Digital Convergence
USP2030

Talking Interoperability

A dialogue series for advancing interoperability in the social protection sector

Leveraging Interoperability for Social Impact in Rwanda

> *This brief summarises key learnings from the dialogue on advancing interoperability in Rwanda's social protection held on 18 March 2025.*
>
> *The keynote was delivered by **Ariane Mugisha**, Chief Digital Officer, Rwanda Ministry of Local Government, and **Albin Shema**, Senior Software Developer, Rwanda Ministry of Local Government. The discussants were **Murodjon Khalikov**, Chief Specialist, National Agency for Social Protection, Uzbekistan, and **Mostafa Ghaly**, Business Transformation Officer, World Food Programme. The session was moderated by **Christabel E. Dadzie**, Senior Social Protection Specialist at the World Bank.*
>
> **Please click here to access the recording and presentation slides.**

Overview

With a population of 13 million and a 38.2% poverty rate, Rwanda has **nine social protection programmes,** managed by **four agencies** under **three ministries**. These programmes support various vulnerable groups, including people with disabilities and survivors of genocide. The government's flagship programme is the **Vision Umurenge Programme (VUP)** which includes:

- **Direct Support:** Assistance for vulnerable households without labour capacity.
- **Public Works:** Supporting poor and vulnerable households.
- **Nutrition-Sensitive Direct Support:** Assistance for pregnant and lactating women.

Rwanda has employed a community-based categorisation system, known as Ubudehe, to target social protection recipients. However, it is no longer deemed effective in identifying the right beneficiaries and supporting Rwanda's recent "Sustainable Graduation out of Poverty" strategy. This learning brief explores Rwanda's newly launched solution: the **Imibereho** Social Registry.

Rwanda's Social Registry (Imibereho)

Rwanda has established a robust **digital infrastructure**, with various registries and systems (Figure 3), to enhance interoperability in social protection. Among these, **the Imibereho Social Registry**, launched in 2024, has registered over 3.2 million households (99.2% of households). It carries out initial registration, eligibility verification, grievance-handling mechanism (currently

under development), enrolment, and data management. Key milestones in the development of Imibereho include (Figure 1):

- **2022:** Minimum Viable Product (MVP) developed and tested in two districts.
- **2023**: Development of the registration module, essential for registering households in the field, and the targeting module, which refines beneficiary selection criteria.
- **2024:** Enhancements to the targeting module, integration with key government systems, and implementation of the grievance and redressal module.
- **2025:** An external portal was provided for stakeholders to access beneficiary data and track support. The Beneficiary Registry was introduced to consolidate all beneficiaries.

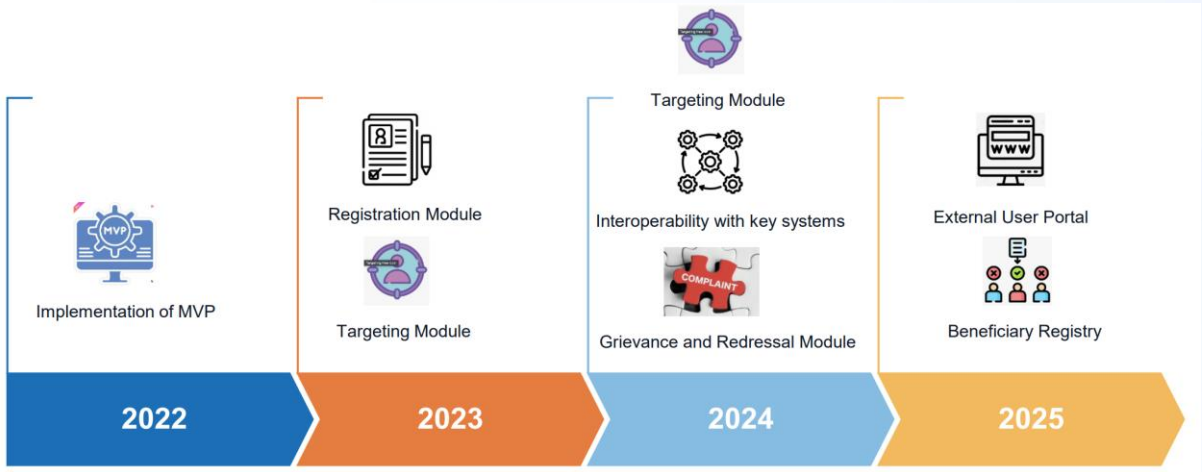

Figure 1: Main Milestones in the Development of Imibereho

Architecture: The system utilises **a microservices architecture**, where each service performs a specific function. This modularity enables scalability and accessibility, ensuring adaptability to policy changes and technological advancements. The architecture (Figure 2) includes:

- **Load Balancer**: Distributes incoming calls to physical servers.
- **API Gateway**: Centralised request handling and microservice allocation.
- **Backend Services**: Comprising user management, household management, reporting, and Unstructured Supplementary Service Data (USSD services).

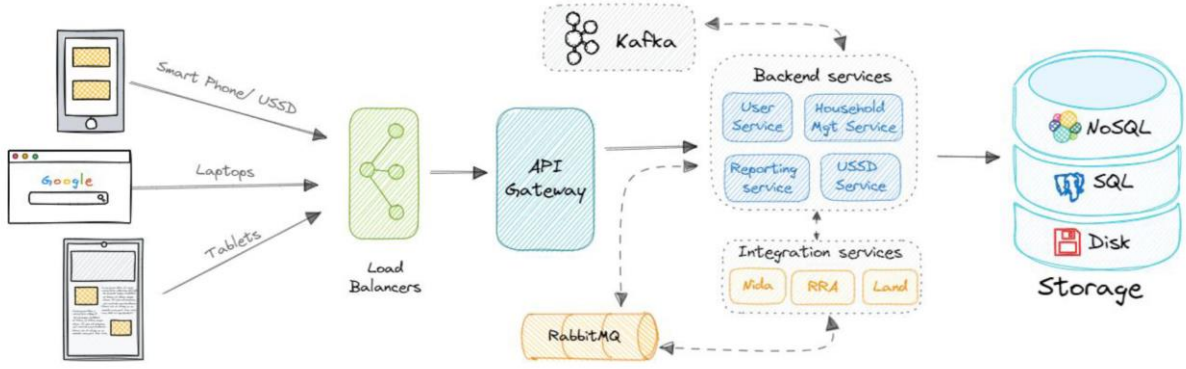

Figure 2: Microservice Architecture of Imibereho

Data Exchange and Interoperability Interfaces

As shown in Figure 3, data exchange occurs across three pillars:

Pillar 1: Programme Operations and Functions – Encompasses the operational steps of each social protection programme, including outreach and registration. The initial steps, registration and needs assessment, are closely integrated with the social registry (Pillar 2) to facilitate data exchange on potential beneficiaries.

Pillar 2: Integrated Delivery Systems – Centres on the **social registry**, serving as a gateway for identifying potential beneficiaries and assessing their needs. The registry pulls data from common information systems (Pillar 3) to validate information while communicating potential beneficiaries to Pillar 1 for needs assessment.

Pillar 3: Common Information Systems – Consists of shared systems, such as the common ID system and civil registration, enabling data validation and exchange across programmes.

