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# **USAID UGANDA HEALTH SYSTEMS STRENGTHENING (UHSS) ACTIVITY**

## **Information and Communication Technology (ICT) Assessment Report Mbarara Regional Referral Hospital (RRH)**

July 27, 2020

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## ACRONYMS

CCTV	Closed-circuit Television
DHIS2	District Health Information Software 2
DHI	Division of Health Information
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
G2G	Government to Government
ICT	Information and Communication Technology
IT	Information Technology
iHRIS	Integrated Human Resources Information System
IHFMS	Integrated Health Facility Management Information System
ICU	Intensive Care Unit
LAN	Local Area Network
MoH	Ministry of Health
NITA	National Information Technology Authority
NBI	National Backbone Infrastructure
RRH	Regional Referral Hospital
UTL	Uganda Telecom Limited
UPS	Uninterruptible Power Supply
UHSS	Uganda Health Systems Strengthening
USAID	United States Agency for International Development
VC	Video Conferencing

## EXECUTIVE SUMMARY

Following the identification of Jinja and Mbarara Regional Referral Hospitals (RRHs) as the pilot facilities for the Government to Government (G2G) mechanism, the Uganda Health Systems Strengthening (UHSS) Activity has rolled out specific packages to provide technical assistance (TA) to these RRHs aimed at preparing them for the G2G mechanism and eventually make them key centers of excellence for comprehensive support supervision and other support to lower level health facilities within their catchment area.

The main objectives of this assessment were to:

- Confirm the current status of Information and Communication Technology (ICT) environment at Mbarara RRH in relation to the December 2019 ICT assessment by the Ministry of Health (MoH);
- Clarify support so far secured and planned by MoH; and
- Highlight additional areas that UHSS can propose to USAID to provide additional support under the G2G pilot.

The UHSS team finalized the ICT assessment tool in alignment with the above objectives and also completed a plan for performing field visit in collaboration with MoH Division of Health Information (DHI) and USAID.

The ICT needs assessment revealed that the status of computer hardware, data center, network and connectivity, Health information systems and processes, ICT human resources support, specialized technology solutions and power supply are not satisfactory at the hospital. The MoH has already put in place remedial plans for computer hardware, data center, network and connectivity, and health information systems and processes only. However, the facility needs additional support in all the unsatisfactory areas (table 1).

**Table 1: Summary of the status of Mbarara RRH ICT environment**

Area of Review	Status at Hospital Satisfactory	Already under MoH Remedial Plan	Additional Support still Required
Computer Hardware	No	Yes	Yes
Data Canter	No	Yes	Yes
Network and Connectivity	No	Yes	Yes
Health Information Systems and Processes	No	Yes	Yes
ICT Human Resources Support	No	No	Yes
Specialized Technology Solutions	No	No	Yes
Power Supply	No	No	Yes

## INTRODUCTION

Following the identification of Jinja and Mbarara Regional Referral Hospitals (RRHs) as the pilot facilities for the Government to Government (G2G) mechanism, the Uganda Health Systems Strengthening (UHSS) Activity has rolled out specific packages to provide technical assistance (TA) to these RRHs aimed at preparing them for the G2G mechanism and eventually make them key centers of excellence for comprehensive support supervision and other support to lower level health facilities within their catchment area.

Based on the initial request from USAID to UHSS to perform an ICT needs assessment for the two RRHs in Mbarara and Jinja, the UHSS team developed and shared with USAID for review a proposed ICT needs assessment tool. UHSS further engaged with the Ministry of Health (MoH) Division of Health Information (DHI) to understand whether there were any prior assessments that could have been performed for these RRHs.

Discussion with the MoH DHI revealed that MoH had carried out a regional referrals e-health readiness assessment in December 2019 to identify computing and network needs necessary for successful deployment of the Integrated Health Facility Management Information System (IHFMIS) and a report was shared with UHSS. Following completion of the 2019 assessment, the Ministry has secured the following support for ICT activities:

1. Funding from Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) for all the 16 RRHs (as at time of assessment); under this funding, each RRH will receive: 45 desktop computers, 25 laptops, 15 tablets and deployment of a Local Area Network (LAN) to cover key service points. It was noted that the first consignment from the Global Fund has been received by the ministry and second batch is scheduled for delivery in August 2020. Networking of the RRHs is ongoing and plan is to dispatch the equipment to the RRHs once networking is completed.
2. The ministry has also received funding from World Bank to purchase computers and deploy network in 21 General Hospitals. Procurement of this equipment is underway

Having noted the above progress made by the Ministry in relation to building ICT capacity at RRHs and also the General Hospitals across the country, both the UHSS and the MoH DHI teams agreed to jointly proceed and visit both Mbarara and Jinja RRHs to confirm current status and validate t ICT needs.

