ACTIVITY REPORT

For The Memorandum of Understanding
Between The Ministry of Health And
Health Information System Program Ltd – (HISP-Rwanda)

VISION

To be the leading solutions provider for Healthcare systems in Rwanda, Africa and beyond, that enhances Health System Strengthening to help countriess and organizations to implement customizable, innovative and sustainable solutions that leverage health care delivery in low-resourced settings.

MISSION

To build binding and lasting mutually beneficial relationships with national and international organizations and governments seeking to set up implementable and sustainable health information systems in Rwanda and beyond.

OUR CORE VALUES

- ☑ **Integrity** – We are committed to acting with honesty and honor without compromising facts in all our services.

- ☑ **Service** – We are committed to building a sustainable organization by offering quality services and other initiatives that impact lives within and outside our organization.

- ☑ **Ownership** – We are committed to taking care of our clients and partners as our first priority, the company values, and the services we provide.

- ☑ **Accountability** – We are committed to acknowledging and assuming responsibility for our actions, products, decisions and policies.

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1. INTRODUCTION

HISP Rwanda as a company with a mission of providing solutions for Healthcare systems in Rwanda, Africa, and beyond that enhances Health System Strengthening has signed an MoU between HISP Rwanda and the Ministry of Health Rwanda. In collaboration with the University of Oslo, HISP Rwanda is mandated to contribute to integrated strengthening health information systems for the health sector through creating the required interoperability between different systems for improved performance and use of data, mainly through the following specific objectives;

1. Performing the required enhancements for the existing information systems in the health sector to achieve improved performance and applies, not only to routine management support systems such as the aggregate HMIS but also extends to the individual-level data systems such as the disease surveillance systems.
2. Performing the required interoperability between various systems; including those owned by stakeholders in the social cluster ministries, such as; LODA and NISR.
3. Perform capacity building, on DHIS-2 implementation for health system strengthening, through conducting interactive and experience-sharing international academies on dhis2 customization and data use in Rwanda.
4. Development of new applications that facilitate systems' functionality and provision of technical support at generation and use of strategic information for, planning and metrics of health interventions.
5. Develop the operational apps like the data request software, the data correction apps, username, and password.
6. Development of the HMIS embedded and Google play apps, to promote android-based data entry and information use.

For all projects initiated or supported, some have been achieved; some ongoing, stopped while others are waiting for a final handover. The following paragraphs are describing the status of those projects, what has been performed, and the way forward under each of the specific objectives above.

2. SPECIFIC OBJECTIVE 1: SYSTEM ENHANCEMENTS.

2.1 PROJECT I: ECEBS _ ELECTRONIC COMMUNITY EVENT-BASED SURVEILLANCE SYSTEM

2.1.1 eCEBS_ Description of the project

The electronic Community Event-Based Surveillance system (eCEBS) has the main objective to detect and report any suspected unusual health event that has occurred in the community, at the earliest possible stages of their occurrence by community volunteers. By concept, eCEBS is an integral part of IDSR, which is extended to the community level, and it is designed to integrate animal health in line with the goals of one health. The primary purpose of eCEBS is rapid detection, early warning, and prompt response to unusual events of potential threat to public health, with emphasis on early implementation of basic control measures to reduce the risk of communicable disease spread in communities. HISP Rwanda and the ministry of health have completed the development of a system of disease surveillance and response eCEBs and will undoubtedly help disease surveillance and response at all levels.

2.1.2 eCEBS_ Specific Activities planned /requirements by Project.

HISP Rwanda has been given a mandate by the ministry of health to develop, install, configure and customize eCEBS in DHIS2 a platform system used to collect data for reporting purposes. The Hosting and system maintenance was supposed to be done in close collaboration with RBC/ MOH Rwanda.

2.1.3 Project Activities performed.

So far, the following activities/ tasks to implement eCEBS are performed.
- The development of the system has been completed
- Metadata configuration is completed
- SMPP is configured
- The user guide and system documentation are completed
- The system was presented to RBC/ MOH for testing and agreed on the way forward
- The system is hosted on HISP servers and waiting for RBC/MOH to avail the server for hosting so that the system is up and running
- The system has been deployed and is hosted on the RBC/MOH server

