



# NHP Digital: CXIO Call Midland Region

Date: 10/02/2026

Presenter's name: Eamonn Gorman



**New Hospital  
Programme**

# The New Hospital Programme

The NHP is currently one of the largest infrastructure programmes in the UK



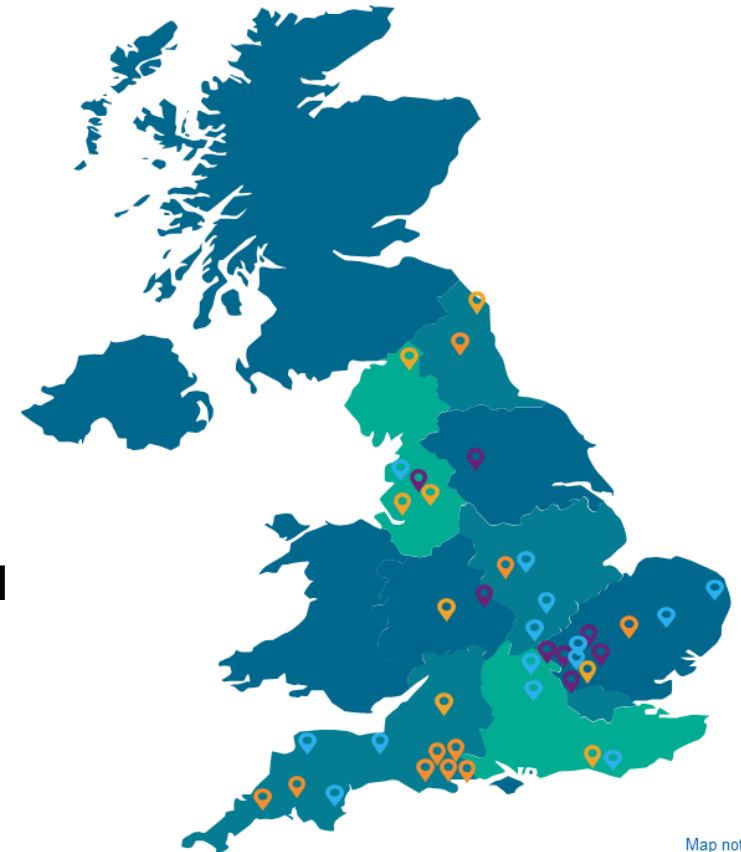
A series of next generation hospital builds including seven **RAAC hospitals** (Reinforced Autoclaved Aerated Concrete)



This is a **centralised programme** to deploy a **common set of design principles** incorporating **modern methods of construction**



Development and application of a **common commercial and procurement strategy** to achieve economies of scale and mitigate supply constraints



# NHP Programme Outcomes

**Going Beyond Construction... The New Hospital Programme is focused on delivering benefits across the entire lifecycle of schemes**

## Enhanced Patient Experience

The programme is ensuring new hospitals are designed, built and operated with the patient experience at the forefront, supporting the delivery of high-quality care on patients' terms and addressing their unique needs.

## Improved Clinical Care

The programme is a vehicle for new methods of clinical care, incorporating learning from the pandemic and previous hospital builds and ensuring our health infrastructure can continuously adapt to changing health needs.

## Improved Workforce Wellbeing and Efficiency

The programme is ensuring new hospitals are great places to work in, designed and operated to enhance employee wellbeing by enabling them to deliver the highest quality care.

## Latest Digital Technologies

The programme is building on the NHS England vision for digital care, harnessing digital transformation and using the latest technologies to benefit our people and patients to allow hospital care to go beyond the estate and into homes and the community.

## Green, Sustainable Hospitals

The programme is promoting sustainability and ensuring our health infrastructure is fit for the future, contributing to the Net Zero Carbon vision across the NHS.

## Integration with Local Communities and the Wider Health System

The programme and new hospital builds are integrating with local health and care systems, allowing our hospitals to support local communities and provide social value.

# In-Patient Wards



## 100% Single Patient Ensuite Bedrooms

- 50% of hospital footprint
- 32 Bed Standard Ward
- 5000 bedrooms in RAAC hospitals
- Prioritises clinical benefit over space/cost.
- Prototyping
- Patient social space



