Meeting your KYC registration needs, one regulation at a time.
Introduction

The Challenges of Biometric Identity Registration

Identity management offers itself as a key component of any large organization and government parastatal, from data capture to data security. The idea of businesses/government agencies having a database of the information of individuals comes with many benefits, yet many risks. Hence, the reason regulations are coming up (and will continue to) to ensure that identities captured maintain the required level of acceptance for any data capture (KYC) operation, including text, fingerprint, and image capture.

Among a host of others, organizations and governments are faced with three major challenges when it comes to biometric data capture. Some of these are:

- **Lack of robust systems**
  A number of organizations conducting biometric registrations do not have a robust system in place for the end-to-end collection of all kinds of biometric data.

- **Meeting KYC/Identity Management regulations**
  In the presence of the above, organizations are often faced with finding a system that helps to meet all the standards set by regulatory bodies for identity management.

- **Limited reach during enrolment**
  The inability to capture data on mobile in an age of financial inclusion limits the reach of project owners during biometric capture.

- **Data storage & integration issues**
  The existence of (citizen) data in silos and lack of integration among all government databases makes it difficult to achieve a more secure ecosystem for the country as a whole.

- **Poor data quality**
  The quality of data (images, fingerprints, and other ID documents) provided by users is poor and do not meet the minimum requirements for a successful data capture operation.

- **Inadequate operations management**
  There are often no central management systems for controlling and monitoring all operations happening during biometric registrations. Data capture devices, for instance, can get lost easily as a result of this.
Large organizations and government parastatals that are focused on identity management for the effective running of day-to-day activities will find the BioSmart platform very valuable. It is a KYC system that enables these establishments to conduct end-to-end biometric registrations while meeting all the regulations for identity enrolment, from text to images and fingerprints.
The adoption of BioSmart comes with a lot of values to organizations and has been proven to deliver on these for multiple biometric projects across Africa. Here are some of the key values that BioSmart offers its users.
Integration to national databases for authentication.

Data integrity and regulatory compliance via built-in validation rules.

Real-time verification of customer information and documents, thereby reducing fraud.

Interactive & intuitive graphical user interface (GUI).

Offline Biometric Registration.

Multiple registration channels, including web and mobile.

Faster customer onboarding through business process automation.

Dynamic configurations on the system to suit business and regulatory requirements.

End-to-end management of capture agents in different locations.

Customer document management.
**Applications**

To register subscribers. Supported on Windows, Android and Web.

**AFIS**

To verify the identity of subscribers using fingerprint and identifying duplicates in the database.

**SEAMROP**

Administrative Portal for managing all Registration operational activities.

**SDP**

To process and save captured subscribers’ data.

**BioKozuna**

To re-validate captured subscriber’s data to ensure it is compliant with regulatory rules and standard.

**BioExporter**

To generate and export data in XML format.

**Face Matcher Engine**

to verify the identity of subscribers using facial match
GeoTracker
To track location of all devices running BioSmart.

Reporting & Analytics Engine
To access various types of reports and analytics.

Microservices
To provide all required services to BioSmart.

CRM
For customer lifecycle management.

SMTP
To manage emails to be sent to subscribers.

SMSC
To manage SMS to be sent to subscribers/users.

VAS
To manage Value Added Services integration e.g. airtime and data vending.

Provisioning System
To provision and activate subscribers data.

The BioSmart Ecosystem
Features of BioSmart

For security reasons, the BioSmart platform operates a robust Role-Based Access Control feature that ensures that all accessible features or functionality on the system are role based.

Role-Based Access Control

This enables the agent to collect the signature of a customer by signing directly on the touch screen of the device (if it has one) or on a signatory pad.

Digital Signatures

The BioSmart application is able to carry out a facial match/comparison of the images on biometric ID cards against the face of end users in real-time to ensure that they’re true owners of the ID provided during capture.

Face to ID Match
In order to prevent cases of fraudulent cases of ‘Picture of Picture’ capture by agents with malicious intentions, the BioSmart application has in place a Machine Learning Model capture of detecting liveness of an image. With the BioSmart Push Notification feature, an agent is able to receive targeted instructions from the administrative staff managing the biometric registration exercise via push notifications on his/her device. The BioSmart KYC provides an offline capability that makes it possible to capture individuals in remote areas with poor network coverages.
BioSmart has a deduplication (N:N) engine that is able to scan through fingerprint images in its database and flag duplicates. With this feature, it's possible to know unique identities via their biometric identity.

Beyond ordinary capture, the platform enables agents to validate customer data, including text, fingerprint, and image. These validations are done based on configure business rules. BioSmart is compatible with in-built or external cameras.

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The background clean-up feature makes it possible for the BioSmart application to analyze the background of an image, carefully crop out the non-uniform background and impose a plain white background without impacting the picture of the user.

The OTA feature enables automatic download and installation of latest versions. This feature is supported on both the Android and Windows component.

The BioSmart OCR feature facilitates the extraction of customer details from a physical form or ID document and populates the fields automatically on the digital platform. This feature makes customer onboarding faster.
BioSmart Product Brief

The Seamfix Registration Operations Portal (SeamROP) is a component of BioSmart and a robust management portal that is responsible for the management of all data capture activities of agents & admins, as well as the tracking devices & kits used across the biometric project.
**User Management**
This module is used to manage user account creation on the BioSmart KYC Suite. Activities in the module include user account creation and update, user account activation and deactivation, password reset, and account unlocking. All users on BioSmart KYC Suite are required to have an account created on SeamROP before they can interact with any component of the BioSmart suite.

**Agent Management**
With SeamROP’s mapping ability, capture devices are easily assigned to each agent and in the future can be identified based on the ownership status of each device.

**Analytics**
SeamROP includes a dashboard that can be accessed by agents and stakeholders for a full view of captured data and registration analytics at every point in the project. This information can be accurately presented in various chart formats.

**Blacklisting/Whitelisting**
Capture devices can be whitelisted or blacklisted as the case may be. Blacklisting can occur in the case of a fraudulent activity by a device and hence, its deactivation. The device can only operate again when the relevant administrator whitelists from the system.

**Geo-tracking**
The GeoTracker feature facilitates the management and control of device activities from a central location to avoid loss of devices. From a map, agents can tell the current status of a particular device.

**Reporting Tool**
The reporting feature enables you to generate reports in various formats (Excel, CSV, PDF, etc.) which can be used for improved decision making.

**Issue Log Management**
This feature enables agents to report device or agent-related issues and get quick feedback on resolutions.

Here are some of the core features of SeamROP.
BioSmart enables forward-looking organizations and government parastatals with a focus on identity management to carry out large-scale biometric registrations of citizens across the country using a single platform. Which include:

- SIM registration
- Voting registers
- National drivers license
- National identity schemes
- National passport and eID schemes.
A Case Study of National Enrolment - Sim Registration
The Challenge

To meet the national regulatory requirements for KYC, a dominant player in the Nigerian telecommunication space, needed a robust identity management solution for the end-to-end capture of its subscribers.

Solution

The BioSmart platform was implemented to capture and validate biometric identities/records in real time. Within 6 days, we delivered the solution and subsequently drove its implementation nationwide, while maintaining a strict compliance to regulatory standards.

Key Achievements

Implementation was done within a very short timeline.
Seamfix is a one-stop KYC platform that provides solutions that enable organizations to seamlessly capture, onboard, verify and digitize identities of customers and their documents in real time.

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