

# ENHANCING FUNCTIONALITY OF DIGITAL ID SYSTEMS: USE CASES IDENTIFICATION AND OPTIMIZATION FOR THE KADUNA STATE GOVERNMENT (KDSG)

## Independent Assessment of Potential High-Value Use Cases



United Nations  
Economic Commission for Africa

SUBMITTED BY:

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## **ACRONYMS & ABBREVIATIONS**

ECA	Economic Commission for Africa
ID	Identity
FGN	Federal Government of Nigeria
KDSG	Kaduna State Government
NIN	National Identity Number

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## 1. Introduction

The Technology, Climate Change, and Natural Resources Management Division (TCND), Green Technology and Innovation Section (GTIS) of the United Nations Economic Commission for Africa (“ECA”), in close collaboration with the ECA Digital Centre for Excellence, is supporting the office of the Governor of Kaduna State (“KDSG”) in the **Identification, Optimization and Operationalization of Digital ID Use Cases** (the “Consultation”). Towards this goal, in June 2022 ECA engaged Fola Odufuwa and Adeola Bojuwoye as the TCND Consultant/Digital ID Operationalization Expert: Use Cases Identification & Optimization and the TCND Consultant/Digital ID Integration & Operationalization Expert respectively (together the “Consultants”) to carry out the Consultation.

An aspect of the work of the Consultants entails the identification of high-value Digital Identity use cases with a strong impact on the development plans of Kaduna State. On August 28, 2022, the Consultants submitted a final draft of the **Digital ID Use Cases Prioritization Framework** (the “**Framework**”) which contained a summary of the stocktaking exercise of potential use cases conducted since the commencement of the Consultation to assist KDSG in making decisions on which use cases to immediately implement in conjunction with ECA.

Through an email issued by ECA on September 2, 2022, the Consultants were directed to implement the Framework by conducting an independent evaluation of the potential Digital ID use cases as previously identified. This **Independent Assessment of Potential High-Value Use Cases** report (the “**Assessment**”) in draft form contains the required evaluation and should be read in conjunction with the **Framework**.

While the Consultants have applied their knowledge and expertise in the field, the **Assessment**, though made in good faith and otherwise sound judgement, are nonetheless subjective. For example, the estimation of the *Possible Impact* of a use case that has not been implemented is at best a forecast even if a seemingly scientific approach has been used in arriving at any determination. It is, therefore, possible that a different result may arise if any of the contributory variables e.g., stakeholders and evaluators are changed.

Secondly, though the **Assessment** seeks to guide KDSG and ECA as to the prioritization of the identified high-value use cases, it is not a binding document and the sequence of implementation may be varied by the collaborating parties at any time. The first draft of this Report is in line with the Terms of Reference and is a deliverable under the contract. The Consultants acknowledge the invaluable input of the ECA and KDSG teams.