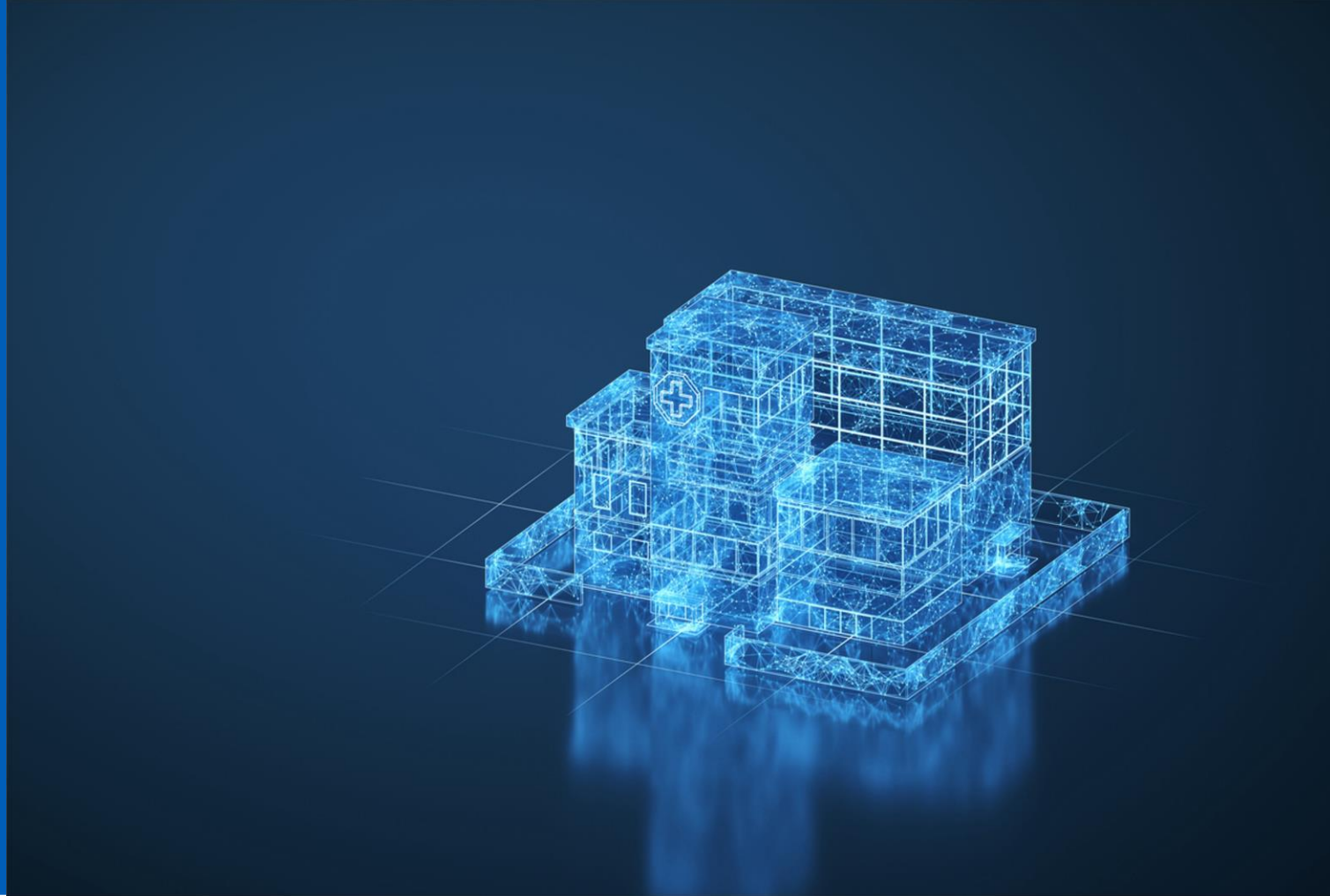
# NHP Digital Ambition

The vision: 'To define, deliver and optimise the Intelligent Hospital of the future for the NHS'

The challenge: "The NHS remains in the foothills of digital transformation... There must be a major tilt towards technology to unlock productivity."

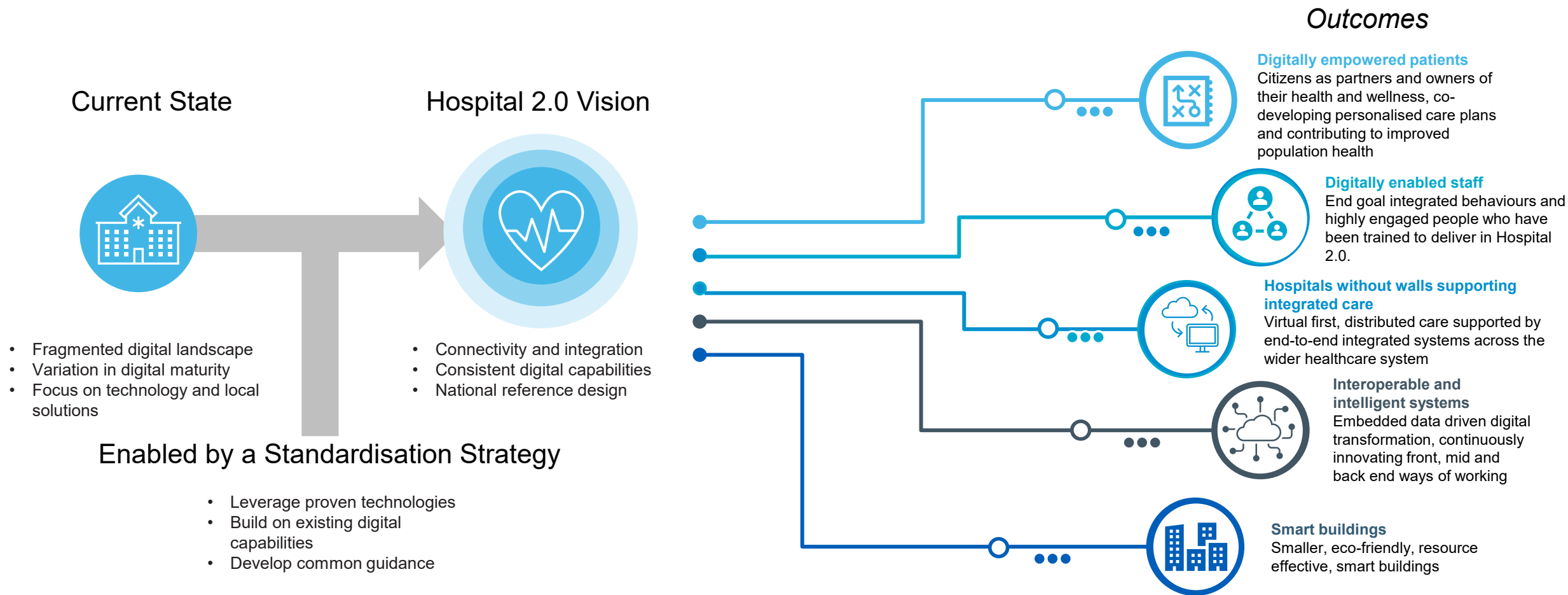
*Lord Darzi, 2024*

Wes Streeting's vision for the NHS has highlighted the need to move from **analogue to digital**, sickness to prevention and care into the community.



