NHS
Bedfordshire Hospitals
NHS Foundation Trust

Digital Strategy
2024-2029

INTRODUCTION

Bedfordshire Hospitals NHS Foundation Trust (BedsFT) was formed in April 2020 through the merger of Bedford Hospital and Luton and Dunstable University Hospital.

As we enter our fifth year as a unified Trust, we are proud to present our updated strategy for 2024-2029. This strategy marks a significant milestone in our journey, providing a comprehensive framework for the future of our hospital services with a strong emphasis on digital transformation.

Our strategy is built using a structured framework, ensuring a clear and actionable roadmap for our digital future. It reinforces our commitment to placing our staff at the heart of everything we do, prioritising their development and wellbeing so they can continue to deliver outstanding care to our patients. We are proud of what we have achieved in recent years including deploying core clinical functions such as e-discharge, electronic prescribing & medicines administration, and electronic observations to both hospitals. We have migrated over 8,000 of our staff to a new corporate email address and supported new ways of working across many services lines. The Trust is committed to ongoing financial investment in digitalisation as an enabler of effective and efficient service provision.

We recognise the vital role of technology in shaping the future of healthcare. Our digital strategy is designed to empower our staff, enhance patient care, improve operational efficiency, and drive innovation across our Trust. By embracing digital solutions, we aim to create a more connected, responsive, and patient-centred healthcare system. We will support the unique opportunities that we are being presented with through the trusts buildings redevelopment programme which is heavily supported by digital enablement.

This strategy aligns closely with the NHS Long Term Plan and the goals of our Integrated Care System (Bedfordshire, Luton and Milton Keynes - BLMK). We remain committed to our dual role within the Bedfordshire Care Alliance and the wider BLMK Integrated Care Board (ICB). Our strategy also supports the three place-based partnerships that are leading efforts to address wider health determinants and deliver integrated neighbourhood working.

This strategy will be supported by yearly business plans which provide a more near-term view of priorities, adapting as necessary to the changing demands of our environment. The six key missions that form the foundation of our strategy have been created and refined to enable our organisational goals, while incorporating emerging priorities and innovative approaches to healthcare delivery.

Left to right

Stephen Mason
Chief Nurse Information Officer

Josh Chandler
Chief Digital Information Officer

Dr Joya Bhattacharyya
Chief Clinical Information Officer

1. Digital Skills and Confidence
2. Patient-Centred Digital Records
3. Patient Engagement and Empowerment
4. Integrated Digital Care Systems
5. Technical and Cyber Security Improvement
6. Data-Driven Care Transformation

Within each of these areas, we have set out broad, high-level goals and principles, underpinned by specific objectives, strategies, and tactics all aligned to a standardised strategy framework.

OUR DIGITAL VISION

Enable our Trust in delivering patient-centred, accessible healthcare through secure, resilient, and innovative digital solutions. Empower our colleagues with the advantages of technology, fostering a caring, unified, and safe environment to be proud of.

OUR TRUST VALUES

Teamwork
Honesty & Openness
Respect
Inclusivity
Valuing People
Excellence

OUR MISSIONS

Digital Skills and Confidence
Equip our people with the skills and confidence to succeed in a digital workplace.

Patient-Centred Digital Records
Develop real-time patient-centred digital records that are complete and intuitive.

Patient Engagement and Empowerment
Enable all patients to actively participate in their personal healthcare.

Integrated Digital Care Systems
Facilitate the seamless integration of systems in the Trust and ICS to enable collaboration.

Technical Debt Reduction and Cyber Security Improvement
Reduce technical debt for enhanced patient care, operational efficiency.

Data-Driven Care Transformation
Effectively utilise complete, accurate, and relevant data to improve patient care.

These missions form the cornerstone of our strategy, guiding our efforts to enhance digital capabilities, improve patient care, and drive organisational efficiency. They represent both our ongoing commitments and our aspirations for the future, ensuring we remain at the forefront of healthcare innovation and delivery.

DIGITAL SKILLS AND CONFIDENCE

Equip our people with the skills and confidence to succeed in a digital workplace

Our first mission focuses on empowering our staff with the digital skills they need to thrive in an increasingly technology-driven healthcare environment. We recognise that our people are our greatest asset, and their ability to confidently use digital tools is crucial for delivering high-quality patient care.

