DIGITAL TRANSFORMATION CENTER KIGALI

DIGITAL SOLUTIONS FOR SUSTAINABLE DEVELOPMENT (DSSD) PROGRAM

DSSD PROGRAM

PROGRESS REPORT

JANUARY TO MARCH 2020

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Implemented by
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Republic of Rwanda
Ministry of ICT and Innovation

1 INTRODUCTION

The program Digital Solutions for Sustainable Development (DSSD) advises Rwandan institutions on the implementation of the Smart Rwanda Master Plan (2016-2020) and its priority projects.

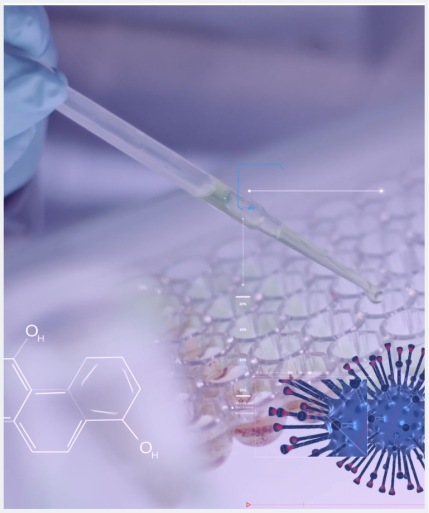
One of the project's main pillars is the Digital Transformation Center. An innovation space dedicated at delivering impact driven digital solutions, developing the capacities of the local innovation ecosystem, and scaling-up digital solutions at regional and continental level.

2 PROGRESS PER OUTPUT DURING THE PERIOD

2.A: Human Resource and Institutional Development

2.A1: Institutional support to RISA

Virtual Lab Implementation Study



The Rwanda Education Board, with the support of DSSD, envisions to implement virtual labs as a solution to provide students with the chance of practicing scientific experiments.

The implementation will require different changes on different levels such as policy level, leadership and maintenance.
The aim of this study is to asses and provide proper guidance during the implementation including the adoption and usage of the solution. A needs assessment was conducted and the draft report was shared with partners.

Coaching at RISA

The project aims at transferring skills through providing comprehensive technical expertise in different IT-domains. Experts will provide hands-on skills by working on assigned projects and mentor RISA's technical professionals. The five domains supported are:

- Project Management, 100% completed
- TYPO 3, 100% completed
- Networking, 80% completed
- Enterprise Architecture, 50% completed
- Software Architecture, 30% completed

Emerging Technology (ET) Strategy

The final draft of the ET Strategy is under validation. The document outlines the steps for Rwanda to leverage emerging technologies for sustainable development in alignment with its Vision 2050 and the NST1.

The ET Strategy aims at positioning Rwanda as an ET Testbed, Export Hub, and propel the Social and Economic Application of ET.

2 PROGRESS PER OUTPUT DURING THE PERIOD

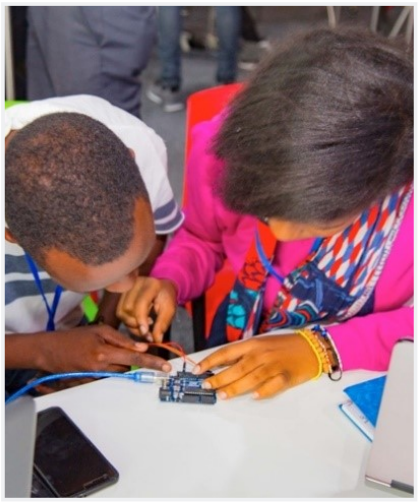
2.A: Human Resource and Institutional Development

2.A2: Capacity Development

Machine Learning Training

The training is held at the DigiCenter by Exponent Africa in collaboration with DSSD and GIZ's Fair Forward Program. It focuses on understanding and demystifying the use of Artificial Intelligence models and Machine Learning in design, data systems and product development.

It is meant to run from January 2020 to July 2020 having 5 cohorts with 35 trainees each (total number 175). So far 2 cohorts have been trained.



IoT Training

The IoT training is designed for entry and mid level use of embedded systems and electrical engineering to design smart circuits. The training is held at the DigiCenter by STES Group in collaboration with DSSD and GIZ's Special Innitiative Jobs.

Nine cohorts will be running from January 2020 to June 2020 with 35 participants each (total number 315). So far 4 cohorts have been trained.

Mentoring Local Tech Start-ups

DSSD supported six volunteers from Germany to mentor various start-ups in the local digital ecosystem as well as students at the Rwanda Coding Academy. This mentorship lasted 2 weeks with students being advised in various software engineering methodologies.

As part of the mentorship program, the DigiCenter hosted workshops which were open to the public. These included hands-on workshops on Agile vs Scrum, advanced GitHub and a meetup of all mentees to share experiences and best practices in their respective companies and start-ups.

