Plenary Session

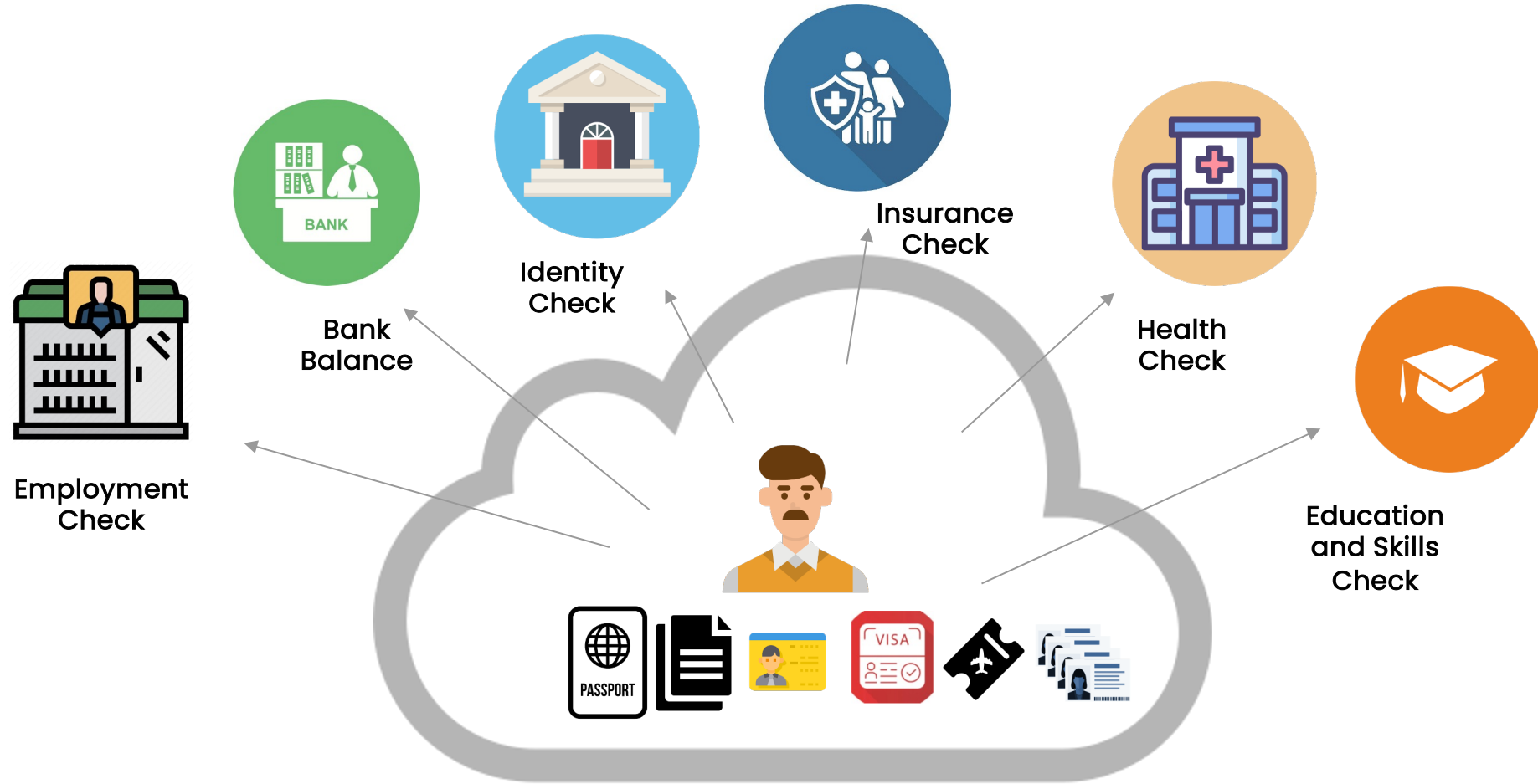**Pramod Varma |** Centre for DPI (CDPI)

Verifiable Credentials

MOSIP Connect – Addis Ababa
March 6, 2024

Dr. Pramod Varma
Co-Chair, Centre for Digital Public Infrastructure
Ex-Chief Architect, Aadhaar & India Stack; Advisor, NPCI
Cofounder, FIDE; CTO EkStep

Certificates needs to be **presented** and **validated** for Access to any kind of service

