



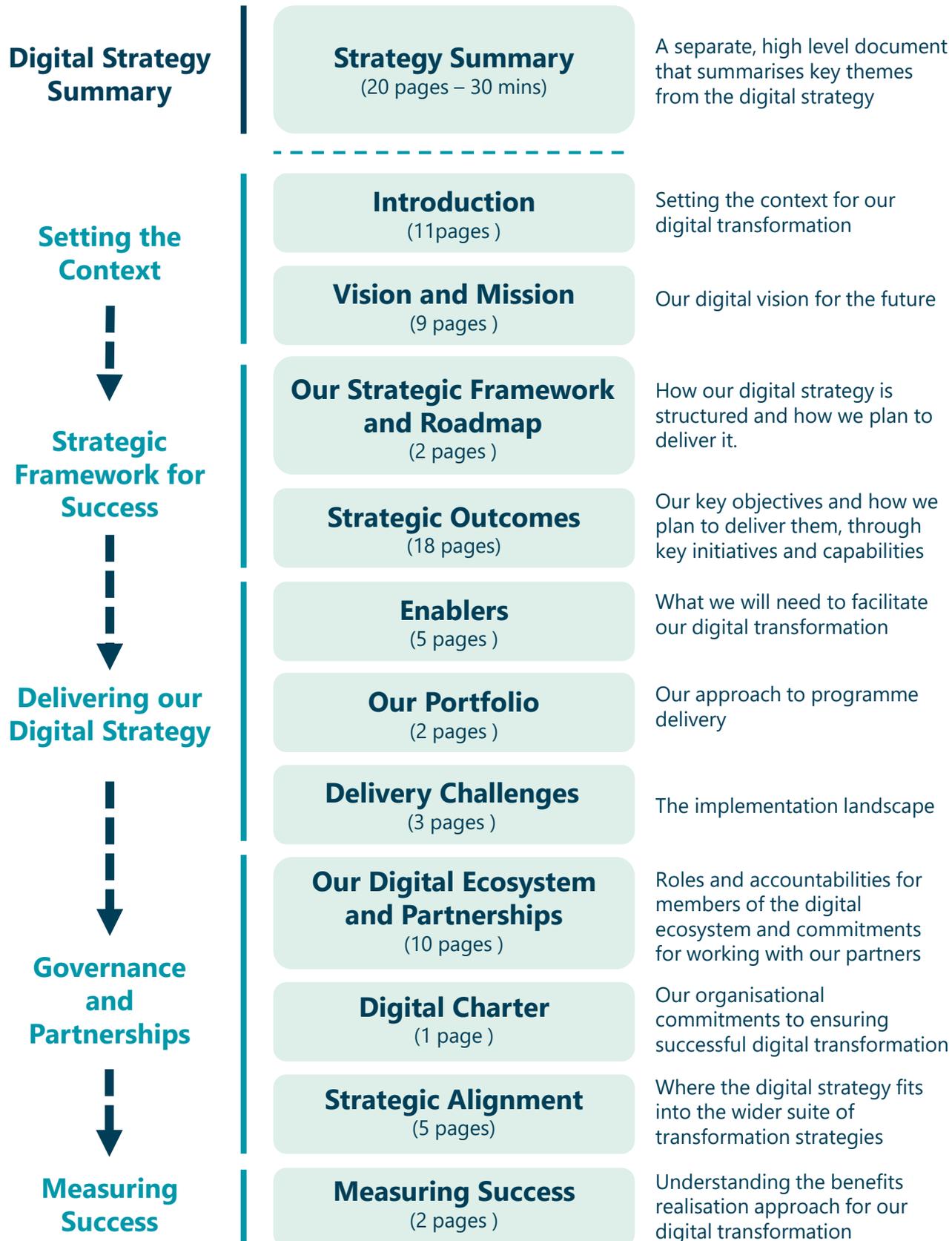
Health and
Social Care

Digital Strategy

Health and Social Care Northern
Ireland 2022-2030



Navigation guide



Foreword



Our Digital Strategy sets out an ambitious agenda for our organisations over the next number of years. We are at the start of what is an exciting, yet challenging, digital transformation journey that will see us make major investments to deliver a better quality of care to the people of Northern Ireland.

