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UgHub

Building a Digital Government in Uganda

WSO2

Overview of NITA-U

- The National Information Technology Authority-Uganda (NITA-U) is an autonomous statutory body established under the NITA-U Act 2009 to **coordinate, promote and monitor IT developments in Uganda**.

- NITA-U is under the general supervision of the Ministry of ICT and National Guidance.

- Our Vision is to ***"Transform Citizens' Lives through eServices delivery***"



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Laying a foundation for E-Government Service Delivery

INFRASTRUCTURE

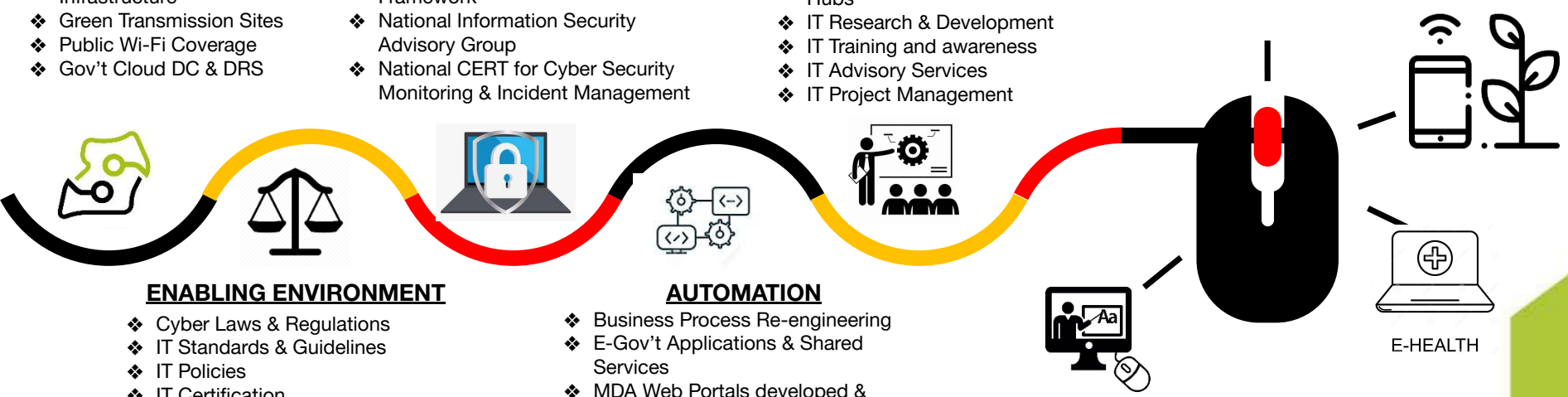
- National Backbone Infrastructure
- Green Transmission Sites
- Public Wi-Fi Coverage
- Gov't Cloud DC & DRS

INFORMATION SECURITY

- National Information Security Framework
- National Information Security Advisory Group
- National CERT for Cyber Security Monitoring & Incident Management

CAPACITY BUILDING

- Support to BPOs & Innovation Hubs
- IT Research & Development
- IT Training and awareness
- IT Advisory Services
- IT Project Management



ENABLING ENVIRONMENT

- Cyber Laws & Regulations
- IT Standards & Guidelines
- IT Policies
- IT Certification
- Compliance Assessments

AUTOMATION

- Business Process Re-engineering
- E-Gov't Applications & Shared Services
- MDA Web Portals developed & supported

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Improving Service Delivery through Automation



- Offering services requires many documents issued by different entities.
- Processes take longer because there is lack of real-time information sharing.