Empowerment
Online Learning
Digital Skills Training
Innovation Recognition
Workforce

NHS Digital Strategy
NHS Long Term Plan

Key initiatives include:

1. Comprehensive digital skills training program: We'll develop and implement a trust-wide training program, tailored to different roles and skill levels supported by on-site staff in the place of work. This will ensure all staff have the basic digital literacy needed for their work.
2. User-friendly online learning system: We'll establish a self-service platform for ongoing digital skills development, allowing staff to learn at their own pace and convenience.
3. Digital innovation recognition: We'll implement an award scheme to celebrate staff who demonstrate exceptional digital innovation and proficiency, fostering a culture of continuous improvement.
4. Technical proficiency in the digital department: We'll invest in upskilling our IT professionals, creating clear career progression pathways to attract and retain top talent.

To measure our progress, we'll track metrics such as:

- Percentage of staff completing digital skills training
- Improvement in digital skills across the trust
- Increase in usage of key digital systems
- Number of staff-led digital innovation projects

This mission directly supports the NHS England's strategic goal of "Supporting the Workforce" by creating a digitally confident workforce. It also aligns with the NHS Long Term Plan's emphasis on improving staff experience and making the NHS a better place to work.

Implementation will be phased, starting with a comprehensive digital skills assessment to identify gaps across the trust. This will inform the development of our training programs and the online learning platform. We'll then roll out these initiatives, prioritising areas with the greatest need or potential impact.

A key aspect of our approach will be the establishment of a network of Digital Champions across departments. These champions will provide peer support, share best practices, and help drive adoption of new digital tools and processes. We'll support these champions with additional training and resources to ensure they can effectively fulfil their role.

To ensure our training remains relevant and effective, we'll regularly review and update our programs based on feedback from staff and evolving technology needs

PATIENT-CENTRED DIGITAL RECORDS

Develop real-time patient-centred digital records that make information complete, available, reliable, secure, and easy to navigate

Our second mission focuses on creating a comprehensive, integrated digital record system that puts patient information at the heart of care delivery. This mission is crucial for improving patient outcomes, enhancing clinical decision-making, and supporting the improvement of healthcare processes across our trust and local health and care partners.

Digital Records
System Integration
Data Security
Care Coordination

NHS Digital Strategy
NHS Long Term Plan

Key initiatives include:

1. Electronic Patient Record (EPR) implementation: We'll deploy a trust-wide EPR system, providing a single, unified view of patient information. This will reduce reliance on paper records, improve information accessibility, and enhance care coordination across departments and sites.
2. System integration: We'll integrate disparate clinical systems with the EPR, enabling seamless information flow, and strive to eliminate duplicate data entry. This integration will provide clinicians with a holistic view of patient information, supporting more informed decision-making.
3. Infrastructure enhancement: We'll upgrade our IT infrastructure to ensure the stability and reliability of our digital platforms. This includes improving network capacity, implementing resilience measures, and optimising system performance to support real-time access to patient information.
4. Shared Care Record adoption: We'll increase the visibility and usage of the Shared Care Record, promoting better information sharing across different healthcare providers in our region. This will support more coordinated care for patients who receive treatment from multiple organisations.
5. Cybersecurity enhancement: We'll implement robust cybersecurity measures to protect patient data and foster a security-conscious culture among staff. This includes regular security training, implementation of advanced threat detection systems, and achieving ISO 27001 certification for information security management.

To measure our progress, we'll track metrics like:

- Number of clinical areas using the EPR system
- Number of handheld devices active on the EPR systems
- Percentage of patient records that are fully digital
- Digital maturity score (e.g. DMA (Digital Maturity Assessment), HIMSS (Healthcare Information and Management Systems Society))
- Number of systems successfully integrated with the EPR
- Percentage uptime of critical systems
- Number of clinicians regularly accessing the Shared Care Record

This mission aligns with the NHS Digital Strategy's goal of "Digitise, Connect, Transform" by digitising health records and connecting them across organisational boundaries. It also supports the NHS Long Term Plan's emphasis on digitally-enabled care and improving patient safety through secure data handling.

Implementation will be phased, starting with a comprehensive assessment of our current systems and workflows. At each step of the way we will remain aligned to our responsibilities to information governance and clinical digital safety standards. We'll then proceed with the EPR implementation, prioritising high-impact clinical areas and gradually expanding across both hospital sites. Alongside this, we'll roll out our system integration initiatives and infrastructure upgrades.

