

# LEICESTER, LEICESTERSHIRE & RUTLAND

## DIGITAL STRATEGY

2022-2025

# A bright future

for health, care and wellbeing in Leicester, Leicestershire and Rutland

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# CONTENTS

1. FOREWORD .....	1
2. INTRODUCTION .....	2
2.1 About This Document .....	3
2.2 Purpose .....	3
2.3 Consultation Process.....	3
3. NATIONAL STRATEGIC CONTEXT.....	4
3.1 NHS Long Term Plan.....	5
3.2 Integrated Care Systems .....	6
3.3 Adult Social Care Reform .....	7
3.4 NHS People Plan and People Digital Strategy .....	8
3.5 National Digital Ambitions .....	8
3.6 ‘What Good Looks Like’ Framework .....	10
3.7 ‘Who Does What’ Proposed Guidance.....	11
3.8 ‘Who Pays for What’ Proposal .....	12
3.9 Health and Care Integration .....	13
4. LOCAL CONTEXT .....	14
4.1 Leicester, Leicestershire, and Rutland .....	15
4.2 The LLR Integrated Care System .....	16
4.3 ICS System Structure.....	17
4.4 Purpose and Principles of the ICS .....	17
4.5 ICS Transformation Priorities .....	18
4.6 Operational Priorities.....	19
5. GOVERNANCE AND LEADERSHIP .....	20
5.1 ICS Governance.....	21
5.2 Digital Governance.....	22
5.3 Assurance.....	23
6. SAFETY .....	26
6.1 Architectural and Data Standards .....	27
6.2 Cyber Security .....	29
6.3 Information Governance.....	30
6.4 Commercial Management .....	31
6.5 Financial Management .....	31
6.6 Business Continuity / Disaster Recovery.....	32
6.7 Environmental Impact .....	32
7. INFRASTRUCTURE AND SYSTEMS .....	34
7.1 Front-Line Infrastructure .....	35
7.2 Cloud Architecture .....	35
7.3 Strategic Systems Landscape .....	36
8. DATA AND INFORMATION .....	37
8.1 Data Quality .....	38
8.2 Record Sharing Across Health and Care .....	38
8.3 Operational Insights.....	39
8.4 ICS Intelligence Function.....	39
8.5 Machine Learning / AI / RPA .....	40
8.6 Digital Communication and Transfer of Data.....	41
9. WORKFORCE .....	42
9.1 Digital Culture .....	43
9.2 Digitally Enabled Workforce .....	45

9.3 Digital Workforce Tools .....	46
9.4 Digital Skills .....	47
9.5 IM&T Capability .....	48
<b>10. IMPROVED CARE .....</b>	<b>51</b>
10.1 Virtual Wards .....	52
10.2 Remote Patient Monitoring .....	52
10.3 Digital Primary Care .....	53
10.4 Community Pharmacy.....	54
10.5 Integration with Voluntary Sector .....	55
10.6 Social Care.....	55
10.7 Care Homes.....	58
10.8 Mental Health .....	58
<b>11. CITIZENS .....</b>	<b>60</b>
11.1 Service and System Co-Design .....	61
11.2 Access to Information .....	61
11.3 Addressing Digital Exclusion .....	63
11.4 Public Adoption of Digital Channels.....	65
<b>12. THE WAY FORWARD .....</b>	<b>66</b>
12.1 Digital Innovation and Transformation Team .....	67
12.2 Digital Asset Optimisation.....	69
12.3 Digital Portfolio .....	70
12.4 Financial Outline .....	70
<b>APPENDIX A. UHL APPLICATIONS ASSESSMENT .....</b>	<b>71</b>
<b>APPENDIX B. 'WHAT GOOD LOOKS LIKE' MEASURES AND ACTIONS .....</b>	<b>72</b>
<b>APPENDIX C. VIRTUAL WARDS AND REMOTE MONITORING .....</b>	<b>75</b>
<b>APPENDIX D. DIGITAL ASSET OPTIMISATION ASSESSMENT.....</b>	<b>77</b>
<b>APPENDIX E. ARCHITECTURE PRINCIPLES.....</b>	<b>82</b>
<b>APPENDIX F. DIGITAL NATION UK 2021.....</b>	<b>86</b>
<b>APPENDIX G. DIGITAL ACTION PLAN .....</b>	<b>87</b>
<b>APPENDIX H. FINANCIAL FORECAST .....</b>	<b>91</b>

# GLOSSARY OF TERMS

ABBREVIATION / TERM	MEANING
BI	Business Intelligence
CDDO	Central Digital and Data Office
CDO	Chief Data Officer
CIS	Core Information Standard (see PRSB)
DHSC	Department of Health and Social Care
DITT	Digital Innovation and Transformation Team
DTAC	Digital Technology Assessment Criteria for Health and Social Care
dm+d	Dictionary of Medicines and Devices
FHIR	Fast Healthcare Interoperability Resources
HEE	Health Education England
HWB	Health and Wellbeing Board
HWP	Health and Wellbeing Partnership
ICB	Integrated Care Board
ICS	Integrated Care System
KLOE	Key Lines of Enquiry
ktCO <sub>2</sub> e	Kilotonnes of carbon dioxide equivalent
LHCR	Local Health and Care Records
LLR	Leicester, Leicestershire, and Rutland
LLRCR	LLR (Shared) Care Record
LPT	Leicestershire Partnership Trust
LTP	NHS Long Term Plan
PAM	Professions Allied to Medicine
PHM	Population Health Management
PRSB	Professional Records Standards Body
RPA	Robotic Process Automation
ShCR	Shared Care Record
TCoP	CDDO Technology Code of Practice
UHL	University Hospitals of Leicester NHS Trust
VCFS	Voluntary, Community, and Faith Sector
VCSE	Voluntary, Community, and Social Enterprise

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# FIGURES & TABLES

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## FIGURES

Figure 1 – NHS Vision for Digitally-enabled Models of Care .....	5
Figure 2 – Accelerating Adoption of Technology .....	7
Figure 3 – LLR ICB Governance Structure .....	21
Figure 4 – LLR Digital Design Governance Structure .....	23
Figure 5 – NHSX Standards and Interoperability Programme - Scope .....	27
Figure 6 – Technologies Underpinning Automation.....	41
Figure 7 – Health Informatics Workforce Themes .....	50
Figure 8 - Survey of Public attitude to accessing Health Care online.....	65
Figure 9 – Digital Innovation and Transformation Team Structure.....	69
Figure 10 - NHS @Home Operating Model .....	76
Figure 11 - Digital Nation UK 2021 Infographic.....	86

## TABLES

Table 1 - Digital Exclusion: Factors and Statistics .....	64
Table 2 - Funding Requirements Summary .....	70
Table 3 – UHL Applications EPR Replacement Roadmap .....	71
Table 4 - What Good Looks Like .....	72
Table 5 - Principles of Virtual Wards .....	75
Table 6 – Digital Asset Optimisation Assessment Summary .....	77
Table 7 - Digital Asset Optimisation Assessment .....	78
Table 8 – Architecture Principles.....	82
Table 9 - Additional Technology Funding Capital and Revenue Requirements for Three Years.....	91

# 1. FOREWORD

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In the last two years, the pandemic has forced the NHS to undertake transformation at pace in the way that it delivers its services, and technology has underpinned much of that transformation.



Working with our health and care partners we must ensure that we continue to transform culture, processes and operating models, harnessing the technologies of the internet era to respond to these raised expectations of the public, whilst recognising the impact a lack of access to technology may have on health equity.

The big challenge for the LLR ICS will be to keep the really good and innovative digital transformations, accelerate that gain by describing a clear vision for the next three years, and ensure that our staff and our population are empowered to improve care with digital innovation.

This document will set out our clear vision to enable our collective transformation.

Andy Williams  
Designate Chief Executive  
Leicester, Leicestershire, and Rutland ICS



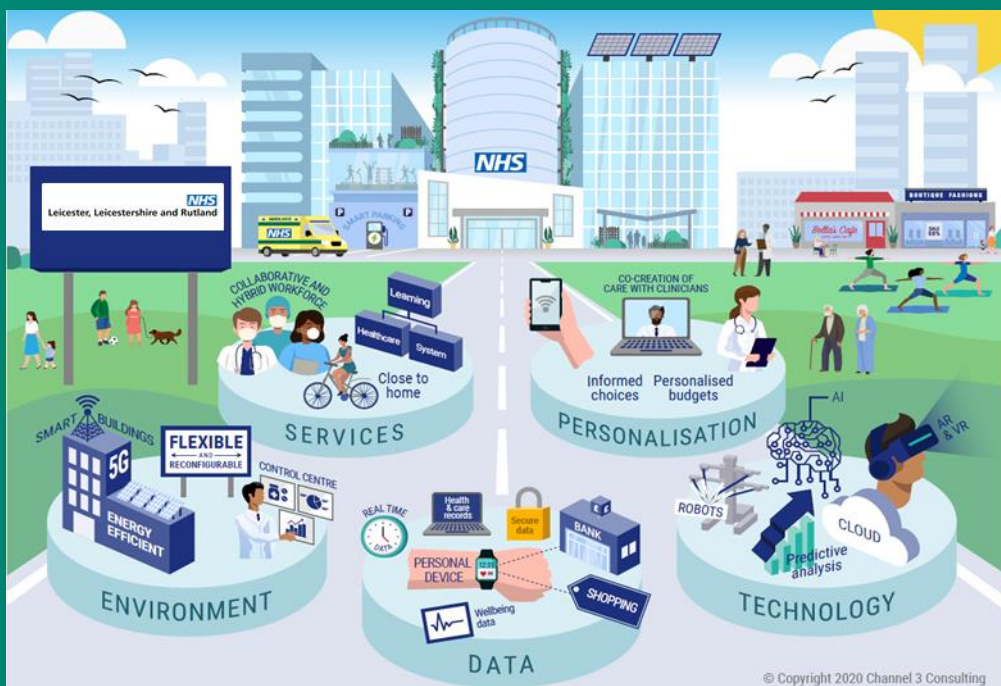
# 2. INTRODUCTION

The Leicester, Leicestershire, and Rutland Integrated Care Service (ICS) is accountable for improving outcomes, tackling inequalities, enhancing productivity in health and social care across the region.

National strategies for integration of local health and care services conforming to national policies and standards have led to the creation of ICSs.

New legislation is providing these statutory bodies with the mandate to achieve the vision of a person-focused delivery of health and social care in their region through new models of care, greater integration between partner organisations, and the use of digital tools and technology.

The Leicester, Leicestershire & Rutland Digital Strategy (2022-2025) aims to provide a unified direction for the key digital initiatives that we will deliver over the next three years, and the context for them.



## 2.1 ABOUT THIS DOCUMENT

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The 2017 NHS Five Year Forward View noted the pressures faced by the health and social care systems, the opportunities available to address those challenges, and called for better integration of General Practice, community health, mental health, and hospital services, as well as more joined up working with home care and care homes under the accountability of localised Integrated Care Systems.

Working together with patients and the public, NHS commissioners and providers, as well as local authorities and other providers of health and care services, the government has provided ICSs with new powers to plan how best to provide care, while taking on new responsibilities for improving the health and wellbeing of the population they cover.

Over the past twenty years, technology has significantly changed our lives. The COVID-19 pandemic showed how important digital interactions have become and how quickly the health and social care system can respond, from online consultations to remote working.

Although technology is an enabler of the new patterns of work and care delivery, this document will also look to ensure that people with disabilities, impairments, or existing conditions, people from minority ethnic cultures and people from low socio-economic backgrounds will not be excluded from or vulnerable to transformation.

The Integrated Care System for Leicester, Leicestershire, and Rutland has developed a strategy to deliver more integrated care for our citizens. The Digital Strategy will describe how digital tools and modern ways of working will support the aims and principles of the ICS.

## 2.2 PURPOSE

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The pandemic has shown the willingness of many patients to use and reap the benefits of digital care, indeed digital care is now an expectation of many citizens who are accustomed to these interactions in other aspects of modern life. New digital healthcare technology and services such as integrated care records must make patient experiences better.

Against a background of national strategy to improve and integrate care and leverage the benefits of modern technology, this document will highlight the key outcomes from the planned digital transformation and the actions we will take to achieve this.

The Digital Strategy will provide a consistent direction to all digital initiatives across LLR to facilitate the necessary cross-organisational collaboration to achieve our vision for improved health and social care.

## 2.3 CONSULTATION PROCESS

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In the production of this Digital and Data Transformation plan we have engaged with many partner organisations and key individuals to ensure that this document is co-designed, and our target audience will recognise their contribution reflected in our vision.

It was really important to capture current intentions and future digital ambitions and over 50 stakeholders including, technical and design groups, organisational leads, clinical leads, and operational leads were interviewed. In addition, a review of respective organisational and digital strategies was conducted. Additional artefacts were requested and reviewed where appropriate to understand roadmaps that this strategy needed to take account of.

# 3. NATIONAL STRATEGIC CONTEXT

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For some time, the government has encouraged a greater use of technology to support and improve health and social care. The 2019 NHS Long Term Plan has been followed by a series of policy documents to drive the opportunities of a vision of digitally-enabled care forwards in healthcare and social care.

The Department for Health and Social Care has set a series of ambitions to achieve this vision and has published national guidelines and frameworks to create greater integration of systems and remove barriers to digital adoption.

The creation of Integrated Care Systems as statutory bodies has enabled a cohesive system of health and social care across organisational boundaries, leading towards a vision of integrated care with the citizen at the centre rather than navigating a journey across multiple siloed providers.

The commercial sector has elevated people's expectation of how digital tools can support new ways of interacting which delivers services to a person rather than expecting the person to travel to the service provider. This model has not yet been fully matched in statutory health and social care.

The COVID-19 pandemic showed the benefits of digital tools and recent legislation has provided greater local powers to progress this further with a higher level of ICS accountability to deliver transformation in health and social care integration, including digital tools and care models.

National guidance has set standards for ICSs to achieve, and the adoption of open standards is enabling and encouraging technology solution providers to support greater data integration.



### 3.1 NHS LONG TERM PLAN

Prior to 2019, the national IM&T strategic direction was regularly refreshed but there was not a long-term strategic plan for the NHS to contextualise the digital projects. Consequently, technology improvement over the previous 20 years in health and social care had predominantly been organic and did not reflect the pace of change seen in commercial sectors.

In January 2019, the NHS published the NHS Long Term Plan<sup>i</sup> (LTP). The LTP described a sweeping vision that “Digitally-enabled care will go mainstream across the NHS” alongside 135 specific “asks” to set the digital agenda.

The LTP noted that “*the way we deliver care remains locked into the service model largely created when the NHS was founded in 1948... Digital services and data interoperability give us the opportunity to free up time and resources to focus on clinical care and staying healthy*”.

*Figure 1 – NHS Vision for Digitally-enabled Models of Care*

*In ten years’ time, we expect the existing model of care to look markedly different. The NHS will offer a ‘digital first’ option for most, allowing for longer and richer face-to-face consultations with clinicians where patients want or need it. Primary care and outpatient services will have changed to a model of tiered escalation depending on need. Senior clinicians will be supported by digital tools, freeing trainees’ time to learn. When ill, people will be increasingly cared for in their own home, with the option for their physiology to be effortlessly monitored by wearable devices. People will be helped to stay well, to recognise important symptoms early, and to manage their own health, guided by digital tools.*

The vision that was set out in the LTP has subsequently been embedded into specific plans and frameworks which are aimed at improving statutory health and social care and ensuring that digital technologies and ways of working support that improvement. This ensures that digital transformation is at the heart of future care models and reinforces the demands on the IM&T community to support these care models.

The commitment made in the LTP was that there would be:

- Comprehensive digitisation of the health and care system
- Locally based shared records supporting high quality care
- Digitally skilled workforce, supported by those with transformation skills
- Centrally delivered capabilities, where necessary
- Enabling a digital ecosystem
- Digital care plans and Personal Health Records available to patients

The subsequent NHS Long Term Plan Implementation Framework set out the approach that Integrated Care Systems were asked to take to create their strategic plans to deliver the commitments of the LTP.

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<sup>i</sup> <https://www.longtermplan.nhs.uk/>

## 3.2 INTEGRATED CARE SYSTEMS

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The 2019 LTP placed Integrated Care Systems at the centre of the delivery of the commitments by bringing together local organisations in redesigning care, improving population health, creating shared leadership, and being accountable for the actions taken.

In November 2020 NHS England and NHS Improvement published 'Integrating care: Next steps to building strong and effective integrated care systems across England'. It described the core purpose of an ICS as:

- improve outcomes in population health and healthcare
- tackle inequalities in outcomes, experience, and access
- enhance productivity and value for money
- help the NHS support broader social and economic development

The 2021 "Integrated Care Systems: Design Framework"<sup>i</sup> further described the ambitions for Integrated Care Systems to build on previous progress and to provide guidance on developing plans in preparation for the establishment of statutory ICS bodies from April 2022.

The Design Framework set clear expectations on ICSs to provide digital and data capabilities in place at system and place levels, and across provider collaboratives, including:

- A renewed digital and data transformation plan to meet 'What Good Looks Like'.
- Clear accountability for digital and data, with a named SRO with the appropriate expertise, underpinned by governance arrangements that have clear oversight and responsibility for digital and data standards and requirements for the ICS and enabling partner organisation programmes and services.
- Investment in levelling-up and consolidation of infrastructure, linked to the future ICS reference target architecture and data model, adopting a simplified cloud-first infrastructure that provides agility and frictionless cross-site working experience for the workforce.
- A shared care record that allows information to follow the patient and flow across the ICS to ensure that clinical and care decisions are made with the fullest of information.
- Ensure adherence by constituent partners to standards and processes that allow for interoperability across the ICS, and alignment to forthcoming national guidance.
- A single co-ordinated offer of digital channels for citizens across the system and remote monitoring technologies to help citizens manage their care at home.
- A cross-system intelligence function to support operational and strategic conversations, as well as building platforms to enable better clinical decisions. This will require ICSs to have linked data, accessible by a shared analytical resource that can work on cross-system priorities.
- A plan for embedding population health management capabilities and ensuring these are supported by the necessary data and digital infrastructure

The Department of Health and Social Care has recently published the government's proposals<sup>ii</sup> for health and care integration which details the new legislation which will "give ICSs stronger and more streamlined decision-making authority, and to embed accountability for system performance and delivery into the

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<sup>i</sup> <https://www.england.nhs.uk/publication/integrated-care-systems-guidance/>

<sup>ii</sup> <https://www.gov.uk/government/publications/health-and-social-care-integration-joining-up-care-for-people-places-and-populations>

accountability arrangements of the NHS to government and Parliament” with the aim of establishing the accountability of ICSs in the health and social care outcomes in their region.

### 3.3 ADULT SOCIAL CARE REFORM

The government’s 2021 policy paper “People at the Heart of Care: adult social care reform”<sup>i</sup> was presented to Parliament by the Secretary of State for Health and Social Care in December and set out the government’s ten year vision for the modernisation of adult social care to deliver person-centred care with three key objectives:

- People have choice, control, and support to live independent lives.
- People can access outstanding quality and tailored care and support.
- People find adult social care fair and accessible.

The white paper recognises the benefits of digital transformation in achieving this vision, the challenges to be addressed, and the progress that has been made:

*Figure 2 – Accelerating Adoption of Technology*

**Accelerating Adoption of Technology**

*During the COVID-19 pandemic, the use of digital technologies transformed the delivery of care and helped people stay connected with friends and family. These digital tools supported people’s care through remote monitoring, ensured care teams had the right information at their fingertips and helped services to identify those in need. Looking ahead, in a recent survey, 90% of care providers said they will continue to use technology as they have during the pandemic.*

*Although technology has been a lifeline for millions of people, it has also laid bare inequalities in access. Recent research by Age UK highlighted that the older population are still less likely to be digitally included – among those aged 75+, more than 40% do not use the internet. Office for National Statistics data shows that 14.9% people with a disability have never used the internet, compared with 6.3% of the UK population.*

*Recent research showed that 23% of care home staff cannot access the internet consistently at work. In addition, 45% of providers express concern that care staff lacked digital skills*

*Providing the right care in the right place at the right time sets out a range of measures to accelerate digitisation and adoption of technology across social care.”*

In support of the white paper, Alice Ainsworth (Deputy director for adult social care technology policy, NHSX) committed to:

- Launch a new scheme to test care technologies and scale those where there is proven benefit to people, building the case for change for local organisations.
- Ensure that at least 80% of care providers put a digitised care record in place that can connect to a shared care record.

<sup>i</sup> <https://www.gov.uk/government/publications/people-at-the-heart-of-care-adult-social-care-reform-white-paper>

- Support care homes that lack basic infrastructure to improve their broadband connections by delivering fibre upgrades. We will also work with government and industry to ensure homecare providers have the infrastructure they need to work digitally.
- Deliver a comprehensive digital learning offer to support a step-change in digital skills and confidence, including targeted digital leadership support for decision-makers who can drive cultural change at a senior level.

### 3.4 NHS PEOPLE PLAN AND PEOPLE DIGITAL STRATEGY

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The 2020 NHS People Plan set out what the people of the NHS can expect from their leaders and from each other in supporting transformation across the whole NHS to *“foster a culture of inclusion and belonging, as well as action to grow our workforce, train our people, and work together differently to deliver patient care.”*

It established a plan which focused on:

- **Looking after our people** particularly the actions we must all take to keep our people safe, healthy, and well – both physically and psychologically.
- **Belonging in the NHS** highlighting the support and action needed to create an organisational culture where everyone feels they belong.
- **New ways of working and delivering care** emphasising that we need to make effective use of the full range of our people’s skills and experience to deliver the best possible patient care.
- **Growing for the future** particularly by building on the renewed interest in NHS careers to expand and develop our workforce, as well as retaining colleagues for longer

Supporting the NHS People Plan, the NHS People Digital Strategy is currently in development to build a single cohesive strategy to unite the digital initiatives with the aim of improving the experience of the people working within the NHS.

The NHS People Digital Strategy will review the people digital tools in use, such as:

- Workforce Management & Engagement
- Enabling Staff Movement
- Workforce Deployment
- Talent Management / Career Development
- Education and Training

Ensuring that our workforce has access to the digital tools and technologies which support them as a professionals and individuals, works efficiently and reliably, and for which they are suitable skilled is a key factor in the success of achieving the future vision of the NHS.

### 3.5 NATIONAL DIGITAL AMBITIONS

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In October 2018, the Department for Health and Social Care published the policy paper *“The future of healthcare: our vision for digital, data and technology in health and care”<sup>i</sup>* which set out the government’s vision for the use of technology, digital and data within health and care with the ultimate objective of

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<sup>i</sup> <https://www.gov.uk/government/publications/the-future-of-healthcare-our-vision-for-digital-data-and-technology-in-health-and-care>

providing better care and improved health outcomes for people in England with a clear focus on improving the technology used.

To lead and coordinate the digital transformation of the NHS and Social Care that was needed to deliver this vision, NHSX was established in 2019 as the DHSC policy unit for digital health and care. While NHSX has recently been integrated with the NHS England Transformation Directorate, its missions remain the same:

- Reducing the burden on clinicians and staff, so they can focus on patients
- Giving people the tools to access information and services directly
- Ensuring clinical information can be safely accessed, wherever it is needed
- Improving patient safety across the NHS
- Improving NHS productivity with digital technology

When created, the Department for Social Care noted that “... much NHS technology relies on systems designed for a pre-internet age. Patients are not getting the care they need because their data does not follow them round the system. Change has been slow because responsibility for digital, data and tech has been split across multiple agencies, teams, and organisations. NHSX will change this by bringing together all the levers of policy, implementation and change for the first time.”<sup>i</sup>

The CEO of NHSX held strategic responsibility for setting the national direction on technology across organisations. NHSX responsibilities included:

- Setting national policy and developing best practice for NHS technology, digital and data - including data-sharing and transparency
- Setting standards – developing, agreeing, and mandating clear standards for the use of technology in the NHS
- Ensuring that NHS systems can talk to each other across the health and care system
- Helping to improve clinical care by delivering agile, user-focused projects
- Supporting the use of new technologies by the NHS, both by working with industry and via its own prototyping and development capability
- Ensuring that common technologies and services, including the NHS App, are designed so that trusts and surgeries don’t have to reinvent the wheel each time
- Making sure that all source code is open by default so that anyone who wants to write code for the NHS can see what we need
- Reforming procurement – helping the NHS buy the right technology through the application of technology standards, streamlined spend controls and new procurement frameworks that support our standards
- Setting national strategy and mandating cyber security standards, so that NHS and social care systems have security designed in from the start
- Championing and developing digital training, skills, and culture so our staff are digital-ready
- Delivering an efficient process for technology spend, domain name management, and website security

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<sup>i</sup> <https://www.gov.uk/government/news/nhsx-new-joint-organisation-for-digital-data-and-technology>



### 3.6 'WHAT GOOD LOOKS LIKE' FRAMEWORK

NHSX's What Good Looks Like (WGLL) framework emphasises the role of ICSs as the centre of decision-making on digital strategy and related investment decisions. ICS boards must ensure investment is maximised in technology and innovation to improve the experience of both clinicians and patients.

WGLL is directed at all NHS leaders, as they work with their system partners, and sets out a model for success at both a system and organisation level. It describes how arrangements across a whole ICS, including all its constituent organisations can support success.

WGLL is included in both the ICS design framework and the NHS Operational Planning and Contracting Guidance, reflecting the expectation that the standards in the WGLL framework will be used to accelerate digital and data transformation.

The WGLL framework has 7 success measures:



#### 1. WELL LED

The ICS has a clear strategy for digital transformation and collaboration. Leaders across the ICS collectively own and drive the digital transformation journey, placing citizens and frontline perspectives at the centre. All leaders promote digitally enabled transformation to efficiently deliver safe, high quality care.