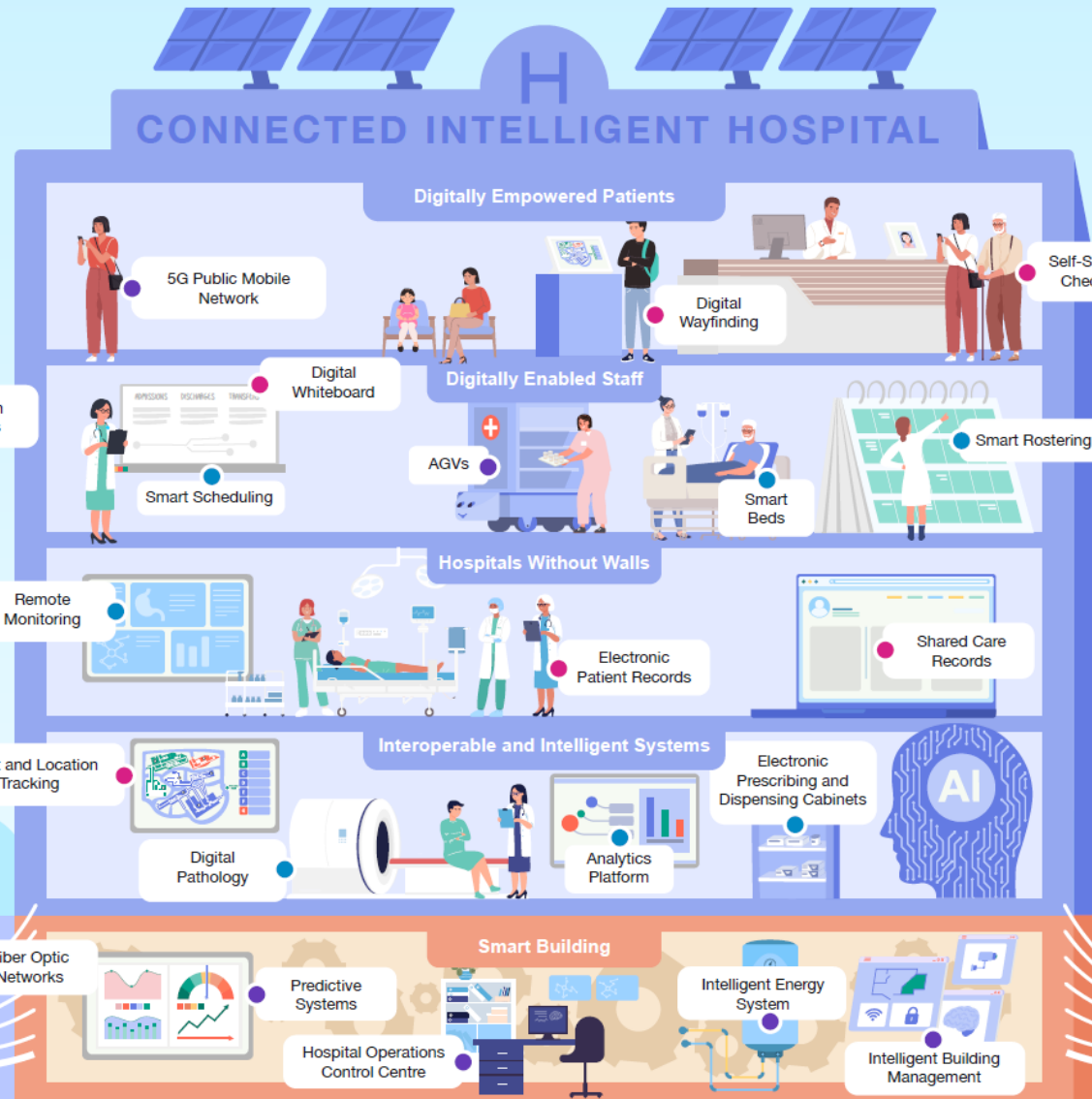


# Digital Transformation: From Current Model to Hospital 2.0



# Hospital 2.0

● Flow technologies ● Footprint technologies ● Fabric technologies



At home care increasing patient comfort

Natural transitions allow for smooth transfers of care

Telemedicine

### Home care

Patients experience a single organization and clinicians provide fully informed care

### Primary care

- Community Nursing
- Dentistry
- General practice
- Urgent Treatment Centers
- Eye Health

Holistic data enabling Cross Pathway Population Health

Integration Gateways

### Community care

- School Nursing
- Voluntary Sector
- District Nursing
- Hospice/Palliative Care
- Community Physiotherapy

Interoperability means no unnecessary tests are repeated

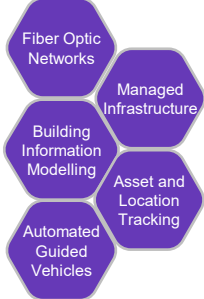
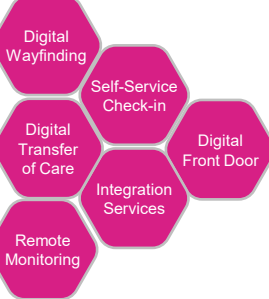
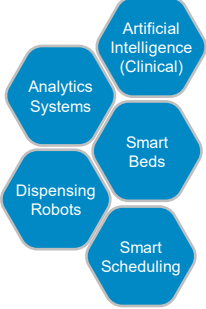
Digital transfer of Care means more flexible and appropriate care

### Aunt Betty's Care Home



# Fabric, Footprint and Flow: technology to transform & simplify lives

There are three fundamental categories of technology required in an Intelligent Hospital. The Intelligent Hospital MVP uses these categories to help NHP stakeholders navigate a complex technology landscape and link these back to the five fundamental principles and target outcomes