Dan West

Chief Digital Information Officer, Northern Ireland Department of Health

Our Health and Social Care (HSC) Digital Strategy has been developed on the back of two major events – firstly, the conclusion of our five-year [eHealth and Care Strategy \(2016\)](#) and secondly, the emergence and impact of the COVID-19 pandemic.

The eHealth and Care Strategy was developed to supplement the [Health and Wellbeing 2026 - Delivering Together](#) and set out a plan to transform the way we deliver health and social care services across Northern Ireland. It defined many of the foundations that we stand on as an organisation today and many of its objectives have already been achieved.

The COVID-19 pandemic is the most significant health event of the past century and has had an unprecedented impact on global health and social care systems, including our own here in Northern Ireland. Our system has been tested in ways we had not experienced before and we are proud of the role that digital has played in supporting our dedicated and tireless teams and the population of Northern Ireland, to continue to deliver and access critical services during this period.

In June 2021 we set out to establish a new strategic direction for digital that could further sharpen our focus and attention on how we use the resources and tools at our disposal to continue to deliver better outcomes in health and social care. In the process of developing this digital strategy we have engaged with our people and our population to understand their expectations and priorities for digital. I want to thank everyone that participated for the time and careful attention they have given to support this vital exercise. The result of this engagement is a digital strategy that we are confident can deliver our shared ambition to “deliver digital health and care services, putting people at the heart of everything we do”.

Our new strategic roadmap sets out a three-phased approach for digital transformation; we must focus on implementing a series of foundational technologies including [encompass](#) – our regional digital care record system, NIPACS+(delivering a single enterprise imaging solution for HSC) and NILIMS (regional Laboratory Information Management System). The encompass programme is our most ambitious digital investment to date and will fundamentally transform our digital capability, enhancing collaboration between staff and ultimately improving the care pathways that we are able to deliver and moving us closer to working as one system.

Foreword (cont.)

Beyond Implementation

As we progress through our digital journey and successfully embed digital foundations like encompass, we will begin to turn our attention to making the best use of our tools and products to meet the emerging challenges in our health and social care system. This focus will help us to deliver tangible improvements in our use of digital services and find new ways to work with our partners to serve the people of Northern Ireland.

As our digital transformation matures - we will begin to invest more resources into innovation so that we remain ready to participate in the development and application of next wave of digital capabilities. This innovation will ensure we maintain a continuous improvement approach that ensures we improve our digital health and care services over the long term.

This is an ambitious journey and we recognise the importance of our people who are at the heart of everything we do and will remain our greatest asset as we build a digital future – that’s why this digital strategy also outlines how we will invest in the future digital skills and capabilities of our people and support our current digital staff to further their careers with HSC and attract new digital talent. We will deliver integrated and intuitive systems that make jobs and interactions with HSC easier and safer for our people and make use of digital tools to integrate services including primary and integrated care, hospital services, community services, mental health and social care to deliver joined up patient journeys and care continuity. The sustainability of our health and care service relies on the education and mobilisation of citizens to help them to live better and healthier lives where individuals may choose to use digital technology to enable them. We will work with our people and the Northern Ireland population to co-produce solutions that meet this challenge, empowering people to manage their wellness and health care. We have laid out a whole-system strategy and made commitments to collaborate with our partners across sectors.

Thank you for taking time to read our HSC Digital Strategy, we look forward to continued engagement with you as we commence this next phase of our digital journey. Together we will deliver the quality of digital services that the people of Northern Ireland have asked for and deserve.



Dan West
Chief Digital Information Officer,
Northern Ireland Department of Health

Summary

In Northern Ireland, we have set out on an ambitious journey of transformation in how we deliver health and social care services for our population.

