Healthcare environments:

design considerations in an increasingly demanding environment

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The Opportunity



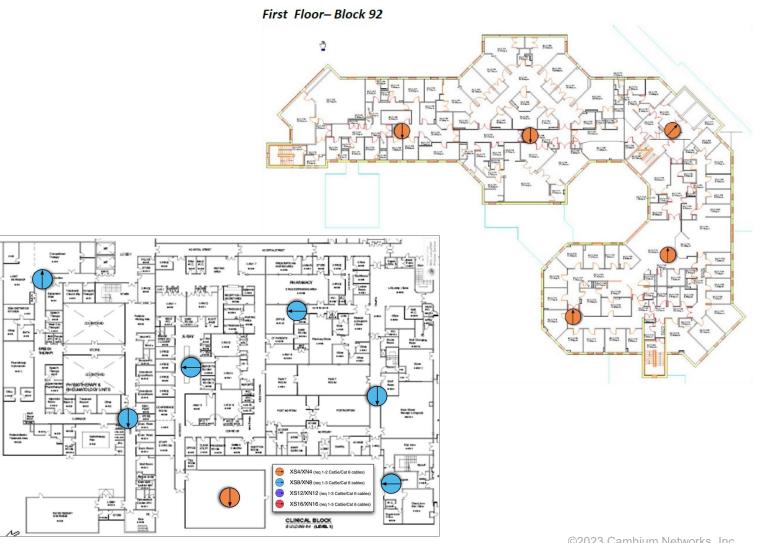
There is a tide in the affairs of men
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures.

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

The Start

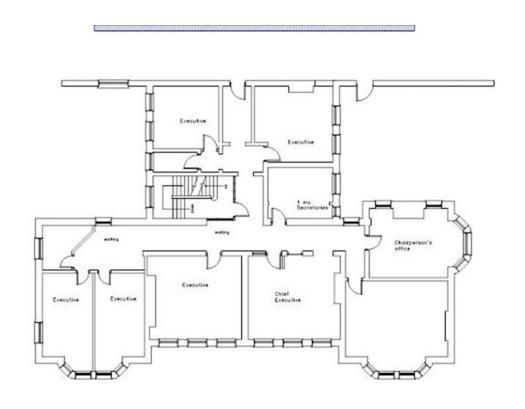


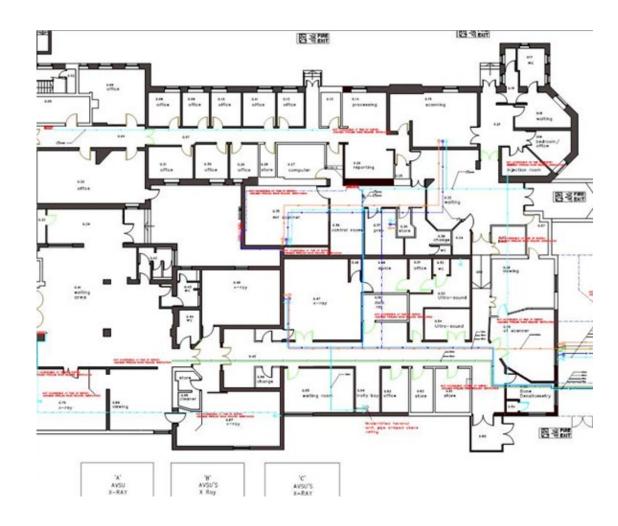
- · 2009 2011
- Coverage Only
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- · -67 -72 -80



