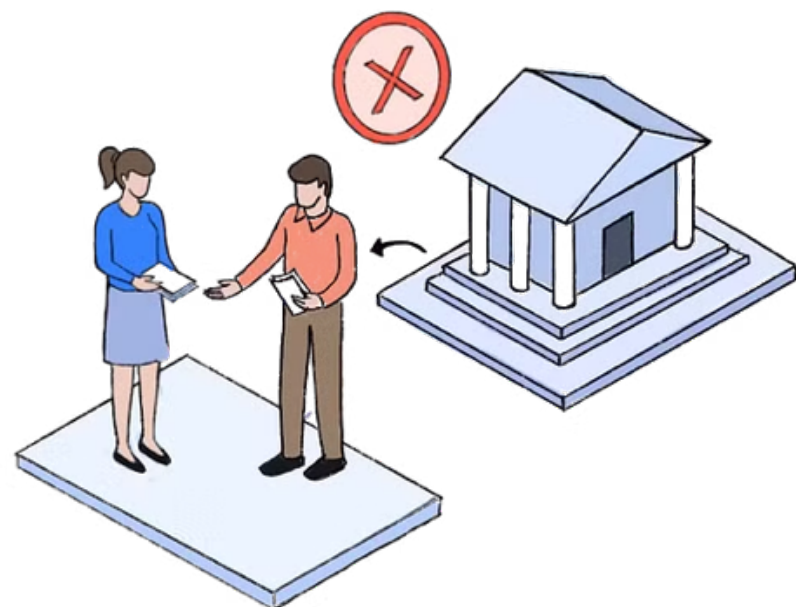


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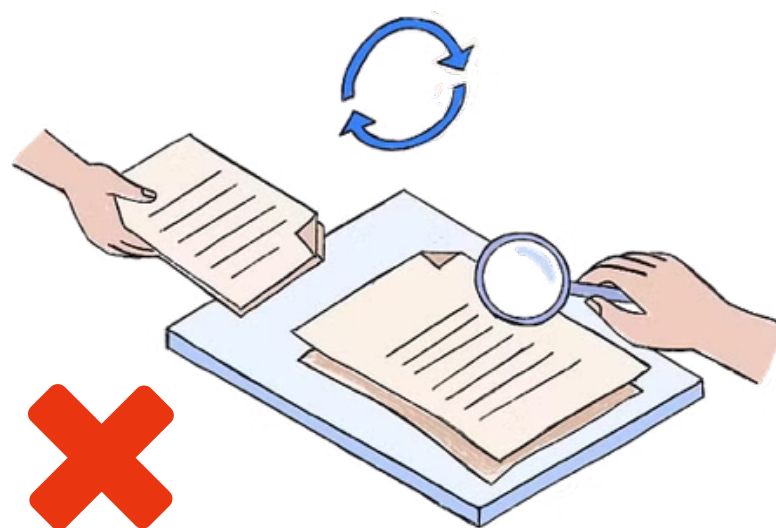




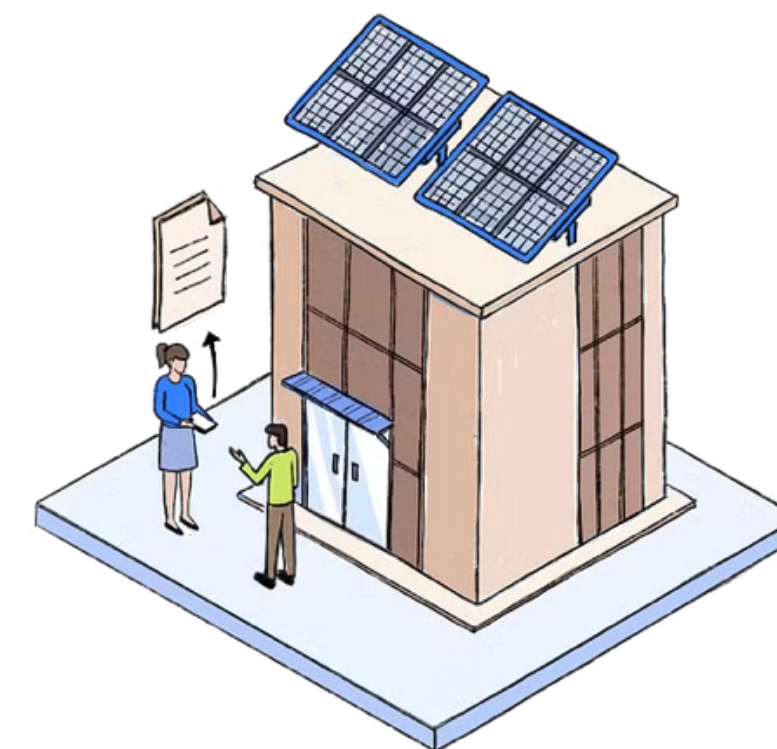
# Now, let's imagine a **use case** in sustainability financing



