NHS Lanarkshire

Five year digital plan

Empowering people to enhance care for everyone

Our Health Together

2023-28

Sections

01 OUR VISION

02 DIGITAL ENABLEMENT

03 DIGITAL DELIVERY

04 APPENDICES

Highlights (1/3)

This plan has been created for the Lanarkshire public, clinicians, NHS Staff and partners. Below we highlight topics that will be of interest to different groups:

For Everyone

This plan is intended for several different stakeholders, with certain sections more relatable for the intended reader. Throughout the plan you will notice a series of purple 'digital-in-action' pages that tell short stories about the human impact of digital activities. We hope you enjoy the variety of this content, which has been supplied from across Lanarkshire. We have also provided a glossary in the appendix, given that digital includes some professional and technical language.

For general interest please refer to the following pages:

o	Forward	Page 07
o	Key themes	Page 09
o	Our five year vision	Page 11
o	Engagement overview	Page 13 & 14
o	Digital in action (purple pages)	Throughout

For the Public & Patients

- o The COVID-19 pandemic taught us all a great deal about the importance of online access to health services.
- o We want to build on these advancements to provide continuous access to services via digital means.
- o Digital plays a big part in supporting face to face healthcare, and we want to reassure the public that this will continue.
- o An important part of our five year vision is to improve the patient experience, by being people centred, and ensuring we do not alienate or exclude anyone.

Members of the public and patients should find these sections of more interest:

o	Understanding digital	Page 08
o	Our five year vision	Page 11
o	Engagement overview	Page 13 & 14
o	How digital is driving change	Page 23
o	Monklands Replacement Project	Page 34
o	Digital equality & Person centred care	Page 44-46

For Clinicians

o Most aspects of this plan are intended for our clinical colleagues, with some sections focused on specific health and social care services.

o This plan is an opportunity to reshape how NHS Lanarkshire delivers digital healthcare.

o We know that some digital systems can be frustrating to use and want to shift perception of digital as a barrier to a problem solver.

o Digital is a strategic enabler to achieving service transformation that represents untapped potential to alleviate, mitigate and better manage some of our biggest challenges.

o Our vision is to demystify digital, making it simpler to understand and use.

o Together - in close consultation with our clinical colleagues, we will ensure that digital solutions are fit-for-purpose, integrated and simplified.

o We will build on what we've achieved since 2018, including the COVID-19 Response, recovery and redesign.

o We will balance our commitments to manage and maintain core systems, whilst making digital transformation achievable for every service.

o We will focus on person centred care as a priority, introducing the Electronic Health & Care Record and joining up our services and systems to ensure we reduce repetition.

o We will ensure that digital works for everyone who needs it, with reduced barriers to digital access.

o We will grow strong partnerships to collaborate and innovate with National, academic, industry and technology partners; to achieve what would otherwise be out of reach.

Clinical staff and teams should find these sections of interest:

o	Our vision	Full section
o	Digital enablement, including:	Full section
	Simplifying digital	(p 48)
o	Digital delivery, including:	Full section
	University Hospital Monklands	(p 67 & 68)
	Lanarkshire National Treatment Centre	(p 69)
o	Appendices, including:	Full section
	Appendix A: Digital enablement framework	(p 74-84)

Highlights (3/3)

For Staff

- o We appreciate how much the workplace has changed to be more digital in recent times, especially following the COVID-19 pandemic.
- o This plan will ensure technology is available to those who need it, performs as it should and remains secure.
- o We aim to make digital simpler to understand and use.
- o We will place the needs of our staff at the heart of existing and new digital solutions.
- o We want to make digital transformation achievable for everyone, by simplifying the steps and stakeholders involved, available support and access to skills.

Staff should find these sections of interest:

o	Our vision	Full section
o	Digital enablement, including:	Full section
	Staff Health & Wellbeing	(p 40)
o	Digital delivery	Full section
o	Appendices	Full section

For Partners

- o Partnering to innovate is one of the six components of our five year vision and remains at the heart of our work.
- o Strategic partnerships are essential to achieving digital innovation that would otherwise be out of reach.
- o Partnerships will ensure we take full advantage of R&D, the triple helix and funding opportunities.
- o We want to continually engage with partners to include your voice.
- o Our data strategy will support both partner and public health outcomes.

Partners should find the following sections of interest:

o	Our five year vision & mission	Full section
o	Our digital journey: Roadmap	Full section
o	Innovation and Partnership approach	Page 52
o	Cloud technology	Page 69
o	Digital enablement framework:	Appendix A
	Benefits realisation	(p 78 & 79)
o	Digital enablement framework:	Appendix A
	Routes to funding	(p 82)

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Introduction

Summary

Our digital journey

Foreword

Welcome to this five year digital plan.

We have chosen the title; *"Empowering people to enhance care for everyone"* because it reflects the wide ranging needs and potential for digital technology across NHS Lanarkshire. We have engaged widely with the public, clinicians, operational staff and our partners to develop this plan. My sincerest thanks go to everyone who has been involved in this big team effort.

We understand that digital has an important role to play following the COVID-19 pandemic, to bring people together and continue to support face to face care. Digital is one of our most effective tools to reduce administration and manage waiting times. It can also increase availability of appointments and improve quality of care. Digital connects people when they're unable to meet in person and empowers patients to be more independent when managing their own conditions.

Across Lanarkshire, we rely on digital systems and online communications to support every aspect of our health & social care services. These systems and services are supported by a talented team of digital professionals who have a wide range of skills. This plan provides examples of digital in action today, and where it will help into the future.

To realise our goals, this plan promotes closer working with the public, our NHS colleagues, partners and nationally as we focus on enabling and empowering people in their daily lives. I invite you to read the plan and consider how you can benefit and get involved.

Thank you.

Donald Wilson
Director of Digital & Information

Empowering People.

Enhancing Care.

For Everyone.

We welcome your feedback:
digital.plan@lanarkshire.scot.nhs.uk

Understanding digital

Digital is a word that's used a lot these days. It can mean different things to different people, which sometimes leads to confusion and frustration.

What do we mean by 'Digital'?

It's important we explain what we mean by digital, so we avoid any misunderstanding and unnecessary worry. When we use this word, we refer to how the public can access care online, and how technology supports NHS Lanarkshire to deliver care. By using websites, Apps, video and other online services, more people will be able to access health and social care in Lanarkshire.

A little like electricity; digital is everywhere, but not always something you can see. For example; patients don't need a smartphone, tablet or laptop to benefit from digital in Lanarkshire. When you attend an appointment, have an emergency or receive a home visit – digital technology is working behind the scenes to support face to face care.

To deliver care, our staff use digital systems, devices and equipment every day, but rather than talking about digital, we like to describe what it can provide.

Did you know that digital...

o   Brings people together when they're unable to meet in person.

o   Empowers people to be more informed and independent when managing their own conditions.

o   Reduces administration and helps to manage waiting times.

o   Increases availability of appointments.

o   Improves quality of care by making our services more effective and efficient.

Not bad for a word that's so misunderstood! When digital is applied in health and social care, it has the potential to help resolve some of the biggest challenges we face. This strategy focusses on achieving exactly that; how we ensure digital will enhance care for everyone.

Key themes

Below you can see a summary of the high-level themes covered in this plan.

01   VISION

We will…
o   Fully align to the NHS Lanarkshire 'Our Health Together' strategy (planned for publication 2023) and the national Digital Health and Care Strategy.
o   Demystify digital, making it simpler to understand and use.
o   Build on what we've achieved since 2018, including the COVID-19 Response, recovery and redesign.
o   Make digital transformation achievable for every service that needs it, by simplifying the steps and stakeholders involved, availability of support and access to skills.

02   ENABLEMENT

We will…
o   Represent the needs of services and support their strategic objectives.
o   Focus on person centred care as a priority, introducing the Electronic Health & Care Record and joining up our services and systems to reduce repetition.
o   Ensure digital works for everyone who needs it and barriers are reduced.
o   Place partnerships at the heart of our work to ensure we take full advantage of stakeholder insight and the triple helix.
o   Ensure we are positioned as a problem solver and are able to innovate.

03   DELIVERY

We will…
o   Work to ensure that our technology services are available to staff that need them, perform as they should and remain secure.
o   Evolve from the current reactive service to a proactive and self-service offering.
o   Change our current practices to offer increased efficiencies, including transition to cloud hosted services and solutions.
o   Deliver our data strategy to provide insight, knowledge, improved care quality, partner and public health outcomes.
o   Deliver the digital infrastructure and services for Monklands replacement and Lanarkshire National Treatment Centre, and leverage these projects to provide the widest possible digital benefits across the whole of Lanarkshire.
o   Support operational and corporate functions to make use of digital to be more efficient and productive.

Key drivers for 2023-28

Here we outline what has influenced, guided and informed this plan.

This digital plan aligns fully with the NHS Lanarkshire healthcare strategy (see Digital enablement - Part A for more information) and the national Digital Health and Care Strategy. In order for this plan to succeed, it is essential that we continue to learn from and closely adhere to a number of plans, strategies, policies, guidance, frameworks and standards. Here are some of the main components that drive this plan:

- Our Health Together; the NHS Lanarkshire healthcare strategy and it's evaluation approach.
- Scotland's Digital Health and Care Strategy, Digital Front Door and the 2022-23 Delivery Plan.
- Fairer Scotland Duty.
- NHS Lanarkshire Equality Impact Assessment guidance.
- Input from over 400 individuals that has directly informed this plan, comprising of the Lanarkshire public, patients, partners, clinical colleagues and staff.
- Achievements and lessons from the COVID-19 Response, recovery and redesign.
- University Hospital Monklands replacement and it's associated commitments.
- Lanarkshire NTC (National Treatment Centre) and it's associated commitments.
- The Scottish Approach to Service Design.
- NHS design principles.
- The Health Foundation's communicators toolkit.
- Series of supportive papers and information from reputable sources (Gartner, Microsoft, CISCO).

We will continually monitor this guidance and adjust our digital plan if needed to address any new requirements over the coming years.

NHS Lanarkshire

Our five year vision

Below you can see the six components of our vision for digital at NHS Lanarkshire:

Enable care outcomes

Empower health and social care services to improve quality, patient experience and service efficiency with reliable, sustainable and secure digital solutions.

Be people centred

Continually engage with the public, clinicians, our staff and partners to include and involve their voice and ensure that human needs are at the heart of existing and new digital solutions.
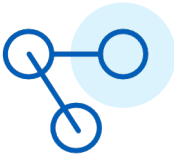
Connect services & systems

Join-up our core systems, information and data to support service improvements, clinical and operational decision making. Make patient and clinical experiences more seamless, reducing the need for patients to repeat information and duplication of clinical effort.

Enhance care for everyone

Champion equal improvements for everyone, even when people are unable to get online or don't own a digital device. Ensure we don't alienate anyone, but continue to evolve naturally in-line with digital progress across other areas of our society.

Optimise ongoing care

Build upon COVID-19 lessons, advancements and investments to provide continuous access to services via digital means. Grow and sustain self-management and remote solutions to reduce pressures across our services.

Partner to innovate

Actively engage in partnerships across national, regional, academic, health industry and technology collaboration to ensure we access opportunities and deliver digital innovation that would otherwise be out of reach.

Our mission

Our mission guides our work, so we can:

> **Improve the care and wellbeing of everyone in Lanarkshire, by enabling services with digital solutions, reliable data & robust technology.**

To achieve this mission, the digital team will work to empower improvements and innovation across NHSL, by ensuring that data is accurate and accessible, and based on secure, performant technology:

Empower
IMPROVEMENTS & INNOVATION

Digital Team

Data
ACCURATE & ACCESSIBLE

Technology
SECURE & PERFORMANT

Engagement overview (1/2)

Engagement to develop this plan has been extensive, but we also understand the importance to remain flexible, given that things can change over the next five years. Later in this plan we explain how we will remain agile to new challenges and opportunities as we deliver our strategic objectives.

Over 400 people have been involved in developing our new digital plan, and we are very grateful for their help and input:

20 Weeks of engagement

100+ Sessions conducted

20+ Groups & events

300+ Patient responses

44 Authors & contributors

Because digital has the potential to impact every aspect of our health and social care services, it was important to conduct a broad and diverse engagement to inform our strategic planning. Using a variety of communications methods, we collected hundreds of data points that have been reviewed by a digital strategy group which met on a weekly basis throughout the development of this plan. The group included a mix of clinical and digital representatives, with input from services across Lanarkshire.

We would like to take this opportunity to thank everyone who has given up their time to support creation of this plan.

THANK YOU

Engagement overview (2/2)

What we've been told

Below you can see some of the insights we have collected to inform this plan:

Patient expectations have changed. If people can track where their trainers are in the World using Amazon, why can't they know where their elderly mother is after she enters an emergency department?

More digital solutions that enable self-help and remote management will be a massive help for struggling services.

I'm OK with digital so long as the face to face option is still there.

We need a single integrated and accessible care record (EHCR) for health & social care.

Digital is an enabler, so eHealth should be positioned as a problem solver.

Data is difficult to share between services, our many systems need to talk to each other.

I love ordering my prescription online and using MyGP. It fits really well with my busy life.

Can you please make digital simpler – to understand and so it 'just works'?

I fully endorse this, as it empowers me to self manage and free-up NHS capacity for other needs.

Core to our work is administration of patients. Innovation isn't just about 'fancy tech' but should be about accessible, affordable solutions that tackle our biggest problems.

Digital must realise benefits that align with patient, clinical, strategic and national needs.

We have to consider everyone, and ensure digital doesn't exclude people.

Digital advisory support is unequivocally needed. We don't understand the tools we already have.

We want less waste. Paper waste, time waste (duplication of effort) but less waste in general.

It's hard to think about innovation without the basics being in place.

Progress with technology is slower than we want, how can we speed things up and innovate?

= Clinical or staff   = Public or patient

2018-22 Achievements (1/2)

The previous digital strategy (2019-2026) was approved by the Board in April 2019 and is superseded by this plan. The previous strategy set ambitious objectives to enhance our digital services extending beyond our walls across a number of areas including;

- o Real Time Data and Analytics

- o Smart Infrastructure

- o Technology Enabled Care

- o Regional and National Collaboration and Integration

- o Mobile Working

- o Digital Innovation Programme and Research

In addition to the digital services delivered as part of the COVID-19 Response, Recovery and Redesign Programme the core digital delivery plan successfully delivered a range of products and services as part of the strategy.

Completed the delivery of Hospital Electronic Prescribing and Medicine Administration (HEPMA) Implementation across all inpatient wards (with the exception of paediatrics).

We have an on-going programme of work to scan historical paper based records within General Practice. The GP backscanning programme enables historical records to be accessed on-line and frees up space within GP Practices to enhance the delivery of patient care.

All of the GP Systems will be replaced during 2022/23. Extensive work has been completed during 2021/22 including the development and approval of a Full Business Case to ensure NHS Lanarkshire can be an early adopter within NHS Scotland to support the introduction of a modern GP System, required to support a range of service improvements across Primary Care.

2018-22 Achievements (2/2)

The management of electronic observations has been transferred from paper based charts to a modern digital system 'Patientrack' which links to patient monitor devices to streamline patient care and improve patient safety.

We enabled the electronic order of laboratory tests and the electronic delivery of results known as 'Order Comms' across General Practice. 'Order Comms' is now live in University Hospital Hairmyres and will be extended to University Hospital Monklands and University Hospital Wishaw during 2022/23.

A new modern digital system called MORSE has been introduced within our community teams during 2019-2022 which has resulted in the retirement of the legacy system known as MIDIS. MORSE is a mobile clinical system, enabling community staff to access and update patient records at the point of care introducing a wide range of patient and service benefits.

A range of Infrastructure improvements have been completed to support the wider digital agenda including;

- o Deployment of a modern desktop infrastructure based on Microsoft Windows 10

- o Start of the migration from locally hosted Microsoft products to Microsoft 365 platform.

- o Major programme of work to rationalise Telephony estate moving from 60 standalone systems to a single telephone platform / dial-plan

- o To enable access to clinical systems within community settings e.g. community hospital and clinics, the WiFi network has been extended to ensure real-time access to information. Patients can also access Guest WiFi to access the Internet.

- o A wide range of Cyber Security improvements have been introduced to strengthen our cyber security posture as part of the work required to meet the standards as set out in the Network and Information Systems (NIS) Regulations and Cyber Essentials Plus.