Integrated Care Boards (ICBs) build digital and data expertise and accountability into their leadership and governance arrangements and ensure delivery of the system-wide digital and data strategy.

#### 2. ENSURE SMART FOUNDATIONS

Digital, data and infrastructure operating environments are reliable, modern, secure, sustainable, and resilient. Across the ICS, all organisations have well-resourced teams who are competent to deliver modern digital and data services.

#### 3. SAFE PRACTICE

Organisations across the ICS maintain standards for safe care, as set out by the Digital Technology Assessment Criteria for health and social care (DTAC). They routinely review system-wide security, sustainability, and resilience.

#### 4. SUPPORT PEOPLE

The workforce is digitally literate and are able to work optimally with data and technology.

Digital and data tools and systems are fit for purpose and support staff to do their jobs well.

#### 5. EMPOWER CITIZENS

Citizens are at the centre of service design and have access to a standard set of digital services that suit all literacy and digital inclusion needs.

Citizens can access and contribute to their healthcare information, taking an active role in their health and well-being.

## 6. IMPROVE CARE

The ICS embeds digital and data within its improvement capability to transform care pathways, reduce unwarranted variation and improve health and wellbeing.

Digital solutions enhance services for patients and ensure that they get the right care when they need it and in the right place across the whole ICS.

## 7. HEALTHY POPULATIONS

The ICS uses data to design and deliver improvements to population health and wellbeing, making best use of collective resources. Insights from data are used to improve outcomes and address health inequalities.

Within each of these success measures are suggested supporting actions. These actions are listed in Appendix B - 'What Good Looks Like' Measures and Actions [Page 72].

### 3.7 'WHO DOES WHAT' PROPOSED GUIDANCE

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The NHS Transformation Directorate (formerly NHSX) is looking to address the operational challenges which emanate from the competing visions of national bodies and locally-focused ICSs.

In keeping with the accountability of ICSs within a national structure, its proposed principle is to devolve activities and decision-making away from central bodies to the ICSs, unless there is a clear benefit or over-riding national interest at stake to do otherwise.

At this stage, "Who Does What" is in a consultation phase aimed at providing guidance later in 2022. Its aims are to:

- Provide clarity on responsibilities at provider, ICS, multi-ICS, and national level
- Ensure that collective activities work across ICS boundaries, remains patient-centred, and drives consistency where this is important
- Understand and address challenges in collaboration within the local and national landscapes

### 3.8 'WHO PAYS FOR WHAT' PROPOSAL

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The NHS Transformation Directorate's proposed "Who Pays for What" guidance aims to describe the investment barriers to digital transformation and support ICSs to move forward by decentralising funding of frontline technology.

Challenges which have been identified as slowing transformation include:

#### **COMPLEX FUNDING ARRANGEMENTS**

- Uncertainty over what is funded nationally, and by which pots of money.
- Lack of visibility by systems of future national funding opportunities.
- Misalignment of local and national priorities.
- Single-year budgets and late notification leading to poor investment decisions.
- Burdensome and duplicative bidding processes.
- Wrong mix of capital and revenue to support optimal tech spending including a lack of recognition of the revenue consequences of capital investment. This is an increasing problem as tech shifts to being consumed and managed as a utility.
- Allocations focused on providers rather than ICSs and uncertainty over how to deal with shared tech assets within ICSs.

#### **PAYMENT, FINANCIAL AND OTHER POLICIES THAT IMPEDE INNOVATIVE TECH INVESTMENT**

- Aspects of the previous financial system have hindered the shift to digital pathways, for example, organisational financial targets focused on non-recurrent savings, and activity-based payments in outpatient settings.
- Current policies address these issues but provide limited incentives for digital transformation.

#### **LACK OF INFORMATION AND MEASUREMENTS FOR OPTIMISING TECH INVESTMENT**

- Organisations do not know how much they are spending on technology, how much they should be spending, or the cumulative impact of under-investment.
- Measurable benefits of digital investment are not widely understood.
- Some worthwhile investments have no measurable financial payback, for example an investment which reduces the chance of catastrophic failure from 1% to 0.1%.

From 2022/23, there will be a move away from the central funding of frontline technology and ICSs will be able to fund the delivery of their digital and technology plans from their own budgets and will be given the resources to do this with funding allocated ahead of the financial year rather than a requirement to bid for the funding.

National funding will remain but there will be clearer delineation:

#### **ICS FUNDING**

- Applications such as EPRs - procurement, development, and management
- Cloud services and data centres
- Core kit and supplies including laptops, printers, telecoms, and networks
- Local cybersecurity measures

- IT programme management
- Training
- IT service management
- System transformation, for example shared care records

### **NATIONAL FUNDING**

- National products such as the NHS App
- National infrastructure
- Pilots linked to the NHS Long Term Plan commitments in advance of national scaling
- Things that need to be done across multiple ICS areas - such as Office 365

## **3.9 HEALTH AND CARE INTEGRATION**

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In February 2022, the government published the “Joining up care for people, places, and populations” white paper<sup>i</sup>. This has the stated aim of bridging gaps between health and social care by further integrating the NHS and local government through the introduction of a single person accountable for the delivery of a shared health and social care plan at a local level.

This white paper highlights how digital and data can act as an enabler, sets challenging but achievable expectations, and demands a minimum level of digital maturity of the health and social care providers within an ICS.

The digital expectations placed on each ICS include:

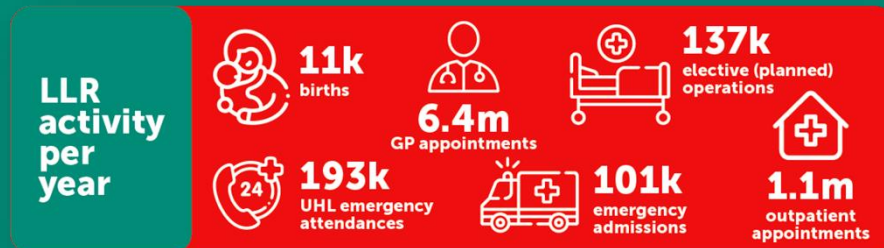
- Digitising: records of health and care delivery to be digital, not paper, everywhere
- Connecting: different systems to exchange information
- Appropriate Information Governance
- Transforming: Digitally enabled transformation and the funding, skills, and time needed to do it well
- Skills and workforce
- Population health management
- An ICS-focused approach to systems, information sharing, and procurement
- Rapid digital adoption

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<sup>i</sup> <https://www.gov.uk/government/publications/health-and-social-care-integration-joining-up-care-for-people-places-and-populations>

# 4. LOCAL CONTEXT

Locally, we have had great success in collaborating across our partners to improve health and social care outcomes for our population. Our health and care system already delivers so much in serving our citizens.



New mandates and accountabilities handed to our Integrated Care System will enable a unified and consistent approach to health and social care across our region.

Our wide diversity enriches our region, but deprivation creates challenges for health equality and digital inclusion.

Our purpose is clear and drives all our initiatives:

## TO WORK TOGETHER FOR EVERYONE IN LEICESTER, LEICESTERSHIRE, AND RUTLAND TO HAVE HEALTHY, FULFILLING LIVES.

Our aim is to deliver a health and care system in Leicester, Leicestershire, and Rutland that tackles inequalities in health, improves the health, wellbeing, and experiences of local people, and provides value for money.

Our key priorities are:



Delivering against these priorities will give:

- quicker diagnosis,
- care closer to home in improved facilities,
- higher quality services,
- earlier intervention in long-term conditions,
- improved wellbeing,
- more digital healthcare options where appropriate, and
- greater integration between healthcare providers so patients have seamless care between organisations

## 4.1 LEICESTER, LEICESTERSHIRE, AND RUTLAND

Leicester, Leicestershire, and Rutland have a combined population of around 1.1 million people. Of these, around 360,000 people live in the city of Leicester and 40,000 in the county of Rutland.

It is a diverse area, ranging from inner city and urban centres, through to very large expanses of rural countryside.



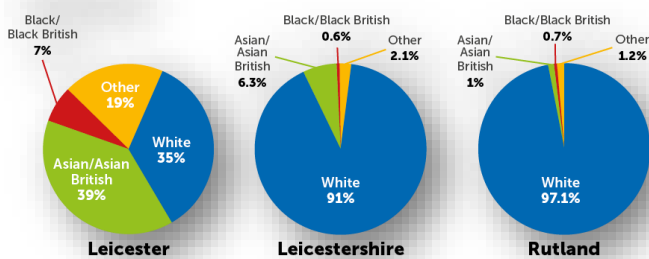
Like many areas of England, the population is growing, and its health and social care needs are also changing. Our region contains some of the most deprived and diverse communities in the UK which have been hit particularly hard by COVID-19, reflecting some of the underlying poor health and inequalities experienced by many of the communities we serve.

### POPULATION DIVERSITY

In some wards within the city, up to 80% of residents are from ethnic minority groups. Leicester is a growing city with a younger than average population, in part due to its two universities as well as the high number of children that call it home.

Typically, Leicester is characterised by its high levels of ethnic diversity, with more than 50% of the city’s population belonging to an ethnic minority, and high levels of migration into the city.

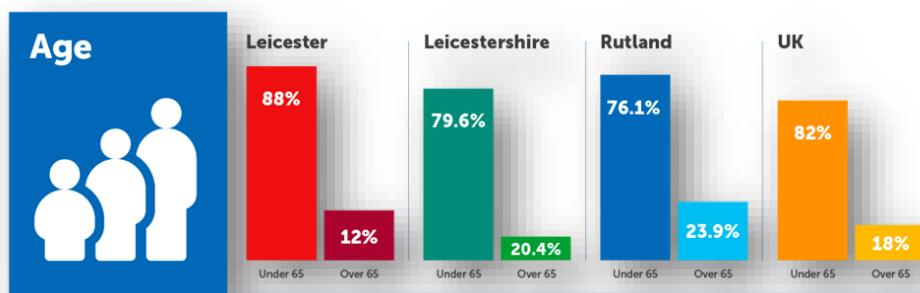
#### Ethnicity



Leicestershire and Rutland are less diverse, with around 10% and 3% respectively belonging to ethnic minority groups.

Leicester is a ‘City of Sanctuary’ welcoming asylum seekers and refugees. Recently this has seen Leicester receive a number of Afghan refugees, with our system responsible for ensuring they were safe and looked after following their initial arrival into the country.

Rutland has an older population, on average, with nearly 24% aged over 65.



### DEPRIVATION AND HEALTH INEQUALITY

We have many stark health inequalities across our area.

In Leicester we serve some of the poorest areas of the country alongside some of the most affluent in Rutland.

Leicester is ranked as the 32nd most deprived local authority area in the country (out of 317). Just over a third (35%) of our residents live in an area classified as being in the most deprived 20% nationally.

Although Leicestershire is not particularly deprived there are some small pockets of significant deprivation for a proportion of the population, particularly in parts of Loughborough and Coalville.

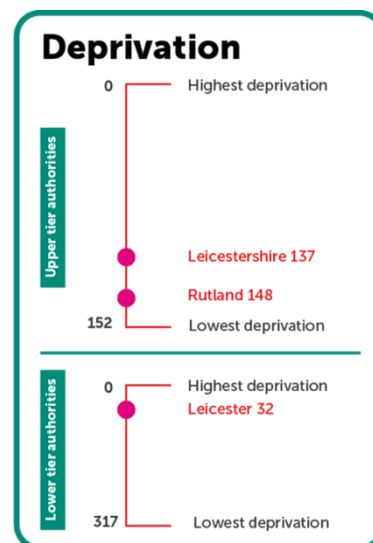
Often the localities with the highest deprivation are also those with the highest number of citizens from ethnic minority backgrounds. Rutland is more affluent than England as a whole.

However, issues regarding rurality and access contribute to inequalities of other kinds. In Leicestershire life expectancy for both men and women is slightly above the national average and in Rutland men tend to live for around 1.4 years longer than national average for both men and women.

Whilst life expectancy is improving in Leicester, it is rising slower than the national average. Women live 1.2 years less than the national average and men live 2.3 years less.

On average more than 17 years for men and 25 years for women are spent in poor health, whilst life expectancy varies significantly across the city with a difference of 8.3 years for men and 5.9 years for women between areas with the highest deprivation and the least deprived areas.

These unacceptable gaps drive our relentless determination to put reducing health inequalities at the forefront of our strategy for the ICS.



## 4.2 THE LLR INTEGRATED CARE SYSTEM

Leicester, Leicestershire, and Rutland have a background of collaborative working across health and social care. We are committed to working together for everyone in Leicester, Leicestershire, and Rutland to have healthy and fulfilling lives now, and for generations to come. This will be formalised under the ICS statutory body from 01 July 2022.

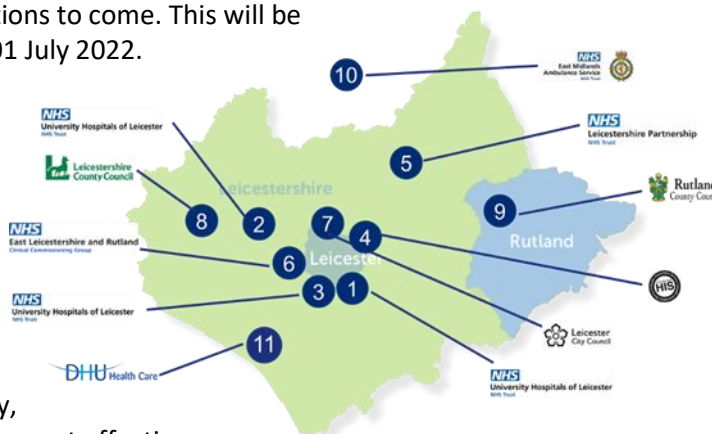
Our aim is to deliver a health and care system in Leicester, Leicestershire and Rutland that tackles inequalities in health and delivers improves the health and wellbeing and experiences of local people and provides value for money.

Our Integrated Care System is a collaboration between the NHS and local government, working together with partners in the voluntary, community and independent sectors to find the most effective ways to manage the health and care needs of the population within the available resources – providing high quality and sustainable care for the future.

Our partnership brings together NHS and council partners with the voluntary, community and social enterprise sectors, to plan services and provide funds to address the needs of our population.

- **Local Authorities**

Our current ICS boundary aligns directly with three upper tier local authorities: Leicester City Council, Leicestershire County Council and Rutland County Council.



- **NHS Statutory Bodies**

Our three CCGs run and coordinate our hospitals and community care facilities, mental health services, community nursing, health visiting teams and GPs.

- **Wider Partners and Stakeholders**

General practice, NHS providers, local government and the third sector are the foundation of our ICS.

As a key delivery partner, our general practices, of which there are more than 130 across 25 Primary Care Networks, will have a key role for locality and place-based working that will integrate services and ensure they meet the needs of our diverse communities.

Representatives of the voluntary and community sector are also actively engaged with ICS partners in shaping and supporting local services, along with Healthwatch.

## 4.3 ICS SYSTEM STRUCTURE

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Our new system will operate at three levels, building a better knowledge of the needs of people, so that:

- Patients receive more care closer to home, including some outpatient and diagnostics procedures.
- People can stay independent for longer because health providers, social care and community-based services will support those with the most complex needs.

### NEIGHBOURHOODS

Neighbourhoods are the cornerstone of our ICS. Based on 25 groups of GP practices, known as primary care networks, they work together to manage care close to home for populations of 30-50k patients.

They develop multidisciplinary teams working with councils, the community and voluntary sector, to care for those with long-term conditions. GPs, practice and community nurses and staff will work with partners to wrap care around the most vulnerable.

### PLACES

At the 'place' level, care alliances, including hospitals, local authorities (Health and Wellbeing Boards), urgent care, mental health and community services, transport providers and the newly formed primary care networks, plan the delivery of healthcare in response to local need.

### SYSTEMS

At a system level, the statutory Integrated Care Body and its partners will analyse need, set priorities and desired health outcomes, and allocate funding.

## 4.4 PURPOSE AND PRINCIPLES OF THE ICS

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Our Integrated Care System purpose is “**Working Together for Everyone in Leicester, Leicestershire, and Rutland to Have Healthy, Fulfilling Lives**”. This underpins everything we do:

We are committed to working together with respect, trust, and openness to:

- Ensure that everyone has equitable access and high-quality outcomes
- Make decisions that enable great care
- Make decisions and deliver services (as) locally as possible



- Develop and deliver services in partnership with [our] citizens
- Make the Leicester, Leicestershire and Rutland health and care system a great place to work and volunteer
- Use our combined resources to deliver the very best value for money and to support the local economy and environment

## 4.5 ICS TRANSFORMATION PRIORITIES

To maximise the impact of the ICS, we have established four priority areas which will be the foundation for all key initiatives across the region. We will transform these areas ensuring we take steps to improve the equity of access and outcomes.

Our priorities are:

**1**  **Best start in life**  
We will support you to have a healthy pregnancy, a safe environment, a nurturing and secure relationship with caregivers, good nutrition and healthcare, and support from birth to adulthood. 

We will focus on the first 1001 days of life to enable more equity in outcomes as we know this is critical to a child's life chances.

**2**  **Staying healthy and well**  
We will help you to live a healthy life, make healthy choices, within safe and strong communities, and maintain a healthy quality of life. 

We will support our residents to live a healthy life and make healthy choices to maintain wellbeing and independence within their communities.

**3**  **Living and supported well**  
We will support you through your health and care needs to live independently and to actively participate in your care. 

We will focus on supporting those with multiple conditions and who are frail to manage their health and care needs and live independently.

4



## Dying well

We will ensure you have a personalised, comfortable, and supported end of life with personalised support for your carers and families.



We will ensure people have a personalised, comfortable, and supported end of life with personalised support for carers and families.

These priorities will be demonstrated by improvements such as:

- quicker diagnosis,
- care closer to home in improved facilities,
- higher quality services,
- earlier intervention in long-term conditions,
- improved wellbeing,
- more digital healthcare options where appropriate, and
- greater integration between healthcare providers so patients receive seamless care.

## 4.6 OPERATIONAL PRIORITIES

The ICS has four operational priorities. While the digital strategy will support all operational priorities, it is expected that it will have the greatest impact on Operational Priorities three and four.

1. Work together across health and local authorities to deliver the COVID vaccination programme and winter Flu programme ensuring maximum uptake
2. Recover services across all sectors of our partnership that have been affected during the pandemic improving our communication with our residents as we do this
3. **Deliver changes to UHL hospitals and transform our mental health services ensuring appropriate local delivery**
4. **Work together across health and care to transform access to the health and care services we provide, with a focus on primary care, urgent care, chronic conditions, and mental health services**

These priorities will be the focus of the LLR ICS NHS Board to deliver working with partners as necessary.

# 5. GOVERNANCE AND LEADERSHIP

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## CURRENTLY:

Collaborative working across organisations has brought many benefits, but strategic priorities and plans are set by individual organisations.

Resource capacity is directly funded by individual partner organisations and there is limited shared capacity.

Nationally-distributed funding is based on achieving specific aims.

## MEANING THAT:

The needs of the collective health and social care system defer to the needs and constraints of individual trusts or groups.

There is limited capability to deliver ICS-wide initiatives and the priorities of key digital resources is focused within individual organisations' priority operational service and local projects.

We are reactive to bidding for nationally funding made available.

## LEADING TO:

Siloed planning and delivery with limited opportunities to realise the benefits of scale and cross-organisational synergies.

Citizens experiencing disjointed models of care.

Duplication of effort and missed opportunities for leveraging our scale.

Change programmes driven by the funding available rather than the identified need in LLR.

## WE WANT TO:

Build an integrated model for health and social care to provide a coherent and connected service for the citizens of LLR and our workforce.

## WHICH WILL IMPROVE:

The patient experience.

Overall efficiency.

Value for money.

## WE WILL ACHIEVE THIS BY:

Building a collaborative Integrated Care System across LLR with a consistent strategy and priorities.

creating a seamless journey across health and social care for our citizens.

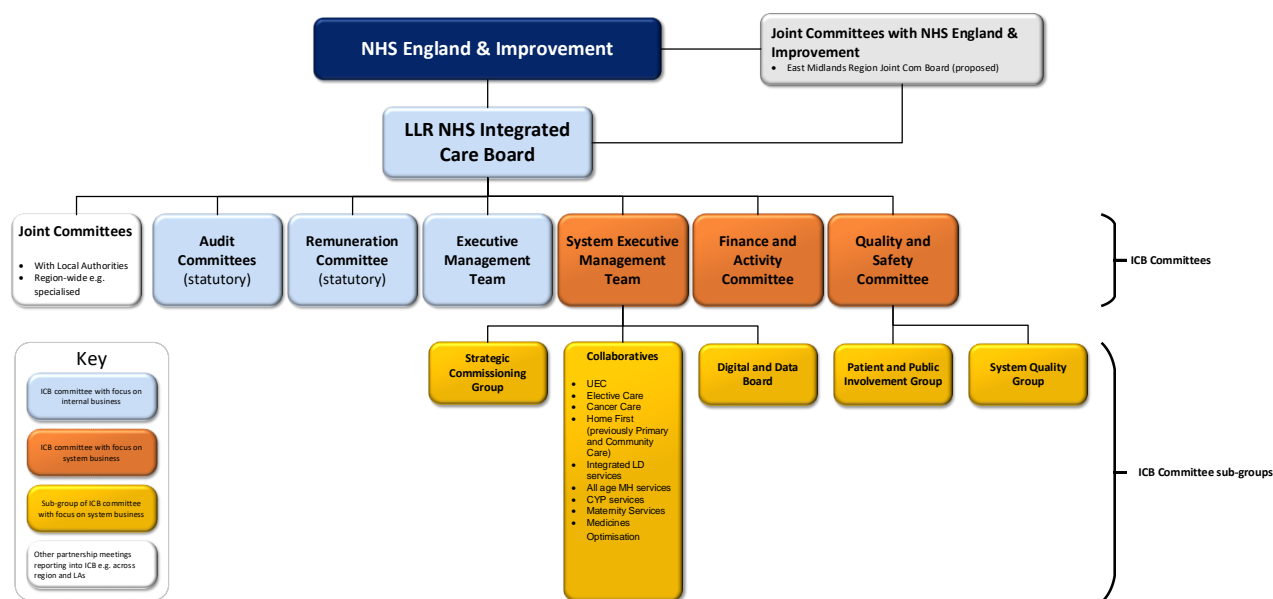
Sharing resources between partner organisations for the benefit of the whole region.

Consolidating digital technologies and consistently applying best practice across all our systems.

## 5.1 ICS GOVERNANCE

We will build a governance structure which brings together partner organisations at a system level to share resources, make decisions and plan jointly, with a single person accountable for the delivery of shared outcomes and plans, working with local partners.

Figure 3 – LLR ICB Governance Structure



### 5.1.1 ICS HEALTH AND WELLBEING PARTNERSHIP

This brings together health and care organisations, along with other partners, in a statutory committee to develop a single strategic vision and strategy for the system which sets out how the wider health needs of the local population of LLR will be met, informed by Joint Strategic Needs Assessments (JSNAs).

### 5.1.2 INTEGRATED CARE BOARD

The Integrated Care Board (ICB) will take on NHS planning functions held by current CCGs. The ICB will have its own leadership team, including chair and chief executive, and will also include members from NHS Trusts, local authorities, and general practice.

The ICB will produce a five-year plan (updated annually) for how NHS services will be delivered to meet local needs. This plan must have regard to the ICS Partnership Board’s integrated care strategy.

### 5.1.3 PLACES

We have three established places: Leicester, Leicestershire, and Rutland and six localities (One for each of Leicester and Rutland, and four for Leicestershire). These will link with each of the three Health and Wellbeing Boards to translate the priorities of the ICS Partnership Board’s integrated care strategy into local action to reduce health inequalities.

While retaining the cohesive integration of the System, reporting may be done at the Place or Neighbourhood levels to provide greater clarity and aid decision-making.

### 5.1.4 COLLABORATIVES

We are developing our provider collaborative arrangements in active consultation with providers. The purpose of the collaboratives is to:

- Build partnerships involving NHS providers working at scale across multiple places with a shared purpose.
- Build broader coalitions with community partners to promote health and wellbeing and reduce unwarranted variation and inequality in health outcomes, access to services and Residents and local population experience.

Our collaboratives each have a primary focus. These are:

- Urgent and Emergency Care
- Elective Care
- Cancer Care
- Home First (previously Primary and Community Care)
- Integrated Learning Disability services
- All age Mental Health services
- Children and Young People services
- Maternity Services
- Medicines Optimisation

All collaboratives will have IM&T representation and will seek approval of the Digital and Data Board to ensure the strategic fit of digital proposals.

## 5.2 DIGITAL GOVERNANCE

**We will build a model which balances flexibility for clinicians and practitioners to operate effectively within their 'place' with the benefits of consistency across the ICS 'system'.**

Governance and leadership of the digital and data transformation enables a cross system approach to the plan, so that changes to models of care and service redesign involve digital and data experts working with partners from all relevant sectors from across the system.

### 5.2.1 LEADERSHIP

Executive Directors with digital portfolios provide wider connections into organisations working together at ICS level on digital initiatives.

The ICB has appointed an interim Chief Information Officer (CIO) and substantive Chief Clinical Information Officer (CCIO) to be accountable officers. They act to provide the leadership capacity to drive forward the strategic programme. Substantive arrangements for the CIO will be established once the ICB is a legal entity from 1st July 2022.

