Gearing up for the Digital future of Healthcare

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Hospital of the Future Video

Design and Sustainability related to Technology

Technology, Maintenance and Equipment

The digital hospital of the future

In 10 years, technology will change the face of global health care delivery

As the cost of care continues to rise, many hospitals are looking for long-term solutions to minimize inpatient services.

Technology and health care delivery are merging and influencing the future of hospital design and the patient experience across the globe

Technology Design and Sustainability

Key Benefits of digitization

Greater Efficiency and Accuracy

Instead of nurses manually logging patient information in paper chart records at the bedside and later capturing the data into a computer system, the data is automatically uploaded to the patient's electronic record, eliminating the possibility of human error.

Cost savings

It increases staff productivity by eliminating hours of time spent on administrative duties. Since all patient data can be stored in one electronic record, billing becomes much more automated and streamlined further reducing costs and errors.

Better Quality of Care

Freeing the staff from the administrative duty of manually inputting data, gives them additional time to focus on patient care. Automation also allows for better response to alarms and finer detail in tracking patient data. It also provides doctors or other care givers with instant access to a patient's health status from just about anywhere with a network connection, eliminating the need to review a physical patient chart.

Patient privacy

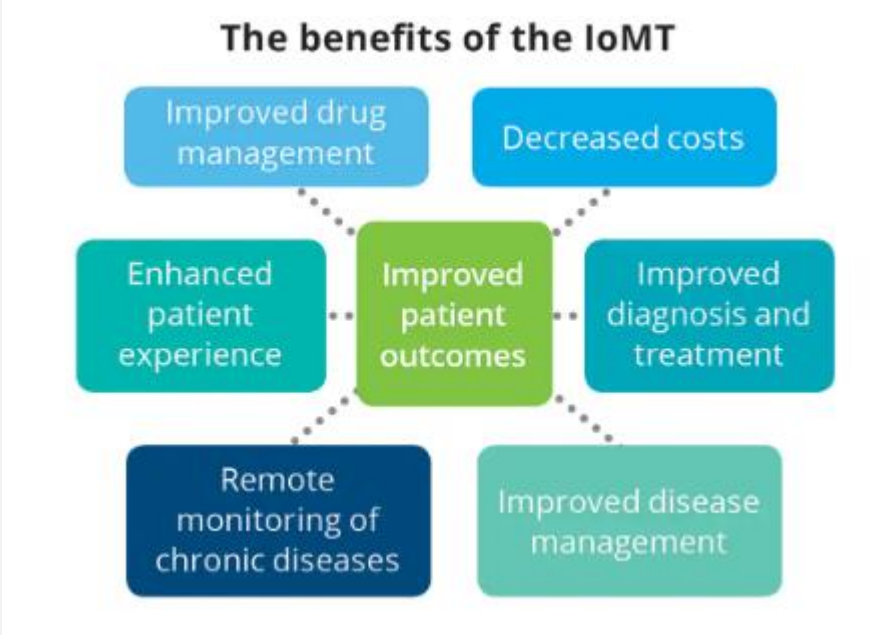
Since the records can be sent over an encrypted connection there is no paper to be lost or fall into the wrong hands, ensuring only those that are supposed to have access to the data are allowed to see it.

What is the Internet of Medical Things? (IoMT)

From pregnancy testing kits to surgical instruments, artificial joints and MRI scanners, the medical technology (medtech) industry designs and manufactures a wide range of products.

Technology is allowing these devices to generate, collect, analyse and transmit data, creating the Internet of Medical Things (IoMT) – a connected infrastructure of health systems and services.

The IoMT and its relationship to medtech is instrumental in helping health care organisations achieve better patient outcomes, lower climbing health care costs, improve efficiency and activate new ways of engaging and empowering patients. The pace and scale of health care transformation will be exponential if Medtech can harness the IoMT.