    successfully.
- HISP team carried out the training of trainees(TOT).
- HISP team assisted the TOT to decentralize the system through training off over 700 users.
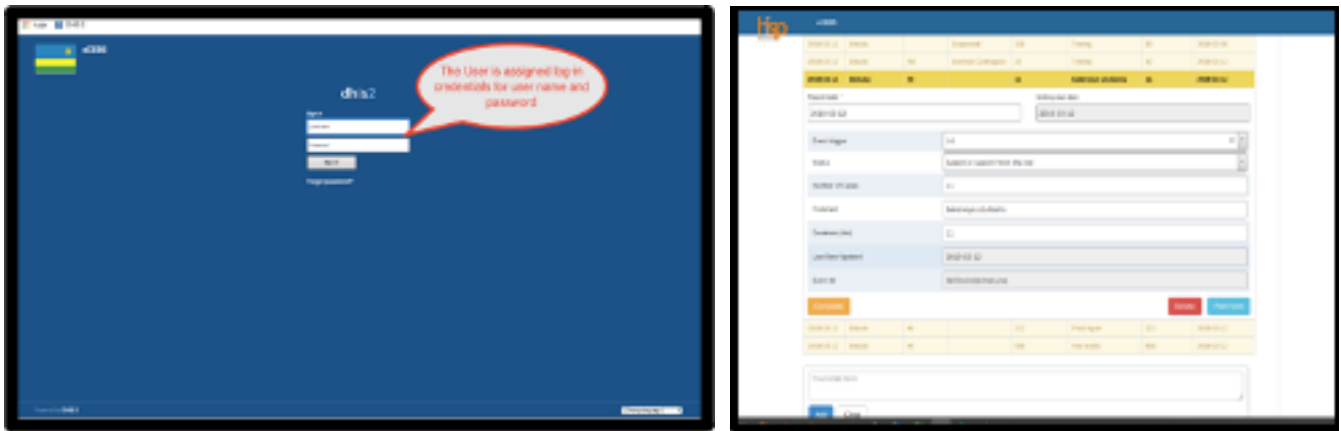
2.1.4 Pending activities/ ongoing activities.

HISP team is working on SMS delivery debugging and configurations, as initial use was failing to deliver the SMS.

2.1.5 Way-forward and conclusion

HISP team to continue providing user support and system maintenance.

2.2 PROJECT II: EIDSR/ DISEASE SURVEILLANCE.

2.2.1 Description of the project

For early detection and efficient, timely intervention against communicable diseases, control is a priority in Rwanda, which would help to Timely, detect epidemic outbreaks. DHIS2/eIDSR as an electronic tool was developed in the line of disease surveillance and response. As the system is serving/ being used in all public and private facilities, there are always needs to make it more and more efficient.

2.2.2 Specific Activities planned or requirements by Project

Based on the eIDSR expectations, HISP Rwanda was assigned by the MOH/RBC to upgrade the system. One of the main enhancement features to be added was the outbreak detection of all case-based diseases and seasonal and non-seasonal diseases.

2.2.3 Activities performed

- The Upgrade of the system has been completed
- SMPP was configured & System successful sending outbreak notifications for immediate intervention.

2.2.4 Way-forward and conclusion

HISP team to continue providing support and system maintenance.

## 2.3   PROJECT III: EPI TRACKER
2.3.1 Description of the project

The Ministry of Health of Rwanda, MCCH/EPI Program expressed the need to improve the vaccination services in all heal facilities, integration of birth notification into the child immunization program, and compliance to the immunization calendar. This has been thought of as a mitigation strategy to not only improve statistical and public health data, but also to ensure immunization services coverage increases and improve monitoring of the dropout for a timely response. In collaboration with HISP Rwanda, the EPI Program adopted the EPI tracker module of DHIS2. The module was designed to capture all children immunized and help in the follow-up of children to comply with the immunization calendar. The EPI system is currently being used across the country.

2.3.2 Specific Activities planned or requirements by Project

EPI program is up and running on MOH/ RBC servers and being used by data managers and EPI staff from all facilities. HISP Rwanda entirely conducted the development, customization, and configuration of the EPI tracker.