2 PROGRESS PER OUTPUT DURING THE PERIOD

2.B: Digital Solutions Development

2.B1: Development of 14 Solutions

Kinyarwanda Language Engine

The main objective of this project is to build open Kinyarwanda Voice Data Sets allowing developers to create more inclusive solutions by using a voice-to-text interface.

So far,

- more than 1,200,000 sentences were collected and Data set curation completed
- voice collection and verification for the first cohort is completed
- the third phase of voice collection and verification is ongoing

Blood Bank Management System

This is an implementation study done by DSSD in partnership with RISA and the National Center for Blood Transfusion (NCBT) on all processes and technical requirements for the creation of a smart blood management system.

This study has been completed with 100 functional and non-functional requirements. These are needed for the system to register donors, label blood groups, log testing info, track inventory and distribute blood to health centers in Rwanda. The overall goal is to achieve full hemovigilance.

Labor Market Information System

The Labor Market Information System is a web platform with all labor statistics displayed and smartly graphed out. The purpose is to make it easy and possible for users like government analysts, scholars and external partners to access this information easily and in real-time.

Recently, the technical upgrade of the platform was finalized. LMIS is now ready to be launched.

2 PROGRESS PER OUTPUT DURING THE PERIOD

2.B: Digital Solutions Development

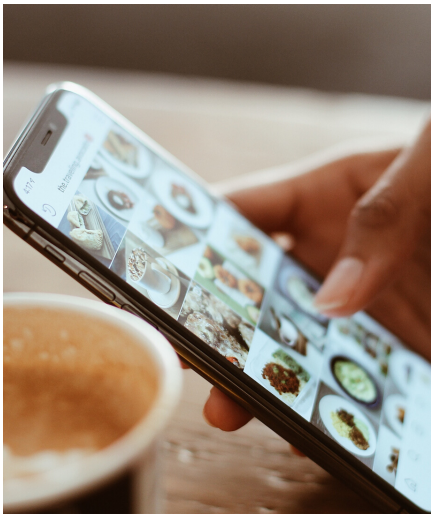
2.B1: Development of 14 Solutions

Digital Walking Stick

The main purpose is to produce a digital walking stick that will enable visually impaired people to detect obstacles in the distance of 50 cm by using sound and vibration. This will reduce challenges that visually impaired people face in their daily lives.

Status of the innovation phase:

- Design Phase completed
- Early Stage Prototype completed
- Incubation Phase is ongoing



Nutri Rwanda

Nutri Rwanda is a mobile application for women in rural areas offering online nutritional services. This includes consultancy on diet therapy, meal planning and child growth monitoring. Nutri improves nutritional knowledge, attitudes, and practices from individual level to households in the rural areas.

Status during innovation phase:

- Design Phase completed
- Early Stage Prototype completed
- Incubation Phase ongoing

My Money

The project intends to build a digital platform which will link female refugees to financial institutions enabling them to access loans and to promote financial inclusion. This will be done through a web-based and mobile match-making application where women refugees can share their business plans and get connected to funding possibilities.

Status Innovation Phase:

- Design Phase completed
- Early Stage Prototype completed
- Incubation Phase ongoing

2 PROGRESS PER OUTPUT DURING THE PERIOD

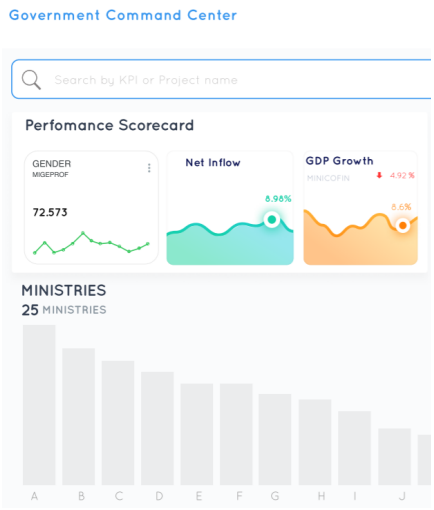
2.B: Digital Solutions Development

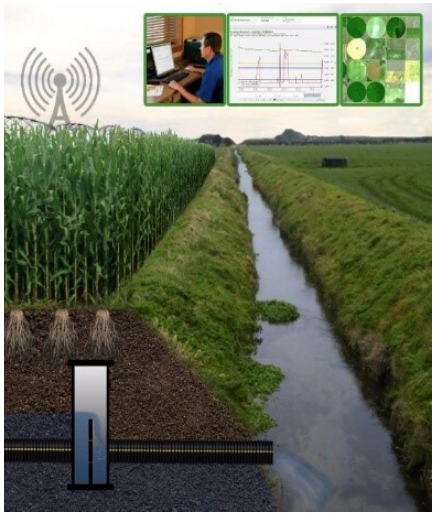
2.B1: Development of 14 Solutions

Government Command Center

This quarter, the Government Command Center was officially launched and handed over to RISA. A multi-disciplinary team from different stakeholders and ministries was trained on the platform's new functionalities.

