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DIGITAL & IT STRATEGY 2022-2025



STAKEHOLDER ENGAGEMENT AND ALIGNMENT

STAKEHOLDER ENGAGEMENT

- The Digital Ambitions report was accepted by Trust Board in August 2020 as the direction of travel for the next few years.
- Since then the Trust has refreshed its strategy and thus the digital strategy has been updated to reflect the new direction and respond to the digital ambitions in a post Covid19 pandemic environment
- The NHS Transformation Directorate (pka NHSX) have developed a What Good Looks Like (WGLL) framework to accelerate digital and data transformation thus SWB digital strategy and the Black Country ICS Digital Strategy will be underpinned by these guiding principles and deliverables
- The development of the 2022 SWB Digital Strategy has been in collaboration with the following:
 - Executive colleagues, particularly to underpin the strategic delivery programmes
 - Committees: Digital, Finance and Investment, Group Digital Committees
 - Departmental: Patient engagement, communications, pharmacy, and informatics
 - Engagement with internal and external stakeholders, including patients, will be ongoing through the delivery of this strategy
 - Endorsement has been received by Digital Committee and Clinical Executive Leadership in June 2022

TRUST STRATEGIC ALIGNMENT

Digital is an enabler to support the Trust strategic pillars for patients, people, and population, and will be flexible in response to the strategic plans as these develop further. The aims of the digital plan are as follows:



Implement technologies that are **easy to use** and help our people to do their jobs more easily



Make the most of digital technologies to **transform the delivery of care** and patient outcomes, helping to understand our population and their needs, and keep them in the best possible health



Achieve a core level of **digitisation in every service** to make our work easier and safer

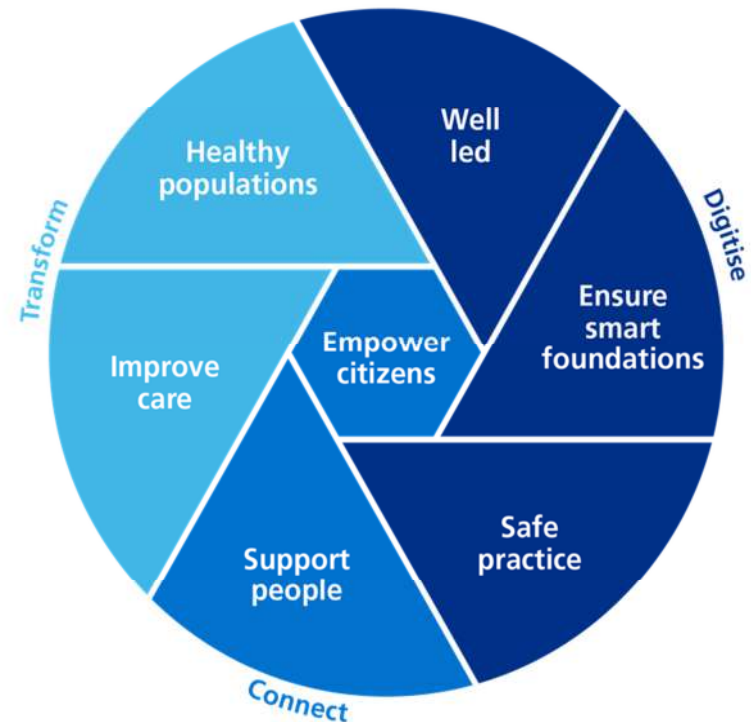


Support our partnerships in **linking our information together** so that we can all see a full picture of health and reduce inefficiencies



NHS TRANSFORMATION DIRECTORATE - WHAT GOOD LOOKS LIKE (WGLL) FRAMEWORK

- The aim of this framework is to accelerate digital and data transformation across the ICS
- It will underpin the Black Country ICS digital strategy to support levelling up and collaboration of digital solutions across organisational boundaries
- The seven success measures each have several deliverables supporting the functions of digitising, connecting and transforming





DIGITAL STRATEGY VISION

VISION FOR OUR PATIENTS

- The vision for our patients is to have ease of access to and use of digital tools to the information they need to manage their health and ill-health and navigate and interact with our services.
- This vision will form the basis of all digital projects over the next 3 years
- An example patient story is outlined as follows:
 - Easy access to a digital portal – a single point of entry to a variety of applications
 - View and amend appointments and choose type of appointment
 - Send messages and questions to my clinical team
 - See results, medication and clinical information about me
 - Complete surveys and documents to help enable my healthcare 'visits' (appointments, inpatient etc) more efficient
 - Have access to a variety of applications whilst an inpatient such as entertainment, order my meals, call the nurse, video call family and friends
 - View healthcare information about my condition such as leaflets, instructions, videos