The Internet of Medical Things

Design

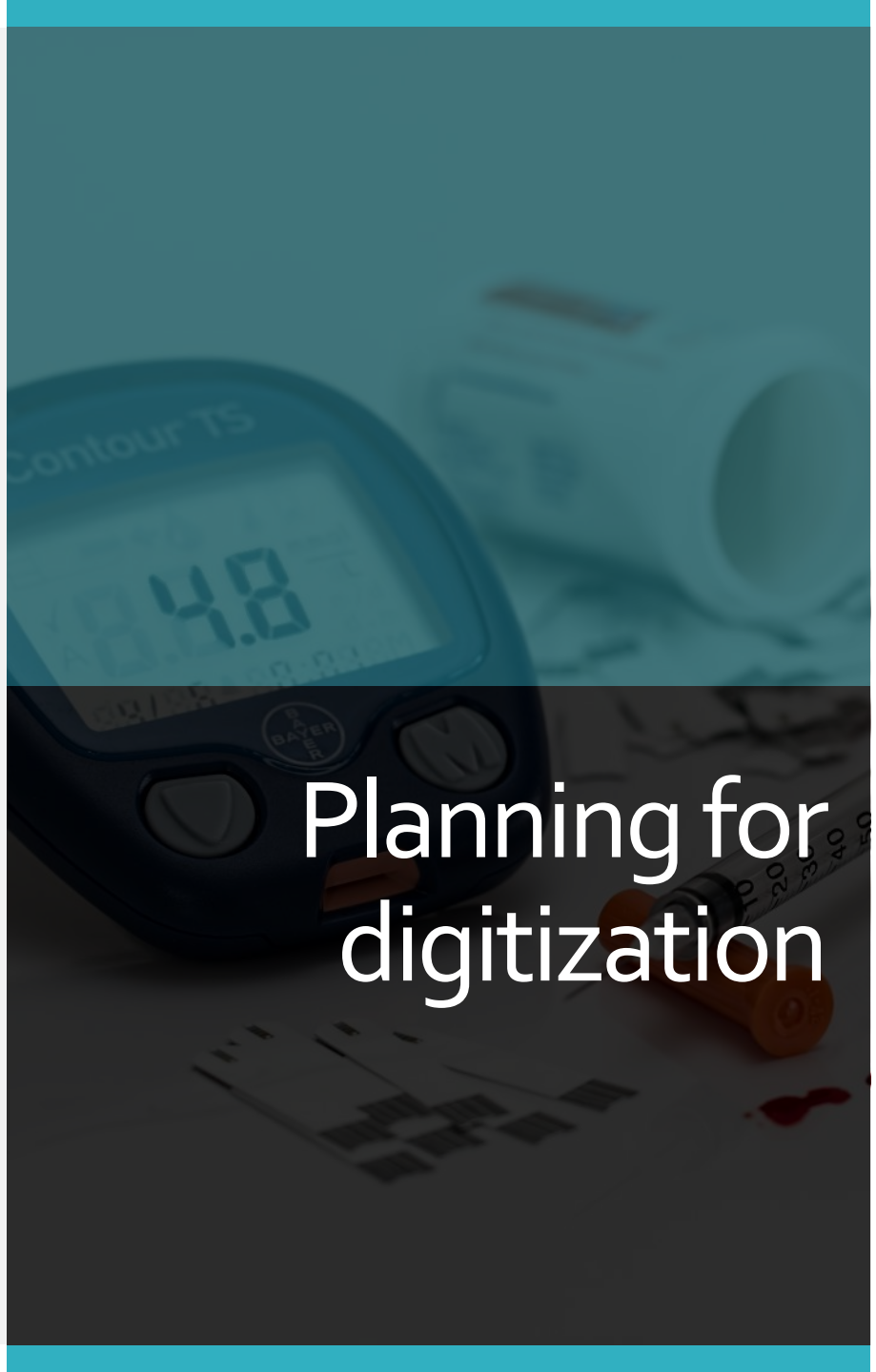
- Network design
- Bandwidth
- End User Computing
- Clinical Information
- Security
- Power

Management

- Operational costs
- Change Control
- Collaboration

Monetize

- Spend



Planning for digitization

What is the purpose of having a converged network?