The main objectives of the visits were to confirm the current status of ICT environments at the two RRHs in relation to the December 2019 ICT assessment by MoH; clarify support so far secured and planned; and to highlight additional areas that UHSS can propose to USAID to provide additional support under the G2G pilot.

The UHSS team finalized the ICT assessment tool in alignment with the above objectives and also completed a plan for performing field visits in collaboration with MoH DHI and USAID.

The assessment tool covered the following key ICT areas:

- **Computer Hardware:** this section targeted identification of additional computer hardware needs of the facility basing on the understanding of currently available hardware to support computing needs of the facility and support already planned by the MoH.
- **Network and Connectivity:** this section targeted identification of the network and connectivity needs of the facility basing on the current status understanding and support already planned by the MoH.
- **Health information systems and processes:** this section targeted identification health information systems needs of the facility basing on understanding of the current status and the support already planned by the MoH.

- **Information and Communications Technology (ICT) support human resources:** this section targeted identification of ICT support personnel needs of the RRH).
- **Specialized technology solutions:** this section sought to determine whether the facility has already invested in some specialized technology solutions and/ or whether there are some gaps that require to be closed in light with any plans that the MoH may already have.
- **Power supply:** This section targets identification the facility's power supply needs in supporting ICT equipment basing on understanding current status and any support that could have already been planned by the MoH.

**Table 2: Summary of the ICT needs assessment participant (accessors and respondents)**

Team	Role	Composition
UHSS Informatics	Assessor	<ol style="list-style-type: none"> <li>1. Wence Benda Twesigye – Information Systems Team Lead</li> <li>2. Ian Muhire – IT Associate</li> </ol>
MoH DHI	Assessor	<ol style="list-style-type: none"> <li>3. Andrew Babigaisa – Data warehouse Architect</li> <li>4. Carol Kamasaka - Digital Health Specialist</li> </ol>
Mbarara RRH	Respondent	<ol style="list-style-type: none"> <li>5. Dr. Barigye Celestine – Hospital Director</li> <li>6. Mr. Okello Odeke Peter – Principal Hospital Administrator</li> <li>7. Mr. Pius Emojong – Principal Human Resource Officer</li> <li>8. Mr. Balikudembe Joseph – Human Resource Officer</li> <li>9. Mr. Mbusa Joshua – Assistant Records Officer</li> <li>10. Mr. Justus Musiime – Medical Records Assistant</li> </ol>