VISION FOR OUR STAFF

- The vision for our people is to have good digital skills and ease of access to digital systems and technology that provide to improve care and add value to their work
- This vision will form the basis of all digital projects over the next 3 years
- An example people story is outlined as follows:
 - Easy access to a portal / single digital point of entry to a variety of applications and information such as the EPRs, my rota, policies, room booking, communicate with colleagues
 - Devices that enable and encourage mobility (small but effective)
 - Patient clinical systems are integrated to avoid missing vital clinical information
 - Easy onboarding process when I join, move and leave
 - Systems use innovative technology such as AI, RPA, chatbots to create efficiencies for me
 - Robots and robotics help with the menial but necessary tasks
 - All these elements help add value to my job – more time dealing with patients, making a difference to people



AIMS, OBJECTIVES AND OUTCOMES

OUR PATIENTS – AIMS, OBJECTIVES & OUTCOMES

- Enable the interaction for our patients with our services to be easier and more accessible through a single digital front door and online tools to navigate our services, understand their healthcare journey and find information at a time to suit them
- For patients, and their carer's, to be able to access their information and interact with services through secure digital portals
- For patients to be able to better manage their own health, well-being and ill-health through easily obtained information to keep them well and reduce ill-health
- To support patients less digitally able to receive the same benefits through colleague collaboration and identifying alternative solutions

Outcomes

Save patients time and reduce inconvenience

Improve ability for patients to communicate with clinicians

Improve the ability for patients to manage their own condition

Improve patient health outcomes

Reduce digital inequalities

OUR PEOPLE – AIMS, OBJECTIVES & OUTCOMES

- Optimise the usage of key EPR systems through system improvements and user training, incorporating the levelling up of digital skills
- Enable our people to easily access, find and record information about their patients when they need it through integration of key EPR systems and deployment of the Shared Care Record
- Enable improved collaboration between health and social care staff through easy-to-use digital communication tools
- Automate repetitive and mundane tasks across staff functions such as clinical, pharmacy and IT through use of technologies such as AI, RPA and machine learning
- Enable our people to remotely monitor and respond through secure system management such as for pharmacy and IT teams
- Develop digital identity to enable user authentication and support the starters, movers and leavers process and enable a digital passport
- Ensure systems and equipment are up to date and in good working order, actively monitoring and easy for our people to obtain and find

Outcomes

Utilise clinical records and associated applications with ease

Our people communicate with each other with ease and improve responsiveness for care

Reduce manual tasks to increase time to care directly and indirectly

Enable SWB to be sustainable and smart hospitals for the future

OUR POPULATION - AIMS, OBJECTIVES & OUTCOMES

- Enable our population to stay at home for longer and to safely return home from hospital sooner, supported by using digital solutions such as remote monitoring and virtual wards
- Support resilient and thriving communities through our Place based strategy enabled by seamlessly sharing appropriate information with partners
- Underpin the Vision for Information to support the use of Big data to enable population health management
- Contribute to the sustainability agenda through a range of initiatives such as reducing the need for travel, use of paper and reprovisioning devices

Outcomes

Identify population trends and correlations to target interventions

Improve pathways for patients between providers

Enable care to be delivered out of hospital

Reduction in environmental impact

2022/23

PRIORITY PROJECTS AND PROGRAMMES FOR 2022/23

OUR PATIENTS – PRIORITY PROJECTS

Develop a business case for a digital platform which enables all patient facing applications to be accessible – a single digital front door

Complete phase one of the Digital Patient Improvement Programme to digitise print communication with patients

Initiate phase two of the Digital Patient Improvement Programme to enable two-way communications – enabling appointment management supporting PIFU

Initiate a review of and develop a business case for the patient portals – access to patient's own clinical record

Procure and deploy an entertainment and communications system for inpatients in particular for MMUH

Redesign the Trust website

OUR PEOPLE – PRIORITY PROJECTS

Initiate an EPR Optimisation programme - with an initial focus on improving use and functionality of Unity and SystemOne

Develop the business case to update or replace the PAS

Develop an improved digital process utilising automation for prescribing, dispensing and administration for medicines management for inpatients, outpatients and community service provision

Support the delivery of the MMUH Smart hospital and Acute Care Model agendas

Integration between Unity, SystemOne and iPM PAS particularly addressing alerts and safeguarding

Widely deploy unified digital communication tools for clinical advice and information sharing including clinical images

Deploy Allocate rostering tool to facilitate more effective diary management

Continue to reduce the reliance on paper-based processes including the deployment of eConsent and eReferrals