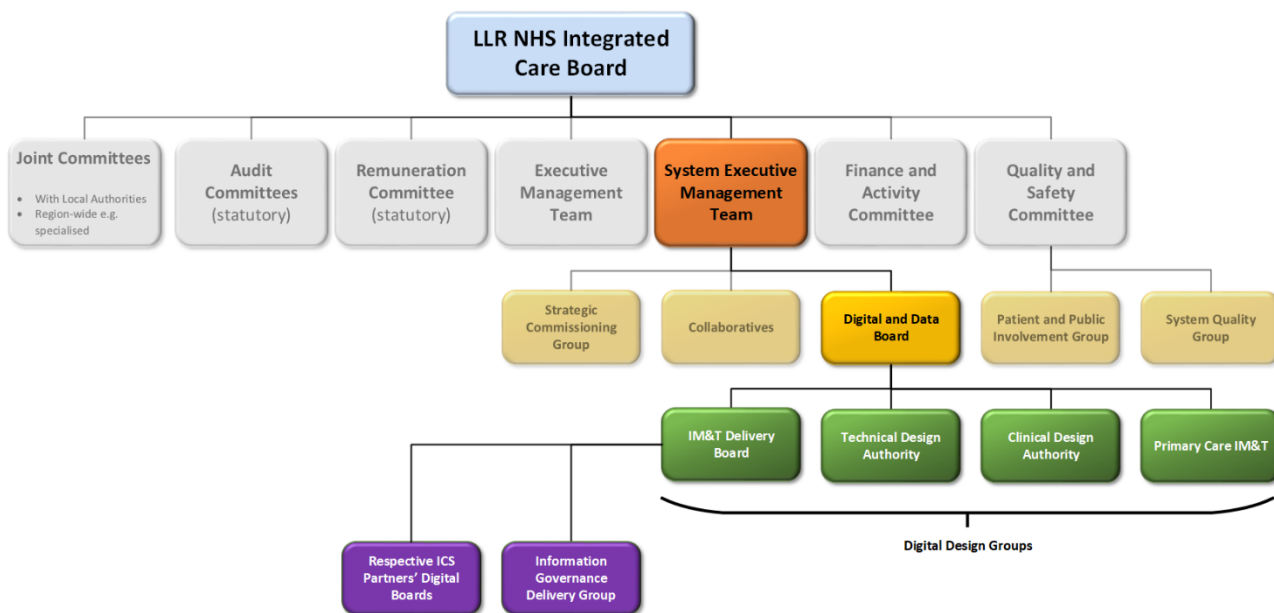
### 5.2.2 DIGITAL DESIGN GROUPS

The prospective design of how the ICB wants to ensure that digital supports service transformation and citizen experience with health and care is the responsibility of a system level design group. This represents not only the technology aspects of digital but also population health management and business intelligence, being a digital and data workstream.

This group sponsors strategic analysis, agrees strategic direction, and receives business cases for approval. It formally reports to the LLR ICB System Executive Group. Once a digital transformation is agreed it is then delegated to the LLR IM&T Delivery Board to manage.

The IM&T Design Authority will retain primacy over individual partner organisation’s design and architecture functions to ensure that integration across the ICS is prioritized.

Figure 4 – LLR Digital Design Governance Structure



### 5.2.3 DELIVERY GROUPS

These groups act as programme boards for the digital and data projects that have a system level interest e.g., impacting a patient pathway throughout the system.

All LLR health and care organisations are members, and they present progress and escalate any risks and issues where organisations working together to a common objective requires additional direction.

## 5.3 ASSURANCE

**We will build ICS-wide assurance policies and functions to give confidence that our digital and data solutions meet all appropriate legislation, standards, and best practice.**

### 5.3.1 CLINICAL DESIGN AUTHORITY

**In 2022/23, we will establish a Clinical Design Authority group under the leadership of the ICS CCIO to determine the impact of transformational opportunities presented by ICS Design Groups and major Trust-level transformations on the digital agenda.**

The Clinical Design Authority will drive changes in working practices to ensure that there is optimised alignment with digital systems being used, their configuration, data collected, data presented, data shared and transferred.

This group will also receive assurance on clinical safety through the Clinical Safety Officer network in the ICS to guarantee that the clinical safety requirements the DTAC (Digital Technology Assessment Criteria for Health and Social Care) are met, including the BCD0160: Clinical Risk Management<sup>i</sup> standard. Core membership of the group will be trust CCIOs with an ICS-wide commitment to much wider multidisciplinary representation across Health and Social Care.

The ambition is that digitally-enabled transformations can be described to IT colleagues as an agreed “ask” that has full support of clinical / practitioner colleagues.

The philosophy of the group will very much be aimed towards driving a forward thinking ambitious agenda of aligning progressive models of care and the opportunities made available through modern technology rather than holding onto heritage processes. The group will endorse an “ICS System First” approach with citizens’ interests at the forefront of the ambitions. Driving a solution-focused approach, the group will frame problems and challenges as “this is where we are; this is where we need to be and why; what we need to do to get there”.

### 5.3.2 TECHNICAL DESIGN AUTHORITY

**In 2022/23, we will establish a Technical Design Authority group under the leadership of a System CIO to act as assurance of technical architecture across the ICS.**

The Technical Design Authority will have a broad range of technical expertise to consider proposed future digital developments and to advise on security, compliance with architectural principles on messaging standards, data storage, reporting, and infrastructure.

The scope of the Technical Design Authority will include all patient-facing clinical systems that have any impact wider than an individual partner organisation.

This group will own and evolve the ICS Technical Architectural Principles and, through CIO membership of the ICS Digital Board, will assure that all proposed technical solutions are compliant with the architectural principles and the technical requirements of the DTAC (Digital Technology Assessment Criteria for Health and Social Care).

In line with the architectural and data standards outlined in Section 6 - Safety [Page 26], the group will ensure that:

- systems use open standards
- systems are not siloed and integrate into the wider ecosystem
- information can be shared across digital systems and organisations
- information is consistent along patient pathways
- data is codified and classified correctly so that meaningful information can be used elsewhere after initial data capture

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<sup>i</sup> <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dcb0160-clinical-risk-management-its-application-in-the-deployment-and-use-of-health-it-systems>

### 5.3.3 SYSTEM-LEVEL ASSURANCE FUNCTION

**In 2022/23, we will establish an ICS-wide function who will establish policies for key areas of compliance and provide assurance of functions', programmes', and solutions' adherence.**

At a system level, we will create the Digital Innovation and Transformation Team (DITT). The key responsibilities of this team are explained in more detail in Section 12.1 - Digital Innovation and Transformation Team [Page 67].

The team will provide wide-ranging assurance that our digital initiatives are being “done well” and following best practice across the ICS.

The team will foster continuous improvement through the sharing of good practice identified within our region and by monitoring, reviewing, sharing, and responding to relevant recommendations and alerts, including those from the NHS Transformation Directorate.



# 6. SAFETY

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## CURRENTLY:

We have a good record of cyber security and information governance.

Architecture and data standards across health and social care have been slow to emerge and be adopted by solution vendors.

## MEANING THAT:

Interconnecting systems is difficult.

We rely on converging onto single supplier platforms.

Greater integration of systems and increased public access will create new challenges for IG and cyber security.

## LEADING TO:

Systems not being integrated, complex middleware being required, and integration projects being slow to deliver.

Supplier lock-in.

Disproportionate and duplicated effort required to maintain cyber security across a complex technology landscape.

## WE WANT TO:

Build our digital landscape on open standards and best practice, reducing our dependence on bespoke or parochial technologies.

Create assurance functions for clinical and digital safety.

## WHICH WILL IMPROVE:

The opportunity to securely access and share information across our partner organisations.

Have the confidence that we are providing consistently safe digital services which meet best practice.

## WE WILL ACHIEVE THIS BY:

Deploying digital solutions based on open standards which will connect to our ecosystem.

Building the capability to take ownership of standards and best practice, shared with colleagues across the region, provide assurance that this is being applied, and drive continual improvement.

## 6.1 ARCHITECTURAL AND DATA STANDARDS

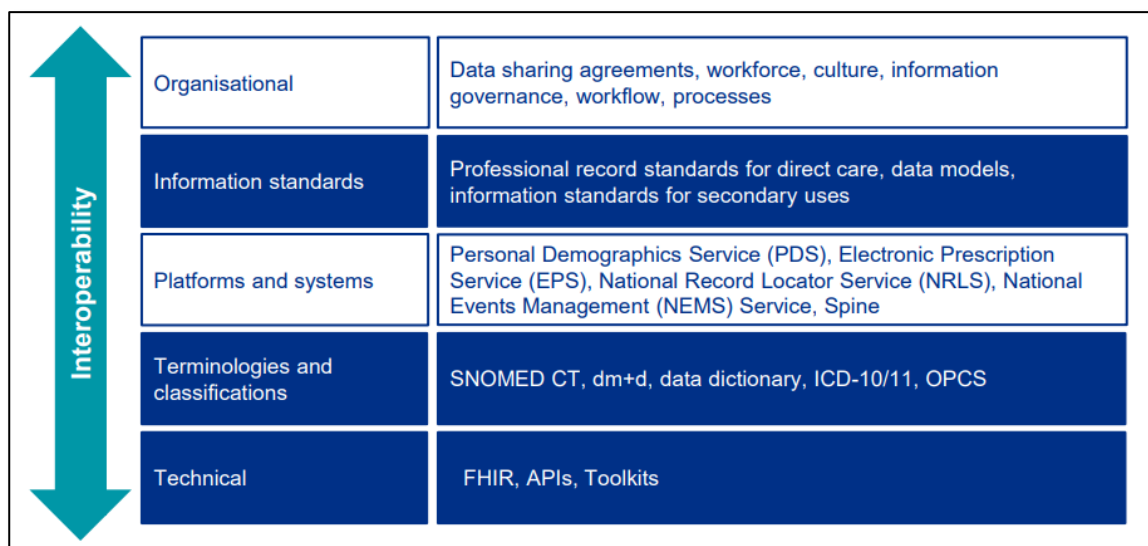
**Greater multi-organisational collaboration and data sharing requires a consistent approach to technology standards. We fully support a standards-based approach to technology implementation, and this will underpin the technology roadmap across our partners.**

In building, selecting, or implementing systems which are designed to interact with our staff or citizens, we ensure that we follow clear standards which support the design and delivery of secure, robust, and effective solutions.

The Wachter Report<sup>i</sup> proposed that *“The new effort to digitise the NHS should guarantee widespread interoperability ... to enable seamless care delivery across traditional organisational boundaries, and to ensure that patients can access all parts of their clinical record”*

NHSX has introduced a programme to drive interoperability and open standards across health and care systems. The scope of this programme is shown in Figure 5 – NHSX Standards and Interoperability Programme - Scope below

Figure 5 – NHSX Standards and Interoperability Programme - Scope



The following, while not exhaustive, highlights some of the key standards and principles to which we will adhere:

### ARCHITECTURAL PRINCIPLES

The Enterprise Architecture function within NHS Digital produced a set of Architecture Principles which are reviewed and, if necessary, refreshed and published twice yearly.

These Principles are approved by the Enterprise Architecture Board, a cross organisational body with NHSX members that provides strategic direction, governance, and assurance of enterprise architecture, including of architecture strategies, policies, patterns, and standards which support health and care strategy.

<sup>i</sup> <https://www.gov.uk/government/publications/using-information-technology-to-improve-the-nhs>

LLR has taken onboard the NHS Digital principles and the Central Digital and Data Office Technology Code of Practice (TCoP)<sup>i</sup>, particularly reinforcing the importance of Cyber Security (See Appendix E - Architecture Principles [Page 82]).

## **FAST HEALTHCARE INTEROPERABILITY RESOURCE (FHIR) RELEASE 4**

The Fast Healthcare Interoperability Resource, commonly known as FHIR, has quickly become one of the most popular protocols for joining together disparate systems. FHIR has been formalised through Information Standards Notice DAPB4020<sup>ii</sup>.

This information standard introduces the governance process for the oversight, direction, and leadership of the UK Core Fast Healthcare Interoperability Resources (FHIR) R4. The standard mandates, within the health and care sector in England, a consistent approach to the development of UK Core resources, thereby facilitating clear interoperability in the sharing of data across the NHS, health services and adult social care in England.

Within the United Kingdom, it has been agreed that FHIR should be used across the home countries as the foundation of sharing data across health and care organisations. However, alignment of FHIR with UK healthcare requirements is needed and a UK Core FHIR Board has been established to oversee and assure this alignment and take responsibility for the promotion of the resulting resources, brought together as the UK Core.

With the adoption of FHIR R4 there is now an opportunity to create a unified approach to interoperability within health and social care systems across England, Scotland, Wales, and Northern Ireland. This will enable consistent information flows across borders to improve health and care outcomes for all citizens.

The FHIR standard is already being used to improve data sharing and data flows between providers and systems in services such as:

- Summary Care Record
- Electronic Prescription Service.
- E-Referral Service
- Electronic Prescribing and Medicines Administration

## **DICTIONARY OF MEDICINES AND DEVICES (DM+D)**

The dm+d is a dictionary of descriptions and codes which represent medicines and devices in use across the NHS and provides:

- the recognised NHS standard for uniquely identifying medicines and medical devices used in patient care
- clear, consistent recording and communication of information relating to medicines and devices used in patient care
- consistency in how medicines and medical devices are expressed through a robust published editorial policy

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<sup>i</sup> <https://www.gov.uk/guidance/the-technology-code-of-practice>

<sup>ii</sup> <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/dapb4020-uk-core-fhir-r4-governance>

The Standardisation Committee for Care Information (SCCI) has approved the NHS dictionary of medicines and devices (dm+d) as the NHS standard (SCCI0052<sup>i</sup>) for communicating medicines information.

This standard ensures that diverse clinical systems can effectively 'talk' to each other using a common coded language for the transfer of medicines information. The dm+d provides this common language using identifying codes with associated written descriptions.

The scope of the standard in terms of content is for medicines only; medical devices are currently excluded. The primary purpose is to support interoperability. Therefore, electronic systems that exchange or share information about medicines relating directly to a patient's care must adhere to the standard by using dm+d identifiers and descriptions when transferring information.

## SNOMED CT

SNOMED CT is the information standard for clinical terminology; it is an international standard published by SNOMED International providing a global common language for health terms.

SNOMED CT gives clinical IT systems a single shared language, which makes exchanging information between systems easier, safer, and more accurate. It contains all the clinical terms needed for the whole NHS, from procedures and symptoms through to clinical measurements, diagnoses, and medications.

The UK edition of SNOMED CT also contains the UK extensions. These provide terms specifically required in the UK, such as UK screening procedures, assessment scales and British English spellings. SNOMED CT was first published as an information standard by the Information Standards Board (ISB) in August 2011 and the government's policy document, "Personalised Health and Care 2020: A Framework for Action", published November 2014, identified SNOMED CT as the required terminology to support direct management of care.

All NHS healthcare providers in England must now use SNOMED CT for capturing clinical terms within electronic patient record systems. The use of SNOMED CT is a National Information Standard (SCCI0034), and therefore a contractual requirement.

## 6.2 CYBER SECURITY

**We are creating the role of Security & Compliance Manager in our Digital Innovation and Transformation Team to define and assure our approach, procedures, and culture with regards to information security, data privacy and compliance.**

The cyber security threat continues to be very dynamic, and public sector organisations remain prestigious targets. Although traditional threats remain e.g., phishing, ransomware, external attacks, etc., a renewed focus on system patching and upgrading has resulted from recent high-profile vulnerabilities.

To strengthen our position, the revisions to existing standards are also being deployed across the estate. This includes a recent update to the Cyber Essential standards and the DSP (Data Security and Protection) Toolkit assessment which includes a number of strengthened technical security controls.

The DAPB0086 Data Security and Protection (DSP) Toolkit is an online tool that enables relevant organisations to measure their performance against the data security and information governance requirements mandated by the Department of Health and Social Care, notably the 10 data security standards set out by the National Data Guardian in the 2016 Review of data security, consent, and opt-outs.

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<sup>i</sup> <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/standards-and-collections/scci0052-dictionary-of-medicines-and-devices-dm-d>

All organisations that have access to NHS patient data and systems must use this toolkit to provide assurance that they are practising good data security and that personal information is handled correctly. Such organisations are required to carry out self-assessments of their compliance against the assertions and evidence contained within the DSP Toolkit.

Across the ICS, our partners' IT Departments hold multiple cyber security accreditations such as ISO27001 and ISB1596, but we recognise that we cannot be complacent and cyber security is a constant and changing threat, particularly as we place more emphasis on our digital services. An example of this continued focus on cyber security has been LHS increasing their NHS / BitSight security rating, placing them in the top 10% of healthcare organisations for cyber security.

Within the ICS Digital Innovation and Transformation Team, a new role to co-ordinate Cyber Security between IM&T services, liaise with national cyber services, and provide upward assurance to our digital board will be established to further strengthen the LLR position.

## 6.3 INFORMATION GOVERNANCE

**The LLR Information Governance Board is embedded into ICS delivery governance and proactively supports and advises our programmes. Early engagement and a solution-focused perspective keeps our citizens' data secure and facilitates the increased collaboration between ICS partner organisations**

Across LLR, we have a successful history of collaboration between our health and social care partners to provide the best care to our citizens. This has been enabled by the data sharing agreements that have already been established to ensure that share confidential information effectively between professionals with a legitimate interest while meeting, or exceeding, the applicable information governance standards and legislation that keep our citizens' data safe.

Our Information Governance Board reports directly to the IM&T Delivery Board to maintain awareness and knowledge of all key programmes which may have data / information implications. This allows advice to be proactively provided at an early stage and confirm that best practice is applied.

While the COVID-19 pandemic highlighted the value of simplifying the sharing of patient information across statutory health and care organisations, Local Authorities, and DHSC arms-length bodies, the notice<sup>i</sup> which was issued under Regulation 3(4) of the Health Service Control of Patient Information Regulations 2002 (COPI) to process confidential patient information for the purpose of monitoring and managing COVID-19 will expire on 30 June 2022 and pre-existing legislation must be followed as partner organisations increase their data sharing.

The LLR Information Governance Delivery Board:

- Acts as the delivery arm for information governance to the IM&T Workstream
- Supports the development and delivery of initiatives enabling the delivery of integrated care to the patients of Leicester, Leicestershire, and Rutland in a seamless and patient focused manner, no matter where and by whom the patient is treated.
- Provides IG advice and support to the IM&T Delivery Board through two way dialogue on in-flight projects and the wider information governance agenda where it might impact future work. This includes the provision of updates on the latest national policy/legislation/rulings.

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<sup>i</sup> <https://www.gov.uk/government/publications/coronavirus-covid-19-notification-of-data-controllers-to-share-information>

- Makes key programme level IG decisions and sponsors digital/integrated care developments that improve services within the LLR health and care economy.
- Works with work stream task and finish groups to resolve risks, issues, and blockers wherever possible through the scrutiny of data protection impact assessments, software approvals and sense checking on early thoughts around new ideas/initiatives.
- Acts as an advisory resource for the LLR ICS portfolio through screening and provision of assurance on preferred delivery options.
- Acts in an advisory capacity to the IM&T Delivery Board.
- Acts as liaison with the Information Commissioners Office for system queries

## 6.4 COMMERCIAL MANAGEMENT

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**We will use the scale of ICS to support our partners' supplier relationships to provide an over-riding focus on the holistic healthcare needs of the region as a whole and endorse the suppliers who best align with the regional vision.**

The ICS has been handed the over-riding accountability for improving health and social care outcomes across the region. To fulfil this, all partner organisations must prioritise the regional collaborative working which will drive these improvements and ensure that technology choices and strategic partnerships do not create silos or restrict ICS-wide, person-centric care.

While partner organisations will continue to manage their supplier relationships, the ICS will work with our partners to support local programmes, projects, and technology choices which follow the standards given in Section 6 - Safety [Page 26] and challenge those which do not. We will take a holistic view of the initiatives planned across the region to align inter-connected programme deliveries to best meet the regional roadmap.

We will take advantage of the ICS relationships with strategic suppliers and leverage our scale to influence supplier roadmaps, priorities, quality, and commercial terms to confirm that they are aligned with our transformational vision.

## 6.5 FINANCIAL MANAGEMENT

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**We will ensure that digital spending is effective across LLR, driving efficiency gains through greater alignment of resources and taking opportunities to review technology consolidation when contractually feasible.**

As the digital spending model changes with the introduction of the "Who Pays for What" framework, we will look to guide how budgets are utilised within the region by taking advantage of the wider view of our digital spend and how greater collaboration can improve financial efficiency.

We will achieve this through a system level prioritisation and approval process supported by financial capabilities and resources.

## 6.6 BUSINESS CONTINUITY / DISASTER RECOVERY

**The ICS will provide assurance that partner organisations' BC/DR plans are effective as we increase our dependency on digital services and systems.**

All partner organisations already maintain and test their own Business Continuity and IT Disaster Recovery plans.

The newly-formed Digital Innovation and Transformation Team (DITT) will hold a remit for IT Security and Compliance across the ICS. A key activity within this area is to provide advice and assurance to partners on the continuity plans for their IT services, particularly during procurement and change programmes.

This role does not move the responsibility away from partner organisations, but independently provides the confidence that we have a cohesive plan to reduce risk exposure with contingency response action in place as our dependency on technology increases.

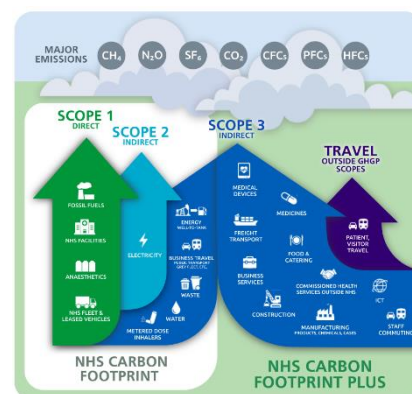
## 6.7 ENVIRONMENTAL IMPACT

**To support the NHS Net Zero commitment, we will provide and encourage the use of digital alternatives to paper and physical travel for our citizens and staff where this does not reduce the care we provide.**

In October 2020, the NHS became the world's first health service to commit to reaching carbon net zero in response to the profound and growing threat to health posed by climate change.

The "Delivering a Net Zero Health Service" report<sup>1</sup> set out a clear ambition to be the world's first net zero national health service, and set two targets:

- "For the emissions we control directly (the NHS Carbon Footprint), we will reach net zero by 2040, with an ambition to reach an 80% reduction by 2028 to 2032
- For the emissions we can influence (our NHS Carbon Footprint Plus), we will reach net zero by 2045, with an ambition to reach an 80% reduction by 2036 to 2039"



To achieve these targets, the report noted the achievements and opportunities, including those for which digital transformation can directly contribute:

- "As part of the new service model for the 21st century, multiple commitments are in progress, including boosting 'out-of-hospital' care; empowering people to have more control over their health; digitally enabling primary and outpatient care; and increasing the focus on population health. Optimising the location of care ensures that patients interact with the service in the most efficient place, which may be closer to, or even in, their home. Not only does this improve patient experience and often offer greater access to care, but it also reduces emissions by helping to avoid unnecessary hospital visits and admissions. The urgent and emergency care programme is working in partnership with the primary care and community care teams on this approach, with NHS 111 First helping to rapidly triage and connect patients to the most relevant, and often community-based, health professional. It is estimated that accelerating this approach will directly improve patient treatment, avoiding approximately 8.5 million

<sup>1</sup> <https://www.england.nhs.uk/greenernhs/a-net-zero-nhs/>

*km of unnecessary travel per year, to and from hospitals, with a carbon saving of 1.7 ktCO<sub>2</sub>e per year in the first instance.*

- *The NHS will ensure that a trajectory compatible with a net zero health service is embedded in the digital transformation agenda, and work to continuously drive down residual emissions from digital services via a number of actions which include:*
  - *digitally enabled care models and channels for citizens that will significantly reduce travel and journeys to physical healthcare locations, with care closer to home being delivered through remote consultations and monitoring*
  - *developing a blueprint for 'What Good Looks Like' for low carbon digital care, across the system*
  - *building net zero into the digital maturity framework*
  - *issuing policy advice to ensure NHS data centres and companies providing these services minimise their environmental impact and support the drive to reach net zero*
  - *utilising levers, including local spend controls for technology, to incentivise a shift to net zero*
  - *supporting front-line digitisation of clinical records, clinical and operational workflow, and communications, aided by digital messaging and electronic health and care record systems."*

As part of the delivering a Net Zero NHS, LLR ICS will play its part to help the NHS reduce the environmental impact of digital services. Through its leadership, it will ensure that new or replacement digital services are sustainable and will engage with the NHSE cloud centre of excellence that will support us to shift to more resilient and sustainable cloud hosting arrangements. This will form part of our investment prioritisation process.



# 7. INFRASTRUCTURE AND SYSTEMS

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## **CURRENTLY:**

Many systems are locally hosted, segregated, and designed around organisational boundaries within a physical workplace setting.

## **MEANING THAT:**

Systems and the data they hold are physically isolated.

Data security cannot easily be centrally governed.

## **LEADING TO:**

Limitations on data sharing across organisational boundaries, or with patients.

Costly and complex middleware systems are required to provide limited data sharing.

Some of our workforce is required to unnecessarily travel to physical locations to access systems and data.

## **WE WANT TO:**

Decouple front-line and supporting systems from physical locations.

Allow our workforce to securely access systems and information from any appropriate location including remote, blended and home working.

Reduce system duplication.

## **WHICH WILL IMPROVE:**

Allow patients to access their data without costly and complex technologies.

System resilience and security.

Workforce experience by reducing the need to log into multiple systems, supporting remote working and reducing travel.

Value for money as maintenance, support, and training is reduced.

## **WE WILL ACHIEVE THIS BY:**

Rationalising our digital landscape to avoid duplication, support, training.

Ensuring that our key digital technologies are able to securely communicate across our digital ecosystem.