As we move forward, the role of digital in achieving the ambitions set out in our [Health and Wellbeing 2026 - Delivering Together](#) strategy will come increasingly into focus, alongside pursuing our 'Once for NI' agenda for a more regional view of digital, data and technology. Our new Digital Strategy outlines how we will rise to the challenge of delivering the digital transformation needed to improve health and care outcomes going forward, alongside standardisation of our services and coordinated regional management. This digital strategy has been developed alongside our people. They have helped shape our priorities and initiatives for successful digital transformation and confirmed our new digital vision, which is 'to deliver digital health and care services, putting people at the heart of everything we do'.

To anchor our digital priorities and help us effectively measure our impact, we have outlined [six core strategic outcomes](#) for digital that represent the broad agenda of change that we are seeking to deliver across our health and social care system over the lifetime of this strategy.

Digital will provide our population greater visibility and control over treatment and care journeys

Digital solutions will put quality and safety at the heart of all new processes, systems and ways of working across health and care

Effective and joined up care through systems integration and streamlined information flows

Digital will enable our people to work more efficiently and collaboratively across standardised systems

Intelligent use of data will optimise performance and harness population health insights, whilst ensuring robust data protection standards

Digital will support the acceleration of research and innovation to gradually embrace system leading disruptive and cutting edge solutions

Building our digital capabilities

To realise our digital ambitions and deliver our strategic outcomes, we must build and scale digital capabilities across our organisation, investing in [six core capabilities](#) that will underpin everything we do.

Patient engagement

Digitally skilled workforce

Emerging technologies

Systems integration & cyber security

Innovation and digital agility

Data driven care and insights

We need to empower our population to take an active role in their health and care, promoting self-service and personalised care journeys in delivering incremental efficiency for the HSC alongside improved outcomes. We need to support our people (those involved in the design, delivery and evaluation of health and social care across Northern Ireland) and build new skills so that we can, develop our staff's knowledge and skills to use systems confidently, evaluate and invest in emerging technologies, integrate our systems for better security and collaboration, develop new ways of working through innovation and put data and insight at the centre of our decision making.

Summary

Developing a considered approach to transformation

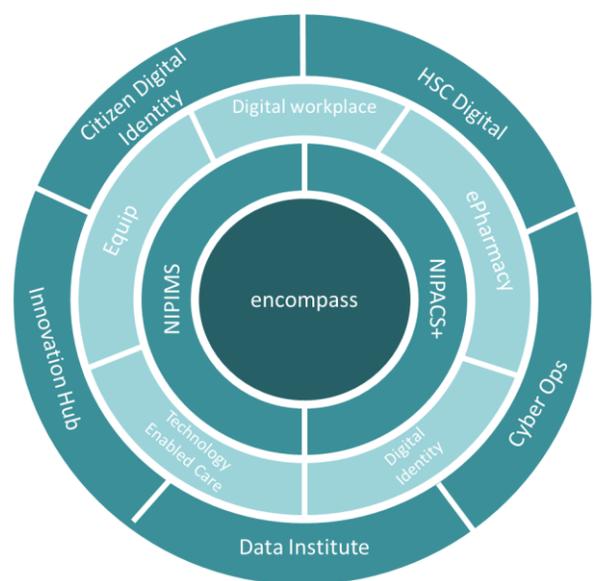
Digital change of any kind can be challenging and our ambitious digital portfolio of programmes will create a continuously changing landscape as we seek to embed the new digital foundations of our organisation. Given the magnitude of the change we are expecting, our transformation requires us to focus our teams and resources effectively over time – that is why we have developed a three-phase approach. Our [Strategic Roadmap](#) will focus our attention first on implementing the new digital foundations of our organisation, before increasing our focus on making best use of these technologies to meet the changing needs of our population and our partners in supporting health and social care. The innovation phase is when we will build on the digital tools, systems and skills at our disposal to identify the next wave of solutions to deliver better care. In this way, we can deliver change as part of a clear and actionable journey, with our people at the centre of our transformation.