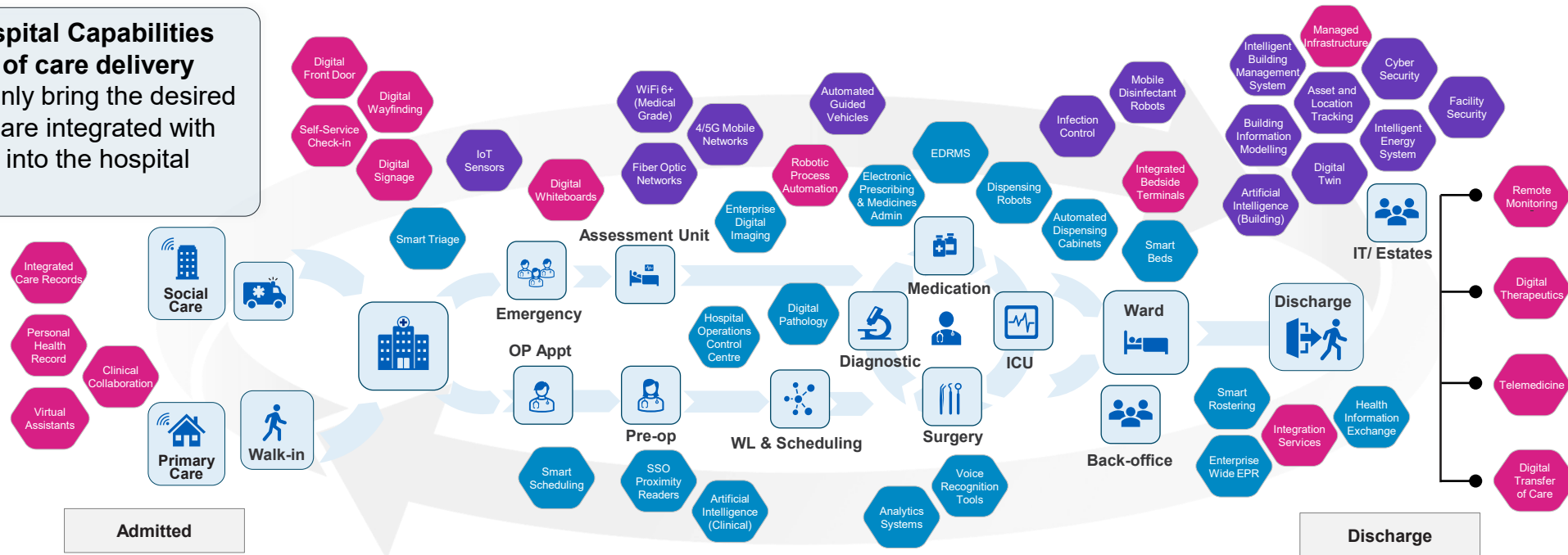
| CATEGORY                | SUMMARY   | DESCRIPTION   | EXAMPLE  |
|-------------------------|---|---|--|
| <p><b>Fabric</b></p>    | <p>The technology that is part of the hospital building</p>                     | <ul style="list-style-type: none"> <li>▶ <b>Underlying infrastructure</b> – the parts of the building that imperceptibly make user lives simpler.</li> <li>▶ <b>Enabling technology</b> – the speedy internet connection that reduces load time, or the sensors that tell them where things are.</li> <li>▶ <b>Sustainability built-in</b> – the technologies that allow the building to provide and use large volumes of data about space utilisation, energy consumption etc.</li> <li>▶ <b>Enabling architecture</b> – the building itself will be designed to accommodate certain technologies, for example corridors must be wide enough for Automated Guided Vehicles.</li> </ul>       |   |
| <p><b>Footprint</b></p> | <p>The technology that connects the hospital to other care settings</p>         | <ul style="list-style-type: none"> <li>▶ <b>Patient experience</b> – the technologies that allow for simplified and natural use of the hospital.</li> <li>▶ <b>Connected care</b> – patients get to a hospital through other care settings; care should pass smoothly between them.</li> <li>▶ <b>Care beyond the hospital</b> – a hospital should deliver care remotely if needed.</li> <li>▶ <b>System Interoperability</b> – data should move freely to make the patient journey as natural as possible.</li> <li>▶ <b>Staff engagement</b> – staff should be able to focus on care and work in ways that suits them.</li> </ul>   |   |
| <p><b>Flow</b></p>      | <p>Technologies which support the flow of information in a clinical pathway</p> | <ul style="list-style-type: none"> <li>▶ <b>Traceable journeys</b> – clinical pathways should capture data wherever possible to create a trackable flow of patients and workforce.</li> <li>▶ <b>A learning and predictive system</b> – artificial Intelligence and machine learning will analyse this data. Patient safety will be improved and staff processes optimised.</li> <li>▶ <b>Next generation and core clinical systems</b> – the systems the hospital needs to directly enhance care delivery, for example by more effectively monitoring patients.</li> <li>▶ <b>Security and data governance</b> – the systems must ensure that data is stored and shared securely.</li> </ul> |  |

# Digital will change the care experience across the organisation

Hospital 2.0 will radically reconfigure the way services are delivered. IHCs that are delivered together and effectively integrated will change nearly every aspect of service delivery in the enterprise.

## Intelligent Hospital Capabilities in the context of care delivery

The IHCs will only bring the desired benefits if they are integrated with each other and into the hospital environment.



**Sofia**  
Frequent Ambulance User

- Remote Monitoring:** Sofia is continuously monitored meaning her comfort is increased and her trips to hospital more infrequent.
- Internet of Things (IoT) Sensors:** Sofia arrives at a Hospital operating at full capacity as the air quality and temperature of all areas is continuously monitored.
- Infection Control:** Despite repeat visits, the chances of Sofia catching healthcare associated infections is low. Digital Signage means she only gets called when needed.
- Integration Gateways:** Sofia's clinician sees her health history and can forward this data with their own notes to any of Sofia's subsequent clinicians.
- Personal Health Record:** Sofia checks and manages subsequent appointments. She can see and query the updates to her medical record.
- Clinical Communication & Collaboration:** Sofia can easily communicate with her care team remotely. She feels involved in and empowered by her care.
- Digital Wayfinding and Signage:** Sofia arrives, uses her phone to get to the relevant ward and can see estimated wait times based on live signs in the ward.
- Dispensing Robots:** Sofia quickly receives her medication with a much reduced chance of any errors.
- Digital Transfer of Care:** Sofia feels she is moving within a single organisation across care settings.

# Example: NHP Hospital Pathway Data Overlay

## Data Layer Principles

The data layer should be reviewed in conjunction with the NHP Reference Architecture, Interoperability Framework and Smart Buildings Strategy.

