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Deutsche Gesellschaft  
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Zusammenarbeit (GIZ) GmbH

Digital  
Transformation  
Center Rwanda

# Digital Transformation center Quarterly Progress Report

April - June 2023

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# Contents

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## 1 Introduction

## 2 Solutions & Innovation

- 2.1 User-centered Design Research for Machine Translation Use Cases
- 2.2 NIRDA Lab Management Information System
- 2.3 Customer Relationship Management
- 2.4 Mass Services Digitization (GoR)

## 3 Ecosystem

- 3.1 Robotics Community of Practice
- 3.2 Voucher System

## 4 Digital Literacy & Capacity Bulding

- 4.1 Robotics 4 Youth National Program
- 4.2 Digital Literacy for People with Disabilities
- 4.3 Digital Literacy for 20,000 Farmers
- 4.4 Support to the PSF Specialized Cluster
- 4.5 Support to NGA and RCA

## 5 Public Sector Innovation

- 5.3 Blood Bank Information System (BBIS)
- 5.4 Public Service Request Portal
- 5.5 MINAGRI Grain Storage Management System

## 6 Events

- 5.1 AfricAI conference 2023

# Introduction

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Thank you for taking the time to read our quarterly update report and our successful collaboration during the past 3 months. Here we would like to list

Public sector innovation:

Here we keep track of all the important activities that contribute to the public sector in Rwanda. this time we would like to highlight:

- Blood Bank Information System(BBIS)
- Public Service Request Portal
- MINAGRI Grain Storage Management System
- Mass services digitalization (GoR)
- Customer relationship management

Artificial Intelligence:

Here we record all the important activities in the area of AI such as Machine Translation, Natural Language Processing and others. As highlights we would

- User-centered design research for machine translation use cases

Digital Inclusion:

Here we record all important activities in the area of digital inclusion and digital literacy in order to contribute to the integration of vulnerable groups in

- Robotics 4 youth national program
- Digital literacy for people with disabilities
- Digital literacy fro 20,000 farmers
- Support to the PSF specialized cluster
- Support to NGA and RCA

Ecosystem-building:

Here we record all important activities in the area of building the tech ecosystem, which includes topics such as startup promotion and networking. As

- Voucher System
- Robotics community of practice

## 2. Solutions and Innovation

### 2.1 User-centered design research for machine translation use cases



Progress has been made towards developing precise machine translation engines. High-quality parallel training data in English-Kinyarwanda has been successfully gathered. Additionally, the initial phase of creating a plugin to facilitate text translation on Moodle-supported e-learning platforms is now underway. Further engagements with the RDB are scheduled to evaluate the potential and durability of implementing on-the-go translation for the tourism sector.

### 2.2 Grain storage management system

A web-based system that is being built in partnership with the ministry of agriculture and animal resources (MINAGRI) that will assist in the management and control of the grains stored in silos and warehouses. Viewed as a critical enabler, for the National Strategic Grain Reserves (NSGR) of MINAGRI to manage, monitor and control silos and warehouse facilities in addition to tracking the inventory status in these facilities across the country. Currently in development.

### 2.3 NIRDA lab management information system

A web-based system being developed for the National Industrial Research and Development Agency (NIRDA) that will improve laboratory research productivity and efficiency by organizing and keeping track of data associated with samples, experiments, Laboratory workflows, and communication between NIRDA and its clients.

## 2.4 Blood Bank Information system

A comprehensive Blood Bank Management System is currently under development for the Rwanda Biomedical Center (RBC). This integrated ERP solution will encompass three key components: the Donor Management System (DMS), the Core Blood Bank Information System (BBIS) Rules Engine, and the Logistics Management Component (LMS). The system will seamlessly integrate all aspects of A1, A2, and B1 components, ensuring a unified and efficient approach to blood bank operations and management.

## 2.5 Public service request portal

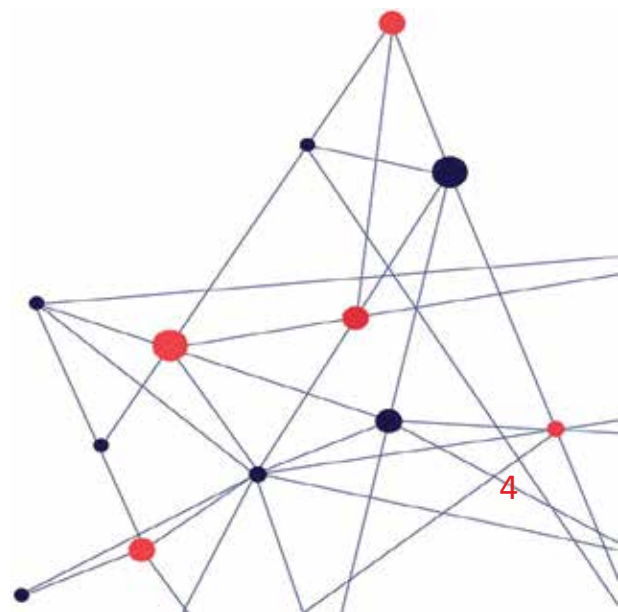
A comprehensive portal is currently under development for the Ministry of Public Services and Labor (MIFOTRA). This platform aims to streamline the processing, management, monitoring, and dispatching of all service requests. The system's primary objective is to empower the secretariat responsible for request reception. It will facilitate efficient management, monitoring, and status tracking of requests across multiple departments. Ultimately, the portal's long-term goal is to furnish real-time status updates to the individuals making the requests

