Healthcare environments:

design considerations in an increasingly demanding environment

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Regional Technical Manager

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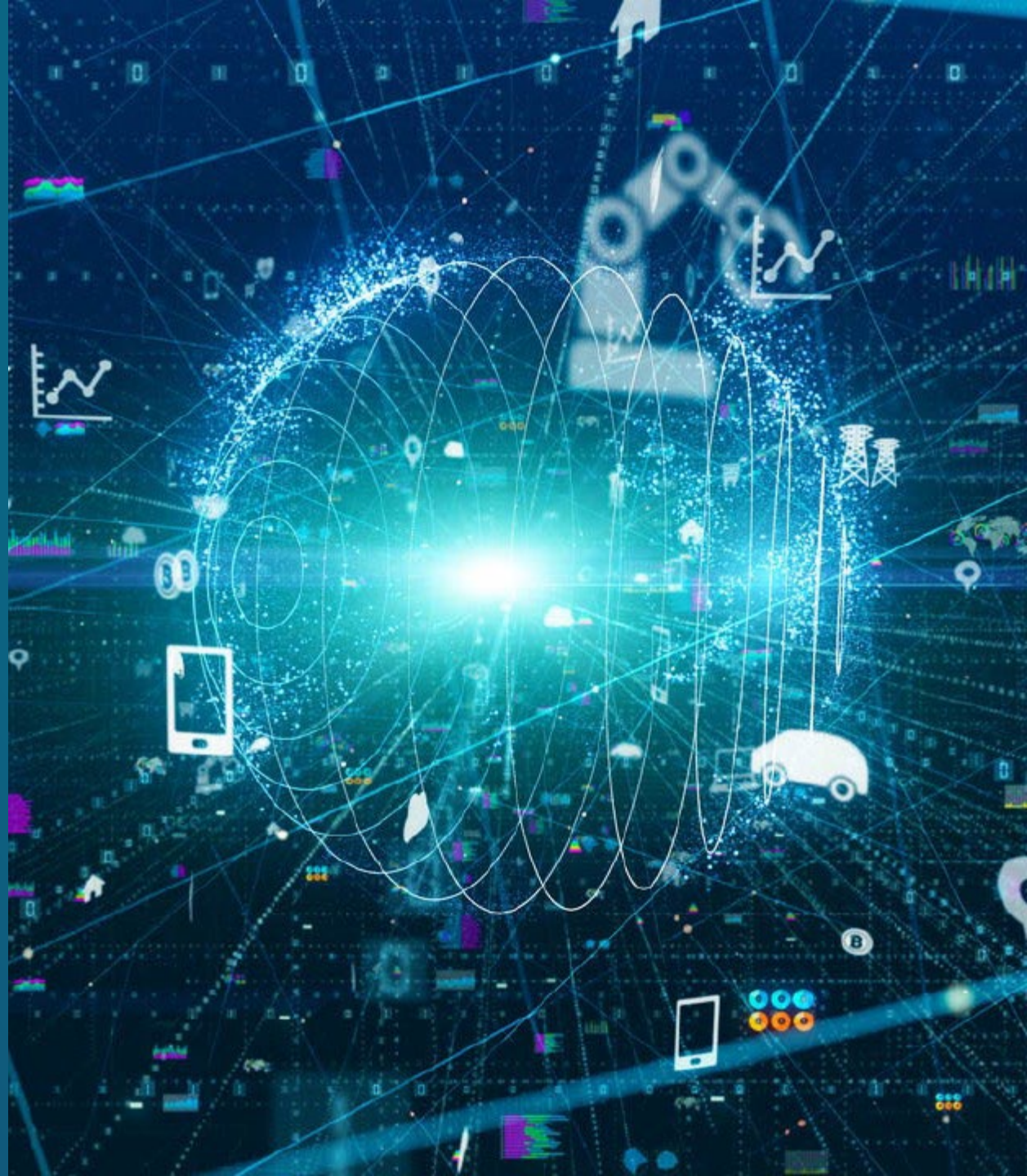