COVID-19 Response, recovery and redesign

The COVID-19 pandemic resulted in a change in the way patient services were delivered across many areas of health and social care. This change often required the support of digital services to provide new ways of working. This included;
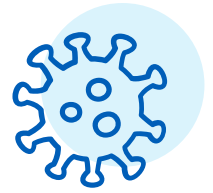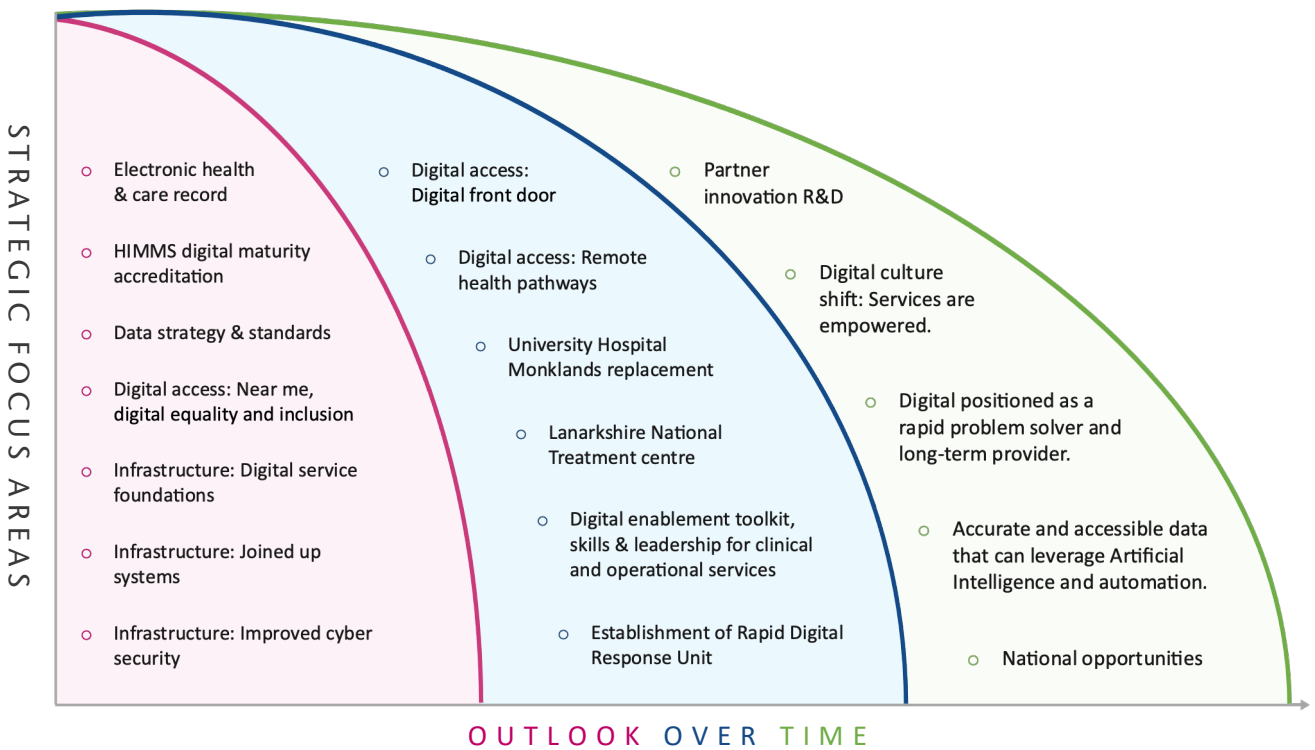
▶ Near Me (powered by AttendAnywhere) has been deployed across; General Practice, Care Homes, Primary Care and our Acute Hospitals. This allows for virtual/remote consultations. Significant week on week increase in remote consultations has been achieved with over 191k consultations since March 2020.

▶ Microsoft 365 including Microsoft Teams has been introduced as a collaboration platform. We have over 12,000 users who are using it on a daily basis to collaborate with their colleagues, attend meetings from any location, and access key information both on site and remotely.

▶ An increase in our secure remote access service to enable a large proportion of our workforce to work at home. We now have 4000 registered users and average of 1400 remote users on a daily basis during peak times.

▶ Introducing a digital visiting solution available across all ward areas. This is based on iPads and enabled patients to connect with their friends and family at this time.

▶ Implementing new systems to support the information and digital requirements of the community hubs as part of the new COVID-19 patient pathways.

▶ The ability to receive Laboratory Results through the National Pathology Exchange (NPEX) to improve the speed of results received and the management of care including Patients with COVID-19.

▶ Extending access to the Emergency Care Summary (ECS) to Pharmacists, Dentists and Optometrists.

▶ Delivering a range of digital and services to enable the delivery of over 8 million vaccinations in Lanarkshire.

▶ Providing extensive support to deliver the Cohort requirements of the national vaccination programme for COVID-19 and Flu including the provision of dashboards containing key performance indicators.

Roadmap (1/4)

Our strategic plan over the next five years includes several key areas which are aligned to Our Health Together and the national Digital Health and Care Strategy. This will include the introduction and expansion of a range of on-line digital services for our patients, their families and carers. Strategic focus areas include:

- o Building our Electronic Health and Care Record
- o Digital Access for Citizens/Patients
- o Digital Services
- o Digital Foundations
- o Digital Skills and Leadership
- o Data Driven Services and Insight

STRATEGIC FOCUS AREAS

o Electronic health & care record

o HIMMS digital maturity accreditation

o Data strategy & standards

o Digital access: Near me, digital equality and inclusion

o Infrastructure: Digital service foundations

o Infrastructure: Joined up systems

o Infrastructure: Improved cyber security

o Digital access: Digital front door

o Digital access: Remote health pathways

o University Hospital Monklands replacement

o Lanarkshire National Treatment centre

o Digital enablement toolkit, skills & leadership for clinical and operational services

o Establishment of Rapid Digital Response Unit

o Partner innovation R&D

o Digital culture shift: Services are empowered.

o Digital positioned as a rapid problem solver and long-term provider.

o Accurate and accessible data that can leverage Artificial Intelligence and automation.

o National opportunities

OUTLOOK OVER TIME

Managing & defending foundations (Horizon One)

Enabling citizens & services (Horizon Two)

Enduring innovation (Third Horizon)

Building our Electronic Health & Care Record

Our vision for the Electronic Health and Care Record (EHCR) is to enable health and care staff across Lanarkshire and beyond. This will support patient journeys across a number of settings; in Primary Care, Secondary Care, Social Care and at home.

We are building our EHCR to enable health and care practitioners to access the right information in the right place and the right time. Our approach to building our EHCR is based on integrating a range of digital products to provide a single source of truth for patient information.

Our plan over the next five years is to exploit the capabilities within a range of core digital products to deliver our vision. To ensure the EHCR and our wider digital maturity aligns to standard, we have adopted the EMRAM (Electronic Medical Record Adoption Model) as the main self-assessment model within HIMMS (Hospital Information Management System). This is the standard we will align with to ensure the new Monklands hospital will achieve HIMMS Level 7.

HIMSS | EMRAM

Digital access

Based on the national NHS Scotland strategy, we are committed to enabling Lanarkshire citizens to have access to their own health and care data. This will involve access to the digital information, tools and services they will need to help maintain their health and wellbeing.

Near Me

The response to COVID-19 saw the accelerated uptake of Near Me where patients can have virtual face-to-face consultations with their healthcare practitioner. Since it's introduction Near Me has supported thousands of consultations to directly deliver health and social care across Lanarkshire. We will make video-based access via the Near Me service a choice available for all appropriate appointments and services across health and care. This includes increasing the number of ways people can access the care, support and information they need, including extending the use of group based consultations.

We will continue to extend our WiFi Network across health and care settings in Lanarkshire. The WiFi is used by health and care practitioners to access information / systems but can also be used by patients and their families in both bedside and public areas within healthcare settings.

Roadmap (3/4)

Remote Health Pathways

Some of our clinical services will be re-designed to take advantage of digital technologies to support new pathways. Health and care support not only takes place in a formal health and care setting, but increasingly in community settings including patient's homes. Remote health pathways will be introduced to support the management of long term conditions including; diabetes, hypertension, coronary heart disease, rheumatology and more.

Telecare

In Telecare we will support the shift to digital, monitoring, dementia and falls response solutions. There will be a shift to a pro-active and preventative approach with the potential to integrate and use public/patient data to assess, anticipate and even predict needs enabling earlier intervention and improved outcomes.

Digital Equality and Inclusion

We will provide access to, and enable patients to have control over, their own health and care information, including the ability to view and update information contained in their records, and access information such as test results, letters and treatment/care plans. We will provide digital access to services through asynchronous communication, giving people the option to respond to a message or email at a time that is most convenient to them.

Digital Front Door

Over the coming years, digital services will be the first point of contact for health and care services for many people. The digital front door will include a safe, simple and secure digital App. This will support people to access information and services directly as well as self manage, and access and contribute to their own health and care information. It is envisaged that the digital front door will be a secure point of access for patients to access a wider range of digital services relating to:

- o   Managing personal details and contact information
- o   Managing appointments
- o   Managing medication including repeat prescriptions
- o   Communication including; digital letters and messages
- o   Access to the health and care record

Digital foundations

Digital technology provides the Foundation on which our health and care system is built upon. The foundations will enable the future delivery of our strategy and integration within key national programmes including the Digital Front Door / NHS App.

Roadmap (4/4)

Infrastructure
We will continue to invest in our infrastructure as the industry shifts from "on premise" to cloud-based infrastructure continues. Our infrastructure and systems will comply with regulatory requirements and legislative standards. This includes the need to comply with regulatory requirements where some health and care software and digital products can be classed as medical devices.

Core systems
Our core systems across health and social care are critical to enabling joined up and integrated care across Lanarkshire. We will:

- Continue to enhance the clinical user experience as we develop our systems and implement the Electronic Health and Care Record (EHCR).
- Adopt Integration and Messaging Standards, making them available in the right place and the right time including the Digital Front Door / NHS App.
- Continue to adopt Microsoft 365 across health and social care to support staff working across organisation boundaries to improve the user experience when working in multi-disciplinary teams.
- Adopt Data Standards that are essential to ensure we can join our systems together so they can speak to each other and share information as required. As we open up Citizen access to their health and care record. We will adopt SNOMED as the clinical coding system for use in electronic health records.
- Build services based on new digital standards and access services via the national digital platform (NDP).
- Continue to embrace and adopt our approach to meeting standards improving our security posture and working in compliance with the Scottish Cyber Resilience framework, as the threat from Cyber Security continues to evolve.

Digital skills & leadership

Developing digital skills and leadership across health and social care will be required to underpin the successful delivery of this plan. Digital transformation is about re-examining how and why our services operate the way they do and re-designing services to be more efficient using digital as a catalyst for change. In order to embed digital transformation, leaders across the organisation must be equipped with necessary digital skills. We will continue to build knowledge and skills within the organisation to support and deliver digital transformation.

Innovation

We will adopt the triple helix model for collaboration between academia and Industry. Building strong partnerships to collaborate and innovate are fundamental to the future delivery of healthcare services.

Delivering big change, backed by data

This digital-in-action story provides an example of service transformation at North Lanarkshire Council Housing. It demonstrates the importance of service owner involvement during any change, and the efficiencies that can be achieved, by using data to obtain a single view of the customer.

NORTH LANARKSHIRE COUNCIL

When scheduling housing repair appointments and inspections by technical officers, it's important to have the most up-to-date and accurate information as possible. Making better use of resources time, and reducing the need for manual intervention vastly increases efficiency across repairs and inspections.

As part of a wider digital transformation, the council decided to make use of a new technology system to obtain a single view of the customer, with all information being held on one data management system. When considering the best technology, the decision was made to use a system that would support other areas of business to arrange and schedule appointments.

To achieve these changes, the team needed to document their current processes, given that many had evolved over the years, with workarounds and some manual intervention to allow for changes in working practices. It was essential to ensure staff and mangers and all key stakeholders were involved early, to reduce any anxiety and hesitation associated with such a big change. This was achieved with regular engagement, where staff were kept informed and users of the new technology were able to use a test version of the software to gain familiarity. Knowledge transfer and training sessions with the implementation team, and use of Microsoft Teams to collaborate, provided an environment for questions & answers and resulted in a successful implementation. To date, all feedback has been positive and the council is now looking to implement the technology in other services where appointments are required.

How digital is driving change

Digital will support many changes to Health & Social Care over the coming years. We know that change can be both challenging and very rewarding. Below we give some examples of how data, IT systems and service innovation will change how people deliver and access Health & Social Care into the future.

	Data examples ⌄	**System examples** ⌄	**Service examples** ⌄
For the Public & Patients	Log-in online to view your data e.g. latest blood test. Manage how your data is used and register a proxy to act on your behalf.	Reduce the times you repeat information to NHS Services; due to technology systems being more joined-up.	Log-in online to check where you are in a Service waiting list, or discover your eligibility for a particular care assessment.
For Clinicians	Access to higher quality, simplified data that will inform and improve clinical decision making.	Use of fewer, connected systems to view clinical information, reducing admin time and the need to log-in/out.	Deeper collaboration with digital specialists to design clinical systems and solutions based on your Service needs.
For Staff	Data that reduces repetition and administration, by use of business intelligence and automated workflows.	Alignment with National standards and system procurement to improve efficiency and sustainability.	Better forward planning and visibility of available digital support through use of Agile Programme Management.
For Partners	Able to prove success of innovation and investment, using data that will demonstrate impact across communities.	Secure access to governed data, to predict and model certain population, health and social care scenarios.	Deeper understanding of Service needs through closer working and use of Service design methods.

DIGITAL ENABLEMENT

02

Part A

Our Health Together

Our Health Together

This digital plan aligns fully with the NHS Lanarkshire healthcare strategy. Titled "Our Health Together" the strategy is planned for publication in 2023 and includes a series of workstreams that require digital solutions and support over the coming five years. We dedicate this section to represent the needs of each workstream.

Digital Health & Technology

Digital will play an important role in delivering the Our Health Together strategy and is deemed a 'cross cutting' workstream, given it's importance in enabling each area. In addition; digital transformation – a topic that is explained later in this plan, is an important enabler for NHS Lanarkshire. When considering Digital Health and Technology our ambition is to enable service transformation by unlocking the vast potential of digital innovation, technology, data and information.

To **tackle Inequalities** we will:

o   Support and enable digital solutions that improve the lives of everyone.
o   Build upon COVID-19 achievements and investments to provide continuous access to services via digital means.
o   Ensure people are not alienated or left behind because of digital enablement.

To **promote well being** we will:

o   Help to improve digital confidence, literacy and skills.
o   Leverage digital to improve people's work environments.
o   Apply innovation, such as automation, AI (Artificial Intelligence), robotics and other important process efficiencies, to reduce cognitive load.

To **deliver sustainable healthcare** we will:

o   Support services that want to make use of digital solutions to be more efficient, improve quality of care and/or be more cost effective.
o   Enhance clinical and wider decision making through use of technology and improved access to data.
o   Ensure a robust, resilient, reliable, performant, sustainable and secure digital estate.

Children & Young People

The purpose of the children and young people workstream is to lead on and oversee the strategic priorities for children and young people within the Our Health Together strategy in Lanarkshire. The scope of this work is broad, and is in part outlined in The children and young people Health plan, Lanarkshire 2021-2023. This document sets out our vision to support and enable infant, children, young people and families to achieve the best possible health outcomes and realise their full potential. Our aim would be to extend this vision to ensure in all new developments in NHS Lanarkshire, we include the United Nations Convention on the Rights of the child.

The purpose of the Children & Young People group is to:

Provide an overarching view and ambition for children and young people's services in NHS Lanarkshire from pre-conception through to transitions to adult services.

Digital opportunity
Digitally empowered and enabled services is recognised as a key interface for the transformation of our services, with impact on:

1 How data and its analysis will guide our clinical decisions and provide focus for our outcomes.

2 The interface with our systems to prevent gaps in the patients journey, keeping children and young people at the centre of their care.

3 Recognising the contribution of children and families being supported and digitally included, and exploring where this can contribute to capacity within our systems.

Environmental Sustainability & Limiting Climate Change

Tackling climate change and taking pro-active steps to deliver 'net zero' sustainable health services for NHS Lanarkshire is fundamental to the delivery of Our Health Together. Alongside the digital strategy, this should underpin and feature as part of the work of all our workstreams.

The workstream itself is largely focused on identifying opportunities to plan our services and the supporting infrastructure, in a way that reduces waste and emissions and enhances the environment of our patients and staff. We have a recently developed strategic plan focused across 6 themes:

- o Carbon and Emissions
- o Travel and Transport
- o Built Environment
- o Environmental Impact
- o Greenspace and Biodiversity
- o Sustainable use of resources

Our improvement strategy is concerned with actions that reduce our carbon footprint and range from reducing energy used in our buildings; decarbonising our fleet; reducing patient and staff travel, and also reviewing our procurement practices and supply chain emissions. The overarching ambition of our workstream is;

To deliver a net zero sustainable health service that is equitable, just, and resilient to the effects of climate change, whilst providing efficient, patient-focussed care now and for future generations.