2.3.3 Activities performed

- The system is up and running and being used, a continuous support is being provided by HISP Rwanda not only to the users of the facilities but also to EPI program staff. The system is maintained by both HISP and MOH system developers.
- System integrated with CRVS for access to all birth registrations.
- Server migration
- Field visit for User feedback and information gathering for feature updates and
- Metadata updates.
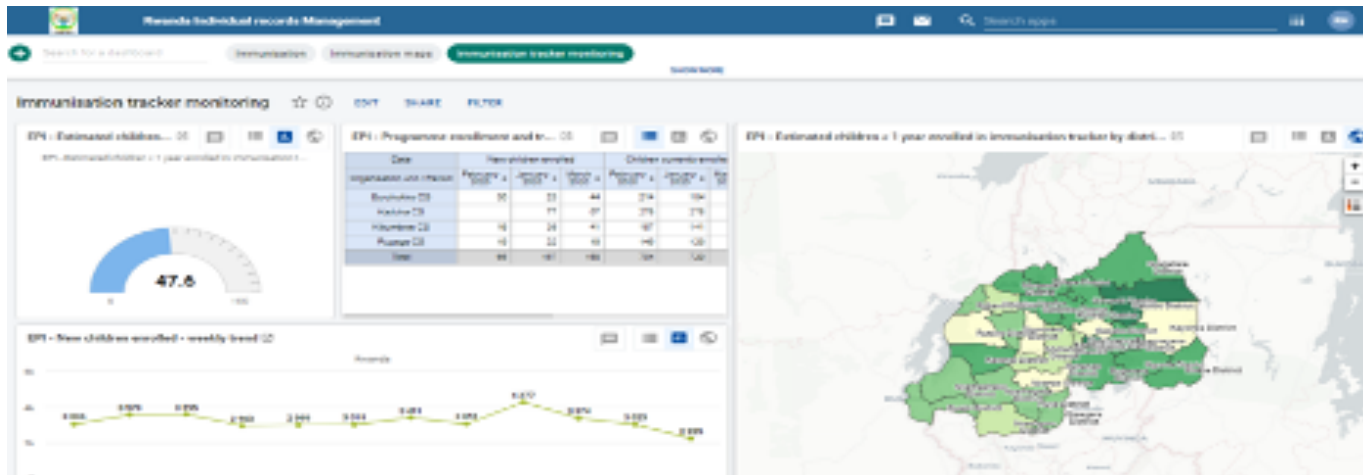
2.3.4 Activities/ ongoing activities

HISP Rwanda guarantees the continuous user support of EPI tracker, through ongoing tasks including; field visits, real-time troubleshooting to fix call-in requests for support from users; refresher training and metadata cleaning; program indicators definition and enhancement are the ongoing tasks to be done by HISP staff together with EPI program staff. HISP Rwanda is focusing on the strengthening of data quality and data use of immunization data.

2.3.5 Lessons learnt or challenges

The EPI tracker is contributing a lot to the increase of immunization coverage in Rwanda. The low-performing health facilities will be supported and the training of users on analytics will be planned together with the EPI program.

2.3.6 Way-forward and conclusion

- The low-performing health facilities in capturing immunized infants and newborns will be supported and training of users on DHIS2 analytics features will be the main focus for the next support. System maintenance and user support are the main focus also to the sustainability of the system to achieve expectations.
- Consult on additional capacity building of CRVS use on the field for better quality data.

2.4   PROJECT IV: COVID-19 SYSTEM

As the government of Rwanda is on the front line to fight against COVID 19 from the citizens, an electronic tool has been initiated for surveillance and response and for prevention decision-making. The tool currently used by all health facilities and

health institutions is designed in DHIS2 to track/capture and aggregate COVID 19 data. MOH Rwanda with the support of HISP Rwanda has developed COVID instances and continues to provide technical support for all enhancement requirements for the COVID-19 module.

2.4.1 Specific Activities planned/requirements by Project

Both RBC/MOH and HISP developers have worked hand in hand in the development, installation of metadata customization, and configuration of the COVID 19 system. HISP developers moved to the COVID-19 national command center for a few months

for technical support. The following COVID specific modules were supported by HISP:

- COVID result print-out app
- Design and Printing out of testing certificates
- Design and implement passenger locator form (for airport Rwanda)
- Unique API support
- Self-Registration form

2.4.2 Activities performed on COVID19 system

HISP Rwanda developers have successfully developed and installed the Printout results application, passenger's locator application, certificates print out app, and the self-registration form (to reduce lines at testing sites) into DHIS2 covid 19 system. The continuous technical support for the MOH/RBC team is maintained to sustain the expected outputs of the tools.

2.4.3 Pending activities/ ongoing activities

The configuration of the new features according to new emerging user requirements as guided by the leadership of the COVID-19 task force will continue to be added to the systems in close collaboration with MOH/ RBC team and HISP Rwanda.

2.4.4 Way-forward and conclusion

The COVID 19 system is a sensitive and very essential tool for the decision-makers in surveillance and prevention of the pandemic, and HISP Rwanda will continue to provide needed technical support to the ministry of health.

2.5 PROJECT V: COVID-19 VACCINATION REGISTRY SYSTEM

As the government of Rwanda was to receive its first batch of vaccines, an electronic vaccination registry system was developed to assist in the Covid-19 vaccination process and ensure that the patients have access to Vaccination certificates. The tool currently used by all health facilities and health institutions is designed in DHIS2 to register all patients receiving the Covid-19 vaccination doses. MOH Rwanda with the support of HISP Rwanda has developed COVID-19 Vaccination registry instances and continues to provide technical support for all enhancement requirements for the COVID-19 module.

