Christopher Kantinti

Manager Cybersecurity

National Identification and Registration Authority **(NIRA)**
Uganda

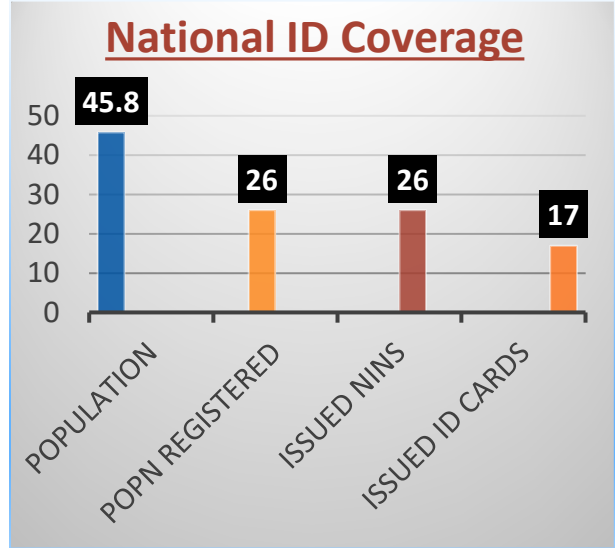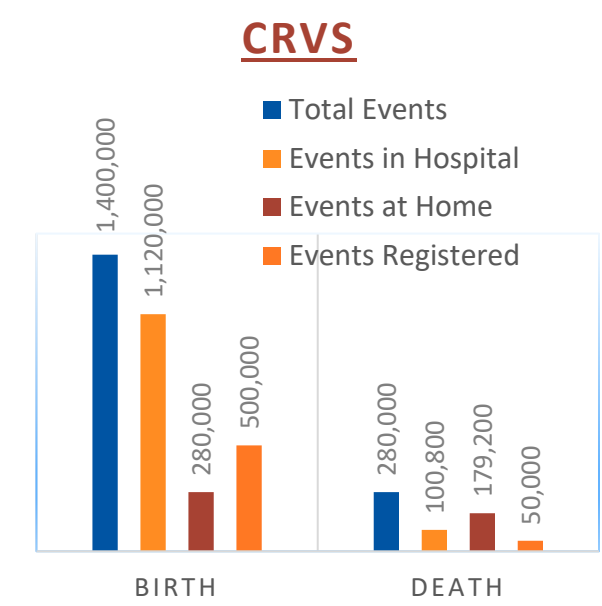# Uganda

A Country Profile

Civil Registration 2022/23:
- ❖ Annual Birth (1,400,000);
- ❖ Annual Death (280,000);
- ❖ Birth in health facilities (80%);
- ❖ Death in Health Facilities (36%);
- ❖ Birth registration rate 36%;
- ❖ Death Registration rate 17.9%;

National ID Registration
- ❖ Population: 45.8 mil
- ❖ Population registered: 26 mil
- ❖ Population issued National Identity Cards: 17 mil
- ❖ Identity cards printed: 19 mil

Uganda is a landlocked country in the East Africa region with the following demographics;

- ❖ **Capital:** Kampala
- ❖ **Area:** 241,038 sq.km
- ❖ **Population:** 45.8 million (49% male, 51% female)
- ❖ **Languages:** English, Swahili
- ❖ **Life expectancy:** 61 years (men) 65 years (women)

CRVS

Legend:
- Total Events
- Events in Hospital
- Events at Home
- Events Registered

BIRTH: 1,400,000 / 1,120,000 / 280,000 / 500,000
DEATH: 280,000 / 100,800 / 179,200 / 50,000

National ID Coverage

- POPULATION: 45.8
- POPN REGISTERED: 26
- ISSUED NINS: 26
- ISSUED ID CARDS: 17

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Presentation Outline

01 Introduction
- ❖ The Registration Authority (NIRA)
- ❖ Functions of NIRA (NID and CRVS)
- ❖ Enabling Laws

02 Biometric Technology
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- ❖ Factors guiding evaluation of biometric technologies
- ❖ Biometric technologies – Uganda ID Management

03 Evidence of Identity (EOI)
- ❖ Definition
- ❖ Establishment of Identity in Uganda – Principles and Practices

04 IDM Improvements
- ❖ Current improvements
- ❖ Scheduled improvements
- ❖ Status of Technology as a tool for IDM in Uganda