Embracing digital advances is fundamental to us achieving our net zero ambitions. The expansion of digital technology will enhance our built environment, allow us to monitor and manage energy efficiently and support effective building management and decision-making to maximise carbon reduction opportunities.

From a service delivery perspective, digital technology advances continue to improve diagnostic capability and have delivered the ability for our clinicians to remotely monitor and review patients. We are using digital technology to engage with our patients and streamline pathways of care, reducing the need for travel and multiple visits to access support across primary, community and secondary care. As well as the advantages this presents for patients and staff, the effective use of digital impacts directly on emissions and reduces our carbon footprint.

Technology-Enabled Care (TEC)

TEC, such as home health monitoring, delivers benefits to the population at scale and is a key focus in supporting self-management of health and well-being through a focus on digital products and services. Significant developments around at-home and mobile health monitoring have already been achieved locally. Using digital technology to support long-term conditions means that people develop a greater understanding and ownership of their condition and are more engaged with interventions and treatment plans.

Significant evidence shows that patients/service users can live in good health for longer by taking ownership and improving their health and well-being. Several digital platforms are available to enhance self-care, such as Florence (FLO), a text messaging service used to manage a range of Long Term Conditions. A recent addition is an Inhealthcare portal, enabling patients to remotely self-manage their medical conditions by submitting readings via an inclusive range of communication channels, including mobile applications and landline telephones.

Patients spend less time attending and travelling to appointments alongside a reduction in hospital and GP appointments and district nursing home visits. These approaches are areas that the Falls, Frailty and Rehabilitation strategies are considering adopting to assist in the monitoring and supporting of the public/patients. In addition, TEC can assist in a variety of ways, including:

o   Patients and service users have access to mobile, wearable technologies to enhance self-management and improve individualised healthcare information and analytics, including GPS locating devices for those with dementia.
o   Both local councils have recently switched from an analogue to a digital approach by embarking on transitioning telecare services. This transition and the redesign of the respective services to an anticipatory, person-centred model will ensure that vulnerable service users who are frail and at a falls risk receive a safe, effective, reliable community alarm service.
o   Improve record keeping and management information reporting by developing clinical dashboards.
o   Virtual appointments, clinics and meetings for a variety of services, patients and service users.
o   Improved communications with service users and the general public through enhanced use of social media, Interactive Information Screens in public spaces, and text messaging to improve appointment attendance levels.

As a result of the pandemic, digital communication options in health & social care have become an essential part of the way we work. Employing digital communication tools enables staff to stay in touch with each other and maintain contact with external organisations and service users. This arrangement has involved a combination of approaches, including:

Falls & Rehabilitation (2/2)

- o Agile Working – with the majority of staff able to work remotely.
- o Microsoft teams allow employees to communicate instantly with colleagues on computers/laptops. It also allows employees to see if colleagues are available on the phone for a message or call.
- o Video conferencing - enables people to have face-to-face contact using a computer, tablet or smartphone using Microsoft Teams.
- o Use of the Microsoft 365 platform, which allows for bespoke apps to be developed to support patient care/pathways. One such example is the patient connect app used by a neighbouring health Board, which allows clinicians to communicate with patients/service users and their families via Microsoft Teams. This application allows family members and the patient/service user to connect without having to install technology.

A strategic partnership with the University of Strathclyde has also enabled links with the Sir Jules Thorn Centre for Co-Creation of Rehabilitation Technology at Strathclyde University. The centre supports rehabilitation for those who have suffered a stroke.

The strategic partnership will aid community-based technology-enhanced stroke rehabilitation programs between NHS Lanarkshire rehabilitation community teams and Lanarkshire sport and Leisure services to be established.

Allied Health Professions (AHPs)
The AHPs are a diverse group of 10 clinical services within the Board. AHPs must be able to capture their records, assessments, care plans, and patient transfers on a digital platform to reduce a clinician's administrative burden. Furthermore, advanced role AHPs require access to haematology, radiology, and other investigations as part of their role profile to digitally request, view and chart diagnostic results. AHPs use TrakCare and MORSE systems. However, not all AHP services have full access to digital systems, which means substantial numbers of AHP clinical staff undertake manual collation of data and record-keeping, causing duplication, which is time-consuming and reduces clinical capacity. Podiatry access a digital clinical record in TrakCare, which should be rolled out to the other AHP services that have TrakCare access. AHP services are also embracing digital capabilities, including:

- o Capturing information at the point of care using hand-held devices.
- o Clinics where consultations which historically were delivered face to face.
- o Online appointment bookings – reducing DNAs.
- o Supporting digital AHP student placements .
- o Utilising dashboards and digital systems to guide AHP clinicians along defined clinical pathways to standardised practice, reducing unwarranted variation and minimise unnecessary variation.
- o Innovative approaches to promoting AHP careers using digital solutions.

Frailty & Care Homes

Identifying and managing frailty in all settings

We want to enable people and their carers to remain healthier and independent for longer at home through comprehensive person centred support and services that prevent and identify frailty, delay onset of related disability, manage acute and chronic illness and optimise recovery.

Digital technology and innovation will pay a big part in achieving this, with examples provided within the Technology-Enabled Care (TEC) section on page 28.

To promote wellbeing with our older people, we will enhance digital inclusion with community partners and use technology to support older people to remain well and independent in the place they call home, for as long as possible and to mitigate deterioration and complications.

We want to make outpatient and ambulatory care models accessible, using virtual options for pre-assessment, assessment and follow-up consultation that value patient, carer and staff time. Where and when appropriate, use of virtual options will enhance care delivery and reduce carbon footprint.

Care homes

There are many different types of care homes across Lanarkshire. Care home providers can be specialist, local and straddle multiple health boards in Scotland and operate across the whole of the UK. Due to these differences, care homes work in different ways, with different degrees of digital literacy, skills and technology capability. With each care home having a different degree of resource availability and digital skills, ensuring consistency of care quality can be a challenge.

Measuring care quality across Lanarkshire care homes would benefit from consistency in the recording and reporting of care data. It is our belief that digital solutions could greatly help in the recording and reporting of care quality across care homes, but given the pressures on care home staff, any such solution(s) would need to be carefully considered and configured to form part of regular care home operations, and not represent a burden to already stretched care home services.

The Digital in Care Home Action Plan was published in December 2020. NHSL will support national consultations in this area, to determine key challenges and consider how digital solutions can support measurement of care quality across Lanarkshire care homes. In addition to following national direction and guidance, NHSL want to ensure we are asking the right questions and have visibility of future expectations. This would involve consideration of challenges that care homes, residents and associated services face when needing to monitor, measure and report care quality data.

Long Term Conditions

The primary aim of the Long Term Conditions Steering Group is to reduce the burden of LTCs on the people of Lanarkshire. To achieve this ambition, the Steering Group will create a LTC Pathways Framework for the development of person centred long term conditions journeys, spread holistic models of care and undertake targeted and proportionate Community Engagement and Co-production. As such, digital and Technology Enabled Care (TEC) will be vital in moving forwards the care and treatment of people with LTCs and for the staff who support them. In particular, the following digital enablers will be of specific importance:

Secure Information Sharing
- Sharing patient information across all sectors of the health service to promote seamless care.
- Sharing information between health and social care.
- Sharing information with patients, especially biometric results.
- Streamlined referral processes.

Technology Enabled Care (TEC)
- Telehealth to support patient health literacy and self-management.
- Telemonitoring to support patient with more complex LTCs and multi-morbidity, especially during more acute episodes.
- Remote diagnostics and biometric measurements e.g. blood pressure.
- Remote monitoring and review of implantable devices.

Remote Consultations
- Telephone consultations.
- Attend Anywhere consultations to support patient appointments and LTC reviews with flexibility to offer face to face appointments as required and to accommodate patient preference.
- Near Me for Groups to support health education and self-management.
- Near Me for Groups to facilitate Patient Group Consultations to support single disease monitoring and treatment.
- Asynchronous consulting, which offers people more choice and flexibility to access health and social care support.

Staff Support
- Microsoft Teams to support staff meetings, educational events and planning / networking opportunities.
- Interactive Pathways and Guidelines.
- Digital platforms to support workforce development.
- Digital infrastructure to support remote working.

Engagement & Communications
- Smart surveys to support engagement of people, communities and staff.
- Internet and Intranet to provide mechanism of communication.

Looking after yourself – whilst caring for others.

Ewan, a 68 year old male with operable renal cancer, is on a current waiting list for his procedure. He recently had to take early retirement to become a full-time care giver for his wife, who has Multiple sclerosis (MS).

The hospital asked Ewan to monitor his blood pressure daily in the 3 months leading up to his renal cancer operation. The readings were required for the renal unit at the hospital, and the patient had been told he could either purchase his own Blood Pressure monitor, or attend at his GP surgery each day to have his blood monitored. Ewan did not have the means to afford monitoring equipment, and didn't want to take-up an appointment every day in the GP practice. This was also because he found it difficult to leave the house daily due to being his wife's full time care giver.

To resolve this challenge for Ewan, he was added to the Florence (or "Flo") text messaging system, provided with a Blood Pressure monitor at home and agreed to text in his results daily.

With a printout of his results, Ewan was able to share the information with the hospital to make decisions regarding his care in the run-up to his operation. Given that readings were taken in his own home, the results were likely more reflective of his circumstances, based on his day-to-day activities.

The convenience of being able to monitor his own Blood Pressure, meant less of an impact on his daily life and an additional daily appointment being available at his local GP. Most importantly for Ewan, he didn't have to leave his wife every day for 3 months to visit his Practice Nurse for a Blood Pressure reading. This meant he was able to continue in his caring responsibilities and still look after his own healthcare.

Mental Health

Mental health services are spread across many community and inpatient areas, meaning that we have a need to have excellent information sharing to ensure safety and continuity. There are also new opportunities to provide a range of evidence based treatment approaches which include computerised therapies such as Cognitive Behavioural Therapy (CBT).

The mental health strategy Board has 4 workstreams:

1. Good Mental Health for All.
2. Improving Access to Mental Health Supports and Services.
3. Specialist Mental Health Services.
4. Perinatal and Infant Mental Health.

Each of the above workstreams have embraced digital solutions as part of their development journey.

Digital areas across Mental Health
Key areas that are currently being progressed are;

- o   Completion of the move of all Mental Health and Learning Disabilities Services to MORSE clinical records system (including those not previously on electronic records, such as CAMHS).

- o   The use of Near Me across a number of clinical areas.

- o   Completion of all Mental Health and Learning Disabilities inpatient services moving to HEPMA, the electronic prescribing system.

- o   Increased adoption of Digital therapy delivery where appropriate, such as computerised CBT, including ensuring that people do not need to approach their GP first.

Monklands Replacement Project

The Monklands Replacement Project (MRP) will replace the existing University Hospital Monklands (UHM) with a new state of the art hospital that can deliver a new model of care required to meet the future healthcare needs of NHS Lanarkshire's population.

Welcome to
University Hospital Monklands

> **Scotland's digital hospital**

The Project presents NHS Lanarkshire with an opportunity to consider digital design from the outset and truly optimise the potential for digital systems, technology solutions and data. This will support the Board to achieve the project's key objectives to:

- o Improve person-centred services.
- o Improve the safety of patient care.
- o Improve clinical effectiveness and enhance patient experiences and clinical outcomes.
- o Improve the quality of the physical environment.
- o Provide flexible and adaptable facilities across the healthcare system.

Such ambition must be underpinned by a strong culture of connected thinking and supportive behaviours that drive digital transformation and innovation. This has been set out more clearly in the MRP's Strategic Vision for a Digital Hospital.

The digital vision is framed around the following six characteristics that provide a supporting foundation for decision making regarding digital requirements by helping to identify value added opportunities:

- o Accessibility
- o Automation
- o Connectivity
- o Enabled Workforce
- o Empowered Patients
- o Integration & Interoperability

The Project will also seek new and ambitious opportunities to deliver:

- o An Operational Command Centre for Lanarkshire.
- o Increase the use of robotics across clinical and facilities management functions.
- o Develop a digital twin of the physical asset.

Palliative Care

The ambition of the Palliative Care workstream is to:

Ensure quality of life for both patients and families at every stage of the disease process, from diagnosis onwards.

Palliative Care offers a holistic set of approaches that aim to address the physical, social and spiritual burdens that individuals and those that are important to them are faced with when dealing with the challenges associated with a progressive incurable illness, end of life and bereavement.

Technology is not widely used within Lanarkshire for Palliative Care at present. There are examples across the UK where technology is being used to assist in the electronic identification of those who are near the end of life and allow for both the recording and sharing of individual preferences for their care at this extremely important time in their life.

There is evidence that electronic systems have proven to result in better resource planning and improved coordination and communication between services improving the overall quality of care individuals experience. We highlight this in the example provided below:

End of Life Care Together
NHS Highland has partnered across voluntary, health and social care organisations as part of End of Life Care Together. The partnership is committed to improving end of life care for all, by communicating a persons end of life wishes across all parts of the healthcare system. This will be achieved by increasing identification of people in their last 12 months of life, to understand their care preferences and requirements. End of Life Care Together will record this information digitally, and share it via a centralised coordination and advisory service. This will allow partner services to see where care is needed and in what capacity, with the result being a reduction in unplanned hospital admissions. The partnership is based on a model that is already effective in other parts of the UK.

A short video about the partnership can be viewed here: End of Life Care Together

The newly revised NHS Lanarkshire Palliative Care Strategy has the fundamental aims of ensuring services delivered in Lanarkshire are accessible, fit for purpose and coordinated around the individual and those that are important to them. Digital interventions would have an essential role in helping us achieve such aims.

Unscheduled Care

In recent years urgent and unscheduled care services across Lanarkshire have faced an unprecedented level of demand. Across the health and social care system, including acute, primary and social care, we are witnessing consistently high levels of demand. Consequently, we struggle to meet key targets consistently and deliver the high standards of care we aspire to. The impact of COVID-19 has further highlighted the necessity to manage patients closer to home and minimise the need for in-patient hospital care or attendances. Our Ambition for the Urgent and Unscheduled Care workstream is for everyone in Lanarkshire to get the right care, at the right time, in the right place based on their individual circumstances and needs.

We know that prevention, early intervention, proactive care and good disease management keeps people in Lanarkshire healthy, active and independent and within our communities, when it is safe to do so. However we need to develop resilient and sustainable 24/4 services across our whole system i.e. Acute, Primary and Community Services to support people when they need urgent care. We need to plan with our people to ensure that they are integral to our service development and re-design. We need to ensure a whole system approach through integration and collaboration with our communities, third sector & public sector organisations working together to improve health and wellbeing and reduce health inequalities in our local communities. We also need to rebuild our staff morale following the impact of COVID-19 to ensure that we have a suitable and workforce model to deliver our ambition.

We know that Digital Health and infrastructure can help us in the following ways:

- o   Developing electronic connections between our various systems to share information and reduce duplication by improving the interfaces between services.

- o   Working in collaboration with partners e.g. housing to increase the use of wearables and remote monitoring appliances to keep people safe.

- o   Supporting the development and capacity for virtual consultations for urgent care e.g. minor illnesses and minor injuries.

- o   Supporting the role out of consultant connect / other professional to professional electronic mechanisms to support advice regarding patient management.

Planned Acute Care

The ambition of planned care is to:

Provide timely access to modern, flexible elective care delivered in an appropriate care setting.

Over recent years, the ability to achieve this has been impacted disproportionately by the COVID-19 pandemic, resulting in growing waiting lists and extended waits to access services.

As planned care continues to recover core services the challenge ahead will be to meet waiting times targets, treatment time guarantees and reduce current long waits. This is set against a backdrop of continued workforce pressure and ongoing impact from unscheduled care demand.

A different approach will be required to address these issues including; revised models of care and clinical pathways, specifically in how the needs of patients are managed and met, maximising clinical capacity and collaboration across Health Boards, to maximise clinical capacity and treatment opportunities for patients.

How digital health can help
Digital will play an important role in delivering the strategic objectives across Planned Acute Care. This would include:

o   Implement a digital first approach where appropriate.
o   Explore and implement new models of care that enhance patient pathways and improve access.
o   Adoption and expansion of alternative methods of patient contact, such as video consultation, patient monitoring and clinical review.
o   Integration of systems to assist in patient Preabilitation and Pre-Assessment enabling patients to optimise their health prior to treatment.
o   Support the implementation of new technologies such as Robotic Assisted Surgery, which enables patients to recover much quicker from surgery and spend less time in hospital.
o   Linking current systems to optimise clinical capacity within Outpatients, Treatment Rooms, Operating Theatres and Diagnostics.
o   Joining up systems to ensure appropriate sharing of electronic information and facilitate national collaboration in providing patient care, such as, National treatment centres (NTC), National Elective Co-ordination Unit (NECU) and cross board working.