2.5.1 Specific Activities planned/requirements by Project

Both RBC/MOH and HISP developers have worked hand in hand in the development, installation of metadata customization, and configuration of the COVID-19 vaccination registry system. HISP team with RBC/MOH were dispatched across Rwanda for the initial vaccination process for technical support. The following COVID-19 Vaccination Registry specific module was supported by HISP:
- Covid-19 Vaccination Registry Certificate portal

2.5.2 Activities performed on Covid-19 Vaccination Registry

HISP Rwanda developers successfully developed and designed the Covid-19 Vaccination Registry system, and developed and installed the Covid-19 Vaccination Registry Certificate portal. The continuous technical support for the MOH/RBC team is maintained to sustain the expected outputs of the tools.

2.5.3 Pending activities/ ongoing activities

The configuration of the new features according to new emerging user requirements as guided by the leadership of the COVID-19 task force will continue to be added to the systems in close collaboration with MOH/ RBC team and HISP Rwanda.

2.5.4 Way-forward and conclusion

The Covid-19 vaccination registry system will continue to be maintained and supported by the HISP Rwanda team in collaboration with RBC/MOH to ensure the system run's smoothly per design and have quality data that can be used in the decision making of the respective authorities.

2.6   PROJECT VI: DHIS2/HMIS SUPPORT
2.6.1 Description of the project

Since 2009, the Rwandan health sector has been using DHIS2 as a primary tool in health data collection. Since then, the system has been used in all health facilities and most of the SOPs are developed. To maintain the system and respond to the needs of the users, the ministry of health seeks support from partners including HISP Rwanda. As an experienced company in DHIS2, HISP Rwanda provides regular support to the HIMS core team and HMIS users.

2.6.2 Specific Activities planned or requirements by Project

Data quality and data use are the main preoccupations of the ministry of health for

public health decision-making. HISP Rwanda collects feedback from users and channels them to the DHIS2 developers based at the University of Oslo for the system upgrades, which happen with every new version of dhis2 released. The utilization of data quality tools, available in dhis2 (HMIS production instance) and the utilization of analytical features for data use are also the focus of HISP Rwanda.

2.6.3 Activities performed

HISP Rwanda provides continuous support and technical advice and support to the HMIS core team to maintain and sufficiently use the DHIS2 tool in data management for Rwandan health integrated systems.

2.6.4 Pending activities/ ongoing activities

MOH in full collaboration with HISP Rwanda is preparing workshops for metadata cleaning, refresher/training on WHO data quality tools, and analytics. We are working with MOH programs (Malaria, TB, EPI, MCCH) in the installation and configuration of WHO apps in HMIS.

2.6.5 Way-forward and conclusion

The HISP team is committed to providing all technical needed support to the ministry of health to keep strengthening the integration of health information systems and the data quality together with data used for evidence-based decision-making in the health sector.

3. SPECIFIC OBJECTIVE 2: PERFORMING THE REQUIRED INTEROPERABILITY BETWEEN VARIOUS SYSTEMS

3.1 FBF WITH NIDA AND LODA SYSTEMS.
3.1.1 Activities conducted.

Following customization of HMIS by MoH in 2017 to capture FBF indicators used to improve the FBF provision at the Health Center level. HISP Rwanda provided support for interoperability of FBF with both NIDA and LODA systems and as a result, now FBF system is able to pull individual ID from NIDA and LODA systems linked to HMIS.

4. SPECIFIC OBJECTIVE 3: PERFORM CAPACITY BUILDING, ON DHIS-2 IMPLEMENTATION.

4.1 DHIS2 ACADEMY
4.1.1 Tracker Level -1 dhis2 Academy.

In October 2019, HISP Rwanda in collaboration with the MoH and University of Oslo organized and hosted an international dhis2 level1 dhis2 academy; the aim is to strengthen national and regional capacity to successfully set up, design, and maintain DHIS2 systems

- Number of participants: 71 participants;
- Rwanda had over 15 participants, mainly from MoH and RBC.
- Other Countries represented: Ghana, Kenya, Uganda, Indonesia, Botswana,
- Lesotho, Libyan Arab Jamahiriya, Malawi, the Democratic Republic of the Congo, Tanzania, Zambia, Sierra Leone, Somalia, Norway, and Ethiopia.
- Organizations/Institutions represented the most: Ministry of Health Rwanda,
- Ministry of Health Ethiopia, Ministry of Health Republic Kenya, and UNICEF Rwanda.