## APPROACH

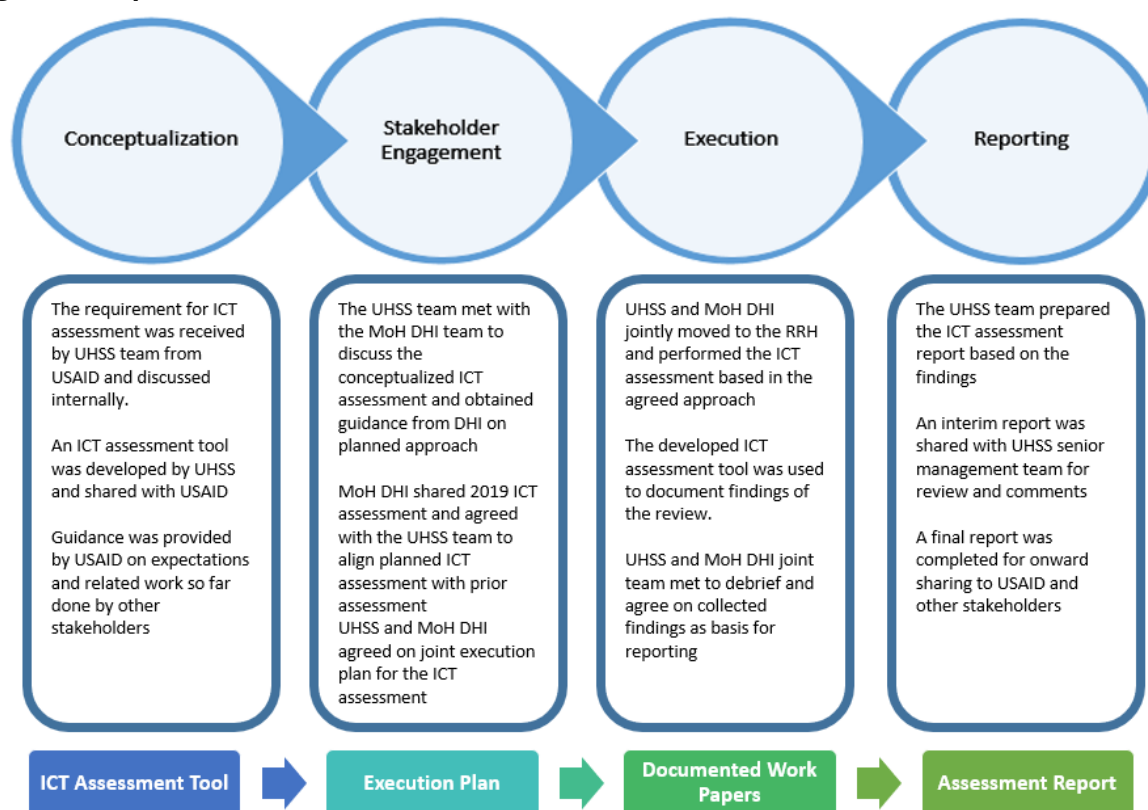
The UHSS team held internal discussions to conceptualize the above request and subsequently developed an ICT needs assessment tool that was eventually shared with USAID as the proposed tool to guide the ICT needs assessments.

UHSS also engaged the MoH DHI to understand whether there have been any prior similar activities and/or related plans. Discussion with the MoH DHI revealed that MoH had carried out a regional referrals e-health readiness assessment in December 2019 to identify computing and network needs necessary for successful deployment of the Integrated Health Facility Management Information System (IHFMS) and a report was shared with UHSS.

UHSS and the MoH DHI teams agreed to jointly proceed and visit Mbarara RRH to confirm current status and validate the ICT needs.

Below is an illustration of the general approach that was used by UHSS to plan and execute the requested ICT needs assessments.

**Figure 1: Steps for the ICT needs assessment**



## FINDINGS

The Hospital Administrator took the UHSS team around the hospital and shared an overview of hospital environment highlighting the hardships faced in service delivery with the current ICT infrastructure. The hospital's key service points were also noted as below

*Table 3: Summary of the Regional Referral Hospital's service point*

Unit / Block	No. of Service Points
Administration Block	10
Intensive Care Unit	8
Private wing	10
Stores	5
Pharmacy	1
Receptions	6
Accounts	1
Maternal and Child Health	23
Radiology	4
Private Operating Theatre	24
Lab	4
Dental	4
Psychiatry	8
Tuberculosis	2
Orthopaedics	2
Physiotherapy	6
Paediatric oncology	12
Surgical	8
Security Gate Office 1	1
Security Gate Office 2	1
Mortuary	10
Outpatient	15
Maternal and Child Health Lecture Theatre	5
New Lab	15
Dispensary	2
ISS Clinic	15
Dermatology	2
Medical ward	8
Emergency	10
Isolation Unit	4
Interns Mess	2
Oncology	6
Gynaecology	6
Nutrition Centre	4
Paediatrics	8
Maternity	8
Perinatal	8
<b>Total</b>	<b>266</b>

Based on review of the target ICT areas agreed upon by UHSS and MoH DHI, included computer hardware, network and connectivity, health information systems, specialized technology solutions and power supply, current ICT needs of the RRH were confirmed with reference to the December 2019 ICT assessment and interventions that have already been planned by MoH towards addressing these needs. Areas still requiring additional support have also been highlighted in the sub-sections below.



