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Economic Commission for Africa

Digital Identity: Empowering the Future

Presented By
Mactar Seck
Chief of Technology & Innovation, UNECA
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Contents

Section 1 Digital Identity for Citizens – Context

Need for Digital Identity

- Digital technologies are changing the Citizens' interaction with the government and businesses.
- The desire to transact online, in real-time, through multi-channels with ease and convenience is transforming traditional systems into advanced digital platforms.
- The aim of many countries is now to support the digital economy agenda through a digital transformation strategy focusing on access to digital services, adoption of digital services, and enhancement of value creation
- Digital Identity in countries shall address the current limitation of the traditional identity ecosystem and provide
  - A digital platform to enhance citizen experience,
  - Reduce identity frauds
  - and offer a cost-effective way to identify and deliver E-governance and e-KYC in the Health, Education, Banking, and Government social sector schemes.

What is Digital Identity ?

Definition: A digital ID is an identity verified and authenticated to a high degree of assurance over digital channels, unique, and established with individual consent. Unlike a paper-based ID, a digital ID can be authenticated remotely over digital channels.

Six attributes of Digital ID are

Verification and authentication

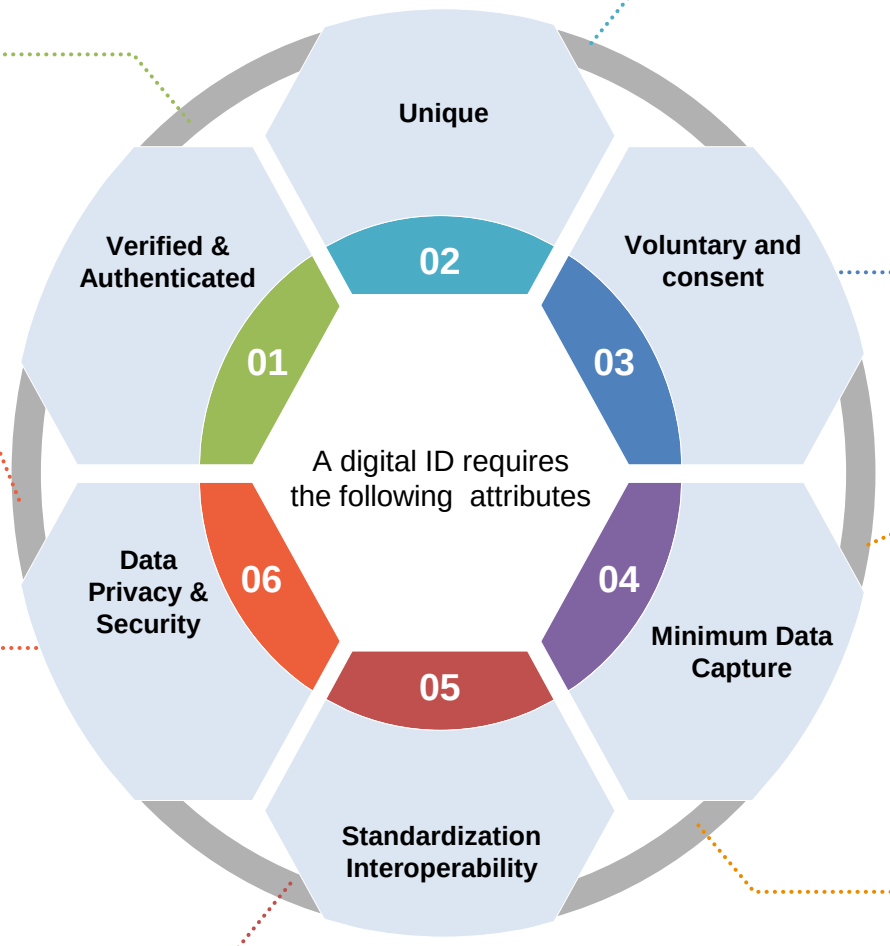
High degree of assurance. High-assurance digital ID meets the standards of both government and private-sector institutions for initial registration and for a multitude of important economic use cases.

Data Privacy & Security

We built safeguards to ensure privacy and security while giving users access to their data and setting up a consent framework with transparency into who has accessed it.

Standardization & Interoperability

. The system should interoperate using open data standards and the ability to continually replace specific components without affecting the rest of the system.



Unique

With a unique digital ID, an individual has only one identity within a system, and every system identity corresponds to only one individual..

Voluntary & Consent

Voluntary means that individuals knowingly register for and use the digital ID with knowledge of what personal data will be captured and how they will be used.

Minimum Data Capture

Only minimum data on the citizen is collected. The type of data collected will determine the uses and utility of the system for various purposes. The collection of more data than needed—including sensitive attributes—increases the registration cost, creates data protection risks, and decreases the reliability and accuracy of the system..

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Key Components of Digital Identity

Demographic Analysis 0

Pre-Registration & Registration 01

ABIS – Biometric Solution –Authentication Methods 02

Technology Solution & Hosting options 03

Other Software Application(S) like Contac Centre and BI 04

Letter / Card Printing & Distribution 05

Project Management and Governance 06

Maintenance Operations 07

Associated Components of Digital ID System

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Volume Analysis 0

- Demographic Data. & Scalability
- BSP / ABIS throughput
- Authentication Volumes
- TIC Timor I.P. User numbers
- Registration Kits deployment

Pre-registration & Registration 1

- Citizen – Residents' eligibility
- Pre-registration Portal
- Family Registration
- Documents of PoI and PoA
- Registration Kits
- Location & distribution
- Service requirements
- Forms
- Language

Biometric& ABIS 2

- Standards
- Throughput
- Interoperability
- SDK Licenses
- Encryption
- .Manual Adjudication

Technology Solution 3

- Registration
- IDMS / ABIS
- Software Systems
- IT Infrastructure
- Biometric Solution
- Authentication Solution
- Data Centers
- Operation and Management

Other Software Solution 4

- IDU a unique random number
- Life Cycle Management of numbers
- BIDU Cards for Citizens

Letter Card Printing and Distribution 5

- Network for IDU data upload
- Communication network
- DC network.