5. SPECIFIC OBJECTIVE 4: DEVELOPMENT OF NEW SOLUTIONS AND APPLICATIONS THAT FACILITATE SYSTEMS' FUNCTIONALITY

5.1 PROJECT 1: CLINICAL STAFF APPLICATION MANAGEMENT SYSTEM APPLICATION.

5.1.1 Description of the project.

HISP Rwanda was tasked to develop a system, which will help the management of all clinical staff applicants' files. The expectations of the system are to respond to management of hard copies, the big burden of files of clinical staff across the country

archived for decision-making. The system will integrate all applications for new jobs of clinical staff, annual leave, maternity leave, study leave, and transfers of health staff from one facility to another. The files uploaded into the system will be analyzed by human resources managers and applicants shall receive feedback/response from the system once the application is updated.
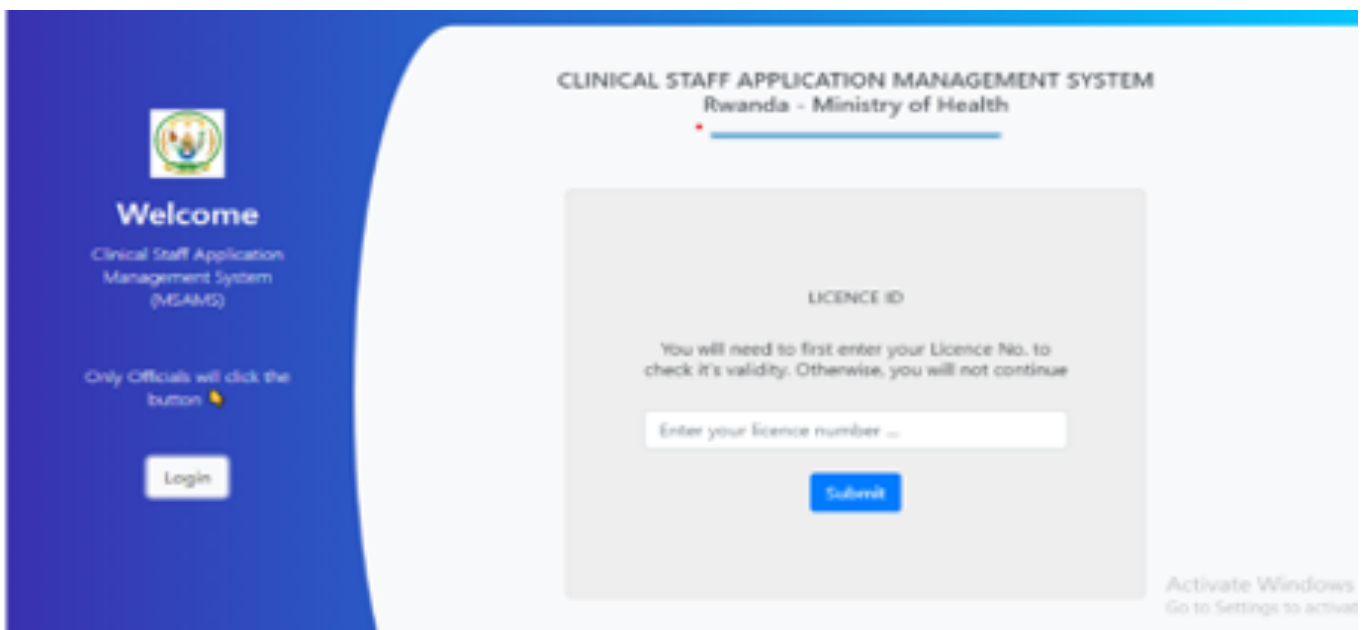
5.1.2 Specific Activities planned or requirements by Project

HISP Rwanda was assigned to develop and implement a system that will manage the applications of all clinical staff across the country. The HISP Rwanda developers have successfully customized the system which is ready to be used by the ministry of health.

5.1.3 Activities performed

For this clinical staff application, the testing stage has been done and the deployment on MOH servers is ongoing. And the Human Resource department from the Ministry of Health will be trained after the migration of the system.

5.1.4 Pending activities/ ongoing activities

The clinical application management system will provide all needed information for the ministry of health to manage all health professionals across the country in all facilities.

5.1.5 Way-forward and conclusion

As it is a new system, there will be always feedback from the users, and the support from HISP Rwanda will be maintained to meet the expectations of the clinical staff system.