Employment Check

Bank Balance

Identity Check

Insurance Check

Health Check

Education and Skills Check

Any information sharing strategy should scale across **govt-held**

Identity cards

Business licenses

Vaccine Certs

Land records

Public School Transcripts

Tax returns

... and also **privately held documents!**

Bank Statements

Hospital Records

Employer Certificates

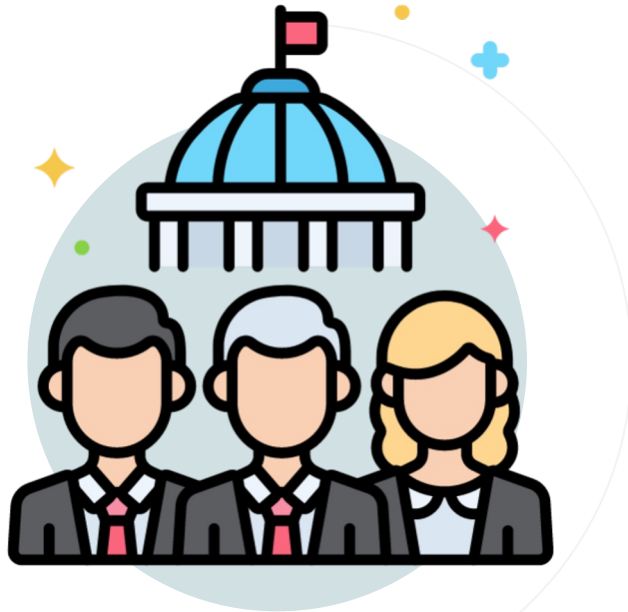**Schools/ University DIplomas**

Agri-tech records

eCommerce records

The societal cost of paper is ultra high in emerging economies.

And citizens resort to ad-hoc methods for sharing their data.

The current paper based process exclude the citizen and overwhelm the systems!

x High chances of fraud and impersonation

x High cost of processing paper

x High cost of re-issuance

x Long, manual verification process

x Lengthy issuance process; no choice in mode of issuance

x Have to carry and safeguard **"original"** certificate

x Delayed/ No access to services because of absence of proof

How can we **empower** users to **digitally share their certificates** to get access to services?

Giving paper back to the individual is already a habit for institutions – add verifiability!

Credential Producers

Banks, Hospitals, Government Depts, Schools, Businesses...

Credential Owner's 'Inboxes'/Wallets

Machine readable Credential
Digitally Signed: Tamper-proof trust

Shares onward flexibly

Credential Users/ Service Providers

Verifies

Banks, Insurers, Govt Dept's, Employers...

8

Any paper certificate/ card can be turned into a verifiable credential by adding a **signed QR code!**

Make certificates High trust at Low cost

Machine readable
Allows low cost review

Digitally signed
Tamper-proof & Trusted

Accessible via Open APIs
Ease of market/gov't reuse

Issued to Any 'Inbox'
Paper binder, e-locker, digital wallet, or email!

Captures consent
Wet signature, e-sign or online approvals

The evolution of credentials!

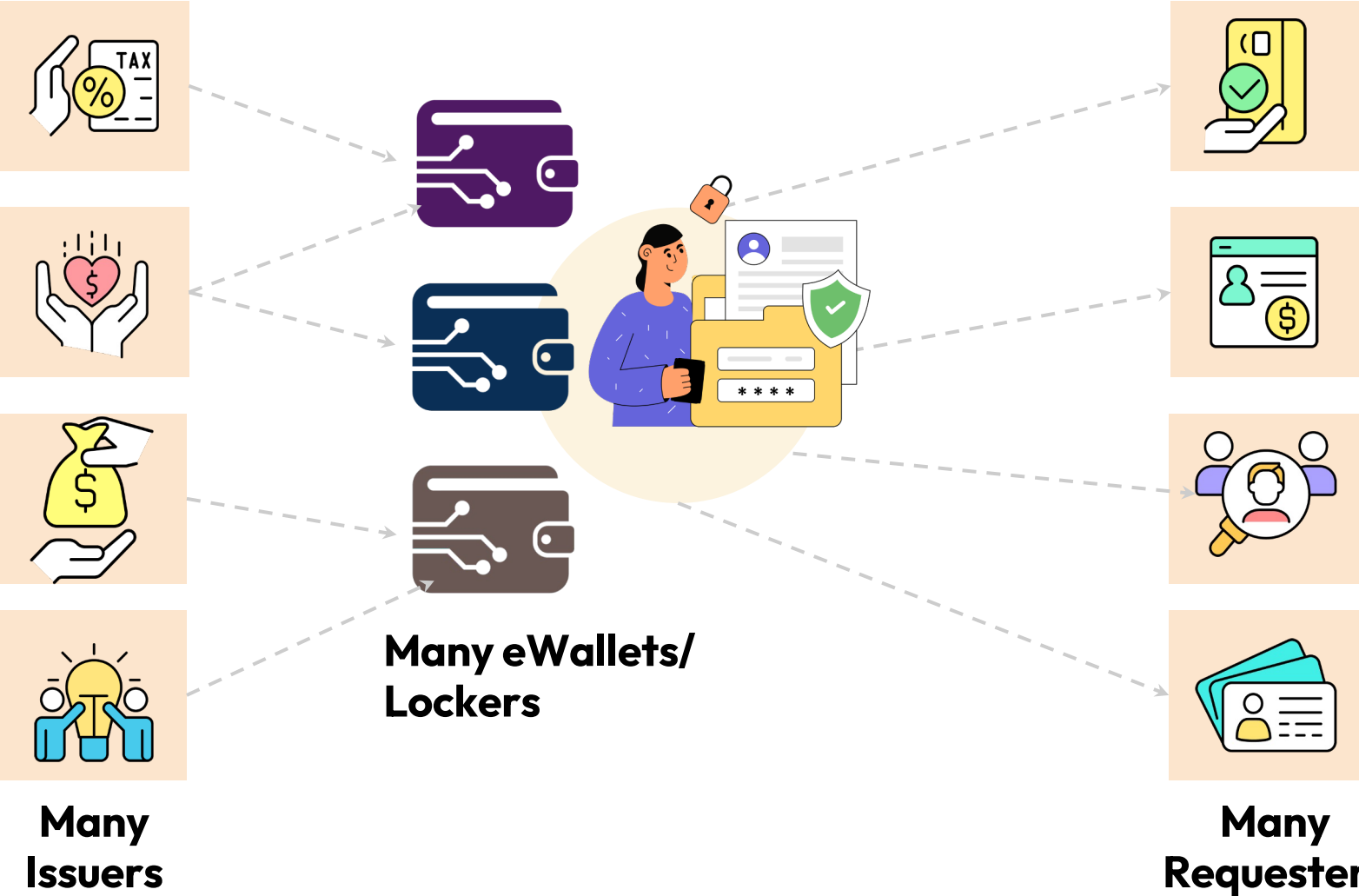**I. Paper certificates with hologram/ seal**