The Walls







Technology











Changing times

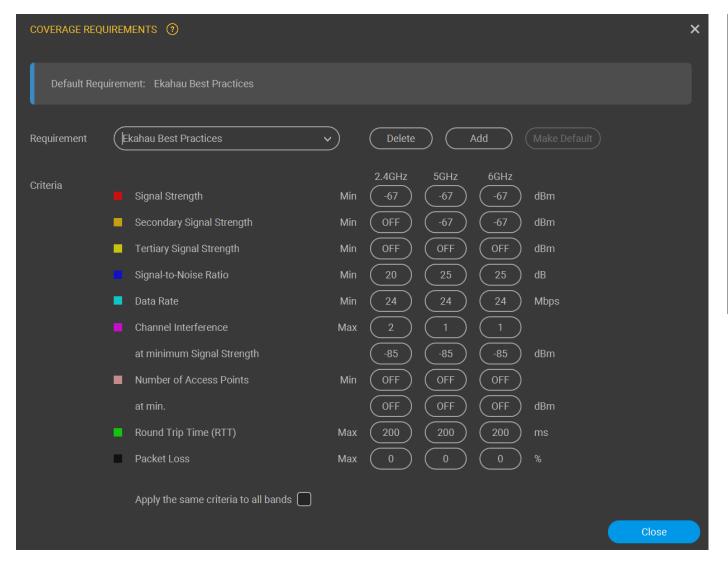


- The installed WIFI solution was ordered and built around 2007/ 2008 as part
 of a directive to deliver ubiquitous WIFI coverage across the hospital site.
 The hospital was surveyed, cabled and access points installed across this
 timeframe and subsequently re surveyed, beyond which the AP count was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





Location Tracking (RTLS)	
Basic Connectivity High Speed Connectivity	
Location Tracking (RTLS)	, and the second
Ekahau Best Practices	N
WIPS / WIDS	N
Aruba VHD Guideline	
Cisco Design Guideline	
Polycom Guidelines	N.
Ruckus Best Practices	
Skype / Lync Gt DEVICE PROFILES	
Profile Name	Generic Wi-Fi 6E Smartphone v Delete Add
Technology	
Max Supported Bandwidth	
МІМО	
Offset @ 2.4 GHz	(-10.0) dB
Offset @ 5 GHz	
Offset @ 6 GHz	
Band Selection	

More Devices



- Guest access
- Streaming Media
- Video calls
- 2021-22 -15.9M FAE
 - NHS Digital*