Project Management 6

- Project Management
- Governance structure
- Key resources of SI
- TIC Timor I.P. users
- Training
- Registration Kits services
- Call Centre
- Printing Stationery

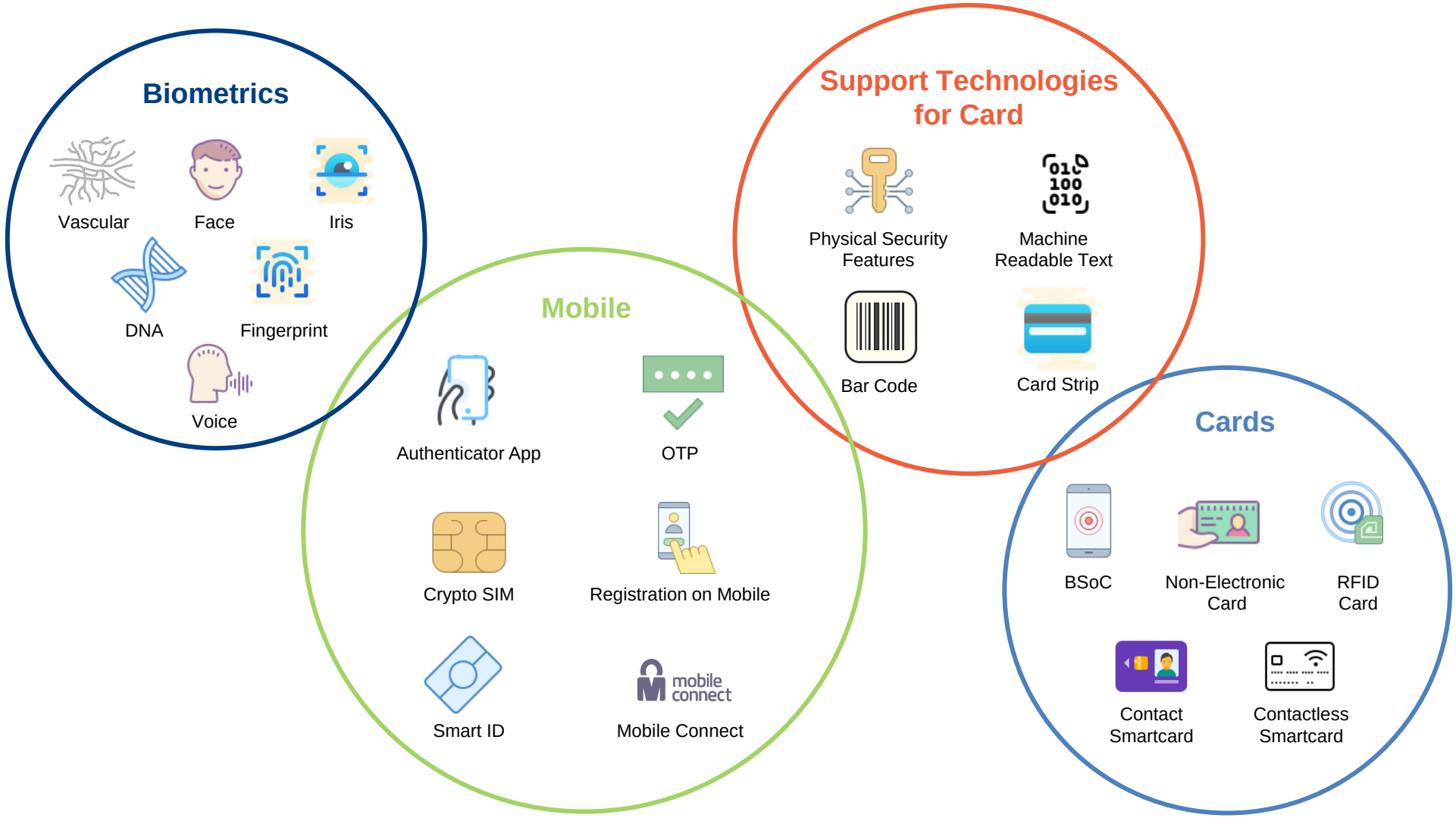
O&M and service levels 7

- UAT and Acceptance Test
- Phase I and PoC
- DC Operations
- Service Levels
- Security Operations

Types of Digital ID : Identification & Authentication Technologies

Various technology options are available for identity credentials

Option analysis needs to be conducted before selection of an ID technology



Source: ID4D, Technology Landscape for Digital Identification

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Section 2: Future Benefits of Digital Identity - Overview

Potential value of Digital ID : Benefits

Digital ID benefits a wide range of individuals, from those who lack ID to those who have ID but cannot use it effectively in the digital world

- In this presentation, we take a comprehensive approach to understanding the potential economic value created by digital ID for both individuals and institutions
  - Digital ID helps individuals meet Know Your Customer (KYC) requirements and enables remote customer registration for financial services
  - Digital ID, much like other technological innovations of 20th century can be used to create value.
  - When digital ID is used expressly to create value and promote inclusive growth, the connectivity and information sharing that creates its value also contribute to potential dangers.
  - Individuals benefit most from increased access to financial services and employment
  - The four largest contributors to direct economic value for individuals globally are
    - increased use of financial services,
    - improved access to employment,
    - increased agricultural productivity,
    - and time savings.

Overview of Applications – Digital ID

Legal & Functional IDs vs. Digital ID

Legal / Civil ID

It is established on the basis of a person's birth registration, which records the individual's biographical information and subsequent life events.

Birth Certificate

Functional Database

Computerized systems, which store digital information about citizens and residents.

Driver's license | Passport | Tax ID

Unique ID system

Computerized, central system which assigns a **Unique identifying number (UIN)**, stores and verifies other digital identity information, and creates and validates information across functional databases.

UIN

Assigns each citizen and resident a unique digital number that links personal information across various databases.

Digital ID

- Nearly 40% of the adult population (aged 15+) in low-income countries do not have an ID. Also, income and gender gaps exist in ID coverage (low-income people and women are less likely to have an ID).
- For the estimated one billion people globally who lack any form of legally recognised identification, digital ID represents a path to rapid inclusion by helping to provide access to critical government and economic services that they may currently be denied.
- Digital ID looks to digitize paper-based legal / civil and functional IDs by assigning a unique identifying number (UIN) to each individual (whether they are citizens, foreigners or child) and link information across various database.
- Significant part of the digital ID is removal of duplication, which may have been caused by recycling of ID numbers over time, weak identity proofing procedures, allowance of multiple enrollment of the same person.

