IDC Infographic Sponsored by Juniper Networks

An Agile and Scalable IT Network Infrastructure Foundation for the Smart Hospital of the Future

APRIL 2021

Authors:
Adriana Allocato
Research Manager, Health Insights, IDC Europe
Silvia Piai
Research Director, IDC Europe

The Smart Hospital of the Future Will Rely on a Unified Digital Infrastructure to ...

The speed and intensity of the COVID-19 crisis have challenged hospitals to accelerate the shift from being data rich to being data driven. Hospitals will be able to create new experiences for their patients, workforce and partners across the ecosystem, leveraging new, intelligent workflows. **Smart hospitals in the future** must optimise, automate and redesign new clinical processes and management systems **enabled by the underlying digitalised network infrastructure** to:

Scale up primary and specialty services

Hospitals are just one component of larger, integrated and interconnected ecosystems that include multiple other facilities.

The economic and clinical vulnerability brought about by the pandemic will drive **20%** *of healthcare organisations to* ***embrace integrated care*** *to improve outcomes during 2021.*

IDC FutureScapes

Support connected health

Accelerated deployment of telehealth enables the delivery of highly complex but also regular care to large numbers of new patients in different locations.

Fuelled by COVID-19, digitally enabled remote care will drive ***70% growth in spending on connected health technologies*** *by providers and life science companies by 2023.*

Improve operational and clinical efficiency

An ecosystem of data enables staff in centralised care coordination centres to support the patient flow and manage resources remotely.

By 2024, the proliferation of data will result in **60%** *of healthcare organisations'* ***IT infrastructure being built on a data platform*** *that will use AI to improve process automation and decision making.*

... to Reengineer How Care Is Delivered Across the Healthcare Ecosystem ...

Hospitals will have a new role in the wider ecosystem, building on a network that makes use of advanced technologies to:

- Optimise and automate processes
- Improve existing procedures
- Support new care delivery models

% increase in spending on selected IT solutions expected in 2021:

Source: IDC EMEA, COVID-19 Impact Survey, November 2020

... and to Improve the Patient Experience Through More Personal and Accessible Care

A connected environment to simplify, automate and personalise routine processes to provide a better care experience

21% of European healthcare providers will increase spending on **patient engagement applications** in 2021.

A **smart network** enhances the patient experience and outcomes in a hospital setting, becoming an **empathy enabler**.

Hospital facilities for the patient experience

- Physical security
- Remote healthcare
- Mobile experience and wayfinding
- Guest connectivity
- In-patient bedside experience

Source: IDC EMEA, COVID-19 Impact Survey, December 2020

A Modern Digital Infrastructure Enables Renewed Business Agility to Set the Foundation of the Smart Hospital

The emerging digital infrastructure for the smart hospital, built for purpose but compliant to regulations, relies on a modern network that is:

Optimised to ensure resilience and build a new operating care delivery model through connected clinical workflows.

Interoperable and intelligent to ensure workforce collaboration and an integrated care pathway for the patient

Automated to facilitate automation, relying on AI capabilities facilitating proactive management of the infrastructure and delivery of a "continual enhancement" environment

European healthcare providers' **spending on IT infrastructure orchestration** is expected to increase by 31% in 2021.

Source: IDC EMEA, COVID-19 Impact Survey, December 2020

Digital Infrastructure Addresses the Challenge of Accessing Data Through Network Capabilities

The network capabilities to transform data into insights ...

- **Connectivity:** connect medical devices, processes, applications and healthcare professionals
- **Visibility:** ensure performance and optimal experience for devices and users (clinical, workforce and patients)
- **Security:** protect data
- **Availability:** deliver data and models in real time, anytime, at the point of care
- **System interoperability:** enable data sharing

... that can be shared to drive value across the healthcare ecosystem are generating benefits for:

Clinicians — core clinical applications and patient data accessible anytime, anywhere on any device, with the lowest latency for more informed and accurate clinical decision making

Business executives — ensuring business continuity, workflow efficiency and compliance, and enabling business innovation and greater patient reach

A Modern Network Infrastructure Creates Opportunities for More Innovative Solutions Such as Digital Twins

Digital twins use connected sensors and IoT devices **to collect real-time data** about physical items, software systems and interaction between people. The data can then be analysed more deeply through intelligent automation solutions to:

- Improve patient experience
- Enhance health/clinical outcomes
- Improve caregiver experience
- Lower costs

10% say IoT is leading to new business models and additional revenues.

Source: IDC European Tech and Industry Pulse Survey, 2020 — healthcare

30% say network inadequacy is the biggest technology challenge when implementing work transformation initiatives.

IDC EMEA, Future of Work Survey, March 2020

By 2023, **30%** of health organisations' **business and clinical decisions** will be informed by **AI insights**.

Around 30% of European healthcare organisations are using AI for **IT automation, automated threat intelligence and prevention systems**.

Source: IDC European Tech and Industry Pulse Survey, 2020 — healthcare

The growing volume, variety and velocity of healthcare information will challenge the adoption and sustainability of connected and intelligent healthcare solutions.

Network capacity and reliability will emerge as key enablers of European healthcare providers' IoT, cloud and AI initiatives.

Enhanced networking capabilities will enable the development of an intelligent enterprise that increases IT and business process automation and improves decision making.

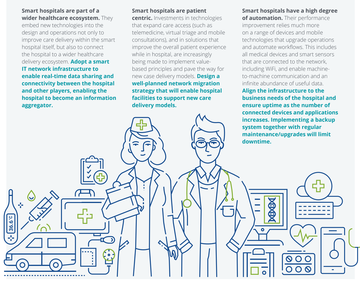
Creating a Modern IT Network Infrastructure for the Smart Hospital of the Future

Where hospital CIOs should invest to make IT network infrastructure an enabler of the smart hospital

Smart hospitals are part of a wider healthcare ecosystem. They embed new technologies into the design and operations not only to improve care delivery within the smart hospital itself, but also to connect the hospital to a wider healthcare delivery ecosystem. **Adopt a smart IT network infrastructure to enable real-time data sharing and connectivity between the hospital and other players, enabling the hospital to become an information aggregator.**

Smart hospitals are patient centric. Investments in technologies that expand care access (such as telemedicine, virtual triage and mobile consultations), and in solutions that improve the overall patient experience while in hospital, are increasingly being made to implement value-based principles and pave the way for new care delivery models. **Design a well-planned network migration strategy that will enable hospital facilities to support new care delivery models.**

Smart hospitals have a high degree of automation. Their performance improvement relies much more on a range of devices and mobile technologies that upgrade operations and automate workflows. This includes all medical devices and smart sensors that are connected to the network, including WiFi, and enable machine-to-machine communication and an infinite abundance of useful data. **Align the infrastructure to the business needs of the hospital and ensure uptime as the number of connected devices and applications increases. Implementing a backup system together with regular maintenance/upgrades will limit downtime.**



IDC #EUR147497021 | IDC Infographic Sponsored by Juniper Networks