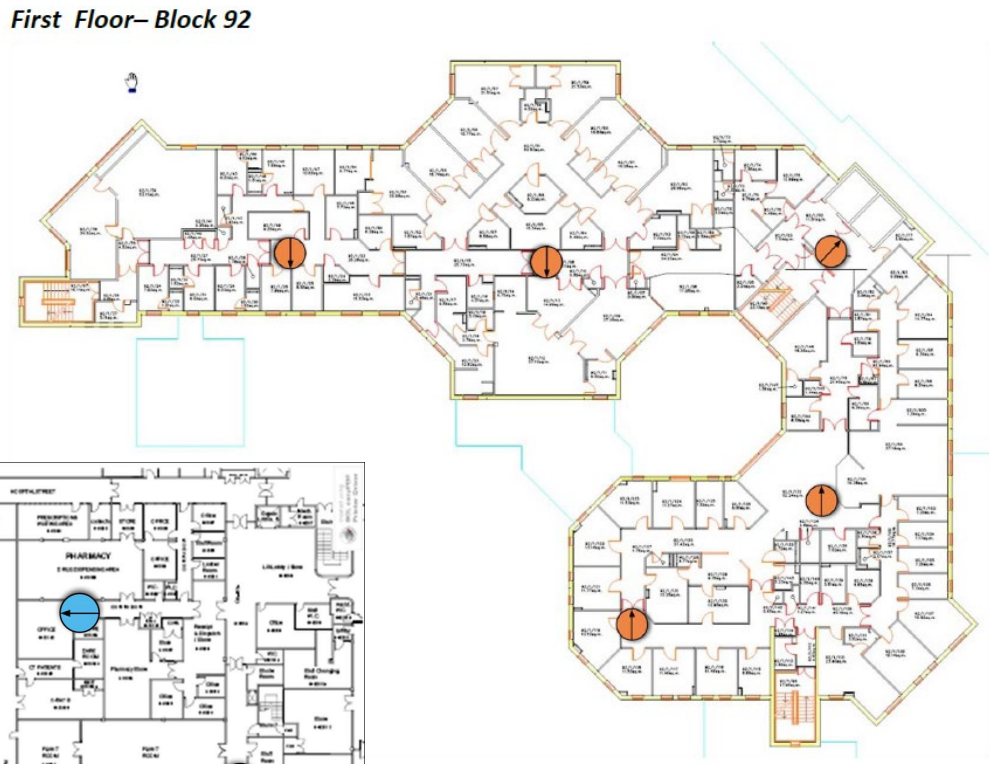
The Opportunity

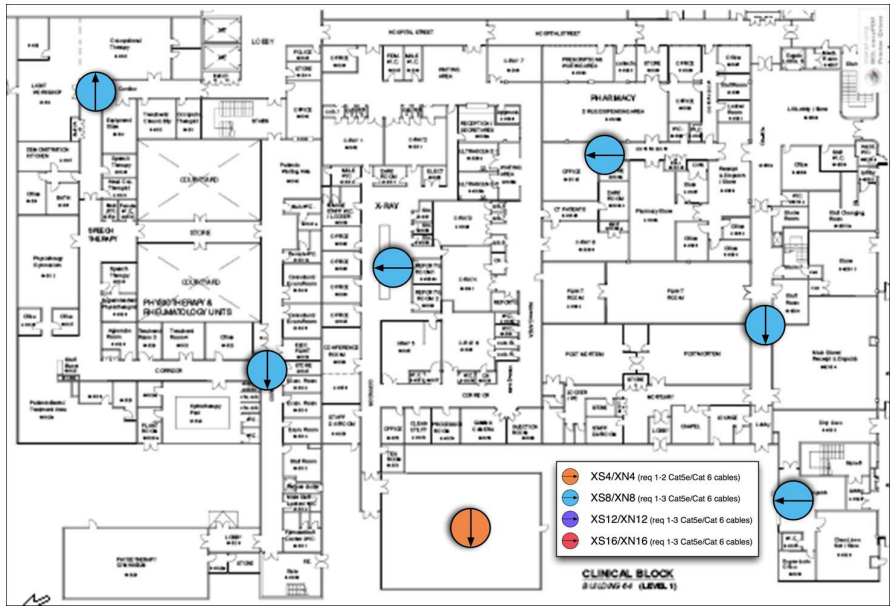
- There is a tide in the affairs of men
  Which, taken at the flood, leads on to fortune;
  Omitted, all the voyage of their life
  Is bound in shallows and in miseries.
  On such a full sea are we now afloat,
  And we must take the current when it serves,
  Or lose our ventures.