Benefits of Digital Identity - Overview

Citizens I Business I Government

1. **Convenience & Efficiency**
2. **Improved Access to Government Services**
3. **Financial inclusion**
4. **Security & Fraud Prevention**
5. **Healthcare Access**
6. **Privacy & Control**
7. **Planning & Coordination**
8. **Innovative Services**
9. **Digital Skills & Capacity**
10. **Cross Border Mobility**

Digital ID can significantly improve various aspects of the daily life of citizens

Individuals and institutions can benefit from digital ID in a range of interactions

The economic value of Digital ID

User Name	Agency Name	Use cases Associated with each role
Consumers	Commercial Providers of Goods and services	▪ Streamlined registration and authentication ▪ Secure digital payments ▪ e-KYC for Financial Services
Workers & Employers	Secure Architecture	▪ facilitated talent matching ▪ Automated background verification ▪ Efficient Payroll Services
Microenterprises	Range of institutions	▪ Formalized Business Registration ▪ High-assurance contracting and transacting
Taxpayers and beneficiaries	Public Service Provides of goods and services	▪ lined e-government services ▪ Digital tax filing ▪ Direct disbursement of government benefits
Civil / Government Services	Government & other Individuals	▪ Online voting ▪ Verification of donations ▪ School enrolment

Source : McKinsey Global Institute Analysis

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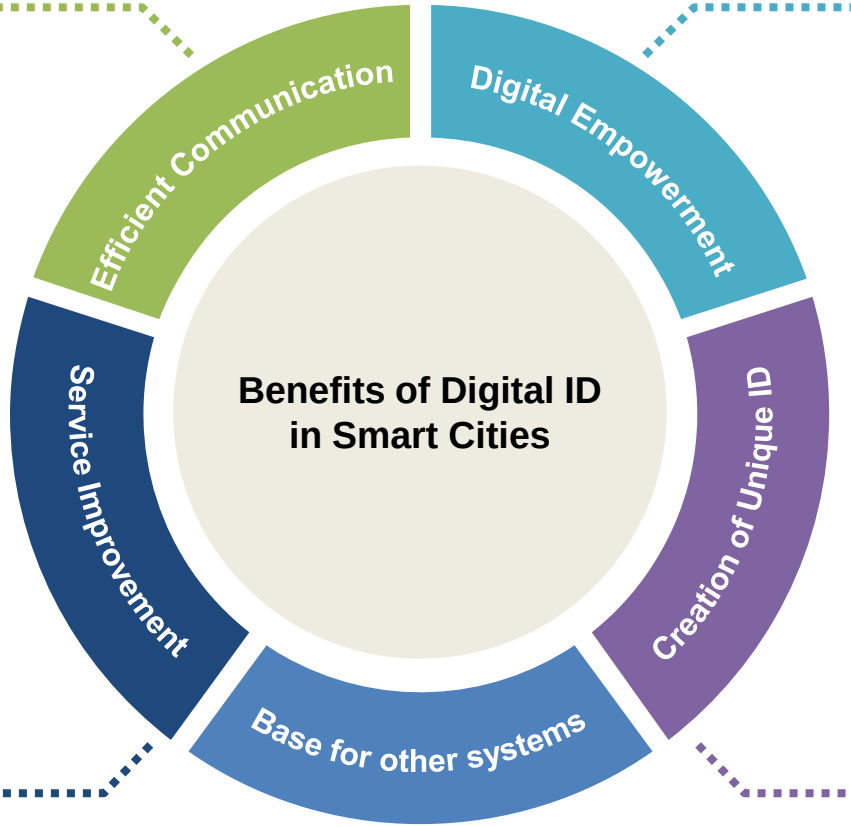
Section 2.1 Digital Identity & Future of Smart City Services

Digital ID and its use in Smart Cities

- Digital identity solutions in a smart city allow secure recognition between IoT devices and users.
- They also create unique identities and relationships, allowing for dedicated monitoring in applications like health, traffic, etc.



- Digital ID helps in building digitally empowered cities, which can lead to all round digitisation of services, in domains like G2C, G2B, and B2B services.

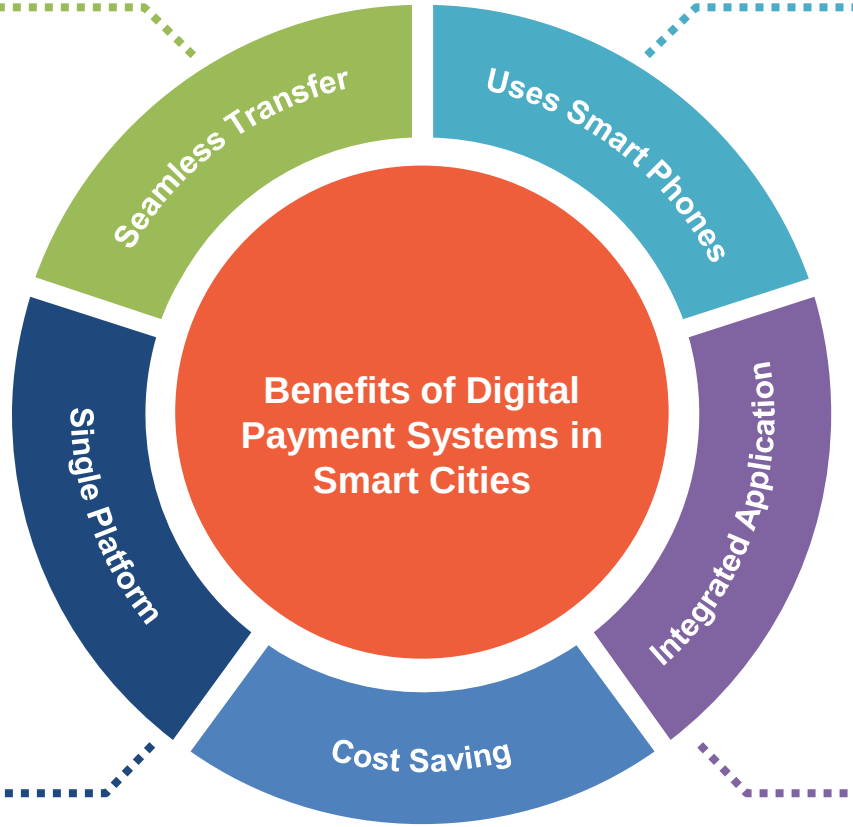
- Improved public services within smart cities– Initiatives like smart class rooms in COVID times, disaster resilience systems.
- Cities are becoming cleaner due to the monitoring of cleaning work via connected CCTV cameras.