II. Paper certificates with QR codes

III. Fetch-able VCs from digital wallets (via API calls)

Credentials ecosystems are always decentralised & federated!

Many
Issuers

Many eWallets/
Lockers

Many
Requesters

Enabling Policy allows many wallet providers and access gateways to enable a vibrant ecosystem

What do we need to unlock to scale verifiable credentials?

Global Standards: Policy & Adoption

Ensuring cohesion & privacy/security by design, adoption of global standards

Enabling Issuance

Tools & Capabilities for entities to issue and market activation

User Centric Tools & Wallets

For safe storage and management of credentials, user controlled and privacy preserving sharing

Driving Usage: Relying Parties & Acceptance

Ensuring credentials are used to drive paperless services across public and private ecosystem

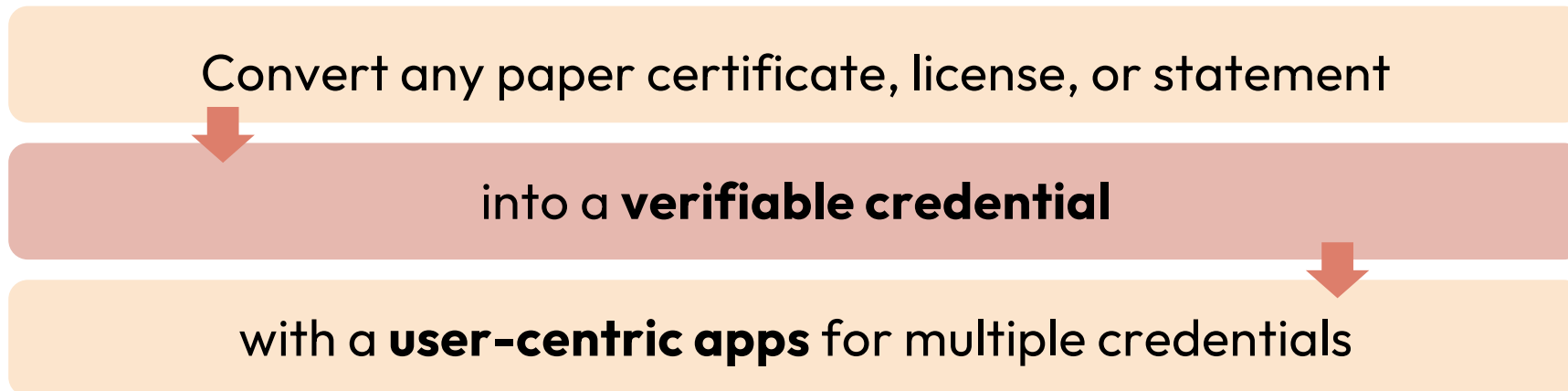# Open Specifications & Open Source are here to help!

Inji is an **easy deployable** end-to-end solution for verifiable credentialing

Inji solves for **issuance**, **sharing** & **verification** of a VC

Convert any paper certificate, license, or statement

into a **verifiable credential**

with a **user-centric apps** for multiple credentials

Powered by   MOSIP   sunb:rd   INJI

Thank you!
Q&A

Centre for Digital
Public Infrastructure