Our portfolio

In each phase of our roadmap, we will deliver programmes and projects that cut across everything we do, from implementing major transformation programmes that fundamentally change the way we deliver care, to managing ongoing maintenance and upgrades to critical systems and infrastructure.

In addition to planned activities, we have also responded quickly to support our regional response to the COVID-19 pandemic, including developing and implementing solutions and systems to manage testing, contact tracing and the delivery of our regional vaccination programme. As an organisation, we will build on these new skills and methods as we review and implement solutions that enable us to achieve our key strategic outcomes.

The digital transformation of HSC is built around key priority programmes and supporting initiatives, which will be delivered over the next 4-5 years. They will allow us to improve how we operate as an organisation and support our staff to work more flexibly. Our flagship programme, [encompass](#), is our largest and most significant digital investment and will provide a single digital care record for every citizen, accessible by all care providers with a legitimate reason for access, changing the way in which we deliver health and care services across the region to achieve better population outcomes as well as opening up new avenues for innovation in the years to come.



Our key programmes and supporting initiatives for the delivery of our digital vision

Summary

Our transformation journey is one we must take in collaboration with partners from across our health and social care system. We recognise the importance of our population, our people and our partners in supporting health and social care in design, delivery and adoption of our digital solutions.

We have established a number of commitments to our partners to ensure that the tools and systems we implement are fit-for-purpose and meet their needs and our shared objectives. We will :

- Open new routes and forums for our population to co-design services and tools with us; working proactively to better understand their experiences and digital requirements;
- Embed our people in the design and delivery processes to place their experience and insights at the heart of the digital experience;
- Provide increased opportunities for secure data and information sharing, access to integrated systems and opportunities for collaboration with arms-length bodies, universities and the private sector, in line with legislation/best practice.
- Foster partnerships that make Northern Ireland a leading location of research and innovation.

Enabling our digital transformation

A successful digital transformation relies on many things, from the leaders of the organisation through to the infrastructure that supports it. Establishing these foundational enablers is a critical component of our digital strategy and will enable us to deliver on our stated vision and mission for HSC. Our digital enablers cut across everything we do and make the delivery of successful change possible.

Our four categories of enablers outline the priority areas that we will focus on building over the lifetime of this digital strategy. We have worked with stakeholders from across the health and social care and our partners to identify existing challenges and blockers and identify the solutions and changes that we must introduce.

Digital Leadership and Culture

Developing a culture that embraces digital and data, starting with our senior leaders. Adopting a 'digital-by-default' mindset to solve problems and develop new care models and ways of working.

Digital Specialist Workforce

Attracting, recruiting and retaining digital professionals who feel empowered to deliver programmes. Developing new pathways that allow our digital staff to progress with us.

Management and Governance

Creating greater transparency in how we manage and govern digital transformation, providing robust management of our plans and budgets to ensure successful delivery of programmes and projects.

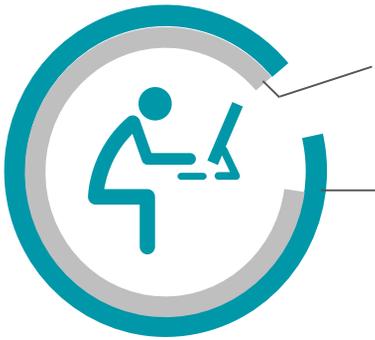
Infrastructure and programmes

Providing the infrastructure and tools that our people need to work effectively. Maintaining reliability and safety of systems, ensuring they are accessible at all times.

What we heard from the public

People are ready and willing to use digital healthcare...

*Based on the responses from a self-selected public conversation online survey, conducted in October 2021.