Telepresence

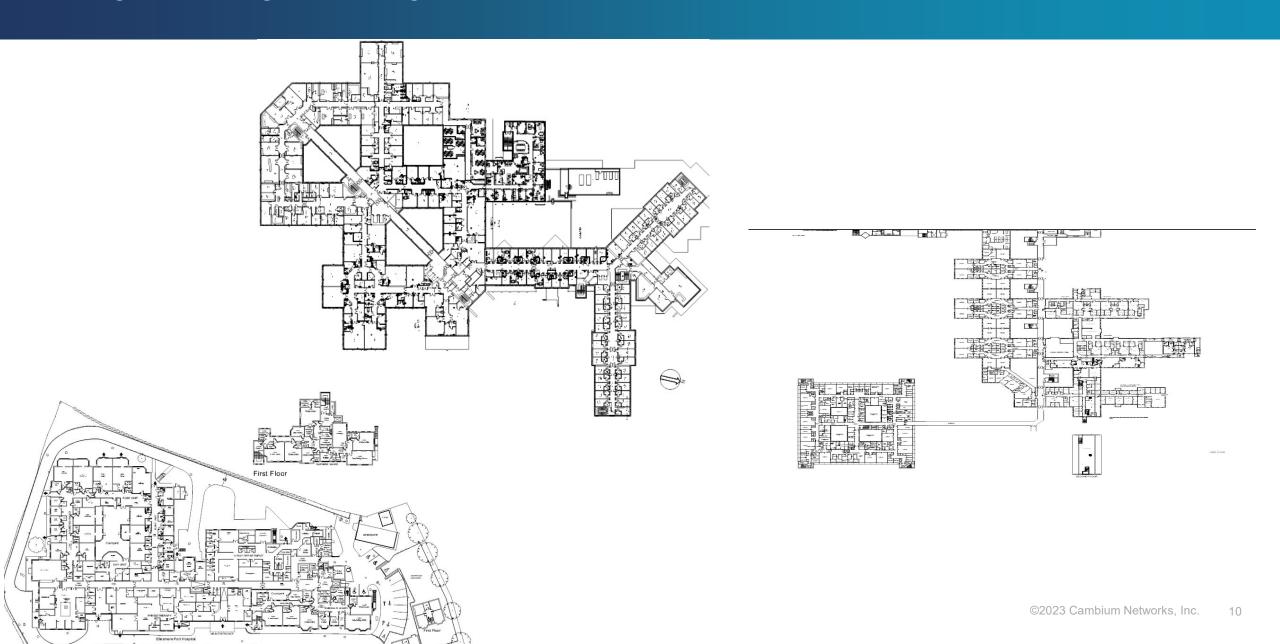






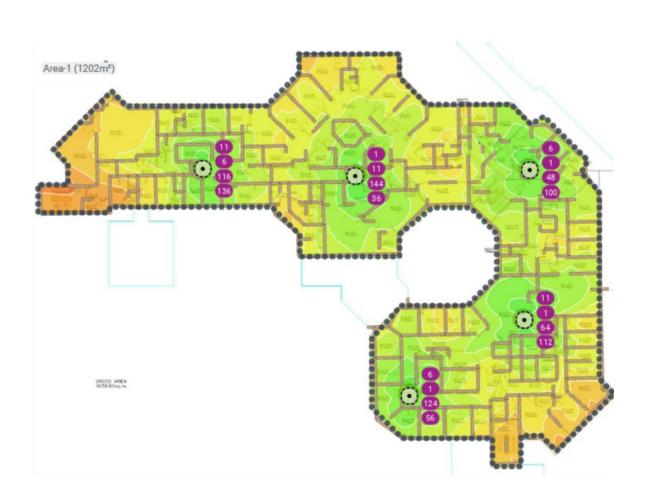
Design's Design's





Changing times - Designs Change





Al Auto-Planner
Channel Planner
Network Simulator (BETA)

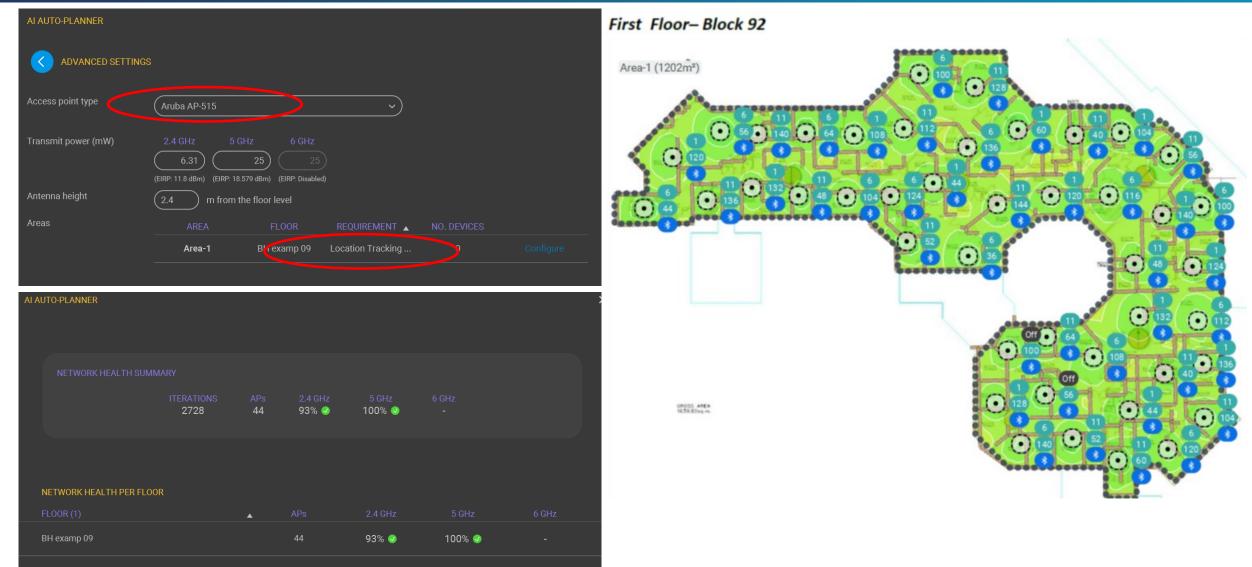
Locate Measured Access Points
Clear Measured Access Points