**High Cost in establishing company & carbon provenance**



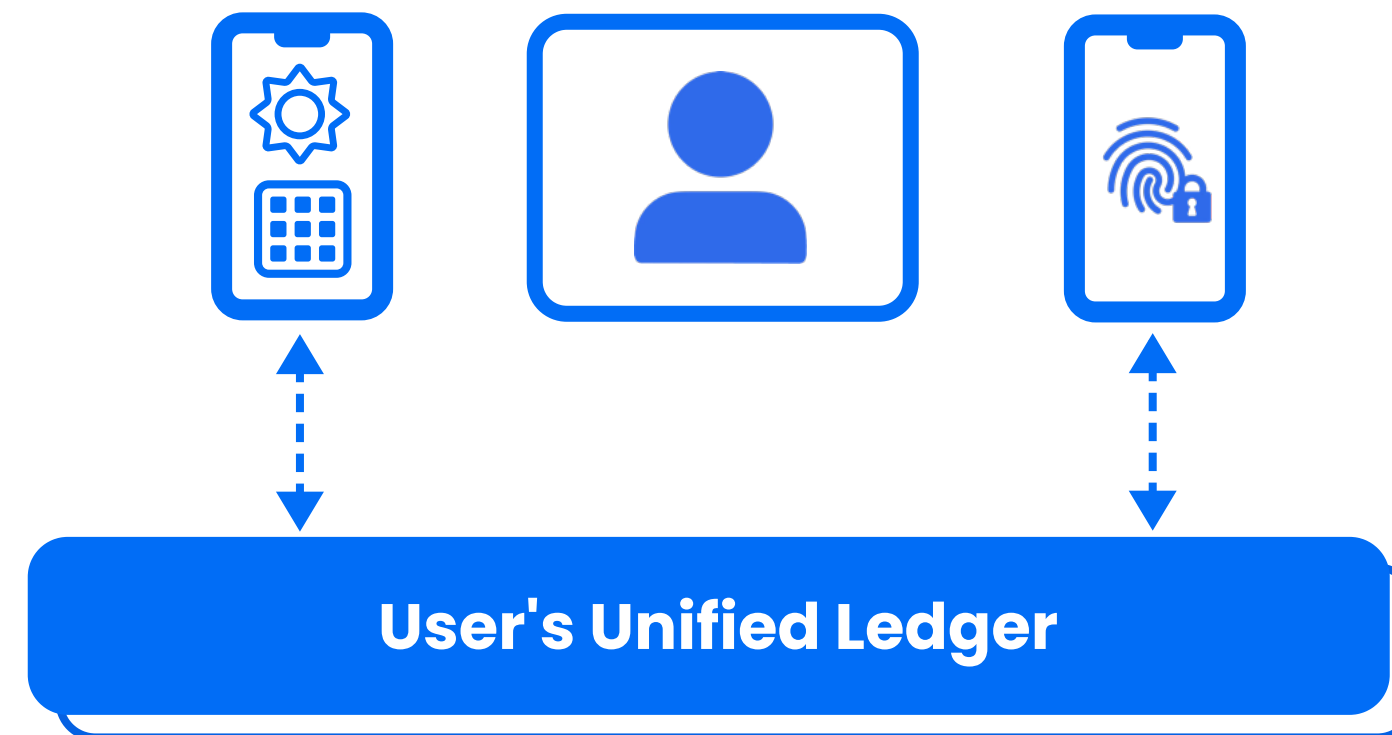
**Lack of Interoperability** affects the ability to finance across sectors and countries



