One Person, One Identity, Multiple Tokens, One Lifetime

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Mind Map

Solving Nigeria's Identity Challenges

Problems

- Intrusive KYC
- Multiple Identities
- Fraud
- Illegal Migration
- Lack of Healthcare
- Identity Theft
- Sex Trafficking
- Multiple ID Tokens
- Exam Malpractices
- Poor Security
- Document Forgery
- Tax Evasion

Solution

- Promote Single Source of Truth
- Harmonise ID Tokens
- Simplified Identity Verification
- Help Identify Vulnerable Persons
- Offer Robust eServices
- Inter-agency Interoperability/ Mutual Recognition
- Deploy Simple Mobile Apps

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The Challenge

Resolving Identity in Nigeria

Brother, brother… or brother?

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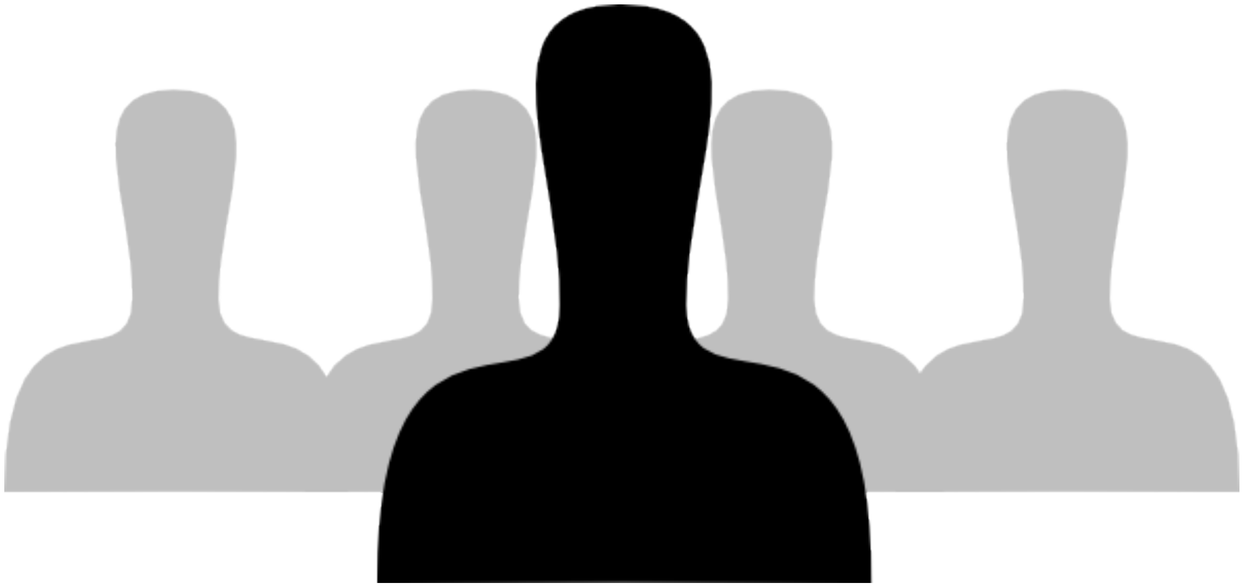
The Challenge

Resolving Identity in Nigeria



Multiple Enrolments

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The Challenge

Resolving Identity in Nigeria

Multiple Tokens

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The Solution

One Identity, Multiple Tokens

Tax Identification Number (TIN)

Health Insurance Number (HIN)

Drivers' License Number (DLN)

Mobile Phone Number (MSISDN)

Voters Identification Number (VIN)

Passport Personal Number (PPN)

Bank Verification Number (BVN)

National Identification Number (NIN)