Shakespeare's Julius Caesar IV.ii.269–276

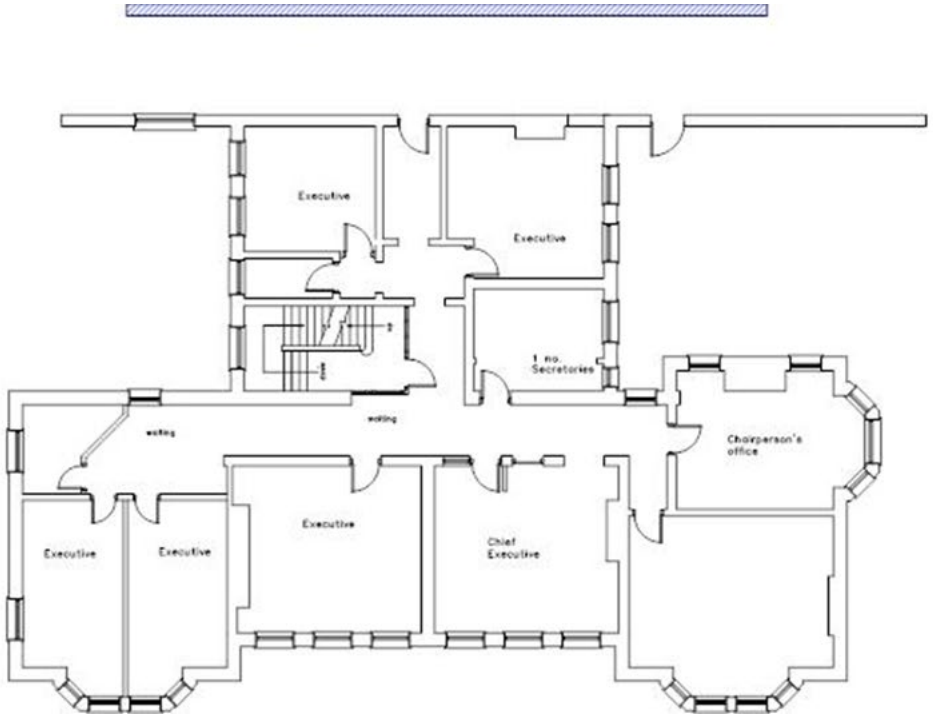
The Start

- 2009 – 2011
- Coverage Only
- COWS
- VoIP
- -67 -72 -80





The Walls



Technology

Changing times

- **The installed WIFI solution was ordered and built around 2007/ 2008 as part of a directive to deliver ubiquitous WIFI coverage across the hospital site. The hospital was surveyed, cabled and access points installed across this timeframe and subsequently re surveyed, beyond which the AP count was increased to the current capacity.**

- **As the needs of applications like VoIP and patient imaging present themselves more frequently across the WIFI, the network has become more visibly constrained. Simpler, more agile and more available service is required across the site.**

- **A number of medical devices are now using the WIFI for patient imaging, data access and other elements. An example of this is the Agfa Mobile Digital Radiographic machines in use in the hospital, which operate as portable wheeled units – these are 802.11n WIFI capable and transmit X-Ray images directly to PACS imaging resources on the hospital network.**