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Before UgHub using WSO2

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Scanning physical documents



Sharing data on movable storage devices



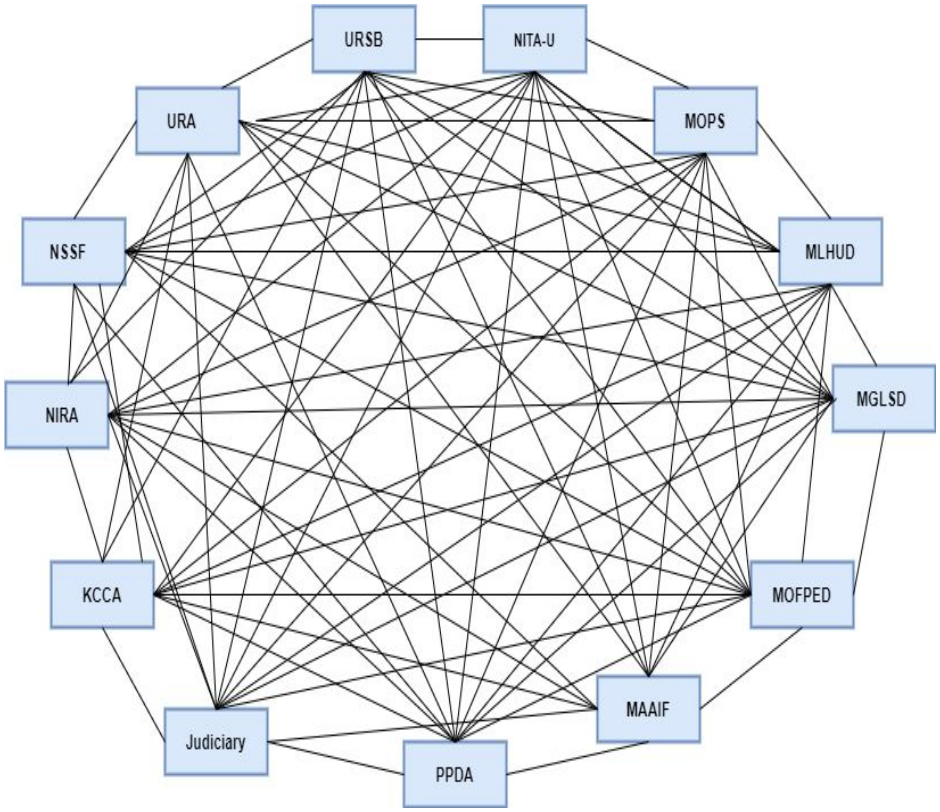
Sharing data on data communication channels, phone, email/sms …



Direct, ad-hoc sharing, without any governance

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A Few Entities Where here



- **Tedious** and **costly**, e.g. requires **custom code** for every connection.
- Makes **upgrading** applications difficult.
- Disorganized and poorly managed. **e.g. very hard** to **manage** all these **Services.**
- Prone to failure and stability issues.
- **Heterogeneity**: Disparate **systems**, **protocols** and **standards**, **Legacy** systems.
- **Multiple Security end points.**
- Increased **complexity** – **rework**.
- Loss of agility and flexibility.

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Introducing

UGHUB

Life made easy

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Citizen View

Citizens

Businesses

Developer Community

Government View

Government Ministries

Government Agencies

Local Government

Access Channels

Mobile (e-Citizens Portal)

Web (e-Citizens Portal)