87% find it easy or very easy to use digital services

92% of people rated their digital skills 7 or more out of 10

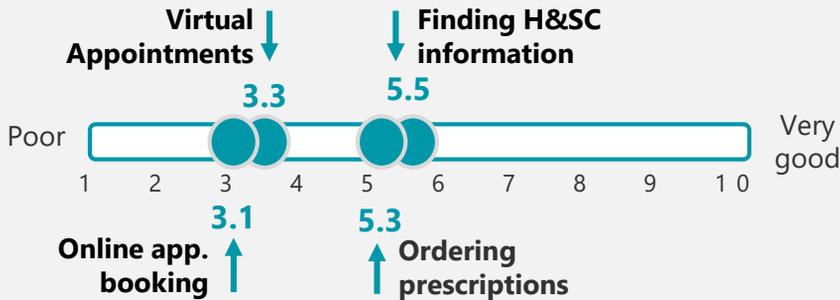


More than half of respondents felt comfortable sharing data from their devices to help plan their care

Respondents identified a need for awareness that not everyone will be able to or want to use digital



Respondents felt online services **require improvement** and rated their experiences below.



...and frequently access online services



77% of respondents access information about H&SC services online

What do we need to provide?

27% of people need **training to be able to use digital health and care services.**

80% of respondents are likely or extremely likely to use **medication reminders** on their phone, TV or other gadget, whilst 60% are likely or extremely likely to use **activity reminders.**

65% of respondents would be likely or extremely likely to **wear a device that tracks their location**, in case they become lost or confused. **61%** would be likely or extremely likely to **wear a sensor that predicts or detects a fall.**



The solutions that we implement should be introduced alongside cohesive training modules, directed at the least digitally confident people



Alerts and reminders should be a key part of digital solutions that empower patients to manage their health from home



Wearable technologies will be key to enabling Northern Ireland's ageing population to more safely maintain their independence for as long as possible

What we heard from the public

Our public conversation illustrated increasing digital confidence amongst the population of Northern Ireland, alongside an expectation that the health and care system should keep pace with the broader digitalisation taking place across other industries. Widespread uptake of COVID-19 related digital interventions show a public willingness and readiness to accept service digitalisation.

With this in mind, the digital solutions that we develop must be built with people at the centre, meeting a variety of needs and requirements that we can expect from our diverse population and undergoing continuous review and consultation to optimise the services we provide. The public conversation survey highlighted four key areas of focus (below) with respect to user-centred service development.



Data security

Whilst most respondents felt confident sharing their health and care data online, our services must support increasing public confidence in the security and confidentiality of health and care data usage across our systems. This includes enforcement of strict verification and 'need to know' principles for people accessing data and empowering members of our population to feel in control of their data's privacy, accuracy and access permissions.



Service Usability

The greatest barrier to digital service uptake is the learning required for people to understand and use new systems if they choose to do so, alongside the time taken to find relevant information. Therefore, the digital services that we implement need to provide a unified and intuitive experience for users, driven by greater integration of systems, information and processes to enable better care pathways.



Range of services

We need to increase the range of services that are available to access online and remotely, to supplement existing service, including opportunities to access virtual appointments, accessing personal health data on the go and managing health and well being through a personal device or piece of wearable technology.



Equal opportunities

Some respondents requested extra support using digital services, so we must ensure that relevant training/community support is available to service users. Furthermore, efficiencies driven by digitalisation of key services will liberate resources that we can use to improve analogue care options as an alternative.



Success for our population looks like: consistent reliable services that enable patients to have greater control and visibility over their health and care, as well as better contact with HSC



Success for HSC professionals looks like: integrated systems and time saving solutions, alongside reliable and accessible data for better population outcomes



Success for HSC looks like: digital services and products support a system response to improving care pathways – including enabling the population to manage their own health more autonomously if they choose to do so

Introduction

This document outlines the Digital Strategy for Health and Social Care in Northern Ireland (HSC) and prioritises what we will deliver up to 2030.. Digital is a fundamental enabler for everything we do. This strategy considers how digital will enable better processes, support improved care pathways, change our ways of working and, ultimately, deliver better outcomes for the people that we serve every day.