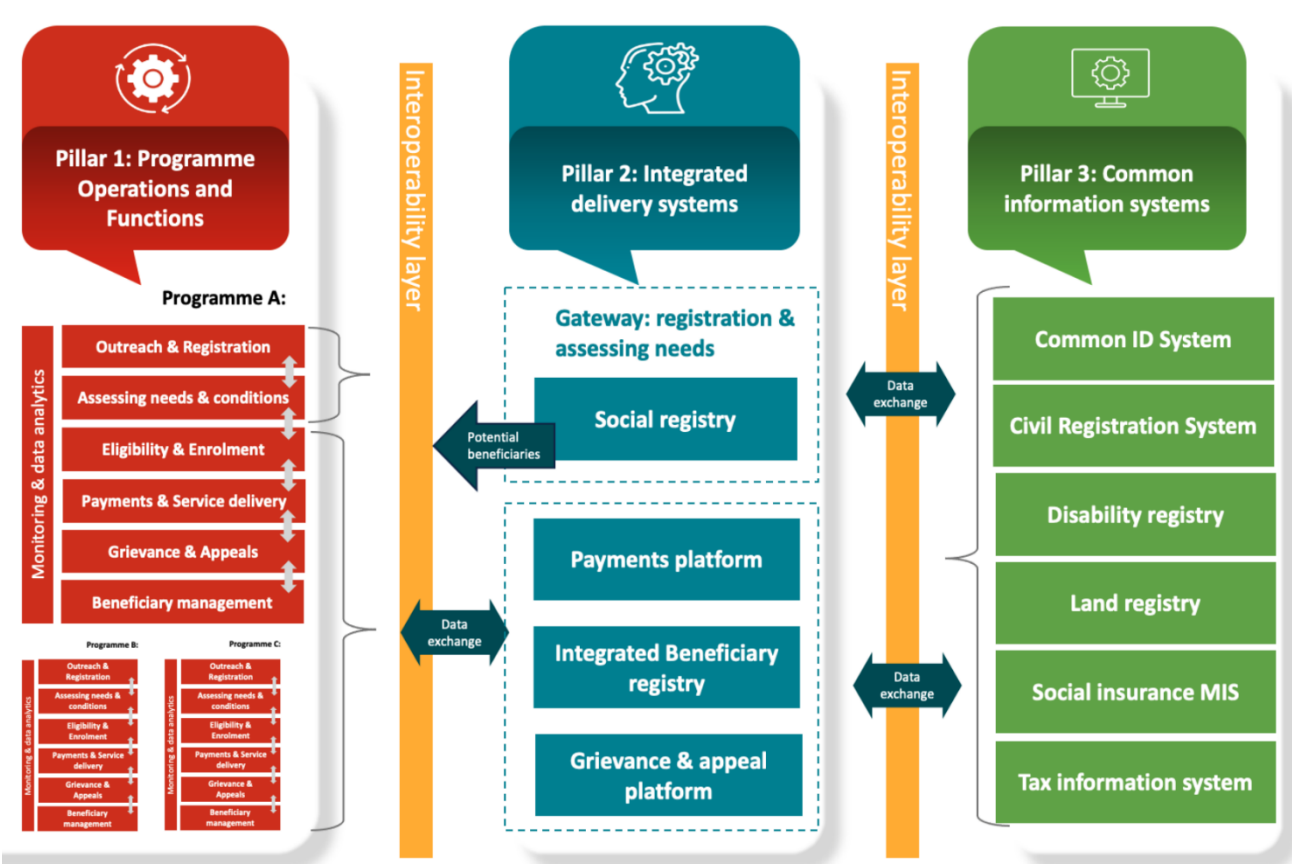

Figure 3: Data Exchange and Interoperability Interfaces

Challenges Faced

Some of the challenges encountered in the implementation of the social registry system are:

1. **Data Protection and Privacy**: The introduction of Rwanda's Data Governance Law (2021) initially posed data sharing and privacy challenges. However, compliance of the data processor and controller with this law has strengthened trust among institutions.
2. **Inconsistent System Availability**: Some integrated systems experience downtime, causing data exchange disruptions. To address this, retry logic, which enables automatic retries until systems are restored, has been implemented.
3. **Technical Capability Gaps**: Disparities in skill levels among teams managing legacy and new systems have created challenges. Strategies are being developed to support teams with varying technical expertise.
4. **Legacy Systems**: Some outdated systems pose challenges during integration efforts. Plans are in place to upgrade these systems and integrate newer versions.
5. **Data Discrepancies**: Inconsistencies in data across systems remain a challenge, requiring ongoing efforts to standardise and validate data.

Future Roadmap

To address these challenges and enhance the system's capabilities, Rwanda has outlined a comprehensive future roadmap:

Integration with Government Business Intelligence System (GBIS): The social registry will integrate with GBIS, enabling social registry dashboards to support data-driven decision-making across government institutions.

Broader Integration: Collaboration with additional government and non-government organisations will improve the targeting of social protection recipients. While the system is currently integrated with VUP and Community-Based Health Insurance, future integrations will support a broader social protection ecosystem.

Centralised Data Management: Plans are in place to consolidate data from dispersed databases into a unified system, ensuring easier access and management.

Prepared by Amirhosein Rahbari based on the presentation by Ariane Mugisha and Albin Shema, with contributions from Murodjon Khalikov, Mostafa Ghaly, and Christabel E. Dadzie.