- To provide high speed connectivity to all end devices
- To achieve fault tolerance and high availability of data network infrastructure devices
- To reduce the cost of deploying and maintaining the communication infrastructure
- To ensure critical data is prioritised and reaches its intended destination

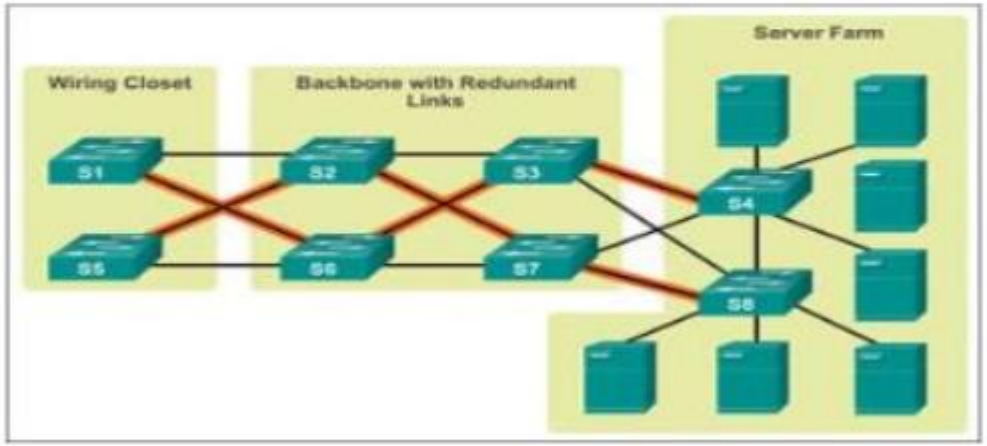
The converged networks or multiservice networks refer to the integration of voice, data, video and medical devices over a single IP-based network.

Implementing this, greatly reduces maintenance costs as it would be a single network instead of performing maintenance on 3 different networks (voice, data and video). All services are built on your network...

Building the foundation:

Converged Redundant Network

LAN Network with Redundancy



- Two Data Rooms in separate locations (opposite sites of facility)
- Fiber backbones running two separate routes to each Data Room
- Strict adherence to cabling and infrastructure certification requirements
- Impact on Hospital Design

Building the foundation:

Converged Redundant Network

These six core elements of an enterprise digital strategy can help you get started as you begin to push your hospital into the future:

Create a culture for digital transformation
It is essential that senior management understands the importance of a digital future and drives support for its implementation at all organizational levels.