This digital strategy is owned by HSC, but will require support from across the whole system and our partners to implement it. As the lead digital organisation in Northern Ireland, DHCNI will coordinate day-to-day management of this strategy and work in partnership to ensure it is implemented successfully. We will work with partners from the public and private sector to ensure we meet our objectives and deliver the benefits of digital health for Northern Ireland.

Our HSC Digital Strategy Foundations

In 2016, HSC set out an ambitious 10-year strategy to transform the delivery of health and wellbeing services across Northern Ireland. In [Health and Wellbeing 2026 - Delivering Together](#), digital was identified as one of five core enablers for the delivery of the strategy. A subsequent five-year [eHealth and Care strategy](#) was developed in 2016 to *'improve health and wealth through the use of information and communication technology'*, aligning the aims and objectives with the **'Quadruple Aim'** set out by HSC in ['Health and Wellbeing 2026 - Delivering Together](#).

As we reach the conclusion of the eHealth and Care strategy a refresh is required, both to reflect our progress to date and to lay out the new challenges and opportunities that exist for health and social care and our partners in a fast moving digital world.

This document considers what role digital will play in both front-line delivery and back-office support in the future HSC. The development of this digital strategy included reviews of a number of other HSC strategies, including the *Workforce, Innovation and Leadership* strategies, as well as action plans and strategies focussed on *various service areas*. Through this process of review and reflection, we have developed a set of digital requirements that must be met to enable service delivery across health and social care.

Our HSC Digital Strategy Development

Collaboration with stakeholders from across the HSC and with our partners who support health and social care has been central to the design of this digital strategy, alongside engagement with the population of Northern Ireland. It is intended for all of those involved in the delivery and support of health and social care services. The digital strategy outlines the vision, mission and objectives for digital health and care in Northern Ireland and what capabilities will be required across the ecosystem in order to successfully deliver upon these.

The document also considers the current digital portfolio of programmes and projects that HSC delivers, including operational, transformation and COVID-19 response programmes. We have evaluated the continuing role of these programmes and what will be required to deliver them successfully.

The future of digital in HSC

Digital in Health and Social Care

The role of digital in health and social care has never been more important and is key to the removal of silos and barriers required in the shift towards 'Once for Northern Ireland' ([Health and Wellbeing 2026 - Delivering Together](#)).

As society becomes more digitally advanced, the expectations are that the health and care system will keep pace – virtual appointments, accessing personal health data on the go and managing our health through a personal device or piece of wearable technology are just some of the basic expectations of 21st century users. COVID-19 has further accelerated the adoption of digital technologies and has been vital in enabling people to access the services they need virtually during the national lockdown periods.

Digital touches upon almost everything HSC does – from enabling the operational delivery of functions through to supporting those on the front-line. The digital transformation programmes that HSC is implementing will fundamentally change the way that health and social care services can be delivered, helping us to standardise our services under regional management, as well as changing how users of the systems are able to work and receive care.

In addition to the front-line benefits that will be achieved through the implementation of programmes such as encompass, NIPIMS, NILIMS and NIPACS+ (*See page 58*), HSC will also support back-office transformation activities e.g. EQUIP that will create new efficiency opportunities and help to change the way people work.

Our Refreshed Perspective

Whilst we have made significant strides in the previous five years, we recognise that there is still much to do if we are to develop a leading digital health system.

We have identified a number of focus areas for the coming period that will shape the types of programmes we deliver and prioritise what happens when. To meet our goals, we will need to manage our portfolio and align our decisions with our digital principles (outlined on page 16).

This is a shared journey and we will continue to engage with partners and stakeholders to deliver on our objectives as a unified health and social care system.

Our Learning

For successful digitally enabled transformation significant engagement is required from the service to develop new operational processes and use of modern digital tools. We must continue to learn and adapt and the following pages outline our intention to focus on:

- **Integrating our technology products** to provide a seamless care experience for people;
- **Ensuring we have the right resources** in place to deliver programmes successfully;
- **Evaluating the impact of our portfolio** and evidencing it;

Perspective: Our population

A Changing Population

Northern Ireland has experienced a 15% increase in population over the past 25 years, rising to 1.9m people by June 2020¹.