05 Challenges and Recommendations

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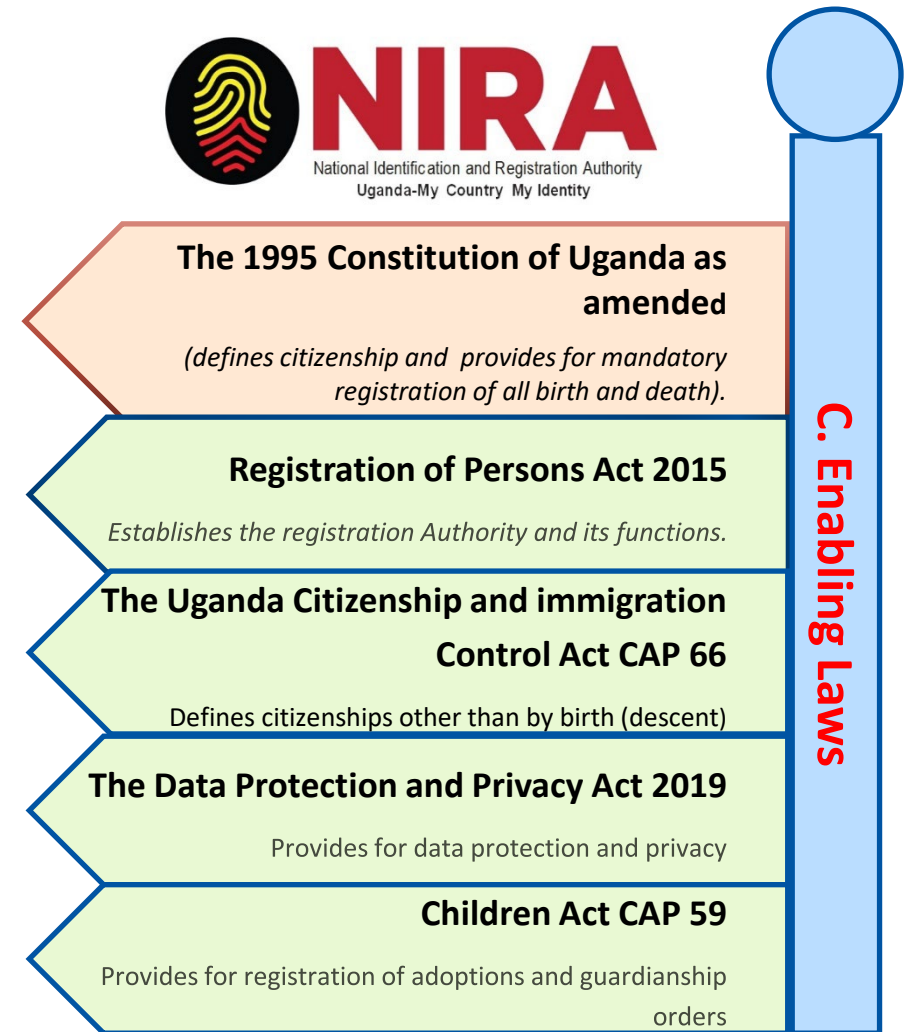
1. Introduction

A. The Registration Authority (NIRA)

The National Identification and Registration Authority (NIRA) was established (under the Ministry of Internal Affairs) by an act of Parliament on 26th March 2015 with the aim of consolidating all laws on identification of Persons in Uganda.

B. Key Functions of NIRA;

❖ Create, manage and maintain the National Identification Register (NIR);

❖ Register Citizens of Uganda and issue them National Identification Numbers (NINs) and National ID Cards (for 16 years and above);

❖ Register legally resident Aliens and issue them Alien Identification Numbers (AINS) and Alien ID Cards;

❖ Register all Births occurring in Uganda and Issue Birth Certificates;