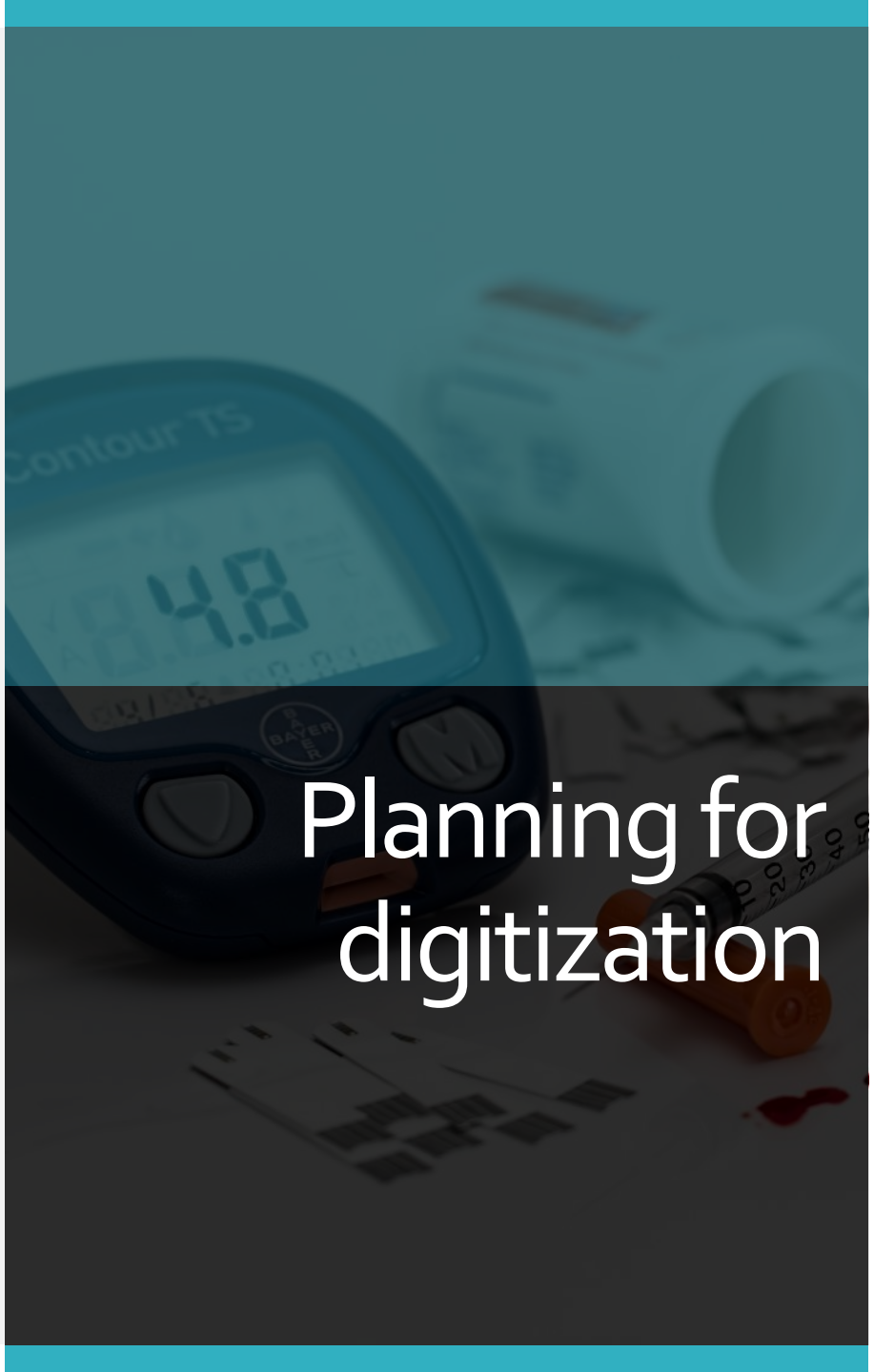
Consider technology that communicates
Digital implementation is complex. Connecting disparate applications, devices, and technologies—all highly interdependent—and making certain they talk to each other can be critical to a successful digital implementation.

Play the long game
Since digital technologies are ever evolving, flexibility and scalability during implementation can be critical. The planning team should confirm that project scope includes adding, modifying, or replacing technology at lower costs.

Focus on data
While the requirements of data interoperability, scalability, productivity, and flexibility are important, they should be built upon a solid foundation of capturing, storing, securing, and analyzing data.

Prepare for Talent 2.0
As hospitals invest in exponential technologies, they should provide employees ample opportunities to develop corresponding digital strategies.

Maintain cybersecurity
With the proliferation of digital technologies, cyber breaches can be a major threat to hospitals of the future. Everyone should understand that cybersecurity is the other half of digital implementation and allocate resources appropriately.



Planning for digitization

- ICT Cabling
- Conduits
- Power consumption
- Medical device licensing and integration
- WiFi
- Strict Change Control
- Strict standards and maintaining them
- Security
- Tight collaboration between Departments

Impact on Infrastructure design and maintenance

Thank You

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