Ai Pro

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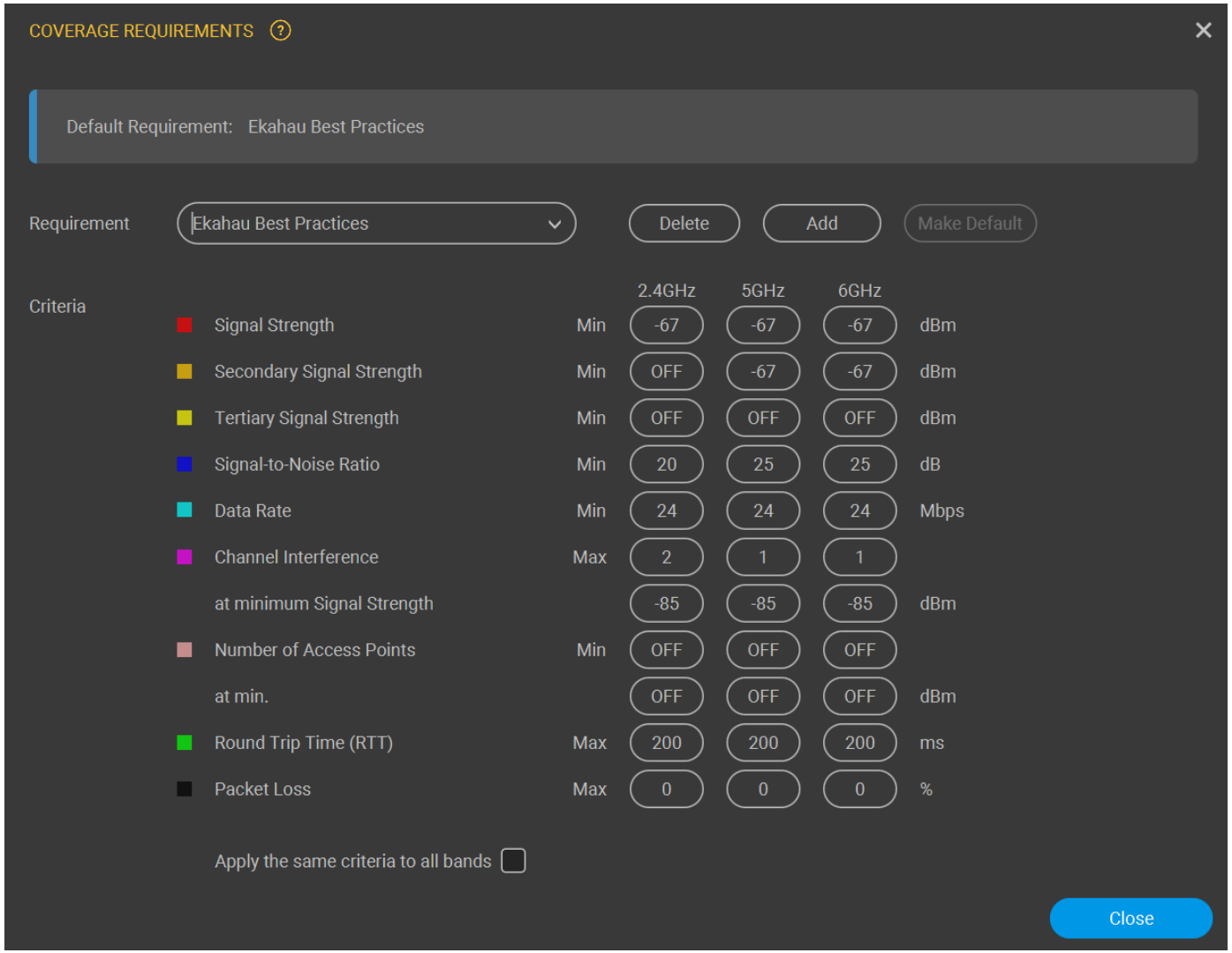
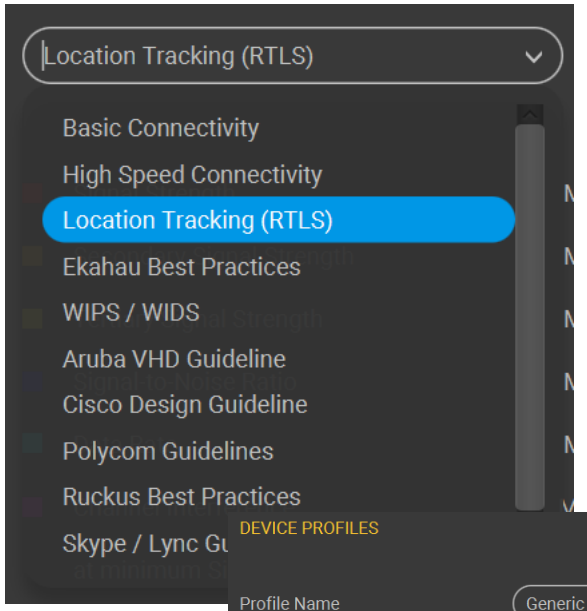
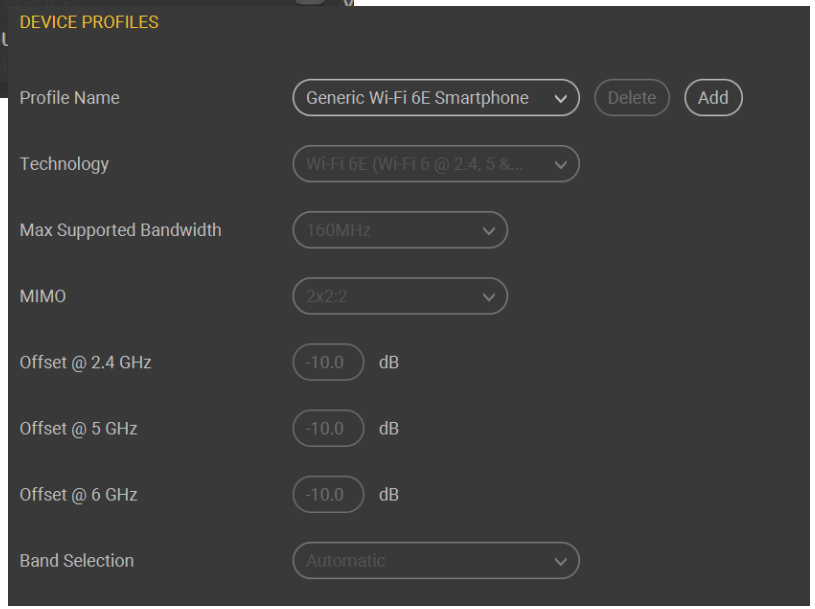






