



MOSIP

A DPI
for Identity

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By the year 2018,
60+ countries had
attempted to build
**National Digital ID
Systems**, including
every sub-Saharan
African country.*

**Very few have been
successful.**

*GELB, A., & METZ, A. (2018). Identification
Revolution: Can Digital ID be Harnessed for
Development?



CHALLENGES FACED BY NATIONS IMPLEMENTING IDENTITY SYSTEMS



INFLEXIBILITY OF PROPRIETARY
SOLUTIONS



SILOED APPROACH TO DIGITAL
IDENTITY



COMMON NEEDS;
DIVERSE SOLUTIONS



MODULAR OPEN SOURCE IDENTITY PLATFORM



Established in 2018
as a **not-for-profit project** at
the **International Institute of
Information Technology, Bangalore**

CURRENTLY SUPPORTED BY

Gates Foundation



Pratiksha
Trust

TATA TRUSTS



MOSIP

Over the Years

8+
years

31
countries

200+
Million IDs
generated

340+
Million
cumulative
authentications





What Does MOSIP do?



PROVIDES A PLATFORM

Development and enhancement of technology for ID issuance and usage



PARTNERS WITH COUNTRIES

Support countries in adoption of digital ID



BUILDS ECOSYSTEMS

Nurturing a robust ecosystem of commercial partners



SUPPORTS RESEARCH AND COLLABORATIONS

Collaborate with academic partners to develop cutting edge technology





THE MOSIP VISION: A DPI approach

MOSIP envisions a digital future that is interoperable, inclusive, and trusted



Services



OpenG2P

Financial Inclusion, Social Benefits, Emergency Response, Registries, Private Sector



Data Exchange



Inji & eSignet

Data Exchange, Digital Trust, User Consent, Mobility, Privacy, Security



Identity



MOSIP

Identity issuance and verification as the foundation





MOSIP Technology Principles

MOSIP Technology is built on a **bedrock of good principles**, like **inclusion, interoperability** etc. constantly improving through field and implementation learnings.



DESIGNED FOR PRIVACY & SECURITY

Secure and private by design, using secure devices, processes, data storage & data processing

OPEN SOURCE

Open-Source platform, using open standards

SCALABLE

Independently scalable components, tested for ~100 million population

MODULAR

Independent, interchangeable modules, and API-based implementation

CONFIGURABLE

Easy personalisation & configuration

MANAGEABLE

Easy auditing, monitoring, testing and upgrades

HUMAN-CENTRIC DESIGN

Technology designed with inclusion in mind, ensuring no one is left behind



MOSIP Modules

MOSIP Platform



PRE REGISTRATION

- User-enabled data entry
- Appointment booking



REGISTRATION

- Online or offline mode
- Fingerprint, iris & photo

Local/Multi Language Support



ID ISSUANCE

- Credential Issuance
- Mobile ID/Card printing



AUTHENTICATION

- Demographic & Biometric
- Yes or No & E-KYC services

Notification to residents at various stages



RESIDENT SERVICES

- Lock your credentials
- Generate credentials on-demand



PARTNER MANAGEMENT

- Manage relying parties
- KYC/data share policies

Tokenisation & Virtualisation of ID



MOSIP'S

Offerings to Countries



**MOSIP
Technology**
Offering core
digital ID
infrastructure



**Platform
Support**
Supporting
countries is
MOSIP
adoption



Advisory
Equipping
countries with
best practices
to understand
and operate
MOSIP
technology



**Training &
Capacity Building**
Making countries
full and
independent
owners of their
digital
infrastructure



One Project. Multiple Flavours.

01

Green Field Implementation

Building a foundational digital identity system from the ground up.

02

Brown Field Implementation

Integrating modular identity components into existing legacy national digital infrastructures.

03

Only e-Signet Implementation

Deploying IDP layers for external, existing national identity systems.

04

Only Inji Implementation

Deploying a digital credentialling solution for managing existing identity credentials.

05

Vendor Driven Engagement

Commercial partners managing the technical implementation and maintenance of MOSIP.

Scalable to any population size.

Large Populations >10 M | Medium Populations >1 M | Small Populations <1 M



MOSIP Rapid Pilot

A **quick and efficient pilot model**, developed by optimising **people, process**, and **technology**

- **OBJECTIVE:** Experience ALL the stages of MOSIP Implementation
- **SUCCESS FACTORS:** Understand MOSIP capability and process through successful registration of 1000 Residents
- **DURATION:** 2 – 3 months
- ABIS, biometric kits, and authentication devices **provided by MOSIP**

National Roll-Out Models

01 Greenfield Model:

From the Ground Up

Adopt MOSIP and join its ecosystem of technology partners.