PATIENT ENGAGEMENT AND EMPOWERMENT

Enable patients to actively participate in their healthcare by providing secure digital access to their records

Our third mission aims to empower patients by providing them with secure digital access to their health information and tools to actively engage in their care. This mission is central to our vision of delivering patient-centred, accessible healthcare through innovative digital solutions that reduce health inequalities in BLMK.

Patient Portal
Personalised Care
Self-Management Tools
Digital Communication

The Denny Review & The NHS Long Term Plan

Key initiatives include:

1. Patient Engagement Portal: We'll implement a secure online portal that allows patients to access their health records, manage appointments where appropriate, and communicate better with healthcare providers. This will give patients greater control and choice over their health information and care management.
2. Specialty care management: We'll develop specialty-specific modules within the portal to support patients with chronic conditions or those undergoing specific treatments. These modules will provide tailored information, self-management tools, and remote monitoring capabilities where appropriate.
3. Enhanced patient-provider communication: We'll implement secure messaging and virtual consultation capabilities, allowing patients to communicate with their healthcare team more easily and reducing the need for unnecessary in-person visits.
4. Patient Initiated Follow-Up (PIFU): We'll implement solutions supporting PIFU processes for suitable patient groups, empowering them to seamlessly initiate follow-up appointments when needed rather than attending routine appointments that may not be necessary.
5. Waiting list management: We'll develop digital tools to support more efficient waiting list management, including patient-facing features for self-service updates and appointment rebooking.

To measure our progress, we'll track metrics like:

- Number of patients registered for the Patient Engagement Portal
- Percentage of appointments booked/modified through the portal
- Patient satisfaction scores related to digital services
- Number of secure messages exchanged between patients and healthcare providers
- Number of patients enrolled in PIFU programs
- Reduction in unnecessary follow-up appointments

This mission supports the NHS Long Term Plan's emphasis on personalised care and improving access to services. We'll seek to ensure that digital solutions designed to enhance patient engagement and involvement in their care are designed to meet the needs of our local populations including minority groups, as set out in the 2023 NHS England publication - Inclusive digital healthcare: a framework for NHS action on digital inclusion

Implementation will be phased, starting with the core Patient Engagement Portal functionality and gradually adding more advanced features. We'll work closely with Patient Experience Groups to ensure the portal meets patient needs and is as accessible and user-friendly for patients as possible.

A key aspect of this mission will be ensuring digital inclusion. We'll develop strategies to support patients who may have limited digital access or skills, including offering alternative access methods and providing digital skills support where needed. Coproduction practices to encompass the patient perspective in the development will be essential for our solutions.

INTEGRATED DIGITAL CARE SYSTEMS

Facilitate the seamless integration of Trust systems to enable cross-site clinical pathways and greater connectivity with system healthcare partners

Our fourth mission focuses on creating a unified digital ecosystem within our trust and better integration with external health and care agencies, enabling efficient and secure cross-site working and improved connectivity with our healthcare partners across BLMK. This mission is crucial for delivering coordinated, high-quality care across our entire healthcare system

System Interoperability
Data Integration
Cross-Site Working
Workflow Efficiency

NHS Digital Strategy
NHS Long Term Plan

Key initiatives include:

1. Cross-site system implementation: We'll deploy single-instance, cross-site systems for key services, ensuring consistency and interoperability between our hospital sites. This will support seamless care delivery regardless of where a patient is treated within our trust.
2. Interoperability standards adoption: We'll implement and adhere to healthcare interoperability standards across our systems. This will facilitate easier data exchange both within our trust and with external healthcare partners.
3. Context-aware system launching: We'll enable clinicians to launch specialist systems directly from the EPR with relevant patient context, reducing the need to switch between multiple systems and improving workflow efficiency.
4. Integration strategy development: We'll create a trust-wide integration strategy to facilitate system connectivity and secure data sharing, both internally and with external partners. This will support more flexible and scalable integration of current and future systems.
5. Create a digital infrastructure that facilitates efficient and effective data input and access that supports continuous improvement in patient care and the positive transformation of Trust services

To measure our progress, we'll track metrics like:

- Reduction in number of systems providing the same functions
- Percentage of systems adhering to interoperability standards
- Reduction in duplicate data entry across sites
- Number of successfully integrated systems
- Staff satisfaction with cross-site digital tools

This mission aligns with the NHS Digital Strategy's goal of "Digitise, Connect, Transform" by connecting systems across organisational boundaries. It also supports the NHS Long Term Plan's emphasis on integrated care systems and seamless information sharing across care settings.