5.2 PROJECT II: VACCINE STOCK MANAGEMENT INFORMATION SYSTEM
5.2.1 Description of the project

The immunization program is suggesting the development of the DHIS2 app to HISP

Rwanda, to support vaccine management. The application will be purposely to record and report all the requests, deliveries, waste, and acknowledgment of requests for vaccines. The new DHIS2 application will improve the management of the stock of vaccines from the central level to health facilities.
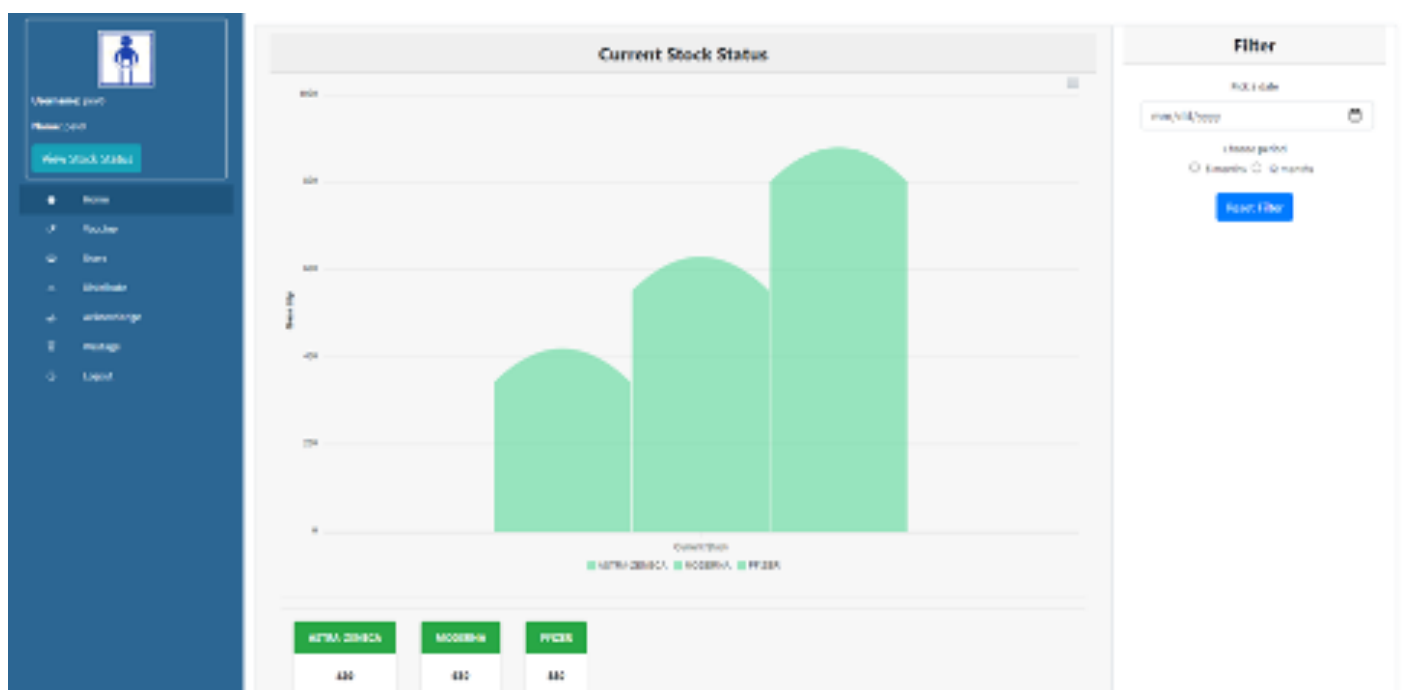
5.2.2 Specific Activities planned or requirements by Project

HISP Rwanda has gathered all information required from the EPI program to develop and customize and configure the Vaccines stock management application in DHIS2. The development is at the testing stage with the EPI program staff.

5.2.3 Activities performed

- System development completed.
- Training of trainees completed.
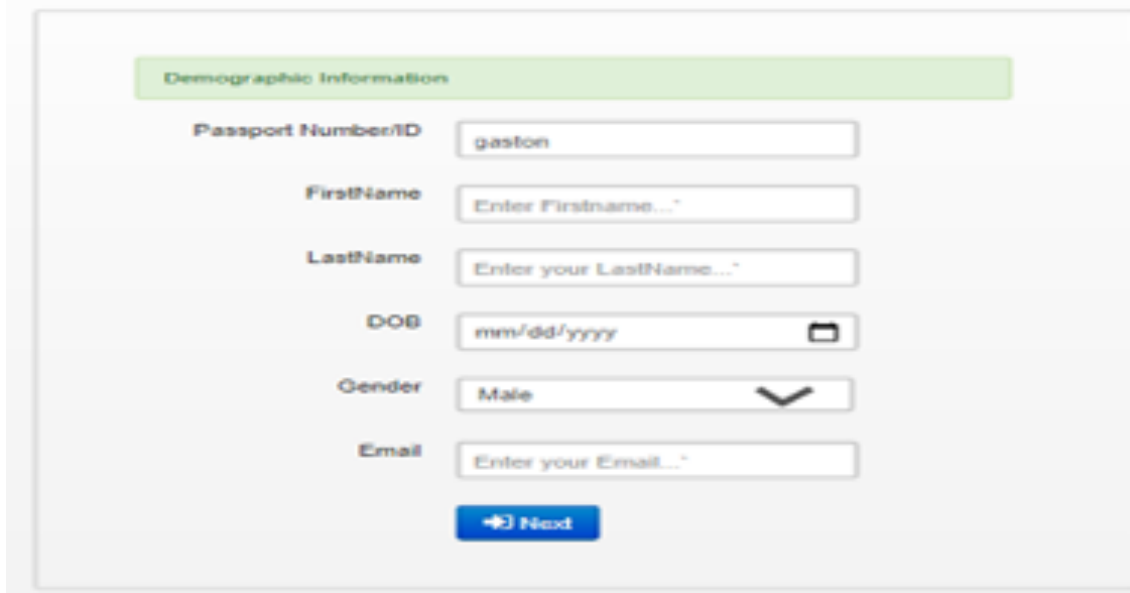
5.2.4 Way-forward and conclusion

User feedback implementation and continued support on decentralized training as the system is strengthened.