Customise modules from scratch to enable all processes

02 Brownfield Model:

Embracing Existing Infrastructure

Integrate the MOSIP platform with existing databases or identity systems

Work with MOSIP and local experts to upgrade legacy infrastructure to modern digital identity systems

03 Use cases:

Building on ID

Build services on top of foundational ID systems
Work with MOSIP and partner DPGs to build a robust digital transformation journey



Africa

20 Countries

Morocco (37.271 Million)

Ethiopia (126.5 Million)

Guinea (14.2 Million)

Togo (9.1 Million)

Sierra Leone (8.8 Million)

Burkina Faso (23.3 Million)

Niger (27.5 Million)

Madagascar (30.3 Million)

Uganda (48.6 Million)

Nigeria (223.8 Million)

Congo (6.1 Million)

Zambia (20.6 Million)

eSignet
Adoption

The Gambia (2.7 Million)

Côte d'Ivoire (28 Million)

Benin (13.35 Million)

São Tomé & Príncipe (225,000)

Lesotho (2.3 Million)

Senegal (18.5 Million)

South Africa (63 Million)

Gabon (2.65 Million)

Map Key

● National Rollout

● Completed Pilot

● Ongoing Pilot

● Pilot to Begin

Asia

Pacific

4 Countries

Philippines (117.3 Million)

Sri Lanka (21.9 Million)

Cambodia (16.9 Million)

eSignet
Adoption

Tonga (107,000)

LatAm

& The Caribbean

7 Countries

Peru (34.4 Million)

Belize (405,000)

Mexico (128.5 Million)

Trinidad & Tobago (1.5 Million)

Bolivia (12.4 Million)

SVG (104,000)

The Bahamas (405,000)



MOSIP Adopting Countries

195+ Million residents received digital IDs on MOSIP-based systems across **14 national rollouts**.



01 MOSIP Partner Program

A framework to build capacity and engage as a community

02 Technology, Tools, and Sandboxes

To build, verify, and maintain compliance with MOSIP technology

At the heart of
MOSIP adoption
is a
**vibrant
ecosystem of
partners.**



Technology Solution Providers





System Integrators





Enabling Sustainability – **Empowering Ecosystem**

Building Runbooks

Documenting platform operational workflows.

Robust Monitoring

Developing better system observing metrics.

Better Estimations

Coming up with methods for estimating infrastructure requirements for national digital identity systems.

Brownfield Implementation Support

Supporting the modernisation of legacy national identity systems.

Troubleshooting Guides

Creating comprehensive documentation for resolving platform technical issues.

Advance Training and Regional Workshops

Scaling technical capacity through advanced regional training workshops.

Use case Dedicated Team

Assembling cross-functional experts to implement specific identity solutions.

DPG to DPG Integrations

Integrating interoperable digital public goods to build national infrastructure.

Regional Teams

Local teams will make operations efficient and round-the-clock

Support and Build Local Ecosystems





Global DPGs

Local Impact



MOSIP

Identity Issuance
and Verification



Identity Verification, Login
& Consented Data Sharing

Trusted Identity



Credentials Wallet
and Authenticator



Beneficiary Management
and Benefits Delivery

Trusted Data

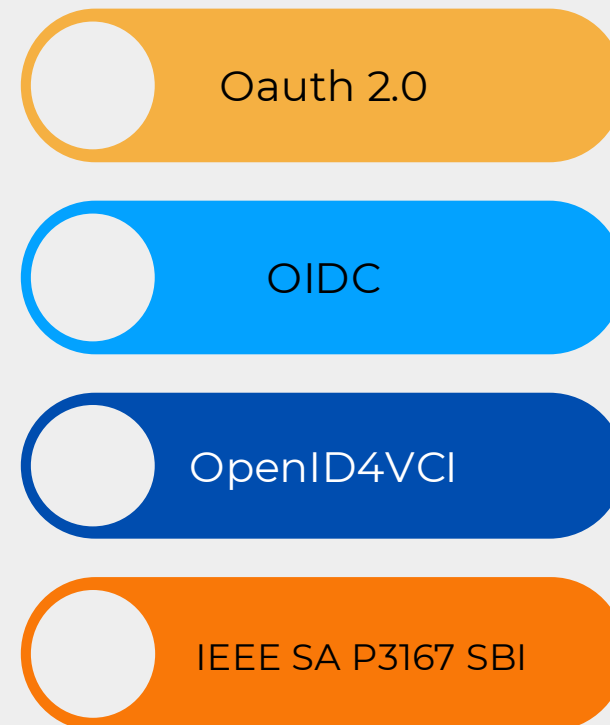


What is eSignet?