Building our digital ecosystem on securely accessible cloud-first technologies.

## 7.1 FRONT-LINE INFRASTRUCTURE

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**We will provide our workforce with the tools which allow them to work remotely where possible, including internet-facing virtual desktops and supporting the adoption of cloud telephony in primary care.**

LLR has made great strides in federating public sector Wi-Fi networks locally so that staff can search and find over 300 public service LLR Wi-Fi hotspots using an App to locate the nearest supporting agile working across the NHS, local authorities, care homes and libraries.

This infrastructure was designed in a pre-pandemic context where extensive home working combined with domiciliary visits was not the predominant model. The emphasis in the next three years will be to ensure that as new care models emerge with no reliance on a public sector building as a base that all applications can be access via domestic broadband and mobile data services using internet-facing services.

Supporting this will require additional investment in secure virtual desktop infrastructure for the workforce with published desktops and applications designed around a workgroup.

Along with UHL and LPT, we continue to support GP practices with video and online consultations and are providing business change support resources to help practices with their digital adoption. We are supporting practices with their transition to cloud telephony to provide a fully-remote working environment for primary care.

## 7.2 CLOUD ARCHITECTURE

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**Where appropriate, we will transition services to cloud-hosted platforms or cloud-based systems to provide resilience, scalability, and wider access.**

The ICS supports the architectural principle of ‘public cloud first’, the NHS Cloud Strategy and its vision, and the NHS Cloud Principles as described in Appendix E - Architecture Principles [Page 82]. The pace of digital change has been so fast that many of the systems on which we depend were designed in a pre-cloud era. Consequently, these systems are often physically hosted on our premises, requiring access to VPN and installed client applications.

It must be recognised that ‘cloud first’ can represent several differing models (IaaS, PaaS, FaaS, or SaaS). Transferring physical servers into a virtual, cloud-hosted platform is fundamentally an infrastructure exercise (IaaS). In contrast, some of the significant benefits of ‘cloud’ are delivered through the development of software systems designed from the outset to use scalable cloud functionality (FaaS or SaaS).

As we look to renew our systems and infrastructure, we will take the opportunity to transition to cloud where this is appropriate and provides demonstrable benefit and we will endorse system suppliers who have cloud-designed offerings.

A dependency which adds to the complexity of a technology shift to cloud is the financial model for funding technology infrastructure. Primarily, conventional infrastructure requires the purchase of physical assets which necessitates capital funding. In contrast, cloud architecture represents a service, which requires revenue funding. While sitting outside the direct scope of a digital or technology-based roadmap, this may represent a challenge to meeting this transformation.

## 7.3 STRATEGIC SYSTEMS LANDSCAPE

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### We are rationalising the number of operational systems in use across the region to simplify support, increase data sharing, and improve training.

LLR wants to ensure that the best solutions are in place across the system, that they align and deliver best value and outcomes for patients in line with the 'what good looks like' (WGLL) framework.

In order to work towards a vision of having a simplified and optimised collection of systems across the region, the ICS has commissioned a review to clarify the current digital solution landscape and identify waste, fragmentation, duplication, and unnecessary costs that may have evolved through siloed organic digital growth.

We have a vision of a connected digital ecosystem of strategic solutions focused on the needs of the ICS and its citizens, allowing secure, seamless system interoperability and data sharing with benefits including cost optimisation, reduced system support, and improved user experience.

We will achieve this ecosystem through a rationalisation of our key systems to reduce and ultimately eradicate unnecessary system sprawl. The current landscape of duplicated and partially-connected systems is a huge obstacle to allowing people the transparency of accessing their own health data and providing true patient-centred care.

We are aligning the existing state with our future state vision so that opportunities for further optimisation, transformation and improvement can be determined, including understanding and rationalising our strategic supplier contracts.

Having already made significant progress along this journey, the largest remaining opportunity is the consolidation of the large number of systems within UHL. We have recently engaged external consultants to work with UHL to identify the potential future integrated system state and determine whether each can be integrated with, or replaced by the UHL EPR system (NerveCentre)

The resulting report, which has been agreed with the UHL CIO, has identified a roadmap based around the widespread distribution of the NerveCentre EPR within UHL. Some applications will be decommissioned and replaced by current or planned NerveCentre functionality. Of the remainder, some will be upgraded or retained as is with the intention that they have closer integration with NerveCentre. Systems where there is no clear long-term development roadmap, they cannot be integrated, or their benefit is limited will be decommissioned.

The applications which are planned for decommissioning and replacement with NerveCentre EPR functionality are listed in Appendix A - UHL Applications Assessment [Page 71].

# 8. DATA AND INFORMATION

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## CURRENTLY:

Data is siloed with questionable data quality.

Business Intelligence is predominantly historic and available at an organisational level only.

We have not had the capacity to explore or adopt modern technologies such as Machine Learning / Artificial Intelligence.

## MEANING THAT:

There is limited real-time information available.

There is no longitudinal patient record.

Data quality affects our confidence that we can make informed decisions

## LEADING TO:

We cannot give truly personalised care without the data about the whole person.

We are unable to react quickly to real-time events.

Business Intelligence is resource intensive.

## WE WANT TO:

Be data-led in our decision making for the care given to individuals and to inform the preventative and reactive services we provide to our population.

## WHICH WILL IMPROVE:

The level of personalised care based on access to a more complete and accurate set of information.

Visibility of the health of our population to inform proactive health and care initiatives.

The opportunity to react quickly based on real-time data.

## WE WILL ACHIEVE THIS BY:

Having a longitudinal patient care record and population health management through central function.

Joining up our systems and making the data available promptly.

Utilising modern data techniques such as machine learning to identify actionable insights from the data we hold.

Taking steps to improve the overall quality of our data at the point of entry and across our operational systems.

## 8.1 DATA QUALITY

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**We will build an ICS Intelligence function to drive improved use of data and Data Quality Assurance. We will introduce the new responsibility/role of Chief Data Officer who will be accountable for building a culture of data quality across the region.**

While we have systems which can support our models of care, these are only as valuable as the data that is entered. It is vital that we have good quality succinct data.

As we consolidate and capture increasing volumes of data and make it more widely available, it is vital that the data we hold is accurate. This means that we may need to introduce cleansing mechanisms, however this is more efficiently done by

It is important that everyone recognises the importance of entering data well and that we highlight to them why this is important. Information entered into key systems must be done so with regard to who will utilise that data in the future, both for direct care of the patient and for secondary use such as Population Health Management.

## 8.2 RECORD SHARING ACROSS HEALTH AND CARE

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**By March 2023, the LLR Shared Care Record (LLRCR) will support direct care across primary and secondary health organisations as well as the three local authorities within the LLR footprint.**

The LLRCR Shared Care Record programme is delivering a unified view of person-centred health and social care records across the region. The primary aim of this programme is to improve the patient information available to health and social care professionals for the purposes of direct care.

The initial phases of this programme are providing this information across primary, secondary, acute, urgent, and emergency care settings.

By March 2023, 200 care homes, LOROS, the Rainbows Hospice, DHU and several community pharmacies will have also joined the LLRCR. Further to this, we will work to include an additional 100 care homes, roll out to further community pharmacies and gear up for a national exchange by March 2024.

As all of these organisations are onboarded to the LLRCR, we will continue to develop richer data sets as local digital maturity increases.

A challenge which has faced previous digital transformation and data sharing initiatives has been the volume of disparate systems which need to be connected. LLR has historically looked to reduce 'system sprawl' by collaboration of partners to find common platforms and solutions and share the resources, where appropriate e.g., TPP SystemOne and LiquidLogic.

The ICS is now developing a formal strategy of system consolidation with a reduction in the number of active EPR systems to two: TPP SystemOne and NerveCentre. This has benefits for information sharing, technical support, and training and forms a key part of the planned strategic system landscape detailed in Section 7.3 - Strategic Systems Landscape [Page 36]

NHS England plans to go to market to procure a federated data platform to integrate technologies and services implemented across the NHS in England. This will extend the model used by the NHS Palantir Foundry platform. LLR recognises the benefits of an increased data ecosystem at a national level and we will monitor the progress of this programme to determine the local implications and benefits.

## 8.3 OPERATIONAL INSIGHTS

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**We want to establish a platform to share real-time operational insights across health and social care partners which will help operational planning at a regional level.**

Managing our capacity and patient flow across in-patient and community settings, patients will have a better experience removing unnecessary delays. From a system perspective, efficiently managing the flow of patients between settings will improve resource utilisation and reduce administration time for clinical staff.

We will look to deliver the tools which will enable to partners to proactively manage capacity and predicted demand, using real-time data in operational planning. For example, sharing care home bed capacity will allow hospital discharge teams to discharge patients quickly and confidently to a care home where this is appropriate.

## 8.4 ICS INTELLIGENCE FUNCTION

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**We will establish an ICS-wide function to drive improved reactive and pro-active use of data encompassing Population Health Management and Business Intelligence across LLR by March 2023.**

### 8.4.1 BUSINESS INTELLIGENCE

Currently, our business intelligence services provide risk stratification on primary care data only. The Data fragmentation and low data quality across NHS partners and disconnected datasets in social care and care homes creates significant challenges in correlating patient-level data across multiple services.

As we integrate disconnected datasets, improve data quality, and correlate patient data, we will look to deliver the following:

- Compilation of service performance dashboards and analysis of trends
- Capacity and demand analysis and activity modelling
- Information to monitor targets, key performance indicators and metrics such as national targets or patient focussed outcome measures
- Interrogation of activity datasets to support service planning and redesign
- Identify data quality issues
- Supporting Recovery Framework through Modelling & Prioritisation of Waiting Lists

### 8.4.2 POPULATION HEALTH MANAGEMENT

Thanks to continuous innovations in healthcare, people are living much longer than previous generations. Unfortunately, for many people, this also means living longer with a long-term condition or persistent illness.

We know that health inequalities are present throughout across the region. Despite improvements in life expectancy, the region remains below the England average. As with the rest of England, there is a social gradient in health, the lower a person's socioeconomic position, the worse their health is likely to be. To reduce these health inequalities within LLR, there is considerable work to be done, but there is a wealth of historic data to draw upon in predicting preventable health issues.

At the LLR system level, there is an agreement to establish a collaborative approach to Population Health Management. Each ICS partner will support this agreement by developing a capability of analytics staff to feed into population health management and report at system, place, and neighbourhood levels.

Organisational Development Resource will be focussed on engaging BI/Analytics staff in all partner organisations and ensure that staff start to think about using population health analytics to support service delivery decisions.

The challenge will be the shift from utilising scarce analytics resource away from routine retrospective reporting to predictive analytics on population health, which is traditionally the domain of Public Health Medicine (PHM) only.

One hundred staff across eight analytics teams in LLR will form a collaborative multi-agency group to facilitate peer working, sharing tools, capacity, skills, and knowledge as the ICS matures. This group will support and contribute to a wider East Midlands PHM Analyst network to share secondary use data for the purposes of public health, research, and service redesign for the benefit of the wider community.

Beyond combining our workforce, there is a need to access and correlate a huge volume of data, analyse it, and make recommendations. This is expected to be a multi-year programme requiring significant investment and the use of new technologies and analytic skills, but with very clear benefits.

## 8.5 MACHINE LEARNING / AI / RPA

**We aspire to research and adopt modern and emerging technologies such as ML and RPA where there is a clear benefit to doing so.**

We recognise that there is still much to gain from better use of the technology we already have and ensuring that the ways in which we interact with technology allow us to 'work smarter' to gain the benefits of digital tools and new models of care. We also want to be able to take advantage of new and emerging technologies.

As we consolidate data which has for so long been siloed, we can make use of that data, at the patient, service, and population levels. Machine Learning is a key aspect in identifying new discoveries from our data. It is envisaged that an ICS Intelligence function, equipped with data analysis and modelling skills and machine learning tools will open new directions for investigation that could not be done easily using algorithmic data models.

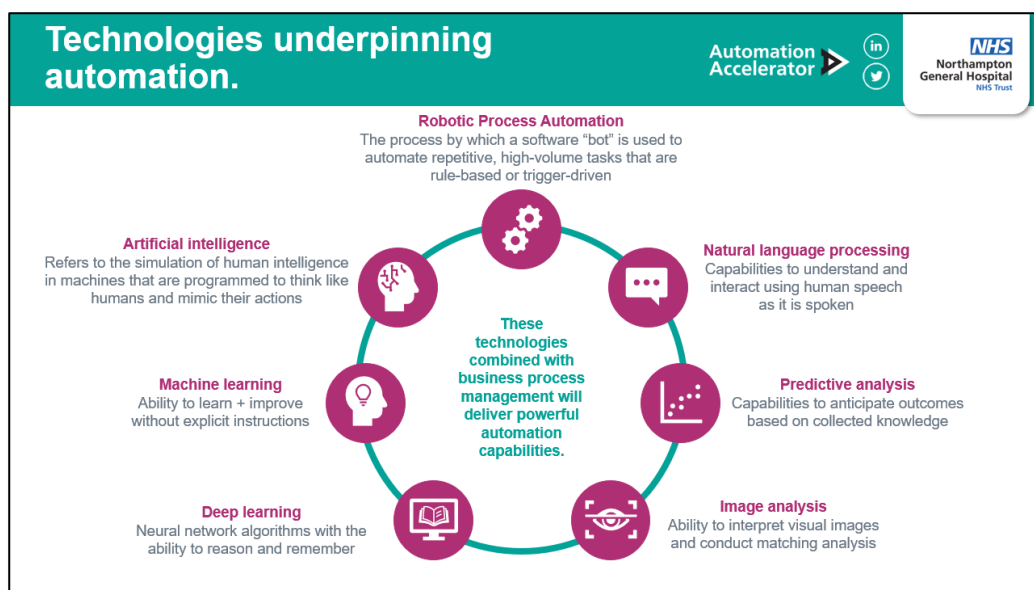
UHL have developed skills in process automation having initiated projects to explore this technology in areas such as operational visibility of the discharge prescription process and Patient-Initiated Follow-Up appointment processing. UHL are planning further projects to leverage this capability in the automation of back office processes.

We have agreed a joint bid to build an RPA (Robotic Process Automation) Centre of Excellence at Northampton General Hospital (NGH). This will allow us to:

- Improve efficiency by moving repetitive tasks to automation 'bots'
- Connect systems at a process level where they may not be easily integrated at a data level
- Free up more time to be spent on clinical care rather than administration

In automating the manual process of monitoring oxygen tank levels at NGH, the frequency of checks was increased, accuracy was improved and over 1500 hours were redirected to value-add activities.

Figure 6 – Technologies Underpinning Automation



## 8.6 DIGITAL COMMUNICATION AND TRANSFER OF DATA

**We will build upon existing initiatives by endorsing a greater availability of digital communication and information sharing for both our citizens and our workforce.**

Alongside our strategic system rationalisation (Section 7.3 “Strategic Systems Landscape” [Page 36]), we are already working towards our vision of improving digital access to data and increasing digital communication.

In conjunction with this strategic system review, the LLR Digital Innovation Hub is investigating options to reduce the need to create and move physical copies of information through a “Paper Switch-Off” initiative.

We will achieve this reduction in physical movement of people and paper-based information through:

- Health and social care professionals accessing unified data through their key operational systems
- Increased secure data sharing between health and social care partners across our digital ecosystem of strategic systems
- Citizen access to their electronic records, including care plans and correspondence
- Increased adoption of remote consultations through telephone or video

These changes will support the NHS Net Zero commitment, provide greater efficiency, and support new models of care.



# 9. WORKFORCE

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## CURRENTLY....

- Backoffice systems, including HR, lack digital workflows, are labour intensive and slow.
- Clinical systems are not intuitive.
- There are gaps between the digital skills of our workforce and the systems they use.
- Recruiting and retaining IT personnel is challenging.

## MEANING THAT...

- There are delays in processes such as staff being granted system access.
- Clinical personnel can struggle to use systems as they were intended to be used.
- IT teams have gaps in capacity and experience.

## LEADING TO...

- Our workforce is frustrated by our systems and processes.
- Time available for front-line care is reduced.
- Poor or incomplete data is being entered into key operational systems.
- IT capacity limitations leads to a focus on operational service and limits change and improvement programmes. Staff retention creates risks for succession planning.

## WE WANT TO...

- Create and encourage a digital first approach across the ICS and share innovation improvement ideas from frontline health and social care.
- Ensure that front line staff across the ICS have the information they need to do their job safely and efficiently at the point of care, including an ICS shared care record.
- Create ICS-wide professional development, front-line skills development, peer support mechanism, and training opportunities.
- Address the challenges of attracting and retaining IT personnel.

## WHICH WILL IMPROVE....

- Workforce satisfaction.
- How our people use the systems which support their work.
- Onboarding of personnel into a new role.
- Time available to provide care.

## WE WILL ACHIEVE THIS BY...

- Co-design solutions with our workforce.
- Ensuring that our workforce have the digital skills they need.
- Modernising our IT technologies, delivery methods, and IT workforce offer.

## 9.1 DIGITAL CULTURE

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**We shall co-design our systems with our workforce, ensuring that our solutions are intuitive. We shall streamline the number of different systems our people need to learn and keep working processes and system processes aligned.**

Our workforce is arguably the single most significant component of health and social care success. The tools and supporting service we provide to them must support their commitment and work with them and for them, acting as an enabler, not a barrier.

Our people experience digital services on a daily basis in their personal lives. Accelerated digital transformation in the commercial world over the past twenty years has set an expectation level for our workforce as high as for our patients and citizens. For younger members of our workforce, a high level of digital interaction may represent their baseline expectation; it is no longer considered optional, it is the minimum they expect. This is equally relevant for their daily working activities and their interaction with their employer.

User research which has informed the NHS People Digital Strategy identified that:

- People are frustrated when technology is not easy to navigate or when it does not work for them
- Repeated form filling, employment checks, and statutory and mandatory training irritates people
- Systems are clunky and “not like Amazon and Facebook”
- People want to help solve the problems and many have become clinical entrepreneurs
- There are too many workforce systems to learn, and they are not intuitive
- Data is often wrong or out of date
- Alerting, reminders, and escalations are often a manual process rather than automated

It is vital that our digital tools work in a way that people expect and reflect processes, not steer processes. Often, heritage software systems provide an outdated user experience which can be confusing for operators who have grown up with interactive design and monolithic systems can be slower to change often failing to maintain pace with organisational change. Both of these challenges can contribute to frustration and lead to a reduction in data quality.

The 2019 Topol Review<sup>i</sup> ‘Preparing the healthcare workforce to deliver the digital future’ noted the move towards a more agile workforce: *“The entry of millennials into the workforce has already resulted in changing expectations around work-life balance, flexible careers, rewards and incentives, relationships with employers and the use of technology. With increasing digitisation and digital literacy, the social and emotional skillset of the workforce will become increasingly important. Adoption of innovative technologies that automate repetitive and administrative tasks should also give the workforce more time to make use of cognitive skills.”*

The NHS operational planning guidance for 2021/22 set out a priority for systems and employers to embed the workforce transformations adopted during the pandemic to support recovery and longer-term changes.

These transformations include maximising the benefits of e-rostering and e-job-planning to give our people more control and visibility of working patterns so that they can manage their different responsibilities and broader interests, supporting service improvements and ensuring the most effective deployment of personnel.

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<sup>i</sup> <https://topol.hee.nhs.uk/>

Local systems were also encouraged to make use of interventions to facilitate flexibility and staff movement across systems, which were an important part of the response to the pandemic. These interventions include remote working plans, technology-enhanced learning, and the option of staff digital passports.

### 9.1.1 DIGITALLY ENABLED NURSING

**We will support our nurses, PAMs, and practitioners by collaborating with them to co-design digital systems which reduce unnecessary administration and allow them to focus on the care they give.**

*“What Good Looks Like (WGLL) is powered by cohesive, interdisciplinary teams. It presents a unique opportunity for the nursing profession in driving digital transformation.*

*This guidance for board level nurse leaders accountable for digital transformation will work alongside and support the WGLL framework, through practically applying its success measures to nursing practice. By applying WGLL to nursing, we can showcase the importance of system-wide collaboration and community, with people and teams working together to achieve the overall WGLL aims.*

...

*As nurses, we are deeply connected to delivering high quality care for all people. Through shifts large and small in health systems, nurses are the constant and direct connection with people. It is hard to ignore the rapidly evolving landscape around us – from the opportunities to improve care in better connected systems and data sharing to our population becoming more digitally fluent.*

*What Good Looks Like (WGLL) sets out an ambitious, common vision across seven success measures for digital transformation. We see a unique place for nurses and nursing practice to support the realisation of this vision. This Guidance for Nursing on WGLL aims to support strong nursing leadership and the practical application of WGLL to the nursing profession, enabling us to have a key role in delivering transformation.”*

NHS England has provided guidance for nurse leaders supporting digital transformation aligned with the What Good Looks Like framework. The WGLL Guidance for Nursing<sup>i</sup> includes a “Unified Vision for Digitally-Enabled Nursing”. This vision describes a landscape where:

- Nurses are empowered to practice and lead in a digitally enabled health and social care system, now and in the future.
- Nursing practice is fully supported by the use of digital technology and data science.

The guidance provides support for accountable nurse leaders, across ICSs and organisations, to achieve this vision and enable WGLL through:

- **Success measure 1 - Well led**

*“Driving a supportive culture and enabling structure from board to point of practice.”*

- **Success measure 2 - Smart foundations**

*“Building the right foundations for digitally enabled nursing practice will ensure our time is spent in the right place, at the right time, and providing the right care.”*

- **Success measure 3 - Safe practice**

<sup>i</sup> <https://www.nhs.uk/digitise-connect-transform/what-good-looks-like/guidance-for-nursing-on-what-good-looks-like/>

*“Secure, sustainable and fit for purpose solutions are paramount in delivering safe person-centred nursing care.”*

- **Success measure 4 - Support nurses**

*“Every nurse is equipped to ensure the service they work within is always striving to provide a better experience with better outcomes today than it did yesterday.”*

- **Success measure 5 - Empower people**

*“Involve, don’t just engage”*

- **Success measure 6 - Improve care**

*“Continually aim to push the boundaries of what is possible - once one achievement becomes the norm, be safe and brave to see what is possible using the most up to date technology to improve care.”*

- **Success measure 7 - Healthy populations**

*“Our vision is that we will use population health data to inform how we work, ensuring we provide services and care early and close to home.”*

As part of our digital vision, we will work with our people to give them the tools they need, make them intuitive to use, and work for them both for their operational roles and their employment.

## 9.2 DIGITALLY ENABLED WORKFORCE

**We will promote an environment where intuitive digital tools support flexible working models and we will work with our people to give them the digital skills they need.**

The national People Digital Strategy will be implemented through the Digital workstream of the LLR People Programme. We will map the digital people strategy across the partners, inclusive of social care and the external care market, to develop a plan that sees a digitally enabled workforce right across LLR, with a road map of key deliverables in year. Key digital interventions are already in place across the system, to support efficiency:






- Creation of virtual wards - patients remain under the care of a consultant but supported by community teams from district nursing and therapies – practice is enabled by digital technology. We aim to develop this model further. See Section 10.1 - Virtual Wards [Page 52].
- Use of interface technology to enable access of primary care records in secondary care.
- Increased adoption of the Digital Staff Passport
- Use of electronic rostering to facilitate workforce planning; LPT has begun piloting Safe Care in some inpatient wards. Safe Care works alongside electronic rostering to match staffing levels with patient acuity in real-time.
- Skills for Care are working with Social Care colleagues to identify “what good looks like” from a digital perspective. This is the Adult Social Care Reform White paper, ‘People at the heart of Care’ which has ‘accelerating technology’ as a core theme and sets out £150 million of additional funding to drive greater adoption of technology and achieve widespread digitisation across social care.

### 9.3 DIGITAL WORKFORCE TOOLS

Through our Digital Workforce Programme, we will build a workforce intelligence system which will digitise workflows, integrate core systems such as e-rostering and Electronic Staff Record within 18 months. This will reduce administration, improve staff experience, and release time for care.

#### WORKFORCE PLANNING AND MANAGEMENT

The NHS People Digital Vision sets out a blueprint for a digitally-enabled experience for NHS personnel, allowing them to complete tasks from any location.

<p><b>Define Staffing Needs and Publish Vacancies / Shifts</b></p>  <p>Evidence-based workforce planning and insights to define staff and skills needed.</p> <p>Staff records full and up to date.</p> <p>Employers publish vacancies and unfilled shifts bookings.</p>	<p><b>Easily Access Information and Activities on Any Device</b></p>  <p>Staff use an app(s) to do basic tasks on the move like booking shifts, booking annual leave, viewing payslips etc.</p> <p>Carefully targeted notifications keep staff informed and engaged.</p>	<p><b>Intuitive Workflow Tools to Complete Tasks Quickly</b></p>  <p>HR teams manage workflow to recruit, shifts booking, managing absence, employee relations and more rapidly with confidence that all safeguards have been met.</p>	<p><b>Present Credentials as Evidence and For Access</b></p>  <p>Staff control their data.</p> <p>Staff use an app(s) to hold their 'verified employment and skills credentials' securely.</p> <p>Staff able to access buildings and log into clinical systems.</p>	<p><b>Maximise Time with Patients</b></p>  <p>Clinicians, managers, and support teams feel their time is valued.</p> <p>Processes fast-tracked.</p> <p>Patients can rest assured that all safeguarding checks have been completed and are up to date.</p>
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In implementing this blueprint, one platform will allow staff to:

- Control their own data
- Book annual leave
- Book shifts
- View payslips
- Auto-fill forms
- Apply for roles
- Onboard quickly and easily
- Build their own competency portfolio

#### DIGITAL STAFF PASSPORT

Moving between NHS organisations traditionally results in staff, bank workers and HR teams having to repeat time consuming, yet important form filling, pre-employment checks and statutory and mandatory training. There has long been a call for some form of a 'passport' across the NHS.

