



REPUBLIC OF KENYA

**MINISTRY OF ICT, INNOVATION AND YOUTH AFFAIRS
STATE DEPARTMENT OF ICT & INNOVATION**

**P. O. BOX 30025-00100
NAIROBI**

**ADDENDUM FOR
TENDER NO: MOICT/SDICT/ONT/008/2021-2022**

**TENDER FOR SUPPLY, INSTALLATION AND COMMISSIONING OF
NETWORK INFRASTRUCTURE
AT KITUI LEVEL IV COUNTY HOSPITAL, KITUI COUNTY**

ISSUE DATE: 23RD AUGUST, 2021

TENDER CLOSING DATE: 8TH SEPTEMBER, 2021 AT 10.00 A.M

1.0 INTRODUCTION

The Client (Ministry of ICT, Innovation and Youth Affairs, State Department of ICT & Innovation) organized a Pre-Tender Site Survey on 17th August 2021. The was to give the Bidders an opportunity to familiarize with the ground requirements, understand the Tender drawings and identify the omission, adjustments to be considered to ensure installed solution meets the expectation of the intended work. Having gone through the site survey the following was raised and is addressed as below:

2.0 ISSUES AND CLARIFICATIONS

No.	ISSUES THAT CAME UP	CLARIFICATION
1.	The following service points/blocks were not included in the tender document namely; <ul style="list-style-type: none"> • CHMT Block • Manufacturing • Catering office • 2- pay points • New Doctor block 	The Bill of Materials, Price Schedule and network designs have been amended to accordingly to reflect the new requirements as specified in section 3.0, 4.0 and 5.0 of this Addendum.
2.	The Hospital Facility does not have a NoFBI connection within the hospital.	The Bidder shall be required to lay an optic fiber cable from the nearest NOFBI Manhole or County Commissioners office, terminate and configure at the Hospital MDF.
3	There exist Local Area Network at New Doctor block (OPD).	The Bidder shall be required to replace active devices, install access points, UPSs and Install backbone cabling as per specifications. In addition, the bidder should repair any faulty datapoints, do labeling in accordance to the requirements of the bid document The Bill of Materials and Price Schedule have been amended accordingly to reflect the new requirements as specified in section 3.0 and 4.0 of this Addendum.
4	Specifications for Self-Cooling Cabinet in the tender were not clear.	The Specifications for Self-cooling Cabinet has been amended as per the section 2.1 of this addendum

2.1 SELF-COOLING CABINET WITH A POWER SOLUTION

The bidder shall provide a self-cooling cabinet that will include power system, Main Distribution Frame (MDF), Optical Distribution Frame (ODF), battery, environment monitoring and temperature control modules.

No	Technical Specifications	Compliance (Yes/No)	REFERENCE INFORMATION TO SUPPORT COMPLIANCE (Highlighted in the bid document)
Requirements			
1.	The solution shall provide efficient power consumption		
2.	It shall easily be deployed in rugged outdoor environments with a temperature range from 41°C to		

	53°C including high humidity		
3.	Power to the cabinet shall be switched off from within the cabinet. Proper power socket cables to be supplied with the cabinets. The bidder shall be required to provide a 6- Way Power Distribution board		
4.	It shall meet IP55 protection ratings, allowing for installation in adverse conditions such as close to salt water		
5.	Its door shall be installed with air conditioner		
6.	It shall support remote monitoring and alarms for easier Operations and Maintenance (O&M)		
7.	It shall monitor environmental and power parameters		
8.	The cabinet shall have at least 48V LED lamps with a protective circuit breaker		
9.	The cabinet shall have an AC Distribution Unit with an input Voltage range of 220VAC-240VAC		
10.	The cabinet shall have DC Distribution Unit with an output voltage range between 42-58VDC		
11.	The cooling system shall consist of air conditioners with a cooling capacity of at least 800W, forced air exhaust, heat exchanger and thermoelectric conditioner		
12.	It shall have automatic microclimate control system, security and fire alarms which can engage locally or remote control		
13.	It shall have advanced heat dissipation system to reduce power consumption and noise		
14.	The cabinet should be made of Galvanized steel		
15.	It shall have a fire extinguisher system		
16.	The cabinet shall be at least 38U 19 “ mounting racks, which can install 4pcs lead-acid batteries and telecommunication equipment		
17.	The cabinet shall have four 100AH each with 12VDC Lead-acid battery		
18.	The cabinet shall have Temperature sensor, door sensor, water sensor, smoke sensor among others		
19.	The cable inlets should be at the bottom of the cabinet		
20.	Doors should be equipped with a locking system		
21.	It should have a 2year Warranty		

2.2 NOFBI WAN CONNECTIVITY

Specifications and General installation practice. The scope of the project shall include:

- Physical OFC cabling and termination to the nearest Point of Presence NOFBI POP site
- Physical OFC cabling and termination to the aggregation point at the proposed Main Distribution Facility (MDF)

No	Technical Specifications	Bidders Technical Response	Reference to Support Response (Highlighted and provide page no. in the bid document)
Requirements			
1.	The primary media for backbone cabling will be Single mode fiber optic.		
2.	Fiber optic cable shall have a core/cladding diameter on nominal 850nm and 1300nm optical wavelength.		
3.	The fiber optic cable shall have a minimum of twenty-four (24) strands.		
4.	All strands must be terminated at each end of the fiber cable whether used or not.		
5.	The fiber ducts shall be buried at a minimum of 1.2M deep normal soil, 0.6M hard rock. Normal soil backfilling must be compacted to revert to normal state. Hard rock backfilling shall be by concreting of at least 0.2M.		
6.	110mm HDPE ducts shall be used for road crossing between the hand holes 40mm ducts shall be inside the 110mm HDPE duct with the cable inside		
7.	Where there is an existing NOFBI duct, the bidder shall reuse the spare duct by entering through the nearest man hole/hand hole. Authority to use the spare duct shall be sought from MOICT		
8.	The bidder shall use the existing entry Manhole to the NOFBI POP site. OFC cable shall be dropped to the Man Hole as a slag of at least 30Meters. Splicing to the existing OFC shall be done by MOICT through the party maintaining the OFC. Formal request to be done to Ministry of ICT once OFC is in Man Hole.		
9.	Fiber optic WAN link shall be terminated at the identified NOFBI POP room as per the physical topology design.		
10.	All fiber interfaces for uplink must use relevant transceivers and must show LED before logical work start.		

3.0 PRICE SCHEDULE

Bill of Quantities/Schedule of Rates

Below is the amended proposed bill of quantities for guidance.

1. KITUI Hospital

NO.	Description	Unit of Measurement	Qty	Unit Cost	Total Cost
1.	F/UTP Category 6A Outlets Module (Data points)	No	554		

2.	Flash Mount Faceplates – F/UTP Category 6A Double	No	277		
3.	F/UTP Category 6A Wall UTP-RJ45Patch cord (1M)	No	554		
4.	F/UTP Category 6A Wall UTP-RJ45Patch cord (3M)	No	554		
5.	F/UTP Category 6A Wall UTP-RJ45Patch cord (5M)	No	10		
6.	F/UTP Category 6A 24 PATCH PANEL 1 U568A/B	No	24		
7.	Cable managers 2U	No	24		
8.	Galvanized Metallic Trunking 150mm x50mm & accessories for installing 554 Data Points	Lot	Lot		
9.	F/UTP Category 6A Pure Copper Ethernet Cable for installing 554 Data Points and access points	Lot	Lot		
10.	Fiber Patch Panel (at least 8 core)	No	20		
11.	24 core OFC Patch Panel	No	3		
12.	Fiber Cable 8 Core plus Ducts to interlink all the cabinets/switches	lot	Lot		
13.	Fiber Patch Cord 1M	No	23		
14.	1G SFP transceivers	No	22		
15.	18U Network Cabinet with a 4Way Horizontal Mount Power Distribution Unit (PDU)	No	20		
16.	38U Self-Cooling, maintenance free Network Cabinet with Horizontal Mount Power Distribution Unit (PDU)	No	1		
17.	Rack mountable UPS- 1.5 KVA	No	23		
18.	Rack mountable UPS- 3 KVA	No	0		
19.	Distribution/Aggregation Switch	No	1		
20.	48 Port POE+ Switch with Stacking Modules	No	7		
21.	24 Port POE+ Switch with Stacking Modules	No	16		
22.	Wireless Access Point	No	40		
23.	Wireless Controller	No	1		
24.	Civil Works-Pulling, Termination, Labelling, Documentation and Testing of Horizontal and Backbone Cabling,	Lot	Lot		
25.	Installation of Active Devices, IP Schemes and Configuration.	Lot	Lot		
26.	Testing, Training and Handover	Lot	Lot		
27.	Provision of Project Implementation Committee transport services as specified in Section V no 17	Round Trip	5		
28.	Annual SLA Support for one Year	Year	1		
29.	Fiber Connectivity to NOFBI Manhole (NOFBI WAN CONNECTIVITY) Section 2.2	Lot	Lot		
	TOTAL				

Name of Tenderer: _____

_____ Date _____

Authorized Signature of Tenderer:

4.0 BILL OF MATERIALS

NOTE: The bill of materials is just an estimate; the bidder is required to carry out a survey in order to get actual material required and provision for them in the quote. The client is not liable for any omission.

The Bill of Materials:

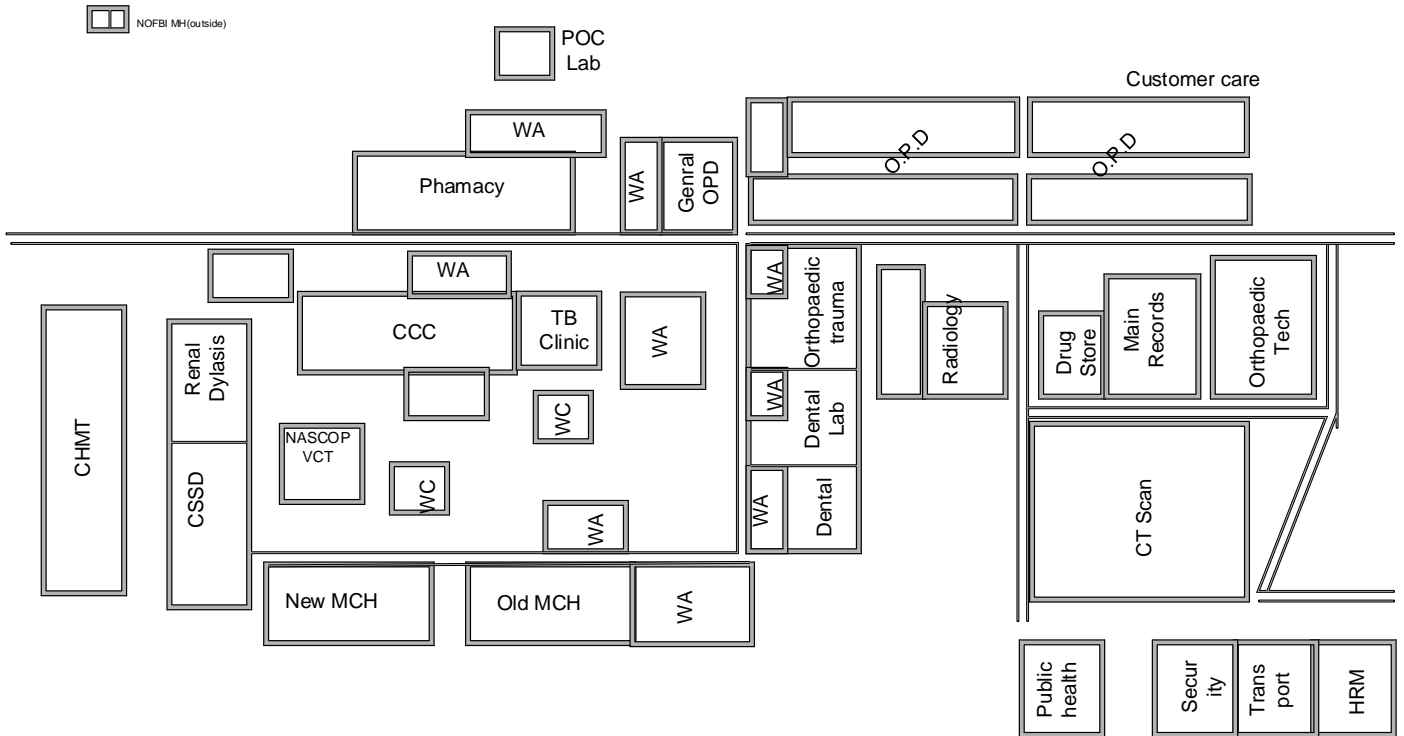
1. Kitui Hospital

NO.	Description	Unit of Measurement	Qty
1.	F/UTP Category 6A Outlets Module (Data points)	No	554
2.	Flash Mount Faceplates – F/UTP Category 6A Double	No	277
3.	F/UTP Category 6A Wall UTP-RJ45Patch cord (1M)	No	554
4.	F/UTP Category 6A Wall UTP-RJ45Patch cord (3M)	No	554
5.	F/UTP Category 6A Wall UTP-RJ45Patch cord (5M)	No	10
6.	F/UTP Category 6A 24 PATCH PANEL 1 U568A/B	No	24
7.	Cable managers 2U	No	24
8.	Galvanized Metallic Trunking 150mm x50mm & accessories for installing 554 Data Points	Lot	Lot
9.	F/UTP Category 6A Pure Copper Ethernet Cable for installing 554 Data Points and access points	Lot	Lot
10.	Fiber Patch Panel (at least 8 core)	No	20
11.	24 core OFC Patch Panel	No	3
12.	Fiber Cable 8 Core plus Ducts to interlink all the cabinets/switches	lot	Lot
13.	Fiber Patch Cord 1M	No	23
14.	1G SFP transceivers	No	22
15.	18U Network Cabinet with a 4Way Horizontal Mount Power Distribution Unit (PDU)	No	20
16.	38U Self-Cooling, maintenance free Network Cabinet with Horizontal Mount Power Distribution Unit (PDU)	No	1
17.	Rack mountable UPS- 1.5 KVA	No	23
18.	Rack mountable UPS- 3 KVA	No	0
19.	Distribution/Aggregation Switch	No	1
20.	48 Port POE+ Switch with Stacking Modules	No	7
21.	24 Port POE+ Switch with Stacking Modules	No	16
22.	Wireless Access Point	No	40
23.	Wireless Controller	No	1
24.	Civil Works-Pulling, Termination, Labelling, Documentation and Testing of Horizontal and Backbone Cabling,	Lot	Lot
25.	Installation of Active Devices, IP Schemes and Configuration.	Lot	Lot
26.	Testing, Training and Handover	Lot	Lot
27.	Provision of Project Implementation Committee transport services as specified in Section V no 17	Round Trip	5
28.	Annual SLA Support for one Year	Year	1
29.	SFP – single mode	No	2
30.	Fiber Pigtail -10M	No	2
31.	laying an optic fiber cable from the nearest NOFBI Manhole or County Commissioners office, terminate and configure at the Hospital MDF.	Lot	Lot
	TOTAL		

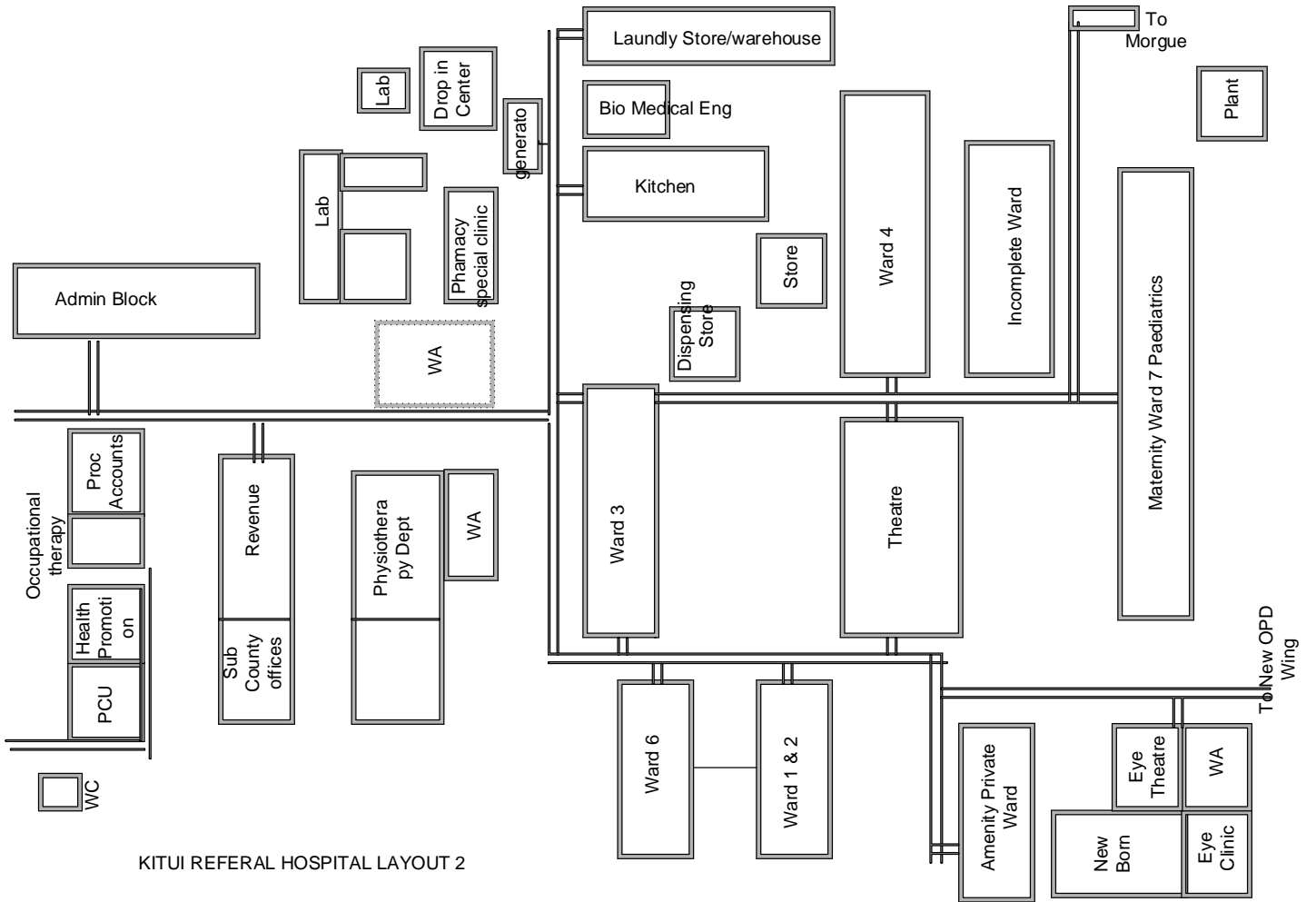
5.0 HOSPITAL BLOCKS WITH PROPOSED NETWORK DATAPOINTS

NOTE: The network drawing and position of datapoints has been amended as indicated below but is just proposal the final position will be determined during sign off of network design before implementation. The bidder is required to carry out a survey in order to get actual length and material required and provision for them in the quote. The client is not liable for any omission. The drawings are not to scale.

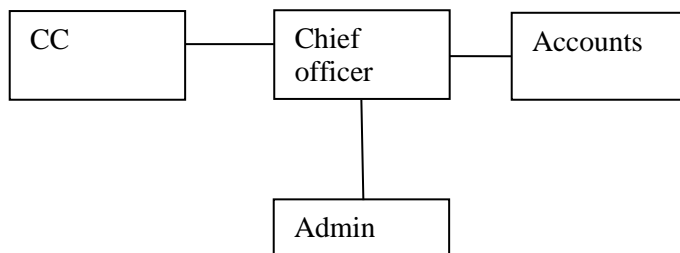
5.1 Hospital Blocks Overview



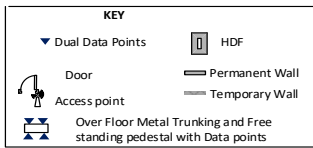
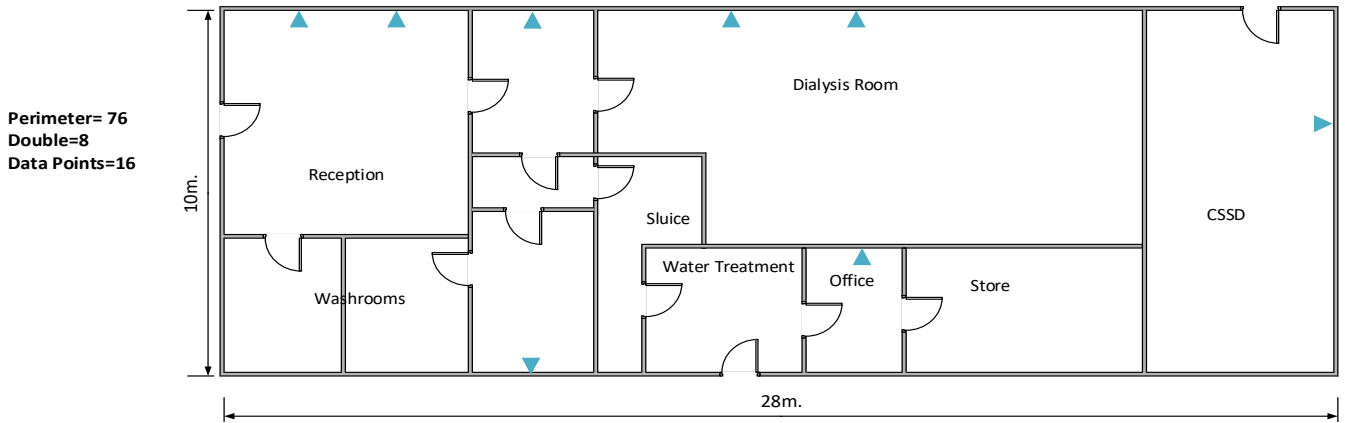
KITUI REFERAL HOSPITAL LAYOUT 1