Implementation will be phased, starting with an assessment of current systems and integration points. We'll prioritise the implementation of cross-site systems for critical services, followed by the rollout of our interoperability initiatives.

A key factor in the success of this mission will be close collaboration with clinical and operational teams to ensure that integrated systems support efficient workflows and meet user needs. This mission will strengthen the links with primary and community care colleagues, we know this is a key factor of great patient care across BLMK.

TECHNICAL DEBT REDUCTION AND CYBER SECURITY IMPROVEMENT

Reduce technical debt in our organisation for enhanced patient care, operational efficiency, and security, while enabling digital innovation and transformation

Our fifth mission focuses on modernising our IT infrastructure and systems, reducing technical debt, and creating an environment that fosters digital innovation. This mission is essential for ensuring the long-term sustainability and adaptability of our digital ecosystem.

Future-Proofing
Innovation Culture
Technical Efficiency
System Modernisation

NHS Digital Strategy
NHS Long Term Plan

Key initiatives include:

1. System modernisation: We'll systematically remove unsupported operating systems and outdated software across our estate. This will reduce security risks, improve system performance, and enable the adoption of newer technologies.
2. IT estate consolidation: We'll reduce the complexity of our IT estate by consolidating systems where possible, particularly through the implementation of our EPR and other enterprise-wide solutions.
3. Proactive maintenance: We'll implement proactive monitoring and maintenance processes for all critical systems to minimise downtime and ensure optimal performance.
4. Emerging technology adoption: We'll evaluate and implement emerging technologies such as artificial intelligence, machine learning, and Internet of Medical Things (IoMT) devices where they can provide tangible benefits.
5. Cyber Security Strategy: We will implement a Cyber Security Strategy that will improve cyber culture in the workforce, manage cyber security risks, effectively detect cyber events, protect against cyber-attacks to minimise the impact of adverse cyber security events.

To measure our progress, we'll track metrics like:

- Percentage reduction in systems running on unsupported operating systems
- Average age of IT infrastructure components
- Number of legacy systems decommissioned
- System uptime and response times
- Number of new technologies piloted
- Return on Investment (ROI) from digital innovation projects
- Number of Cyber incidents due to technical debt
- Delivery of the Cyber Security Strategy

This mission aligns with the NHS Digital Strategy's goals of "Enhance System Performance" and "Promote Innovation". It also supports the NHS Long Term Plan's focus on research and innovation and making the NHS a better place to work by providing staff with modern, efficient tools.

Implementation will be phased, starting with a comprehensive audit of our current IT estate to identify areas of technical debt and prioritise modernisation efforts. We'll then proceed with a rolling program of system upgrades and consolidation.

The Digital Innovation Hub will be established early in the process to begin exploring new technologies and use cases. We'll create a structured approach for evaluating, piloting, and scaling innovative solutions, ensuring that we balance innovation with practical considerations of integration, security, and clinical benefit.

DATA-DRIVEN CARE TRANSFORMATION

Effectively utilise complete, accurate, and relevant data to improve patient care and transform services

Our sixth and final mission focuses on harnessing the power of data to drive improvements in patient care, operational efficiency, and strategic decision-making. This mission is crucial for realising the full potential of our digital and business intelligence capabilities to successfully transform care

Data Integration
Cross-Site Working
Workflow Efficiency
System Interoperability

NHS Digital Strategy
NHS Long Term Plan

Key initiatives include:

1. Data warehouse expansion: We'll enhance our data warehouse capabilities to integrate data from across our trust, creating a comprehensive repository for analysis and reporting.
2. Advanced analytics implementation: We'll develop and deploy advanced analytics capabilities, including predictive models and machine learning algorithms, to support clinical decision-making and operational planning. This will be supported by the Federated Data Platform which is a National priority.
3. Data quality improvement: We'll implement robust data quality processes to ensure the accuracy, completeness, and reliability of our data across all systems.
4. Real-time dashboards: We'll create comprehensive, real-time dashboards for key performance indicators, enabling data-driven decision-making at all levels of the organisation.
5. Population health management: We'll use data analytics to identify health inequalities and generate insights to support targeted interventions and resource allocation.