To support the COVID-19 response, an interim COVID-19 Digital Staff Passport was developed to enable safe and rapid staff movements between NHS organisations. This was the first step by NHS England and NHS Improvement in their ambitions to build a Strategic Digital Staff Passport to use technology to simplify staff movement between NHS organisations, as outlined in 'We are the NHS: People Plan for 2020/21 – action for us all'<sup>i</sup>.

A Staff Digital Passport will simplify the high volume of temporary staff movement between NHS organisations e.g., junior doctors, save time by providing a verified record of identity and employment, and allows colleagues to carry their credentials and professional registration on their smartphone.

## 9.4 DIGITAL SKILLS

### We will support our people through ICS-wide professional development in digital skills.

Everyone who works in health and social care needs to have digital capabilities grounded in knowledge, skills, attitudes, and behaviours that will enable them to provide the most effective and compassionate care for patients everywhere.

If the knowledge, attitudes, and behaviours around digital capability enable staff to provide the most effective care, then in order to really improve care for our patients, we need to promote the digital skills and confidence of our workforce. By improving digital literacy capabilities of health and social care colleagues, the uptake and adoption of new digital tools and technologies can be improved, and the provision of care transformed.

It is important to note that, while we expect our workforce to have the necessary digital skills to use their tools effectively, we should not expect them to have expert skills; our systems should be intuitive to use so they support our people when performing their main role. We will co-design our systems with our workforce to do this.

Lloyds Bank's UK Consumer 2020 Index<sup>ii</sup> estimated that 52% of people in the workforce lack digital skills in the workplace, and evidence has shown that this deficiency in digital skills extends into the health and social care workforce.

### NHS DIGITAL ACADEMY

The NHS Digital Academy is the home for digital learning and development, set up to increase the digital skills of our workforce and to support a new generation of digital leaders who can drive the transformation of the NHS.

It was established following a 2017 Secretary of State commitment following the recommendations of the Wachter Report to invest in the capability and capacity of digital change leaders. HEE is now significantly expanding the Digital Academy model into a suite of learning artefacts – additional formal learning programmes, learning resources and tools – which will mean digital learning and development will be accessible to a much higher number and broader range of individuals across our workforce.

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<sup>i</sup> <https://www.england.nhs.uk/publication/we-are-the-nhs-people-plan-for-2020-21-action-for-us-all/>

<sup>ii</sup> [https://www.lloydsbank.com/assets/media/pdfs/banking\\_with\\_us/whats-happening/lb-consumer-digital-index-2020-report.pdf](https://www.lloydsbank.com/assets/media/pdfs/banking_with_us/whats-happening/lb-consumer-digital-index-2020-report.pdf)

## DIGITAL CAPABILITY FRAMEWORK

We can only provide the best care to all if we can fully exploit the potential of digital and other technologies. We want the health and social care workforce to be fully competent, confident, and capable in the use of digital in the workplace in order to be able to provide that best care.

Excellent digital capabilities are not just about technical skills but include a positive attitude towards technology and innovation and its potential to improve care and outcomes.

To achieve this, we need to provide easy to access learning and development for everyone and for the professions. The HEE Digital Literacy Capability Framework<sup>i</sup> has been developed to support the improvement of the digital capabilities of everyone working in health and care. It is intended as a developmental and supportive tool that can empower and enable all staff.

A self-assessment diagnostic tool underpinned by the Health and Care Digital Capabilities framework will be used to support individuals to identify their digital skills learning needs and be intelligently signposted to appropriate learning resources. Work is also underway to create profession and service-specific digital capabilities frameworks.

## 9.5 IM&T CAPABILITY

**We will work together with our technical personnel to establish an initiative to improve how we can best recruit and retain the best people to deliver and support our digital solutions.**

### AGILE DELIVERY

Accelerating our digital strategy will require a fast-paced, agile approach to technology delivery ensuring systems are aligned with new models of care and new ways of working. Many of the delivery methods on which public sector organisations have relied for decades no longer apply.

Public sector projects have long been characterised by monolithic, highly-governed, waterfall lifecycles. While this model was appropriate forty years ago, the fast pace of change of organisations and technology cannot be implemented in this way.

Agile delivery, as distinct from agile working models, supports frequent change, shorter delivery cycles, but with less governance and shorter planning horizons. This ultimately depends on a cultural shift and more flexible budget and requirements management. Agile delivery can be constrained by the architecture of the technology in place and the Technical Design Authority will assess the suitability of systems to supporting agile delivery methods.

### IM&T CAPACITY – RECRUITMENT AND RETENTION

Attracting and retaining suitably experienced and skilled IM&T personnel is challenging in the face of a competitive IT skills marketplace. There are several challenges:

- Outdated technology is not seen as attractive to a workforce who sit at the leading edge of technology and aspire to work with new hardware and software.
- Many systems are outsourced or off-the-shelf requiring implementation and support roles within the public sector organisation with many key technical roles being supplier-based.

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<sup>i</sup> <https://www.hee.nhs.uk/our-work/digital-literacy>

- As agile delivery methods have been commonplace in private sector technology for over two decades, many prospective IM&T workforce candidates can be discouraged from the public sector because of the highly governed nature of public sector projects.
- Public sector salaries are commonly lower than comparable private sector roles.
- Succession planning for future leaders can be compromised by personnel leaving the organisation in search of the above

In 2019, as part of the 'Building a Digital Ready Workforce Programme', Health Education England published a report<sup>i</sup> on Health Informatics Career Pathways which made the following recommendations across five areas across the NHS:

- **Articulating health informatics career pathways across the NHS**

There is a need to agree and articulate the specialist areas within health informatics alongside skill requirements. Job titles and descriptions need to be in line with industry standards and be meaningful.

Increased consistency in terminology will also enable us to measure and improve diversity in specific specialist areas as well as ensuring individuals seeking work are able to locate opportunities.

- **Nationally-supported recruitment and retention**

Entry level roles require an improved foundation potentially with a basic education package to avoid being specialised too early on and gaining a better understanding as to how their specialism fits into the wider NHS.

Mid-career roles need support to build specialist skills and be able to use them in practice. Senior managers require more knowledge and leadership support as their portfolios broaden.

Leadership skills are required at all levels including those who do not wish to become managers.

Individuals external to the NHS may need an orientation to the NHS initially but must not be automatically disregarded.

- **Defining the professional body offer and understanding health informatics network opportunities**

Individuals were not always clear what the professional bodies were offering, what the overlap was and how they could benefit. There is real potential for the professional bodies and local training networks to support individuals in realising their goals; however, until we can articulate with consistent language what we are striving to achieve, this is difficult to match up.

The professional bodies and training networks also have an opportunity to support organisations with understanding their profiles and developing meaningful succession planning, while supporting individuals with careers advice and development.

There is a need to ensure that there is more consistency in training and support available and this is not down to luck or being in the right organisation.

- **Regional/System approaches to developing an informatics workforce**

There are opportunities for organisations to tackle workforce challenges together at scale. This includes developing joint initiatives to enable staff to gain exposure through rotational, placement or secondments in system wide projects, developing new skills and experience valuable to the local system without the costs of unplanned succession planning and recruitment.

Structured activities around networking, mentoring, and coaching should also be encouraged as part of this to build up individuals' support networks. This should be linked closely with local training networks

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<sup>i</sup> <https://www.hee.nhs.uk/our-work/building-digital-ready-workforce/health-informatics-career-pathways-project>



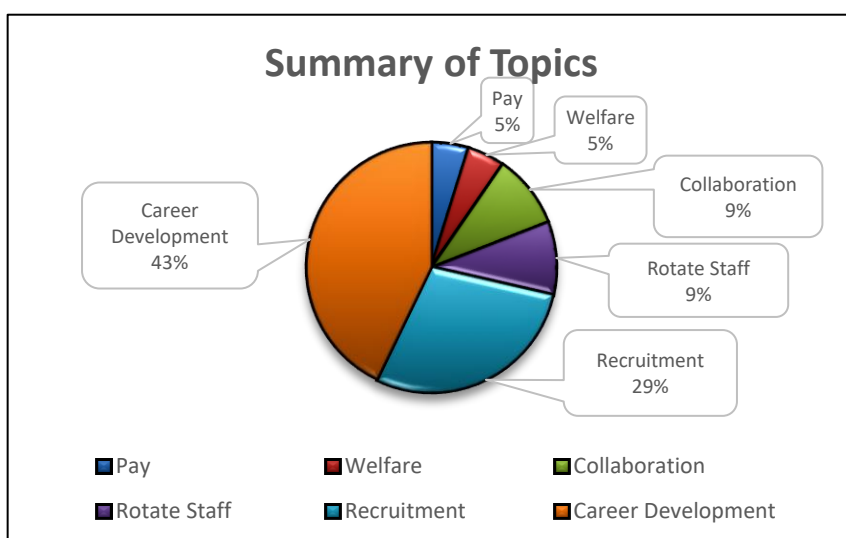
providing specialist training and linked to Regional Talent Boards to ensure this is considered as part of the mainstream and future proofing the local workforce.

We believe that the roles of professional bodies and informatics networks and regional/system workforce approaches are complimentary with the former providing advice and services, the latter identifying local supply and demand requirements.

• **What can senior leaders do now?**

This section considers the cultural changes that all leaders can explore with their organisation including the importance of executives understanding what health informatics staff need in order to do their jobs effectively. Part of this is ensuring health informatics has a voice and is seen as integral to service transformation, rather than becoming a scapegoat and suffering from blame cultures. Those in a recruiting or line manager capacity can also do more to support and signpost their direct reports.

Figure 7 – Health Informatics Workforce Themes



Within this programme, two conferences were held in 2020 with Health Informatics professionals. Only the conference title was pre-set by the organisers– ‘How can we Attract and Retain the Best Digital Talent’.

At the start of the conference, the delegates put forward themes they wanted to discuss, these were then ranked by all delegates, and the most popular themes became the workshop sessions. A summary of the distribution of these themes is shown in Figure 7,

highlighting that Career Development and Recruitment were the two biggest topics chosen for discussion.

**YEAR OF THE DIGITAL PROFESSION**

Recognising that a sustainable, skilled, and supported workforce of digital, data, technology, and informatics experts in health and care is essential to meet the demands and ambitions of the sector, 2022 has been named the ‘Year of the Digital Profession’ with a national pledge to:

- Launch a 5-year strategy and roadmap for a sustainable digital and data workforce and developing the profession the workforce deserves.
- Create a career framework setting out core competencies to inform professional development and critical for both the recruitment and retention of those within the health and care sector.
- Deliver targeted campaigns to attract apprentices, graduates, and specialist skills in short supply, into the sector.

The Year of the Digital Profession will be promoted sector-wide to increase the understanding and visibility of the roles and will highlight their function and value across health and care to lay the right foundations upon which these professions can grow.

We will support this initiative and align with its work to inspire and recognise our digital workforce.

# 10. IMPROVED CARE

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## CURRENTLY:

- There is limited integration between organisational systems and therefore organisations.
- Our systems don't easily support multi-organisational pathways.
- Transfers of care can require significant manual effort and communication.

## MEANING THAT:

- Models of care are aligned to individual organisations or locations.
- Conventional referral mechanisms between organisations can be slow, resource intensive, and disjointed.
- Patient discharge from an inpatient stay can be slower than possible.

## LEADING TO:

- A fragmented patient experience as they retell their story when they are referred between organisations.
- High cost resources such as ward beds are used when alternative options are available.

## WE WANT TO:

- Provide person-centred care along care pathways rather than being organisation-specific.
- Allow people to remain in their home when it is safe and appropriate to do so.
- Digitally support models of care which provide a seamless patient experience along multi-organisation care pathways.

## WHICH WILL IMPROVE:

- The patient experience.
- The efficiency of scarce, high-cost inpatient resources.
- Upstream and downstream communication along care pathways.

## WE WILL ACHIEVE THIS BY:

- Increasing our use of virtual wards and remote monitoring.
- Maximising the collaboration across all our partner organisations e.g., pharmacy, voluntary sector etc. through improved communication and information sharing.
- Provide a cohesive any-to-any referral mechanism supporting new models of care.
- Supporting patients in managing their physical and mental health.

## 10.1 VIRTUAL WARDS

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**Currently, we have 132 virtual wards beds with concrete plans for 287 beds to support patients receiving acute care in their own homes.**

A virtual ward is a safe and efficient alternative to NHS bedded care that is enabled by technology.

Virtual wards support patients who would otherwise be in hospital to receive the acute care, monitoring, and treatment they need in their own home. This includes either preventing avoidable admissions into hospital or supporting early discharge out of hospital.

The NHS @Home Operating Model and principles of Virtual Wards are included in Appendix C - Virtual Wards and Remote Monitoring [Page 75].

LPT and UHL are recognised as leading NHS Trusts nationally in developing virtual ward support for patients on a pathway. LPT and UHL collaboratively have been sharing their success on regional and national platforms so that other Trusts can learn and build upon the work in Heart Failure and Respiratory patients. With the launch of the Elective Recovery Technology Fund, the ICS has been co-ordinating bids to attract transformational funding into LLR, so far within this fund £6.5m of investment has been secured with potentially more to be announced.

The teams at University Hospitals of Leicester, Leicestershire Partnership Trust, the CCGs, and Spirit Healthcare have rapidly expanded their remote monitoring schemes to care for patients with chronic conditions safely in the comfort of their own home.

Inspired by efforts to establish 'virtual wards' for heart and lung patients after the pandemic began, work has been taking place to extend the use of technology across more care pathways including heart failure and COPD. The technology is set up to help patients self-manage their condition at home while giving them support and reassurance that the monitoring equipment will ensure their clinical teams can act swiftly if their health deteriorates.

In its first year, more than 900 patients were supported including over 700 with heart failure and COPD. Fifty patients with heart failure and respiratory conditions were supported in the first six months through the digital rehabilitation pathway, while 172 COVID-19 patients have been discharged after a hospital admission with remote monitoring at home during an initial five-month period.

The Regional Office of NHSE have encouraged the LLR ICS to expand upon the two conditions being supported, so that we can demonstrate the scalability of the model and directly impact waiting lists both in terms of joining waiting lists and keeping patients fit while they are on waiting lists, to avoid failing a preoperative assessment. This learning can then be blueprinted for further national replication.

## 10.2 REMOTE PATIENT MONITORING

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**We will expand the capability of existing pathways through remote monitoring to maximise the prevention of avoidable admissions, improve patient readiness for surgery through prehabilitation, and support in-home monitoring patients being discharged.**

Also allowing patients to receive care while remaining in their own home, remote patient monitoring differs from virtual wards as it is a mechanism intended for:

- enhanced primary care programmes,
- chronic disease management,
- intermediate or day care,

- safety netting,
- proactive deterioration prevention, or
- social care for medically fit patients for discharge.

Remote patient monitoring allows the provision of prehabilitation to allow patients to improve their general health and fitness at home ahead of surgery or treatment. LLR began a pioneering initiative in 2019 to provide a supervised exercise regime, nutritional support, education, and psychological support to improve outcomes for cancer patients.

Patients with poor physical fitness and/or a poor nutritional state before surgery are known to have a higher risk of complications after major surgery. Patients undergoing major cancer surgery face additional demands as their surgical treatment is often combined with chemotherapy or radiotherapy. Studies have shown that patients can improve their aerobic fitness by 20% in a six-week programme before surgery.

Prehabilitation is a programme of support and advice that covers three aspects of a patient's health:

- Nutrition and weight
- Physical activity and exercise
- Mental wellbeing

Monitoring progress and providing advice remotely will improve patients' preparedness for major surgery and treatment, reduce post-surgical complications, and improve outcomes.

Remote monitoring for patients in a social care context is included in Section 10.6 - Social Care below.

### 10.3 DIGITAL PRIMARY CARE

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**We will continue to support our GP practices with their provision of video and online consultations through dedicated business change support, move e-referrals to a more robust and resilient platform, and support practices with their adoption of cloud telephony to support flexible working.**

GP IT systems have long sat at the heart of primary care technology facilitating and recording millions of interactions with patients every week. GP practices have led the way in the move from paper to digital record-keeping and are now well on the way to offering online transactions, such as appointment bookings and repeat prescriptions, across all practices in England.

Since April 2015, all practices have been required to offer patients access to online GP services. Latest data shows that 15.1 million people are registered to book their GP appointments, order their repeat prescriptions, and view their health records online.

The 2019 NHS Long Term Plan commits to every patient having the right to be offered digital-first primary care by 2023/24.

The five-year framework for GP contract reform published in January 2019 to implement The NHS Long Term Plan, introduced a bold set of commitments related to digital services in general practice, agreed by NHS England and NHS Improvement and the British Medical Association (BMA). These commitments have been introduced gradually every year through the GP contract since 2019-2020.

From October 2021, amendments to the GMS and PMS regulations came into effect, bringing into force a number of the agreements reached by NHS England (NHSE/I) and the British Medical Association (BMA) General Practitioners Committee (GPC) England.

GPs are now required to “offer and promote” to their patients (and those acting on their behalf) the following tools and services for their patients:

- an online consultation tool
- a video consultation tool
- a secure electronic communication method
- an online facility to provide and update personal or contact information.

These requirements are all subject to existing safeguards for vulnerable groups and third-party confidentiality. They are to be in place alongside, rather than as a replacement for, other access and communication methods, for example, telephone and face to face contact.

Within LLR we have a well-established pathway referral management solution supporting both our primary care teams and services for the appropriate care pathway to be identified for the patient need. This solution is fundamental at supporting accurate and appropriate patient referral but is now in need of replacement. We will look to ensure we have a robust and resilient platform to continue our pathway referral management and supporting our patients with the right pathway at the right time. The long-term ambition is for the NHSE e-Referral Service (e-RS) to become an ‘any-to-any health sector triage, referral and booking system’ by 2025, which local systems will need to integrate with.

## 10.4 COMMUNITY PHARMACY

**We will continue to include community pharmacy in our digital initiatives to provide a truly joined-up patient experience.**

Community pharmacy is a pivotal part of the NHS family, and the healthcare people receive. The traditional role of the pharmacist as the dispenser of medication prescribed by a GP is evolving and in recent years community pharmacists have been developing clinical services in addition to the traditional dispensing role to allow better integration and team working with the rest of the NHS.

Community pharmacy is consequently a socially inclusive healthcare service providing a convenient and less formal environment for those who cannot easily access or do not choose to access other kinds of health service. Most pharmacies now have a private consultation area specifically for confidential or sensitive discussions.

The NHS Long Term Plan set out how patients and the public will increasingly rely on clinical care provided by pharmacy professionals.

Increasing the services which can be provided by community pharmacists will be supported by providing access to the LLRCR and the implementation of EPS (Electronic Prescription Service) in secondary care outpatients departments in UHL and LPT.

Many people live near to a pharmacy and appointments are not required to speak with the pharmacist. They are often open in the evenings and at weekends, so they offer fast, convenient support.

Sometimes GP practices will directly refer patients to their community pharmacist for appropriate health conditions, through the Community Pharmacist Consultation Service.

As services increase and community pharmacy transacts more closely with the wider NHS, the ability to make appointments will become important. We will deliver the tools and processes which enable this.

## 10.5 INTEGRATION WITH VOLUNTARY SECTOR

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**We will identify how we can collaborate and communicate digitally with the voluntary sector on a case-by-case basis.**

LLR's voluntary and community organisations are a vital component of the support and care available to our citizens. The ICS is committed to including voluntary and community services to provide our vision of integrated person-centred care. Our digital tools will support the new care pathways that support this integration.

We are already integrating our systems and securely sharing patient information with Rainbows Children's Hospice and LOROS Hospice to reduce unnecessary administration.

The voluntary and community sector encompasses organisations of many shapes, sizes, and types. The new digital tools we are introducing such as the LLRCR give us a clear opportunity to ensure that we have a clear catalogue of these organisations, and we refer, signpost, or socially-prescribe to them appropriately and securely.

New legislation removes legal barriers to integrated care for patients and communities and allows for greater inclusion between statutory services and the voluntary sector. We remain dedicated to the security of patient data and appropriate levels of information governance, and we will review our digital integration with voluntary and community organisations on a case-by-case basis following the required levels of governance and due-diligence.

## 10.6 SOCIAL CARE

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**We will support digital services and tools in social care to provide citizens with access to the same levels of information and advice as the NHS services.**

**We will continually review the opportunities of remote monitoring and assistive technologies to support service users in their own homes.**

**We will ensure that our social care workforce is able to access and use modern technologies and share information to improve productivity and service quality.**

It is vitally important for people to receive the best care and support in their homes and their community and lead healthy and fulfilling lives and retain their independence and self-esteem. Digital technology can enable this in ways which previously seemed impossible.

Approximately 30% of social care providers nationally are still using entirely paper-based systems. Digital transformation can dramatically improve the quality and safety of care, with real time data integrated into the NHS. This ensures people receive the right care, at the right time, and the right people have access to the information they need. As an example of the opportunities, falls in care homes cost the NHS over £2 billion a year; data from NHSX suggests that the use of innovative care technologies, such as acoustic monitoring, could reduce these falls by over 20%.

The recent "Busting Bureaucracy"<sup>i</sup> report outlined the ambition for all social care providers to have access to a digital social care record (DSCR) that can interoperate with a local Shared Care Record by 2024. These records will play an important role in joining up care across social care and the NHS, freeing up time spent

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<sup>i</sup> <https://www.gov.uk/government/consultations/reducing-bureaucracy-in-the-health-and-social-care-system-call-for-evidence>

by care workers and managers on administrative tasks whilst equipping them with the information they need to deliver care.

Social care is at the heart of our communities, providing support to those who need it so that as many people as possible can live the life they want to lead. Social care supports adults of all ages – including young people moving into adulthood and those of working age – with a diverse range of needs, including:

- autistic people
- people with a learning disability or physical disability
- people with mental health conditions
- people with sensory impairments
- people who experience substance misuse
- people with dementia
- other people with long-term conditions

The use of technologies in social care should enhance the quality of care, free up time for meaningful human interactions, and create stronger connections between people and their friends, family, and care networks. We must ensure that technology reduces rather than exacerbates loneliness and isolation, and that it supports the mental health and wellbeing of people and carers. And while not all people will want to use technology as part of their care or daily life, we must make sure that professionals and care teams have the right digital tools and data to provide the outstanding, safe care that all people deserve.

The 2021 Policy Paper “People at the Heart of Care: adult social care reform”<sup>i</sup> describes a vision of person-centred care which revolves around three objectives:

1. People have choice, control, and support to live independent lives.
2. People can access outstanding quality and tailored care and support.
3. People find adult social care fair and accessible.

Supporting wider improvements in social care, we will provide digital tools and services which help to deliver these objectives. Our digital offer will improve the experiences of our citizens through advancing integration between systems, self-care, access to services, aids and adaptations including the introduction of smarter or technology enabled care.

## ACCESS TO INFORMATION

Access to information, including self-care advice, details of available services, and self-referral guidance can be fragmented. We will look to make it easier for people to access our services through easy-access information and digital channels.

We will make accessing services as consistent and as simple as possible and embrace digital and virtual opportunities to enhance access and participation.

Our first line of preventative action will always be high quality information and advice in an accessible format to meet a person’s needs, building on increased accessing of our online communications during the COVID-19 crisis.

We will ensure that improved access to information is equally applicable to service users and carers, social care professionals, clinicians, and citizens and that this is both inclusive and meaningful to its audience.

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<sup>i</sup> <https://www.gov.uk/government/publications/people-at-the-heart-of-care-adult-social-care-reform-white-paper>

## CHOICE

By providing our citizens with access to more information about the services available to them, we aim to give them access to greater choice about how they want to be supported.

We will help them to manage personal budgets and direct payments and select the range of services which supports them best.

## TECHNOLOGY ENABLED CARE

We can make better use of Technology Enabled Care (TEC) to meet service user outcomes. It is important over the period of this strategy to ensure that digital capacity is enhanced to improve outcomes for service users. The emphasis placed on the appropriate use of digital technology to drive progress will have an impact on future investment and resources and improve digital access to services.

We understand the benefits of people staying in their own home as long as possible or returning home from hospital. Assistive technology can support this through remote monitoring and adaptations which can provide convenience and security for vulnerable people who might otherwise require residential care.

We will support the evaluation and deployment of assistive technologies, remote monitoring technology and telecare solutions which improve the lives of our citizens and allow them to lead fulfilling lives while reducing demand on NHS services

## INTEGRATION WITH HEALTH CARE

The LLRCR Shared Care Record Programme will provide greater information sharing across health and social care with the three Local Authorities integrated into the federated data ecosystem. This will allow healthcare clinicians to view a patient's social care data and social care workers to view relevant healthcare information.

At this stage, the LLRCR programme scope is data view access only. Data is entered in the clinician / social care worker's own key system and transactional activities are performed using existing methods.

As citizens gain access to their own information and have the opportunity to add and update data and undertake transactional activities, functionality that allows multi-disciplinary teams across health and social care to communicate and transact will also be added to our ecosystem.

## WORKFORCE SUPPORT

To underpin the improvements, we will make to support digital care and digital channels, we will support our social care workforce through:

- Ensuring that they have equipment that enables them to perform their roles flexibly and securely, including remotely.
- Providing access to service information, including assured suppliers, to know the services which are available to citizens, their capacity e.g., care home beds, and simplify the referrals process where needed.
- Providing access to citizen data so social care professionals can best understand the needs of the people they support.
- Providing access to digital workforce tools such as e-rostering so they can manage their own employment efficiently.
- Ensuring that social care professionals have the digital skills they need to support the care they provide and access to the digital learning and training that develops these skills.