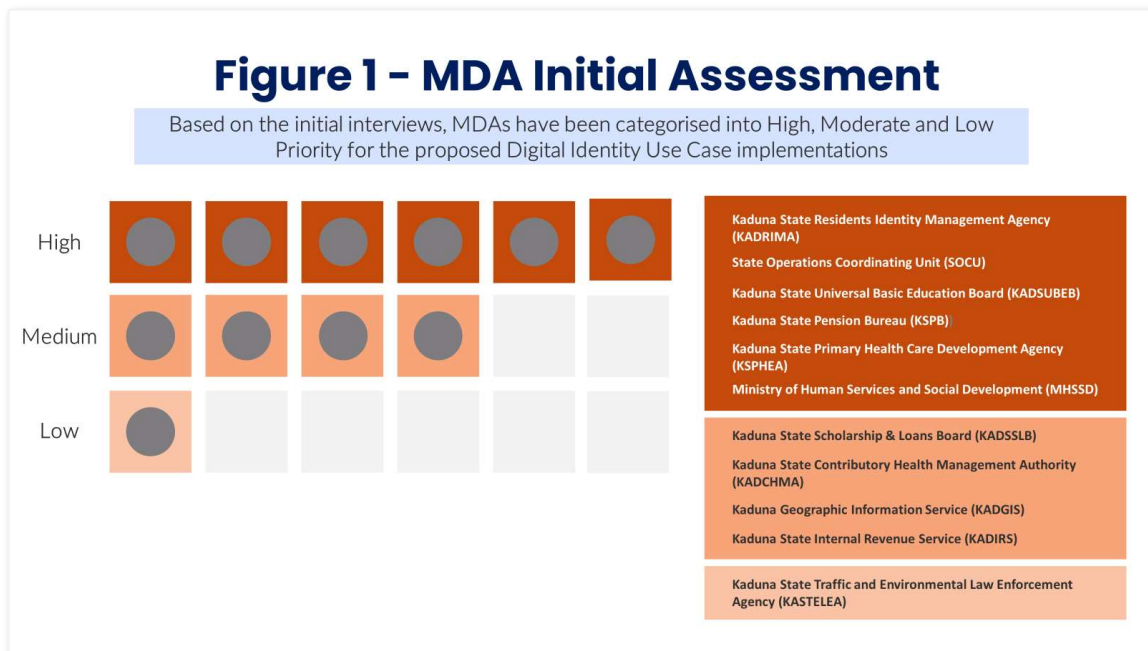
## 2. Evaluation Process

The Consultants in conjunction with KDSG identified eleven MDAs with good prospects for Digital Identity Use Case implementations in Kaduna. These MDAs are as follows:

1. Kaduna State Residents Identity Management Agency (KADRIMA),
2. Kaduna State Contributory Health Management Authority (KADCHMA),
3. Kaduna State Scholarship & Loans Board (KSSLB),

4. State Operations Coordinating Unit (SOCU),
5. Kaduna State Universal Basic Education Board (KDSUBEB),
6. Kaduna State Internal Revenue Service (KADIRS),
7. Kaduna State Pension Bureau (KSPB),
8. Kaduna State Traffic Law Enforcement Agency (KASTLEA),
9. Kaduna State Primary Health Care Development Agency (KSPHEA),
10. Kaduna Geographic Information Service (KADGIS), and the
11. Kaduna State Ministry of Human Services and Social Development (MHSSD).

As captured in the Framework report, in the opinion of the Consultants, six MDAs were considered high value, four were moderate and one had a lower value rating as shown in Figure 1 below.



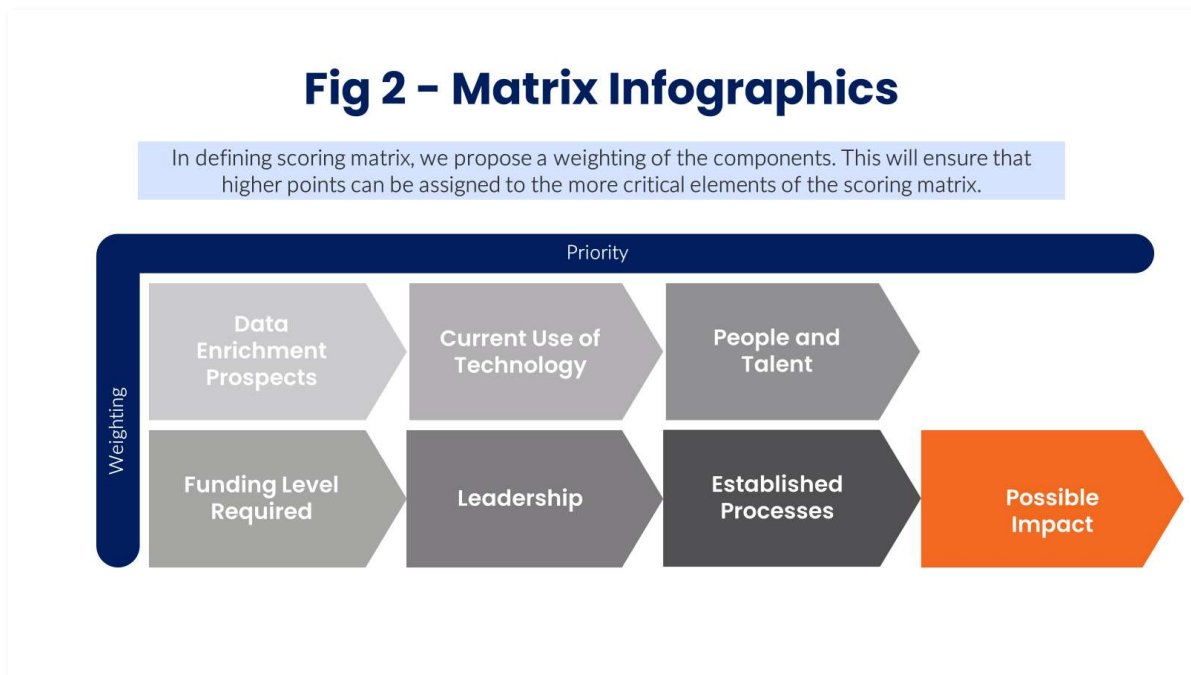
To determine the implementation sequence, the Evaluation Matrix of the **Digital ID Use Cases Prioritization Framework** was applied to the 6 MDAs with higher-rated Use Cases to arrive at a shortlist for the review, vetting and validation of the KDSG and ECA teams.

