

Achieving Interoperability: Linking The Ghana Card Across National Identity Systems And Platforms

A Presentation by

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GLOBAL CONTEXT

National ID Cards Are Common. Fully Integrated ID Systems Are Rare.

170+

Countries with national ID cards in circulation

85%

African countries have national ID systems

15–20

Countries with fully integrated identity systems

Global Benchmarks:

Estonia

India
(Aadhaar)

Singapore

UAE

Ghana

Source: World Bank ID4D Global Dataset (2022–2024), the OECD Digital Government Index, UNECA Africa digital identity landscape 2022

Fragmented Records



Duplicate & Fraud Risk



Citizens Pay the Price



Beyond Card Issuance: A National ID Platform

The Common Approach

- Standalone card programme only
- Fragmented governance and data silos
- Interoperability retrofitted as an afterthought
- Persistent identity silos across agencies



The Ghana Model

- ✔ Designed for integration from day one
- ✔ Legal, organisational, and technical alignment
- ✔ One trusted identity credential across all sectors
- ✔ Resilient and proven in real African conditions
- ✔ 14 applications; e-pasport currently activated.
- ✔ Multiple verification options

THE ARCHITECTURE

Built Across Every Critical Layer



LEGAL

Statutory authority, data governance, lawful access rights



ORGANISATIONAL

Defined roles, accountability structures, and cross-institution collaboration frameworks



SEMANTIC

Common identity data standards and shared data definitions understood across all platforms.



TECHNICAL

Biometric verification APIs, secure infrastructure, and direct sector connectivity



*Delivered through a structured public-private partnership:
NIA (sovereign authority) × Margins ID Group (design, build, integrate)*

Public Authority, Private Delivery



National Identification Authority (NIA) – Public Partner

Legal mandate & sovereign governance

- Statutory authority for national identity
- Policy-setting, standards, and data governance
- Sovereign oversight – no private actor owns the system
- Issues the Ghana Card under state authority



Margins ID Group – Private Partner

Design, delivery & integration

- Conceptualised and financed the ecosystem
- Built all 27 subsystems of the national ID
- Designed the cross-sector integration layer
- Operates under binding SLAs with KPIs on uptime, accuracy & security
- Subject to annual independent audits and NIA oversight



How the Ghana Card Ecosystem Sustains Itself

Transaction-Based Verification Fees

Institutions pay per access to data. (The fees and charges are passed by the Government)

Risk Allocation

The private partner absorbs upfront investment and performance-related risks, while the government retains oversight on governance and data sovereignty.

Private Investment

The private partner (Margins ID Group) provided the initial capital for the technical infrastructure, including biometric equipment, and ID cards.

Revenue Sharing

Shared identity infrastructure removes duplication, and reduces integration and operational costs across institutions.

Interoperability Without Trust Is Just Risk Exposure.



Clear Legal Basis

Statutory foundation for all identity use and institutional authority.



Sovereign Oversight

NIA retains full control; no private actor owns the identity database.



Lawful Access Only

Public agencies within mandate; private sector within consent and permitted scope.



Data Protection

Purpose limitation and privacy safeguards embedded at every layer. Local and global data protection compliance.



Cybersecurity Controls

Encryption, access management, and transaction integrity throughout.



Audit & Accountability

Defined responsibilities and traceability digitalized across the full ecosystem.

PROOF OF SCALE

Ghana's National Identity System by the Numbers

19.4M

Ghanaians
Enrolled



19.3M

Cards
Printed



92%

Adult Population
Covered

*Ghana 2026 adult population
(Ghana Statistical Service
Projection)*



85%+

of the registrations
were issued instantly
in the first year



35 years

Of Identity
Expertise



2019

Progressive
Buildout



262

Institutions
Integrated



250,000

registration
in a day

One Identity. Trusted Across the Economy.

Health (NHIS)

Primary identity reference for eligibility verification; banks use it to strengthen KYC and reduce onboarding time.

Tax (GRA / TIN)

Strengthened taxpayer identification and fewer identity gaps across the revenue base.

Telecoms

SIM registration linked to verified identity; improves network integrity and reduces fraud.

Driver and Vehicle Licences (DVLA)

Secure API connection to NIA; Real-time biometric verification; Unique Identifier, no duplicates



Banking & Finance

KYC compliance, faster customer onboarding, and significant reduction in identity-related fraud.

Social Protection

Verified beneficiary targeting enables accurate delivery of aid and prevents programme leakage.

Immigration

More reliable identity verification at borders and for passport issuance and renewal.

eID + API: A Deliberate and Complementary Design

WHY API MODEL TODAY

API-based verification enables broader and faster ecosystem rollout while infrastructure matures. It also supports the sustainability model and enables real-time audit trails.

- Works across legacy sector terminals
- Enables per-transaction revenue model
- Centralized audit & fraud detection
- Enables real-time online verification with or without card present
- Augmented by offline verification using NFC readers

eID PHILOSOPHY

A digitally signed Ghana Card enables on-card, offline-capable verification — eliminating backend dependency. This is the gold standard: cryptographic trust without connectivity.

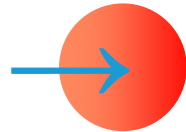
- Contactless chip verification
- Offline biometric match on card
- No API call required for core proof
- True self-sovereign credential

From Physical Card to Digital Identity: The Next Frontier

WHERE WE ARE

Electronic Identity in the Physical World

The Ghana Card is a world-class eID – digitally signed, biometric-capable, chip-embedded. It lives in a physical wallet. Verification requires either the card to be present or an API call to the backend.



WHERE WE'RE GOING

Digital ID: Everywhere with Your Identity Credentials

- **Digital Credential Wallet:** Ghana Card identity bound to a secure mobile app. The phone becomes the credential.
- **Verifiable Presentations:** Citizens present only what's needed (name, age confirmation, liveness) without exposing the full card data.
- **Online & Offline Capable:** NFC tap for in-person; QR + cryptographic signature for digital services. Works without internet connectivity.
- **Device-Bound Security:** Keys stored in device secure element or SIM.

Achieving Interoperability: Linking The Ghana Card



- ✔ Identity without interoperability is incomplete.
- ✔ Ghana demonstrates that a fully integrated national ID platform is achievable and scalable.
- ✔ The model combines sovereign governance with private delivery capability for lasting impact.
- ✔ Legal, organisational, semantic, and technical alignment are all essential, and the technology must always follow the law.

There is no one-size-fits-all — but there is a proven path. Ghana has walked it

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About Margins ID Group

Margins ID Group Limited is an identity solutions company, connecting identities securely to products and services. We manufacture smart, secure documents and conceptualize, design and build secure identity software, applications and multi-module identity infrastructure and systems at the highest level.

- 35+ years in the Identity Ecosystem
- 6 specialised subsidiaries in Ghana and The Gambia
- Global Presence in over 7 Countries

Our Products/Services/Solutions

- ❖ National ID System
- ❖ Driver and Vehicle Licensing Platforms
- ❖ Data Warehouse
- ❖ Document Digitisation Solutions
- ❖ Design and sale of Enrolment/verification Equipment
- ❖ Access Control Solutions linked to NID Card
- ❖ Development of Biometric Verification Platforms
- ❖ Secure document and card manufacturing
- ❖ Identity software, digital infrastructure

Our Group Certifications



Clients



Thank You

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