Continue to deploy O365 and in particular develop a case for change for the now outdated reliance on Access Databases

Redesign the staff intranet to ensure ease of access to information and systems

Confirm the requirements for devices and applications that need to be accessed in all care settings

Trial Unity PowerChart Touch on mobile devices

Upgrade or replace the now outdated Pyxis pharmacy supplies machines

Imaging workflow improvements – notably PACS reporting, mobile CRIS, and cross-organisation imaging sharing

OUR POPULATION – PRIORITY PROJECTS

Establish a SWB team to proactively review and deploy the Shared Care Record across the Trust; and support the ICS to ensure integration across organisations

Continue to deploy and widen the remit of remote monitoring to support the management of long-term conditions

Continue to support care out of hospital through the ongoing development of virtual wards

Enable digital solutions to support the delivery of the Care Navigation Centre

Develop digital requirements to enable partners across Sandwell Place to share information and support the care of those in the community

Develop digital requirements to ensure IT systems capture the required data to meet the Vision for Information

TECHNOLOGY FOUNDATIONS – PRIORITY PROJECTS

IT support desk improvements offering self-service help and chatbot

Asset management tool

End-user virtual 'shop' for equipment requests

Continue cloud migration to achieve cloud first guiding principle in a hybrid approach

Removal of unsupported operating systems

Implement Internet of Things (IoT) for MMUH such as device tracking

Key 'gold' system upgrades – Unity (MPages and Code), Medisight and Rhapsody

Cyber security improvements ensuring DSPT compliance

Medical device connectivity

Switchboard migration

Device review and refresh

Remove the reliance on CDA / CSS with improved document management system

Pathology system (LIMS) implementation and integration with Unity

Skilled permanent workforce, particularly infrastructure staff, to reduce reliance on contractors

Develop automation processes for proactive monitoring and remediation for infrastructure and medical devices