More Devices

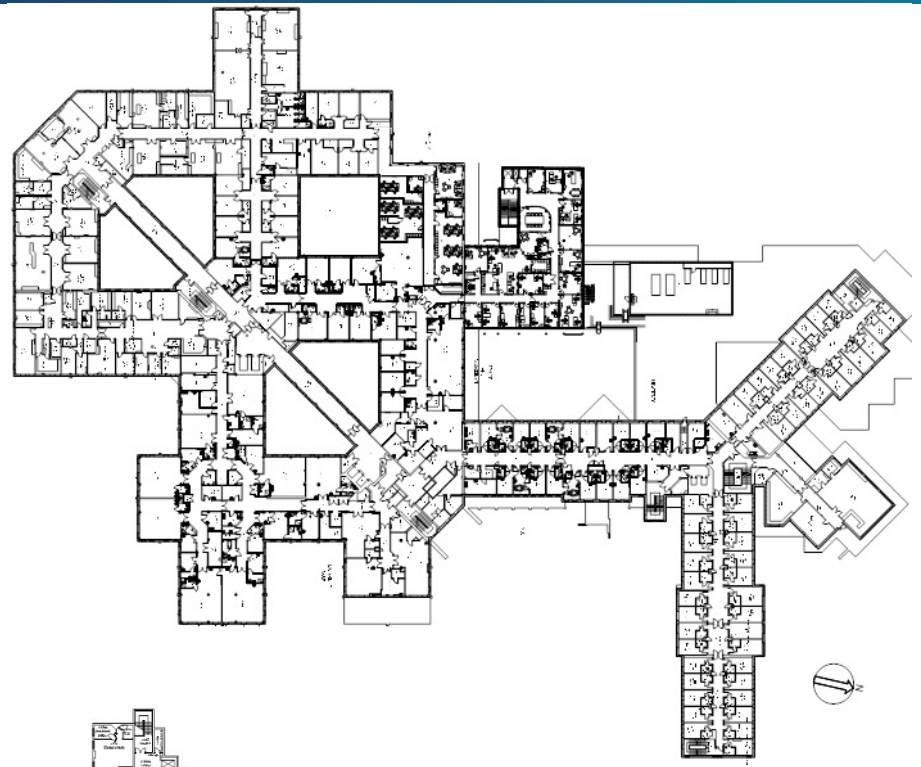
- **Guest access**
- **Streaming Media**
- **Video calls**