Developer Portal

USSD

SMS

e SERVICES

e-services

Dashboards

Predictive monitoring

Data mining

API Marketplace

API Monetization

econsent

e-Consent

National Integration Platform

WSO2 ENTERPRISE INTEGRATOR

WSO2 IDENTITY SERVER

WSO2 API MANAGER

SEMANTIC CATALOG

IOT SERVER

URA

JLOS

NIRA

LANDS

URSB

65 MDAs

Public Sector

ENERGY

UTILITIES

TELECOMS

BANKS

Private Sector

Hosting & storage

NBI Connectivity

SMS & PAYMENT Gateway

Unified Comms

PKI/ Digital Signatures

Government Shared Network

Telecom network

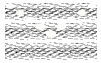
IT Security

Banking network

Private Infrastructure

Integration of Systems





Request

Response



Request

Response



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Request

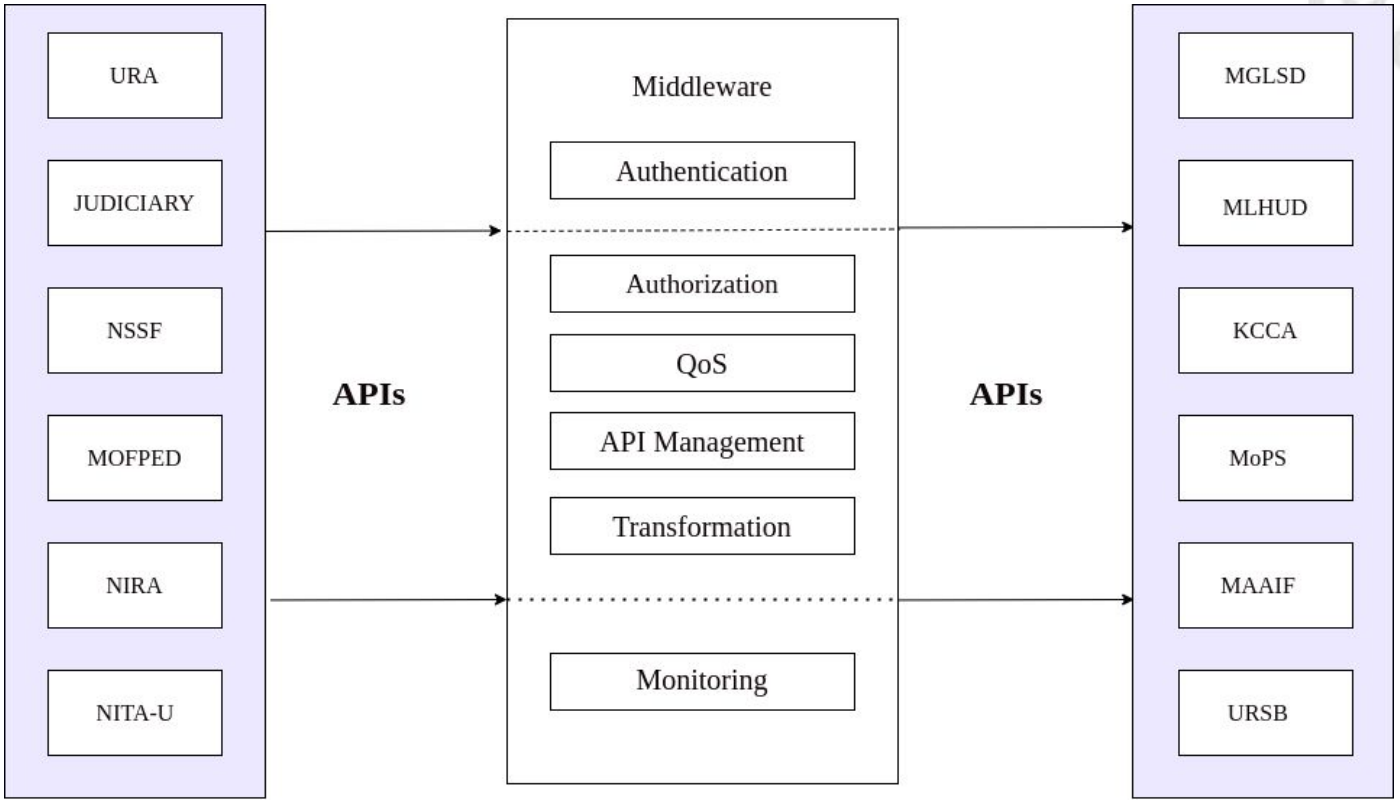
Response



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Solution Architecture UgHub



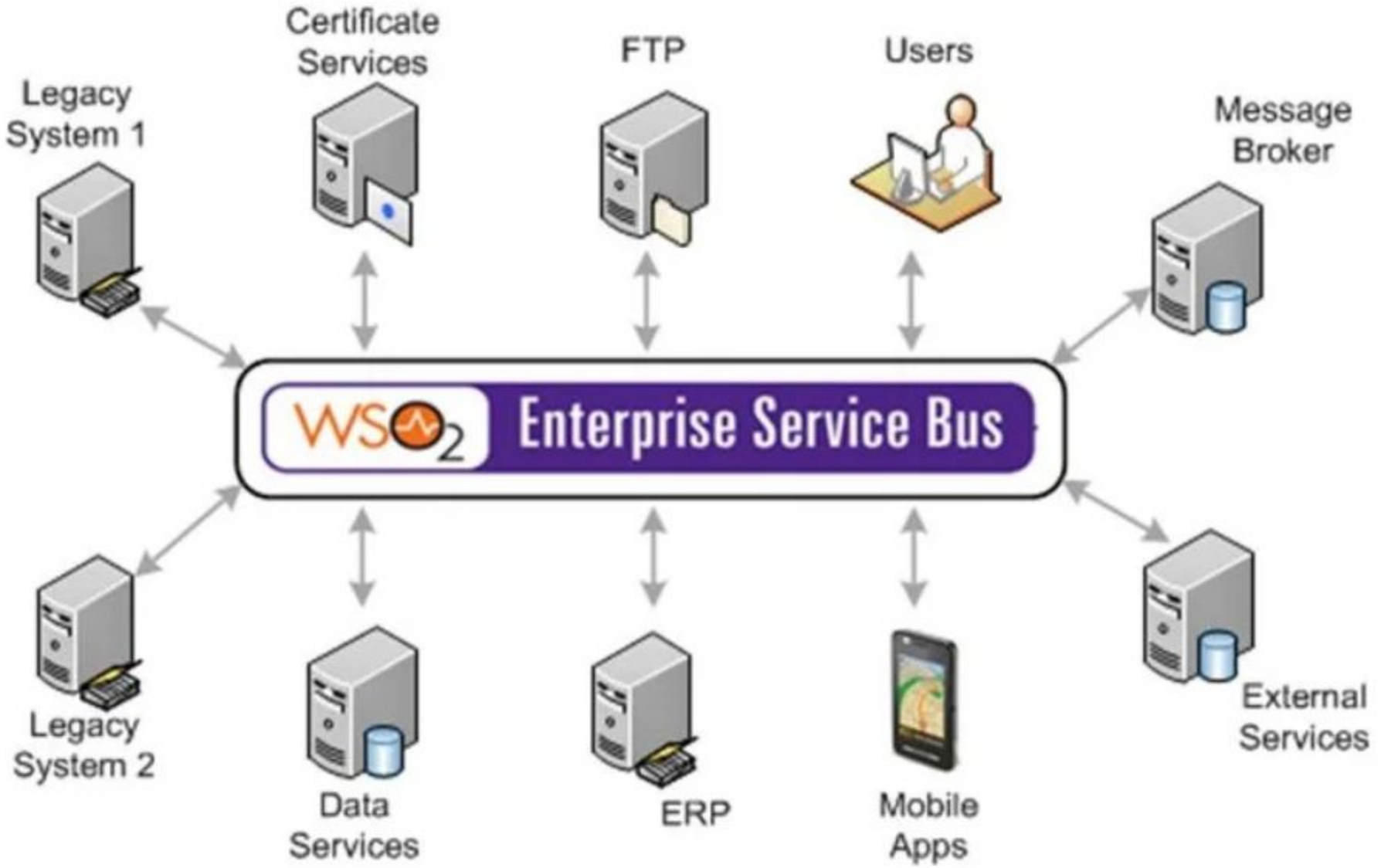
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Key Product Components

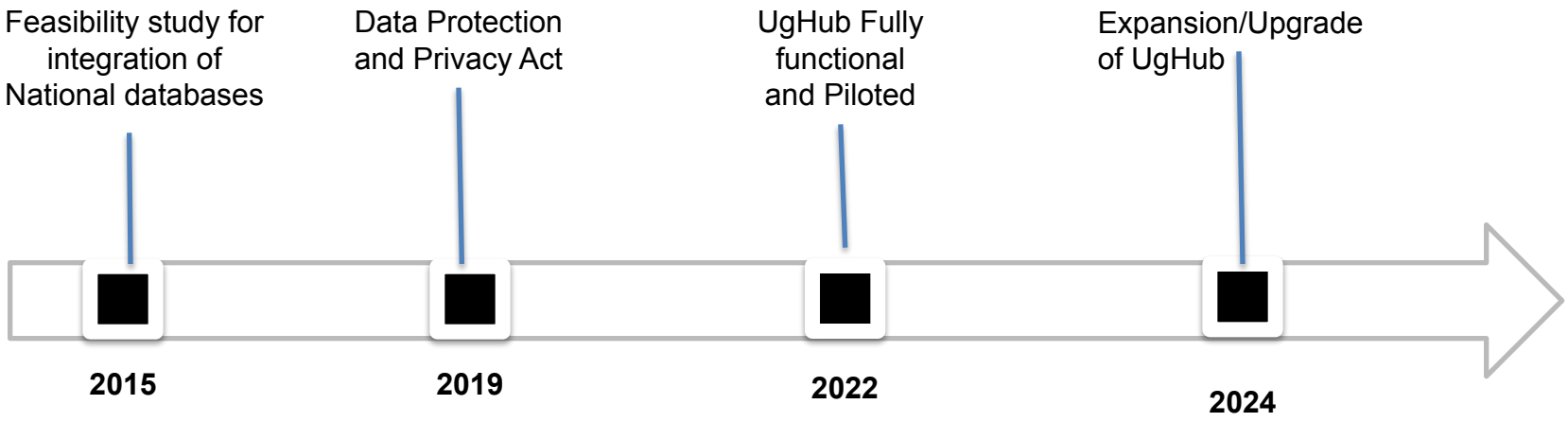
1. Semantic and System Catalogue;
2. Enterprise Integrator
3. API Management;
4. Identity and Access Management;
5. Analytics and dashboard;
6. Mobility module; and
7. Internet of Things (IoT) module;