## 10.7 CARE HOMES

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**We remain on target to achieve our target of digitally-enabling 80% of our care homes by March 2024 and we are working to ensure that there is a financially-sustainable model to continually support the homes.**

There are 300 independent and council-run care homes in LLR. Regionally, we have been supporting their digital-enablement through the provision and support of:

- Wi-Fi networking
- Secure, managed laptops
- Printers
- Access to NHS Mail, TPP SystemOne, and ultimately the LLR Shared Care Record
- Training for care home personnel in the use of the equipment and tools provided

We have successfully reduced the need for care home residents to be admitted to hospital through the new Pre-Transfer Clinical Discussion and Assessment (PTCDA) scheme.

Led by geriatricians and GPs, a discussion takes place between all relevant parties when a care home resident is deemed at risk of hospitalisation to explore safer alternatives. If staying in the care home the patient is visited by either a GP or geriatrician with a special interest in care home medicine to put an appropriate package of care and support in place.

During the initial period, the initiative led to the appropriate avoidance of 577 hospital admissions and 2,885 bed days, the saving of 730 ambulance journeys. Most importantly, it has kept many frail people in a supportive and safe environment rather than in a hospital unnecessarily.

By supporting the digitisation of care homes, we will ensure that initiatives such as this continue to improve the collaboration between care homes and primary care, community care, secondary care, ambulance services, and social care to provide the best support for our older citizens.

As we increase care home access to information and increase the skills and confidence of care home staff, we will investigate how we can share care home information out to the wider health and social care system such as sharing capacity information with social care and secondary care to streamline discharge processes and free hospital beds earlier.

## 10.8 MENTAL HEALTH

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**We will provide digital tools and services to increase access to mental health services, work with voluntary and community partners, broaden the range of information and advice to our citizens, make better use of data, and align our ways of working with the digital tools and channels we have to simplify the mental health journey and help people meet their goals effectively, including through new digital models of care.**

Key Lines of Enquiry (KLOE) for mental health have been established. At a summary level, these are:

- **Real-time information is available to support direct care across all ages**

By 2023/24, all mental health staff will be able to easily input, access and modify the information that they need, at the point of need (typically via an EHR), in mental health systems and across physical health records and primary care

- **Real-time information supports proactive care, better system planning, and research**

By 2023/24, the ICS is focused on system wide Population Health Management solutions, using high quality data from across the health and social care system, to show the areas of greatest health need, and are directing services to those areas / populations

- **Deliver personalised and inclusive care through digitally enabled pathways**

By 2023/24, every child, adult and older adult receiving mental health care will be given the option to access their care digitally

Integrated with the digital transformation of physical health, the ICS will deliver significant improvements for our citizens in choice, communication, and the provision of trusted advice and information to support their mental health. It will give health and social care professionals greater access to the information they need to improve patient outcomes and allow people to meet their mental health goals.

Providing a digital framework will give patients and their carers access to trusted advice, give them greater choice in the services provided, and improve communication with their health and care professionals. They will be able to make their choices based on the feedback of people who have been in their position, and they will not need to be experts in the health and social care system to find the right support.

Health and social care teams will have secure access to the information which will enable them to make informed decisions on the treatment of the people in their care and digital systems will be continually aligned with the services they provide.

Voluntary, Community and Social Enterprise organisations will have a digitally-connected framework within which to provide services as important partners of the statutory health and social care agencies.

Commissioners and NHSE&I will have accurate information based on the data captured electronically to support optimised targeting of funds to the services most needed and most successful in meeting patients' mental health goals.

# 11. CITIZENS

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## CURRENTLY:

- Patients have no access to their health information beyond basic primary care information.
- Patients have limited knowledge of our services.
- Patients are often required to travel to physical locations to transact with clinicians.
- Use of paper-based communication.

## MEANING THAT:

- Patient interaction with their clinicians can be a major undertaking requiring significant expenditure of time and travel.
- Paper-based interaction adds increased cost and delay to communication
- Citizens are not aware of the help and support that is available to them.

## LEADING TO:

- Patients using their GP when more appropriate alternatives are readily available.
- A high level of missed appointments.
- Significant changes in circumstances or health conditions during large gaps in appointments not being communicated.

## WE WANT TO:

- Provide patients with improved access to their information and health and social care professionals.
- Allow patients to easily communicate with their professionals without unnecessary travel.
- Empower patients to manage their physical and mental health where it is clinically appropriate to do so.

## WHICH WILL IMPROVE:

- Greater empowerment for the citizen over the data that is held about them.
- The opportunity for patients to transact with their clinicians and share information in real-time.
- Cost and time saved by reducing unnecessary travel.
- The environmental impact of travel.

## WE WILL ACHIEVE THIS BY:

- Providing digital tools directly to the citizen to allow them to engage with clinicians and manage their data.
- Co-designing accessible systems with citizen groups.
- Working with partners to address digital exclusion to provide these benefits to all our citizens.

## 11.1 SERVICE AND SYSTEM CO-DESIGN

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**We will put the needs of patients, family, carers, and staff at the heart of our system and service design processes by having dedicated roles with clear responsibility for understanding and meeting their emotional, physical, and technical needs.**

We are dedicated to ensuring that all our digital services and services are designed in collaboration with the people who are most impacted by them, following the perspective that there should be “nothing about us, without us”.

We will work to understand why some people avoid using digital services or choose non-digital alternatives and we will design our systems to help them and provide assisted digital support to ensure that people are not excluded when they can't or won't complete tasks online.

The Digital Innovation and Transformation Team (DITT) act as the hub for digital transformation across LLR. The team is committed to the NHS Digital Service Manual's Design Principles<sup>i</sup> and GDS Service Standard<sup>ii</sup>.

The DITT Digital Champion is accountable for the co-design process across the responsibilities of the User-Centred Design roles within the Digital, Data, and Technology Profession Capability Framework<sup>iii</sup>.

## 11.2 ACCESS TO INFORMATION

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**We will provide our citizens with a range of digital tools and channels which will enable them to be better informed, manage their conditions, access statutory and community services and communicate effectively with the people who support them.**

The NHS App provides a simple and secure way for people to access a range of NHS services on their smartphone or tablet device. This is provided at a national level and, locally patients have the opportunity to use supplementary apps and portals, integrated with the NHS App, to provide targeted information and healthcare management.

A key aspect of our ambitions is to realise the opportunities that digital technologies give us to bring our citizens closer to the health and social care services that support them. Providing digital access to information will provide our citizens with relevant and up-to-date service information and advice, the opportunity to manage their conditions, and securely share information with their health and social care team.

In the modern digital age, it is vital that we are able to engage with our citizens / patients and providing public-facing digital services is core to our digital vision and we will look to provide this access across five areas:

- **ACTIVE SIGNPOSTING**

By combining knowledge of the services available in our area and an understanding of our citizens as individuals, we will be able to provide personalised signposting to local community services and information.

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<sup>i</sup> <https://service-manual.nhs.uk/design-system/design-principles>

<sup>ii</sup> <https://www.gov.uk/service-manual/service-standard>

<sup>iii</sup> <https://www.gov.uk/government/collections/digital-data-and-technology-profession-capability-framework>

In some cases, patients are already able to access NHS services without a referral from their GP. Providing greater information through digital channels about the services which support self-referral is expected to remove perceived barriers to receiving appropriate and timely support.

- **NEW TYPES OF CONSULTATION**

Alongside conventional face-to-face consultations, we will provide online consultations, including online triage and symptom checking.

We have the technology to deliver remote consultations, including telephone and video.

Digital channels offer the opportunity to allow shorter, more frequent unscheduled consultations, including through secure messaging or chat.

We can provide remote monitoring of our patients, through online templates and questionnaires, or ultimately using telecare devices or wearable technology.

- **SELF-CARE AND MANAGEMENT**

Managing a health condition across multiple organisations can be challenging for patients, parents, and carers. Delivering a joined-up digital solution to bring together patient information, conditions, care plans, medications, and appointments is an important step to providing people with the tools to manage their own health.

We have, or plan to deliver, tools which can provide:

- Searchable directory of services
- Online appointment booking and management
- Online prescriptions
- Personalised symptoms checker
- Access and update personal information, including care plans
- Access to advice and information via NHS.UK

- **COMMUNITY CONNECTIVITY**

Support is available from many sources. Giving access to community services and resources is part of our wider ambition to provide the best care and support to our citizens.

We will provide access to:

- Personalised signposting for self-care
- Access to moderated online forums to provide peer support
- Patient / carer networking
- Personalised prescribing

- **CONDITION-SPECIFIC DIGITAL TOOLS**

In addition to digital tools which support the individual, their health, and their conditions, many standalone tools are available which provide focused support for specific conditions.

## 11.3 ADDRESSING DIGITAL EXCLUSION

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**While providing digital options for delivering health and social care will benefit many, a significant proportion of the population are digitally-excluded, many of whom would receive the greatest benefit.**

**We are creating the role of Digital Champion to build momentum in supporting the digitally excluded citizens of LLR, helping them gain better access to health and care specifically and public sector agencies in general. Our Research and Design roles will ensure that system design role creates digital systems that people want to use.**

**We will look to support organisations who promote digital inclusion and ensure that the digital systems we deliver meet modern accessibility standards. We will guarantee that the digitally-excluded will not be disadvantaged from the digital transformation programme.**

### DIGITAL INCLUSION

While a large proportion of the population have become accustomed to digital tools and services, many people are digitally-excluded through skills, cost, or accessibility.

Digital inclusion covers:

#### Digital skills

Being able to use digital devices (such as computers or smart phones and the internet. This is important, but a lack of digital skills is not necessarily the only, or the biggest, barrier people face.

#### Connectivity

Access to the internet through broadband, wi-fi and mobile. People need the right infrastructure but that is only the start.

#### Accessibility

Services need to be designed to meet all users' needs, including those dependent on assistive technology to access digital services.

### BARRIERS TO DIGITAL INCLUSION

Research for the UK digital strategy suggests that there are a number of important barriers, and more than one may affect individuals at any one time.

They are:

- access - not everyone has the ability to connect to the internet and go online
- skills - not everyone has the ability to use the internet and online services
- confidence - some people fear online crime, lack trust, or don't know where to start online
- motivation - not everyone sees why using the internet could be relevant and helpful

As access, skills and confidence improve, it is increasingly important to tackle other barriers, including:

- design - not all digital services and products are accessible and easy to use

- awareness - not everyone is aware of digital services and products available to them
- staff capability and capacity - not all health and care staff have the skills and knowledge to recommend digital services and products to patients and service users

It is recognised nationally through the Government's Digital Inclusion Strategy and the NHS and wider health care system initiatives that online services have had a huge impact in transforming almost every aspect of the population's lives. Although there has been great progress in internet access and use of online services, there are still a significant number of people who do not make use of digital services to benefit their health and care needs.

11.5m people in the UK lack the basic digital skills they need to use the internet effectively and 4.8m people are believed to have never been online at all. There are also particular cohorts of the population who are more likely to be digitally excluded than others, many of which who could most benefit from digital health services.

**Table 1 - Digital Exclusion: Factors and Statistics**

older people	51% of digitally excluded are over 65
people in lower income groups	45% of digitally excluded earn less than £11.5k a year
people without a job	19% of digitally excluded are unemployed
people in social housing	37% of digitally excluded are social housing tenants
people with disabilities	56% of digitally excluded have a disability or long-term condition 27% of adults with a disability (3.3m people) have never been online
people with fewer educational qualifications	78% of digitally excluded left school before 16
people living in rural areas	
homeless people	
people whose first language is not English	

Many of the groups on the list above will be disproportionately overrepresented as service users thus acting as a barrier to a complete channel shift to digital.

Each year, Good Things Foundation gathers facts and statistics about digital inclusion and exclusion in the UK. Their 2021 infographic is included in Appendix F - Digital Nation UK 2021 [Page 86].

We will work with partners across LLR to increase the opportunity for the excluded population to engage and establish a dedicated digital engagement workstream.

As part of the establishment of the Digital Innovation and Transformation Team, we are introducing the role of Digital Champion with key responsibilities to:

- identify which citizens that are at most risk of digital exclusion and develop strategies to provide support to those residents of LLR.
- develop a network of supportive organisations that can act as champions, providing essential digital skills to access health and care digital services.

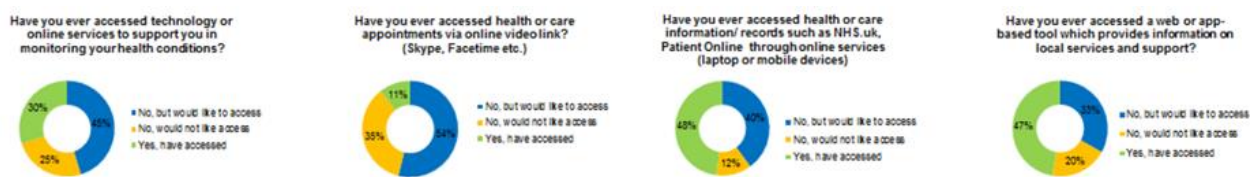
- develop activities and campaigns so that citizens are aware that support is available to them and to encourage adoption of that support.
- develop a digital advocate scheme so that verified individuals can perform online tasks on the behalf of excluded citizens that are unable to transact online with health and care.
- develop a network of digital access points to public services and to ensure that their existence is publicised, branded and easy to obtain.
- Collect monitoring and evaluation information to demonstrate the level of success of the role.
- specifically promote access to personal record sharing, transactional platforms, and condition specific support sites/applications that LLR would wish to promote e.g., NHSApp, TPP Airmid.
- ensure that transformations and projects that are thinking about digital transformations consider on how to provide the best service for all citizens.
- embed patient and public involvement within the digital workstream of the ICS.
- promote digital inclusion as a consideration in the thinking of technical and service design colleagues.
- work across different design and delivery teams so that the end-to-end journey of all patients and service users is considered regardless of their digital literacy

## 11.4 PUBLIC ADOPTION OF DIGITAL CHANNELS

Figure 8 below is based on a recent survey In Nottinghamshire, who have a similar socio-economic profile to LLR. The survey concluded that, while some people express a reluctance to engage with digital channels, the current digital offer from the NHS to our population is a greater barrier to adopting online services.

It is likely that over 70% of the population would readily adopt digital channels for most activities if provided with the effective tools and clear guidance. However, it must be recognised that delivering digital tools must be supported effectively by aligned ways of working and skilled workforce to deliver the experience benchmark that has been set in online commercial sectors such as retail, banking, and travel.

Figure 8 - Survey of Public attitude to accessing Health Care online





# 12. THE WAY FORWARD

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This strategy will deliver the following seven long-term strategic goals:

- We will have a clear and empowered governance structure.
- We will have levelled-up all partners will have a consistent level of digital maturity.
- UHL will have a mature EPR system with tight integration to niche departmental systems, capable of sharing data with the Shared Care Record.
- The ICS will have digital capacity and capability to support future digital needs.
- Data quality will have been improved so it can be used for secondary purposes such as Population Health Management.
- We consolidated duplicated systems into a cohesive digital ecosystem.
- Supported the transformation of care pathways such as Maternity, End of Life and Long Term Conditions with digital enablement.

This strategy will require an additional investment of £24.8M (twenty four point eight million) over three years, which will be subject to NHSE allocation announcements or bidding.

This will require a collaborative system-first approach with the endorsement and support of all partner organisations and the resource capacity to focus on the transformation programme.

## 12.1 DIGITAL INNOVATION AND TRANSFORMATION TEAM

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Within LLR, it is recognised that technology is key to our transformation and the current collaboratives and design groups are supported from within our current technology resources. However, the primary focus of our existing IT teams is the provision of operational IM&T support and project implementation and we have often relied on the use of external consultants to support major change and transformation initiatives.

To move forward and deliver the benefits of digital transformation, we require focused and dedicated roles within the ICS. We therefore plan to establish the Digital Innovation and Transformation Team (DITT) who will act as the digital transformation hub within the ICS, working across our partner organisations.

### PURPOSE

- Increase productivity, efficiency, and quality through digital technology and improved ways of working.
- Deliver intuitive digital tools for people to access information and services easily and securely.
- Ensure clinical information can be safely and securely accessed from wherever it is needed.
- Reduce the administrative burden on clinicians and staff, so they can focus on care.
- Improve patient safety across the NHS and Social Care.

### CORE RESPONSIBILITIES

- Support LLR ICB by enabling design teams to focus on delivering improvements to front line personnel.
- Act as a champion for patients and their interests and involve the public and patients in the digital transformation plans and decision making of the ICB in LLR.
- Ensure that transformations and projects are thinking about how to provide the best service possible for the patient experience.
- Embed patient and public involvement within the digital workstream of the ICS.
- Promote equality and diversity in the thinking of technical and service design colleagues.
- Support the digitally excluded citizens of LLR, helping them gain better access to services in Health and Social Care and generally raise their confidence in dealing online with public sector agencies.
- Plan and design all aspects of data from its collection, processing, and storage to supporting a range of users to maximise data use and to identify, design and deliver the data and insights strategy.
- Deliver technology requirements that are based on real-user needs, solve the key problems and frictions experienced and are endorsed across the healthcare system.
- Publish standards and specifications that drive interoperability of systems and collections of information to support the management of services.
- Design and lead cyber security policies and provide assurance that will ensure systems are secure and that information is held safely.
- Shape the ICS wide approach, procedures, and culture with regards to information security, data privacy and compliance.
- Deliver a modern architecture for access to local and national services and to support the way local organisations work.

- Deliver proof of concepts using disruptive technology and rapid innovation techniques to create new healthcare opportunities, digital pathways that accelerate the long-term plan and deliver meaningful value to patients quicker.
- Plan and implement transformation programmes for new and existing digital initiatives and identify opportunities for channel shifting how clinical services and corporate functions are delivered through the utilisation of technology and digital solutions.

## RELATIONSHIPS

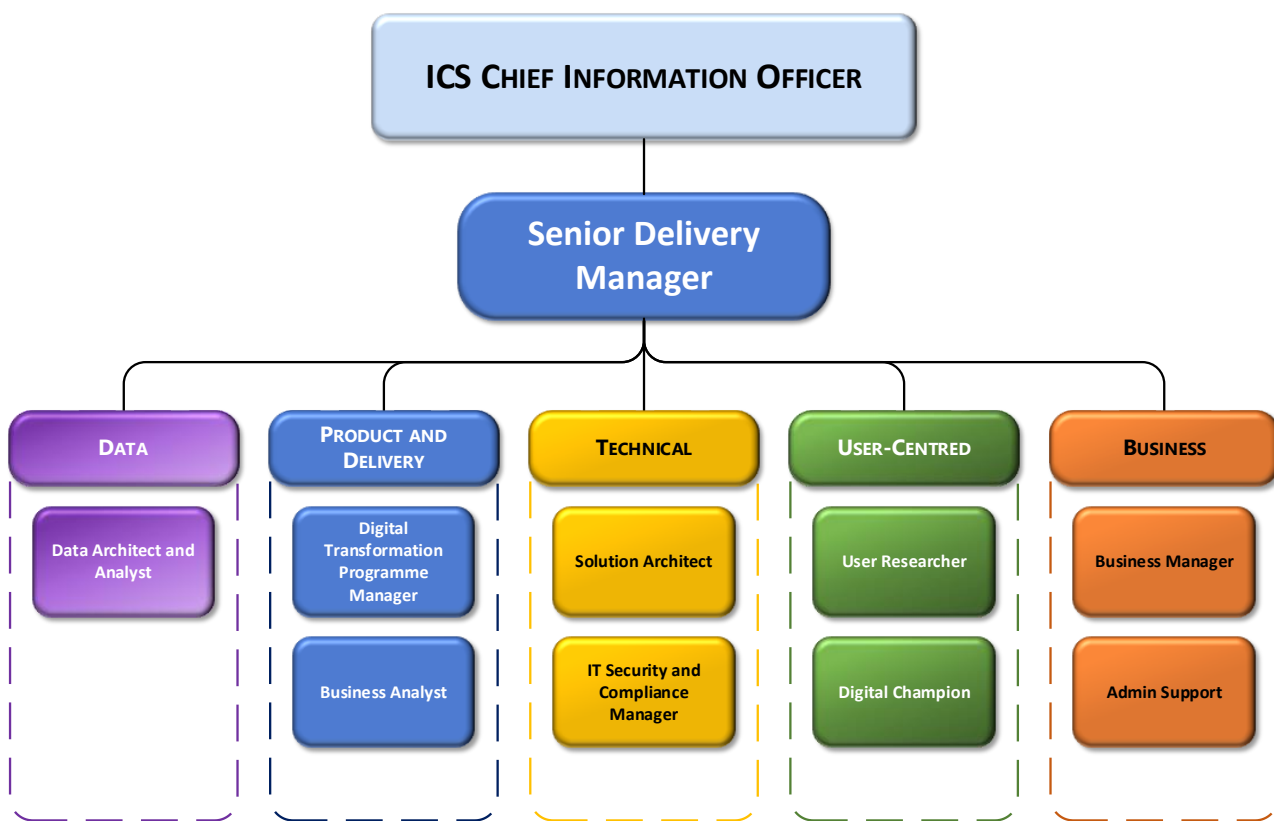
To do this, the DITT will maintain a collaborative working network with:

- CCG/ICS colleagues, Senior Managers, and wider colleagues
- Local system stakeholders including healthcare providers and local authorities
- Other Clinical Commissioning Groups; NHS England / Improvement; Commissioning Support Unit
- Governing Body Members (clinical, managerial, and lay members)
- Executive Team
- GP Portfolio leads
- Primary Care Network Clinical Directors
- Member GP practices and other practice staff
- Public Health England
- ICS stakeholders including Health and Wellbeing Board members
- Patients, carers, and communities
- Local professional committees (LMC, LPC, LOC, LDC)
- Health Education England
- Academic Health Science Networks and Centres
- Voluntary Groups
- Other local and national organisations as required, including Regulatory Bodies.

## STRUCTURE

The activities of the Digital Innovation and Transformation Team will be sponsored by the ICS Digital Design Board, and professional accountability will be through the ICS CIO role.

Figure 9 – Digital Innovation and Transformation Team Structure



## 12.2 DIGITAL ASSET OPTIMISATION

LLR has experienced a significant increase in the adoption of digital technology to support care delivery which has accelerated over the past two years in response to the COVID-19 pandemic.

To ensure that the best solutions are in place across the system, that they align and deliver best value and outcomes for patients, a digital asset assessment has been undertaken. The scope of this assessment related to technical, financial, and cultural aspects as it has been identified that many of the challenges and opportunities relate to how technology is utilised rather than the technology itself.

The assessment found that there is great enthusiasm and a desire to collaborate across LLR which is demonstrated in some of the initiatives across the ICS and the developments within some of the pathways and with partners, e.g., Community Pharmacy.

The digital baseline of LLR is not consistent across the ICS; there are multiple systems in use many of which are duplications of functionality or separate instances, and there is a lack of system-wide alignment of the implementation of new technology across the partners that could compromise or deviate away from the overall joint ambitions for the ICS if left unchecked.

The challenges and opportunities that were identified in achieving the ICS strategic goals include:

- Setting up a clear and empowered governance structure
- Levelling up all partners to a consistent level of digital maturity
- Supporting UHL to deliver the EPR, prioritising the development that will digitally enable pathways across the system, and provide the opportunity to transform and provide better care
- Supporting the ICS to develop the digital capacity and capability to support the digital needs of the ICS

- Establishing and managing data quality
- Converging Systems
- Transforming pathways such as Maternity, End of Life and Long Term Conditions (LTC)

The assessment concluded that *“Access to joined up data is critical to achieve LLR’s goals to transform the delivery of care and improve outcomes for its citizens. This needs to be supported by a number of digital capabilities that will then enable the delivery of better outcomes and quality of care for the varying needs of the citizens of Leicester, Leicester, and Rutland.*

*In addition to data, the citizen themselves needs to be front and centre in the design of care pathways. Whilst there are known issues to be considered in tackling issues relating to digital inequality, there are often unfounded assumptions related to the digital capabilities of citizens, especially the elderly. Studies show that issues concerning the ability to embrace digital solutions are not a barrier to the elderly.”*

The assessment made three recommendations for key areas of focus:

- **Shared Care Record**

The LLR shared care record is a key enabler to deliver and transform the delivery of care across the system.

- **Population Health**

The wider use of population health data will inform the system how and where to commission services.

- **UHL EPR Programme**

UHL are a fundamental stakeholder in the delivery of care; it is therefore imperative that this EPR programme is offered the time and support of the ICS to progress and expedite where possible to enable the whole of the health economy to move on the digital journey.

The Digital Asset Optimisation Assessment is included in Appendix D - Digital Asset Optimisation Assessment [Page 77].

## 12.3 DIGITAL PORTFOLIO

To deliver the vision outlined in this document, we shall define, plan, and implement a portfolio of digital initiatives and actions.

The outline Digital Action Plan from which will define this portfolio is included in Appendix G - Digital Action Plan [Page 87].

## 12.4 FINANCIAL OUTLINE

The outline financial forecast for this strategy and its action plan are included in Appendix H - Financial Forecast [Page 91]. This lists the additional requirements over existing baseline budgets and may be subject to bid funds being successfully agreed.

The annual funding requirements are summarised in Table 2 below.