FINANCIAL CONSIDERATIONS

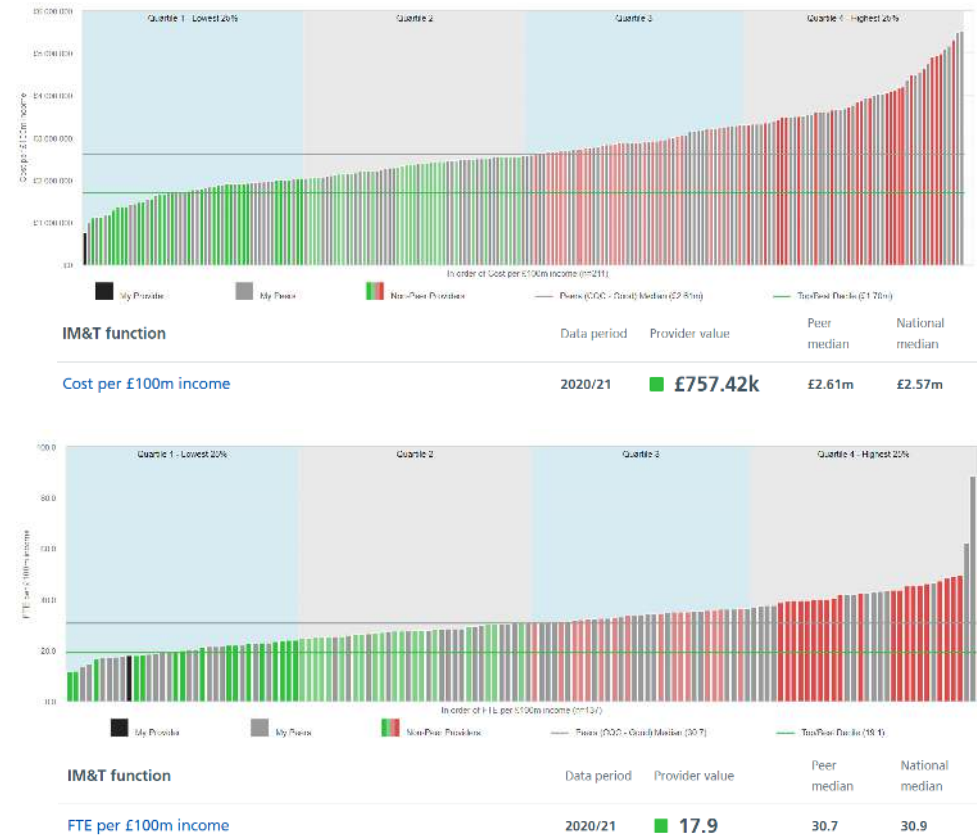
FINANCIAL CONSIDERATIONS – OVERVIEW

- £12.2m Revenue budget provides sufficient funding for our substantive staff (excluding a small cohort whose salaries are Capitalised.) All existing service and software contracts are also provisioned for. 22/23 budget reflects and uplift of £1.7m vs 21/22, driven largely by the increasing cost of IT services, rather than investment or innovation.
- £4.5m Capital budget will enable or support several our priority projects in 22/23. However, a digitally focused Trust strategy will not be achievable without steady growth of Capital investment. 22/23 budget is £1.3m lower than in 21/22, and the current 5-year Capital plan sees incremental decline year on year. Contingency is expected to be required; in particular for MMUH, given the unknowns of opening a new hospital site.
- Whilst there is recognition that significant investment will be required, the full burden will not rest solely with SWB. In 21/22 Informatics successfully won £400k of Capital and £250k of Revenue funding through external bids. The intention is to further develop this function, taking forward business cases not just internally, but wherever possible to external funding opportunities including at ICS, Regional and National level.

22/23	£m
Revenue	£12.2
Staff	£4.0
Software Commitments	£3.0
Cerner	£2.8
Telephony/Data Lines	£1.2
Cyber Security	£0.7
Cloud	£0.5
Innovation/Contingency	£0.0
Capital	£4.5
MMUH	£1.5
Funded projects	£1.4
Infrastructure Commitments	£0.6
Continual Device Replacement	£0.5
Staff costs	£0.4
Innovation/Contingency	<£0.1
	£16.7m

FINANCIAL CONSIDERATIONS - BENCHMARKING

- Although not a perfect measure nor an exact science, the best benchmarking comparator available to us is the NHS Model Hospital tool. It can be used to determine the cost per organisation of the IM&T function (Informatics) and provides a common basis for comparing the cost of this function between different organisations.
- The data comes from many sources including reference costs, ESR and annual accounts. Much of the IM&T data was collated through national corporate services data collection, with the SWB submission being provided to NHSI in August 2021.
- At a high level and at the time of data collection, SWB Informatics were:
 - In the lowest quartile in terms of the comparable number of FTE within the function; 17.9 FTE per £100m income vs national median of 30.9.
 - The lowest cost function in the national data set; costing £0.76m per £100m income vs national median of £2.57m.



FINANCIAL CONSIDERATIONS – FUNDING REQUIREMENTS

If agreed, the following priority projects represent potential cost pressures that would need to be met through internal investment, external funding or generation of income:

- **Delivery of the patient focused projects:**

- Digital patient improvement programme
- Clinical portal and single digital front door
- MMUH patient entertainment and communication
- Website

- **Delivery of the people focused projects:**

- EPR optimisation and extension
- PAS replacement
- ePrescribing and improved medicines management
- Smart Hospital and ACM
- Imaging workflow improvements
- Clinical Unified Comms
- eConsent
- Intranet

- **Delivery of the population focused projects:**

- Shared Care Record roll-out
- Digital solutions for Care Navigation Centre
- Digital solutions in the community

- **Delivery of the technology foundations:**

- Support desk improvements
- Removal of unsupported operating systems
- Medical device integration
- Switchboard migration
- Upgrades – such as for Rhapsody
- Automation

FINANCIAL CONSIDERATIONS – FUNDED PRIORITY PROJECTS

- Current funding will enable or support the following priority projects:
 - Business case development – including Digital Platform and PAS
 - Office 365
 - Allocate Rostering Tool
 - Powerchart Touch
 - Remote monitoring
 - Scheduled upgrades – Unity and Medisight
 - Asset Management
 - Virtual shop for equipment requests
 - Ongoing Cloud migration
 - Cyber Security Improvements and DSPT compliance
 - Device review and refresh
 - Limited aspects of MMUH, specifically network and devices

FINANCIAL CONSIDERATIONS – LIKELY COST MODEL

- In order to deliver on the ambitions outlined, it is expected that the below levels of funding may be required:
 - £1.8m per annum in additional FTE to bring SWB in line with national median, enabling backlog of SCRs to be addressed and resource allocated to priority projects.
 - £2.0m per annum in additional Capital investment to support priority projects and enable further innovation.
 - £6.0m over the next 2 years for MMUH, to support the introduction of a Mobile DAS, smart hospital capability, device tracking, patient entertainment and other expectations.
 - £14.0m over the next 3 years to enable extension, optimisation and integration of the Cerner EPR and introduction of Cerner PAS. A significant proportion of this is expected to be met by the ICS.



