

Board of Directors (in Public)

Item 3.5

Subject: Interim Digital Strategy
Date of meeting: Tuesday 24th September 2019
Prepared by: Gregg Holland, Chief Information Officer
Presented by: Claire Wilson, Chief Finance Officer
Purpose of the report: For approval

BAF Ref	Impact on BAF
1 to 5	The digital strategy is a key enabler to the delivery of Trust strategic objectives.

1. Executive Summary

The Trust is in the process of refreshing its organisational strategy for the next 5 years and this will be reviewed by the Board of Directors in its November 2019 meeting. A key enabler to delivering this will be the digital infrastructure and culture which underpins and facilitates the achievement of our ambitious vision.

The Chief Information Officer and his team have been working with Trust colleagues and other stakeholders to develop a draft digital strategy which is scheduled to be finalised alongside other key enabling strategies in January 2020. This paper sets out the current draft of the Digital Strategy in order to allow review and feedback prior to the conclusion of the strategic planning process by the end of the calendar year.

The Board of Directors are asked to endorse the direction set out in the interim Digital Strategy in Appendix 1 and note that the final version of the strategy will be presented to the Board of Directors in January 2020 in line with the Trusts Strategic planning timetable.

2. Introduction

Liverpool Heart and Chest Hospitals NHS Foundation Trust is rightly proud of its current digital adoption and maturity. Key highlights include:

- 6 year mature Electronic Patient Record
- Multiple clinical monitoring device integration
- Robust PAS with touch enabled electronic bed management
- 99% paper free clinical care
- HIMMS Level 5/6
- Strong digital leadership & governance through Chief Information Officer, Chief Clinical Information Officer, Chief Nursing Information Officer and Clinical Safety Officer

This Digital Strategy provides the decision-making framework from 2019 to 2024, aligned with the NHS Long Term Plan and 'Digit@ll', the Cheshire and Merseyside STP digital plan. Many other organisations are planning to deliver the level of digital working that is already in place at LHCH; this digital strategy is a key enabler in delivering the objectives of the LHCH Strategic Plan and will focus on defining the next ambitious stage in our digital journey in support of outstanding, family and patient centred care.

3. Background

3.1 NHS Long Term Plan

The NHS Long Term plan clearly sets out the mandate for digital as a core element of the plan to 2024 setting out the key priorities between 2019 and 2024.

The table below highlights the key deliverables.

Milestones for digital technology

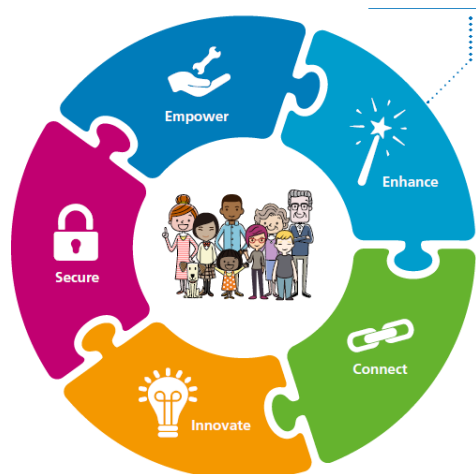
- During 2019 we will introduce controls to ensure new systems purchased by the NHS comply with agreed standards, including those set out in The Future of Healthcare.
- By 2020, five geographies will deliver a longitudinal health and care record platform linking NHS and local authority organisations, three additional areas will follow in 2021.
- In 2020/21, people will have access to their care plan and communications from their care professionals via the NHS App; the care plan will move to the individual's LHCR across the country over the next five years.
- By summer 2021, we will have 100% compliance with mandated cyber security standards across all NHS organisations in the health and care system.
- In 2021/22, we will have systems that support population health management in every Integrated Care System across England, with a Chief Clinical Information Officer (CCIO) or Chief Information Officer (CIO) on the board of every local NHS organisation.
- By 2022/23, the Child Protection Information system will be extended to cover all health care settings, including general practices.
- By 2023/24 every patient in England will be able to access a digital first primary care offer (see 1.44).
- By 2024, secondary care providers in England, including acute, community and mental health care settings, will be fully digitised, including clinical and operational processes across all settings, locations and departments. Data will be captured, stored and transmitted electronically, supported by robust IT infrastructure and cyber security, and LHCRs will cover the whole country.

From the Long Term Plan, key work for LHCH is the introduction of a digital first approach to Outpatient first appointments. Given the complex nature of the majority of services provided this will be a real exercise in changing hearts and minds to accept that remotely delivered consultations can provide the same level of specialist interaction. The converse to this is our Cystic Fibrosis patient cohort; many of whom are young adults and entrepreneurs (18-30) and would absolutely welcome appointments fitting with their lifestyle.

The LTP can also be viewed as highly supportive to both the previous and current approach the Trust has taken to the investment and belief in digital and its place as a building block of the organisations strategic direction.