Based on the mandate issued to them, the Consultants fixed an evaluation session for Tuesday, September 6 2022 to shortlist the final group of MDAs with high-value use cases which shall be recommended for implementation. To ease the assessments, a Google Form was designed which allowed for independent inputs by each Consultant. At 8 am on the day, the Consultants at their respective locations of Kaduna and Lagos respectively made their inputs using the said form. The Consultants did not interact directly or indirectly with themselves nor with the KDSG and ECA teams in the evaluation process, and the results of Table 1 below preview the sequencing direction

that the Consultants consider will be most optimal for KDSG given the information that they were able to access in their interactions with the MDA heads and related KDSG teams. For instance, the Consultants' meeting with the KDSG ICT Cluster Heads which was held at the KADA Hive Innovation and Tech Hub on Tuesday, August 30, 2022, greatly helped to shape their understanding of the state of the digital readiness of each of the six higher-rated MDAs.

### 3. Evaluation Matrix

In ranking the proposed Use Cases, the Consultants applied an Evaluation Matrix which was uniquely developed with the consultative input of the ECA and KDSG teams (Figure 2). The criteria adopted for the Evaluation Matrix are highly relevant and justified for digital identity use case readiness among the MDAs assessed.



This matrix consists of seven parameters anchored on **Possible Impact**. The other components of the matrix are:

- **Established Processes,**
- **Funding Level Required,**
- **Leadership & Commitment,**
- **People and Talent,**
- **Current Use of Technology,** and
- **Data Enrichment Prospects.**

Weights were assigned to each of these parameters on a sliding scale from highest to lowest, the sum of which enables a somewhat less subjective view of which use cases may be eventually adopted for implementation. Figure 3 shows the weights allotted to each evaluation criterion.

Figure 3: Framework for determining MDA use case readiness

Competitors	Objective	Subjective	Weighting
Possible Impact		●	25
Established Processes	●		20
Leadership and Commitment	●		15
Funding Required	●		10
People and Talent		●	10
Current Use of Technology		●	10
Data Enrichment		●	10

#### 4. Functional Modules

Before presenting the results of the Evaluation exercise, it would be necessary to show the Functional Modules attached to the listed potential use cases at each of the six higher-rated MDAs as these shall be central to any forward implementations (Table 1). These modules would be necessarily unique to each MDA but, depending on how they are configured, it may be possible to reuse or extend the capacity of any specific implementation across or among MDAs.

Table 1: Functional modules for potential digital identity use cases.

No.	MDA	Mandate	Potential Use Case	Functional Modules
1.	<b>Kaduna State Residents Identity Management Agency (KADRIMA)</b>	Creation & management of a reliable database for all residents.	<ul style="list-style-type: none"> <li>• <i>Validation of National Identity Number (NIN)</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. NIN Validation</li> <li>3. Biometric Validation</li> <li>4. Analytics</li> <li>5. Audit</li> <li>6. User Management</li> <li>7. Permissions Management</li> </ol>

2.	<b>State Operations Coordinating Unit (SOCU)</b>	Oversees the identification and enrolment of poor and vulnerable households into the social register.	<ul style="list-style-type: none"> <li>• <i>Remote Monitoring</i></li> <li>• <i>Digital Verification</i></li> <li>• <i>NIN Validation</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. NIN Validation</li> <li>3. Biometric Validation</li> <li>4. Data Enrolment/Validation</li> <li>5. Offline Data Validation</li> <li>6. Others Modules</li> <li>7. Analytics</li> <li>8. Audit</li> <li>9. Monitoring and Evaluation</li> </ol>
3.	<b>Kaduna State Universal Basic Education Board (KDSUBEB)</b>	Provision of free and compulsory basic education.	<ul style="list-style-type: none"> <li>• <i>Digital Verification</i></li> <li>• <i>Remote Monitoring</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. Biometric Validation</li> <li>3. Data Enrolment/Validation</li> <li>4. Offline Data Validation</li> <li>5. Local Data Storage</li> <li>6. Analytics</li> <li>7. Audit</li> <li>8. Monitoring and Evaluation</li> <li>9. User Management</li> <li>10. Permissions Management</li> </ol>
4.	<b>Kaduna State Pension Bureau (KSPB)</b>	Pension administration.	<ul style="list-style-type: none"> <li>• <i>Remote Verification</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. NIN Validation</li> <li>3. Biometric Validation</li> <li>4. Data Enrolment/Validation</li> <li>5. Offline Data Validation</li> <li>6. Local Data Storage</li> <li>7. Analytics</li> <li>8. Audit</li> <li>9. Monitoring and Evaluation</li> <li>10. User Management</li> <li>11. Permissions Management</li> </ol>