**Repetitive Verifications** have to be done

**Today, carbon markets are low volume, high cost, fragmented trust**

# Re-imagining **sustainability financing** on Finternet



# Re-imagining **sustainability financing** on Finternet



**Solar Roof Provider**  
(Token Manager)



2

Tokenized assets  
issued to user's  
account

1

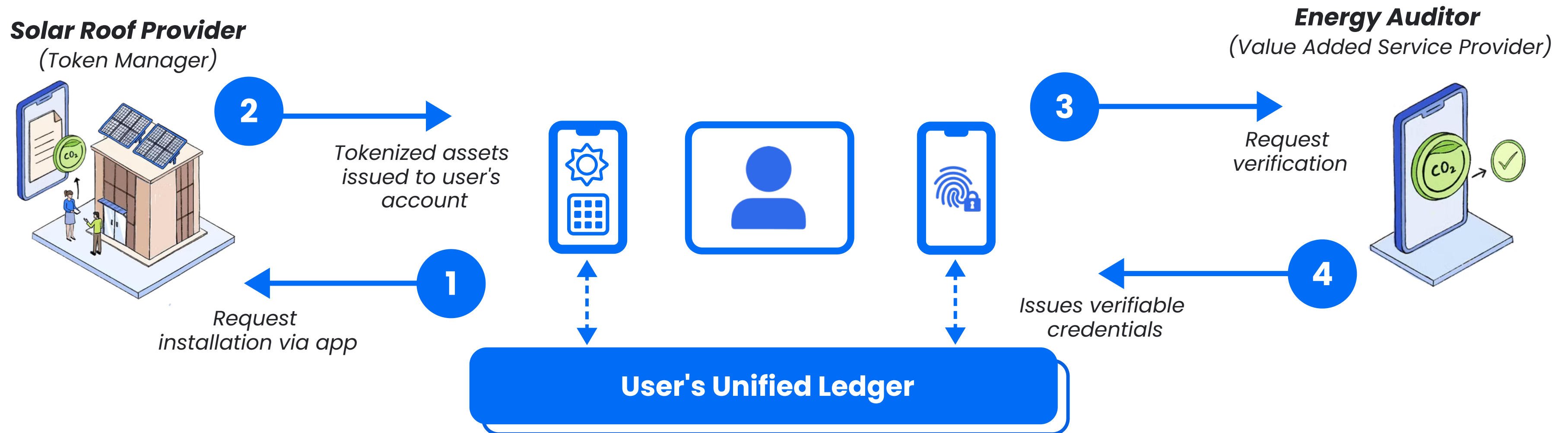
Request  
installation via app



**User's Unified Ledger**



# Re-imagining sustainability financing on Finternet



# Re-imagining sustainability financing on Finternet



- Green Financing
- Tax Credits
- Carbon Credits
- & more apps...