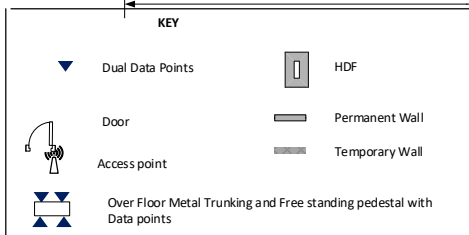
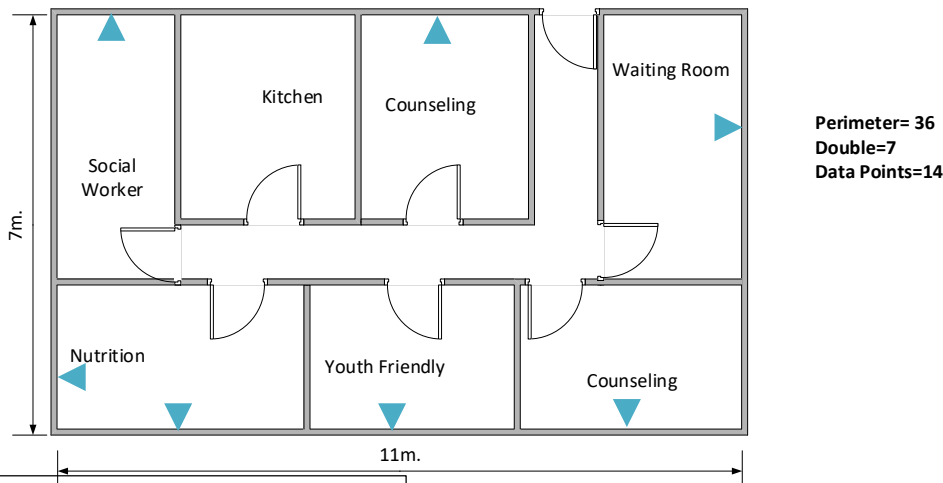
CHMT BLOCK



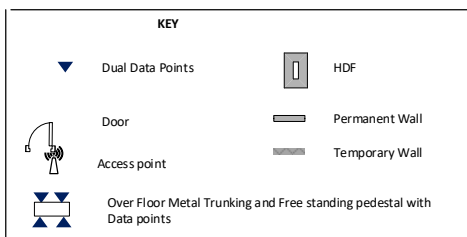
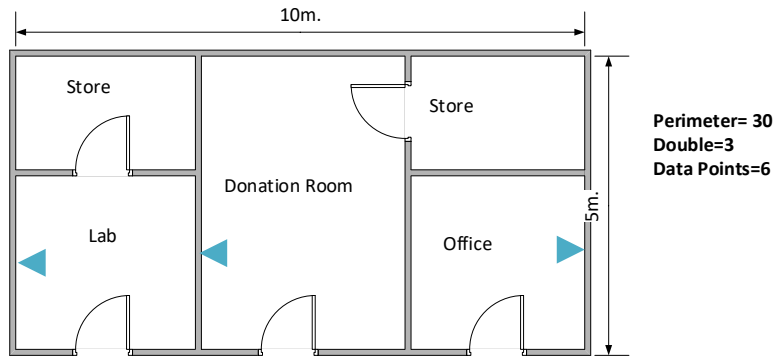
KITUI REFERRAL HOSPITAL
Renal Dialysis
Proposed Network Layout



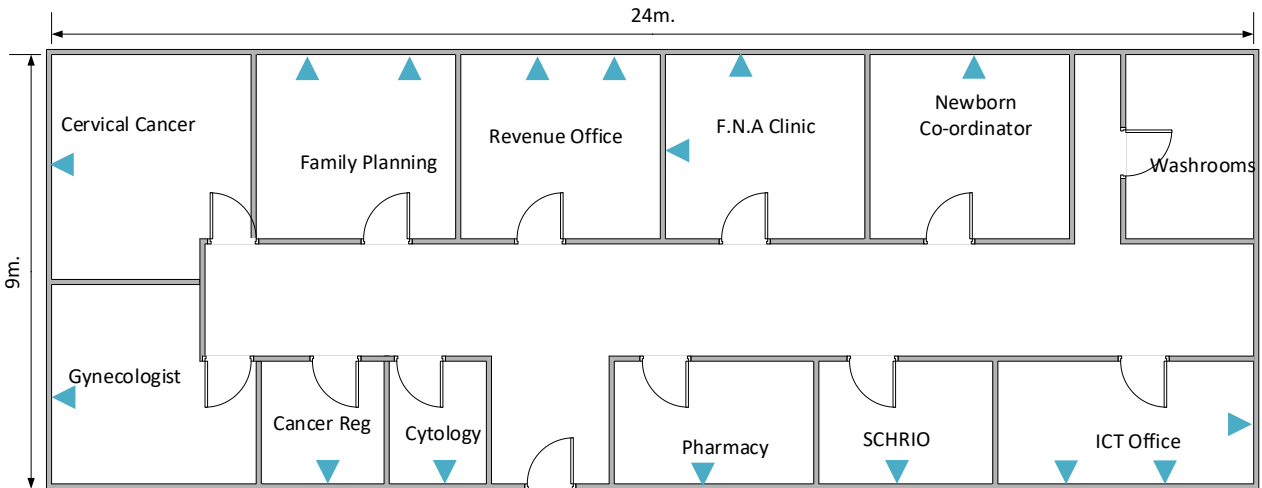
KITUI REFERRAL HOSPITAL
V.C.T
Proposed Network Layout



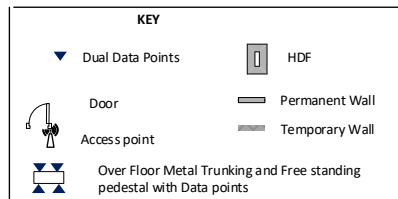
KITUI REFERRAL HOSPITAL
 Blood Transfusion
 Proposed Network Layout



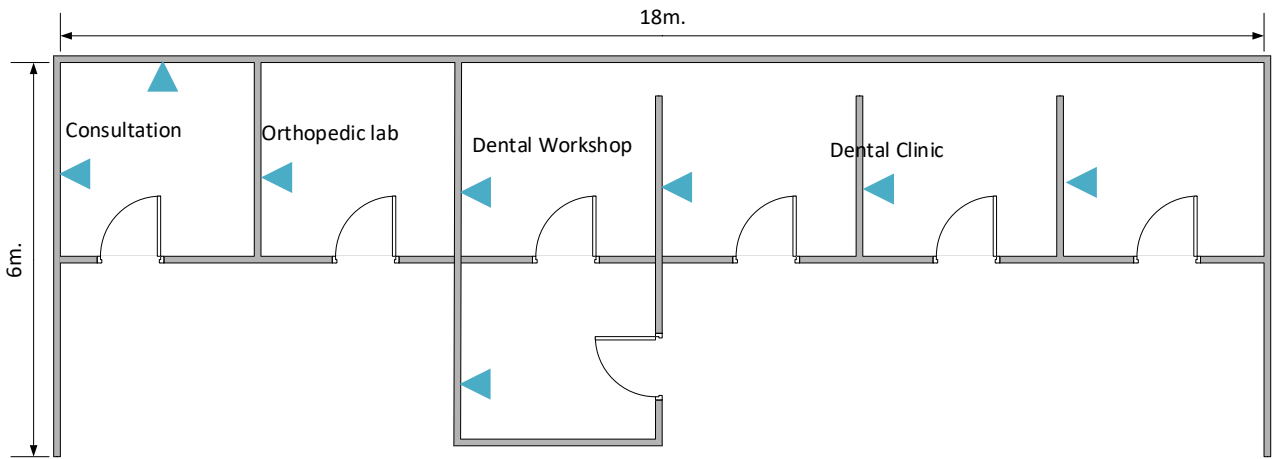
KITUI REFERRAL HOSPITAL
 New M.C.H
 Proposed Network Layout



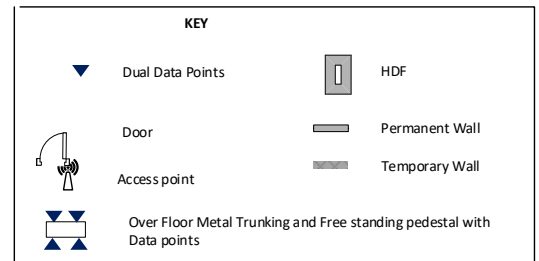
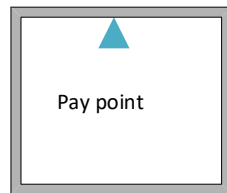
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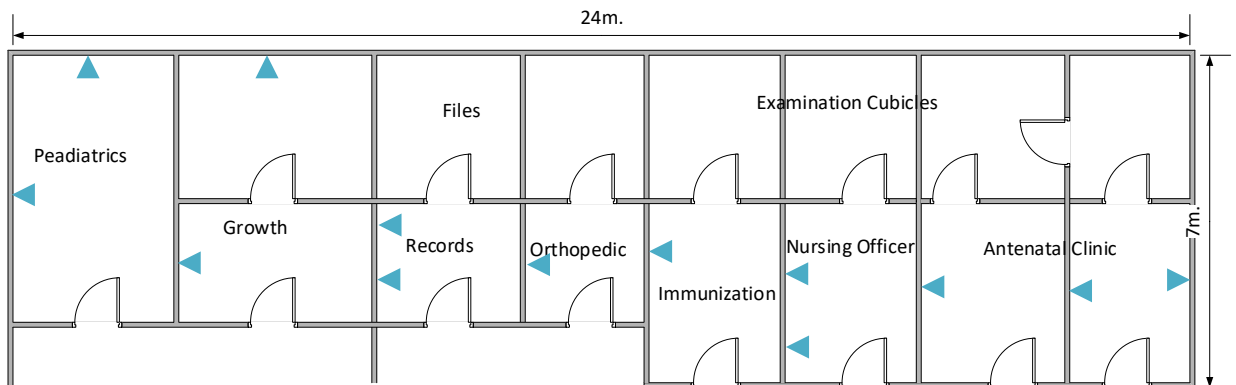
KITUI REFERRAL HOSPITAL
 Orthopedic & Dental Health Department
 Proposed Network Layout



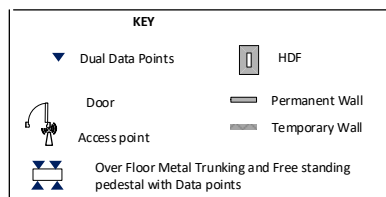
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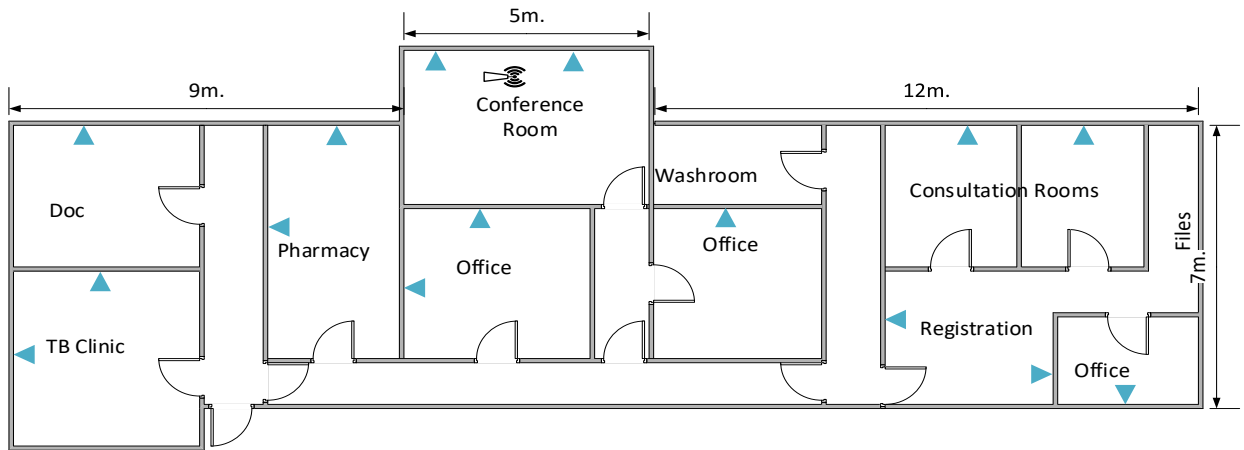
KITUI REFERRAL HOSPITAL
 Old MCH
 Proposed Network Layout