## Computer Hardware

The computer hardware components reviewed included desktop computers, laptops, tablets, server computers, printing/photocopying/scanning devices, multipurpose display monitors, uninterruptible power supply gadgets, projectors and paper shredders. Support already planned by MoH to Mbarara RRH in relation to computer hardware included provision of 45 desktop computers, 25 laptop computers and 15 tablets. The table below shows the additional support that can be provided to the RRH under computer hardware based the hospital's needs and the support already planned by MoH.

**Table 4: Summary of the computer hardware status**

Hardware Component	Ideal Position	Current Position	Planned Support by MoH	Additional Support Required
Desktop Computers	236 Sets	30 Sets	45 Sets	161 Sets
Laptop Computers	30 Units	6 Units	25 Units	None
Tablets	56 Units	0	15 Units	41 Units
Server computers	Adequate servers hosting key local ICT services of the RRH.	1 Unit	None	Provide additional server computers once more services are required to be hosted locally
Printing Devices	10 Units	4 Units	None	6 Units
Scanning Devices	10 Units	6 Units	None	4 Units
Photocopying Devices	5 Units	1 Units	None	4 Units
Multi-purpose Display monitors	4 Units	1 Unit	None	3 Units
Uninterruptible Power Supply (UPS)	Heavy duty UPS system for the whole RRH	0	None	Heavy duty UPS system for the whole RRH
Projectors	2 Units	1 Unit	None	1 Unit
Shredders	3 Units	0	None	3 Units

*Refer to Appendix 2 for a detailed allocation of desktop computers, laptops and tablets per service point.*

## Onsite Data Center

A data center is a space or room within a building that is specially reserved and used to house computer systems and associated components. Key features of a data center include: host to live processing servers, host to onsite backup processing servers, and host to offsite data replication services. The table below illustrates support that can be provided to Mbarara RRH relating to onsite data center based on the hospital's situation as at time of our review and the support that has already been planned by the MoH.

**Table 5: Summary of the onsite data center status**

Current Status	Support already planned by MoH	Additional Support that can be provided
Mbarara RRH has two (2) separate server rooms (datacenters). One server room with a functional server computer and the other server room with a switch rack cabinet.	MoH is in plans to use the Ministry Datacenter to host the Integrated Health Management Information System (IHMIS). The IHMIS will be the key hospital management system that will be rolled out to all Hospitals including Jinja RRH	Through working with the MoH DHI, Mbarara RRH can be supported to boost already existing server-rooms to host key local services like Domain controller, CCTV systems, data backup services and any other crucial services required.

## Network and Connectivity

Networks and the Internet are very key in supporting interconnectivity with different computer systems to enhance collaboration for an efficient and effective working environment. There were areas of additional support noted in relation to Mbarara RRH ICT network and connectivity based on the status as at time of our review and the support that had already been planned by MoH.

**Table 6: Summary of the network and connectivity status**

Current Status	Support already planned by MoH	Additional Support that can be provided
Mbarara RRH currently has multiple wired Local Area Networks (LAN) that are each running separately. This is because when funders come to offer a solution, they all provide the own connectivity that is independent of the pre-existing ones.	The Ministry of Health is in plans to implement wireless LAN connectivity to span all the identified service points. The team was on ground and works had started	The best suited LAN to support the IHFMIS is a wired LAN. Hence working through the DHI, current initiative by MoH to implement wireless LAN can be supplemented by setting a wired LAN to augment the wireless LAN
There is a NITA National Backbone Infrastructure (NBI) at the Hospital but this has not yet been terminated into the hospital existing network to provide Internet.	The MoH team was on ground trying to activate the NITA NBI at the time of this assessment.	None

## Health Information Systems and Processes

Health Information Systems are critical in automating the various processes involved in health services delivery to maximize value output. Key interventions by MoH have been planned in relation to rolling out of the IHFMIS. The table below captures the current status of Mbarara RRH and additional support that can be provided to strengthen the interventions already planned by MoH.