**Solar Roof Provider**  
(Token Manager)



2 → Tokenized assets issued to user's account

← 1 Request installation via app



3 → Request verification

← 4 Issues verifiable credentials



**Energy Auditor**  
(Value Added Service Provider)

**User's Unified Ledger**



# Finternet enables quick **dispute resolution**



**Lifetime  
provenance** of  
all assets

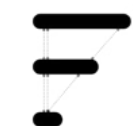


**Online Dispute  
Resolution**

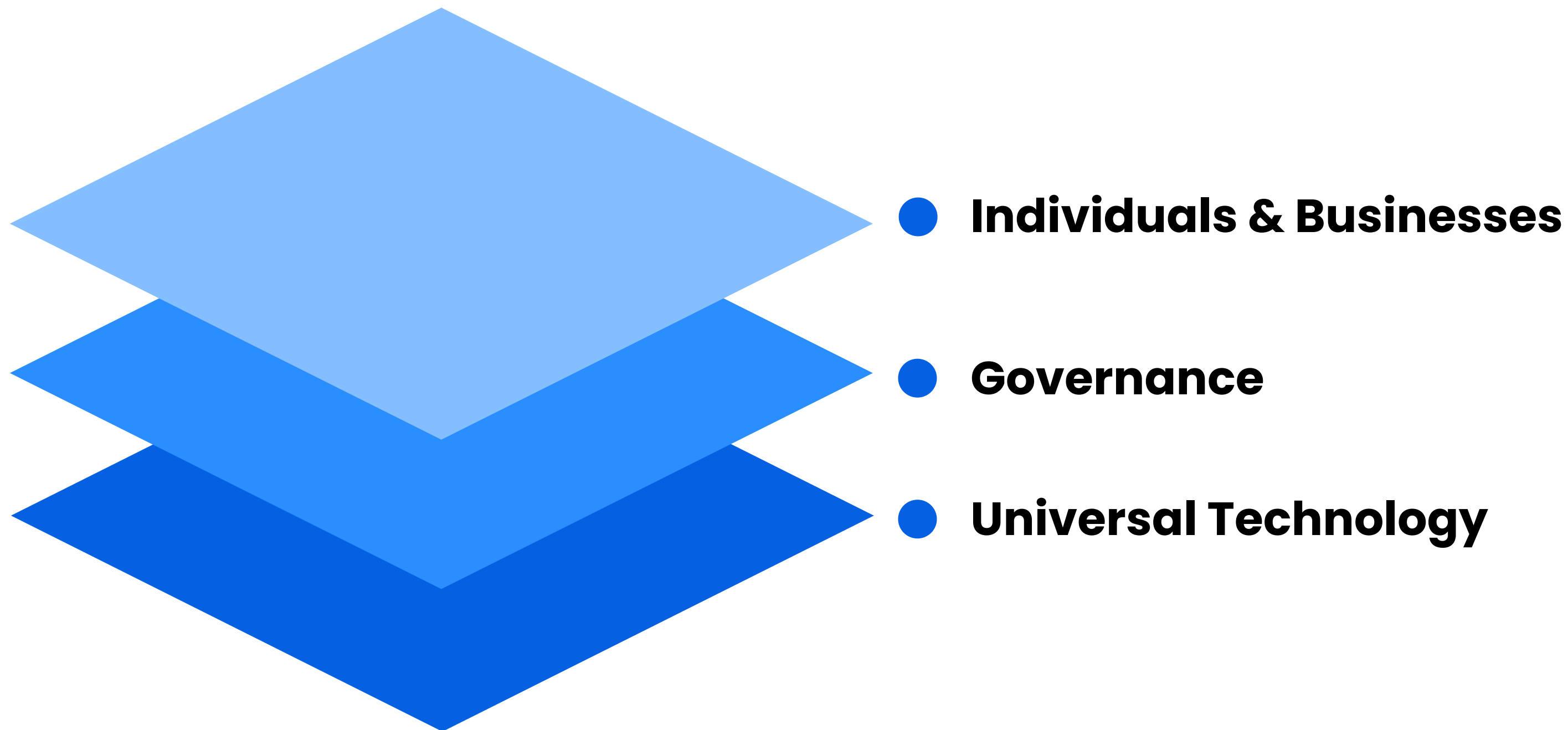


**Digital evidence**  
for auditability &  
observability