Staying connected and active in later life

John is 93 years old with a palliative condition. He attended hospice day services before the COVID-19 pandemic, but due to isolation and shielding measures at that time, John was home alone with no personal contact. His family could only chat over the telephone and his oldest granddaughter was due a baby, who John may never get to meet. This was a lonely time for John who was in the last year of his life. The hospice services were important to John and he looked forward to the weekly interactions with others and enjoyed learning new things at the sessions. John's family was also extremely important to him, especially his granddaughter who he was very close to. With the country in lockdown John's world became very small and closed in, so it was important to find him a way to connect with the things and people that mattered whilst keeping him safe from COVID-19 risks.

Scottish Government were offering digital champion training which the hospice community team took up. They were also able to provide digital devices to people like John. John was issued with an iPad and basic training on email and zoom. With this new digital technology not only was John able to join a zoom chat with hospice staff and other attendees of his group, he was also able to chat with family face to face and got to see his new great grandbaby on screen. This meant the world to him! As John's confidence grew, he also learned new skills online including learning to play an instrument. This may not have replaced the human touch, but it did alleviate John's loneliness and gave him a new lease of life, at a time when he became too ill to travel. When services did resume, John was still able to participate virtually and stay connected with friends and loved ones.

By introducing a digital programme it means people like John can connect with the outside world, and it became very clear that this was something we should continue beyond the circumstances of the COVID-19 pandemic. Moving forward, services could be more inclusive by offering digital options, by allowing those who can't attend face to face to participate and reap the benefits of these services from their own home. It was also highlighted to hospice staff that their reach could be greater by delivering services digitally, thus releasing capacity to support those most in need. Community services are now finding digital technology invaluable and as more and more people are supported to be digitally confident, we are all able to stay connected no matter what.

NHS Lanarkshire

Primary Care Redesign (1/2)

The objective of the Primary Care Redesign workstream is to:

Secure access for the residents of Lanarkshire to sustained and thriving primary care services that deliver modern flexible care in appropriate settings, focussing on Multidisciplinary Team (MDT) delivery.

This entails developing a strategy for the sustainability of independent contractors and delivers a plan which builds an appropriately skilled primary care workforce.

The workstream recognises the need to maximise the contribution of the voluntary and third sector both to address the challenges in providing the services required and in recognition of the need for Realistic Medicine and to avoid over medicalising non-medical problems. In order to achieve this, the workstream will engage in a challenging redesign agenda, building on work undertaken by the Primary Care Improvement Plan to pilot and implement new models of care delivery which work across traditional professional and service boundaries. Maximising the use of technology and its use in supporting individuals, people that are important to them, and staff (both from statutory and third sector organisations) who care for them will be key to this.

Key requirements will be:

o   Shared and integrated records clinical records which allow all those who need information about patients and their prior care access to it across all environments in Primary and Secondary Care. These systems will also be required to make communication between professionals seamless, to maximise the co-ordination of care in busy services.

o   Systems used by services should link to Technology Enabled Care (TEC) systems to maximise the opportunity for self care.

o   Outcomes should be sought to maximise the opportunities for patient facing pathway systems which can direct patients to appropriate information resources, or steer the public towards digital asynchronous consulting systems where appropriate

o   Use of systems which maximise Human Factors research in the development of the User Interfaces to ensure both efficiency and minimise risk to safety from poor system usability.

o   Promote Realistic Medicine in Primary Care through the development of evidence based clinical pathways and decision support integrated in systems to make their adoption easy.

Primary Care Redesign (2/2)

Key requirements (continued)…

o To seek a move towards data driven Primary Care which can target resources to those people and areas of greatest need and in doing so minimise health inequalities. This will require a drive to improve data quality so that resulting multi level reporting is reliable. A Population Health-based approach driven by high quality data feeding Machine Learning driven reporting systems will lead to optimal deployment of limited resources and the best possible care for the people of Lanarkshire.

o Reporting should be easily available to independent contractors, localities, clusters, partnerships and the Board to ensure that each can play their part in meeting the needs of those for whom they have responsibility.

o Our healthcare system should be patient centred, and provide IT systems to ensure that patients care can take place at home as much as is possible. This means the continuing deployment of systems such as Near Me but also the infrastructure changes required to ensure that geographically distant specialists consulting with patients via these platforms can easily arrange follow-up investigations and care in the community close to a patient's home.

o Contribute to the evidence base by taking a triple-helix approach wherever possible, involving both academic and commercial partners in system and strategic development.

Staff Health & Wellbeing

The aim of the Staff Health and Wellbeing (SHWB) work stream is to create the right conditions across the organisation for good health and wellbeing of all staff. A virtual staff health and wellbeing week was implemented (31st October-4th November 2022) as a platform to further engage and support staff by providing a dedicated space to increase visibility and awareness of the staff support services that can help staff manage their health and wellbeing. The SHWB programme that was scheduled was in response to feedback from staff that was gathered within the staff engagement programme 'Your Health Matters – Your Opinion Counts' (July 2022.) The SHWB Strategy (2022-2025) was launched as part of SHWB week on 1st November, 2022.

Digital technology will be essential to this workstream as follows:

o Supporting the SHWB strategy to achieve some of its objectives, by providing digital platforms to communicate, engage and collaborate with staff and deliver accessible, effective and timely support for staff.

Staff Health & Wellbeing

Essential digital technology (continued)…

- o The 'Your Health Matters' webpage allows support to be shared with staff and should remain as an essential communication channel.

- o Staff health and wellbeing measures include analytics from Your Health Matters Web page to inform of the type of support/services staff are accessing and provide an evidence base for reviewing this space.

- o Consideration of staff support resources being developed in an APP format.

Realistic Medicine

The purpose of the realistic medicine workstream is to create a realistic healthcare programme that encompasses a whole system focus and one that engages with our workforce for health and care and for the population of Lanarkshire.

The aspiration for the realistic medicine team is to align the six pillars of realistic medicine with remobilisation, recovery and redesign actions. In doing so; Shared Decision Making, building a personalised approach to care, Managing Risk better, becoming improvers and innovators, reduce harm & waste and tackling unwarranted variation will be demonstrated through our action plan activity. A key component in the delivery of realistic medicine has been the development of our public facing webpage, enabling access across Lanarkshire. This helps us to make the best use of digital technologies, to introduce the concepts of virtual assessment in clinical interactions. Aligning with digital assessment fits with the national focus on Transforming Digital Access by developing a digital front door to health and social care services. Realistic medicine can enable and enhance equity of access to assessment, support the care intervention closer to home and provide a better, consistent service experience which in essence supports many of the key pillars.

Digital will play a part in the Realistic Medicines workstream by:

- o Recognising the impact for service user geography by enhancing virtual connections, reducing health miles and building on the personalised approach to care, reducing harm and waste.

- o Supporting alternative treatment and care options through shared decision making conversations – such as remote monitoring in realistic vetting.

- o Promoting urgent care virtual (interactive) specialty assessment in emergency departments to reduce carbon footprint associated with inter-hospital transfer for specialty review, thus bring the specialist to the patient.

Public Health System Development

The Public Health System Development Workstream is concerned with the advancement of a whole system approach to addressing inequities and improving the health of all in the Lanarkshire region. This is to align with the national work being led by the Scottish Government's priorities and the development of a world class Public Health system. Promoting, protecting, and improving the health of individuals and communities is the core aim of this workstream. Key concerns pertain to ensuring that both reactive and proactive capacities are maintained, such as ensuring that NHSL is equipped to respond to evolving threats to population health or Public Health emergencies, and ensuring that preventive healthcare (such as effective screening and immunisation) is adequately resourced to mitigate or reduce the risk of adverse health events in the population.

Digital Health Technology is an essential component of a functioning Public Health system. The ability of Public Health to identify concerns, measure impacts, assess actions, or contribute meaningfully to service evaluation and redesign is dependent on the availability and access to high quality data.

In light of recent and current health and societal issues, the needs of the population are growing and careful, prompt analysis is required to identify issues of substantial concern that merit urgent action. Digital Health Technology will play a vital role in ensuring that Public Health responses are as effective as possible.

Public Health developments that can be enhanced by the contribution of digital health technology will also benefit other aspects of health and social care services, academia, and the general population. A primary objective of Public Health is to identify the burden of disease or threats to health for the population, and assess the needs of the population to mitigate against these. These activities are driven by data and analytic capabilities. A current worksteam within Public Health NHSL to enable the assessment of needs/burdens is the development of a central repository for health and social care data. This resource relies on digital health technology for its infrastructure, as well as its outputs. This data repository has potential benefit to other parties as it will facilitate the work of other agencies, as well as allowing study by academic partners or the general population to analyse population trends, and assess the impact of interventions on the population (such as government policies and local work programmes).

DIGITAL ENABLEMENT 02

Part B

Strategic themes

Digital equality (1/3)

It is essential that we prevent exclusion and ensure that digital benefits everyone who needs it. When developing this plan we have carefully considered aspects of social/economic equality, including how we will continually manage digital poverty, inclusion and literacy. We respect and commit to championing the needs of all people who live and work in Lanarkshire to deliver digital solutions that work for them.

Digital equality is fundamental to three areas:

1. How the Lanarkshire public access health and social care services online, sometimes described as the "patient experience".
2. How our NHS colleagues deliver health and social care using digital systems.
3. How we design services that make use of digital, to reflect the diverse needs of our population.

In all three areas (access, delivery and design) we need to ensure digital equality. This means making digital accessible for everyone who needs to use it.

How digital enhances and supports care

Often digital is thought of as a replacement to other types of care (such as face to face consultations) which can lead to concerns that some people might become alienated or unable to access care. The reality is much more sophisticated, whereby digital enhances and supports care in ways that should feel natural for many. For example, Quit Your Way (NHS Lanarkshire Stop Smoking Service) support the public by providing clinical and behavioural support to quit smoking. Some aspects of their work require face-to-face, telephone and video consultations to cessation support, especially if they are demonstrating Nicotine Replacement Treatment (NRT) or using Carbon monoxide (CO) monitors. Support consultations can also include in-person demos of Smoke-free Apps that can be used to help manage habits. The service currently uses Near Me video consultation as a Test of Change (ToC) to allow people to make informed choice on how they want to be supported especially those who have mobility or transport difficulties to meet virtually, with links to websites and other guidance supplied via Email or messaging services, which helps to reduce paper and printing costs. We have shared this example to show how digital is already an integral part of the care mix and not often an 'either/or'.

Digital equality (2/3)

As a responsible healthcare provider, we need to balance provision of progressive online options for those who are able to use digital, with options for those who are unable to. We know that some people with health and/or social conditions, no Internet connection or a suitable device, are unable to use digital services. In some instances, carers make use of online services on behalf of persons who need it.

Digital makes a big difference

For some, making use of online services is a personal preference, which we must respect. When the telephone was first introduced, this would have caused concerns that health care was becoming less personal, but now we know that the phone has delivered much more than it replaced. We believe it's important to be honest with the public about the pressures we face, and open about how individual choices can deliver big improvements to communities. Online options provide significant benefits to under pressure health and social care services, which is why we work so hard to make these options available to everyone, when and if the public are able to use them.

Digital equality is important for our NHS colleagues, many of whom need to learn new digital systems and ways of working on a regular basis. These changes can be disruptive, even down to using a new system to log milage, or to book a meeting room. This plan looks to improve the confidence and digital literacy of our workforce over time, by empowering them with the toolkit they need. Better provision of self-help tools, and clearer understanding of what digital tools can be used for what purposes, will greatly help our colleagues access and deliver care that is enhance by digital. Our digital systems and data recording options also need to cater for diverse needs, such as gender neutrality both for our staff and also for the public and patients they look after.

Disability and accessibility

All of our NHS colleagues should be able to conduct their work without hindrance or unnecessary challenge. For those who have additional needs, this can be harder without appropriate support. We commit to supporting our colleagues who have additional needs, by providing technologies that will assist them in their work. This will come in the form of accessibility features that are native to some Applications (such as Microsoft 365) or as additional screen-reading technology. Wherever possible we will support additional needs, whilst also considering the security and stability implications of introducing 3rd party supportive and adaptive technologies.

Digital equality (3/3)

There are several ways we are working to ensure that digital equality is achieved, these include:

o Delivering digital solutions that help the public without any need for them to use a smartphone, tablet or laptop. This includes digital solutions that support our staff to perform their roles, to record health and social care information, and to administrate care.
o Providing alternatives to online and digital wherever appropriate.
o Ensuring equality of access for people with protected characteristics and other marginalised groups.
o Capturing the data required to measure and improve digital equality.
o Ensuring suitable Internet access is available wherever possible across our sites.
o Including diverse groups of people in the testing of websites, Apps and other online access before they are made available to the public/patients and our NHS colleagues.
o Adhering to accessibility, usability and other important digital standards.
o Providing language translation options, including the choice to request information be supplied in other languages and/or formats.
o Advocating or partnering with support schemes such as Connecting Scotland to help ensure fair access for all, including those who may suffer from digital poverty.

Person centred care

To ensure we best reflect the needs and diversity of the Lanarkshire population, we advocate a person centred approach to all care that is supported by digital. This will be achieved by introduction of our Electronic Health & Care Record, joining-up of our core technology systems and applying the Scottish Approach to Service Design. When designing any digital solution, service and system we will ensure the voice and needs of people are at the heart of our delivery. We know that the best services are designed around people's needs and not how health and social care is structured or organised. We will consult closely to create solutions that work hard to satisfy needs. Then working with suppliers or partners who have degrees of separation from the intended 'end-user' we will advocate on behalf of these people, by representing their voice and pressing for the solutions they need. We will also consider secondary stakeholders and the onward impact of any proposed change.

Smart tech supporting self-assisted living

Barry is a 19 year old man who lives with his father and younger brother in a tower block. Barry has a diagnosis of Arthrogryposis Multiplex Congenita (constrictions of the arms) this impacted Barry's ability to live independently, and he has become reliant on his father who is unable to provide 24/7 support due to work commitments.

Due to Barry's restricted limbs, he is unable to turn the lights or TV on or off, or change channels when he wishes.

Barry was taken to the North Lanarkshire Tech Flat where he was shown and able to trial off the shelf technology that could support him within his home. It was identified that voice assisted technology, smart plugs, smart light bulbs and a smart TV would allow Barry to manage tasks in his home that he previously could not do without support.

Barry now has an increased independence, confidence and dignity undertaking daily tasks within his home. He can manage to control his lights to access rooms within the home, and to control the television to allow him to enjoy this on his own.

Whilst these smart technologies provide additional convenience for some, the assistive aspect of voice technology is life-changing for Barry and his family on a daily basis.

Simplifying digital

Some people assume that digital is a very technical area. This can alienate people who don't consider their background, roles, or skills to be technical. Whilst some aspects of digital include specialist topics, we need to ensure it is easy to understand, and easy for everyone to use. For example; very few people read a user manual for a new smart phone these days - because people expect it to 'just work' out of the box.

Over time, we are going to make our digital systems easier to use, so our NHS colleagues can work more effectively with what they already have. We appreciate that some older NHS systems and services are less intuitive, and slower to use (especially when compared with a shiny new iPhone or Android!). There are many ways we can make digital easier to access and use. Some of these improvements will take time, and others will come much sooner. As we strive to simplify digital, we will focus first on reducing frustrations that align with delivering the NHSL healthcare strategy, and have the potential to effect large groups of individuals.

Here are some ways we can make digital easier to understand and use:

o   Align to standards, such as the Scottish approach to service design, to ensure our digital systems, services and solutions are fit-for-purpose.
o   Closely consult with the people who are using/will use systems, to obtain their feedback and ensure we are delivering solutions that match their expectations.
o   Ensure usability/user experience or 'UX' best-practice is included as part of our testing regime and future system procurements and/or upgrades.
o   Provide suitable training that builds digital confidence, including self-help resources and access to systems for those who need it.
o   Challenge our technology suppliers and partners to deliver products and services that better meet the ease-of-use expectations of consumer-grade technology or 'Apps'.
o   Ensure the administration associated of using multiple systems is simplified, including password management and how well our systems connect, so more can be achieved with fewer systems.

Single Sign-on
We commit to roll-out single sign-on within the first year of this digital plan, for everyone at NHSL. We are aware that this technology will massively help our NHS colleagues, to reduce the number of passwords they need to remember and manage on a daily basis, whilst keeping our systems secure.