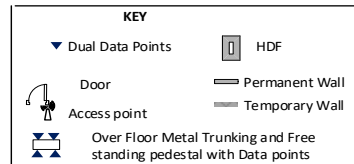
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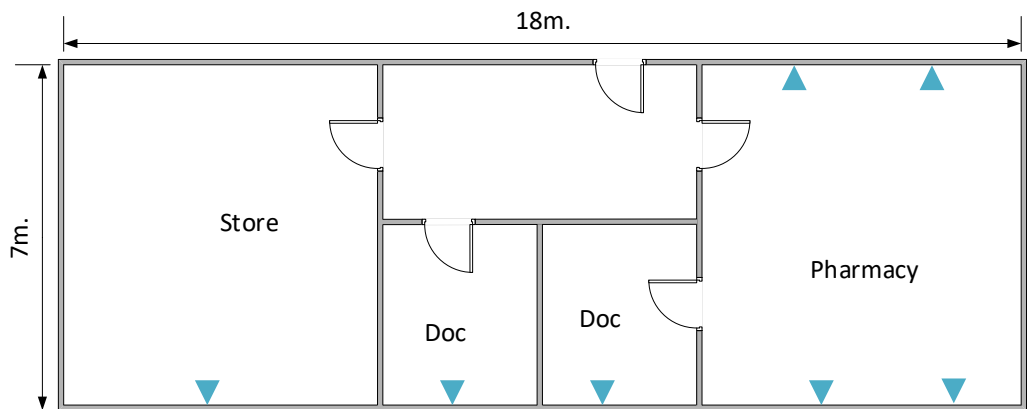
KITUI REFERRAL HOSPITAL
 Comprehensive Care Centre
 Proposed Network Layout



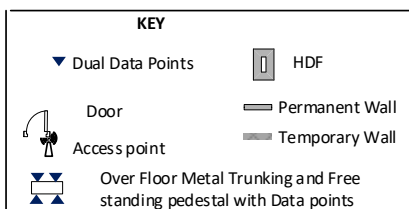
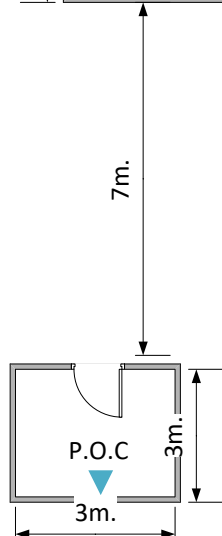
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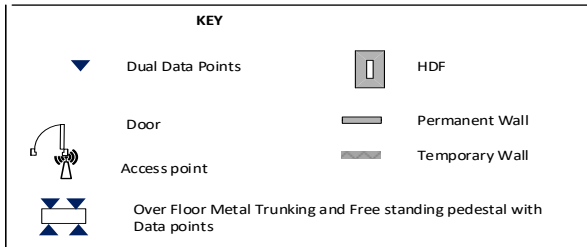
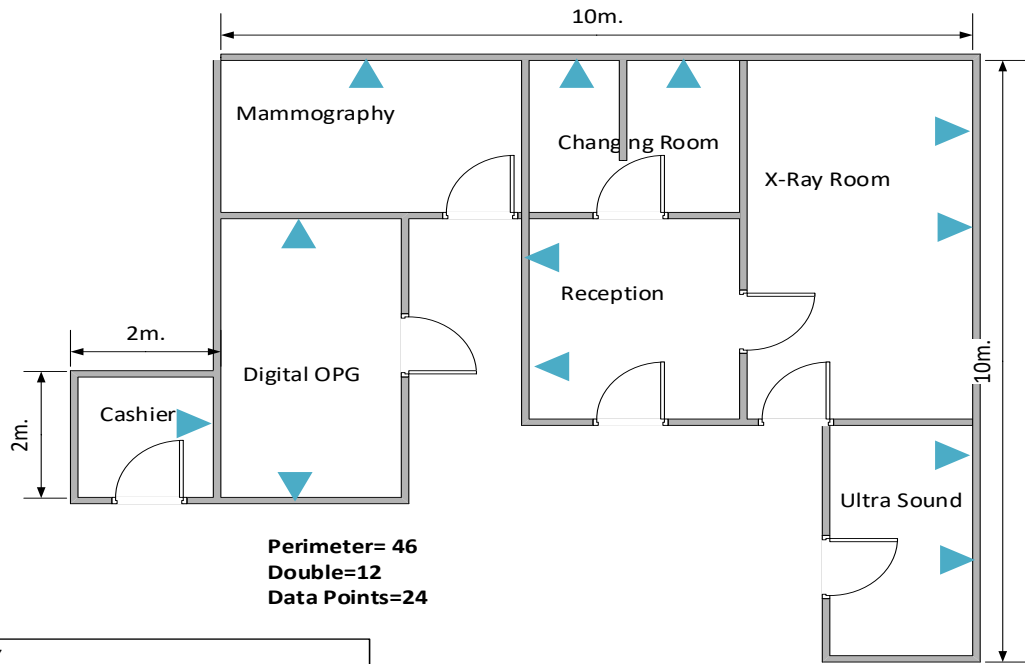
KITUI REFERRAL HOSPITAL
 Pharmacy Department
 Proposed Network Layout



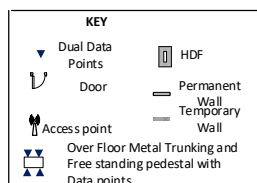
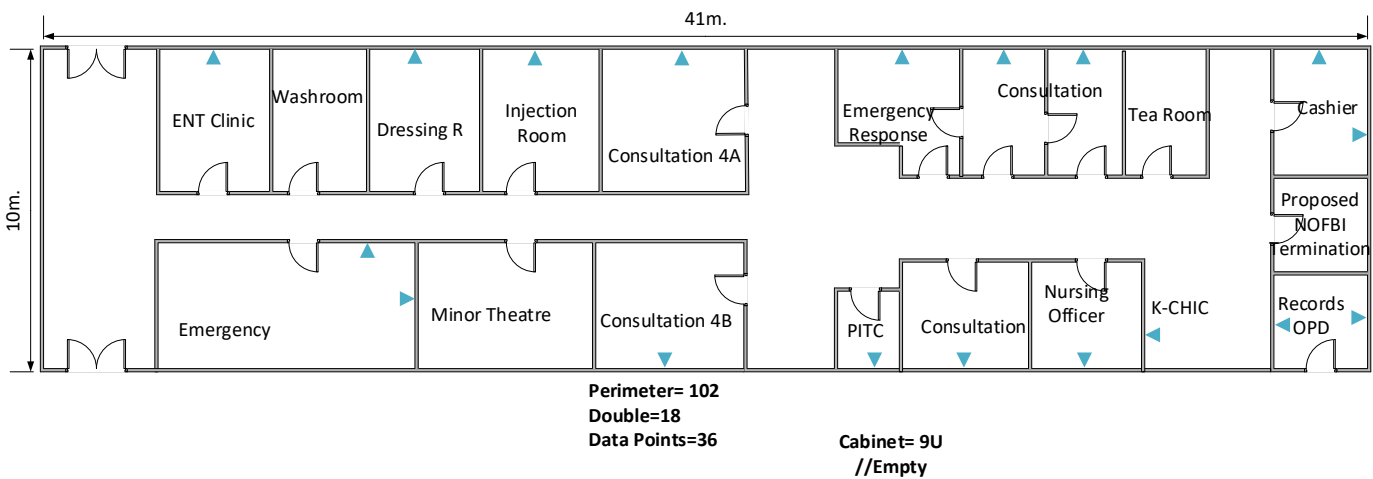
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KITUI REFERRAL HOSPITAL
Radiology Department
Proposed Network Layout

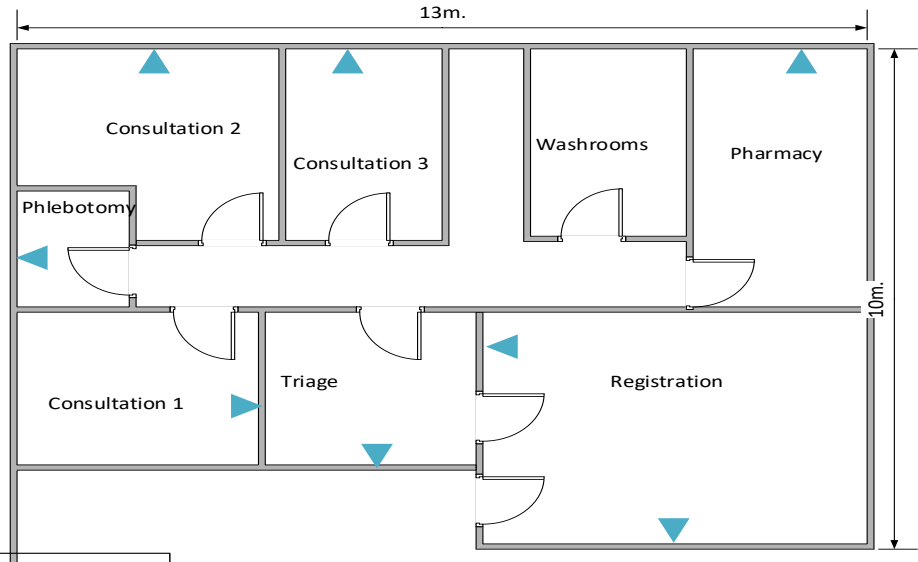


KITUI REFERRAL HOSPITAL
Main OPD Department
Proposed Network Layout



KITUI REFERRAL HOSPITAL
Amenity OPD Department
Proposed Network Layout

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Data Points=16

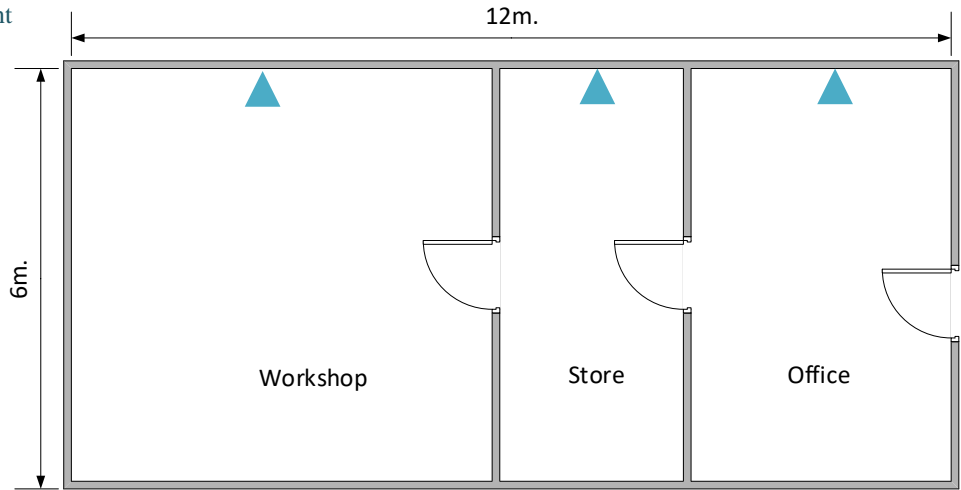


KITUI REFERRAL HOSPITAL
Main Records
Proposed Network Layout

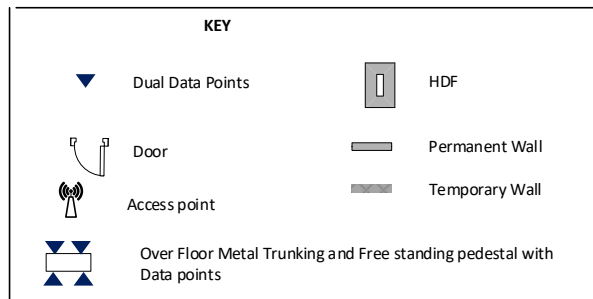
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KITUI REFERRAL HOSPITAL
 Orthopedic Technology Department
 Proposed Network Layout