The Government Command Centre monitors SDG indicators across all ministries.





Smart Agriculture

The beginning of 2020 saw the official launch of the Smart Irrigation Solution which is a joint team effort by GIZ, RISA and the Rwanda-Israel Horticulture Center of Excellence.

The solution consists of solar-powered IoT-devices installed in a farm and management dashboard developed to analyze data in real-time and enable fast intervention if and where needed.

2 PROGRESS PER OUTPUT DURING THE PERIOD

2.B Digital Solutions Development

2.B2 Presentation of digital solutions at continental level

The Special Initiative Jobs Programme (GIZ) in Ethiopia is planning an online platform to match job opportunities with people looking for jobs. The team reached out to DSSD regarding a partnership to use the Innovate Rwanda platform, which was introduced in the last report under section 2.2.B, as a basis for their project.

So far, the DSSD team has shared the source code, TOR and other specifics.

3 COMMUNITY AND EVENTS

Since the beginning of 2020, the Digicenter has hosted 19 events including meet-ups, trainings and workshops. Additionally, the center has been visited by Bayreuth University, DFID- UK and Mr. Clemens Kapler from BMZ, Officer for Digitalization in Development Cooperation, along with the GIZ Rwanda Country Director Mr. Bodo Immink.

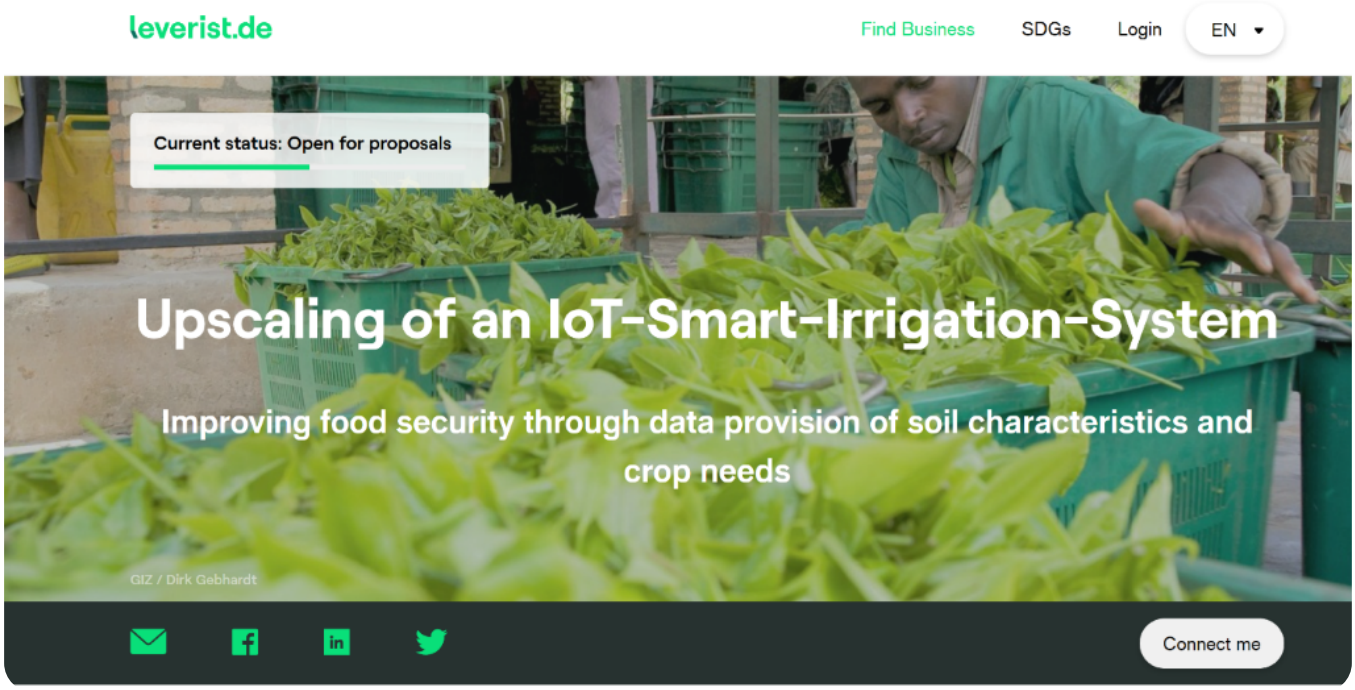
One of the events was the Digital Art Vernissage which was organized in February by the DigiCenter. It hosted over 60 people from the community and local art scene. Artists from all over Africa presented their pieces on the theme Afrotopism.

4 COMMUNICATION AND VISIBILITY

Outreach for new potential partners on Leverist

In order to reach potential new partners for the up-scaling process of the digital solutions, we have started to post our solutions on the matchmaking platform Leverist.

Leverist pinpoints opportunities to engage in sustainable business activities in developing countries and emerging economies. It brings challenges and solutions together.



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