## Data Layer Considerations

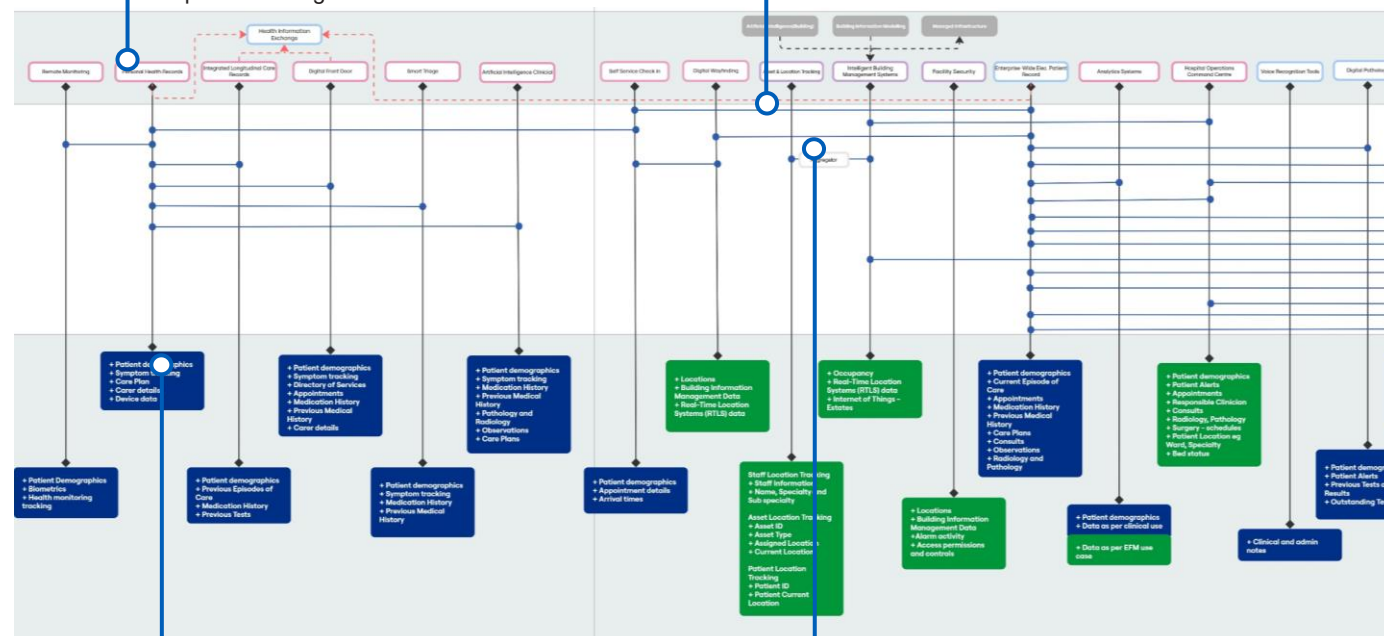
- + The data layer has been developed to illustrate the data flows and interoperability required to enable Hospital 2.0 pathways. The data points and types visualised as part of each pathway is indicative for purposes of illustration.
- + The detailed data and metadata for each of the pathway is heavily reliant on the data and digital maturity of each organisation, its level of integration and the use case.
- + It is likely that Trusts will require specialist expertise that has experience of integrating a wide variety of clinical, operational and building systems and services to achieve the level of interoperability and intelligence envisaged.

### Intelligent hospital capabilities

These have been coloured within their Footprint, Fabric Flow groupings. Some Fabric capabilities are not shown here as they are part how the whole hospital functions rather than are interacting due to the process being shown

### Data flows

Blue connection lines indicate the anticipated data flows between the technical capabilities and are intended to be bidirectional



### Data sets

Narrative description indicating the types of data that are relevant for the pathway, held within each of the technical capabilities above

### Connections to aggregators

These are indicative of automated unidirectional data ingestion flows required for some of the capabilities and shown in grey

# NHP Digital Intelligent Hospital Challenges



## New Hospital Programme

### Loss of Line of Sight

Single-bedroom layouts hinder incidental visual monitoring, increasing risks of unnoticed patient deterioration or emergencies



### Falls

Some patients may be at increased risk of falls; there is a perception that reduced incidental observation, could increase this risk.



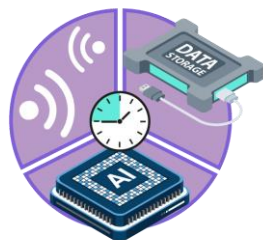
### Failure to Rescue

There is a perception that single-bedroom settings reduce incidental interactions, potentially impacting detection of clinical changes.



### Response Times

Physical separation in single bedrooms can delay staff responses to patient needs, particularly during emergencies or peak workload times.



### Infection Control

While single rooms reduce the spread of infections, they may foster a false sense of security, potentially leading to lapses in hygiene practices.



### Isolation and Loneliness

Patients in single-bedroom settings may be more likely to experience feelings of isolation and loneliness, which can impact mental wellbeing.



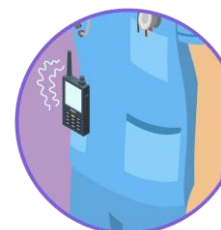
### Patient Flow

Single-bedroom layouts can complicate patient flow, making it harder to coordinate transitions between stages of care.



### Involving patients in their own care

Patients in single bedrooms may feel disengaged from their care due to reduced interactions with staff.



### Increase in demand (Call bells)

Single rooms increase call bell use and ambient noise, adding to cognitive load and clinical demand in already stretched ward environments.