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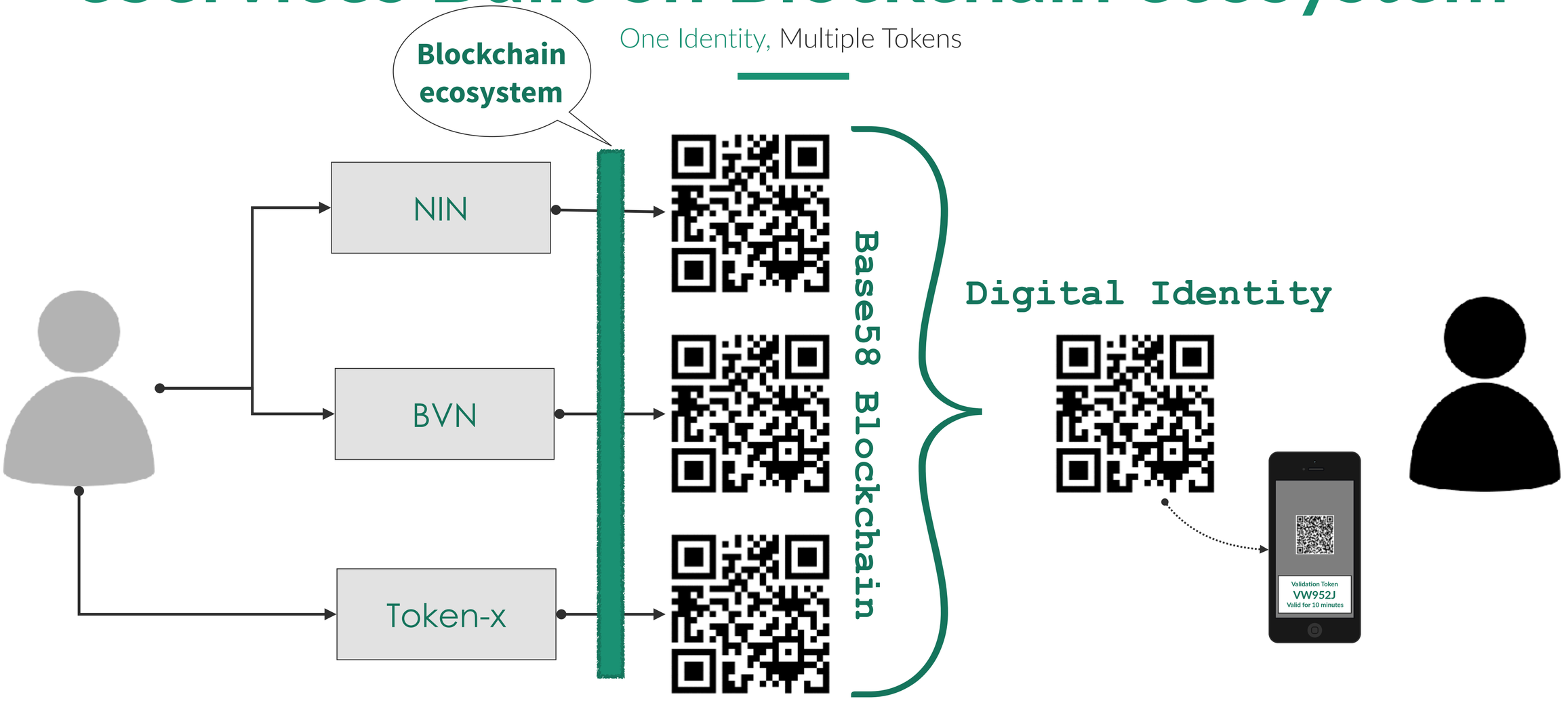
1

National Identity

eServices Built on Blockchain ecosystem

One Identity, Multiple Tokens



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How the Blockchain Addresses are generated

01 **Digital Token** representing the NIN is presented to the **private permissioned** blockchain

02 **A Blockchain-style Digital Wallet** is created, which is like a keychain which stores the Digital Tokens

03 **Blockchain Addresses** are generated from a double Hash (SHA256) and a seed only known to the **NIDB**

04 **Public/Private Keypairs** are generated for each Digital Token, with a prefix to identify the respective agency

05 **Private Keys are** stored securely on dedicated Hardware Security Modules.

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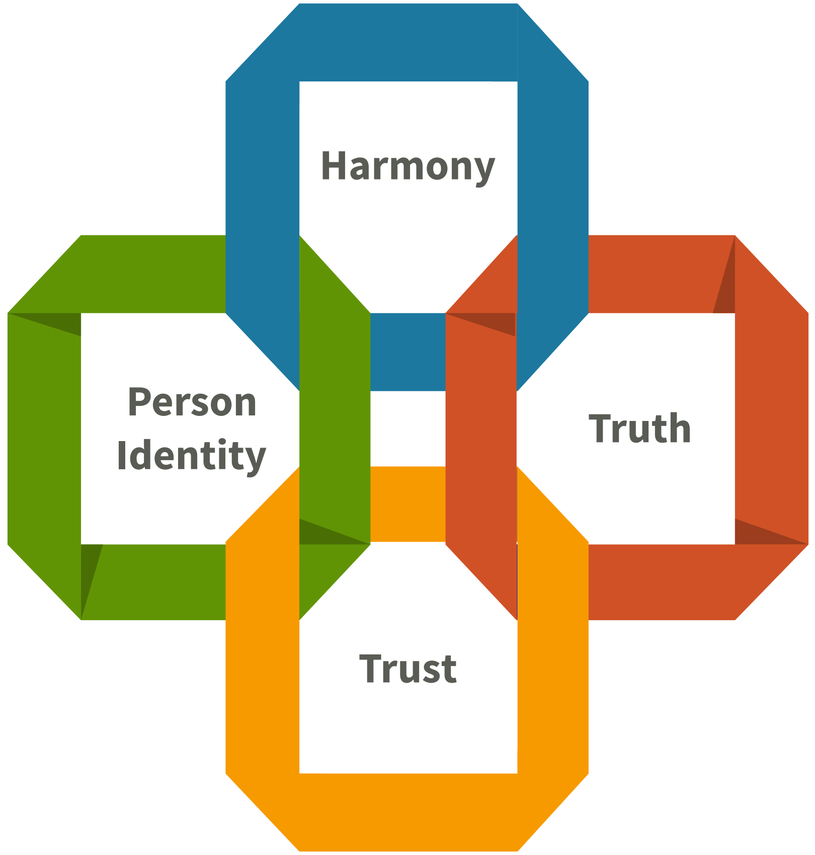
The Result