*Table 2 - Funding Requirements Summary*

	2022/23	2023/24	2024/25
<b>Revenue Sub Total</b>	<b>£3,753,000</b>	<b>£4,461,116</b>	<b>£3,665,116</b>
<b>Capital Sub Total</b>	<b>£4,434,000</b>	<b>£4,875,000</b>	<b>£3,589,000</b>

# APPENDIX A. UHL APPLICATIONS ASSESSMENT

Table 3 – UHL Applications EPR Replacement Roadmap

APPLICATION NAME	FUNCTIONALITY	2022	2023	2024	2025	COMMENTS
<b>HISS / PatientCentre</b>	PAS/ADT/Waiting lists/Clinical Coding/Outpatient appointment management/patient index	Retained	Decommission and replace with EPR	Decommissioned		PAS capability via EPR is planned for December 2022
<b>ICE</b>	GP/ED Order comms/Results Viewing	Decommission and replace with EPR		Decommissioned		Replacement with EPR for acute inpatients is planned by Autumn 2022
<b>Patient Demographic Service</b>	PAS MPI for pathology only	Retained	Decommissioned			Will be retired via the EPR PAS upgrade and the LIMS upgrade (due by 2024)
<b>Data Management Portal</b>	PAS MPI	Retained	Decommissioned			Internal system, very low usage. Will be replaced by EPR
<b>Wristband Application</b>	Inpatient wristbands	Retained	Decommission and replace with EPR	Decommissioned		Planned for replacement in 2023 as part of PAS scope.
<b>ORMIS</b>	Theatres Management	Retained	Decommission and replace with EPR	Decommissioned		
<b>TrackIT</b>	Medical records tracking	Retained	Decommission and replace with EPR	Decommissioned		Plan to decommission following EPR implementation pending confirmation of replacement capabilities.
<b>Dict3</b>	Outpatient letters dictation platform	Retained		Decommission and replace with EPR	Decommissioned	Review the need after EPR outpatient capabilities are in place
<b>Euroking E3</b>	Maternity Information System	Retained		Decommission and replace with EPR	Decommissioned	To be covered by digital maternity strategy in Q1 2022/23. Expect to integrate with EPR and review patient app / community interactions
<b>Medicus</b>	ITU system	Retained		Decommission and replace with EPR	Decommissioned	Specialist ITU system, plan to incorporate into Acute EPR

# APPENDIX B. 'WHAT GOOD LOOKS LIKE' MEASURES AND ACTIONS

Table 4 - What Good Looks Like

WGLL SUCCESS MEASURE	ACTION
<p><b>Success measure 1 - Well led</b></p> <p>Your ICS has a clear strategy for digital transformation and collaboration. Leaders across the ICS collectively own and drive the digital transformation journey, placing citizens and frontline perspectives at the centre. All leaders promote digitally enabled transformation to efficiently deliver safe, high quality care.</p> <p>Integrated Care Boards (ICBs) build digital and data expertise and accountability into their leadership and governance arrangements and ensure delivery of the system-wide digital and data strategy.</p>	Own an ICS-wide digital and data strategy that drives 'levelling up' across the ICS and is underpinned by a sustainable financial plan
	Establish ICS governance to regularly review and align all organisations' digital and data strategies, ICS-cyber security plan, programmes, procurements, services, delivery capability and risks
	Ensure that your ICS digital and data strategy has had wide input from clinical representatives from across the ICS
	Identify ICS-wide digital and data solutions for improving health and care outcomes by regularly engaging with partners, citizen, and front line groups
	Invest in regular board development sessions to develop digital competence
	Support investment in ICS-wide multidisciplinary CCIO and CNIO functions
<p><b>Success measure 2 - Ensure smart foundations</b></p> <p>Digital, data and infrastructure operating environments are reliable, modern, secure, sustainable, and resilient. Across your ICS, all organisations have well-resourced teams who are competent to deliver modern digital and data services.</p>	Have a system-wide strategy for building multidisciplinary teams with clinical, operational, informatics, design, and technical expertise to deliver the ICS digital and data ambitions
	Ensure progress towards net zero carbon, sustainability, and resilience ambitions by meeting the Sustainable ICT and Digital Services Strategy (2020 to 2025) objectives
	Make sure that all projects, programmes, and services meet the Technology Code of Practice and are cyber secure by design
	Oversee across organisation investment in modern infrastructure to retire unsupported systems
	Drive organisations towards 'simplification of the infrastructure' by sharing and considering consolidation of spending, strategies, and contracts
	Ensure levelling up of the use and scope of electronic care record systems, including using greater clinical functionality and links to diagnostic systems and EPMA
	Lead the delivery and development of an ICS-wide shared care record (ShCR) which adheres to the Professional Records Standard Body's (PRSB) Core Information Standard
<p><b>Success measure 3 - Safe practice</b></p> <p>Organisations across the ICS maintain standards for safe care, as set out by the Digital Technology Assessment Criteria for health and social care (DTAC). They routinely review system-wide security, sustainability, and resilience.</p>	Have a system-wide plan for maintaining robust cyber security, including development of centralised capabilities to provide support across all organisations
	Establish a process for managing the cyber risk with mitigation plans, investment and progress regularly reviewed at ICS level
	Have an adequately resourced ICS-level cyber security function, including a senior information risk owner and data protection officer (DPO)
	Ensure that you fully use national cyber services provided by NHS Digital
	Ensure the organisations in your ICS are supported to comply with the requirements in the Data Security and Protection Toolkit which incorporates the Cyber Essentials Framework
	Have an adequately resourced clinical safety function, including a named CSO, to oversee ICS-wide digital and data development and deployment

WGLL SUCCESS MEASURE	ACTION
	<p>Ensure ICS-wide clinical systems meet clinical safety standards as set out by DTAC and DCB0129 and DCB0160</p> <p>Establish a clear system-wide process for reviewing and responding to relevant safety recommendations and alerts, including those from NHS Digital (cyber), NHS England and NHS Improvement, the MHRA and the Healthcare Service Investigation Branch (HSIB)</p> <p>Ensure compliance with NHS national contract provisions related to technology-enabled delivery, for example, clinical correspondence and electronic discharge summaries</p>
<p><b>Success measure 4 - Support people</b></p> <p>Your workforce is digitally literate and are able to work optimally with data and technology. Digital and data tools and systems are fit for purpose and support staff to do their jobs well.</p>	<p>Create and encourage a digital first approach across the ICS and share innovative improvement ideas from frontline health and care staff</p> <p>Promote the use of systems and tools to enable frictionless movement of staff across the ICS - allowing staff from different organisations to work flexibly and remotely where appropriate</p> <p>Ensure that front-line staff across your ICS have the information they need to do their job safely and efficiently at the point of care, including an ICS shared care record</p> <p>Create ICS-wide professional development, front-line skills development, peer support mechanisms and training opportunities</p> <p>Pool resources to provide resilient digital support services across your ICS</p>
<p><b>Success measure 5 - Empower citizens</b></p> <p>Citizens are at the centre of service design and have access to a standard set of digital services that suit all literacy and digital inclusion needs. Citizens can access and contribute to their healthcare information, taking an active role in their health and well-being.</p>	<p>Develop a single, coherent ICS-wide strategy for citizen engagement and citizen-facing digital services that is led by and has been co-designed with citizens</p> <p>Make consistent, ICS-wide use of national tools and services (NHS.uk, NHS login and the NHS App), supplemented by complementary local digital services that provide a consistent and coherent user experience</p> <p>Ensure and monitor a consistent citizen offer by ICS organisations</p> <p>Ensure a system-wide approach to the use of digital communication tools to enable self-service pathways such as self-triage, referral, condition management, advice, and guidance</p> <p>Ensure a system-wide approach for people to access and contribute to their health and care data</p> <p>Take an ICS-wide approach to access to care plans, test results, medications, history, correspondence, appointment management, screening alerts and tools</p> <p>Have a clear ICS digital inclusion strategy, incorporating initiatives to ensure digitally disempowered communities are better able to access and take advantage of digital opportunities</p>
<p><b>Success measure 6 - Improve care</b></p> <p>Your ICS embeds digital and data within their improvement capability to transform care pathways, reduce unwarranted variation and improve health and wellbeing. Digital solutions enhance services for patients and ensure that they get the right care when they need it and in the right place across the whole ICS.</p>	<p>Have an ICS-wide approach to the use of data and digital solutions to redesign care pathways across organisational boundaries to give patients the right care in the most appropriate setting</p> <p>Ensure that organisations across your ICS make use of digital tools and technologies that support safer care, such as EPMA and bar coding</p> <p>Ensure that organisations across your ICS employ decision support and other tools to help clinicians follow best practice and eliminate quality variation across the entire care pathway</p> <p>Ensure that organisations across your ICS provide a consistent and cost-effective approach to remote consultations, monitoring, and care services</p> <p>Lead a system-wide approach to collaborative and multidisciplinary care planning using an array of digital tools and services alongside PRSB standards</p>



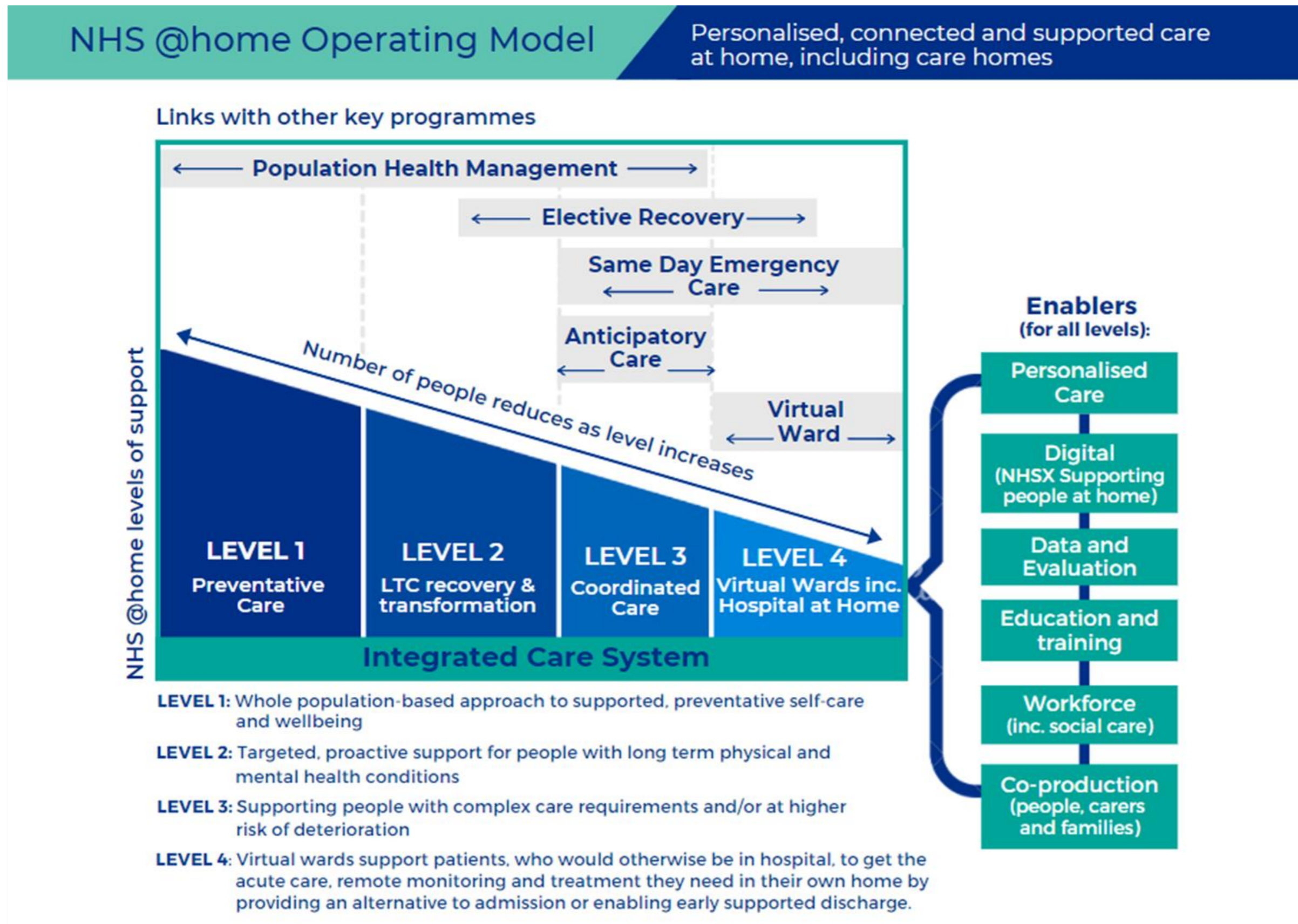
WGLL SUCCESS MEASURE	ACTION
<p><b>Success measure 7 - Healthy populations</b></p> <p>Your ICS uses data to design and deliver improvements to population health and wellbeing, making best use of collective resources. Insights from data are used to improve outcomes and address health inequalities.</p>	<p>Lead the delivery and development of an ICS-wide intelligence platform with a fully linked, longitudinal data-set (including primary, secondary, mental health, social care, and community data) to enable population segmentation, risk stratification and population health management</p>
	<p>Use data and analytics to redesign care pathways and promote wellbeing, prevention, and independence (for example, identifying patients for whom remote monitoring is appropriate)</p>
	<p>Create integrated care models for at risk population groups, using data and analytics to optimise the use of local resources and ensure seamless coordination across care settings</p>
	<p>Ensure that local ICS and place-based decision making forums, including PCN multi-disciplinary teams, have access to timely population health insight and analytical support</p>
	<p>Make data available to support clinical trials, real-world evidencing, and AI tool development</p>
	<p>Drive ICS digital and data innovation through collaborations with academia, industry, and other partners</p>

# APPENDIX C. VIRTUAL WARDS AND REMOTE MONITORING

Table 5 - Principles of Virtual Wards

<b>1</b> SAFETY AND SUSTAINABILITY	<b>2</b> CONSENT AND SELF-SUPPORT	<b>3</b> CRITERIA TO ADMIT AND RESIDE
Virtual wards should be developed for a range of conditions, symptoms, and settings, and should track specific metrics that measure appropriate outcomes to demonstrate patient safety and service sustainability.	Virtual ward staff should provide patients (and/or their carers) with adequate information to allow informed consent and understanding of their care, and to support the use of equipment or digital technology such as mobile phones, apps, web-based tools, or wearables.	Virtual wards should have clearly defined criteria to admit and reside, supported by daily clinical review, by an MDT if clinically appropriate, to provide a safe and robust service.
<b>4</b> CLINICAL ACCESS TO SUPPORT	<b>5</b> TIME-LIMITED INTERVENTIONS	<b>6</b> ESCALATION PROCEDURES
Virtual wards should have access to specialty advice, guidance, and diagnostics support equivalent to acute hospital access as appropriate in order to enable timely clinical decision-making by virtual ward staff.	Virtual wards should only be used to deliver time-limited interventions and monitoring based on acute clinical care needs that would otherwise be treated in a hospital.	Virtual ward staff should ensure that patients are given clear information on who to contact if their symptoms worsen, including out-of-hours. There should be clear pathways to recognise deterioration early, with appropriate escalation processes in place to maintain patient safety.
<b>7</b> CLINICAL GOVERNANCE	<b>8</b> INTEGRATED SERVICE PROVISION	<b>9</b> DIGITAL INCLUSION
Virtual wards should provide acute clinical care and be delivered by a multi-disciplinary team if clinically appropriate. They should be led by a named consultant practitioner (inc. nurse or AHP consultants, or suitably trained GPs), with clear lines of clinical responsibility and governance.	Virtual wards should be fully aligned or integrated with other service development programmes, including urgent crisis response (UCR), same day emergency care (SDEC) and unscheduled care across their systems, which may require forging future links with system partners.	Virtual wards should consider the risk of excluding patients through the exclusive use of digital tools and offer alternatives should patients lack the ability to fully use the technology. This includes recognising potential bias in who an offer of technology-enabled support is made to.

Figure 10 - NHS @Home Operating Model



# APPENDIX D. DIGITAL ASSET OPTIMISATION ASSESSMENT

There is great ambition and the appetite for an ambitious digital agenda in a manageably-sized ICS. However, there are some key challenges and dependencies that need to be addressed. These include the need to level up all the organisations to a consistent standard with agreed and shared principles, including an agreed approach to delivering an EPR across the system. Investment is required for the necessary capacity and capability to deliver the digital agenda across the system.

A RAG rating has been applied to illustrate the level of risk against each of the digital asset optimisation criteria independently. A final status of amber has been drawn by aggregating all ratings to give an overall appraisal.

## SUMMARY

Table 6 – Digital Asset Optimisation Assessment Summary



ASSESSMENT THEME	DESIRED STATE	RAG STATUS
Digital Ambition	Common objectives and strategic alignment across the ICS	● / ●
Digital Technology	Shared and agreed digital foundations	●
Digital Maturity	A digital first culture and the capacity and capability to deliver	● / ●
Digital Transformation	A successful track record in delivering business change and transformation across the ICS	● / ●
Realising Value	An established mechanism to measure and realise benefits across the ICS	● / ●
Governance and Risk	A clear governance structure for centralised decision making and risk management	●

### Key

- No cause for concern
- Areas for improvement
- Significant action required

## ASSESSMENT

Table 7 - Digital Asset Optimisation Assessment

ASSESSMENT THEME	ASSESSMENT CRITERIA	DESIRED STATE	STATUS
 <b>Digital Ambition</b>	A common understanding of the digital vision across all ICS partners	The ICS digital vision is identified, agreed, and shared. All ICS partners see the importance of digital transformation and the associated need for change.	●
	Agreement on key priorities	Key priorities for the ICS digital agenda are established and agreed system-wide.	●
	Alignment on approach	ICS partners agree on the approach.	●
	ICS Digital strategy established and aligned with ICS business/organisational and clinical strategy	The ICS digital strategy is supportive of the ICS's clinical and business priorities.	●
	ICS scope has been confirmed and all partners are fully engaged	A definitive list of all ICS members/participants/partners is established and communicated. All organisations are excited about the potential that ICS digital has to offer.	●
	Executive leadership and sponsorship	Digital leadership as a system	●
 <b>Digital Technology</b>	Culture	Service led.	●
	Delivery track record	The ICS shows a track record of consistent good delivery of digital projects with the desired outcomes achieved and standardised.	●
	Efficiency		●
	Programme approach	There is a central register of technology being implemented, typically coordinated by a PMO function, and is aligned to the overall ICS business and clinical vision.	●
	Principles/standards	Core principles are agreed and adhered to, promoting open standards.	●
	Information governance	Information Governance representation is assigned to the ICS.	●
	Architecture	A documented overview of the overall architecture for the ICS is in place, including all the interfaces to internal and external sources.	●

ASSESSMENT THEME	ASSESSMENT CRITERIA	DESIRED STATE	STATUS
	Infrastructure	Ensure levelling up and use and of digital solutions. The ICS is driven to simplification of the infrastructure by sharing and consolidation of procurement, strategies, and contracts. An asset register is in place with agreed refresh cycle.	●
	Network	The network is sufficiently robust for the ICS requirements and all of its users. Performance is assured and will not be impacted- or plans are in place to upgrade the network in accordance with the ICS system-wide requirements.	●
	Coding	Common codes agreed and in place.	●
	Data Quality	All providers including third sector and independent sector providers are submitting “comprehensive data”.	●
	Data warehouse strategy	A firm plan is in place to complete a rationalisation of the data warehouse capability across the ICS.	●
	Reporting	Catalogue of reports.	●
	Population health data	The ICS has smart digital foundations, connected health and care services, locally joined-up person-level data across health and care partners, and robust analytical capability aligned across system partners.	●
	Cyber	A system-wide plan has been agreed for maintaining robust cyber security, including development of centralised capabilities to provide support across all organisations, and regular reviews have been scheduled. ICS CSO, DPO and SIRO functions have been appointed.	●
	Business continuity/resilience	ICS wide business continuity plan.	●
	Environment	Agenda towards net zero carbon, sustainability and resilience ambitions by meeting the Sustainable ICT and Digital Services Strategy (2020 to 2025) objectives has been agreed and included in the digital strategy.	●
●/● <b>Digital Maturity</b>	Culture	Care without walls philosophy is truly embedded (pathway and building thinking has been replaced with patient thinking).	●/●
	ICS leadership	The ICS has evidence to confirm that the current leadership team has successfully led an organisation of similar size and complexity.	●/●
	Digital maturity of user base	The organisation has a clear understanding of how to measure the digital maturity of its user base and supports its workforce in its ability to adopt new solutions and the confidence in how to use those.	●/●
	Resourcing model	A resourcing model has been agreed across the ICS.	●

ASSESSMENT THEME	ASSESSMENT CRITERIA	DESIRED STATE	STATUS
	IM&T capacity and capability	A digitally mature and experienced IM&T function is established to deliver the size and complexity of the ICS.	●/●
	Transformation capacity and capability	The people and resources to deliver are clearly understood and can be allocated. The skills and capabilities required to deliver the transformative aspects of the ICS are identified and available.	●/●
	Customer and user experience	Internal and external customer experience meet good standards.	●
	Continuous improvement	The ICS has an established framework to ensure continuous improvement forms part of the standard digital delivery cycle/model. Optimisation projects are integral to the BAU planning.	●
<span style="font-size: 2em;">●/●</span> <b>Digital Transformation</b>	Digital first culture	A digital first approach across the ICS is encouraged and innovative improvement ideas are shared from frontline health and care staff.	●
	Co-design with staff and patients/citizens	Plans to involve all stakeholders as part of the design and assurance of solutions.	●
	Business change		●
	Digital inclusion	A clear ICS digital inclusion strategy has been developed, incorporating initiatives to ensure digitally disempowered communities are better able to access and take advantage of digital opportunities. A single, coherent ICS-wide strategy has been developed for citizen engagement and citizen facing digital services that is led by and has been co-designed with citizens.	●
	Access to health and care data	A system-wide approach has been implemented for people to access and contribute to their health and care data. Take an ICS-wide approach to access to care plans, test results, medications, history, correspondence, appointment management, screening alerts and tools.	●
	Interoperable record	A system-wide approach has been implemented to collaborative and multidisciplinary care planning using an array of digital tools and services alongside PRSB standards. The interoperable record needs to provide a single view per pathway/condition and is used to improve the care given across the system. Data can be extracted (vs. PDF).	●
	Population health	As ICS-wide approach has been established to the collection and use of data and digital solutions to redesign care pathways across organisational boundaries to give patients the right care in the most appropriate setting.	●
	Implementation planning and approach	An established ICS programme framework is embedded, and preferred methodology identified. Staff are experienced and trained in programme methodology to fulfil associated roles.	●
	Standardisation	Agreed set of prioritised pathways that will be standardised.	●
	Digital-enabled transformation		●

ASSESSMENT THEME	ASSESSMENT CRITERIA	DESIRED STATE	STATUS
		Efficiency and effectiveness	●
		New ways of working	●
		Paperless	●
●/●	<b>Realising Value</b>	Benefits identification and management	●
		Benefits framework	●
		Benefits realisation track record	●
		Cost effectiveness and value for money	●
●	<b>Governance And Risk</b>	Governance	●/●
		Risk	●
		Procurement	●
		ICS leadership	●/●
		Collaboration	●
		Trust	●
		Finance	●/●



# APPENDIX E. ARCHITECTURE PRINCIPLES

Table 8 – Architecture Principles

NAME	DESCRIPTION	RATIONALE	IMPLICATION	PRACTICAL STEPS
<p><b>1. Deliver Sustainable Services</b></p>	<p>All digital services need to be delivered sustainably.</p>	<p>Digital services need to be ‘resilient’, that is robust and able to withstand and respond to changes arising out of the Environmental Emergency.</p> <p>The impact of digital services on “embodied emissions” or ecological &amp; social impact from mining and manufacture (that is, the environmental cost of producing and disposing of IT equipment) should be considered.</p> <p>Design principles –</p> <ul style="list-style-type: none"> <li>• Minimise data retention and resolution</li> <li>• Code efficiently</li> <li>• Avoid duplication</li> <li>• Limit architectural obsolescence</li> <li>• Carefully consider the benefits of utilising and AI / machine learning – ensure benefit outweighs energy requirements.</li> </ul>	<p>Architects should consider the impact of climate change in their work from three perspectives in addition to the other principles:</p> <p><b>Direct</b></p> <ul style="list-style-type: none"> <li>• Ensure that non-functional requirements are appropriate (do not build in unnecessary duplication and redundancy)</li> <li>• Design services that maximise resource utilisation (i.e., cost and carbon optimisation).</li> </ul> <p><b>Upstream</b></p> <ul style="list-style-type: none"> <li>• Select suppliers considering their carbon footprint.</li> </ul> <p><b>Downstream</b></p> <ul style="list-style-type: none"> <li>• Promote the move to environmentally sustainable cloud services.</li> <li>• Promote digital by default as a principle, reducing CO<sub>2</sub> in health and care business processes.</li> </ul>	
<p><b>2. Put our tools in modern browsers</b></p>	<p>All digital services should be browser based and utilise open web standards.</p>	<p>Provides flexibility for users (and their trusts, CCGs, or any other administrative group) to choose any modern computers and operating systems that meet their needs.</p> <p>Supports move to a mobile-first approach and makes the same digital services easily accessible from mobile phones, tablets, laptops, and assistive technologies like screen readers.</p> <p>Achieves the benefit of the continual security and functionality improvements that come with the continuing evolution of modern browsers and web technologies.</p>	<p>Comply with the Apps and Infrastructure Design Authority’s (AIDA) browser standard, designing systems that support modern browsers on a range of device types. Move away from Internet Explorer 11.</p> <p>Evidence for this should be provided via:</p> <ul style="list-style-type: none"> <li>• Requirements</li> <li>• Technical specifications</li> <li>• User journeys</li> <li>• Architecture</li> <li>• Testing</li> <li>• Operational support.</li> </ul> <p>Browser support should be assessed by the Architecture Approval Group.</p>	<ul style="list-style-type: none"> <li>• Adopt the latest web standards to ensure content is accessible to as many people as possible, including those with disabilities</li> <li>• Ensure that website load times are less than 3 seconds to avoid users dropping off</li> <li>• Use automation to ensure compatibility with all supported browsers and to shorten software test cycles</li> <li>• Only procure tools that are available via modern browsers and adopt a responsive design</li> <li>• Ensure tools are composed as API-facing services for reuse across emerging digital channels such as conversational interfaces</li> </ul>
<p><b>3. Internet First</b></p>	<p>All digital services should adopt internet standards and protocols including setting the default that</p>	<p>When we adopt internet standards and protocols for our networks and digital services:</p> <ul style="list-style-type: none"> <li>• We maximise the number of technologies and digital services that will work for us and for those we care for</li> </ul>	<p>Digital architectures must demonstrate that they are designed to use the Internet as the default way of accessing information. This has two contexts:</p>	<ul style="list-style-type: none"> <li>• Design lightweight front-end user interfaces with no business logic</li> <li>• Adopt modern internet protocols for sending and receiving data across the internet</li> </ul>