5.3   PROJECT III: SELF REGISTRATION SYSTEM FOR COVID-19 TESTS
5.3.1 Description of the project

MOH through RBC has adopted DHIS2 as an electronic system to record all clients tested

for covid19. The existing process was to register the client upon arrival at testing sites and the payment of service done at the same place. The process of Client registration is costly and time-consuming. It has revealed that the process takes time and the additional staff needed to capture demographic information, Clinical Signs and Symptoms, comorbidity information in DHIS2. To shorten the process of registration, the technical team from MOH and HISP Rwanda developed the self-registration platform as a solution to the above which will allow clients to do registration by themselves.

5.3.2 Specific Activities planned or requirements by Project

HISP Rwanda gathered all information required from RBC to develop, customize and configure the Self-registration System for Covid-19 Testing. System was presented and appreciated by the finance team in RBC, with a request to add more payment options in the system.

5.3.3 Activities performed

- Requested payment options added
- Implementing teams trained on the system features

5.3.4 Way-forward and conclusion

Continued support will be available to the team implementing the system.

5.4   PROJECT IV: OPENLMIS

5.4.1 Description of the project

After the increase in workload at the Command Post of the Covid-19 Joint task force when it came to dispatching of materials used such as; PPT, VTMs e.t.c, RBC approached HISP Rwanda with the request of a logistic management information system that can track the logistics at the Command Post specifically focusing on Cars available for use and how members on the field can request transportation using the system, or even request for material needed to be used on the field. All in all the system was created to manage the stock of RBC Command Post and also manage all activities done by vehicles assigned to the Command Post.
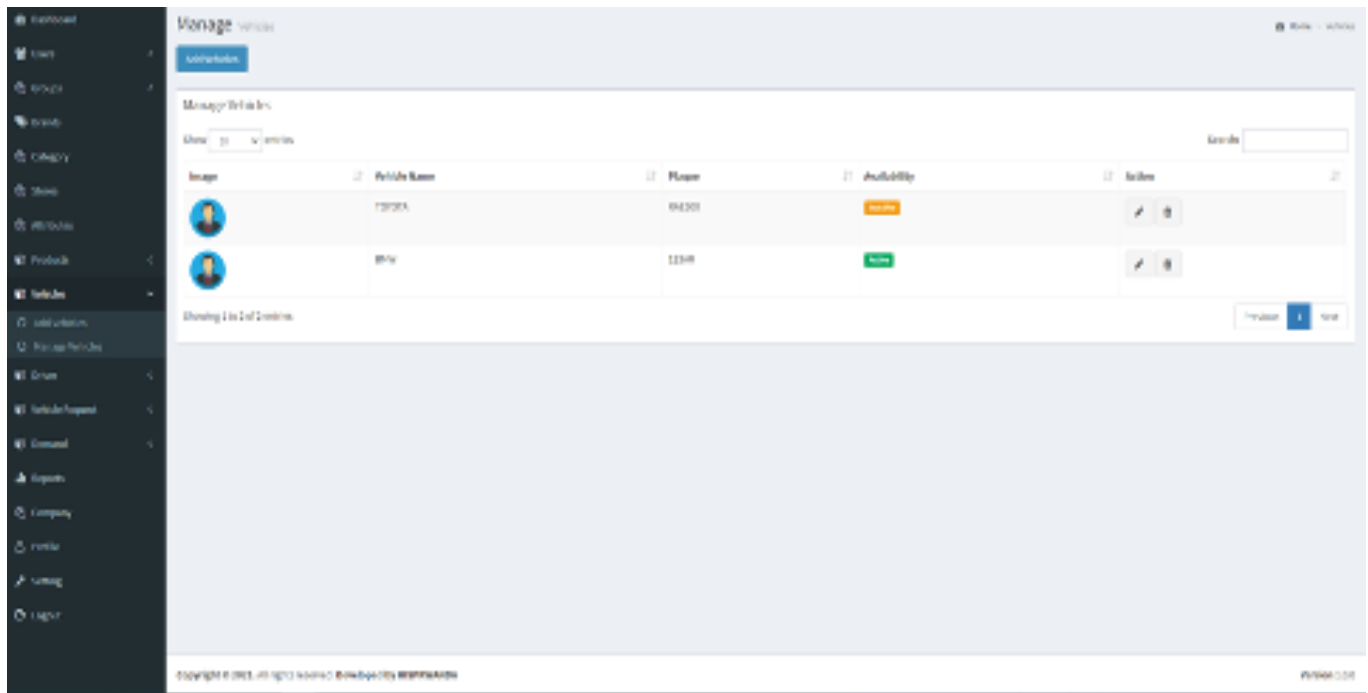
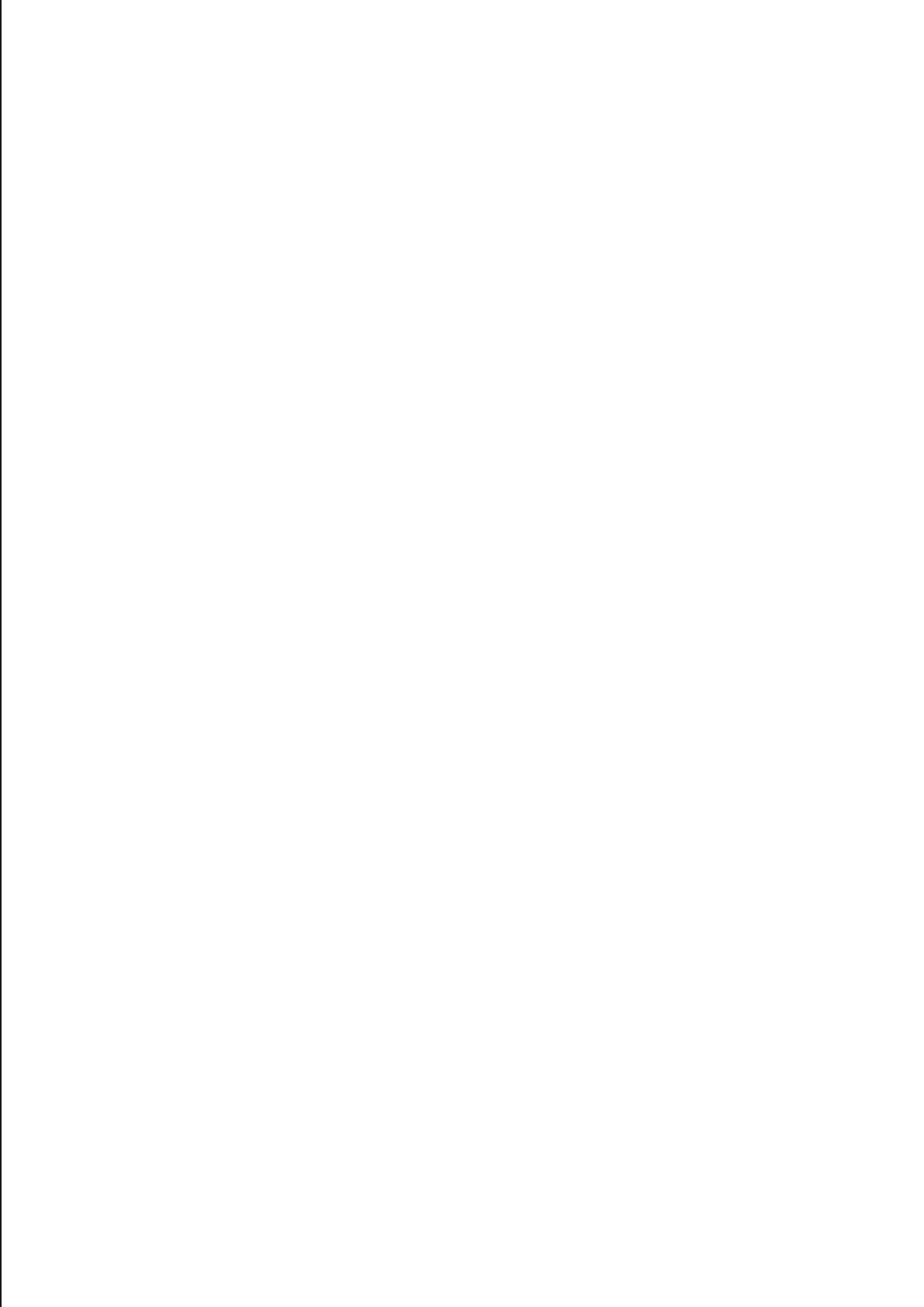## 5.4.2 Specific Activities planned or requirements by Project

System requirements were gathered and an explanation of the working procedures at the Command post to ensure the system follows the same routines.
The system was developed and presented on a testing server.

5.4.3 Way-forward and conclusion

Awaiting system approval by Covid-19 joint task force for implementation.

6. CONCLUSION

Hisp Rwanda is committed to providing all required technical assistance to support integrated health information systems in Rwanda/ ministry of health and will continue to work with MoH to accomplish a few ongoing projects.