A simple yet powerful mechanism for end users to identify themselves, avail online services, and share profile information

- 01** Login with trusted ID
- 02** Support for multiple authentication factors
- 03** Frictionless inclusion of new authentication factors
- 04** Easy integration with relying parties
- 05** Collection of user consent
- 06** Avoids unwanted profiling
- 07** Provides multiple assurance levels
- 08** Integration with Digital Wallets
- 09** Unified Sign Up

Standards Ensuring Security & Privacy





eSignet as a differentiator

- Allows countries to quickly onboard use-cases
- Configuration over customisation approach
- Works seamlessly with non-MOSIP digital ID systems
- Inception for non-MOSIP countries to experience MOSIP technology
- Enables countries to use secure, privacy preserving, and standards based technology





**Verifiable Credentials
For the Real World**



Inji:
Powering Digital
Credentials





Credentialing Stack Modules

Create, Issue, Manage, Share, Verify and Consume Credentials

STANDARDS DRIVEN:

W3C: Verifiable Credentials Data model

W3C: JSON-LD | W3C: DID Web | W3C: Ed25519 Signature 2018

OpenID4VC, OpenID4VP



What is Inji?

Where is it useful?

Inji is an credentialing solutions.

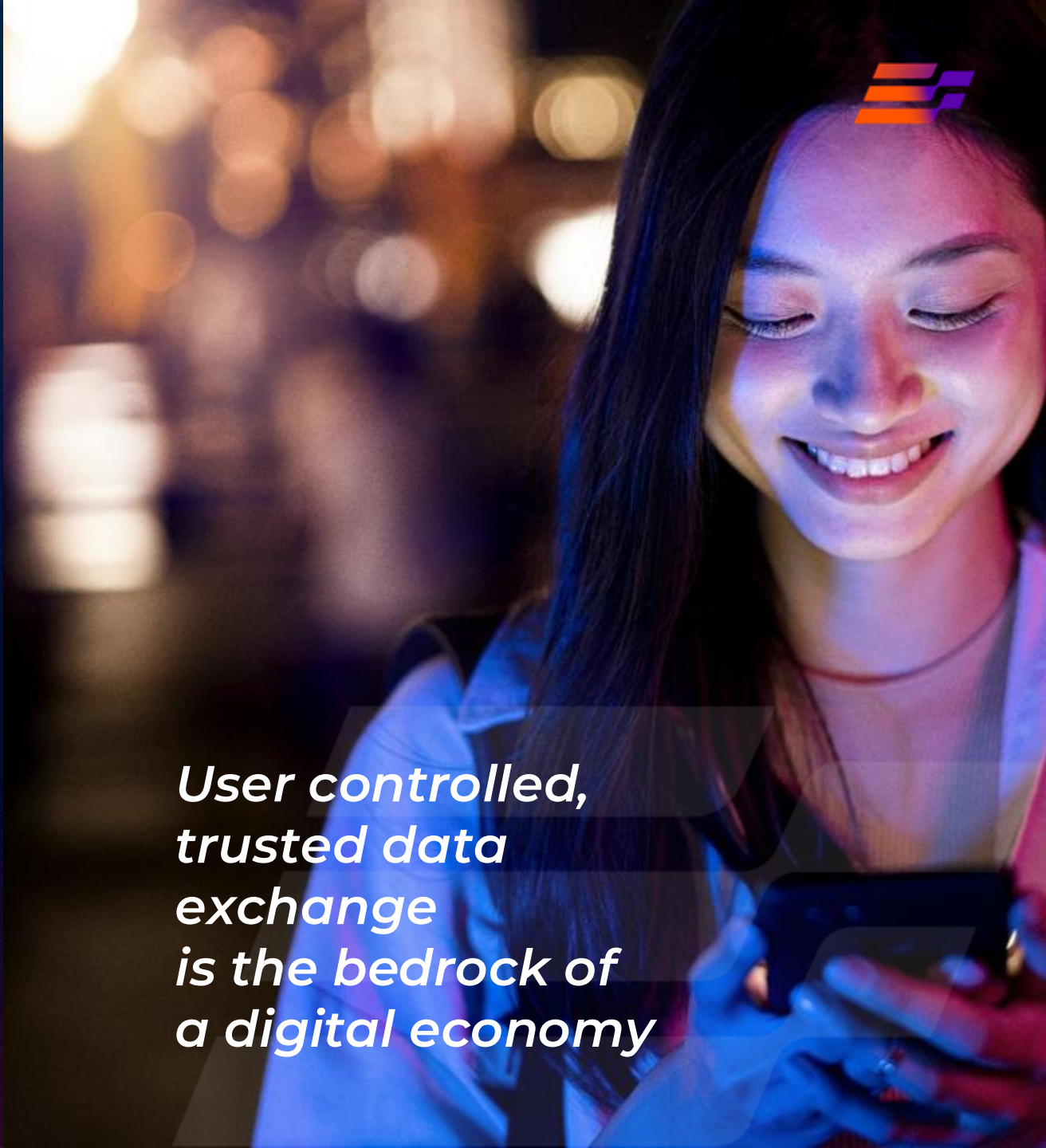
*It can be used to create, issue, store, share, verify and consume **verifiable credentials**.*

Certificates which are typically on paper and prone to damage and fraud can move to a trusted digital form.