- Digital ID helps in creating a unique foundational ID systems, leading to setting up of a digital platform.
- A matured digital platform can help in progression towards digital economy, thus effectively bringing down the cost of transactions.

- Digital ID can also help in creating other systems like CRVS, national population register, biometric based immigration systems, and universal immunization programs.

Overview of Digital Payments System in Smart Cities

- Ability to transfer money between bank accounts across a single window. Send or receive money or scan a QR code to make or authorise payments.



- Traditional transactions making use of merchant establishments and machines can now be conducted using smartphones, provided the banks agree to be connected to the switch.

- Provides a single platform that merges different banking services and and facilities.
- Real-time bank-to-bank payments can be made using a mobile number or virtual payment address.

- Various mobile payment applications or FinTech applications can be created using the platform.
- For example, Google Pay, Amazon Pay, mobile banking applications etc. can be integrated with the digital payments on a single platform for seamless user experience.

- The cost under the unified digital payment platform is brought down considerably.
- The platform handles switching protocols of all payment instruments on a common platform, and allows settlement of transactions seamlessly.

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Section 2.2 Individual & Institutional Benefits

Individuals and institutions can benefit from digital ID in a range of interactions

Individuals can use identification to interact with businesses, governments, and other individuals in many roles: as consumers, workers, microenterprises, taxpayers and beneficiaries, and civically engaged individuals. Correspondingly, institutions can use an individual's identity in a variety of positions:

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Individuals and institutions can benefit from digital ID

- Individuals –
- as consumers,
- Workers and microenterprises,
- taxpayers and beneficiaries,
- civically engaged individuals,
- and asset owners

- institutions can use an individual's identity in a variety of positions:

as commercial providers of goods and services (B2B) interacting with consumers;

- as employers,
- interacting with workers;
- as public providers of goods and services (B2C)
- interacting with beneficiaries; as governments, (G2C)

Applications of Digital ID : Institutional Benefits

Digital ID benefits a wide range of individuals, from those who lack ID to those who have ID but cannot use it effectively in the digital world

- Digital ID allows for the use of a common legally identifiable Unique ID to be used commonly across applications and system
- Enable Digital Payments and electronic transfer of Gambian government subsidy payments
- Linkage with birth registration and automation of CRVS
- Property Tax management
- Tax Information Number and its management
- Electronic health Management System
- Linkages with a bank account number for Direct Benefit Transfer (DBT)

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Section 2.3 Digital Identity & Digital Payments

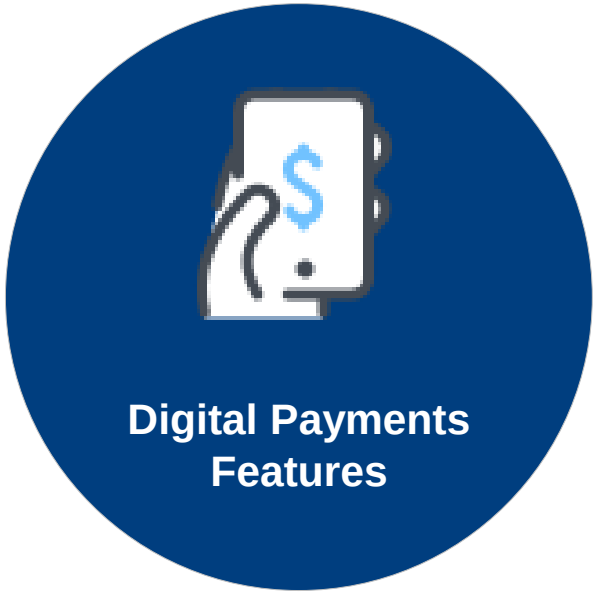
Digital ID Application – Digital Payments

- Payments are a significant component of an economy since they feature the most essential services offered to the citizens. All these services form the core of the economic activity, which includes business procurement, salaries, consumer spending, and tax collection.
- Digital payments can play a significant role in improving the payments ecosystem across departments with various use cases that can cover multiple C2G (Citizen to Government payments) like electricity, toll & transit, taxi, water, education, tourist places, social services, healthcare, penalties, and public convenience.
- Similarly, it can also cover multiple G2C (Government to Citizen) payments, such as monetary awards, senior citizens' benefits, subsidies, and scholarships.
- These use cases ensure enhanced efficiency and security by reducing the dependency on cash.

Applications – Digital Payments its features & uses

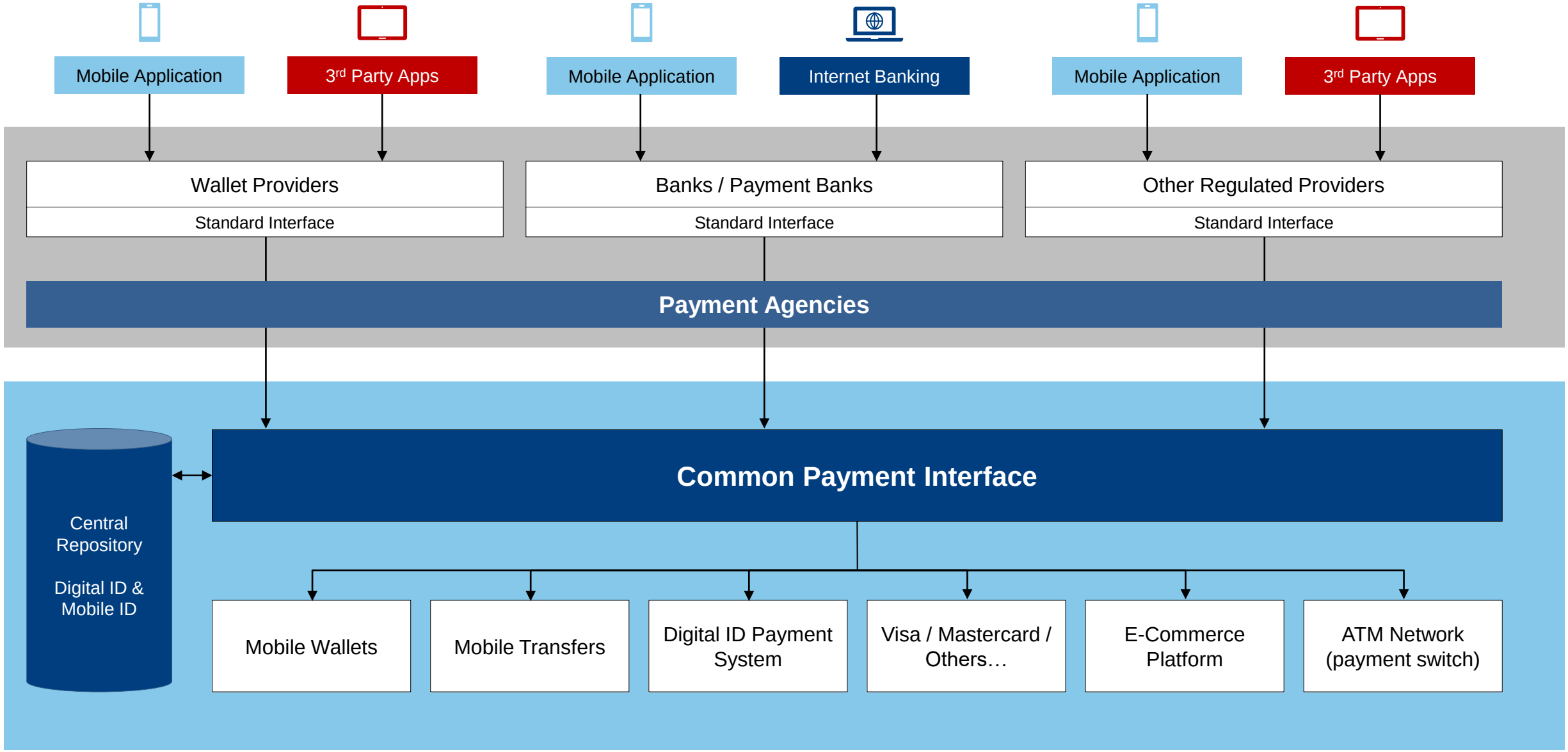
Digital Payments have the following key features:

- Ability to use personal mobile as the primary device for all payments including person to person, person to entity, and entity to person.
- Ability to use personal mobile to "pay" someone (push) as well as "collect" from someone (pull).
- Ability to use Digital ID, mobile number, card number, and account number in a unified way.
- Ability to make payments only by providing an address with others without having ever provide account details or credentials on 3rd party applications or websites.



- Ability to have payment agency-provided mobile applications that allow paying from any account using credentials such as passwords, PINs, or biometrics.
- Ability for all payment system players to use a standard set of APIs for any-to-any push and pull payments.
- Ability to pre-authorize multiple recurring payments (utilities, school fees, subscriptions, etc.) with a one-time secure authentication and rule based access.
- Ability for sending collect requests to others (person to person or entity to person) with "pay by" dates.

Applications – Digital Payments Application Illustration



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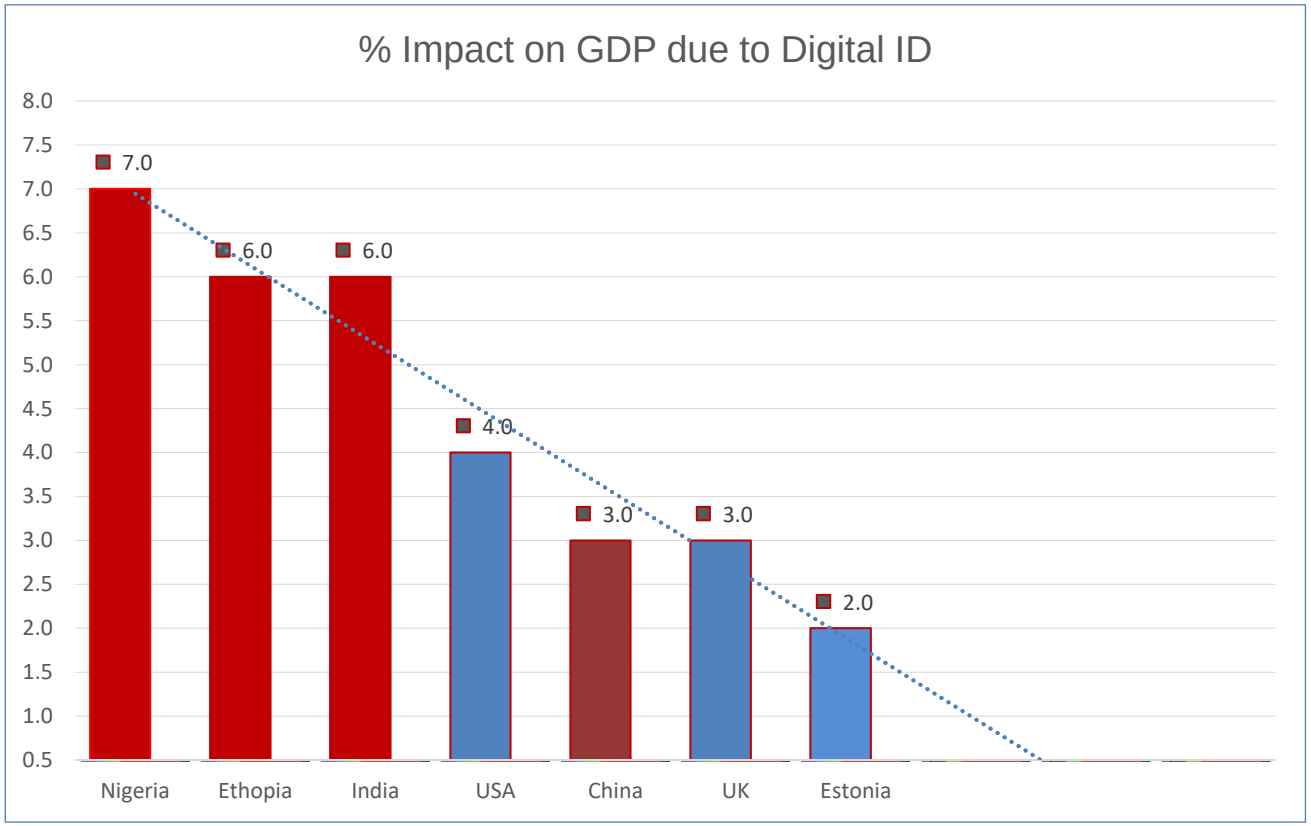
Section 2.4 Unlocking Economic Value Creation

Countries implementing digital ID could unlock value equivalent to 3 to 7 % of GDP

Digital ID can create economic value for countries primarily by enabling greater formalization of economic flows, promoting higher inclusion of individuals in a range of services, and allowing incremental digitization of sensitive interactions that require high levels of trust. Analysis of digital ID Systems indicates that individual countries could unlock economic value equivalent to between 3 and 13 percent of GDP in 2030 from implementing digital ID programs



The report shows that by 2030, digital ID has the potential to create economic value equivalent to 6 per cent of GDP in emerging economies on a per-country basis and 3 per cent in mature economies, assuming high levels of adoption.