**Table 7: Summary of the health information systems and processes status**

<b>Current Status</b>	<b>Support already planned by MoH</b>	<b>Additional Support that can be provided</b>
<p>Mbarara RRH has been off the IHFMIS since December 2019 due to the theft of a gadget (network access point) that was provided connectivity to the system.</p> <p>It was also noted from discussions with the RRH that the IHFMIS report are not suitably aligned for reporting into DHIS2. Staff also need a refresher training</p>	<p>MoH has plans to reinstate the IHFMIS</p>	<p>Working with MOH DHI, the following additional support is required:</p> <ul style="list-style-type: none"> <li>- Refresher training following the re-activation of IHFMIS</li> <li>- Have a Business Continuity Plan for the IHFMIS</li> </ul>

Additionally, the following areas of additional support were noted with specific regard to the iHRIS and the DHIS2 systems at Mbarara RRH.

**Table 8: Summary of the iHRIS and DHIS2 systems status**

<b>Current Status</b>	<b>Support already planned by MoH</b>	<b>Additional Support that can be provided</b>
<p>Mbarara RRH is currently handling the task of updating the iHRIS system. This process has however been affected by challenges including:</p> <ul style="list-style-type: none"> <li>• Limited manpower to undertake the huge task of updating the system</li> <li>• Lack of computers to support existing human resources in updating the system</li> <li>• Network connectivity challenges</li> <li>• Lack of refresher trainings</li> </ul>	<p>When the computing equipment that MoH is providing to the hospital arrives, this will in part solve the problem as they wait for the additional equipment</p>	<p>Through engagement with the MoH DHI and the ICT unit of the hospital can be supported in the following ways:</p> <ul style="list-style-type: none"> <li>• Organize refresher training for existing staff</li> </ul>

Mbarara RRH currently undertakes the requirement to report through the DHIS2 system. It was however noted that access to the latest update of DHIS2 is not zero rated as expected from arrangements with MTN. Staff have to pay internet cost to access the system.	The MoH DHI took immediate note of the issue relating to the charge for internet connectivity to access the DHIS2 system	None
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## ICT Human Resources Support

Mbarara RRH has taken some steps to address ICT support human resources needs as captured below.

**Table 8: Summary of ICT human resources support status**

Current Status	Support already planned by MoH/RRH	Additional Support that can be provided
Currently the Hospital no ICT support role. There is however a process to recruit an ICT officer under the G2-G program.	None	There currently planned ICT support staff under recruitment will not be sufficient for the tasks. There is need to recruit at least two (2) assistants.

## Specialized Technology Solutions

Specialized technologies are key to bringing additional value to the execution of specific tasks within the hospital. The specific technologies focused on during the review included: Video conferencing (VC) solutions, e-Resource center (e-learning), call center solutions, telemedicine solutions and online presence. The table below illustrates the additional support that can be provided based on the RRH's status at the time of the review and the support already planned by MoH.

**Table 9: Summary of the Specialized technology solutions status**

Current Status	Support already Planned by MoH	Additional Support that can be provided
<b>Video conferencing solution</b> Mbarara RRH currently has one functional video conferencing solution that was provided by Jhpiego. This is made up of a computer set, motorized camera, 42 inch display unit, and a wireless audio microphone.	MoH has already received official zoom licenses from Ministry of ICT which they can share with the RRHs	The following offices need a Video Conferencing (VC) facility: <ul style="list-style-type: none"> <li>• Hospital Director.</li> <li>• Lecture Room</li> <li>• Theatre</li> </ul>
<b>e-resource center/ e-library</b>	The MoH has operationalized the Knowledge management	By working with MoH DHI specific support packages can be identified

Mbarara RRH does not have a physical/ e-library	portal online with multiple reading material that can be accessed by everyone.	on how to the Knowledge management portal can be fully institutionalized and also where applicable identify additional functionalities that can be added to the portal.
<b>Telemedicine solutions</b> Mbarara RRH has not ventured into this area		Going through the MoH DHI, engage the Director of Clinical Services to understand the MoH strategy on telemedicine and to identify specific areas within this strategy that can be supported for the benefit of Mbarara RRH.
<b>Call Center solutions</b> No dedicated 24/7 resource to handle calls from the public.	None	Explore options of having a 24/7 contact point at the RRH.
<b>CCTV</b> Currently, Mbarara RRH has 15 CCTV cameras for security surveillance.	None	Need to have a robust CCTV camera system that spans the entire hospital. Minimum of 200 cameras needed.