❖ Register all Death occurring in Uganda and issue Death Certificates;
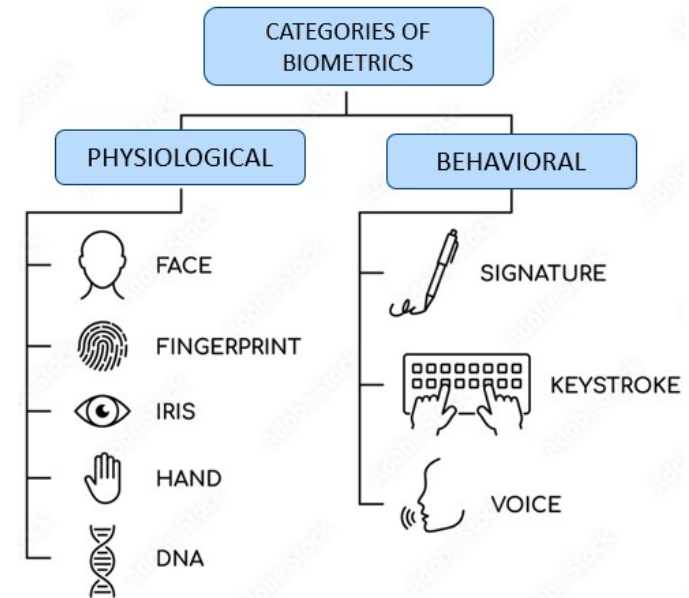
❖ Provide for access and use of information in the NIR;

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The 1995 Constitution of Uganda as amended

(defines citizenship and provides for mandatory registration of all birth and death).

Registration of Persons Act 2015

Establishes the registration Authority and its functions.

The Uganda Citizenship and immigration Control Act CAP 66

Defines citizenships other than by birth (descent)

The Data Protection and Privacy Act 2019

Provides for data protection and privacy

Children Act CAP 59

Provides for registration of adoptions and guardianship orders

C. Enabling Laws

2. Biometric Technology

A. Definitions

❖ **Biometrics** is the measurement and statistical analysis of people's unique physical and behavioral characteristics. The criteria for identifying biometrics include; **universality, uniqueness, permanence, and collectability;**

Biometrics are grouped in two main categories: **physiological biometrics and behavioral biometrics**. Physiological biometrics are characteristics or measurements of the human body, and behavioral biometrics refer to the unique way a person performs a certain behavior;

DNA technologies involve the process of sample screening, extraction, scanning, feature extraction, association and decision

❖ **Biometric Technologies** are identification and authentication devices used to create biometric profiles, verify and/or identify a person (1:N match) based on Biometrics. Most countries use fingerprint and iris biometric features for identity deduplication, as well as face for identity verification.

2. Biometric Technology - Continued

B. Factors guiding evaluation and choice of biometric technologies

❖ The performance of a biometric system is measured by its **Accuracy.**

The measure of accuracy is closely tied to False Reject Rate (FRR) which states the likelihood of a legitimate user being rejected by the system and in rare cases the False Accept Rate (FAR).
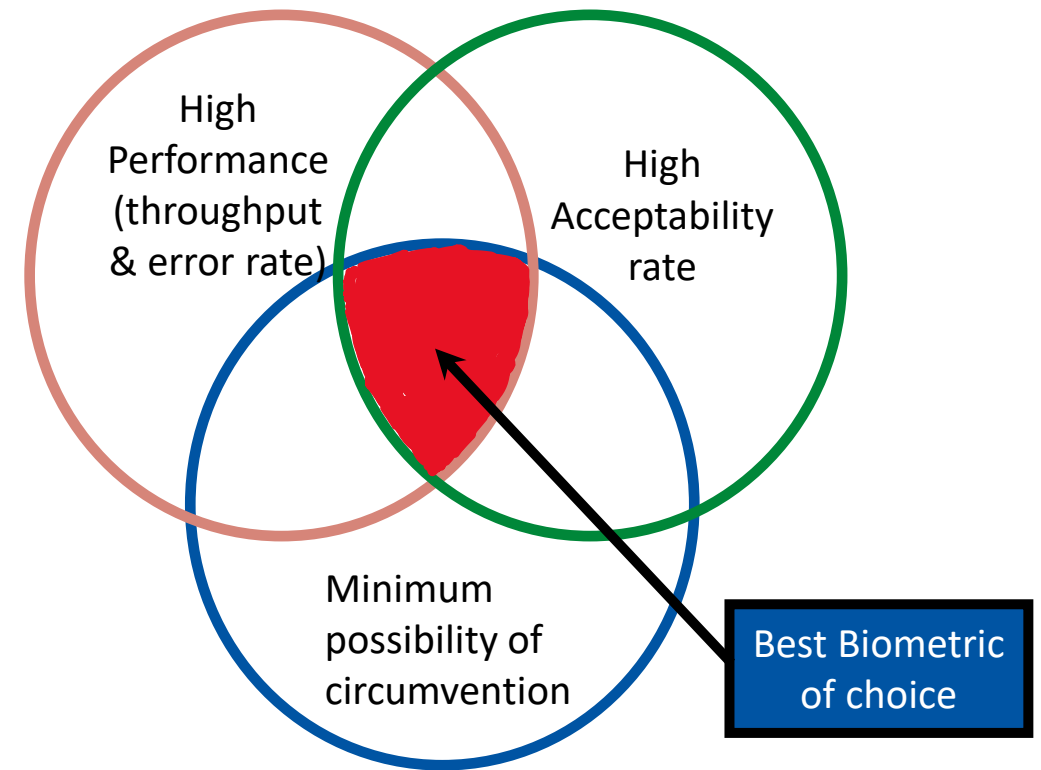
❖ E**ffectiveness** of a biometric technology combines these;