# NHP Digital Intelligent Hospital Digital Solutions



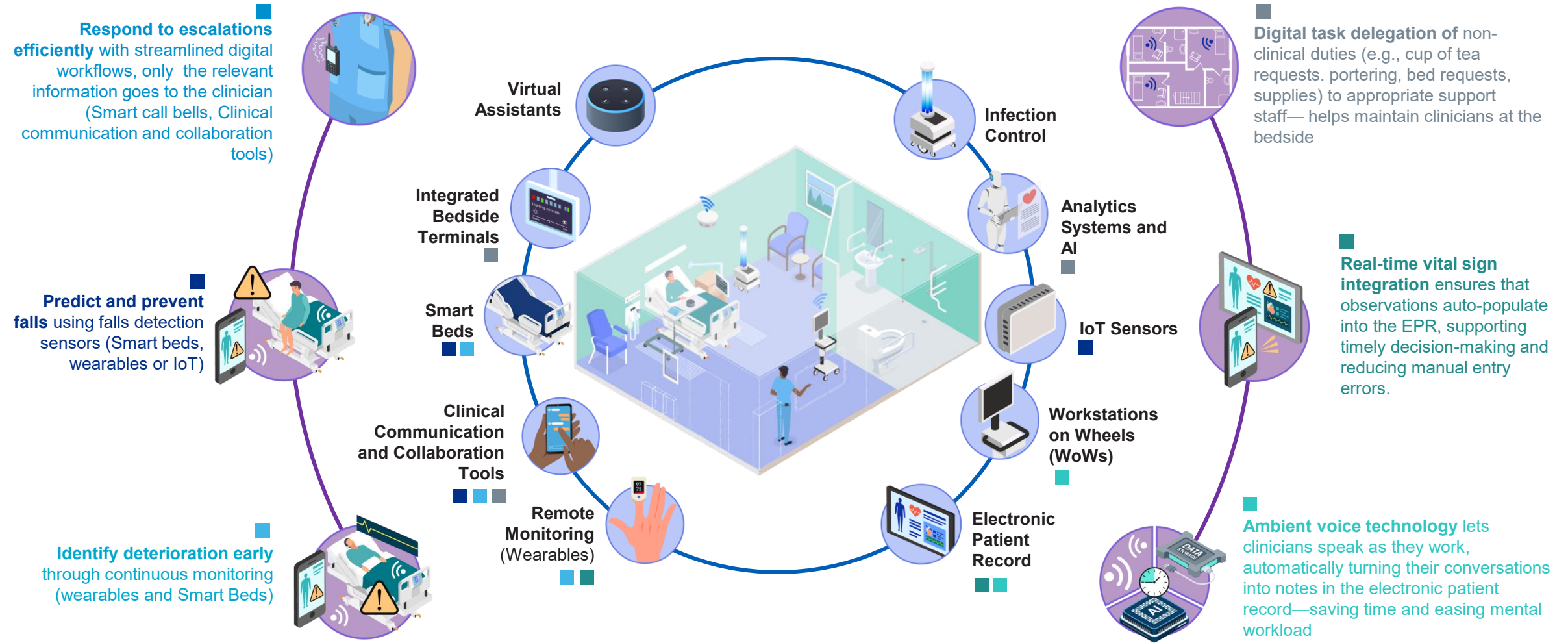
## New Hospital Programme

### Maintain oversight

Ensuring the right team member has the right information, at the right time.

### Reducing burden, enabling care

Smart hospital infrastructure enables clinicians to focus on what matters most: patient care.



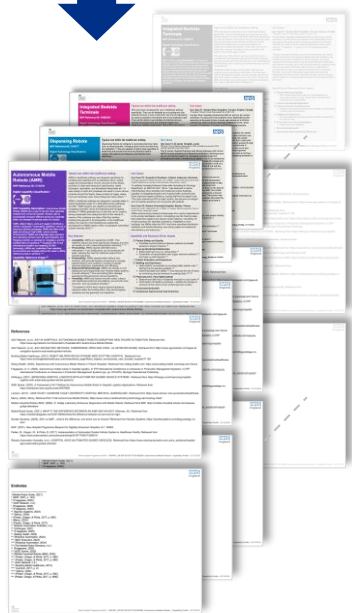
*This is not just digitisation—it's delivering safer, proactive care through intelligent hospital design.*

# Key Digital Product Deliverables



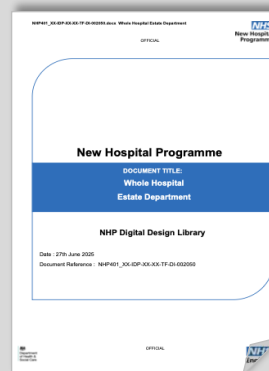
Each IHC Profile comprises a single page of narrative and 2-3 pages of references

49 x IHC Profiles



Each IHC is further elaborated into a section within a single Whole Hospital Design Brief or an individual Digital Design Brief (DDB) document