**Dispute Resolution on Finternet could save decades in court!**



# Finternet enables regulators to **regulate** & innovators to **innovate**





# Finternet is **safe, secure** and enables strong consumer protection



**Security & privacy** by design



Participation of **public authorities**

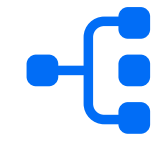


**Value added service providers**

# Enhancing Regulation & Supervision



**Non-repudiable  
Digital Trail**



**Programmatic  
Enforcement of Rules**



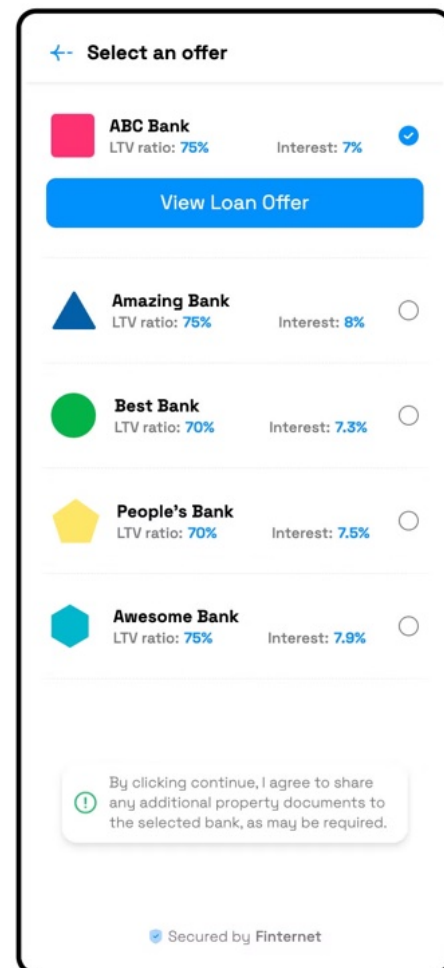
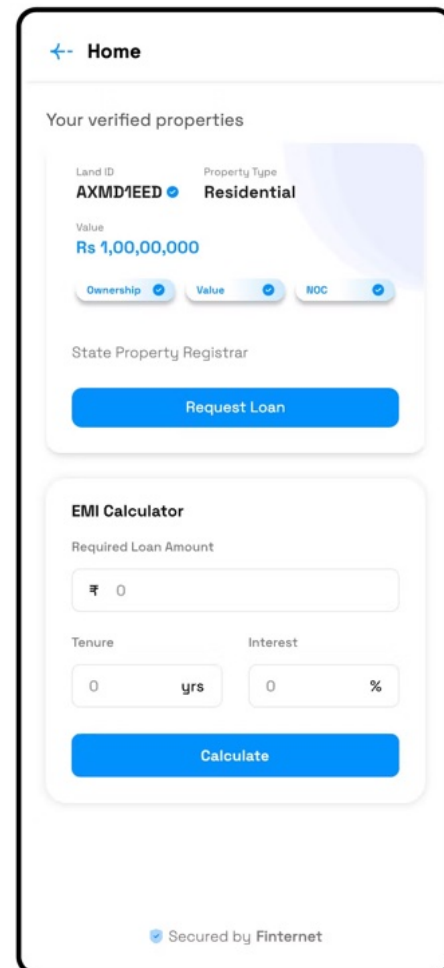
**Monitorability &  
Observability**