GUIDING PRINCIPLES AND CURRENT CHALLENGES

GUIDING PRINCIPLES

- **Owned by the organisation to ensure clinical, operational and IT involvement from conception through to delivery, utilising best practice of:**
 - Robust governance and delivery programmes, including ongoing review of digital risks and incidents
 - Digital change agent resource embedded across the organisation
 - Training and guides are relevant, up to date and easy to navigate
 - Iterative approach (agile) to development and implementation of solutions to support early realisation of benefits
 - Value for money and affordable
 - Adherence to appropriate data governance and retention guidelines
- **Technology best practice principles of:**
 - Applications are secure at the point of access, device agnostic, and platform independent
 - Systems are cyber secure, resilient and utilising supported versions (N-2): utilising no more than two versions behind the current supplier version
 - A cloud first approach and data backed-up (3-2-1 rule - 3: one primary backup and two copies 2: Save backups to two different types of media. 1: Keep at least one backup file offsite)
 - Actively support interoperability of systems
 - Utilise the latest innovative technology such as IoT, AI, RPA, wearables, virtual assistance and robotics

CHALLENGES AND POTENTIAL SOLUTIONS

CHALLENGES	POTENTIAL SOLUTIONS
The IT department appears to be treated as a reactive function within the organisation. Requests are often received as a 'shopping list' rather than being part of the exploration to help improve or even transform services	Involving a representative from IT in digitally enabled projects and change initiatives will facilitate improved identification and deployment of appropriate digital solutions
Groups sometimes work in silo and purchase IT solutions for their own need which may have a cross-group dependency and without IT knowledge	Procurement of all digital and technical solutions to be flagged to the IT Management Team for approval, and sharing with IT SMT for visibility and management
The capacity and expertise within the IT department to maintain the IT estate is already stretched, thus supporting development and implementation of innovative solutions is a further challenge	Agree the deliverables of the IT department, then develop business cases to support the increase in associated funding and workforce
The governance arrangements and change management capacity across the organisation to manage digitally enabled projects is variable which leads to delays in initiating and delivering projects	Priorities for delivery are agreed by Digital Committee, following strategy approval; projects and change management teams are established and report to Digital Committee
Barriers are created by the paternalistic view of the healthcare service in terms of what information the patient should have about themselves, and the data sharing rules and regulations that cut across patient pathways	Create a vision to support an ongoing challenge to such barriers to facilitate a transition to a more streamlined patient pathway



ADDRESSING DIGITAL INEQUALITIES

ADDRESSING DIGITAL INEQUALITIES

- Addressing digital inequalities and ensuring inclusion will form a golden thread throughout all digital initiatives
- Equality impact assessments (EIAs) will be completed for each project and programme
- Consideration of each implementation will be required by clinical and operational colleagues of the potential gap created by implementing digital solutions between those that can and will use the technology and those who can't and won't
- Solutions to bridge the gap will include both digital enablers and non-digital solutions. Freeing staff time for those who are digitally able should enable time to be provided to those who are not
- Collaboration will be ongoing with Place Based Teams and the ICS (beyond healthcare providers) to develop and implement initiatives to reduce digital inequalities across our population

BIBLIOGRAPHY

NHS References

- NHS Long Term Plan. Chapter 5: Digitally-enabled care will go mainstream across the NHS <https://www.longtermplan.nhs.uk/online-version/chapter-5-digitally-enabled-care-will-go-mainstream-across-the-nhs/>
- NHSD Strategy Outline <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/our-strategy>
- NHSX Strategy to digitise, connect and transform <https://www.nhsx.nhs.uk/digitise-connect-transform/our-strategy-to-digitise-connect-and-transform/>
- NHSX (to be NHS Transformation Directorate) What Good Looks Like Framework <https://www.nhsx.nhs.uk/digitise-connect-transform/what-good-looks-like/what-good-looks-like-publication/>
- NHSEI ICS Population Health and Place Development Programme Module D March 2022

Other references that may be of interest

- Community patient platforms that enable sharing of healthcare information by self-population [information https://www.patientslikeme.com/](https://www.patientslikeme.com/)
- Moxi, the Robot to help nurses <https://www.fastcompany.com/90372204/a-hospital-introduced-a-robot-to-help-nurses-they-didnt-expect-it-to-be-so-popular>
- Babylon health GP at Hand (virtual network of GPs) <https://www.gpathand.nhs.uk/> and <https://www.england.nhs.uk/london/our-work/gp-at-hand-fact-sheet/>
- Lego Serious Play to support creative thinking <https://www.youtube.com/watch?v=wsLE6ovLDZU>