- ❖ The technology adopted;
- ❖ The competence level and training of the operator;
- ❖ The environmental elements at deployment (water, sunlight, dust, noise etc.);

A proper balance of all must be attained;

❖ Choosing a Biometric Technology

High Performance (throughput & error rate)

High Acceptability rate

Minimum possibility of circumvention

Best Biometric of choice

2. Biometric technology - Continued

C. Biometric technologies in the Uganda ID management

The Uganda model adopted face image **for Identity verification** and a hybrid off Face Image and Fingerprints for **deduplication.** On-card/ on site electronic verification against the ID card is also done.

1. Face Image/ photo technology;
The facial image is captured and the technology includes an integrated ICAO image quality checker for compliance with ICAO standards for images for MRTDs. A supervisor override option is provided in situations of reduced quality biometrics e.g. persons with grey hair, deformed face image due to e.g. accident or illness.

2. Fingerprint readers/ capture
Uganda deploys the 4-4-2 finger print readers for purposes of increased quality and accuracy of the finger print biometrics; the initial deployment of single fingerprint readers resulted into a mix-up of fingerprint positions and data quality issues.

3. Signature capture; a signature pad is used for capture of signatures. The signature is printed on the ID card to aid offline manual verification at service points like banks;

4. AFIS and FRS technologies; these matching technologies are deployed for 1-N and N-N matching of fingerprints (AFIS) and face images (FRS) respectively
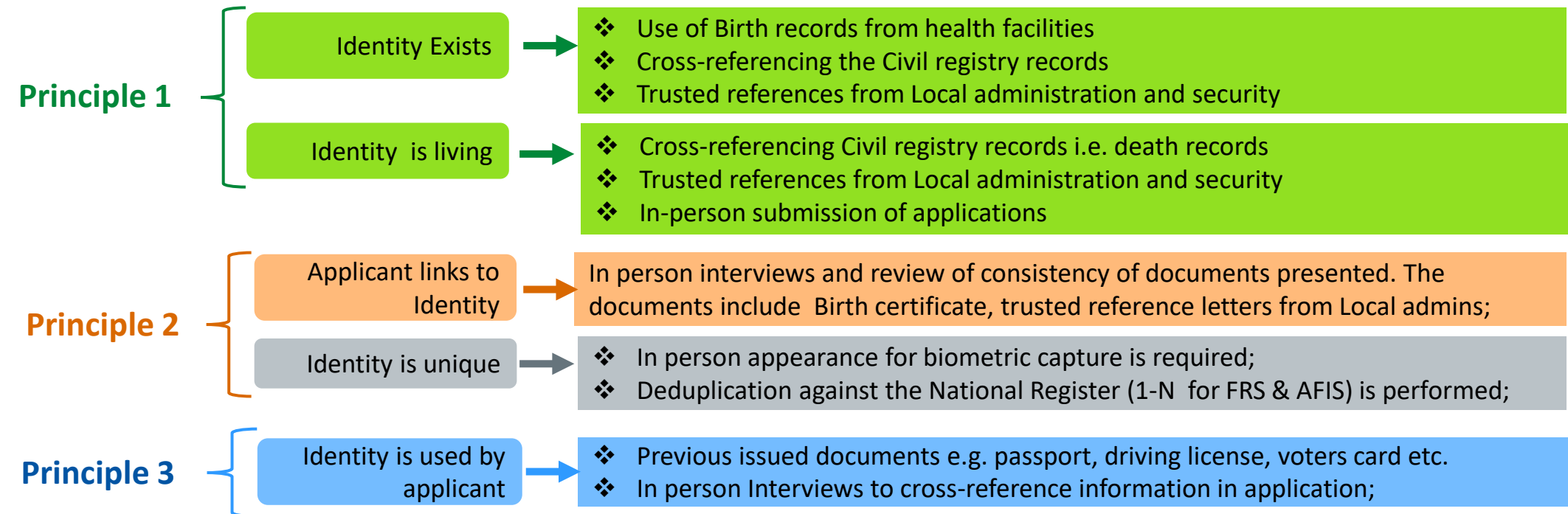