To measure our progress, we'll track metrics like:

- Percentage of key data fields meeting quality standards
- Number of operational decisions supported by data analytics
- Usage statistics for data dashboards and reports
- Number of predictive models deployed in clinical or operational settings
- Improvements in key health inequality metrics identified through data analysis

This mission aligns with the NHS Digital Strategy's goal of "Enhance System Performance" through better use of data. It also supports the NHS Long Term Plan's emphasis on population health management and reducing health inequalities.

Implementation will be phased, starting with the expansion of our data warehouse and the establishment of robust data governance processes. We'll then progressively implement advanced analytics capabilities, prioritising high-impact areas such as patient flow optimisation and clinical risk prediction.

A key factor in the success of this mission will be developing a strong data culture across the trust. We'll provide training and support to staff at all levels to improve data literacy and promote data-driven decision-making.

Data ethics and governance will be central to this mission. We'll establish clear protocols for data use, ensuring that all analytics activities comply with relevant regulations and ethical standards. We'll also implement robust data privacy measures to protect patient information.

ROADMAP

Enable our Trust in delivering patient-centred, accessible healthcare through secure, resilient, and innovative digital solutions. Empower our colleagues with the advantages of technology, fostering a caring, unified, and safe environment to be proud of.

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- P1 — Set up a Digital Transformation Board to oversee the strategy
- P1 — Launch an engaging "Digital Skills for All" training program
- P1 — Select an Electronic Patient Record (EPR) system and plan rollout
- P1 — Strengthen our cyber defences to protect patient data
- P1 — Introduce a user-friendly Patient Portal with online appointment booking

Phase 1: Foundation and Quick Wins (Year 1: 2024-2025)

- P1 — Upgrade the infrastructure to support new digital services
- P1 — Appoint Digital Champions in each department to drive change
- P2 — Roll out EPR across all departments in a phased approach
- P2 — Integrate key clinical systems with the EPR for a single patient view
- P2 — Launch the full Patient Portal with online access to health records

Phase 2: Core Systems Implementation (Years 2-3: 2025-2027)

- P2 — Digitise key clinical pathways that span across our two hospitals
- P2 — Set up a secure data platform for advanced analytics
- P2 — Introduction of e-prescribing and closed-loop medication administration
- P2 — Pilot remote monitoring for patients with chronic conditions
- P2 — Streamline end-to-end digital processes for elective care pathways

Phase 3: Innovation and Optimisation (Years 4-5: 2027-2029)

- P3 — Apply artificial intelligence to clinical decision support systems
- P3 — Expand telemedicine across more specialties and patient groups
- P3 — Introduce wearables and remote monitoring for inpatients
- P3 — Contribute data to regional population health management initiatives.
- P3 — Establish a Digital Innovation Hub to evaluate emerging technologies.

WHAT THIS MEANS

Enable our Trust in delivering patient-centred, accessible healthcare through secure, resilient, and innovative digital solutions. Empower our colleagues with the advantages of technology, fostering a caring, unified, and safe environment to be proud of.

OPERATIONAL TEAMS AND SYSTEM PARTNERS

- I will be able to access information and benefit from the digitised systems and services
- I will be able to connect clinical pathways to integrate and enable system-wide transformation
- I will have access to accurate and robust data to underpin service development
- I will have access to training to enable greater degree of self-service in accessing and interrogating data