3.2 Digit@ll strategy

LHCH is actively involved with the Cheshire & Merseyside STP digital programme, Digit@ll, which has 5 key workstreams to deliver region-wide digital initiatives.



A digital vision for Cheshire and Merseyside

We will:

- ✓ empower individuals to care for themselves and take control of their own health and wellbeing.
- ✓ empower our staff to have access to high quality information, equipped with the digital resources they need to deliver safe, high quality and efficient care.
- ✓ achieve a joined-up, efficient and informed patient journey, based on secure, real-time patient data.
- ✓ make Cheshire and Merseyside the area innovators want to come to learn about digital excellence.

In order to deliver our vision, we will focus on five key digital transformation themes

Whilst a relatively small organisation within the STP footprint and without many of the immediate digital / technology difficulties other organisations face, LHCH is a very active organisation with the digital agenda set out in Digit@ll and also within Collaboration at Scale workstream. In particular, very early engagement occurred with the Share 2 Care programme, where the advantages of EPR were leveraged to provide a robust flow of patient information to the shared information platform (Forcare). LHCH also provides chair person for the Digital Design Authority, the group that leads on the framework for digital systems and approaches across the C&M region.

Of particular interest to the Trust is the **secure** workstream as it aims to provide a region wide approach to Cyber Security which has the potential to offer security enhancements to all whilst delivery cost benefits due to the economies of scale.

3.3 Topol Review

As presented to the Board of Directors previously, the Topol report is a wide ranging review as to the readiness of the current health service for the introduction of 'digital medicine'. It outlines a programme of work across a number of headings:

- Telemedicine
- Smartphone Apps
- Sensors and wearable devices
- Genomics
- Speech recognition and language processing
- Virtual and Augmented Reality
- Artificial Intelligence
- Robotics

Given the Trust focus on patient and families along with a strategic drive to expand the educational offerings, married to the digital drive already present at the Trust, the Topol review presented a clear and obvious area of focus and one which features heavily in the Trusts digital strategy.

4. LHCH Digital Strategic Vision to 2024

The Trusts draft Digital Strategy is set out in Appendix 1 for review. This will be refined over coming weeks as the Trusts overall strategy is finalised and further engagement work is undertaken. However, the Board of Directors are asked to review this draft and provide any feedback at the meeting for inclusion in the final version of the strategy.

5. Resourcing

Resourcing is being considered as part of strategic planning round and will be included in the final strategy presented to the Board of Directors in January 2020.

6. Recommendation

The Board of Directors are asked to approve the interim Digital Strategy in Appendix 1 and note that the final version of the strategy will be presented to the Board of Directors in January 2020 in line with the Trusts Strategic planning timetable.

DRAFT

LHCH Digital Strategic Vision to 2024

Defining our DigitalCORE to 2024

This strategy outlines an expansive approach to Digital, moving beyond systems and products to focus on the game changers to experience and environment that digital technologies are now able to deliver and, Liverpool Heart and Chest is best placed to focus upon.

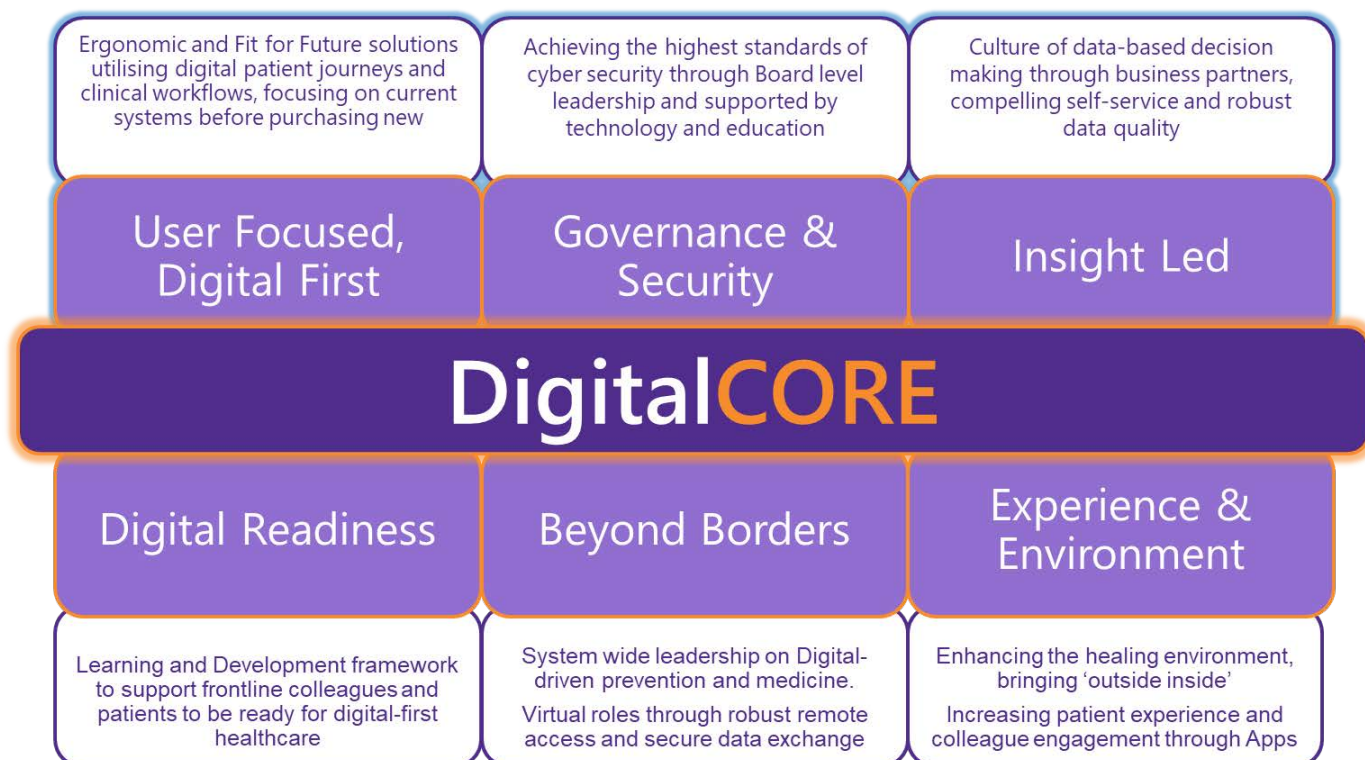
It provides a broad decision-making framework that allows for the agility required in the current health system and the rapid pace of change within the digital marketplace.