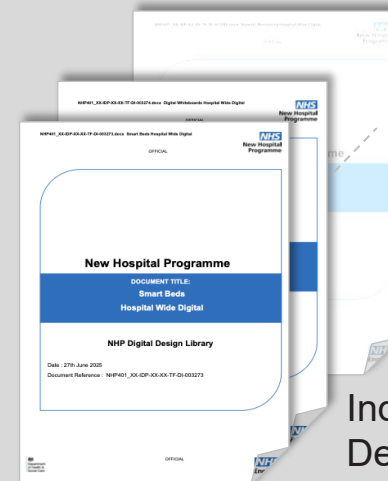
Whole Hospital Design Brief



Digital Design Library Overview



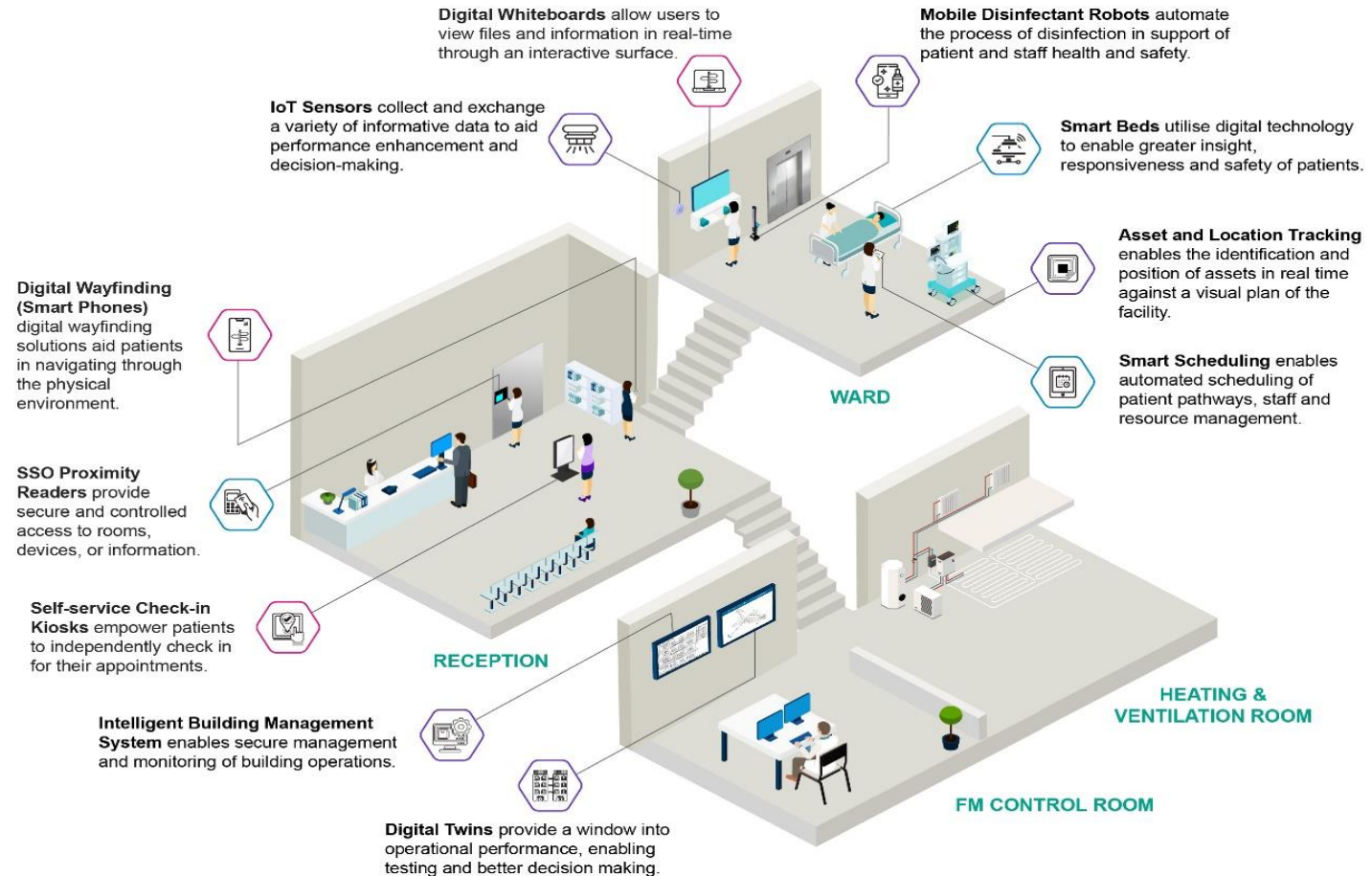
Digital Design Library



Individual Digital Design Briefs (DDBs)

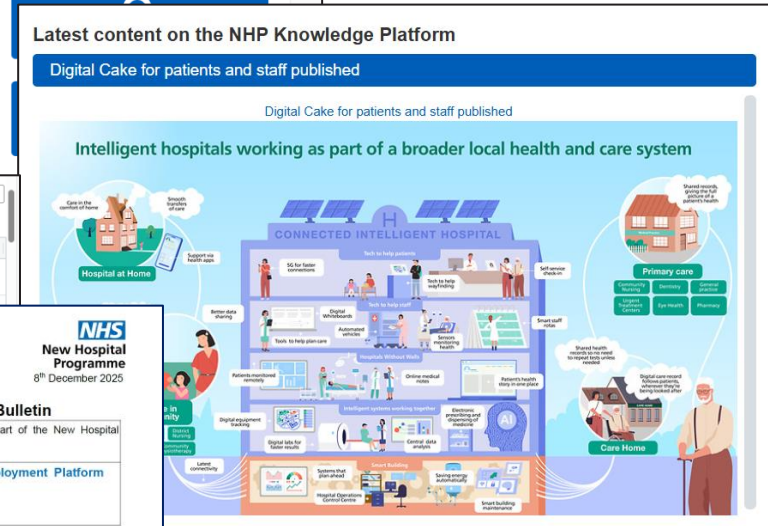
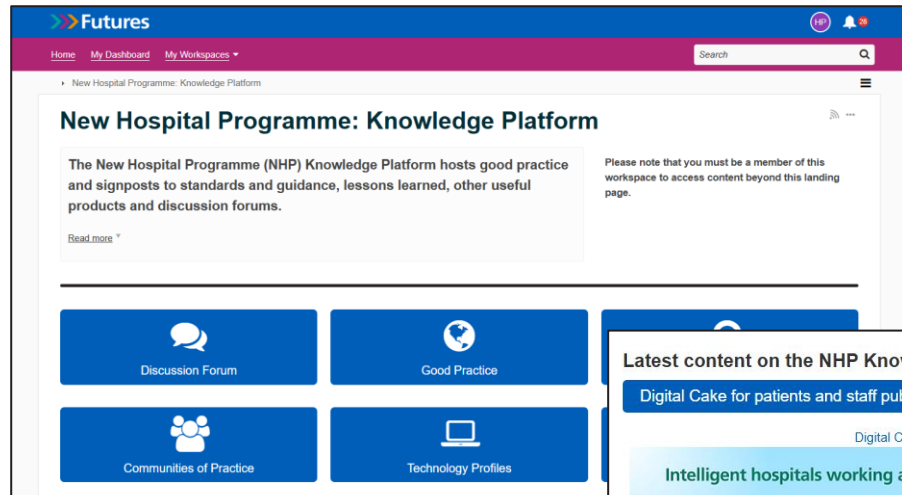
# Smart Buildings

Smart Buildings refer to a digitally-connected physical estate using digital, data and technology to optimise all building operations and enhance patient, staff and visitor safety and experience.