Self Service Password Resets
We all forget our passwords sometimes, especially after a well-deserved holiday!
Self-serve password reset will allow our NHS colleagues to re-set their own passwords when they need to, and also reduce support team requests for password reset.

Digital transformation (1/2)

If the word "digital" can lead to misunderstandings (see page 8: *Understanding digital*) then digital transformation warrants explanation too.

In simple terms; digital transformation is about making the most of technology for all our advantage. This can involve reducing use of paper and making access to health and social care faster with online communications. Changes such as these also require new skills and training for our staff.
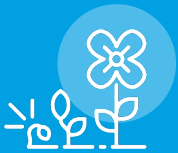
Digital transformation is not just about replacing paper, it is focussed on fundamentally changing and improving the way we deliver Health and Social Care.

Many people assume that digital transformation is only about cost savings. That might be the case for some commercial businesses, but as a healthcare provider we focus first and foremost on people's healthcare and wellbeing, whilst also considering cost efficiency and value. Change can be challenging, especially at large organisations like the NHS, but the results can be positive and profound, with significant improvements to services, patient experiences and patient outcomes.

It was Peter Drucker who famously said; "If you can't measure it, you can't manage it." and that's why we are so keen to record information digitally, so we can better manage health and social care. This area has become so important for NHS Lanarkshire that we have a team focussed on making digital change successful. This team are always busy discussing and delivering projects. There is so much potential for digital to make a positive difference at NHSL that we couldn't practically employ enough people to dedicate to this topic. That's where our clinical colleagues come in. If we are to realise the full potential of digital and help more people receive care when they need it, we will need to cultivate a diverse network of clinical digital champions across Lanarkshire.

In Appendix A: *Digital enablement* you can read more about how we plan to grow and support a network of DEC (Digitally Enabled Care) roles along with other important steps.

Delivering digital transformation
Our approach to digital transformation is not just about new technology systems, but also including changes to working practices and culture, to develop improved processes that help deliver better patient outcomes.

Digital transformation (2/2)

Some examples of digit transformation in action at NHSL are:

Patientrack

Prior to the introduction of Patientrack, bedside observations were recorded on NEWS (National Early Warning System) paper observation charts, and once the patient was discharged the documents were scanned into our EHCR system. With the introduction of Patientrack Electronic Observations (eObs), this information is now captured electronically and can be viewed anywhere in the hospital on any Lanarkshire mobile device or PC. On discharge this goes to patient record on clinical portal within 24hrs removing any need to scan the document and less time for clerical staff scanning.

Patientrack facilitates a whole site view of patient observations in all inpatient areas which has previously not been possible, assisting the identification of deteriorating patients and timely escalation of their care. During shift changes, a fully customisable ward view allows a view of patients which highlights key relevant information to aid clinical handover and decision making.

There are also nursing/medical staff benefits being realised through reduction in time spend looking for charts, removal of illegible and unambiguous observation sets, automated NEWS calculations thereby facilitating 100% accuracy in NEWS scoring and automated alerting which escalates deteriorating patient immediately to the key senior staff.

To support staff further, we have also introduced the Welch Allyn vital signs monitor (in general ward areas) which records NEWS results and then transfers this directly to Patientrack, releasing additional time for patient care.

MORSE

With the introduction of MORSE our new community system nursing staff can take a copy of the patient record with them on mobile devices and update the notes while they are out visiting patients, even when they are not connected to our network. This means they don't have to return to a hospital or health centre at the end of the day and spend time updating systems, rather they can upload the information as soon as they have a WiFi connection. Thus facilitating more time during the day to visiting more patients and providing direct patient care.

All of the information captured in MORSE is also visible in our Clinical Portal so that staff in any part of Lanarkshire have a more comprehensive view of the patient record.

Remote community wound assessments

Beth is a 68-year-old lady who was diagnosed with Multiple sclerosis (MS) 28 years ago. Beth was always independent, but over the past 12 months her condition has deteriorated which has resulted in longer episodes in bed. She is very vulnerable to infection and for that reason, is reluctant to have additional healthcare professionals coming into her home. Beth has developed a pressure ulcer which was identified by Beth's district nurse during a recent skin assessment. Due to the challenges of relieving pressure from the area and the complexities around healing the ulcer, the district nurse required the Tissue Viability Nurse specialist to assess and advise an appropriate treatment plan.

Previously, a Tissue Viability Nurse Specialist would have arranged a community visit with the district nurse, which could take up to 50 minutes and up to 30 minutes preparation time. Due to Beth's vulnerabilities to infection, it was necessary to explore other options.

Having successfully introduced Near Me, Attend Anywhere platform for care home resident's requiring tissue viability wound assessments, we were able to offer Beth and the district nurse a virtual tissue viability wound assessment. As the district nurse had an NHS digital device and Beth was eager to participate in a virtual assessment, both were guided on how to access the Near Me platform by the Tissue Viability Nurse Specialists and clinical guidance. The district nurse set up the connection and Beth was quickly introduced to the Tissue Viability Nurse Specialist virtually, which she thought was a great way to see and meet another healthcare professional in her home without it being in person. Beth thought the image was very clear and after a successful wound assessment Beth requested if any future wound review could be conducted in the same way.

The Tissue Viability Service has been able to identify many patients in a similar situation as Beth, and now conduct wound assessment via Near Me, Attend Anywhere Platform to around 50% of community wound assessments. This enables the service to have more capacity across the community.

Innovation

Innovation enables the NHS to deliver more efficient and effective services. NHSL has a duty to increase its commitment and involvement in the adoption of innovation to meet the needs of our population. Improving quality of care, and making it easier for patients to access services within the availability of financial and staffing resource is essential, if we are to achieve sustained innovation.

We want our people to benefit directly from wide ranging and progressive innovation, as they would in other parts of the UK and overseas. That means maintaining close relationships with partners, so we can stay aware of advancements in digital health and social care.

We will adopt the triple helix model for collaboration between academia and industry. Using this model, we will build our network and foster strong partnerships to collaborate and innovate. This will ensure we can learn from other partners and sectors and understand what works well elsewhere, including how new digital solutions are adopted. Our strategic approach to innovation will be one of partnership backed by reliable data, so we work with our partners to understand how successful any activities or investments have been. Further information can be found in Appendix A: *Digital enablement* about our plans to innovate and ensure routes to funding.

Partnership approach

A feature of innovation is its collaborative nature. Taking forward our strategic priorities will require us to work closely with other bodies such as Universities, technology and consulting partners, the West of Scotland Innovation Hub and National bodies. We do not expect to meet the aims and ambitions of this plan in isolation. We will seek to create strategic partnerships with key suppliers. Working together to utilise their knowledge and resources in delivering our strategic objectives. Where problems exist that are not currently served by industry, we will work with our partners in academia, utilising their specialist skills to conduct research into creating new solutions for the challenges we face.

We will continue to develop our partnerships with North and South Lanarkshire councils to ensuring that patients needs and expectations are met across health and social care. We will also make use of reputable benchmarking resources and industry knowledge, to ensure NHSL stays up-to-date and able to innovate.

Our Data (1/3)

Data Strategy

In order to deliver healthcare, we must utilise the latest technologies to manage the increasing demands that are placed on our healthcare system. Limited resources will continue to present one of the biggest challenges across our system in coming years. The use of data and techniques to deliver safe, person centre healthcare will be invaluable.

Embracing health data science tools and techniques to enable us to optimise patient care is crucial as we must move towards using data to automate processes and embed artificial intelligence into our day to day processes. Health data science combines health research, statistics and computing science to address health and care problems using data.

As a modern organisation we must be able to take any type of data regardless of the scale of format and have the resources, tools, and skills at our disposal to make best value of it.

Foundational Enablers

This is how we will deliver the strategic data outcomes:

People, Patients and culture

Data education, sharing data ownership with our population, data literacy, sharing insights/keeping people informed.

Centralisation and interoperability of data

Connecting data across the ecosystem, data quality improvement, standardisation, clinical terminology, reducing duplication.

Data-enabling Infrastructure and Technologies

AI, Data visualisation, automation, development of the NHS Scotland data dictionary.

Information Governance

Ensuring Security and Privacy are at the core of what we do whilst making sue data is use appropriately.

Our Data (2/3)

Our Data Enablers

There are many dependencies that exist at each stage of a data pathway and range from those that capture the raw data to those analyse and interpret the data. Our enables fall into four categories:

1 **People, Population & Culture**

Data Education – We need to improve the digital literacy of our citizens and staff to optimise our data usage. Data leadership across our organisation is vital for success. A cultural shift away from traditional methods or delivering care to digital enabled health care system will require strong leadership to co-design services to optimise the use of technology to release pressure on an overstretched system and bridge the growing gap in workforce.

Collaboration – Working with key partners such as Public Health Colleagues to assess population needs, support pandemic modelling and create an ecosystem that comprises of health and social care data. Engage with academic partners to train and develop our teams to broaden our knowledge and skill set and work alongside clinicians to meet to develop high quality analytics that supports their needs.

2 **Centralisation and interoperability of data**

o   Our ability to join up data from multiple systems and sources across health and social care. Pulling that data into one place that is easily accessible to those that require it.

o   Ensure classifications, such as ICD 10 and the new ICD11 and SNOMED are adopted as NHS Lanarkshire must keep up with such changes to enable system interoperability.

3 **Infrastructure and technology**

This enabler allows us to maximise the use of Artificial Intelligence (AI), Data Visualisations and Machine Learning. We must invest in technology solutions that can automate and improve what we do.

The challenges we face - Data will continue to grow over the next 5 years as we improve our data capture. We must be able to facilitate and process the management of 'Big Data' and ensure we have the correct building blocks in place to allow as to grow over time.

In order to recruit and retain staff we must modernise the way we manage data to allow us to create an environment that health data scientists and developers want to work in.

We need to move towards improved clinical data capture and incorporate clinical information into our existing data platform. More detail can be found about this topic in Appendix A: *Digital enablement: Data science.*

4

Information Governance

We believe that the effective collection, storage, security, dissemination and use of information are fundamental to the safe treatment and care of patients. NHS Lanarkshire, under its 2019 eHealth Strategy and Delivery Plan, made significant investment and progress in recent years to transform and improve the availability, integrity and confidentiality of information.

The pace of change in the landscape around how we process data has been phenomenal over the last 20 years and continues to move rapidly with significant progress in information management systems and innovation across NHSL.

The Information Governance Team will continue to work collaboratively both locally and nationally to ensure that systems are in place to make information more accessible at the point of delivery whilst recognising the importance of the person's right to privacy utilising the Privacy by Design approach by incorporating Data Protection Impact Assessments as set out in Article 25 and 35 of the UK General Data Protection Regulation. This will allow the Board to incorporate data protection into our processing activities from the design stage and throughout the lifecycle of each process, ensuring privacy risks are identified and mitigated by applying technical and policy controls in advance of processing.

Simplifying information governance and data privacy

We have identified that some activities relating to data protection, including completion of a Data Privacy Impact Assessment (DPIA) and progressing this documentation through to approval, are not as streamlined as they could be and result in frustration for those attempting to take advantage of digital solutions. We therefore commit to support aspects of data protection governance, equality (EQIA) and risk management (Datix) in order to remove any perceived barriers and help simplify these essential processes for our staff.

Joined up services & systems

Lanarkshire Data Sharing Partnership Board (LDSP)

The Lanarkshire Data Sharing Partnership Board (LDSP) is the strategic group responsible for coordinating the development of information sharing across the local partners to maximise the outcomes of patients and service users. Local partners are NHS Lanarkshire (NHSL), North and South Lanarkshire Councils (NLC/SLC), Scottish Fire and Rescue, Police Scotland, Scottish Ambulance Service and the third sector umbrella organisations (VASLan/VANL). The work of the LDSP Board is vital in progressing integrated working arrangements within the Health and Social Care Partnerships and more widely across the community planning partners and with other agencies. The LDSP Board is supported by its sub group, Officers Group, which takes direction from the Board and convenes task and finish groups to deliver specific objectives.

The Board is responsible for supporting a range of activities including providing expert advice to services; ensuring compliance with national policy priorities and frameworks; reviewing the safety and security of developments; setting out and meeting the business requirements of partners; developing appropriate training materials; monitoring compliance; and approving/maintaining Information Sharing Agreements between NHSL, NLC and SLC. The LDSP Board reports directly to NHSL's Information Governance Committee, NLC's Data Governance Board and SLC's Information Governance Committee. Information sharing between health and social care is mainly electronic using the eCare information sharing platform. This bespoke development is owned and funded by NHSL, NLC and SLC. eCare is hosted by the digital team at NHSL on behalf of the partners. It has the following functionality:

o   Unique matching ability for identifiers e.g. CHI and SWiS numbers. This allows information to be routed to individuals involved in an individual's care.

o   Systems connected to eCare are MORSE, TrakCare, Clinical Portal, Adastra, SWiSplus, mySWiS.

o   Allows health and social care to share assessments, reviews and care plans

o   Upload function so practitioners can share additional information considered to be relevant.

o   Sends Pre Birth Concern messages, Child Protection, Adult Protection and Linked Person alerts to practitioners involved in an individual's care.

o   Practitioners can order equipment from the Joint Equipment Store. In North Lanarkshire, homecare can also be ordered.

o   Provides live Homecare information e.g. times/duration of visits, amount of staff attending and tasks provided.

o   Joint Chronology. Not currently in use but will be implemented if work is agreed for the host systems connected to eCare.

o   All functions are available to General Practitioners by downloading eCare onto in-practice systems.

Health Records (1/2)

Electronic Health and Care Record (EHCR):
NHSL are working towards a unified care record that will provide clinical teams with real-time access to patient data from all sources on the one platform. To support this Health Records plan to:

- o Concentrate on retention and development of staff in an increased digital environment.
- o Support the implementation of Microsoft 365 records management.
- o Move to digital records for remainder of any paper-based systems.
- o Explore options to become a virtual repository for all types of health records.
- o Explore the use of Robotic Process Automation for retention/culling of records in line with the Records Management Code of Practice 2020.

Patient Engagement:
There is a commitment within NHSL to improve patient experience and access through digital solutions and Health Records to:

- o Support self-check-in for patients via kiosks and applications.
- o Support digital communications for appointments, reminders, waiting list validations with potential to provide a digital front-door.
- o Support the introduction of the Digital Front Door (DFD).
- o Support continued use of remote appointments.

Patients will be able to make contact, review their information and perform basic tasks digitally.

Clinical Coding:
Health Records commit to investigating the use of RPA/AI in clinical coding:

- o Patient discharges require to have clinical coding applied. RPA/AI would release resource to dedicate to complex coding.
- o Introduction of audit software would further enhance quality of coding information and aid training of staff.

Improvements in quality and performance in clinical coding has benefits for the public and the organisation through national reporting to Public Health Scotland.

Health Records (2/2)

Electronic Referrals:

Health Records commit to investigating the use of RPA/AI in electronic referrals.

- o   Electronic referrals are currently sent via the SCI Gateway system from GPs, Dentists, Optometrist and internal clinician to clinician referrals. RPA/AI would release resource for more complex tasks.

Benefits of utilising RPA/AI are around efficiencies and improved data completion.

Legal Services:

- o   We will support expansion of audit to cover Health & Social Care data.
- o   Overarching change is for the Health Records team to evolve into digital roles supporting digital processes and ensuring compliance with retention schedules, archiving and storage.

DIGITAL DELIVERY 03

Contents

How we operate

Programmes and priorities

National initiatives (1/2)

Following publication of Scotland's Digital Health and Care Strategy titled - *Enabling, Connecting and Empowering: Care in the Digital Age* in October 2021, the 2022-23 national delivery plan was released in late 2022.

Delivery Plan 2022-23

The 2022-23 Delivery Plan describes activities supporting Health Boards, HSCPs, local authorities, primary care, social care, social work, and care providers to offer new or improved services, whether through improved systems and infrastructure, or access to digital services.

The national delivery plan includes six priority areas listing deliverables, descriptions and dates for a variety of initiatives. The six areas are:

1. **Priority One: Digital Access**
   People have digital access to information, their own data, and services which support their health and wellbeing, wherever they are.

2. **Priority Two: Digital Services**
   Digital options are increasingly available as a choice for people accessing services and staff delivering them.

3. **Priority Three: Digital Foundations**
   The infrastructure, systems, regulation, standards and governance are in place to ensure robust and secure delivery.

4. **Priority Four: Digital Skills & Leadership**
   Digital skills are seen as core skills for the workforce across the health and care sector.

5. **Priority Five: Digital Futures – Innovating and Enhancing Our Digital Nation**
   Our wellbeing and economy benefits as Scotland remains at the heart of digital innovation and development.