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3. Evidence of Identity (EOI)

A. Definition

This can be defined as Evidence that proves the identity of a person. The evidence can be direct involving interviews with the person or circumstantial like past documents on the identity e.g. birth certificate, Voters card or even trusted reference documents e.g. local administration reference letter;

B. Establishment of Identity in Uganda – Principles and Practices

Identity establishment in Uganda is currently done by a central registration authority (NIRA) based on the principles and practices below; **all other entities do identity verification against the central register.**

Principle 1

Identity Exists →
- ❖ Use of Birth records from health facilities
- ❖ Cross-referencing the Civil registry records
- ❖ Trusted references from Local administration and security

Identity is living →
- ❖ Cross-referencing Civil registry records i.e. death records
- ❖ Trusted references from Local administration and security
- ❖ In-person submission of applications

Principle 2

Applicant links to Identity →
In person interviews and review of consistency of documents presented. The documents include Birth certificate, trusted reference letters from Local admins;

Identity is unique →
- ❖ In person appearance for biometric capture is required;
- ❖ Deduplication against the National Register (1-N for FRS & AFIS) is performed;

Principle 3

Identity is used by applicant →
- ❖ Previous issued documents e.g. passport, driving license, voters card etc.
- ❖ In person Interviews to cross-reference information in application;

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A. Current Improvements

❖ Establishment of a central Identification and Registration Authority (2015) to create, manage and maintain the register for ID and CRVS; this eliminated duplication of efforts in the registration of persons. Benefits have been realized in increased quality of data for identity verification across Government and Private service points;

❖ Establishing connectivity links to all District sites across the country from the General Headquarters (NIRA); this ensured access to a common central national identification register and facilitated decentralization of registration services;

❖ Establishment of a data protection office (provided for in the Data Protection and Privacy Act 2019) to register and regulate data processors that deal with personal data in terms of data protection and privacy compliance requirements;