Wall Calibration

Wall Detection (BETA)

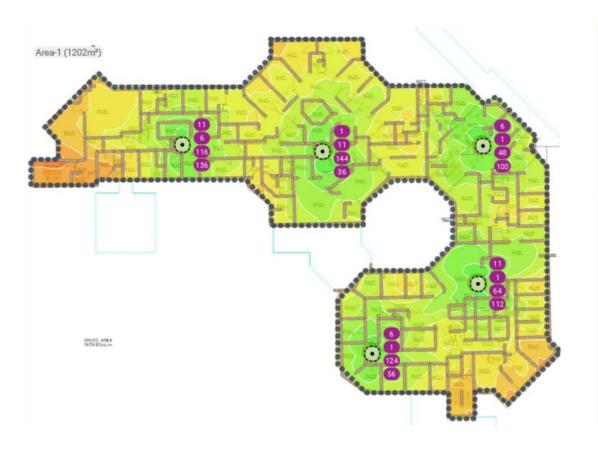
Changing times - Designs Change

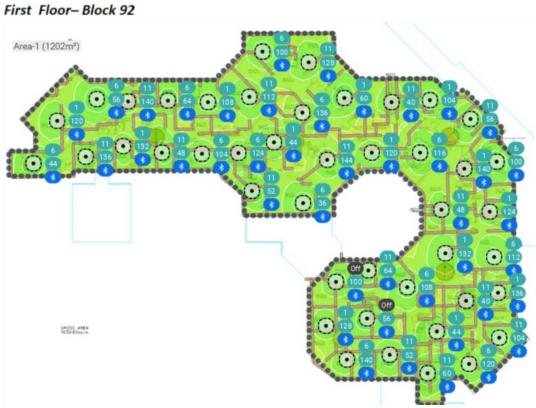




Changing times - Designs Change







Case Study: Emergency Zone in 232 hospitals





TALOŻENIA

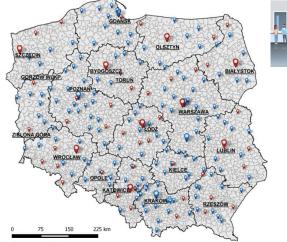
V ramoch postejowania prefergiorego na ziskup Tripów Gasulgi Toojenta w stpilannym Oddania totakowym (10raco) do potreb 232 saptornych oddatów rotakowych ocz c to personeku, sorowdzenego przez Lothicze Pogotowie skolustowe w Wolsce, naci potrer – źrma Cem Bior zł Gyril, Jaco podwysonowci libero realaccji projektu Todelók, Li konocelpa mir Maslo ocz Serenoscie, dostarczy zrzędzenia tiemy Comblem Networka umatikując genedić Ni-17 dia umoglani mobilnych wijstwemych,

ZWIĄZANIE

W celu zapewnienia besprzewodowej iączności urzy personelu medycznego, podjęto decyzję o stworz oddzielnych podsieci Wi-Fi z punktami dostępow Cambium Networks.

Koma Nord Sp. z o.a. – Integrator I dostawca systemów Informatycznych z Gdyrś (PL), dostarczy 400 punktów dostępowych WI-PI on/Riot 440 filmy Cambbarn Norwicks, które zostoły zalnistatowane w 282 BORiock W Polisce.

Control of the contro



KORZYŚCI Z WORDZENIA CORNICO 600 Oortytologo HC 56604-02 personaczony do cruzkwonej KC 56604-02 personaczony com do cruzkwonej kC 56604-02 personaczony com do cruz kC 56604-02 personaczony com do cruzkwonej kC 56604-02 personaczony kC 56604-02 perso

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





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



Step 2

Super Accurate
SIDEKICK 2
Measurements



Step 3

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



Thank You