# Latest digital products for both schemes and staff

- 150+ Digital Products, briefs and IHCs published to Aconex and promoted to schemes
- Content on new NHP Academy site
- Digital 'Cake' visual – for patient and staff engagement work (developed in collaboration with schemes)
- New areas for Clinical and Hospital Operations on the Knowledge Platform
- Innovation Award case studies in development



815 results (0 selected) Select All

| Type            | File | Document No                      | Title   | Revision | Version | Review Status |
|-----------------|------|----------------------------------|---|----------|---------|---------------|
| Report          |      | NHP403_XX-IDP-XX-XX-RP-NS-009002 | Town Planning Guide   | P02      | 1       |               |
| Report          |      | NHP403_XX-IDP-XX-XX-RP-NS-009001 | Site Master Planning Design Guide   | P01      | 1       |               |
| Guide           |      | NHP401_XX-ICP-XX-XX-GU-DI-000002 | NHP Smart Buildings Gap Analysis  |          |         |               |
| Strategy        |      | NHP401_XX-ICP-XX-XX-SY-DI-000003 | NHP Smart Buildings Strategy  |          |         |               |
| Drawing         |      | NHP403_XX-IDP-XX-CL-DR-SE-206306 | Escape Stair Structural Framing - Steel Moment                              |          |         |               |
| Drawing         |      | NHP403_TR-IDP-06-DP-DR-AR-066900 | Diagnostic Imaging - Fire Protection Strategy                               |          |         |               |
| Drawing         |      | NHP403_TR-IDP-05-CL-DR-AR-067300 | Intensive Care Unit Cluster - Fire Protection Strategy                      |          |         |               |
| Drawing         |      | NHP403_TR-IDP-05-CL-DR-AR-066100 | Inpatient Cluster - Fire Protection Strategy                                |          |         |               |
| Room Data Sheet |      | NHP403_TR-IDP-04-RM-RD-AR-807010 | Endoscopy Procedure Room (Standard)   |          |         |               |
| Drawing         |      | NHP403_TR-IDP-04-CL-DR-PH-536133 | Endoscopy Cluster Hot and Cold Water Services Schematic Zone 2 Sheet 2 of 2 |          |         |               |

1-100 of 815 Documents (0 selected)

**NHS New Hospital Programme**  
8<sup>th</sup> December 2025

**New Hospital Programme Bulletin**

This document contains information to schemes as part of the New Hospital Programme, including updates on the following:

1. Digital Products Published on the Deployment Platform (Aconex)
2. Safety Alert

**1. Digital Products Published on the Deployment Platform (Aconex)**

A wide range of Digital products are now available for Trusts to download from the Deployment Platform (Aconex). These products include information on the Digital Design Library, Intelligent Hospital Capabilities (IHC), Digital Design Briefs and guidance on SMART Buildings, Data and Technology, as well key Strategy and Framework documentation.

A number of these products have previously been published and shared via the old H2.0 Library, which Trusts have had access to previously.

Trusts who are part of the New Hospital Programme and in Waves 1a, 1b and 1c are encouraged to give their feedback, where specified, but all other products are for reference.

The digital products now available include:

- Package 1 (52 Products) - This package includes products relating to the Digital Design Library and the 49 Intelligent Hospital Capabilities Profiles.
- Package 2 (16 Products) - This package includes products such as the Digital Strategy, Equipping Strategy, Digital Inclusion Framework and Digital Manual. As well as products relating to both SMART Buildings and Data and several products

# International Digital Exemplars

## International Digital Exemplar

### Denmark's Digital Hospitals: How technology is supporting patients in single rooms

Wednesday 4 March 11am – 12.15pm



#### Session speakers

**Brian Holch Kristensen**, Head of Quality and Education at **Bispebjerg and Frederiksberg Hospital**, where he also leads the hospital's innovation unit, *Behovsfabrikken*. This focuses on needs-driven innovation and developing new solutions in close collaboration with clinicians and external partners.

**Jannick Brennum**, Deputy CEO at **Rigshospitalet**, with responsibility for the Centre for Cancer and Organ Diseases. He is a medical doctor (MD, PhD), specialising in neurosurgery, and holds a Master of Health Management from Copenhagen Business School.



To attend the webinar, please email [england.nhpdigital@nhs.net](mailto:england.nhpdigital@nhs.net)

## Webinar Invitation

from the NHP Digital Engagement Team



This webinar session will explore how Denmark's hospital system has successfully combined digital innovation with new models of care to improve patient experience and clinical outcomes.

With most patients cared for in single rooms, the webinar will showcase how technologies such as digital communication tools, virtual monitoring and smart hospital infrastructure are enabling safer, more personalised and more efficient care.

Drawing on real-world examples from Danish hospitals, the session will highlight practical lessons on maintaining staff visibility, supporting patient engagement and reducing isolation, while making the most of digital solutions at scale.

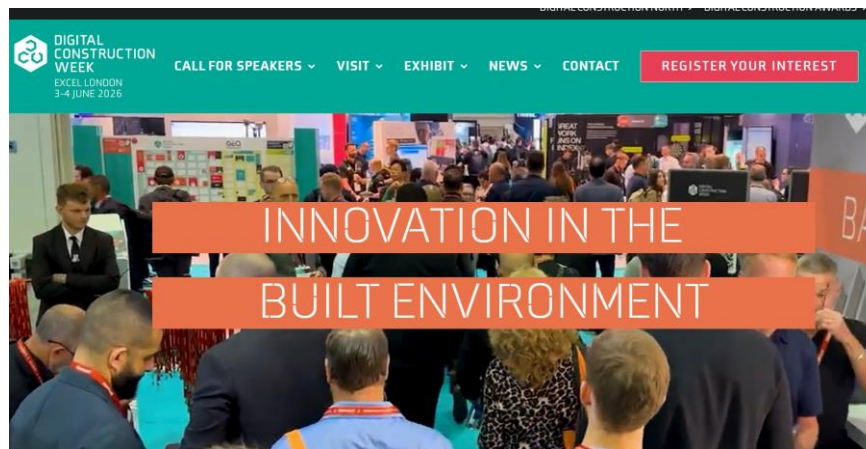
Plus ongoing discussions with **Belgium**, **Portugal** and **Denmark** (robotics / smart buildings) for future exemplars

# National Digital Events in 2026

Digital Health  
Rewired

Digital  
Construction Week

IHEEM –  
Healthcare Estates



*Healthcare Estates® 2026 Theme:*

## Mind the Gap: Are We Heading for a Two-Tier Estate?

Healthcare Estates 2026 asks a central question: Are we heading for a two-tier estate - and if so, how can the gap be bridged?

Across the NHS estate, a growing divide is emerging between Trusts building new, digitally enabled hospitals and those working within ageing, deteriorating infrastructure where the priority is simply keeping services running.

This growing divide raises profound implications for consistency of care, organisational resilience, sustainability, digital maturity and long-term system performance.