- **2021-22 -15.9M FAE**
  - NHS Digital*

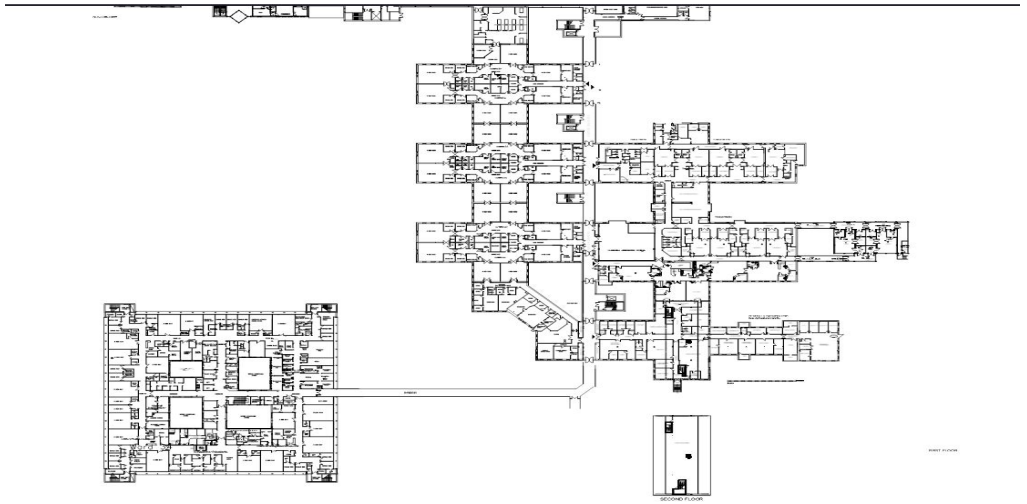
- Shropshire star*

Telepresence

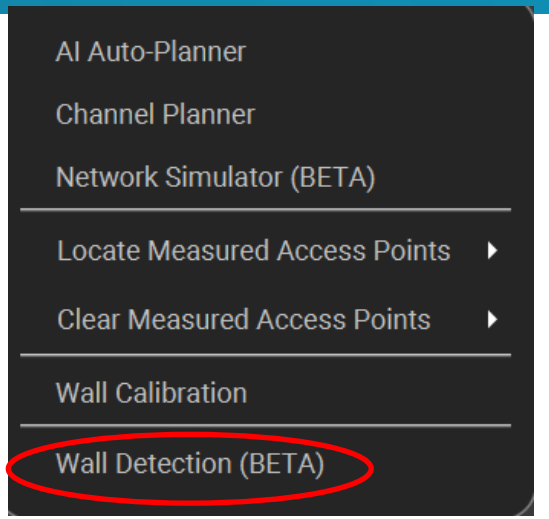
Design's Design's Design's



First Floor



Changing times - Designs Change



Changing times - Designs Change

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ADVANCED SETTINGS

Access point type: Aruba AP-515

Transmit power (mW)

2.4 GHz	5 GHz	6 GHz
6.31	25	25
(EIRP: 11.8 dBm)	(EIRP: 18.579 dBm)	(EIRP: Disabled)

Antenna height: 2.4 m from the floor level

Areas

AREA	FLOOR	REQUIREMENT	NO. DEVICES	
Area-1	BH examp 09	Location Tracking ...	0	Configure