We can distinguish between basic digital ID, which enables verification and authentication, and digital ID with advanced applications. Advanced Digital enables storing or linking additional information and gives higher economic benefit

Digital ID can also unlock noneconomic value not captured through quantitative analysis. Digital ID can promote increased and more inclusive access to education, healthcare, and labour markets; can aid safe migration, and contribute to greater levels of civic participation

Source: World Bank ID4D and McKinsey Global Institute Analysis

Digital IDs and Cost Savings

Analysis allows us to pinpoint the most important benefits of digital ID. These include

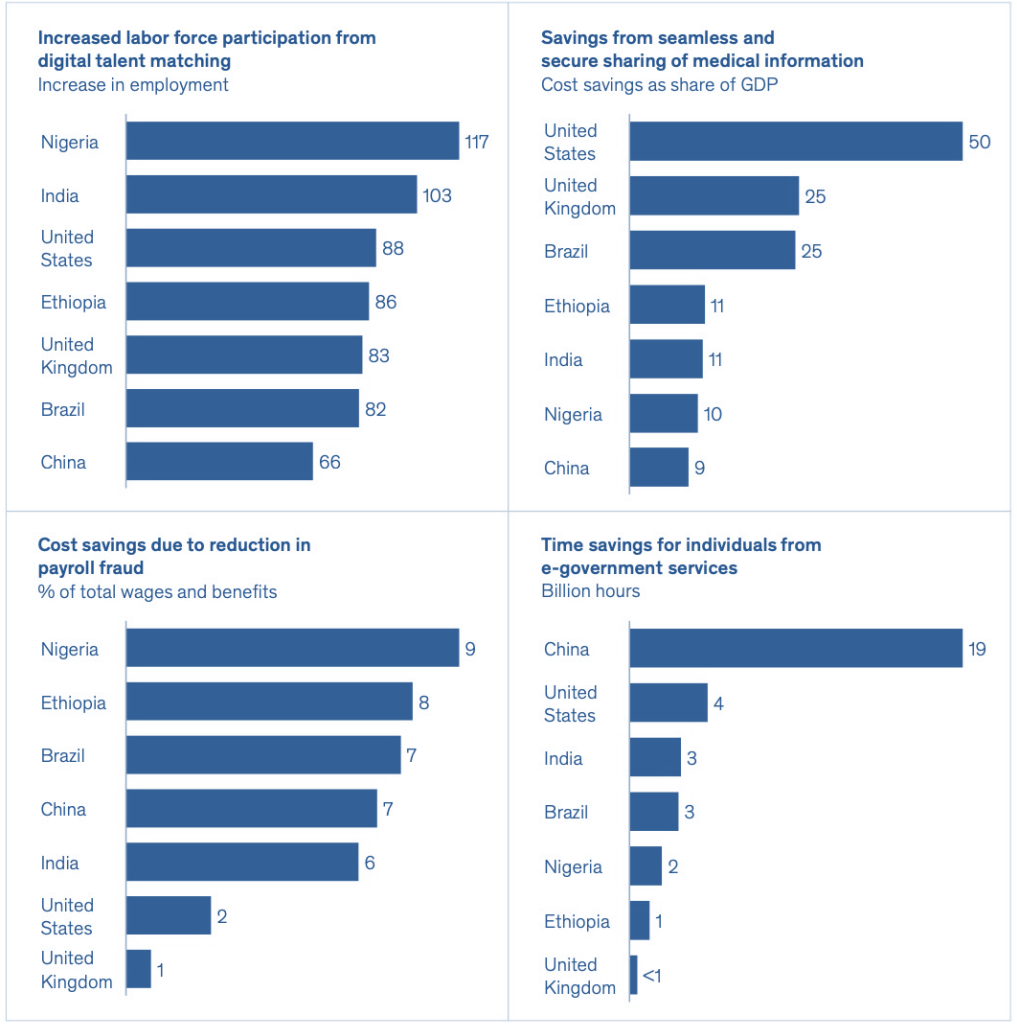
- increased financial inclusion,
- cost savings,
- improved labor market efficiency,
- time savings, and fraud reduction

❖ Increased financial inclusion, particularly in emerging economies, is the most significant benefit associated with consumer interactions

❖ Improved labor market efficiency stems from the way digital ID can facilitate interactions between workers and employers as well as those between microenterprises and their prospective customers.

Countries adopting digital ID schemes have the potential to capture significant value in a wide variety of use cases.

Four examples of how digital ID can create value
Potential benefits, 2030E



Source: McKinsey Global Institute analysis

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Section 2.5: Value Creation in Gambia

Gambia Digital ID - Enabling Factors & Digital Index

Gambia's digital index comprises the ratio of mobile connections/ internet usage/ active social media users in a country's total population. Mobile connections at the start of 2022 are more than 4.22 million, i.e. = 167 % of the total population.

The internet user base is 51 % of the total population, with an extensive active base of social media users. This indicates that the Gambia residents are familiar with mobile technology and broadband. Digital ID & E-Government services in the G2C and G2B area can be rolled out efficiently.

Digital parameter for Gambia Digital ID

1 Internet Users

- 1.39 million citizens use the Internet, which is equal to 51 % of the population
- +2.9% increase year on year is equal to 36,000 citizens
- Internet speed is very good
- 49 % of the population do not have access to the internet

2 Mobile Connections

- Mobile connections are 4.42 million in number.
- Many citizens have more than on mobile phone equals 167.3 % of the population
- 4.9 % year-on-year change , increase by 197000 pa
- Share of social media users by mobile phone 98.2 %

3 Social Media Usage

- Social Media users are 461,000 in number
- 7.2% year-on-year growth in social media users
- 17.6 % of the population uses social media
- Female and male social media users are 32.9% & 67.1 % respectively

4 Social Media Web Traffic

- Twitter users are 6.94 % of the [population
- 2.03 % of the population uses Instagram
- 6.20 % of the population uses Pinterest
- 82.25 % users of Social Media users are also Facebook users

Gambia Digital ID – volumes and challenges

The projected population by the end of year 2030 - 3,018,657 Citizens- system will be planned accordingly

Source: Gambia Labour Force Survey (GLFS), 2018 / Annual Birth rate is 2.36 % per annum.