## 2.6 Customer relationship management - MINALOC

We are collaboratively developing a Customer Relationship Management System in partnership with the Ministry of Local Government (MINALOC), designed to seamlessly align with Rwanda's present and future needs and priorities. Our primary emphasis is on elevating service delivery to citizens while concurrently enhancing feedback mechanisms for continual improvement

## 2.7 Mass services digitalization (GoR)

A business process mapping for the Government of Rwanda across different sectors (14) that will result into digitization of over 600 services by 2024.



## 3.Ecosystem

### 3.1 Voucher system



The voucher system represents a dynamic start-up-centric approach aimed at delivering seamless plug-and-play services facilitated by expert agencies, all channeled through strategically established innovation hubs.

This pioneering system's novel concept has been successfully and comprehensively integrated into the operational framework. At present, a cohort of 60 promising startups has been seamlessly onboarded, while the collaborative efforts extend across three cutting-edge innovation hubs.

The commencement of this transformative journey was marked by an inaugural kickoff , resonating with enthusiasm and shared vision. The meticulously planned implementation phase is currently underway, characterized by a synergy of efforts, as all stakeholders actively contribute to the realization of this innovative paradigm

### 3.2 Robotics Community of Practice

Robotics Community of practice is a platform where different stakeholders come together to exchange, build each other up in terms of skills and experience to further enhance their prospects in Robotics field.



Ending March 2023 we had a demo-day as a community, with “Optimizing the design , assembly process” as a theme. The community demonstrated the robots they made and how they did it.

In May 2023 we had a presentation by a Lecturer from the University of Rwanda about drone design and the strides the mechanical department of UR has been making in the area of Unmanned Aerial Vehicles. More than 60 community members were able to benefit from said sessions and learn thereof.

## 4. Digital literacy & Capacity building

### 4.1 Robotics 4 Youth National Program

Together with MINICT, GIZ is working on a Robotics program to be integrated in primary, secondary and TVET schools. With this as the goal, an innovation challenge will be launched for interested companies to prepare their solutions/kits for the length of 4 weeks after which 5 of these companies will be selected to proceed to test their solutions/kits in a year-long sandbox experiment in 4-5 of the respective schools.

So far, an info session has been held for robotics enthusiasts to share a background on the terms to be published soon and answer any questions related to their participation. We have also narrowed down the modules that will be the focus of integration during this sandbox program.



## 4.2 Digital Literacy for People with Disabilities

The project aims to capacitate 10 organizations that support people with disabilities by training their trainers on basic digital literacy. The 10 organizations are expected to train at least 40 of their beneficiaries with disabilities using the trained trainers.

- Consulting and Innovation Business Action (CIBA) LTD has been selected as the training of trainer (ToT) service provider, and they will train up to 30 trainers from 10 organizations that support people with disabilities from July till November 2023.
- Three organizations that will receive assistive technology tools were identified.
- The trained trainers from 10 organizations (OPDs) are expected to train up to 400 beneficiaries with disabilities by the end of November 2023.

## 4.3 Digital Literacy for 20,000 Farmers

As reported in the last quarter, the grant to One Acre Fund (OAF) was disbursed in January for the training of 20,000 farmers (15,000 women and 5,000 men, including 200 PWD). During the implementation phase, we learnt that the tablets provided made the field officers jobs much more efficient which resulted in increase of farmers to be trained to 30,216 in total (16,688 women and 4,115 PWD).

In May, we took part in a field trip to 2 of the training centers in Rwamagana where we got to see how the training is being conducted and interacted with the trainees and trainers.



#### 4.4 Support to the PSF Specialized Cluster



we are signed an MoU with the Ministry of ICT and PSF Specialized Cluster to be able to support in equipping PSF's space, the Entrepreneur's Desk and training 1000 women members of the cluster. The training will go on for the remaining half of the year while our partnership with PSF Specialized Cluster will continue for a year with the aim of jointly developing a sustainability concept for the space.

#### 4.5 Support to NGA and RCA

Together with MINICT and Rwanda Coding Academy, we facilitated a group of 16 students from local schools to embark on an enlightening journey to the Silicon Valley for a global robotics innovation challenge.



During this opportunity, the students actively collaborated with teams from different countries, pooling their efforts on AI projects geared towards problem-solving. Additionally, they explored the realm of filmmaking, utilizing technology and innovation to amplify their creative expressions. Noteworthy engagements with tech and AI giants such as Tesla, LinkedIn, and Apple, as well as interactions with industry professors, further enriched their experience.

The program spanned an extensive array of engaging topics, including human-centered design, social thinking, design thinking, entrepreneurship, and the transformative potential of AI.

4.2 Digital Literacy for People with Disabilities



## Imprint

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