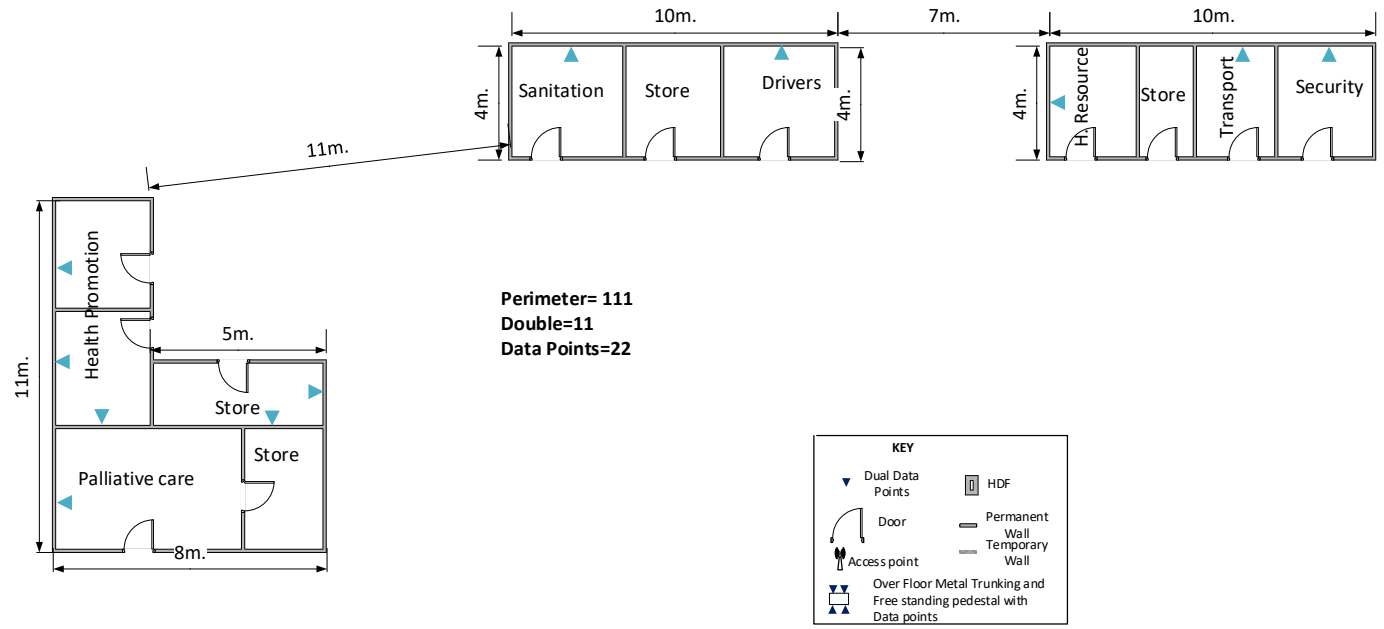
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KITUI REFERRAL HOSPITAL
CT Scan Department
Proposed Network Layout

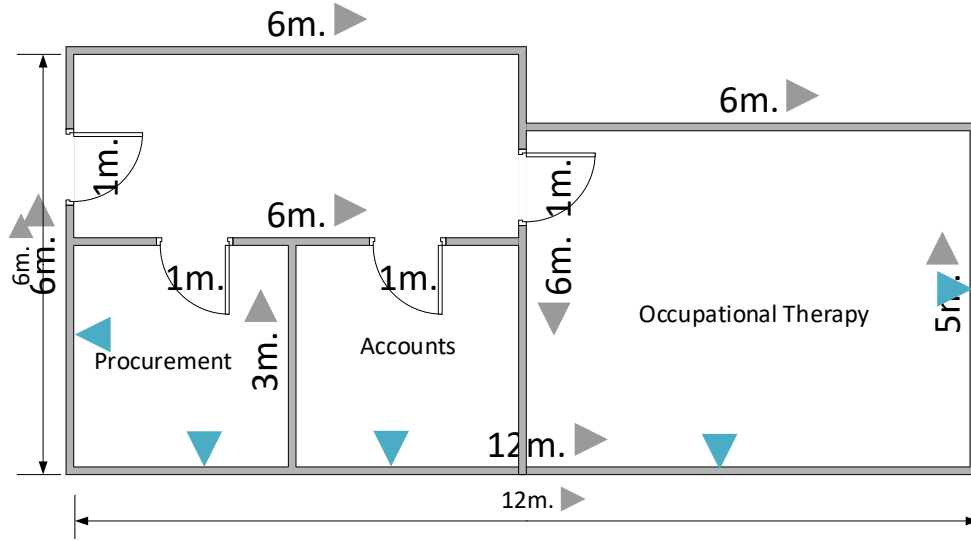


KITUI REFERRAL HOSPITAL
Old Human Resource & Palliative care Blocks
Proposed Network Layout

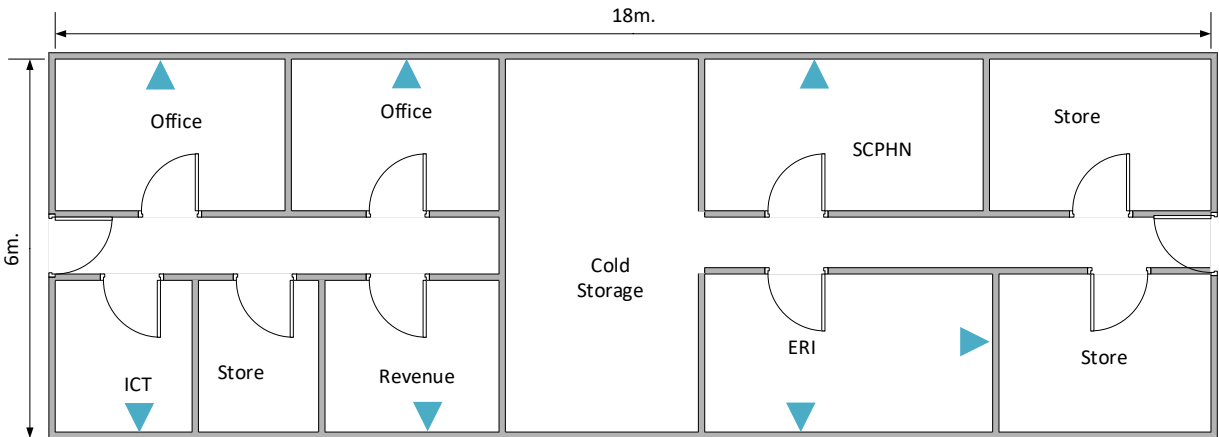


KITUI REFERRAL HOSPITAL
 Accounts & Procurement Department
 Proposed Network Layout

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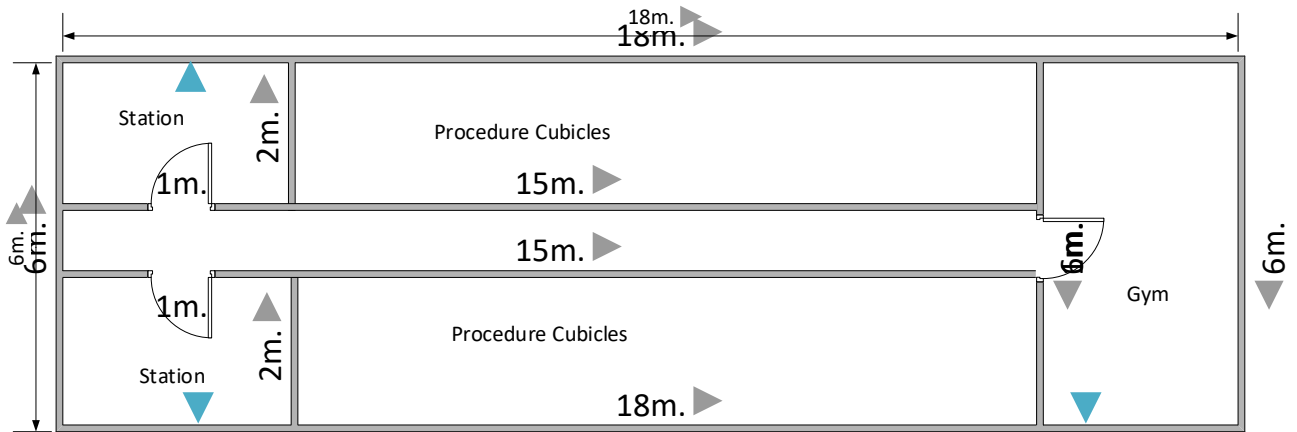


KITUI REFERRAL HOSPITAL
 Revenue & Sub County Block
 Proposed Network Layout



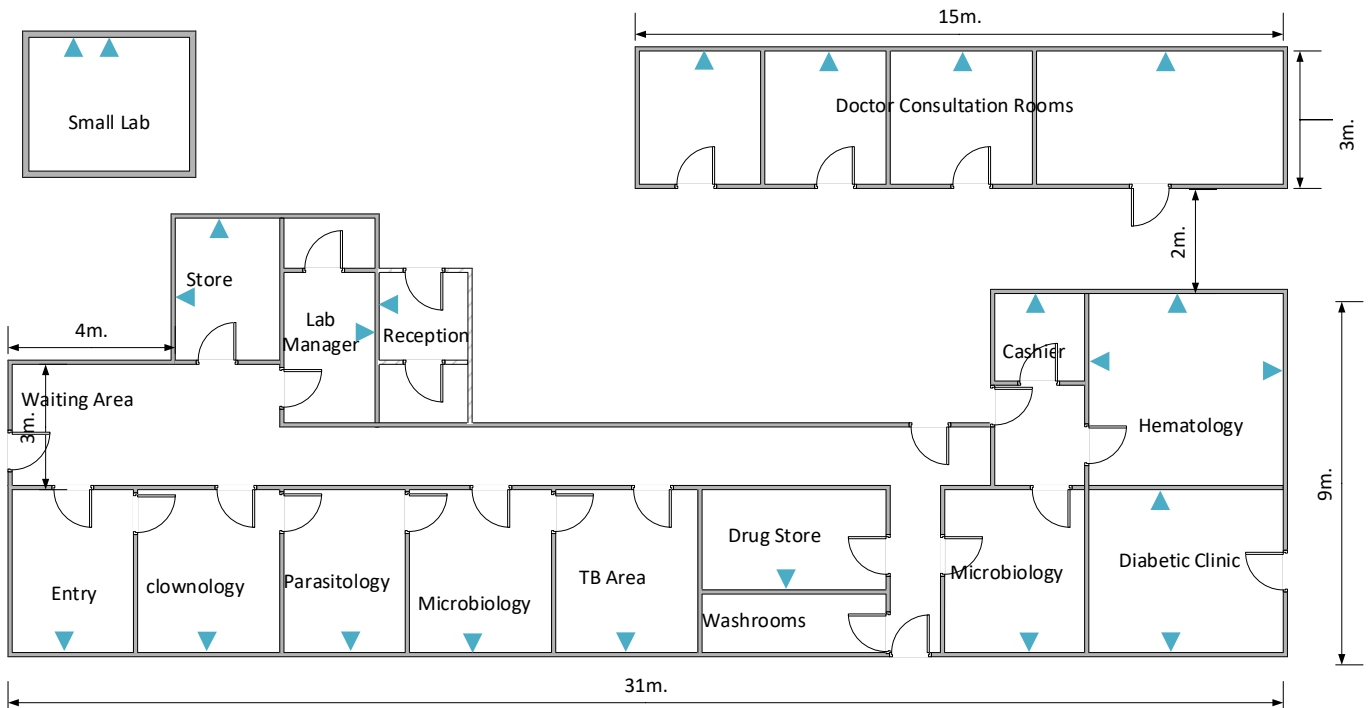
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KITUI REFERRAL HOSPITAL
 Physiotherapist Block
 Proposed Network Layout