Total Population in the year 2018 - 2,335,504*

Current population by the end of year 2022 -2,504,791

Rural Population 36 % of the total population

Urban Population 64 % of the population

A different strategy for Rural area

The target population to be covered is 80% of the total volumes by 2023. Full enrolment with initial investment

Strategy for enrolment and deployment of Kits will be prepared before the commencement of the project

Enrolment of 18 years and above in Phase 1

Registration of children at birth and < 18 years Civil Registration Integration

Data Privacy and other enabling laws ad regulations

Digital ID systems will be scalable and modular to plan for the future volumes

Digital Identity for Gambia - The Road Ahead

Current National Identity Number (NIN)

- In 2018, the Gambia issued the new biometric ID card, National Identity Number (NIN). The new card has improved security features and contains a chip that stores a citizen's ten fingerprints.
- All adult citizens have this ID card, and hence, the way forward is not to discard the existing ID number; the citizens will continue using the National Identity Number.

Way Forward

- A new unique 12-digit random number would be generated as a digital ID and linked in the databases with the current ID . This will bring uniqueness to the current ID and elevate it to a Digital ID
- This approach will help launch a digital platform for digital and electronic transactions in the Gambia. Implementing a national interoperability framework will enhance the interoperability of core government services.
- Upgrading the current ID to a digital ID will expand the quality and functionality of existing delivery platforms in Gambia.

Digital Transformation

- A digital foundational ID system will help unlock the digital economy and enable other functional registries like - CRVS - Birth Registration, Health, Education, Digital Payment, Mobile Wallet, and Mobile will be subsets of the Digital ID registry.
- With the constraints in connectivity, the Government could set up Citizen Service Centers(CSC) that would provide access to e-service platforms in remote areas.
- With the interoperability platform in place, the Gambian government can develop other platforms built on the digital National ID system.

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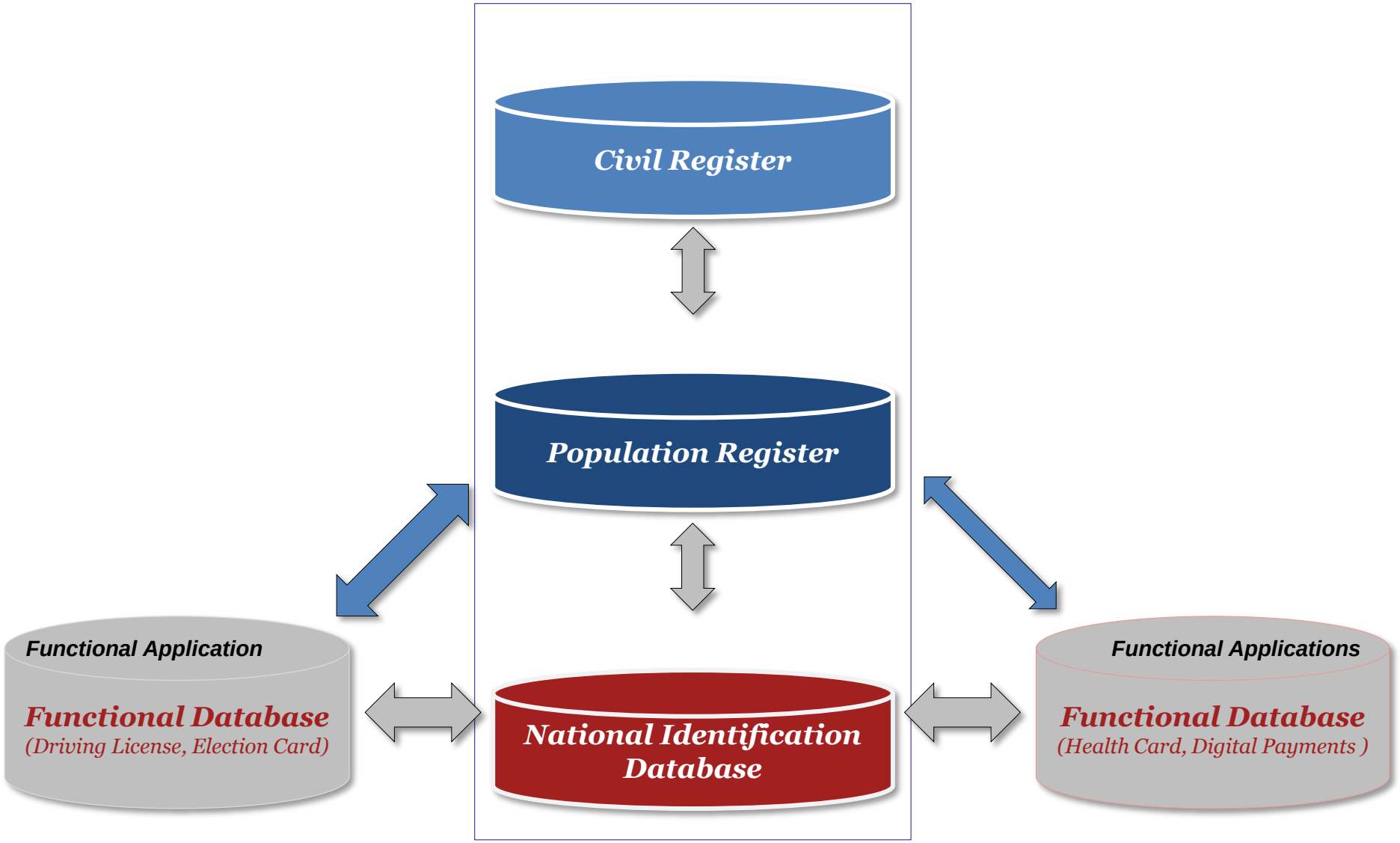
Section 2.6: Digital ID and CRVS linkage

What IS Civil Registration -

•The United Nations define Civil Registration as “The continuous, permanent, compulsory and universal recording of the occurrence and characteristics of the vitals events pertaining to the population as provided through decree or regulation in accordance with the legal requirements of the country.”