## Power Supply

Stable supply of power is fundamental to the correct and consistent functionality of ICT equipment. Crucial areas requiring support were noted as illustrated in the table below.

**Table 10: Summary of the power supply status**

Current Status	Support already planned by MoH	Additional Support that can be provided
<p>The current power sources of the Mbarara RRH are:</p> <ul style="list-style-type: none"> <li>a) Main/Primary power source is national grid. This source covers the entire geography of the hospital</li> <li>b) Secondary source is the Hospital Generator. However this does not cover entire hospital as below: <ul style="list-style-type: none"> <li>- 1 generator for Administration Block, ICU and Theatre</li> <li>- Other generator for the Laboratory</li> </ul> </li> </ul> <p>We also noted that the hospital does not have effective power backup system</p>	None	<p>Through engagement with the MoH DHI the following areas can be supported:</p> <ul style="list-style-type: none"> <li>- Extend secondary power source to all hospital</li> <li>- Set up a heavy duty UPS system for power backup</li> </ul>

## CONCLUSION

Areas of additional support noted throughout this report were arrived at with consultation from both the MoH DHI team as well as the Mbarara RRH team. It was also recommended that the teams (UHSS, MoH DHI and the Mbarara RRH teams) keep in close collaboration and communication to ensure consistent understanding for any support interventions that may be decided upon.

## APPENDICES

### Appendix I: Distribution of Desktop Computers, Laptops and Tables by service points at the hospital

Unit / Block	Number Service Points	Number of Laptops	Number of Desktops	Number of Tablets	Number of Multi-purpose Printers
Administration Block	10	5	5	0	1
Intensive Care Unit	8	1	7	1	0
Private Wing	10	1	9	1	0
Stores	5	0	5	0	1
Pharmacy	1	0	1	0	0
Receptions	6	0	6	0	0
Accounts	1	0	1	0	1
Maternal and Child Health	23	4	19	4	1
Radiology	4	0	4	0	0
Private Operating Theatre	24	0	24	4	1
Laboratory	4	0	4	1	1
Dental	4	0	4	1	0
Psychiatry	8	1	7	2	0
Tuberculosis	2	0	2	1	0
Orthopedics	2	0	2	1	0
Physiotherapy	6	0	6	1	0
Gynecology	6	1	5	1	0
Oncology	4	0	4	1	0
Nutrition Centre	4	0	4	1	0
Pediatrics	8	1	7	1	0
Maternity	8	1	7	1	0
Perinatal	4	0	4	1	0
Pediatric oncology	12	2	10	4	0
Surgical	8	1	7	1	0
Mortuary	10	1	9	1	0
Outpatient	15	3	12	4	1
MCH Lecture Theatres	5	0	5	5	0
New Lab	15	5	10	5	1
Dispensary	2	0	2	0	0
ISS Clinic	15	2	13	5	1
Dermatology	4	0	4	1	0
Medical ward	8	0	8	1	0
Emergency	10	0	10	4	0
Isolation Unit	4	1	3	2	0
Security	4	0	4	0	1
Intern Mess	2	0	2	0	0
<b>Total</b>	<b>266</b>	<b>30</b>	<b>236</b>	<b>56</b>	<b>10</b>

## Appendix 2: ICT assessment tool template used

### Mbarara RRH ICT Needs Assessment Checklist

#### Assessment tracker

Date Assessment Started			
Name of Institute/facility			
<b>Respondents Interviewed</b>			
<b>Section ID</b>	<b>Name of Respondent</b>	<b>Role</b>	<b>Date of Interview</b>
Section B-H			
Assessors			

**Section B: Computer Hardware** *(This section targets to identify computer hardware needs of the facility basing on the understanding of currently available hardware to support computing needs of the facility).*

**B.1** The table below summarizes the computer hardware needs targeted for assessment in comparison to support that has already been organized by the MOH

Hardware Component	Ideal Position	Current Position	Planned Support by MoH	Gap after MoH Support
Desktop Computer Set (Monitor, Processing unit, Keyboard, Mouse)				
Laptop Computers				
Tablets				
Server computers				
Printing Devices				
Scanning Devices				
Photocopying Devices				
Multi-purpose Display monitors				



Uninterruptable Power Supply (UPS)				
Projectors				
Shredders				

**B.2** Table below shows key notes from MoH assessment, key datacentre features targeted for assessment in comparison with features already planned for by the MoH and the pending support.