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Technology Stack



Key Milestones to Data Integration



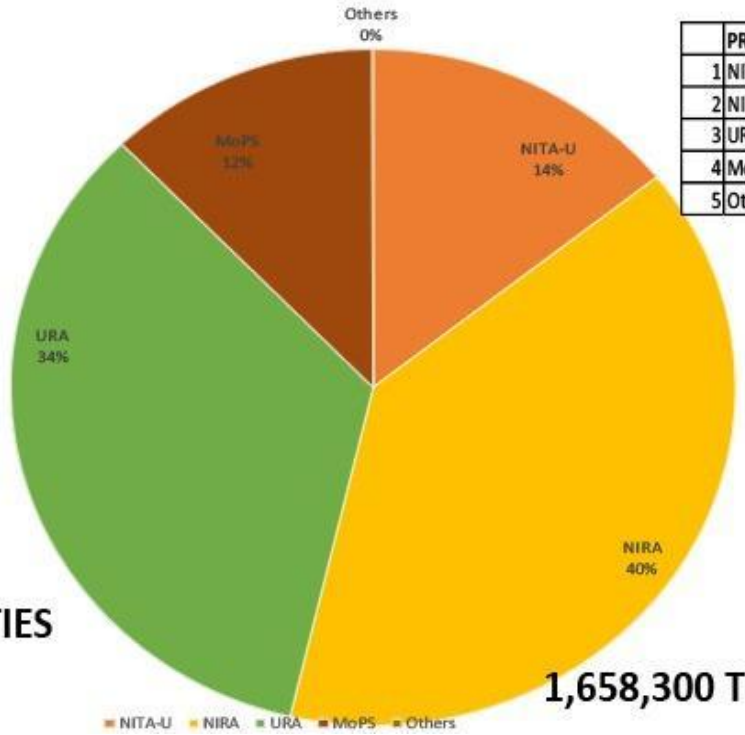
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Key Project Highlights

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DATA PRODUCER TRANSACTIONS - FEB

100,581,834 TRXNS SINCE JAN 2022



	PRODUCER	TRXNS
1	NITA-U	237,515
2	NIRA	652,769
3	URA	565,566
4	MoPS	201,669
5	Others	781

PUBLIC	PRIVATE
62	73

135 ONBOARDED ENTITIES

1,658,300 TRXNS - FEB

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Success Stories

1. Improvement in service delivery, reduction in turn around time in offering public services. Eg. eKYC in 3 – 5 seconds for account opening.
2. Hasten revenue collection – NTR
3. Support to private entities improve service offerings
4. New business service streams cropping up in private sector

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Success Factors

- ✔ Robust and secure **WSO2** Platform
- ✔ **SYBYL Uganda Limited** provided local support and skills transfer
- ✔ Enabling Regulatory Framework
- ✔ Interconnectivity and internet
- ✔ Training and skills capacity built on WSO2 technology

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Limitations and Lessons Learnt

No.	Limitation	Mitigation
1	Limited funding to automate government systems	We are building internal capacity to design and develop systems
2	Resistance to change and enforcing data sharing principals.	Continuous change management with all stakeholders
3	No APIs to facilitate integration of legacy systems	We supported many entities in requirements gathering, API design and development as well as system and business re-engineering.
4	Extended delays in getting integration requirements	Required high-level engagement with senior leadership
5	Volatile and ever changing business requirements	A need to freeze and signoff requirements
6	Private Entities cant access all data	In process of implementing e-consent

Immediate Next Steps

Expansion of the Data Integration Platform



E-Citizen Portal and Mobile Application



Dashboard and Analytics



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COLLIN BABIRUKAMU
Director E-government Services
NATIONAL IT AUTHORITY - UGANDA

THANK YOU

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