- Civil registration is concerned with capturing the vital events like births, deaths, marriage etc. of a citizen and non-citizen resident occurring within the country
- Capturing of vital events is done on a continuous and compulsory basis to create a vital statistics system (CRVS)
- Both programs get benefitted through integration between civil registration and ID programs.
  - Births registered in civil registration system are leveraged for update of ID register
  - Deaths registered in civil registration system are leveraged for update of ID register
- Civil registration is the center of an ID ecosystem or vice versa with involvement of multiple stakeholders

CRVS and Digital ID Linkage



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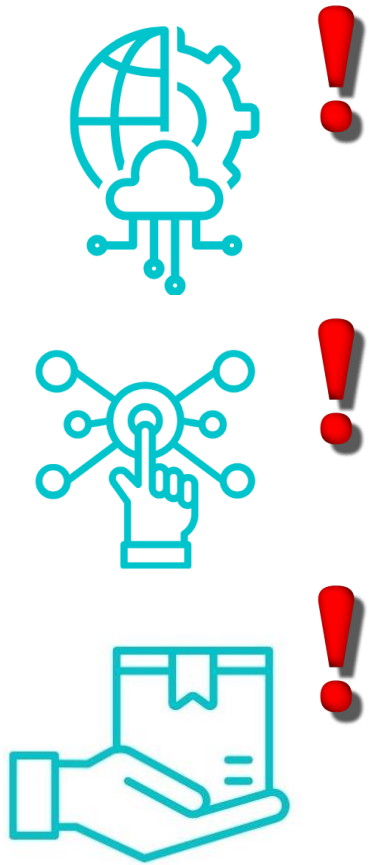
Challenges in Implementing Digital IDs in Africa

- Limited **infrastructure**
- Low digital **literacy**
- Lack of **trust** in government institutions



References:

- Africa's Contribution to the Global Digital Compact (ECA, 2023)
- Africa Digital ID Landscape Report (ECA, 2023)

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Section 2.7: Conclusion and way forward for Afrcia

Critical Success Factors

1 Strong Political Will

- Government commitment and resource allocation
- TCND/ACS can embark on **public policy launches** with politicians at regional and county level.

2 Public Awareness

- Advocacy and **education campaigns** about digital ID benefits
- TCND/ACS to carry out advocacy in African countries, **initially targeting 'non e-Ready' countries** and 'e-Ready' countries later.

3 Legal & Regulatory Frameworks

- Establishment of **clear guidelines** to protect citizens' privacy & personal data
- TCND/ACS can **engage with National Planning Commissions** and **parliaments**

Critical Success Factors

4 Stakeholder Engagement

- Collaboration with civil society, private sector, and **marginalized communities**
- Tailoring approaches to each **country's context**

5 Interoperable Systems

- **Scalability** and **compatibility** with various sectors (E.g Education, Agriculture, Health, Trade, immigration, company registration, … etc)
- TCND to **convince governments** to invest in **interoperable digital infrastructure**

6 Inclusivity

- All citizens regardless of socioeconomic status, gender, or ethnicity.
- Ensuring no exclusion of **marginalized groups**, increase accessibility eg. via mobile phones and increasing access to educational platforms.

Critical Success Factors

7 Capacity Building

- ECA to lead persuasion of African governments to invest in **stakeholder training programs** on implementing digital ID syster
- Inclusion of traditional / local government structures.

8 Partnership

- Leveraging private sector, development community, and traditional systems and philanthropic individuals.
- Should be aimed at **enabling local expertise**, technology, and resources from within African Member States.

Conclusion

• ECA's TCND is poised to lead with **strategic initiatives** and **partnerships.**

• **Interoperable data** and **trust frameworks** are key for building inclusive, transparent, and responsive E-government systems.

• **Collaboration** and **commitment** between governments, international organizations, and the private sector is essential for successful implementation of Digital ID Frameworks.

Source: ECA, 2024

Conclusion & Way forward – 1/2

Implementing a Digital ID system presents a transformative opportunity with far-reaching implications for individuals, governments, and societies. As outlined in this presentation, the benefits are numerous and extend across various sectors

In moving forward, it is crucial to consider the local context, ensuring that digital ID systems are tailored to the unique needs and challenges of specific regions within Africa. More emphasis on inclusivity, accessibility, and ongoing capacity building will contribute to the sustained success of digital ID initiatives.

The primary outputs which can be mentioned in the conclusion are;

- Increased convenience and efficiency
- Improved access to Government services
- Positive growth on GDP
- Time Savings
- Social Inclusion
- Removal of frauds
- Improved access to Government services
- Enhanced growth in GDP
- Linkages with Civil Registration
- Health Sector use cases child immunization
- Increase in G2C e-government services
- Financial Inclusion
- Achievement of Un SDG Goals
- Cross Border mobility
- Digital Economy and Society

Way Forward for Africa - The Road Ahead – 2/2

The successful implementation of digital ID systems requires a comprehensive and collaborative approach, considering the specific needs and challenges of each African country. Regular assessments and adjustments based on feedback and changing circumstances will contribute to the long-term success of the initiative.

An outline of the Digital ID Project roadmap is given here :

Assessment & Planning

1
- Understand the local context
- Undertake Data Analysis
- Volume determination- census data
- Draft Project Plan, and implementation team and appoint ID experts if required
- Data Centre/ DR hosting/location

Legal & Regulatory Framework

2
- Frame Digital ID regulations law and rules
- Ensure privacy and data protection laws are enacted
- Compliance with international standards for open systems and interoperability

Project Report & Requirements

3
- Prepare project report/implementation report
- Prepare a budget plan and undertake a financial analysis
- Finalise design principles
- Finalise Registration Strategy

Government Approvals

4
- Submit Project / Implementation report to stakeholders and obtain consent
- Submit a report to Government for approval
- Obtain Budget Approval
- report/implementation report

Digital ID Solution Design

5
Functional and technical designs
- Technical requirements and specifications / HW & Software
- Biometric requirements, Mobile ID, PKI , Authentication etc.,
- Prepare procurement and implementation strategy

Technology Procurement

6
- Prepare bidding document
- Launch bidding process
- Bid process management
- Appointment of implementation agency one or 2 as per the implementation plan

Solution development & Implementation

7
- Solution development and software development
- Solution implementation
- IT infra & Data Centre hosting
- Testing and Go-Live
- Pilot and proof of concept

Operations & Maintenance

8
B e ginning of Registration / Enrolment of citizens
- Allotment of Digital ID
- Printing and distribution of ID cards
- Launch of Authentication Services
- Setup of Digital platform and use cases

Thank You