Key notes from MoH assessment	Key Data Centre features	Current Situation and Planned Support by MoH	Additional Support Required
<ul style="list-style-type: none"> <li>• Weak access controls</li> <li>• Records were paper based</li> <li>• Paper based backup</li> <li>• Facilities with UgandaEMR used hard disk backup</li> <li>• Facilities with IICS used hard disk backup</li> </ul>	<ul style="list-style-type: none"> <li>• Host to Live processing servers</li> <li>• Host to onsite backup processing servers</li> <li>• Host to offsite data replication services</li> <li>• Access Security</li> </ul>		

**Section C: Network and Connectivity** *(This section targets to identify the network and connectivity needs of the facility basing on the current status understanding).*

**C.1** Table below shows a high level summary of the MoH ICT assessment results, the support already planned by MoH and additionally required support

Key notes from assessment MoH notes	Type of Networks	Current Situation & Support already planned by MoH	Additionally Required Support
<ul style="list-style-type: none"> <li>• Most facilities on wireless access for Local Network</li> <li>• Internet mostly accessed through modems provided by partners</li> <li>• Weak signal strength</li> <li>• Costly internet</li> <li>• No connectivity to NBI for majority facilities</li> </ul>	Local Network		
	The Internet		

**Section D: Health information systems and processes.** *(This section aims at identifying health information systems needs of the facility basing on understanding of the current key processes and the information systems that support them)*

**D.1** Table below shows a high level summary of the MoH ICT assessment results, the support already planned by MoH and additionally required support

Key notes from MoH assessment	Current situation & Support already planned by MoH	Additionally Required Support
<ul style="list-style-type: none"> <li>No facility with an EMR system that covers all departments</li> <li>IICS and UgandaEMR used in 16 facilities</li> <li>Mubende, Hoima and Fort portal don't have any EMR system</li> <li>Facilities with EMRs had staff trained to use them</li> <li>A big number of staff however hardly had any computer skills</li> </ul>		

**D.2** Table below aims to capture any support that is being taken to specifically boost use of iHRIS

Current Situation & Support already Planned by MoH	Additionally Required Support
	•

**D.3** Table below aims to capture any support that is being taken to specifically boost use of DHIS2 reporting

Support already Planned by MoH	Additionally Required Support

**Section E: Information and Communications Technology (ICT) support human resources:** *(This section targets to evaluate whether the facility has competent technical human resource capacity to efficiently support ICT processes).*

**E.1** The table below indicates the common ICT technical support strategies, the support planned by MoH and the additionally required support

Common strategies	Current Situation & Support already planned by MoH/RRH	Additionally Required Support

<ul style="list-style-type: none"> <li>• In-house ICT Support,</li> <li>• Outsourced ICT support,</li> <li>• Both In-house and Outsourced,</li> <li>• short random contracts,</li> </ul>		
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**Section F: Specialized technology solutions:** *(This section targets to determine whether the facility has already invested in some specialized technology solutions and/ or whether there are some gaps that require to be closed)*

**F.I** The left column in the table below lists some specialized technology solutions. Follow guidance in the columns on the right to indicate support that has already been planned by the MoH and the additionally required support

Specialised Technology	Current Situation & Support already Planned by MoH	Additionally Required support
Video conferencing solution		
e-Resource center/e-Library		
Telemedicine solutions		
Call center solutions		
Online Presence		

**Section G: Power supply:** *(This section targets to identify the facility's power supply needs in supporting ICT equipment basing on understanding current status).*

**G.I** The table below indicates key notes from the MoH assessment, the support planned by MoH and the additionally required support

Key noted from MoH Assessment	Current Situation & Planned support by the MoH	Additional Required support
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<ul style="list-style-type: none"> <li>• Facilities are connected to the national power grid as primary source</li> <li>• All facilities had some form of secondary source</li> <li>• Some departments did not have secondary power source</li> <li>• No UPS backup</li> </ul>		
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**END**