6. **Priority Six: Data-Driven Services and Insights**
   Data is harnessed to the benefit of citizens, services and innovation.

A breakdown of all deliverables and dates can be found by viewing the 2022-23 Delivery Plan. Over the next five years we will work hard to ensure balance between local and national priorities to deliver outcomes for Lanarkshire.

National initiatives (2/2)

The Digital Front Door

The Scottish Government is leading delivery of The Digital Front Door (DFD) that will support the citizens of Scotland to access a wide range of self-served health and social care services from a common digital source.

The DFD will support people to access information and services directly, to self-manage, access and contribute to their own health and care information. Scotland's Digital Health and Care Strategy commits to developing a new streamlined approach to how people navigate their way through healthcare services, which will include safe, simple and secure access via online and mobile.

DIGITAL FRONT DOOR

DFD will enhance access and convenience, providing a better, consistent service experience for the people of Lanarkshire and across the whole of Scotland. It will also reduce the administrative workload on staff and services. It is recognised that these ambitions will require service re-design, both at national and local level. NHSL will engage and support DFD in order to see maximum benefit across Lanarkshire.

Planned elements of The Digital Front Door

View

See what basic data is held about me, Check my latest blood test results

Book

Book a sexual health appointment, Rearrange a vaccination

Access

Attend a virtual appointment, Use an online learning platform to support my mental health

Register

Request a care assessment, Request a smoking cessation support pack

Check

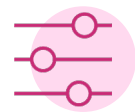See if you're eligible for a particular care assessment, Where am I in the waiting list for Service X?

Learn

Self-assess your mental wellbeing needs, Find your closest Minor Injuries Unit, What types of care can I get?

Tell

Share feedback on a particular service, Update my comms preferences, Change my mobile

Control

Share your anticipatory care plan, Manage how your data is used, Register a proxy to act on your behalf

Clinical systems

Clinical systems are used to deliver health and social care. We have a good number of systems that have been procured over a long period of time and are often updated. This presents a challenge to ensure each system is integrated or 'talks to each other' and shares information. Integration (also referred to as 'interoperability') challenges track back to a time when some technology providers were reluctant to allow information to be shared with their competitors. As tech providers have become more supportive of data sharing, updated data protection and Information Governance legislation has impacted data sharing between systems. We have an unwavering focus on achieving core system integration across health and social care, and make use of leading systems that deliver every day for our patients, the public and our clinical staff. Without clinical systems, we would not be able to deliver care today, given the vast scale and complexity of the work and information involved.

TrakCare
We have invested in several cornerstone applications which we will continue to exploit over the course of this digital plan. We are in the process of migrating our core patient management system TrakCare onto a new cloud platform, this work is expected to complete in February 2023. This will allow us to focus on delivering new functionality and developing Active Clinical Notes as our primary method of clinical data capture. We will also deliver a new modern user interface for staff.

MORSE
The MORSE community system was deployed across Lanarkshire during the COVID-19 pandemic thanks to the support of our community services. We will continue to enhance the functionality available to staff and further integrate it with other clinical systems.

Vision GP System
We have also started the migration of our local GP systems to a new cloud infrastructure as part of the GP IT Re-provisioning programme. This programme will deliver a new user interface and functionality to General Practice that supports our Primary Care Improvement Plan

Maternity
BadgerNet will continue to be developed as our maternity EHCR, it provides mothers with access to their digital electronic maternity record. Supported by our digital midwife we will further integrate it with existing clinical systems and expand its functionality.

Clinical Portal
Our Clinical Portal brings together the information collected in our clinical systems into a single view of the EHCR that is presented to staff. We will gradually transition this from being document driven to a data driven clinical view

Business systems

Business systems are the backbone of our administration and operations. These technologies allow our staff to manage corporate functions, such as Human Resources, Finance, Quality, Communications, Strategy, Facilities and much more. Some of these systems will be familiar to people working in other industries and some are more specific to health and social care. Digital innovation and investment in this area directly impacts productivity and efficiency, as seen with introduction of Microsoft 365 which was vital in delivering services during the COVID-19 pandemic.

Microsoft 365

NHS Lanarkshire has, with other territorial boards, migrated it's on-premise email system to the M365 platform. This gives staff easier access to email and calendar functionality from any internet connected device. We will continue to develop our use of this solution by migrating our staffs personal and departmental data storage onto Microsoft OneDrive and SharePoint online. The use of Microsoft Teams, Forms and the wider functionality offered by M365 will be exploited in a way that makes business and administrative processes more effective within NHSL. This will be done in such a way that data confidentiality and Information Governance principles are followed. Other benefits include hybrid and remote working, with many meetings now conducted by digital video, including at times when severe weather events or transport restrictions would have previously resulted in meeting cancellations.

Speech Recognition

Digital Dictation has been deployed across NHS Lanarkshire for many years with over 7.5million documents being created. Over the course of this digital plan we will work with services to introduce Speech Recognition, thereby streamlining processes and reducing the turnaround time of clinical documentation.

Facilities Management

We will continue to work with Property and Support Service to enhance systems used for the management and maintenance of our facilities. This includes MAXIMO the core FM solution.
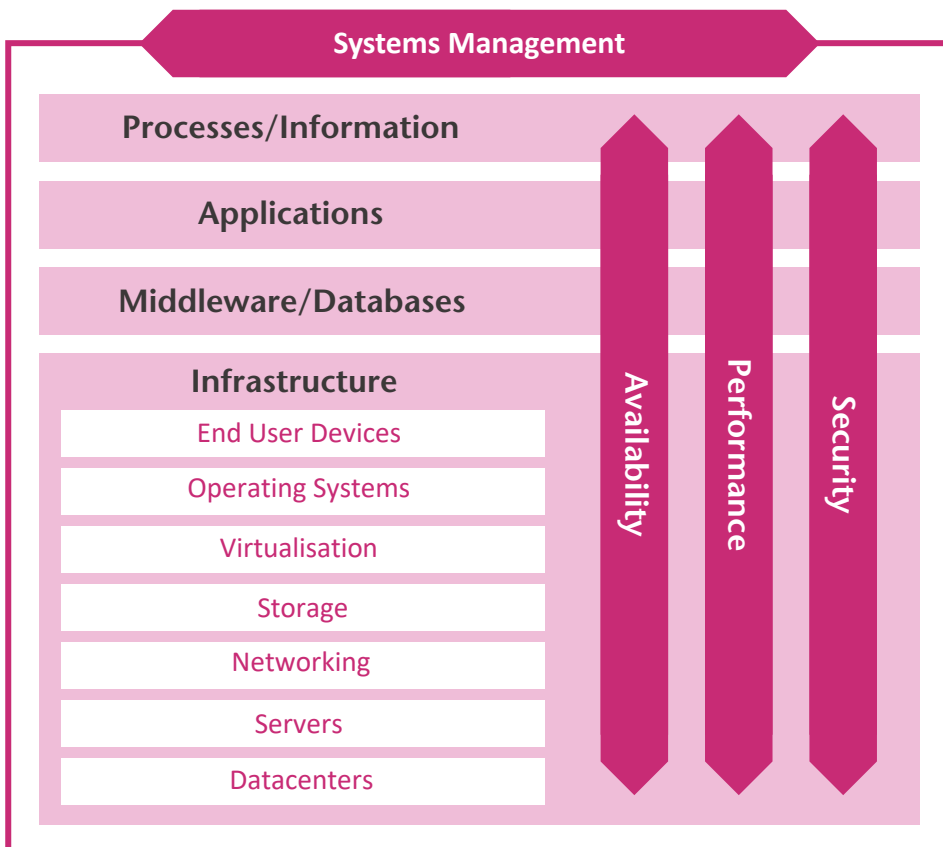
Materials Management

New Genesis system is being brought in to replace the existing system currently used to place orders for hospital consumables. Benefits include:

o   Cloud based web utilising electronic handsets/scanners, moving to paper lite from current printed lists.
o   Point of care/increased patient safety with regards to implant expiry monitoring and ability to track lot numbers for recall purposes (feeding into national Scan 4 Safety initiatives).
o   Data monitoring of products being ordered and utilised across the hospital, providing increased visibility for finance and procurement departments.

Technology Services (1/2)

Digital Operations is the 'engine room' that enables the delivery of digital services across the whole of NHSL. The technical infrastructure that we manage and maintain provides the foundation to deliver a wide range of patient facing, clinical and business solutions. Examples include; WiFi and network connectivity to allow our staff to use systems, provision and support of devices such as laptops and tablets, cyber security and the telephone system. In the diagram below you can see the full scope of our Technology Services. Each computer, software application, hosting server and the entire network requires constant work to ensure it is available to all our staff, performs as it should and remains secure. We use the term Systems Management to describe these activities:

Systems Management

| Processes/Information |
| Applications |
| Middleware/Databases |

Infrastructure

- End User Devices
- Operating Systems
- Virtualisation
- Storage
- Networking
- Servers
- Datacenters

Availability | Performance | Security

The increasing dependency on digital services will exacerbate the reliance upon the core infrastructure, as we have already witnessed with telephony and cloud hosted services.

Technology Services (2/2)

If you have ever owned a digital device, you will know from experience that within a couple of years it grows slower and less effective. At NHSL we manage this on a large scale, with systems, hardware and components needing to be constantly upgraded and updated. This important work ensures we can continue to take advantage of the latest technologies and increased speeds. Many of us rely on technology in our work, and as such we all appreciate the vast benefits when connection strength is strong, and systems are quick to load and work. A prime example is when people are unable to connect to WiFi. Whilst there can be many reasons for this, we are aware of the big benefits that investment in technology can bring across our workforce. In addition, staying up-to-date is not just a nice-to-have but a necessity; with increasing cyber security, the more we can keep our technology estate up-to-date, the more we can help reduce the consequences of a cyber-attack.

These core infrastructure services must have rigorous resilience & redundancy designs incorporated to ensure service availability remains very high, aligned to our customer needs and expectations for an all-embracing digital workplace in support of health and care services.

Service Management (1/2)

As with digital services at home e.g. your broadband or mobile provider, you have a route to initiate customer queries or requests. Service Management is the customer facing element for digital services to ensure systems are available in a timely manner for those with a service need.

Service Desk is the 'Front Door' for all clients utilising our digital services. The structured engagement during contact with the Service Desk ensures the request / incident is recorded and actioned in a suitable a timeframe, thus ensuring continuity of service. Equally any major / widespread incident would be prioritised accordingly to restore services within an agreed timeframe and ensure regular communication on the service status as the recovery work is undertaken.

The increasing dependency on digital services will have an associated growth in support requirements and thus the Service Management function needs to evolve from the current reactive service to a proactive and self-service offering. Equally we need to evolve our current practices to offer increased efficiencies, both from a service and cost perspective. For example, stock holding and deployment techniques are constantly evolving and concepts such as ship-to-desk or ship-to-home are more prevalent effectively freeing more deployment time for other work pressures.

Service Management (2/2)

NHSL applications support has historically been in-house focussed and with the increased transition to cloud hosted services and solutions there will be an increased dependency on our partner network to achieve availability metrics, whilst the support teams focus more on functionality enhancements and vendor compliance.

The landscape as to how we consume digital services is constantly evolving with the IT industry shift to internet hosted services. This, coupled with increasing shift to digital services across NHSL, has driven the need to change the solution focus in support of health and care services.

Service Management is the support function for all digital customers to enable appropriate access to the required systems, ensuring digital services are available in a timely manner to those with a service need.

The application of industry standard best practice processes alongside self-service technologies (e.g. virtual assistant 'chatbots') will drive a lion share of these service improvements over the next five years to ensure we offer an efficient and all-embracing digital workplace.

To ensure we achieve a fit-for-purpose service offering there will need to be an increased number of user and service forums; to better understand the challenges faced through the transition to a Digital Workplace.

These services will be available 24x7 and thus the supply chain / partner network maturity is essential to ensure we have a secure end-to-end service wrapper for each support aspect.

University Hospital Monklands

Monkland Replacement Project (MRP)

The MRP has an ambitious digital vision, supported by close collaboration across stakeholder groups to ensure an integrated approach. The project is benefit-focussed, mapping end-to-end patient journeys to highlight digital interventions, and wider societal benefits. The project identifies where digital tools will support staff, enabling them to work more efficiently and collaboratively.

Digital Hospital: Statements of Intent

1 This digital hospital will optimise the use of systems, technology and data to improve the safety, efficiency, reliability, security and sustainability of service delivery across all functions.

2 This digital hospital will optimise the use of systems, technology and data to support better health and welfare outcomes for staff and patients.

3 This digital hospital will use systems, technology and data to make the delivery of clinical, operational and building management services easier and will not compromise the safety or welfare of staff, patients or visitors.

4 This digital hospital will adapt to innovation and will be designed with the future in mind to ensure flexibility and scalability.

This project will enable:

o A new model of care
o Agile environments
o Linking the hospital to care at home
o Avoiding admissions or reducing length of stay
o Optimising estate and equipment utilisation
o Releasing time to care

From digital devices through to the Operational Command Centre, data will be used to generate insight and support informed decision making across the hospital and the wider Health Board.

University Hospital Monklands

The opportunity presented by any new build project allows key digital technologies such as the network to be designed fresh from the outset and not be restricted by constraints associated with deploying a new network into an existing building. The network is considered as both the NHS network for connectivity to all NHSL applications and the public mobile phone service for connectivity to the users own suite of phone apps, as these will become ever more important in the digital experience available to the public.

This is being achieved through dual resilient routes to the site for external connectivity, the creation of two Core IT Node Rooms in the building and dual resilient connections for each IT Node Room. This will create a Network solution that maximises service availability to both wired and WiFi users.

By designing digital into the fabric of both the site and the building, features such as resilience and redundancy will ensure the highest levels of service availability.

The hospital will have 100% WiFi coverage both internal to the building and some external spaces to meet the operational needs of the site. MRP is also using digital technology to optimise the performance of its buildings and engineering systems to actively manage maintenance, scenario planning and reduced energy consumption.

To enable MRP to set clear digital goals and track progress towards those goals, the project is utilising the globally recognised HIMSS (Healthcare Information & Management Systems Society) digital maturity model assessment framework. The Electronic Medical Record Adoption Model (EMRAM) is an eight stage model, from zero (least mature) to 7 (most mature), with MRP seeking to achieve Level 6/7 accreditation and benchmark performance against global healthcare providers.

Lanarkshire National Treatment Centre

The Lanarkshire NTC is aligned to the Planned Care workstream, as part of the Our Health Together strategy. NHS Lanarkshire is working to deliver the NTC, which will be located in Lanarkshire, in 2028. It will form part of a national network of NTCs across Scotland and provide a significant level of additional capacity for planned elective procedures. A key deliverable of the NTC programme is to protect planned care from cancellations which can occur as a result of surges in unscheduled care. As part of this initiative we will ensure that the NTC is fully equipped with modern digital services.

Cloud technology

NHS Lanarkshire in line with the Scottish Government's own digital strategy (2017) will be making use of cloud hosted solutions, where appropriate. New services looking to be cloud hosted will make use of the NHSL information security cloud computing policy and the NHSL architecture principles. The "cloud" is a service model that provides a ubiquitous, on demand network of computing resources such as servers, networking, storage and applications. These resources can be provisioned and released with minimal user effort, coupled with a reduction of the need to interact with a service provider. Moving to the cloud has the following advantages:

▶ **Cost saving**
The reduction in on premise infrastructure, and the option to use a pay as you go model.

▶ **Reduced risk of data loss**
The use of availability zones across regions increases durability and availability which aids data protection and recovery.

▶ **Environmental benefit**
In terms of energy requirements, datacentres are costly to operate requiring significant expense for powering infrastructure and its associated cooling.

▶ **Ease of access**
The cloud is device agnostic, and therefore resources can be accessed via devices such as smartphones combined with modern browsers.

▶ **Flexibility**
The cloud has elasticity to allow workloads to scale up and down and to provide high performance. Too allow this to happen, there is an unlimited amount of storage and compute capacity which allows auto scaling, elastic load balancing and elastic storage.

Cyber Security

NHSL has invested significantly in Cyber and will continue to invest in Cyber tools for digital staff and training and guidance for all staff, in order to reduce Cyber threats which could directly impact patient care.

NIS and Cyber Essentials reinforce the need to invest in well tested processes and tools & solutions to ensure that essential services remain functional in the event of disruption.