				12. SMS Notification/Reminder
5.	<b>Kaduna State Primary Health Care Development Agency (KSPHEA)</b>	Promotion of general health; prevention and management of diseases and illnesses.	<ul style="list-style-type: none"> <li>• <i>Tracking of pharmaceuticals</i></li> <li>• <i>Integrating Medical Records with the KADIMRA database</i></li> <li>• <i>NIN Validation</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. NIN Validation</li> <li>3. Biometric Validation</li> <li>4. Data Enrolment/Validation</li> <li>5. Offline Data Validation</li> <li>6. Local Data Storage</li> <li>7. Analytics</li> <li>8. Audit</li> <li>9. Payment Tracking</li> <li>10. Monitoring and Evaluation</li> <li>11. User Management</li> <li>12. Permissions Management</li> </ol>
6.	<b>Kaduna State Ministry of Human Services and Social Development (MHSSD)</b>	The welfare of Kaduna women, children, the socially disadvantaged and the physically challenged.	<ul style="list-style-type: none"> <li>• <i>NIN Enrolment</i></li> <li>• <i>NIN Validation</i></li> <li>• <i>Monitoring and Tracking.</i></li> <li>• <i>Payment Verification and Tracking.</i></li> </ul>	<ol style="list-style-type: none"> <li>1. Remote Verification</li> <li>2. NIN Validation</li> <li>3. Biometric Validation</li> <li>4. Data Enrolment/Validation</li> <li>5. Offline Data Validation</li> <li>6. Local Data Storage</li> <li>7. Others Modules</li> <li>8. Analytics</li> <li>9. Audit</li> <li>10. Monitoring and Evaluation</li> </ol>

Since the Use Cases are unique in themselves and to the MDAs, evaluations were carried out on the MDA and not on the individual use case modules. Thus, use cases were evaluated as complete processes per MDA. By ‘complete processes’ we mean software, hardware, people and processes.

## 5. Evaluation Results

In the view of the Consultants, the digital ID use cases at the Human Services and Social Development (MHSSD), Pension Bureau (KSPB) and Kaduna State Residents Identity Management Agency (KADRIMA) are rated as having the highest prospects for immediate implementation out of the 6 MDAs (Table 2).

Table 2: Summary of consultant assessments.

FINAL ASSESSMENT		RANKINGS
MDA	Kaduna State Ministry of Human Services and Social Development (MHSSD)	20.5
	Kaduna State Pension Bureau (KSPB)	20
	Kaduna State Residents Identity Management Agency (KADRIMA)	19
	Kaduna State Universal Basic Education Board (KADSUBEB)	16
	State Operations Coordinating Unit (SOCU)	15.5
	Kaduna State Primary Health Care Development Agency (KSPHEA)	15

A detailed review of the scoring system utilized by the Consultants is contained in the Digital Identity Scoring Sheet appended to this Report.

## 6. Next Steps

Several follow-on actions need to be undertaken as shown in Table 3 below. We discuss these actions and the responsible parties in this section.

Table 3. Anticipated follow-on actions.

<b>ACTION</b>	<b>RESPONSIBILITY</b>	<b>DEADLINE</b>	<b>REMARKS</b>	<b>STATUS</b>
<b>ITEM 1:</b> Review and adopt the final draft of the Use Case Prioritization Report.	<b>KDSG ECA</b>	Wed, Aug 31, 2022	<i>The criteria extensively discussed in this Report would be utilized in assessing and ranking the final grouping of MDAs and use cases to be adopted for implementation.</i>	<b>COMPLETED</b>
<b>ITEM 2:</b> Hold an evaluation session to shortlist the final group of MDAs with high-value use cases recommended for implementation	<b>KDSG Consultants</b>	Tues, Sept 6, 2022	<i>Conducted by the Consultants on behalf of ECA and KDSG.</i>	<b>COMPLETED</b>
<b>ITEM 3:</b> ECA and KDSG teams to review, vet and validate the Assessment Report.	<b>KDSG ECA</b>	Thurs, Sep 15, 2022	<i>To be initiated by ECA upon receipt of this report.</i>	<b>DUE FOR ACTION</b>
<b>ITEM 4:</b> Conduct deep dive sessions with the final group of MDAs to commence the process of operationalizing the high-value use cases	<b>KDSG ECA Consultants</b>	Thurs, Sep 22, 2022	<i>Intensive sessions with each MDA selected for a prospective Use Case implementation to retrieve information on processes, policies, technology infrastructure in place, opportunities, capacity gaps, etc.</i>	<b>DUE FOR ACTION</b>