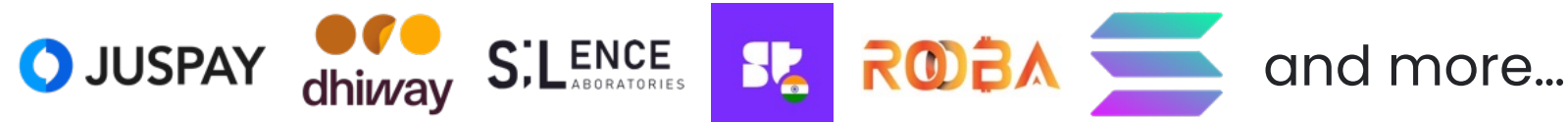
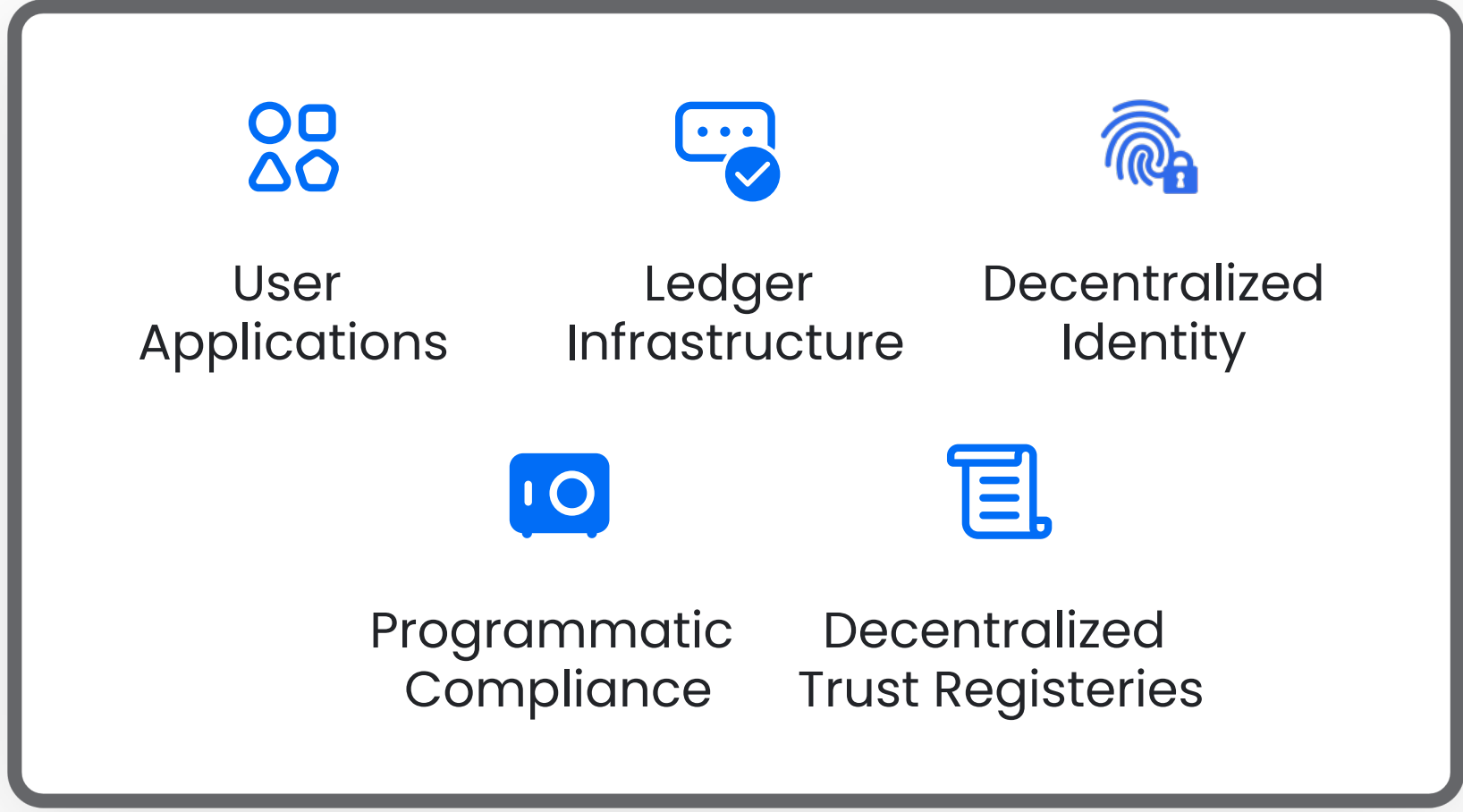
**Governance  
at all levels**