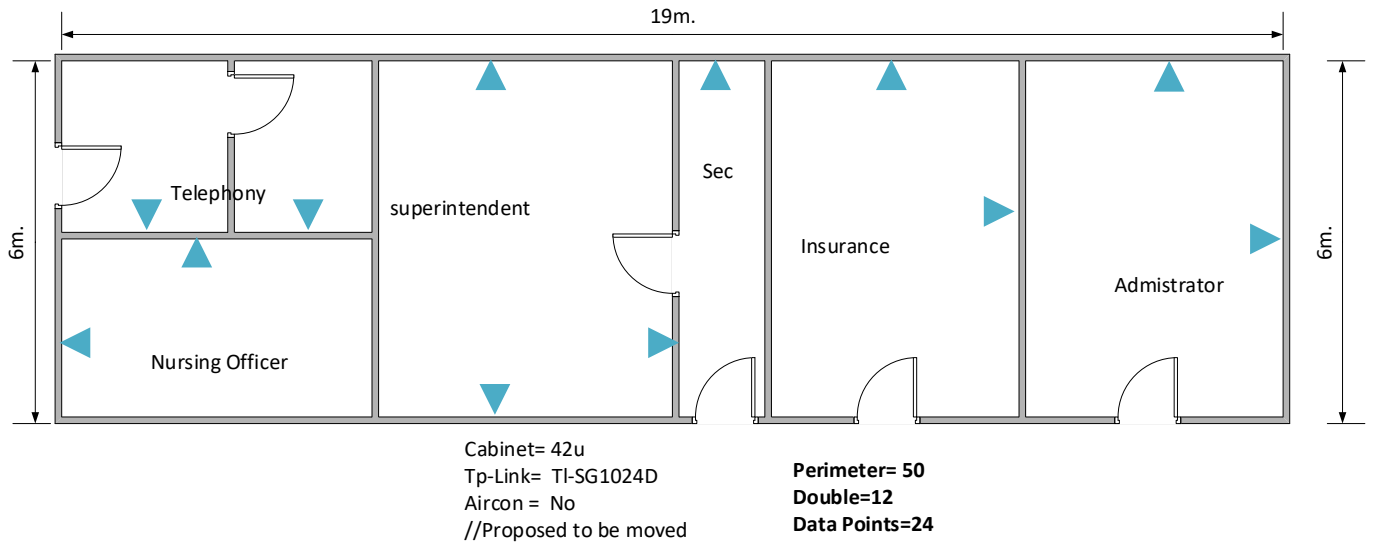
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KITUI REFERRAL HOSPITAL
 Laboratory Block
 Proposed Network Layout

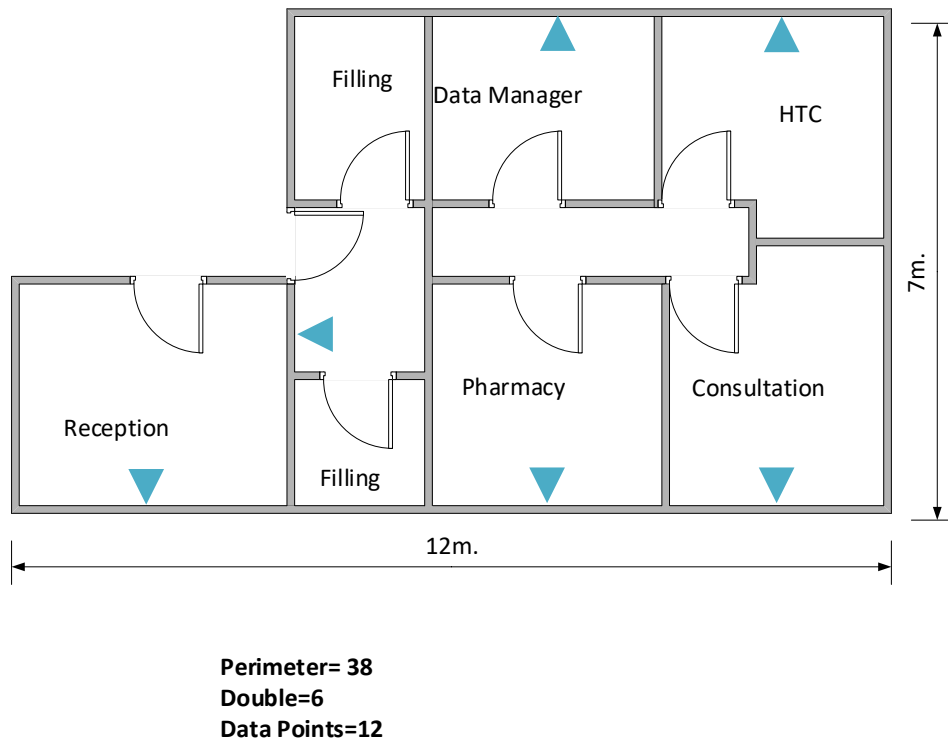


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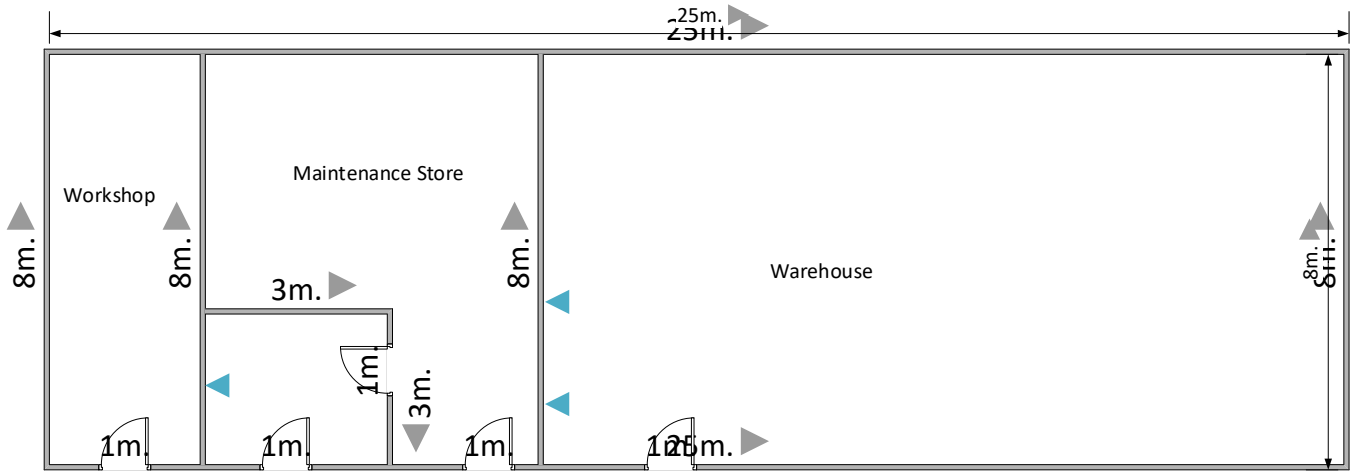
KITUI REFERRAL HOSPITAL
Administration Block
Proposed Network Layout



KITUI REFERRAL HOSPITAL
Dice Block
Proposed Network Layout

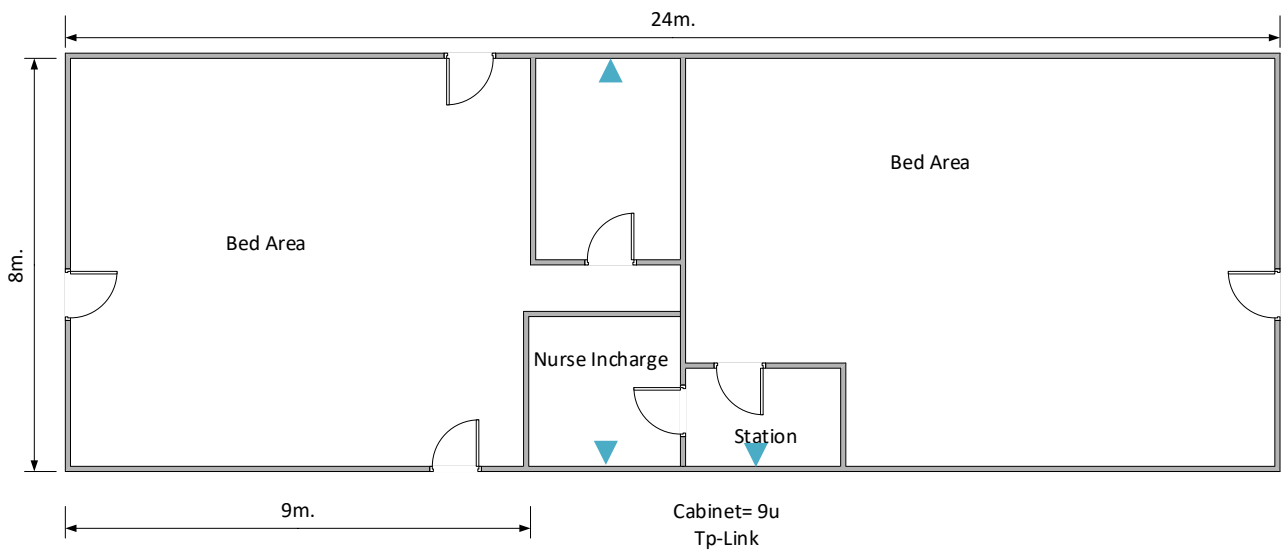


KITUI REFERRAL HOSPITAL
 Workshop Block
 Proposed Network Layout



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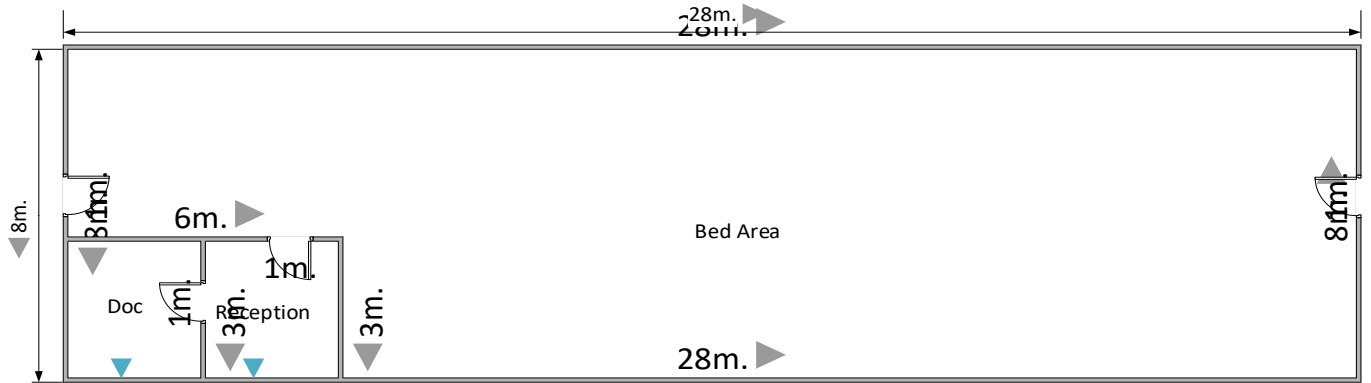
KITUI REFERRAL HOSPITAL
 Ward 3
 Proposed Network Layout