NHSL continues to work towards full compliance of the relatively new law called Network and Information Systems (NIS) Regulations, as the board is considered to be an Operator of Essential Services under NIS and as such must meet all controls within Scottish Government's Public Sector Cyber Resilience Framework (PSCRF). The PSCRF brings together best practice standards and guidance such as ISO 27001, Cyber Essentials, NCSC NIS Cyber Assurance Framework to name a few. NIS is independently audited in a 3-year cycle. The NIS/PSCRF covers the following areas:

- o   Organisational Governance
- o   Risk Management
- o   Supplier Management
- o   Asset Management
- o   Information Security Management
- o   People
- o   Services Resilience
- o   Access Control

- o   Media Management
- o   Environmental Security
- o   Physical/Building Security
- o   System Management
- o   Operational Security
- o   Network Security
- o   Incident Detection
- o   Incident Management
- o   Business Continuity

Practice Development

Medical Education & NMAHP (Nursing, Midwifery & Allied Health Professionals) are both aspects of Practice Development that lead on education and training. Digital support is required on a continual basis, given that students need to learn using real-world systems prior to qualification, and staff undertake continuous improvement, training and certification. Practice Development is an essential part of improving ongoing quality and safety of care across NHSL, and makes use of digital technologies that depend on reliable access and resilient connectivity. At any given time NHSL will have 100 students on acute placements, and many others undertaking a wide variety of specialist education and training requirements.

Innovation is essential, as new learning methods and technologies greatly help in the delivery, retention, monitoring and sharing of results. Examples include; virtual reality, augmented reality, mixed realities – Hololens - HoloPatient and HoloHuman (Apps).

Because data is a critical part of care assurance, introduction of the EHCR will positively impact this field, including QA, intelligence across the whole system, and wider care excellence. Requirements and challenges in this area include:

o Student/trainee engagement, communications, knowledge sharing and connectivity.
o National and regional partner collaboration to achieve seamless integration of NHS email, HR process, training and digital systems for staff and clinical students moving between Health Boards.
o Collaboration in the use of simulation activities enabling mirroring of clinical systems in simulation space.
o Resources to increase learning and development capacity.
o Developing staff to improve their overall digital literacy, IT knowledge, confidence, access and awareness of digital tools.

The digital team will support Practice Development to innovate and ensure access to core clinical systems. This will involve consideration of appropriate hardware, software, connectivity, eLearning/induction and educational technologies.

Various Practice Development requirements have been captured when developing this plan, and recorded within our digital delivery plan, to ensure continued support.

Digital practice development

As a result of the COVID-19 pandemic it became clear that the systems which we relied upon to remain informed, educated and in a position to respond to crisis had to rapidly adapt.

The Practice Education Facilitator's role promotes positive learning experiences to pre-registration students, developing skilled, resilient and compassionate professionals to come and join our organization. COVID-19 and social distancing measures impacted this area significantly, with a need to work hard to rebuild capacity, practice learning environments, and ensure that Practice Supervisors and Practice Assessors were in a position to effectively assess students in line with our NMC code of conduct and Quality Standards for Practice Learning.

As part of the recovery for healthcare services, education and workforce planning, we had to find innovative and creative ways to engage registrants in continued professional development. Feedback we were receiving from both students and practice supervisor's/practice assessors was that they did not feel confident completing the Practice Assessment Document (PAD), a legislative document designed to ensure that student nurses are assessed in line with our NMC platforms and proficiencies, as they progress through their programme. We were aware of a number of factors contributing to this, including; the content and format of the PAD changing during the pandemic.

The Practice Education Facilitators have been utilising Microsoft Teams in the delivery of learning resources and ensuring they are interactive to meet a range of learning styles. We use a PowerPoint live presentation and a number of learning activities to ensure the virtual sessions almost mimic in-person materials. We also make use of Microsoft Forms, Whiteboard and break-out rooms.

We promote a quality improvement approach to any learning evaluations and achieve this digitally via QR codes to encourage completion. This is now part of an ongoing quality improvement project, to measure the impact of these kinds of sessions.

Contents

Digital enablement framework

Background

In June 2022 we began exploring how NHS Lanarkshire could better facilitate routes to digital enablement. This was in anticipation of the new healthcare strategy scheduled for publication in 2023, which identifies digital transformation as a strategic theme to enable all work streams.

> **To give our services the support they need to 'get digital done' we have developed this framework to build confidence in our collective ability to leverage digital.**

Overview

The new digital plan surfaces many needs associated with service transformation, reform and improvement. Some of these requirements are small and can be achieved using the digital systems and technologies already in place. Others are more substantial, requiring long-term effort. This framework introduces changes to how the digital team will operate at NHSL, based on a renewed commitment to deliver digital enabled care. Whilst the main focus of the framework is on governance and process, there is also mention of opportunities for NHS colleagues and partnerships.

What are "Digital solutions"?

We use the term "Digital Solutions" to describe any improvement (big or small) resulting from the use of digital. In addition to physical digital technology such as devices and clinical equipment, digital solutions include the information and data stored within systems and devices. Introducing new digital solutions involves designing new processes and adopting new skills. More complicated digital solutions require strategies and business plans, where the digital team work hand-in-glove with our NHS colleagues, the public and technology partners. There are many aspects of our services that will benefit from digital solutions in the coming years.

What is "Digital enablement"?

Digital enablement represents the many ways our health and social care services can be enhanced, supported and/or transformed by use of digital solutions. To be 'enabled by' digital is to realise benefits such as accessing data that will improve clinical quality and safety, reduction in repetitive or manual tasks, reduced reliance on paper and other significant time saving efficiencies. Both our NHS colleagues and the public can be enabled by digital. For the public this includes new ways to communicate such as online bookings, Apps and video consultations.

Digital enablement framework

Framework contents

1   **Resource & routes to funding**
How the digital team at NHSL will support new resource and suitable routes to funding for our services who want to benefit from digital solutions.

2   **Transparent process**
Our commitment to being a team that is easy to engage with, including how we work and how we communicate what's available in our digital toolkit.

3   **Service-led business cases**
Clarity of who is responsible for developing business cases and how we can ensure they will succeed.

4   **Benefits realisation**
Examples of typical benefits associated with a digital solution.

5   **Service agreement**
What services can expect when they engage with the digital team at NHSL, including what we require to provide support and our decision making process.

Delivering demand for digital
We anticipate the high demand for digital solutions will significantly increase throughout the next five years, due to the OHT (Our Health Together) strategic requirements and service pressures that remain increasingly challenging to manage. With the majority of digital team resources committed to day-to-day operational tasks and delivery of active programmes, a new approach is needed. Given demand for digital solutions is growing, and the needs that underpin this growth are pressing and prevalent; this framework outlines how the digital team at NHSL will continue to maintain essential operations, whilst enabling a wide range of digital innovation and service transformation, in collaboration with colleagues across health and social care services.

Digital enablement framework

1. Service agreement

In order to satisfy demand for digital solutions into the future, the digital team will need to re-shape to provide advisory and guidance to any service who wants to make use of digital. This will be in addition to retaining our responsibilities to manage and maintain core services and systems.

A new service agreement will ensure we balance existing commitments and new service transformation needs, without delaying improvements and innovation. This agreement explains what should be expected of the digital team, and what we look for in return. We commit to:

o Prioritise the availability, stability and security of our core systems, to ensure that our people can deliver effective care needed today.
o Best utilise the digital solutions and systems that already exist, by better communicating their features and benefits and configuring existing solutions to better meet the needs of our people.
o Ensure that digital enablement and solutions are aligned to our healthcare strategy and supportive of our workstreams by taking a service-first approach.
o Communicate clearly the wider opportunities and risks associated with any proposed service change, including the need to ensure integration with core services, the EHCR (Electronic Health & Care Record) and adherence to standards.
o Provide oversight and governance for digital enablement, by maintaining a framework for all services to adopt digital solutions safely and securely.
o Be more open about how we work and make our processes more transparent, so that services understand their options and are kept up-to-date with progress.
o Cultivate and support a network of Digitally Enabled Care (DEC) roles across NHSL services.
o Industrialise our capability to achieve routes to funding for services that need to benefit from digital solutions.

To deliver the above, we will seek to emulate aspects of the Scottish Government's Digital Transformation Service (DTS), with a focus on NHSL services rather than wider public services. This will help our services to:

o Understand how, if and when the digital team at NHSL can help with requests.
o Document service needs, pressures, or 'pains' so others can understand them.
o Deliver patient-centred services in line with the Digital Scotland Service Standard.
o Access tools, resources and data to support evidence-based decision making.
o Ensure service-led transformation adheres to good governance, robust benefits realisation, data standards and strategic priorities.
o Better understand feasibility, timings, effort and potential funding needs.

Digital enablement framework

Our decision making process

To help any service determine the most appropriate digital solution to meet their needs, we will apply a series of early questions. The questions are designed to ensure that the service can access digital tools, systems and services more quickly and will not be used to inhibit progress – but to expedite routes to digital enablement. In the order outlined below, we will ask if:

1. The proposed digital solution already exists elsewhere within the organisation, in whole or in part.
2. The desired remedy or solution could be achieved by making use of existing core systems and services already in place.
3. An additional module, plug-in, App or service could be added to our core systems or services to provide a suitable solution.
4. A solution is, or will be available as a result of a National or West of Scotland initiative within an acceptable time frame.
5. The desired solution could be procured from an existing or new provider that has already developed, tested and taken the solution to market.
6. And finally; if the proposed solution might need to be created, either by configuring one or more existing solutions or by designing and developing a new solution.

2. Transparent process

Every NHS Lanarkshire service, our partners and the public should expect transparency and consistency when engaging with the NHSL digital team. This will involve being more open about our processes, more proactive and forthcoming in providing information about what stage requests are at. To achieve this we will adopt an agile approach to our work, to better manage digital opportunities, risks and change. This undertaking will take time, as we re-shape from a more traditional IT/eHealth Directorate that 'keeps the lights on' and delivers large projects, to a team that is also able to support tactical and wide-ranging digital enablement.

Digital toolkit transparency

We will clearly outline available digital solutions and what purposes they can be used for. This will include providing governance and clarity around use of Microsoft 365 and provision of 'self-help' resources. We commit to better surfacing and socialising existing advice, training, policies and other materials such as the App Development and Governance Policy, guidance available through Library services and reputable sources.

Agile PMO (Programme Management Office)

We will introduce an agile project management process to record and progress digital enablement opportunities. By managing opportunities using an agile PMO; we aim to be more transparent, responsive and reactive.

Digital enablement framework

3. Service-led business cases

In the past, responsibility for developing business cases has been undefined, with different approaches taken depending on the requirements. This digital plan advocates a patient-centred, service-led approach to service transformation. In practical terms this means helping our services to become adept at articulating their challenges and supporting them with specialist digital advisory and technical governance.

The first step in seeking any service improvement is to fully understand the current situation from the perspective of the public, patient, staff and other stakeholders. The more complex the challenges, the more likely a business case will be needed to document these requirements. Whereas some improvements can be achieved without a business case, there are several reasons why one would be needed. Examples include; strategic alignment, funding considerations, managing risk, procurement of technology, new skills and training.

Supporting service-led business cases

The digital team will provide two distinct areas of support for any service wanting to develop a business case:

1. A pre-defined list of benefits that are typically attributed to successful digital solutions, so that every business case is founded on robust benefit realisation. This should include targets for expected benefits over time, with support regarding what data can be used to inform these metrics. Identification of benefits realisation will be required in order for the digital team to engage further and provide support.

2. Then; following benefits being defined, the digital team will support further development of the business case to include aspects of information and technology governance where required. This will ensure that all parties will be aware of what is expected in terms of alignment with NHS Lanarkshire's technology standards. Depending on the proposed work, this may cover information about our technology stack, associated systems, cyber security requirements, interoperability and data/API expectations.

4. Benefits realisation

As part of any business case, one or more benefits should be identified, along with commitments to enact and realise the benefits over time. The digital team at NHSL will commit to support business cases that have defined benefit realisation.

Digital enablement framework

4. Benefits realisation (continued)

Here you will see a list of typical benefits associated with successful digital solutions, along with a brief description and example reporting metrics.

Benefit	Short description	Metric (over time)
Staff time savings	Giving our NHS colleagues time back in their roles to better apply their effort to tasks that matter more.	How much time will be saved over a day/week/year period, and for how many staff? What other tasks could be conducted as a result of these savings?
Service efficiency	Speeding up existing process, reducing waits and delays.	How much will the existing process or service be accelerated (e.g. waiting times will be cut from 8 weeks to 6).
Improved care (e.g. quality/standards)	How health & social care can be delivered more safely and to a higher standard.	Reduction of risk, manual error reduction, reduced Datix events and onward legal challenges.
Patient experience	Offering a more convenient, additional or replacement route to engage or communicate.	Based on existing or trial data sourced from like-for-like improvements, how much would the patient experience improve? This should be based on a recognised standard such as NPS (Net Promoter Score).
Cost savings	Where costs can be reduced as a result of introducing a new digital solution.	Most often involving replacement of a legacy system or technology service (£) that is more costly than the newly proposed solution.

As part of any business case, it is not only important to identify one or more benefits in advance, but also to determine how the digital solution will be measured and monitored to ensure that the benefits will be realised over time. This should consist of appropriate service-led governance to manage and review benefit expectations.

To support any proposed benefit realisation, the digital team are able to advise on availability of data, and/or tap-into our partnership network to make special requests for case studies, proof of concepts, digital trial data or use cases. Requests can be made on a case by case basis, but are not guaranteed.

Digital enablement framework

5. Resource and routes to funding

Being aware of financial challenges and funding limitations, the new digital plan promotes introduction of new Digital Enabled Care (DEC) roles within clinical service areas.

Digitally Enabled Care (DEC) roles

At time of publication, the digital team at NHSL do not have the resource capacity to provide the support that will be needed to deliver digital aspects of the emerging Our Health Together healthcare strategy. Services that require digital enablement expect a single point of contact who has deep knowledge of their clinical service area. We are advocating the introduction of new roles within the services themselves to be digital champions with deep clinical and service knowledge.

Similar roles exist in North and South Lanarkshire (TEC – Technology Enabled Care) teams who are typically from a clinical background and are able to best 'bridge the gap' between service requirements and technology specialists. Due to the success of the TEC roles active in North and South Lanarkshire, we have opted to use a similar model across NHS Lanarkshire, to link each service with the digital team. Given each service has different digital needs, funding should be addressed on a case by case basis however, the appointment of DEC roles within different services would help retain clinical talent who might otherwise elect to move to another role that appears to offer digital career progression. Retaining digital clinical champions is a driving factor behind this plan, so that NHSL can achieve its many OHT strategic ambitions.

DEC role responsibilities

o   Champion smarter working and making better use of digital solutions to support and enable clinical colleagues, patients and other stakeholders.
o   Lead in understanding, recording and communicating current challenges associated with a clinical area.
o   Enjoy problem solving by focusing on clinical challenge and new solutions.
o   Have drive and ambition to help colleagues and patients make full use of existing digital solutions.
o   Support introduction of new digital solutions by acting as the primary customer contact for a clinical area.
o   Be naturally curious and ideally confident about how digital systems and tools are making a positive impact in a clinical field.
o   Be experienced in using systems that the clinical area already relies upon.
o   Provide reassurance and support to clinical colleagues who are less confident when using digital systems.
o   Write business cases and other documentation to articulate challenges and anticipate change.
o   Work collaboratively across a network of DEC roles with support provided by the NHSL digital team.

Digital enablement framework

Rapid Digital Response Unit (RDRU)
We will maintain a stand-by capability to deliver tactical digital wins to satisfy high-value, big-impact issues in a shorter timeframe. This function will be at the disposal of the NHSL Board as required.

Many aspects of our current work involves large programmes, big technology systems, significant investments and long procurement cycles. In order to demonstrate the power of digital in the near/medium term, we want to prove success by providing a RDRU. This will ensure we are positioned as a problem solver at NHSL and able to provide strategic and timely help to NHS colleagues.

The team would provide advisory and problem solving, that would typically take no more than three months to deliver. This capability will look at existing processes, ways of working and access to systems for certain roles or functions, in order to quickly determine what can be achieved in a short time frame to help alleviate pressure for a service under significant strain or 'in crisis'. This could be as simple as reducing administrative tasks by improving access to digital solutions that already exist within NHSL core systems, including but not limited to Microsoft 365 and other clinical technologies and communications tools. Whilst there is no intention to limit the potential for this function, we would expect around 1-2 projects to be delivered annually, by making use of existing resource and/or introduction of specialist support from key technology partners or contractors.

RDRU Pilot - Empowering clinical support roles
A test-bed has been identified for the RDRU, to support the proposed introduction of the ED Admin Support Role. We will explore how digital can better enable these roles and ensure they succeed. To achieve this, we will conduct a pilot to evidence how digital can help clinical support roles be as effective and accountable as possible, by using digital tools most effectively. Digital will also play an important part in the reporting capability associated with these roles.