# International community has come together

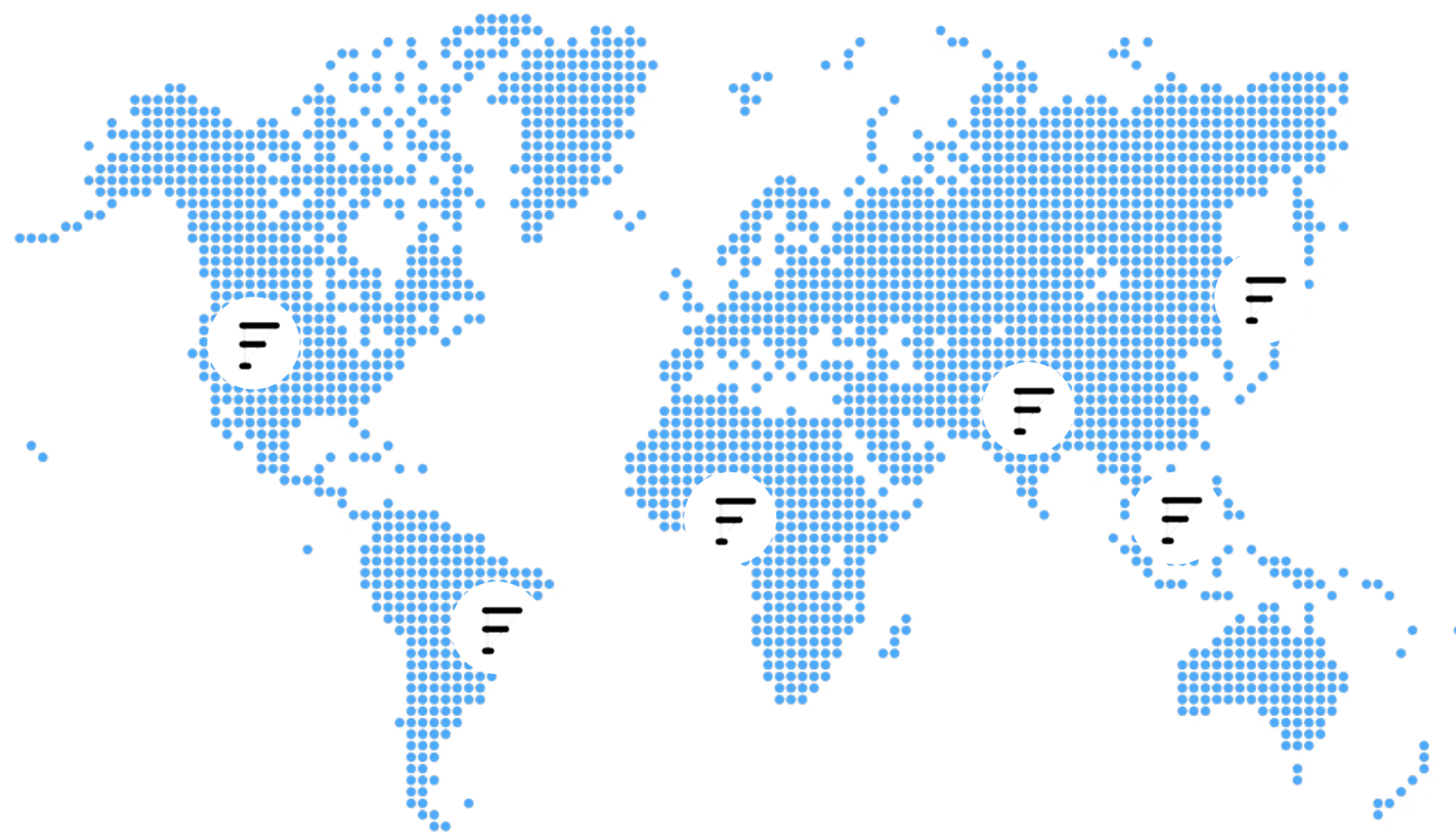


 An early version of the open source sandbox is live





# We are setting up a international network of **technology labs**



**Designing Universal Technology**



**Collaborating with Local Authorities & Ecosystems**



**Driving Adoption Pilots**





# Ambitious Vision, **Calibrated Action!**

The Finternet is designed for asynchronous adoption



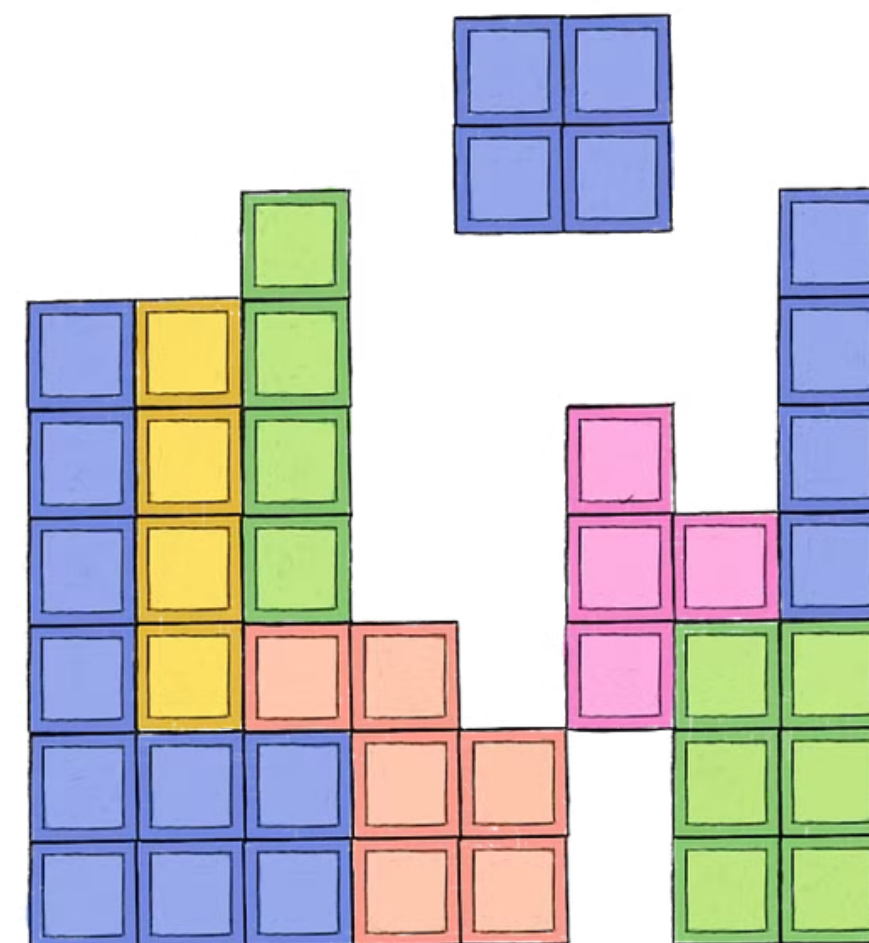
Enabling adoption **one step at a time**



A journey of building trust **gradually**



Join **whenever you want**, its always interoperable





# **Thank You!**

**Siddharth Shetty, September 2024**