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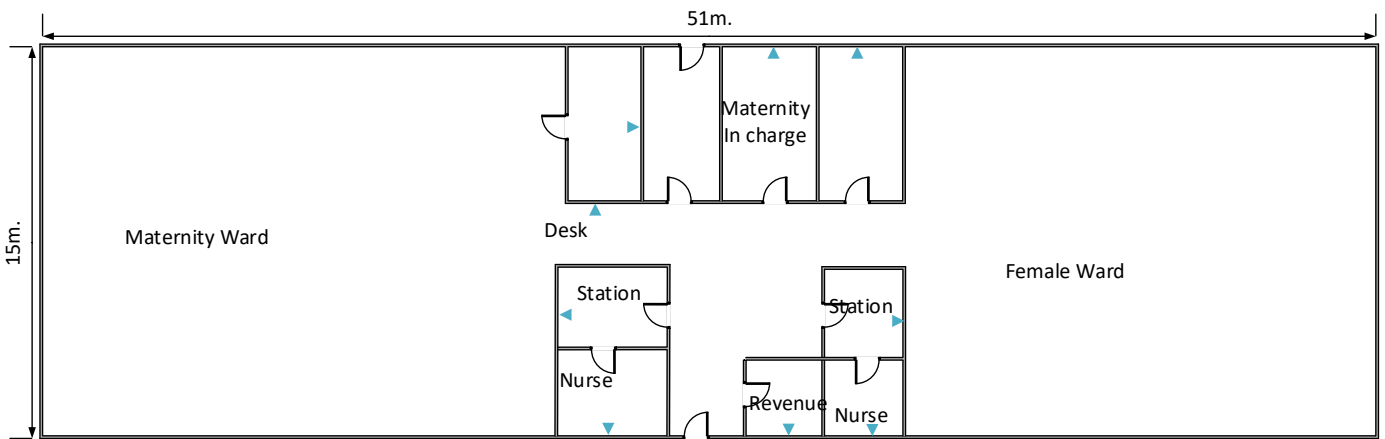


KITUI REFERRAL HOSPITAL
 Ward 4
 Proposed Network Layout



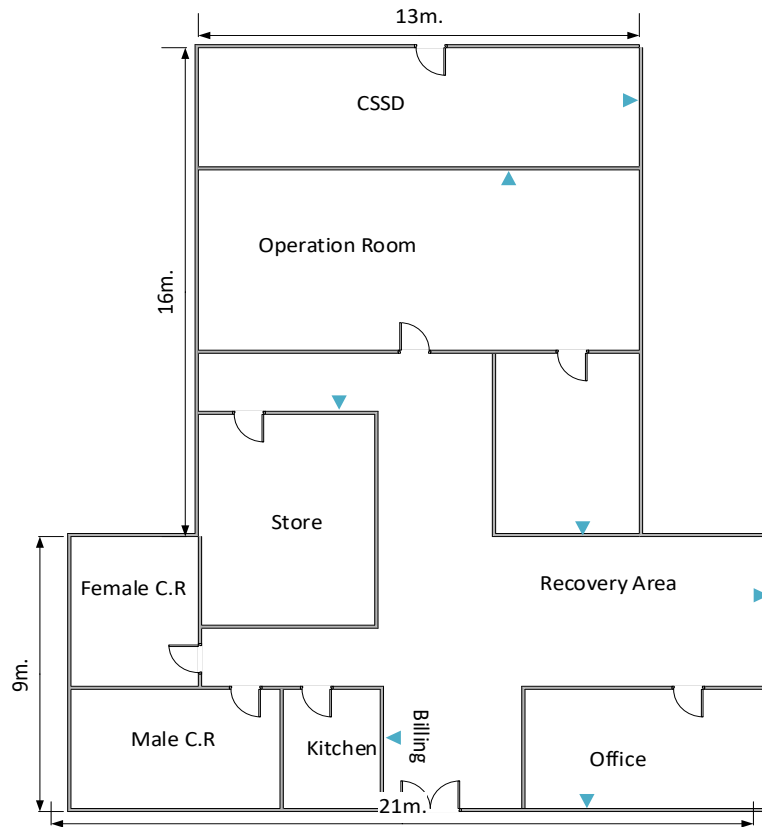
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KITUI REFERRAL HOSPITAL
 Nyayo Ward
 Proposed Network Layout



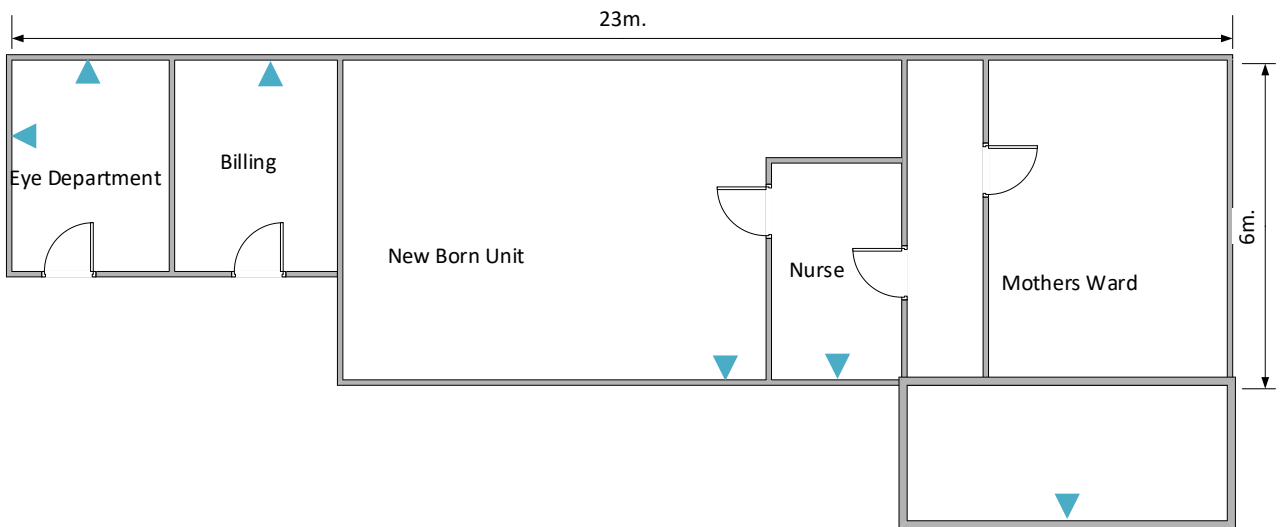
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KITUI REFERRAL HOSPITAL
Theatre
Proposed Network Layout



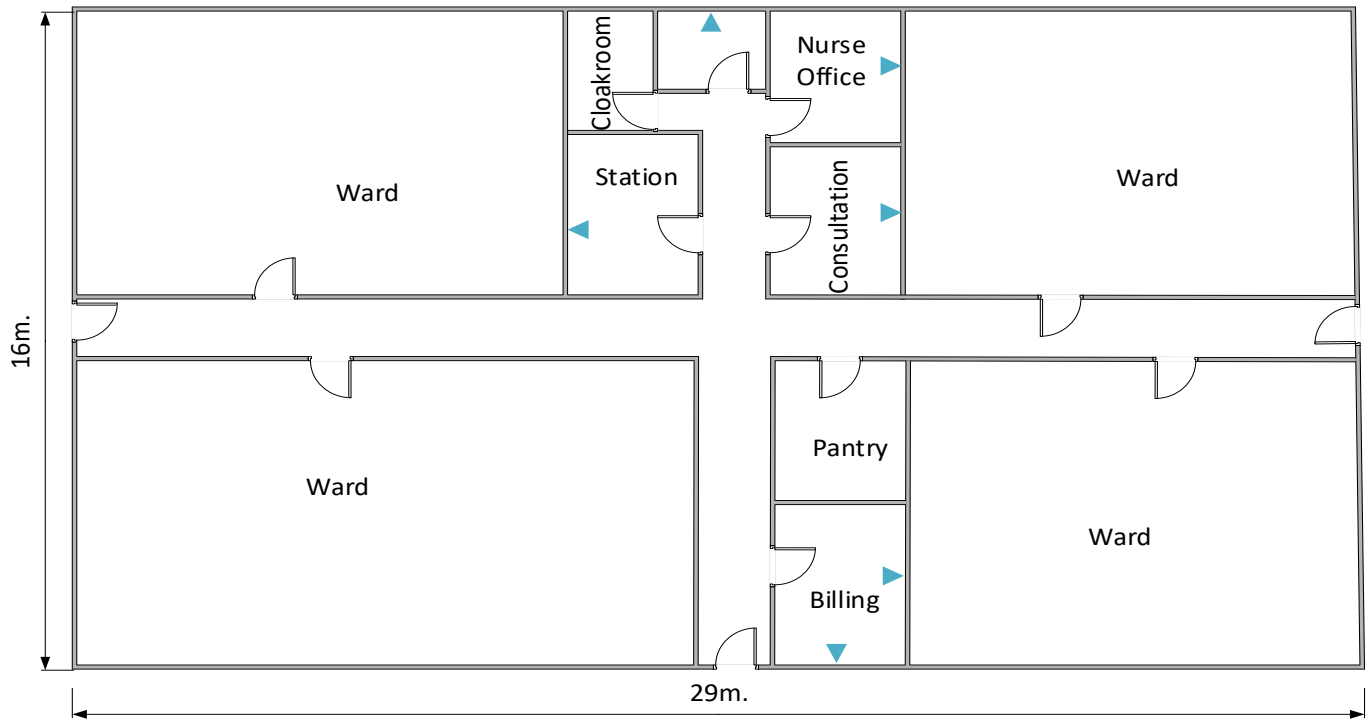
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KITUI REFERRAL HOSPITAL
Eye Department & NBU
Proposed Network Layout



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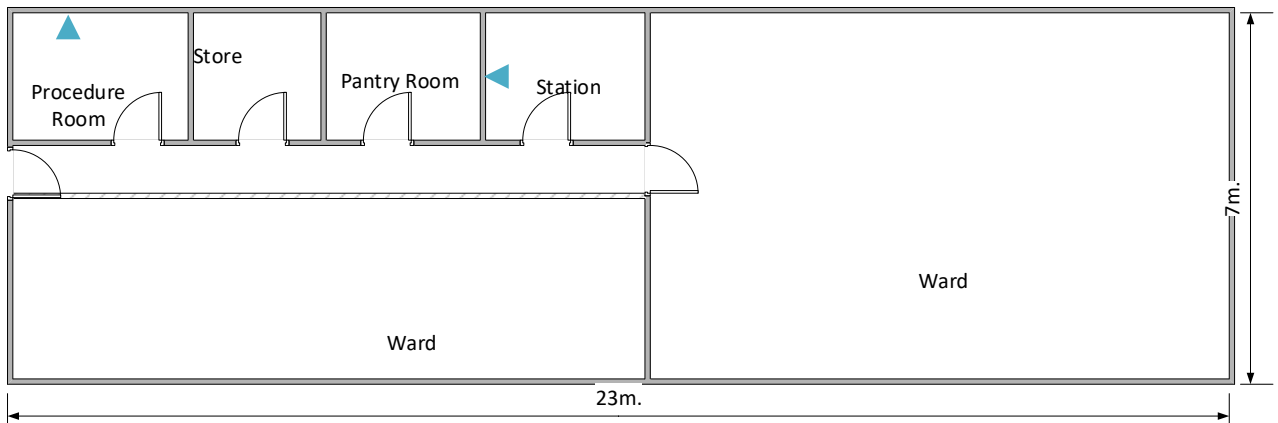
KITUI REFERRAL HOSPITAL
 Amenity Ward
 Proposed Network Layout