User centric data exchange is supported with consent and cryptographic trust.

Inji Components:

- ▶ Inji Certify
- ▶ Inji Wallet (mobile and web)
- ▶ Inji Verify



***User controlled,
trusted data
exchange
is the bedrock of
a digital economy***



Building Use-Cases for Government Services on MOSIP

ID is only as powerful as
what it can enable.

- Civil Registries
- Financial Inclusion
- Social Registries
- Healthcare Delivery
- Benefits Delivery
- Departmental IDs



Foundational ID

as the base layer of service delivery

**Civil Registry
Services**

**AgriTech
Services**

**Health Benefits
Delivery**

**Social Benefits
Delivery**

SERVICE DELIVERY LAYER

National ID System



Foundational Digital Identity

Identity Focused
High Assurance
Full Coverage



MOSIP – CRVS Integration

- The Problem: Life Events, Siloed Systems
- Core Integration Principles
- Integration Patterns and Workflows
- How MOSIP works with CRVS Systems



The Problem: Life Events, Siloed Systems

- Civil Registration and Vital Statistics (CRVS) systems record life events
- MOSIP is an open-source, modular identity platform built for scale and interoperability.
- Integrated with CRVS, it manages an individual's identity continuously from birth registration through end-of-life verification.

When systems operate in isolation:

- administrative inefficiencies,
- fragmented data, and
- barriers to accessing services and rights.

Identity Across the Life Cycle



Birth Registration

CRVS shares birth data → MOSIP issues a UIN



Growth & Services

ID enables healthcare, education, benefits



Life Events

Demographic updates via CRVS as events occur



Death Registration

CRVS notifies MOSIP → identity marked deceased



Core Integration Principles

The foundational rules that govern how CRVS and MOSIP exchange data



CRVS Is the Source of Truth

MOSIP relies on CRVS to perform de-duplication of vital events. MOSIP does not reject duplicate or repeated birth/death requests CRVS owns that responsibility.



Introducer / Informant Model

A registered MOSIP user (parent, guardian, or informant) vouches for the event. Their identity is authenticated before any request reaches MOSIP.



Biometric Boundary

CRVS-driven demographic updates apply only to infants without linked biometrics. Once biometrics are enrolled, updates must go through a MOSIP registration center.



eSignet Authentication

Every request-initiating individual is authenticated via eSignet, and the resulting user-info token accompanies the request to MOSIP.



Integration Patterns & Workflow

Reference flows illustrating the core integration principles in action.

STANDARD INTEGRATION FLOWS



Birth Registration & UIN Issuance

CRVS-initiated registration creates a national ID for a newborn.



Death Registration & Identity Status Update

Deceased flag set on the identity; ID is not deactivated.



Demographic Data Updates

Corrections to name, DOB, or gender for pre-biometric infants.

EXCEPTIONAL / RARE SCENARIOS



Fraudulent Birth Registration

CRVS requests deactivation of a National ID.



Reactivation of Deactivated ID

Manual verification restores a wrongly deactivated ID.



Fraud Death Case Reversal

Reversal of an incorrectly set death flag.



How MOSIP works with CRVS systems?



Birth Registration & UIN Issuance

For a newborn without a national ID, an Introducer (parent/guardian) reports the birth at the CRVS centre. CRVS shares demographic data with MOSIP, which issues a UIN.



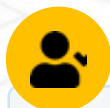
Death Registration & Identity Status Update

An Informant reports a death to the Civil Registration Authority. After identity proofing, CRVS submits a request to MOSIP.



Demographic Data Updates

Corrections to name, date of birth, or gender. An Introducer reports the change at the CRVS centre; MOSIP validates and applies the update only to eligible infant identities.



1. Reported & Authenticated

Informant visits the CRVS centre; identity is authenticated via eSignet. Date of birth/death is captured.



2. Packet Creation

CRVS creates a registration packet stored via Packet Manager with relevant information.



3. Workflow Trigger & Notification

Sync/Trigger APIs initiate processing; MOSIP performs checks and publishes "Completed" event trigger.



4. Status Update & Notify

A notification is sent to the registered contact of the resident; CRVS receives the update.



MOSIP

MOSIP Home: <https://www.mosip.io/>

MOSIP Source Code: github.com/mosip

MOSIP Documentation: docs.mosip.io

eSignet Documentation: docs.esignet.io