The UK in the c21 is in a unique situation where digital natives (those that have grown up with technology) are joined by digital inquisitives (those that are interested in the benefit) which has, rightly, raised the expectations of anyone who interacts with the health service as to why paper-based and non-joined up processes are still so prevalent. Whilst this is a Digital Strategy, it cannot be overstated that people – citizens, patients or colleagues, remain key to any success.

Our Core Vision: DigitalCORE

We will become a Digital Trust; using the best tools and technologies, enabling our outstanding care and research to reach beyond our borders. We will provide 'Team LHCH' with the Digital infrastructure, tools and technologies to be the best.

The 6 DigitalCORE pillars



1. User Focused, Digital First

Engender a **Digital First** approach to all Trust activities through awareness, willingness and want of colleagues through trust-wide social marketing

Deliver the NHS England goal of **digital first outpatient** appointments and beyond to LHCH services where travel and distance are patient barriers

Empower Team LHCH with a single digital communications device providing secure messaging, robust telephony and urgent notifications

Enhance working lives through deployment of **Robotic Process Automation** to remove monotony from roles and allow talent to be nurtured

Expand beyond digital dictation to use **Voice Recognition** as the basis of clinical systems data entry, automated transcription of documents and building management & control

Explore Artificial Intelligence within clinical practice through automated diagnosis providers, operationally through a **virtual assistant** and **Augmented Reality**

Review 3rd party arrangements on a routine basis to ensure both **value for money** and **quality of service**

2. Experience & Environment

Enhance the **Healing Environment** so that patients are not disconnected from the outside world or their own life through the use of audio/visual products such as digital windows and skylights in the 'Digital View'

Enhance Patient experience through LHCH App, digital wayfinding, and individually reactive environmental features

Enhance 1:1 interaction between professionals and patients through a "Pro-Social" relationship, minimising the intrusion of digital equipment through bedside devices, mobile devices, and non-keyboard input

Increase Colleague engagement through the LHCH App delivering rapid news and information and facilitating feedback and conversation

Explore Interoperability beyond clinical systems to Trust-wide systems and services creating a '**Digital Back Office**' to be proud of

Consolidate access systems to a singular entry method to both systems and estate

3. Digital Readiness

Design and **deliver TOPOlogy**; an LHCH learning framework ensuring that:

- Frontline colleagues are ready for digital medicine and a digital-first approach to healthcare delivery
- Patients have knowledge of what a digital-first NHS means to them
- Digital models of Cardiac and Respiratory healthcare delivery are designed by clinical experts
- Reputation of LHCH digital expertise grows through sharing across the region and beyond

Empower Patients to manage their condition, appointments and health records through text messaging, patient portal and LHCH App

Accreditation of **Digital professionals** through the Skills Development Network

Facilitate digitally focused apprenticeship, work experience, placements for both internal and external colleagues again supported by the skills development network

4. Beyond Borders

Empower Healthcare professionals across Cheshire & Merseyside through full engagement with shared care record and information sharing initiatives