NAME	DESCRIPTION	RATIONALE	IMPLICATION	PRACTICAL STEPS
	services are available over the public Internet.	<ul style="list-style-type: none"> <li>We maximise the number of developers and software engineers that can help us transform health and care and meet the needs of our users</li> <li>We minimise what you need to learn to build software and digital services for health and care</li> <li>We maximise the amount of distributed data we can handle.</li> </ul> <p>Our health and care system will never be a centralised service because it services the citizens of an entire nation, and so too should its infrastructure not be centralised. Appropriate access to our data from any part of the system – like you can access your email from anywhere, as long as you have the right passwords – is an important part of delivering care.</p>	<ul style="list-style-type: none"> <li>Internet is preferable to non-digital interactions for most users (letter, phone)</li> <li>Public Internet is preferable to private networks.</li> </ul> <p>This supports sustainability by enabling digital by default.</p> <p>This should be shown in architecture diagrams and assessed by the Architecture Approval Group.</p>	<ul style="list-style-type: none"> <li>Use APIs provided on the national API gateway to decouple the application from the underlying infrastructure that provides the service</li> <li>Systems to have modern network protection as standard ensuring services remain up and secure</li> <li>Designs must demonstrate robust communication with the end-user despite a loss of connectivity</li> </ul>
<b>4. Public Cloud First</b>	Digital services should move to the public cloud unless there is a clear reason not to do so.	Cloud services provide many advantages for NHS Digital, including a reduction in the time to deploy infrastructure and a significant reduction in emissions.	<p>Digital services should be delivered from the public cloud unless there is a reason not to do so, specifically:</p> <ul style="list-style-type: none"> <li>Service characteristics (availability, recover time objective, etc) that cannot be met by public cloud.</li> <li>Cyber or information governance that cannot be met by public cloud.</li> </ul> <p>This should be reflected in architecture designs and assessed by the Architecture Approval Group.</p>	<ul style="list-style-type: none"> <li>Use cloud native services to reduce the amount of time needed to manage servers and infrastructure</li> <li>Architect for scale up and down on demand to ensure services can easily meet future needs without huge rework</li> <li>Demonstrate a shift to devops, containers or serverless, microservices and CI/ CD to increase time to market and reduce risk</li> <li>Non-production environments should only be running when they are being used to ensure no unnecessary costs are incurred</li> <li>Empower product teams to “own” their solution and provide a strong security boundary using cloud accounts</li> </ul>
<b>5. Build a data layer with registers and APIs</b>	Digital services should only store data once (usually where collected) and make it available via open APIs whilst maintaining privacy and security.	<p>By storing data only once we reduce costs by removing requirements for data replication/propagation when data is changed and we ensure that each individual (patient or clinician) has visibility of the same record.</p> <p>Through storing data once and making it available via APIs, it reduces the requirements for costly large databases of personal health and care data to deliver our services and meet our research aims - and smaller, dispersed datasets mean fewer large attractive targets for hackers.</p>	<p>Implement architectures that reuse platforms and separate out disparate components.</p> <p>APIs should be made publicly available through an API management layer based upon open standards.</p> <p>APIs should be included in the API catalogue</p> <p>APIs should also be consumed internally unless there is a good reason not to do so.</p> <p>Data access designs should be shown in architecture diagrams and assessed by the Architecture Approval Group.</p>	<ul style="list-style-type: none"> <li>All data will be validated at the point of entry to improve data quality</li> <li>All data will be made discoverable</li> <li>Do not duplicate data</li> <li>All clinical data stored will be made accessible using APIs published on the national API gateway</li> <li>APIs will be managed throughout their life cycle making them more discoverable, serviceable, and more easily monitored</li> <li>Ensure data is digitally signed to an appropriate level</li> </ul>
<b>6. Adopt the best cyber security standards</b>	Services must adopt the appropriate cyber security standards subject to risk	It is critical that we maintain public trust in how we hold, share and use data.	Digital Services must demonstrate conformance to cyber security best practice during design, development, operation and maintenance phases as specified by:	<ul style="list-style-type: none"> <li>An annual Data Security and Protection Toolkit return must be completed by any organisation handling health data</li> </ul>

NAME	DESCRIPTION	RATIONALE	IMPLICATION	PRACTICAL STEPS
	appetite, including keeping all software, networks, and systems up to date.	We need to maintain a safe and secure data infrastructure that protects health and care services, patients, and the public. The digital architecture of the health and care system needs to be underpinned by clear and commonly understood data and cyber security standards, mandated across the NHS, to ensure we are secure by default and that the penalties for data breaches are effective in protecting patients' privacy.	<ul style="list-style-type: none"> <li>• Cyber Design Authority (CDA)</li> <li>• National Cyber Security Centre</li> <li>• Vendor best practice</li> </ul> This should be shown through a statement of conformance to security standards and through non-functional testing. Since cyber security standards change, conformance will need to be regularly assessed and maintained through the lifecycle of the service.	<ul style="list-style-type: none"> <li>• Services should conform to the technical requirements of Cyber Essentials (for example by not requiring an unpatchable warranted environment).</li> <li>• Services should be assessed against the Digital Technology Assessment Criteria from NHSX which is the baseline criteria for digital health technologies entering into the NHS and social care.</li> <li>• Cyber security expertise to be engaged as a resource to the initiative from the earliest point to ensure good practice is followed and a smooth transition to production.</li> </ul>
<b>7. Use Platforms</b>	Digital services should build upon existing platforms to deliver their services.	New digital services should reuse common infrastructure (platforms) and services rather than create their own. This will reduce architecture debt (duplication of digital services and use of non-strategic technologies) which saves money and time for development.	This should be shown in architecture diagrams and assessed by the Architecture Approval Group.  The Platforms and Infrastructure Board will oversee the development of future platforms.  The EA team will monitor the Digital services portfolio to inform the use of platforms in future releases.	<ul style="list-style-type: none"> <li>• Design and build using microservices that can be composed to deliver business capability</li> <li>• APIs must be delivered and managed as a product to drive an ecosystem of innovation and new experiences</li> <li>• Use NHS number as the primary identifier to connect patient data</li> <li>• Documentation to be published in the API catalogue so that reusable services and data are human and machine discoverable.</li> </ul>
<b>8. Ask what the user need is</b>	Every service must be designed around user needs, whether the needs of the public, clinicians, or other staff.  Services designed around users and their needs: <ul style="list-style-type: none"> <li>• are more likely to be used</li> <li>• help more people get the right outcome for them – and so achieve their intent</li> <li>• cost less to operate by reducing time and money spent on resolving problems.</li> </ul>	This is best practice in the development of digital services.  Inclusivity is a legal requirement, e.g., the Equalities Act.  The NHS Long Term Plan specifies the need to improve healthcare offerings for excluded groups, e.g., patients with learning disabilities & homeless.	Digital Services should: <ul style="list-style-type: none"> <li>• Comply with all legal requirements, especially around website accessibility</li> <li>• Undertake user needs analysis as part of the design process</li> <li>• Ensure UX design principles are followed</li> <li>• Demonstrate that the architecture supports a range of user interactions, e.g., digital, paper, phone.</li> </ul> This can be demonstrated through documented user journeys.  Digital services should be developed with progressive enhancement; this will ensure: <ul style="list-style-type: none"> <li>• Services are more resilient</li> <li>• The service's most basic functionality will work and meet the core needs of its users</li> <li>• Improved accessibility by encouraging best practices like writing semantic mark-up</li> <li>• Users with device or connectivity limitations can use the service.</li> </ul>	

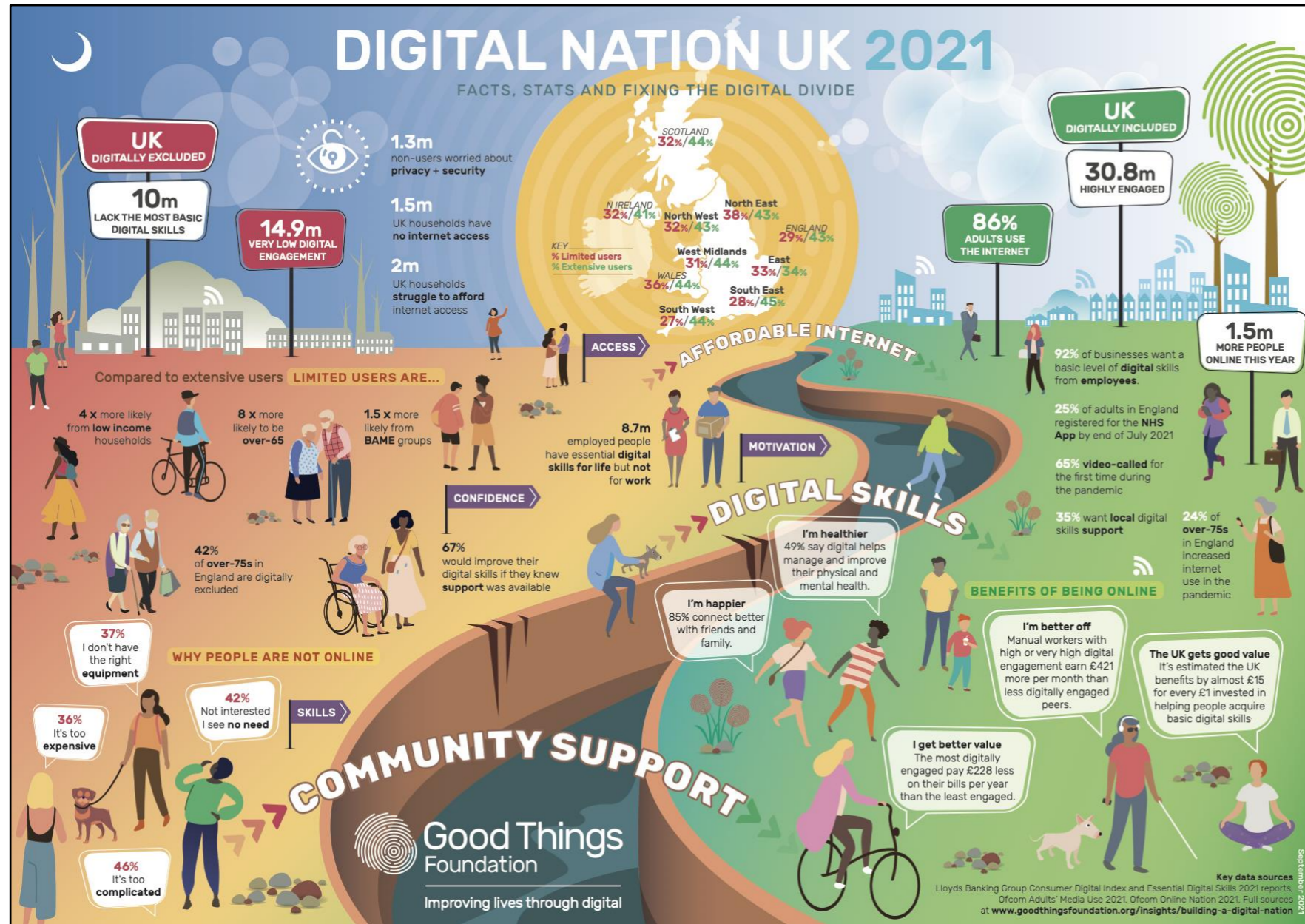
NAME	DESCRIPTION	RATIONALE	IMPLICATION	PRACTICAL STEPS
<p><b>9. Interoperability with open data and technology standards</b></p>	<p>Digital services should adopt open data and technology standards.</p>	<p>Open standards permit interoperability between different regions and systems but they also, crucially, permit a modular approach to IT in the NHS, where tools can be replaced with better alternatives as vendors develop better products. This, in turn, will help produce market conditions that drive innovation, in an ecosystem where developers and vendors continuously compete on quality to fill each niche, rather than capturing users.</p>	<p>Digital services should demonstrate conformance to best practice during design, development, operation, and maintenance phases as specified by Design Authorities.</p>	<ul style="list-style-type: none"> <li>Avoid data siloes; clinical systems should integrate with key EPR systems and/or Shared Care Record at a data or API layer.</li> </ul>
<p><b>10. Reuse before Buy/Build</b></p>	<p>Digital services should demonstrate that they have sought to reuse existing solutions before delivering new ones.</p> <p>Where it is not possible to reuse an existing solution, off-the-shelf (commercial or open source) products should be considered. For open source products there should be an appropriate level of contractual support provided.</p> <p>Only having ruled out the former two options should a new solution be built, either in-house or through third parties.</p>	<p>Cost and time to market.</p> <p>Sustainability and reduction of carbon footprint.</p>	<p>Conformance with approved Technologies List, owned and managed by AIDA.</p> <p>Use of platforms.</p> <p>Evaluation of business case by technical and enterprise architecture.</p> <p>Assessment of high-level solution architecture and risk log by Architecture Approval Group.</p>	

# APPENDIX F. DIGITAL NATION UK 2021

Each year, Good Things Foundation create a Digital Nation infographic, gathering together the facts and stats about digital inclusion and exclusion in the UK<sup>1</sup>.

The 2021 update gathers together facts and statistics about digital inclusion and exclusion in the UK. It uses new analysis of the latest Ofcom data by Prof. Simeon Yates alongside key sources such as Lloyds Bank UK Consumer Digital Index and Essential Digital Skills 2021, external research, and their own data insights.

Figure 11 - Digital Nation UK 2021 Infographic



<sup>1</sup> <https://www.goodthingsfoundation.org/insights/building-a-digital-nation/>

# APPENDIX G. DIGITAL ACTION PLAN

SECTION	ACTION	DELIVERED THROUGH	START DATE	END DATE
5.1 Governance	We will build a governance structure which brings together partner organisations at a system level to share resources, make decisions and plan jointly, with a single person accountable for the delivery of shared outcomes and plans, working with local partners.	Establishment of the ICS Governance Model	Jun-22	Ongoing
5.2 Digital Governance	We will build a model which balances flexibility for clinicians and practitioners to operate effectively within their 'place' with the benefits of consistency across the ICS 'system'.	Establishment of the ICS Digital Governance Model	Jun-22	Ongoing
5.3 Assurance	We will build ICS-wide assurance policies and functions to give confidence that our digital and data solutions meet all appropriate legislation, standards, and best practice.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
5.3.1 Clinical Design Authority	In 2022/23, we will establish a Clinical Design Authority Group under the leadership of the ICS CCIO to determine the impact of transformational opportunities presented by ICS Design Groups and major Trust-level transformations on the digital agenda.	Establishment of Clinical Design Authority	Jun-22	Ongoing
5.3.2 Technical Design Authority	In 2022/23, we will establish a Technical Design Authority Group under the leadership of a System CIO to act as assurance of technical architecture across the ICS.	Establishment of Technical Design Authority	Jun-22	Ongoing
5.3.3 System-Level Assurance Function	In 2022/23, we will establish an ICS-wide function who will establish policies for key areas of compliance and provide assurance of functions', programmes', and solutions' adherence.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
6.1 Architecture and standards	Greater multi-organisational collaboration and data sharing requires a consistent approach to technology standards. We fully support a standards-based approach to technology implementation, and this will underpin the technology roadmap across our partners.	Ownership of LLR Architectural Standards by LLR ICS Technical Design Authority with active assessment of new proposals against this standard.	Jun-22	Ongoing
6.2 Cyber Security	We are creating the role of Security & Compliance Manager in our Digital Innovation and Transformation Team to define and assure our approach, procedures, and culture with regards to information security, data privacy and compliance.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
6.3 Information Governance	The LLR Information Governance Board is embedded into ICS delivery governance and proactively supports and advises our programmes. Early engagement and a solution-focused perspective keeps our citizens' data secure and facilitates the increased collaboration between ICS partner organisations	Through resetting Digital governance in LLR ensuring LLR Information Governance Board is playing an active role in supporting the Digital Delivery Agenda taking asks and returning solution back to the IM&T Delivery Board on a monthly basis.	Jun-22	Ongoing
6.4 Commercial Management	We will use the scale of ICS to support our partners' supplier relationships to provide an over-riding focus on the holistic healthcare needs of the region as a whole and endorse the suppliers who best align with the regional vision.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing

SECTION	ACTION	DELIVERED THROUGH	START DATE	END DATE
6.5 Financial Management	We will ensure that digital spending is effective across LLR, driving efficiency gains through greater alignment of resources and taking opportunities to review technology consolidation when contractually feasible.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
6.6 Business Continuity / Disaster Recovery	The ICS will provide assurance that partner organisations' BC/DR plans are effective as we increase our dependency on digital services and systems.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
6.7 Environmental Impact	To support the NHS Net Zero commitment, we will provide and encourage the use of digital alternatives to paper and physical travel for our citizens and staff where this does not reduce the care we provide.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
7.1 Front Line Infrastructure	We will provide our workforce with the tools which allow them to work remotely where possible, including internet-facing virtual desktops and supporting the adoption of cloud telephony in primary care.	Through ICS CIO discussion with other ICS partner technical teams to adopt at organisational level as a strategy.	Jul-22	Ongoing
7.2 Cloud Architecture	Where appropriate, we will transition services to cloud-hosted platforms or cloud-based systems to provide resilience, scalability, and wider access.	Through ICS CIO discussion with other ICS partner technical teams to adopt at organisational level as a strategy.	Jul-22	Ongoing
7.3 Strategic Systems Landscape	We will rationalise the number of operational systems in use across the region to simplify support, increase data sharing, and improve training.	Through ICS CIO discussion with other ICS partner technical teams to adopt at organisational level as a strategy.	Jul-22	Dec-24
8.1 Data Quality	We will build an ICS Intelligence function to drive improved use of data and Data Quality Assurance. We will introduce the new responsibility/role of Chief Data Officer who will be accountable for building a culture of data quality across the region.	ICS Deputy Director of Strategy and Planning and Chief Data Officer	Mar-22	Mar-23
8.2 Record Sharing	By March 2023, the LLR Shared Care Record (LLRCR) will support direct care across primary and secondary health organisations as well as the three local authorities within the LLR footprint.	ICS LLR Shared Care Record Programme Manager	Jun-21	Mar-23
8.3 Operational Insights	We want to establish a platform to share real-time operational insights across health and social care partners which will help operational planning at a regional level.	Chief Data Office	Jul-22	Mar-24
8.4 ICS Intelligence Function	We will establish an ICS-wide function to drive improved reactive and pro-active use of data encompassing Population Health Management and Business Intelligence across LLR by March 2023.	Chief Data Office	Mar-22	Mar-23
8.5 Machine Learning / AI / RPA	We aspire to research and adopt modern and emerging technologies such as ML and RPA where there is a clear benefit to doing so.	Horizon scanning through DITT and also membership of the Northamptonshire General exemplar for RPA.	Ongoing	Ongoing
8.6 Digital Communication and Transfer of Data	We will build upon existing initiatives by endorsing a greater availability of digital communication and information sharing for both our citizens and our workforce.	Managed through IM&T Delivery Board to establish paper switch off.	Ongoing	Mar-23
9.1 Digital Culture	We shall co-design our systems with our workforce, ensuring that our solutions are intuitive. We shall streamline the number of different systems our people need to learn and keep working processes and system processes aligned.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing

SECTION	ACTION	DELIVERED THROUGH	START DATE	END DATE
9.1.1 Digitally Enabled Nursing	We will support our nurses, PAMS, and practitioners by collaborating with them to co-design digital systems which reduce unnecessary administration and allow them to focus on the care they give.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
9.2 Digitally Enabled Workforce	We will promote an environment where intuitive digital tools support flexible working models and we will work with our people to give them the digital skills they need.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
9.3 Digital Workforce Tools	Through our Digital Workforce Programme, we will build a workforce intelligence system which will digitise workflows, integrate core systems such as e-rostering and Electronic Staff Record within 18 months. This will reduce administration, improve staff experience, and release time for care.	Digital Innovation and Transformation Team working with People Programme Delivery Board	Jun-22	Dec-23
9.4 Digital Skills	We will support our people through ICS-wide professional development in digital skills.	CIOs, Digital Innovation and Transformation Team working with People Programme Delivery Board	Jun-22	Mar-23
9.5 IM&T capability	We will work together with our technical personnel to establish an initiative to improve how we can best recruit and retain the best people to deliver and support our digital solutions.	CIOs, Digital Innovation and Transformation Team working with People Programme Delivery Board	Jun-22	Mar-23
10.1 Improved Care	Currently, we have 132 virtual wards beds with concrete plans for 287 beds to support patients receiving acute care in their own homes.	Virtual Wards Delivery Group	Ongoing	Dec-23
10.2 Remote Patient Monitoring	We will expand the capability of existing pathways through remote monitoring to maximise the prevention of avoidable admissions, improve patient readiness for surgery through prehabilitation, and support in-home monitoring patients being discharged.	Home First Delivery Group	Ongoing	Ongoing
10.3 Digital Primary Care	We will continue to support our GP practices with their provision of video and online consultations through dedicated business change support, move e-referrals to a more robust and resilient platform, and support practices with their adoption of cloud telephony to support flexible working.	GP IM&T Steering Group	Jun-22	Mar-23
10.4 Community Pharmacy	We will continue to include community pharmacy in our digital initiatives to provide a truly joined-up patient experience.	IM&T Delivery Board	Ongoing	Ongoing
10.5 Integration with Voluntary Sector	We will identify how we can collaborate and communicate digitally with the voluntary sector on a case-by-case basis.	IM&T Delivery Board	Jun-22	Ongoing
10.6.1 Social care	We will support digital services and tools in social care to provide citizens with access to the same levels of information and advice as the NHS services.	IM&T Delivery Board	Jul-22	Mar-24
	We will continually review the opportunities of remote monitoring and assistive technologies to support service users in their own homes.	IM&T Delivery Board	Jul-22	Mar-24



SECTION	ACTION	DELIVERED THROUGH	START DATE	END DATE
	We will ensure that our social care workforce is able to access and use modern technologies and share information to improve productivity and service quality.	IM&T Delivery Board	Jul-22	Mar-24
10.7 Care Homes	We remain on target to achieve our target of digitally-enabling 80% of our care homes by March 2024 and we are working to ensure that there is a financially-sustainable model to continually support the homes.	Care Homes Project Board	Ongoing	Mar-24
10.8 Mental Health	We will provide digital tools and services to increase access to mental health services, work with voluntary and community partners, broaden the range of information and advice to our citizens, make better use of data, and align our ways of working with the digital tools and channels we have to simplify the mental health journey and help people meet their goals effectively, including through new digital models of care.	LPT IM&T Committee	Jun-22	Mar-24
11.1 Service and System Co-Design	We will put the needs of patients, family, carers, and staff at the heart of our system and service design processes by having dedicated roles with clear responsibility for understanding and meeting their emotional, physical, and technical needs.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
11.2 Access to Information	We will provide our citizens with a range of digital tools and channels which will enable them to be better informed, manage their conditions, access statutory and community services and communicate effectively with the people who support them.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
11.3 Addressing Digital Exclusion	We are creating the role of Digital Champion to build momentum in supporting the digitally excluded citizens of LLR, helping them gain better access to health and care specifically and public sector agencies in general. Our Research and Design roles will ensure that system design role creates digital systems that people want to use.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing
	We will look to support organisations who promote digital inclusion and ensure that the digital systems we deliver meet modern accessibility standards. We will guarantee that the digitally-excluded will not be disadvantaged from the digital transformation programme.	Establishment of Digital Innovation and Transformation Team in ICS	Jun-22	Ongoing

# APPENDIX H. FINANCIAL FORECAST

Table 9 - Additional Technology Funding Capital and Revenue Requirements for Three Years

	2022/23	2023/24	2024/25
Implementation Capital UHL EPR	£2,129,000	-	-
Implementation Revenue UHL EPR	£1,485,000	-	-
Post Implementation Capital UHL EPR	-	2,570,000	1,284,000
Post Implementation Revenue UHL EPR	-	2,002,000	1,270,000
Levelling Up digital Maturity Capital (NHSE Allocation)	£2,133,000	2,133,000	2,133,000
Critical Cyber Security Capital (NHSE allocation)	£172,000	172,000	172,000
Digital Implementation Teams Revenue (NHSE allocation)	£492,000	492,000	492,000
Tech enabled Remote Monitoring Revenue (NHSE allocation)	£351,000	351,000	351,000
ShCR Revenue (PDC 21/22)	£1,425,000	1,352,000	1,288,000
Elective Recovery (Virtual Wards / Remote Monitoring) (PDC 22/23)	-	264,116	264,116

<b>Revenue Sub Total</b>	<b>£3,753,000</b>	<b>£4,461,116</b>	<b>£3,665,116</b>
<b>Capital Sub Total</b>	<b>£4,434,000</b>	<b>£4,875,000</b>	<b>£3,589,000</b>