AI AUTO-PLANNER

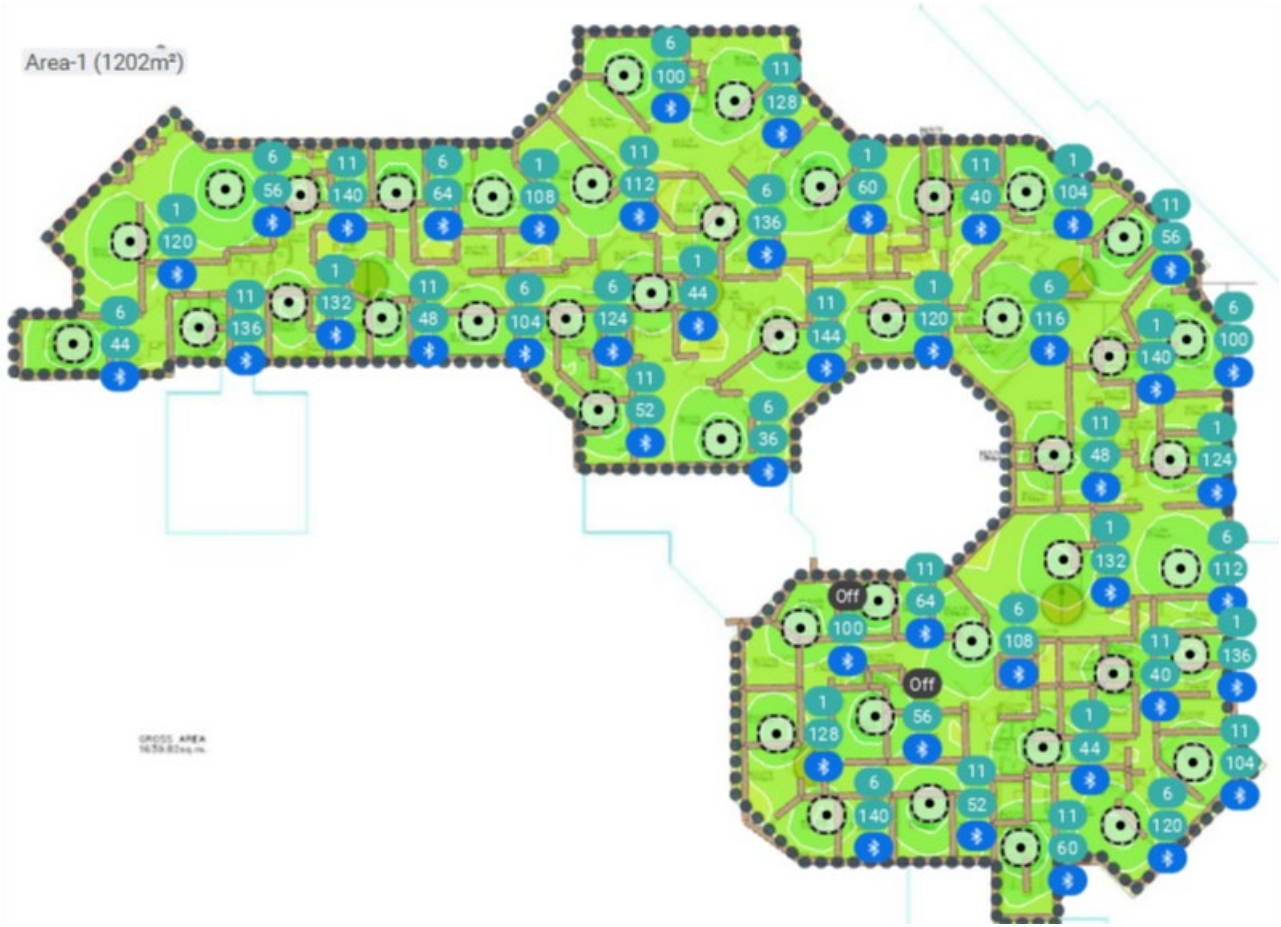
NETWORK HEALTH SUMMARY

ITERATIONS	APs	2.4 GHz	5 GHz	6 GHz
2728	44	93%	100%	-

NETWORK HEALTH PER FLOOR

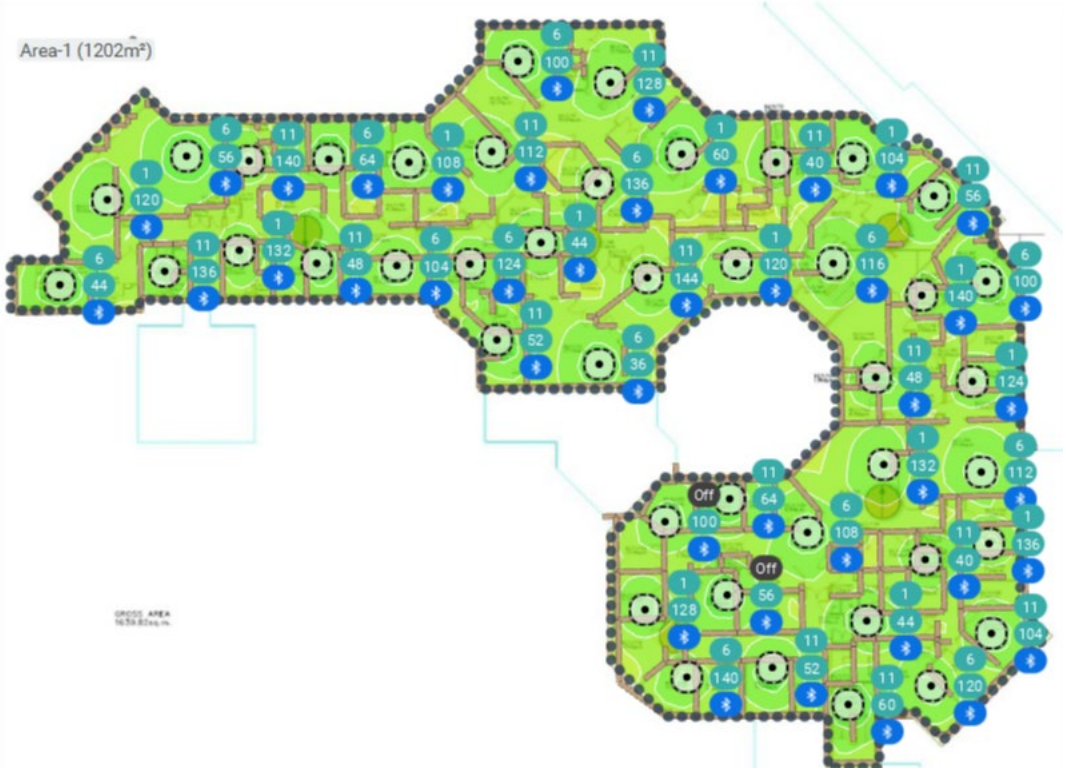
FLOOR (1)	APs	2.4 GHz	5 GHz	6 GHz
BH examp 09	44	93%	100%	-

First Floor– Block 92

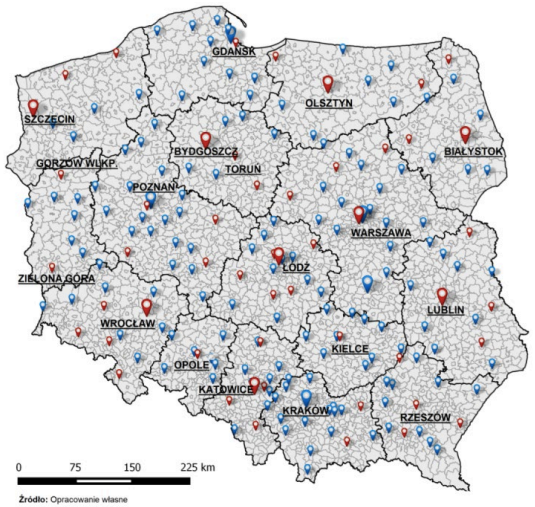


Changing times - Designs Change

First Floor– Block 92



Case Study: Emergency Zone in 232 hospitals



232 Hospital Emergency Departments in Poland

REQUIREMENTS/PROBLEMS

- Project for patient service modes in the hospital emergency department (TOPSOR) with medical triage system and cardio monitors
- 232 different hospitals in different locations
- Reliable network required
- to serve patients

Final Thoughts

- **Hospitals are Huge**
- **There are many systems**
- **1000’s of connected devices**
- **Different devices**
- **innovative technologies**
- **Utilize the right tools**
- **Get a lightweight survey kit**

Step 1

A Great Network Starts with a Great **DESIGN**

Step 2

VALIDATE with Super Accurate **SIDEKICK 2** Measurements

Step 3

Maintain Great Wi-Fi with Regular **HEALTH CHECKS**

Thank You