❖ Establishment of the third party data sharing interface to enable other entities to access the central register for identity verification and ensuring that the National Identification Number (NIN) is a prerequisite for service delivery;
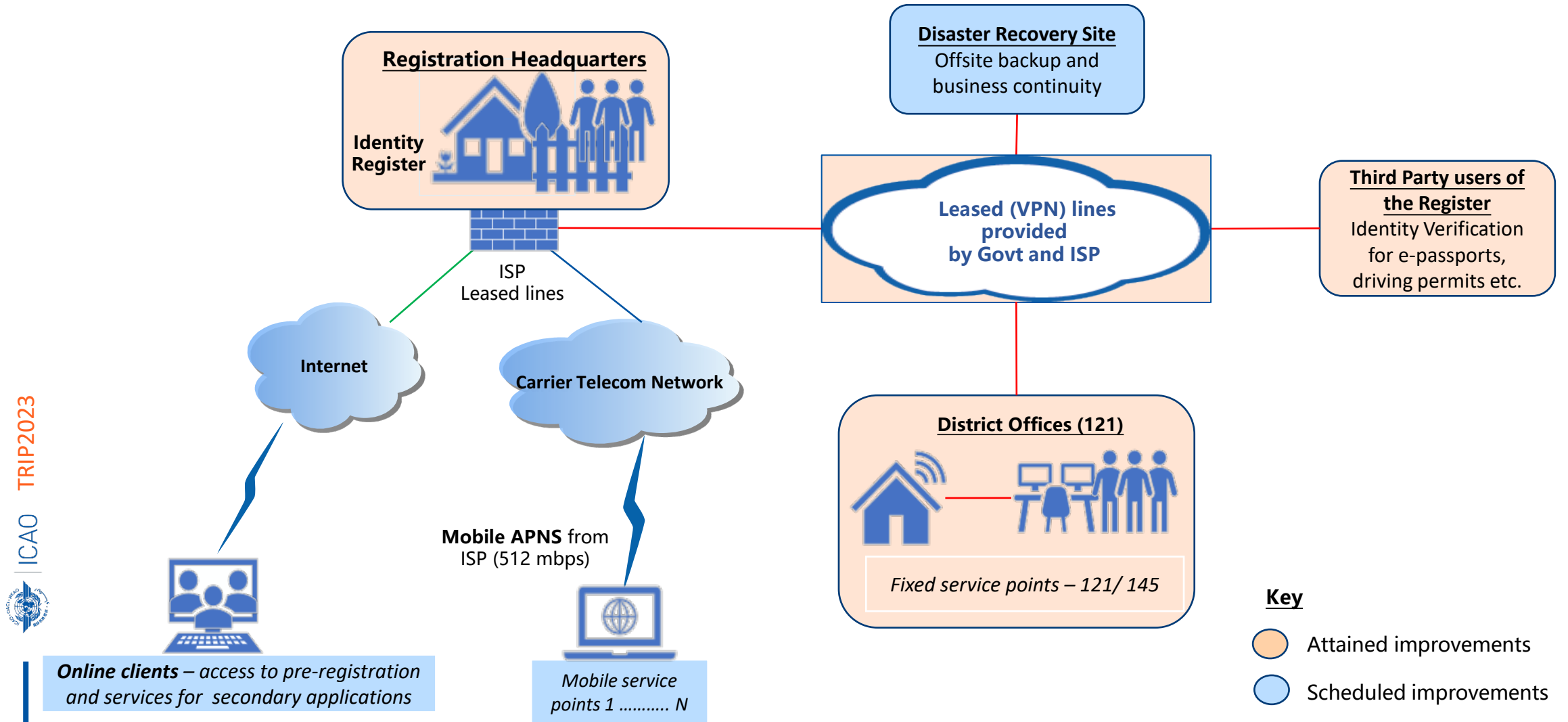
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B. Scheduled Improvements

❖ Adoption of an all inclusive technology solution model for inclusiveness and quality of service for all categories of clients to include;
   1. Pre-registration (self-service)
   2. Appointment booking and management
   3. Online/ offline mode support for registration services using mobile kits

❖ Adoption of a multimodal biometrics identification solution by adding IRIS and DNA. This is aimed at supplementing AFIS and FRS in biometrically enabled identity verifications;

❖ Adoption of new technology features like facial image liveness check to guard against operator circumvention and abuse through taking a picture of a picture;

❖ Adoption of the Modular Open Source Identity Platform (MOSIP) as the initial step toward minimizing vendor dependency and high maintenance costs for vendor locked systems

❖ Upgrade of the existing National ID card to include digitally encrypted biometrics data for the purpose of identity verification on site

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4. Identity Management Improvements – Uganda (continued)

C. Technology as a tool for Identity Management and Identity Verification

Challenges and Recommendations

❖ Misuse of personal data (biographic & biometric data);
  ❑ Put in place guiding legal framework e.g. Data Protection and Privacy.
  ❑ Establish a data protection office to implement the law;

❖ Exclusion of persons with disabilities that affect biometrics capture;
  ❑ Deploy multimodal biometric technologies;
  ❑ Sensitization programs;

❖ Complex and vendor-locked technologies;
  ❑ Emphasize open standards for implementation of biometric technologies;
  ❑ Ensure biometric technologies support multiple platforms and multiple deployment options

❖ Low internet coverage to facilitate online real-time biometric matching as a form of identity verification;
  ❑ Consider a hybrid model for biometric solution deployments (online/offline options)

❖ Change management and engagement of key stakeholders;
  ❑ Uganda adopted a multi-sectoral approach that brought on board all key stakeholders from the start;

❖ Circumvention of biometrics by applicants for multiple identities;
  ❑ Deploy a multimodal identification process;
  ❑ Stringent registration laws;

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Thank You