PATIENTS AND CARERS

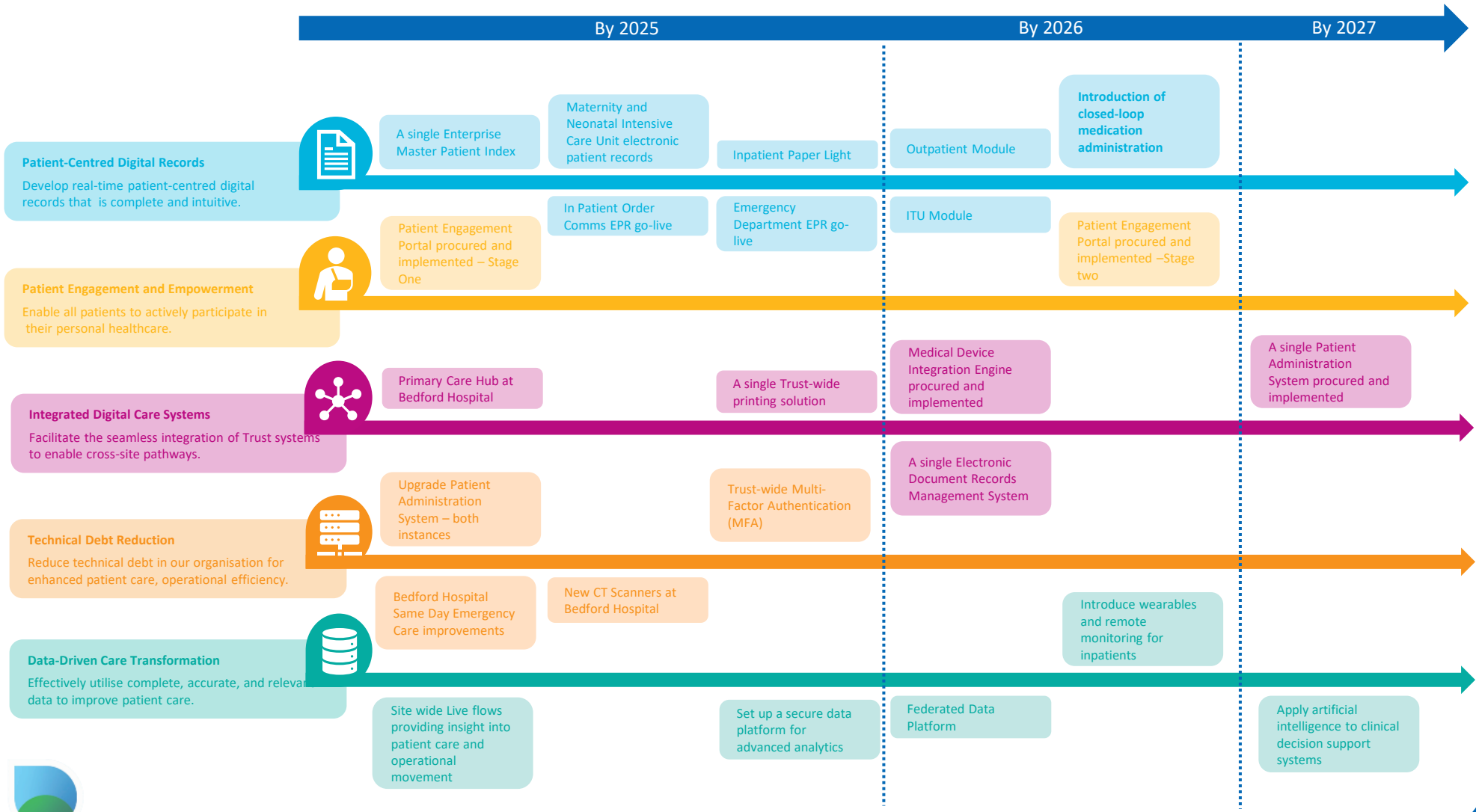
- I will have greater access to my health records and be empowered to manage my health and care offering
- I will receive results and information digitally
- I will be able to change my clinic appointments
- I will have access to video consultation
- I will not be excluded if I do not have the right skills or resources to digitally engage as there will be alternative options
- I will be able to work in partnership with my clinician to manage my health
- I will have access to online information and videos detailing how to use digitally enabled healthcare services
- I will be enabled to receive appropriate remote care in my home led by the hospital through digital technology
- I remain assured my health records continue to be kept in a safe and secure environment

ADMINISTRATIVE WORKFORCE

- I will be able to enter information once as key software applications will be integrated for the sharing of information
- I will have access to single Trust, cross site digital systems that enable seamless working whether on a trust site our accessing remotely, such as Erostering and scheduling
- I will have access to automation software to help reduce the burden of administrative tasks
- I will be able to send clinical letters and correspondence digitally

CLINICAL WORKFORCE

- I will be provided education and training to support digital adoption and transformation
- I can actively contribute to the co-production and co-design of digital ways of working
- I will have seamless access to relevant information at the point of care to support the care I deliver to my patients
- I will have access to artificial intelligence and precision medicine to provide timely and accurate care to my patients
- I will have access to optimised digital technology that reduces burnout, reduces workforce pressures and increases time for value added services (e.g patient care, improved staff satisfaction)
- I will have access to clinical decision support tools that promote the use of best practice and evidence based and shared decision making
- I will be enabled to work flexibly, remotely and between hospital sites

ROADMAP

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