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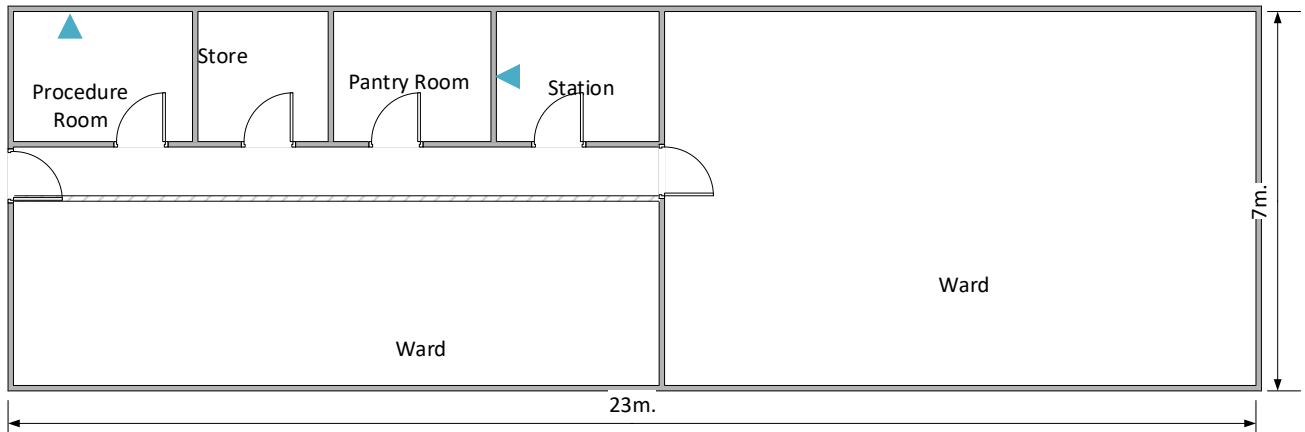
Cabinet = 9U
TP-Link = TI-
SF1024D

KITUI REFERRAL HOSPITAL
 Ward 1 & 2
 Proposed Network Layout



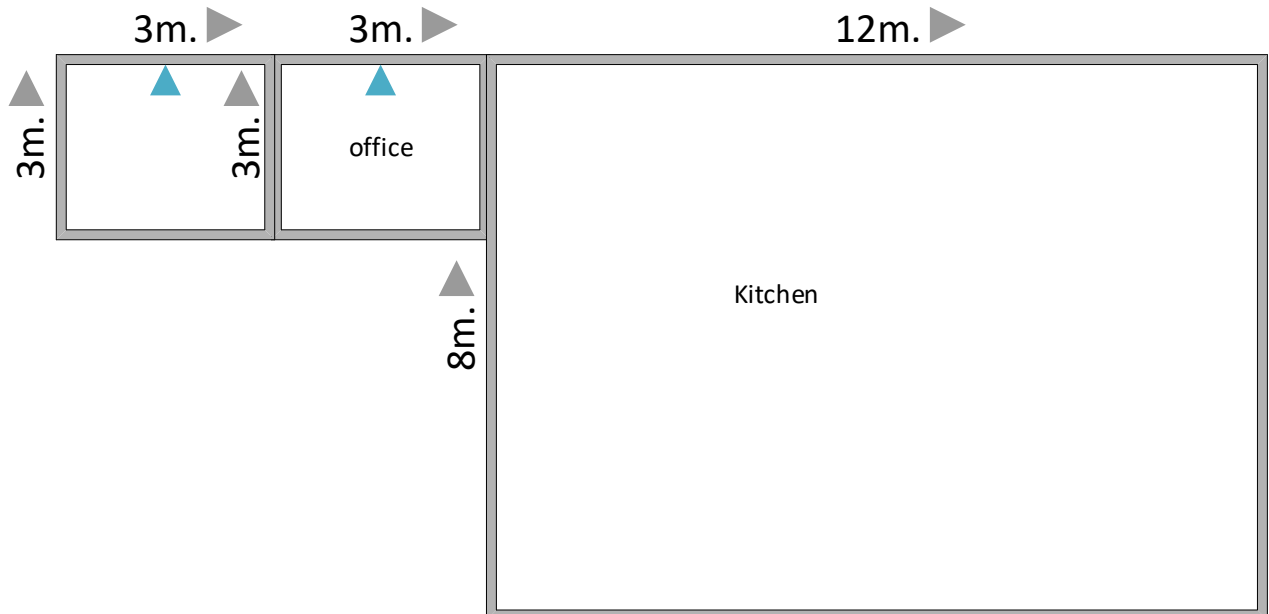
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Data Points=4

KITUI REFERRAL HOSPITAL
Ward 6
Proposed Network Layout



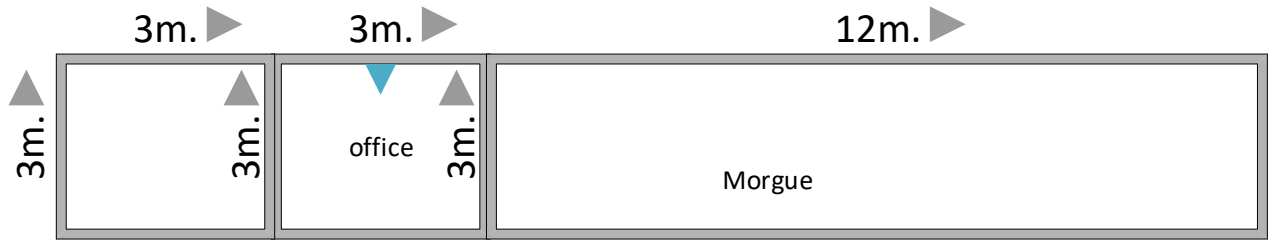
Perimeter= 60
Double=2
Data Points=4

KITUI REFERRAL HOSPITAL
Kitchen/Catering office
Proposed Network Layout



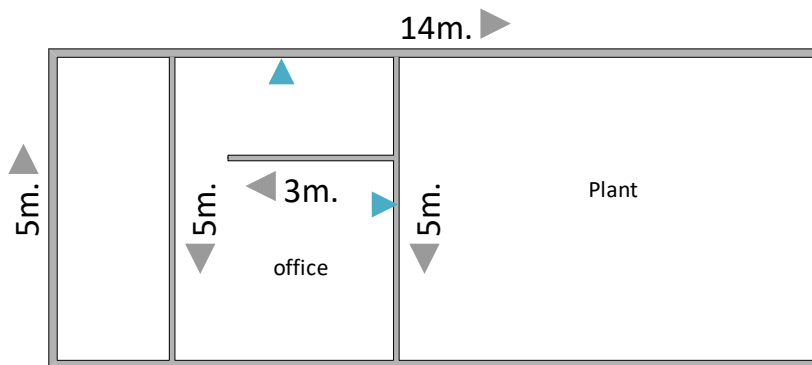
Double=2
Data Points=4

KITUI REFERRAL HOSPITAL
Morgue
Proposed Network Layout



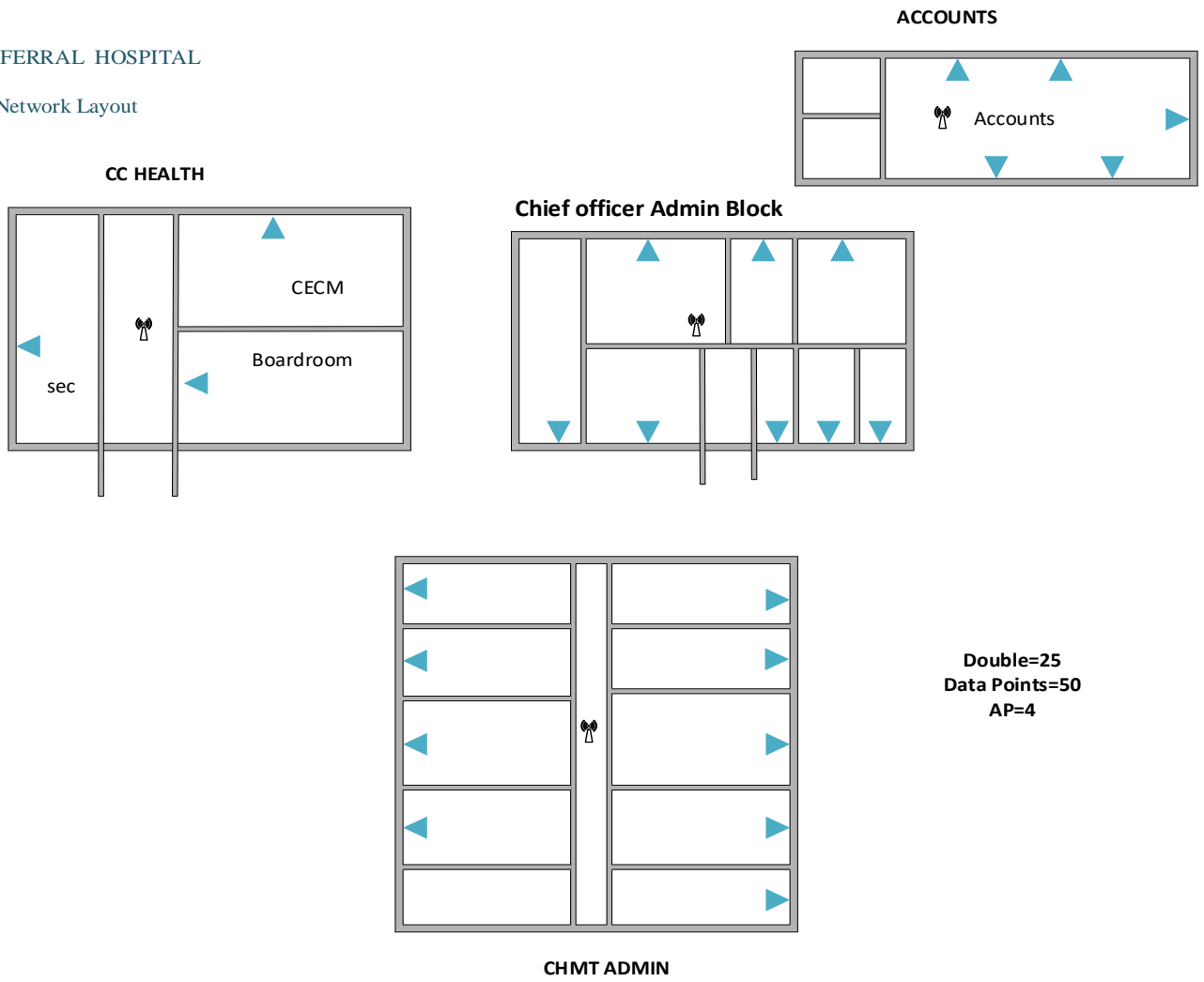
Double=1
Data Points=2

KITUI REFERRAL HOSPITAL
Plant/Manufacturing
Proposed Network Layout



Double=2
Data Points=4

KITUI REFERRAL HOSPITAL
CHMT
Proposed Network Layout



KITUI REFERRAL HOSPITAL
Manufacturing
Proposed Network Layout