One Identity, Truth+ Trust

01

Person Identity

Starting point is the issuance of the National Identification Number as the Single Source of Truth



02

Harmonisation

All the Stakeholders agencies submit their functional tokens and biometrics to the NIMC for harmonisation with the National Identity Database at NIMC, which in turn will return a Blockchain-style pseudonymous ID representation of that functional token

03

Truth

As a result of the synchronised and harmonised data, coupled with robust verification services, a credible Single Version of Truth will be established.

04

Trust

Building on having tapped into a Single Version of Truth, the Private Blockchain infrastructure will establish Trusted Tokens for requesting clients, building a reliable layer of trust that will cross borders and regions over time.

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Advantages of the Blockchain ecosystem

Private Blockchain means that only authorised agents, MDAs and organisations will have access to view or carry out transactions using Smart Contracts

System is built on an Ethereum-style Blockchain engine, making Smart Contracts easy to deploy for respective MDAs such as FRSC, FIRS and so on.

ecosystem is meant to complement, not compete against the online NIN and Biometric verification systems at NIMC. The immutable nature of the ecosystem will also provide a fool-proof audit trail of all Identity Management transactions

Data Privacy is of a passionate concern to all at NIMC. The pseudonymous nature of the token IDs on the Blockchain engine will further enhance strict compliance to confidentiality and securing Person Identity

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2 do list

1 **Virtual SmartCard**

NIMC is working on issuing a Virtual SmartCard to be available on both Smartphones, Tablets and Feature phones, making extensive use of the National PKI

2 **Revised NIN Slip**

The NIN Slip is being revised so it can be verified using Digital Hashes and the National PKI domiciled at the NIMC Datacentre

3 **National Identity Card 2.0** *"The Classic Card"*

The Next Generation National eID Card will come with a Dual Interface (contact & contactless) and have DESFire Emulation built-in

4 **African Digital Identity Blockchain-based Ecosystem**

Develop an African-wide cross-border common identity ecosystem with mutual recognition, produced by Africans - for Africans

Virtual SmartCard Features

Available in Q3 2018

Download on the App Store

GET IT ON Google Play

- Will be available for download from the Google PlayStore, or Apple App Store
- For feature phones, will have digital hashes which revolve and expire after each use, and will rely heavily on the National PKI based at NIMC
- Two apps will be available: One for End Users, the other for verification ONLY.
- Only subscribed users will be able to use the verification app. Each verification will attract a transaction fee, payable to NIMC

Revolving Keys

Will contain very strong encryption from provisioning to verification to prevent forgery

Design

Will not be a 100% visual replica of the physical SmartCard and will contain latent components

Ubiquity

Will instantly provide access to millions of persons awaiting the issuance of the physical National Identity Card

Plan

Verification service requires a Subscription Plan, payable to NIMC

National Identity Management Nimc Commission

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Revised NIN Slip

Verifiable, reliable, realtime

Federal Republic of Nigeria
National Identification Number Slip

First Name:	PROUD
Middle Name:	NIGERIAN
Surname:	CITIZEN
Gender:	M
Tracking ID:	S7Y0NFIZ00001AB

National Identification Number

1234567098

MySignature

National Identity Management System

HASH: f7482cb6e226c132a2e12bc2704441af0a90674d

[1] Please verify the information on this document by scanning the barcode above;

[2] This NIN slip remains the property of the Federal Republic of Nigeria and MUST be surrendered on demand;

[3] This NIN slip does not imply nor confer citizenship of the Federal Republic of Nigeria on the individual the document is issued to;

[4] This NIN slip is valid for the lifetime of the holder and DOES NOT expire.

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Trust… but verify

Thank You