Clinical super-users
Through our clinical engagement we have identified that some clinicians have more complex and high-performance technology needs compared with other staff. One example included a GP needing to run multiple systems and applications, with many instances of each system active in order to manage day-to-day workload. To identify such behaviours we have coined the phrase "Clinical super-users" so we can better identify the advanced and/or intensive needs for these individuals. We will better acknowledge and support our clinicians who have extended technology needs when compared with average computer users. This will include consideration of higher performing devices and more support in the form of face-time, walk-arounds and clinical user groups.

Digital enablement framework

Evolving our offering

The digital plan recommends that where possible; some aspects of digital be devolved to each clinical service area, with the digital team providing an overarching governance and advisory remit.

Even so, these efforts to bolster digital leadership will need to be supported by a digital team that takes a renewed approach to organisation-wide transformation, in addition to the BAU activity of 'keeping the lights on' and delivery of active programmes. To provide appropriate governance and advisory to a new network of DEC roles, and support business cases through to funding, we will request new posts be filled. To begin with, this will consist of an embryonic team in the first year who will scope needs based on the digital strategy engagement, and present formal recommendations to Board for further resource when required. Any such recommendation for new resource will be fully aligned to the new digital enablement framework, which anchors digital activities to clinical service needs/OHT strategic objectives and clearly outlines must-have benefits realisation. Therefore, the governance and advisory function within the digital team should grow organically and in lockstep with NHSL needs and growth of the DEC network. This work starts with the publication of this plan, whereby we continue our natural evolution from an IT function, to eHealth and now better represented as the NHSL digital team. This will ensure that our team keeps up-to-date with wider industry trends, including the ability to attract digital skills and talent.

Routes to funding

One of the main challenges with service transformation is successfully sourcing funding for new digital solutions. This is often because there is some degree of early investment, either in terms of technology, supplier or specialist persons tasked to project manage the work. To help with this, we will explore the establishment of a small digital grant funding panel, tasked with identifying routes to funding. This will consist of permanent representatives and strategic input from other partners. We will engage with National stakeholders and the West of Scotland Innovation Hub in order to explore, investigate and ultimately achieve routes to funding for our services that require digital solutions and transformation. The small panel will leverage the triple-helix model and be tasked with developing deep insight and expertise in determining routes to funding from a wide variety of sources such as InnovateUK, TechScotland, the Health and Social Care Alliance Scotland, industry partners and other regional, National and International grant funding panels/bodies. The decision to form the digital grant funding panel means that we can best leverage our partnership relationships to 'do what we all do best' in order to help NHS Lanarkshire source and secure much needed funding for research, trial, innovation and transformative needs. Over the next five years we will get better at sourcing funding, in order to meet the many needs that exist across Lanarkshire.

Data science (1/2)

Our vision at NHSL is to embrace data science and embed with the latest technologies to improve patient care.

The role of the enterprise data warehouse is changing, no longer seen as simply a repository for structured relation data, Gartner (components of logical data warehouse 2020) states that the structured relational Data Warehouse (DW) should form part of a larger analytics architecture known as the Logical Data Warehouse (LDW) or modern data stack.

The modern data stack should be capable of facilitating analytics on structured, semi-structured and unstructured data, by utilising new storage, ingestion & pipeline technologies. These technologies, combined with a blend of contemporary/new skills and methodologies will ensure NHSL can leverage our data assets and therefore provide the best insights possible via a modern analytics platform.

Changes in technology and data science, coupled with the volume and variety of data that a modern healthcare organisation generates, have led to the requirement for a new multi-faceted approach to analytics.

Gartner's view on a modern data stack advises that modern organisations should no longer simply rely on structured relational database management systems. NHS Lanarkshire should therefore be looking to build an architecture to facilitate analytics on structured, semi structured and unstructured data, at scale with tools accessible to allow any branch of analytics/data science to be undertaken.

As a modern organisation we must be able to take any type of data regardless of the scale of format and have the resources, tools, and skills at our disposal to make best value of it. We should therefore reconsider all technical aspects of the enterprise platform and reframe it in terms of current and future service needs.

The core of the technology approach must have the ability to access elastic computing resource, storage, and a variety of tools that we may or may not routinely use but crucially, we retain access to utilise as and when required.

NHS Lanarkshire

Data science (2/2)

Consideration should also be given to a cloud-based approach to building a new modern data stack, which would be the most innovative and effective configuration. In this approach, the organisations data would be consolidated on one technology stack with access to state-of-the-art tools to maximize the opportunity to leverage NHSL data assets.

Analytics architecture

An example of a modern analytics architecture is highlighted here:

Diagram credit: Microsoft Advanced analytics architecture
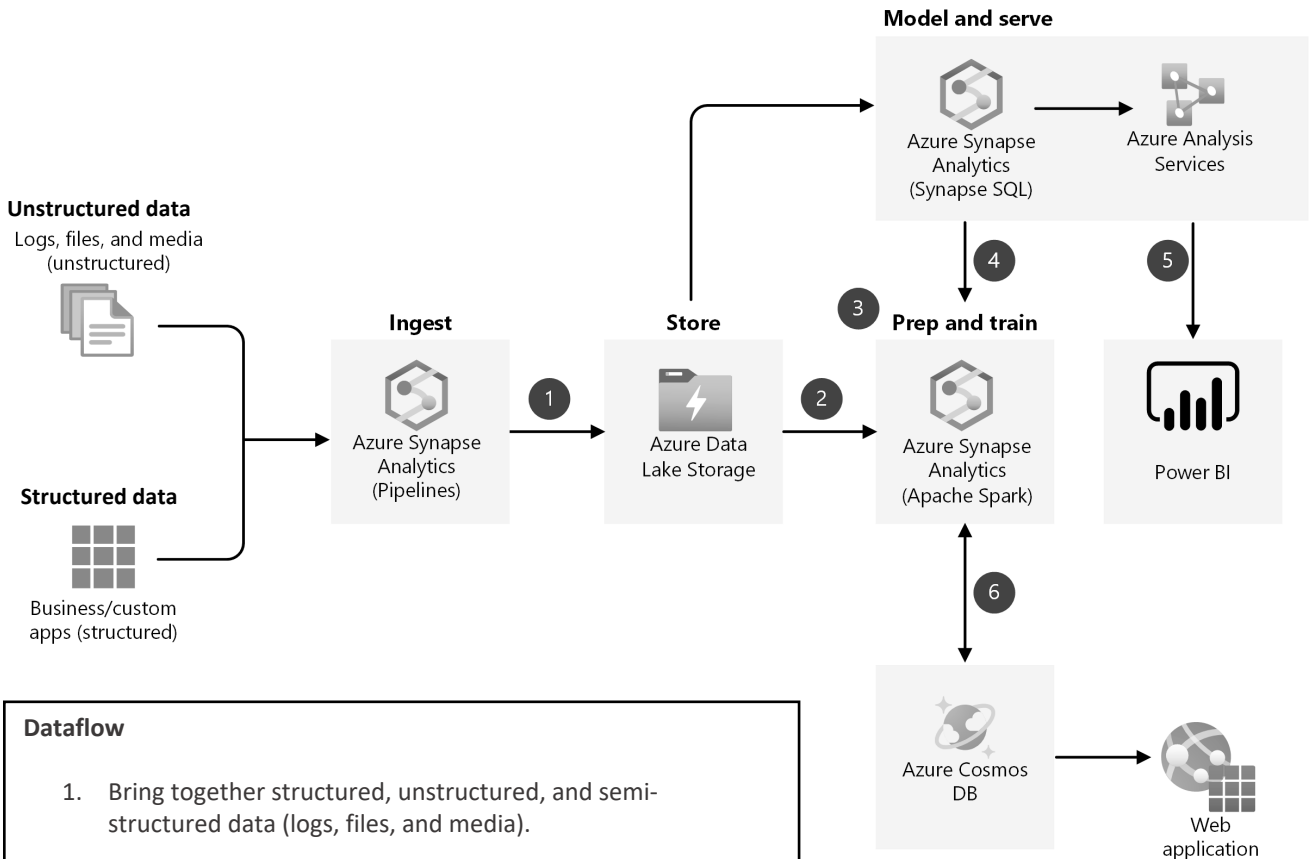
Dataflow

1. Bring together structured, unstructured, and semi-structured data (logs, files, and media).

2. Clean and transform the structureless datasets and combine them with structured data from operational databases or data warehouses.

3. Use scalable machine learning/deep learning techniques, to derive deeper insights from this data.

4. Move data at scale.

5. Query and report on the data.

6. Make the insights accessible through web and mobile apps.

How we will deliver this strategy

This five year digital plan explains our strategic vision and overall direction. We use the three horizons model to outline our strategic focus areas over time, but to achieve our goals; we will maintain a delivery plan to record new opportunities, programmes and projects.

Strategic alignment

As outlined in this plan, we will align entirely with the NHS Lanarkshire healthcare strategy and the National Digital Health and Care Strategy. This means that our digital plans may need to adjust over time to cater for any new challenges or changes in direction that may arise. This can be challenging when working with technology systems that have long support and/or procurement lifecycles, which is why close collaboration with our colleagues and partners across Scotland is absolutely essential. This, along with close working with other Health Boards, academia and industry will ensure that NHS Lanarkshire will benefit from adoption of technologies that will integrate across the whole population.

Digital delivery plan

Our delivery plan will be updated on a regular basis and evolve over time, but remain aligned to this plan and the NHS Lanarkshire healthcare strategy. To ensure we can manage all current and new requirements, we will use Agile project management to record and drive-through active delivery of this strategy and it's associated activities.

Creating an agile PMO

Our Project Management Office will be founded on agile methods, to ensure we can best scope, manage and deliver work based on available resource.

The Scottish Approach to Service Design (SAtSD)

SAtSD exists to empower and support the people of Scotland to actively participate in the definition, design and delivery of their public services. The framework guides how we design user-centred public services, to ensure we design the right thing, before designing the thing right. NHS Lanarkshire will make more use of this framework moving forward to:

Discover Define Develop Deliver

1 | **Understand** The problem

2 | **Design** The solution
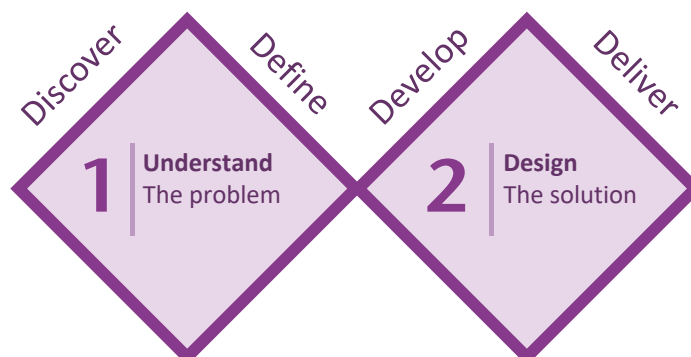
Digital maturity

Every digital plan needs to benchmark where an organisation is now, and answer the question – *how will we get to where we want to be?*

When answering this question it is important to ensure objectivity, by aligning to best-practice and industry standards. We make use of many digital standards on an ongoing basis, which help our team to review their work. Some maturity models are specific to health and social care, and we have elected to align to a the well respected HIMMS model.

HIMMS Model
The EMRAM (Electronic Medical Record Adoption Model) is the main self-assessment model within HIMMS (Hospital Information Management System). HIMMS has 7 maturity components, with an 8th (Social Care) on the way. The model has a global track record of guiding organisations to optimise their digital health transformation through measurement and strategy. HIMMS will ensure we can build a path to person-enabled care with the outcomes being: improved quality of care, workforce development and operational performance. EMRAM provides an achievable pathway to digital transformation by delivering in phases. To achieve this maturity standard, backing and involvement will be required at all levels within NHSL.

Understanding our digital maturity is fundamental to the transformation of future services at NHSL that will directly impact our patients, clinicians and every service that seeks digital enablement. EMRAM is an outcome based model and optimises patient's health through data measurement, risk anticipation & outcome management. The primary objective is to obtain HIMSS accreditation for the 3 NHS Lanarkshire Acute Hospitals using a prescriptive frameworks to build NHS Lanarkshire's digital health ecosystems. Each stage (0-7) maturity model operates as a vendor-neutral roadmap for success and offers global benchmarking. Improvements to care delivery and clinical outcomes include:

- o   Optimising the digital work environment
- o   Supporting a positive patient experience
- o   Improving performance and financial sustainability
- o   Building a sustainable workforce

Our ambition is to attain HIMSS accreditation, with the Electronic Medical Record Adoption Model (EMRAM) providing a framework to monitor and measure progression of our ongoing digital maturity. The Monklands Replacement project will utilise the HIMSS accreditation based on the current University Hospital Monklands. This will provide a baseline and serve as a fixed point of reference that will allow comparison and measurement of digital maturity between the old and new facilities, whilst providing significant learning and improvements across the whole of Lanarkshire.

Financial summary

This strategy sets out an ambitious plan to use information and digital to help transform the health and care services we provide to our patients and our staff. The delivery of this plan will require additional and on-going investment in delivering this transformational change to ensure the strategic ambitions set out in Our Health Together can be achieved.

To enable this strategic plan a new financial model for the provision of digital services should be considered. The likely growth in adoption of digital services during the period covered by this plan will require new and innovative funding models. Service transformation and innovation is critical to the long-term success of NHS Lanarkshire. As part of the development of service transformation and innovation, the information and digital aspects should be fully considered as an ongoing funding requirement.

The traditional model of funding Information and Digital Services is changing from capital based expenditure models to revenue-based models. Industry is leading the shift from organisations hosting and delivering technology services to Cloud based models of delivery where organisations are now consumers of services. Whilst NHS Lanarkshire is at the beginning of this journey, over the duration of the strategy it is likely that most digital services will transition from on-premise to the Cloud. Major Investments will be required to support a range of developments included in the high level delivery plan including:

- o GPIT Re-provisioning.
- o Microsoft 365.
- o Electronic Health and Care Record (including UCR).
- o Infrastructure Modernisation including transition to the Cloud.
- o Cyber Security.
- o New and emerging development arising from Our Health Together workstreams.

Glossary of terms (1/2)

Digital healthcare, online and technology has it's own professional language which can be alien to many people. This appendix lists the acronyms and other terms used in this document, to help provide clarity and context.

o AHPs - Allied Health Professions.

o AI - Artificial Intelligence.

o BAU – Business As Usual.

o DEC – Digitally Enabled Care. See Appendix A. Page 80.

o DFD – Digital Front Door. See Page 61.

o Digital – See Page 8.

o Digital enablement - How our services can be supported by use of digital. See Appendix A. Page 74.

o Digital equality - How we prevent exclusion and ensure that digital benefits everyone who needs it. See Page 44-46.

o Digital maturity - How we measure our digital capabilities. See Page 86.

o Digital solutions - Improvements resulting from use of digital. See Appendix A. Page 74.

o Digital transformation - How we make the most of technology for all our advantage. See Page 49.

o DPIA - Data Privacy Impact Assessment.

o eCare/eHealth - Electronic Care / Health.

o ECS - Emergency Care Summary.

o EHCR - Electronic Health and Care Record.

o EMRAM - Electronic Medical Record Adoption Model.

o eObs - Electronic Observations.

o EPR - Electronic Patient Record.

o EQIA - Equality Impact Assessment.

Glossary of terms (2/2)

o FLO - Florence (text messaging service for a range of Long Term Conditions).

o HEPMA – Hospital Electronic Prescribing and Medicine Administration.

o HIMMS - Hospital Information Management System.

o LDSP - Lanarkshire Data Sharing Partnership.

o LDW/DW – Logical Data Warehouse/Data Warehouse.

o LTCs - Long Term Conditions.

o M365 or MS365 - Microsoft's 365 cloud product

o MORSE - Mobile clinical system, enabling community staff to access and update patient records. See Page 50.

o MRP – Monklands Replacement Project. See Page 34.

o MS – Microsoft.

o NDP - National Digital Platform.

o NHSL – NHS Lanarkshire.

o NLC – North Lanarkshire Council.

o NPEX - National Pathology Exchange.

o OHT – Our Health Together, The NHS Lanarkshire Healthcare strategy (planned for publication 2023). See Page 25.

o PMS – Patient Management System.

o RDRU - Rapid Digital Response Unit. See Appendix A. Page 81.

o RPA – Robotic Process Automation.

o SAtSD - The Scottish Approach to Service Design. See Page 85.

o SHWB - Staff Health and Wellbeing. See Page 40.

o SLC – South Lanarkshire Council.

o TEC – Technology Enabled Care. See Page 28.

o UCR - Unified Care Record.

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