Empower colleagues (current and potential) through remote, flexible and agile working underpinned by robust, tiered, virtual working solution "**Fibres not Floorboards**"

Expand Recruitment potential worldwide through the offer of robust remote access and secure data exchange which could transform current 9-5 services to 24/7 'follow the sun'

Support the education centre with **exemplar digital programmes**, building upon LHCH digital expertise, such as EPR Adoption and Digital Clinical Safety

Build upon tertiary expertise to take **system wide leadership** on Digital Medicine & Prevention, Care Coordination, Continuous monitoring

Embed a **Partnership & Collaboration approach** across teams, divisions and organisations (public and private) utilising existing avenues and learning to inform our approach. Approaching private partners to undertake joint work to deploy state of the art technology and position LHCH as a true digital leader

5. Governance & Security

Embed Cyber security readiness and awareness through the whole organisation through initiatives such as Cyber Month, Board Level Cyber Training

Create Cyber Security as a Service in partnership with an external partner

Undertake Enhanced Information Governance accreditation for relevant teams creating a broader knowledge base of complete IG topics

Robust Governance structure led through the Digital Healthcare Committee and supported by delivery groups for Programmes, Data Quality, Data Warehousing, Clinical Systems and Informatics

Undertake a review and consultation on the current **Information Asset Owners** alignment to Digital Services portfolio

6. Insight Led

Complete the **Information Service re-structure**, including full establishment of data management team and accommodation issues

Underpin Data-based decision making through high performing Information team, compelling self-service analytics, data science and predictive analytics

Accelerate the Business Partner model maturing from Information to Informatics to **Digital Business partners** proving an integrated service to the operational divisions

Understand our current **Digital Maturity** level using HIMSS analytics and other recognised frameworks, engaging with HIMMS Europe, other expert advisors and local GDE Trusts, then plan future programmes of work accordingly

Deploy a robust, single **content management** solution providing Inter and Intranet facing platforms supporting initiatives such as virtual boards, automated document management and clinical safety

Digital NOW	Digital NEXT	Digital FUTURE
<ul style="list-style-type: none"> • LED Skylights installed in Critical Care windowless rooms • Internal 'Google Street View' imagery taken on entire LHCH site • TOPOLOGY working group established and draft programme produced • Information Service re-structure completed • "Digital First" marketing campaign designed • Robotic Process Automation introduced in Finance and Digital Systems • 'Cyber as a Service' specification signed off • Level 1 Accreditation of Digital Services • Current remote working solutions consolidated into a tiered offer • Consolidation of video conferencing solutions begun • Assessment of mobile EPR offer undertaken with reference group of ward managers 	<ul style="list-style-type: none"> • Single digital device introduced across the Trust providing secure clinical, urgent and business communications • First installed Digital Window with audio & video simulating the view from a real window • Internal 'Google Street View' imagery available on LHCH website and actively used to reduce visitors becoming lost • Patient App offering general Trust information, CVD prevention information • Staff App offering rapid dissemination of Trust comms and early 2-way feedback • Artificial Intelligence trialled in all specialties • Digital Back Office operational and delivering real efficiencies • Increased Digital Maturity by minimum of 1 scale • Self-Service analytics portal introduced 	<ul style="list-style-type: none"> • Patients able to personalise their 'Digital View' from a catalogue of videos, their own video or connection to their own home video systems • TOPOLOGY programme a jewel in the crown of the education centre • Majority of routine data entry tasks undertaken by RPA, freeing 100s of hours of value people time, hugely role satisfaction and retention • Maximum level of digital maturity maintained and exemplar for others • Level 3 Accreditation for Digital Services and part of the assessor programme • All systems are interacted with through touch or speech, all meetings are transcribed automatically • Cardy, the virtual assistant, is welcomed to the Trust • Single ID badge allows access through and to LHCH • LHCH App merged into a single offering • Artificial Intelligence a part of all clinical workflows and supporting decision making

References (hyperlinked to source)

- [The Topol Review – Preparing the healthcare workforce to deliver the digital future, Health Education England](#)
- [Digit@II, Cheshire and Merseyside STP](#)
- [Digital Futures, Alderhey Children's Hospital NHS FT](#)
- [Digital Vision, North Bristol NHS Trust](#)
- [2019/20 Objectives, Royal Papworth NHS FT](#)
- [Digital Strategy, Whittington Health NHS Trust](#)
- [Google Street View Hospital Imagery, Walton Centre NHSFT](#)
- [Digital First 2020, Walton Centre NHSFT](#)
- [Digital Liverpool, Royal Liverpool NHS Trust](#)
- [Delivering the benefits of digital health Care, Nuffield Trust](#)
- [Future of Digital Hospitals, Deloitte](#)
- [5 Rules of Digital Strategy, Boston Consulting Group](#)
- [Humber River Hospital - North America's First Fully Digital Hospital, Intelligent Hospital TV](#)