As the population has increased so has the average age - the number of people aged 65+ is expected to surpass the number of children (0-15) by 2028². Northern Ireland also witnessed a 30% increase in people aged 85+ between 2009-2019. However, we are not alone in experiencing this shift in population age – the global population of those aged 60+ is the fastest growing demographic group and one of every six people in the world will be over the age of 65 by 2050⁴.

This is by no means a negative trend – it reflects the increased quality of overall public health, with the average life expectancy increasing tenfold over the previous half century – particularly in the developing world. This has been driven by advancements in medicine, better access to education and social support and the economic improvements required to fund social support initiatives.

An ageing population will, however, present new health challenges that we must address; as our population ages, the demand for adult social care services will only continue to increase. In addition, the rising percentage of the population living with multiple co-morbidities will create new demands on our healthcare system to identify and deliver new treatments and services. In our 2019/20 Health Survey, one third of respondents reported living with at least one long-standing illness that reduced their ability to carry out daily activities.

The Impact of COVID-19

COVID-19 is the largest global health event of the past century, creating unprecedented pressures on our health and social care infrastructure.

Beyond the documented cases and deaths from the illness, the impact of COVID-19 on the longer-term health of the population is not yet fully understood. National lockdowns resulted in the cancellation of large volumes of outpatient appointments and inpatient procedures. As a result, Northern Ireland's waiting lists have expanded to be some of the largest in Europe as at June 2015.

The consequences of COVID-19 are expected to continue to affect the delivery of health and social care services over an extended period and as a system we must respond. In 2020, the Department of Health set out a new [Strategic Framework](#) to enable a return to full service delivery. Digital will play an important role in this rebuilding of services and there is a clear opportunity to identify new tools, systems and ways of working to support services to return to full capacity and improve patient experience.

The key to our new digital strategy is identifying where it benefits our population. Encompass implementation represents one part of this - helping our people to deliver safer care more easily using a digital care record. We will also look to sustain the momentum we gathered in our digital interventions during COVID-19, to deliver health and care services more sustainably.

Our current digital landscape

Digital in the HSC

Our digital portfolio spans the breadth of health and social care delivery in Northern Ireland. The digital ecosystem is complex, requiring consistent maintenance and improvement in order to ensure we can deliver for all 24 hours per day and 365 days per year.

As we move into a more technologically advanced era, most of our systems are not enabled to allow our staff, or our population to access information, functions and services in the most efficient and convenient way.

In this digital strategy we outline a number of significant investments that we are making to advance our digital health infrastructure and move us closer to the required level of digital maturity.

Our major programmes, along with a series of complementary projects, form part of our digital portfolio. In parallel we must also continue to run 'operational' programmes, which include maintaining and upgrading critical infrastructure, cyber security and supporting remote access for staff. Usually these would be considered a major challenges in themselves, however COVID -19 has forced us to establish additional projects designed to respond to the pandemic and support the health and social care system through its most challenging times.

Our Digital COVID-19 response

As part of the national response to the pandemic, we established a number of projects that were either digitally-led or reliant on digital to deliver. These include:

- **Developing and maintaining key patient registers and vaccination logs** to support our regional response;
- Increasing capacity to support **6000 concurrent VPN users**, enabling staff to work remotely;
- Deploying more than **2000 laptops** across HSC to support home working;
- **Developing and launching the COVID-CARE NI mobile application**, with thousands of daily user journeys; and,
- Developing and updating a **COVID-19 data dashboard** to support more informed decision making by senior officials.

Our Future Digital Portfolio

The learning from the introduction of new digital tools during the pandemic must be applied to our digital portfolio.

It has highlighted that in some areas digital can improve provision of care. For example, the increased use of 'tele-therapy' and online stress control classes has helped maintain and improve the delivery of mental health services.

The VMS appointment booking service provided convenient digital access for our population who choose to book online and took the administrative burden off front line services so limited resources could focus on delivering clinical outcomes.

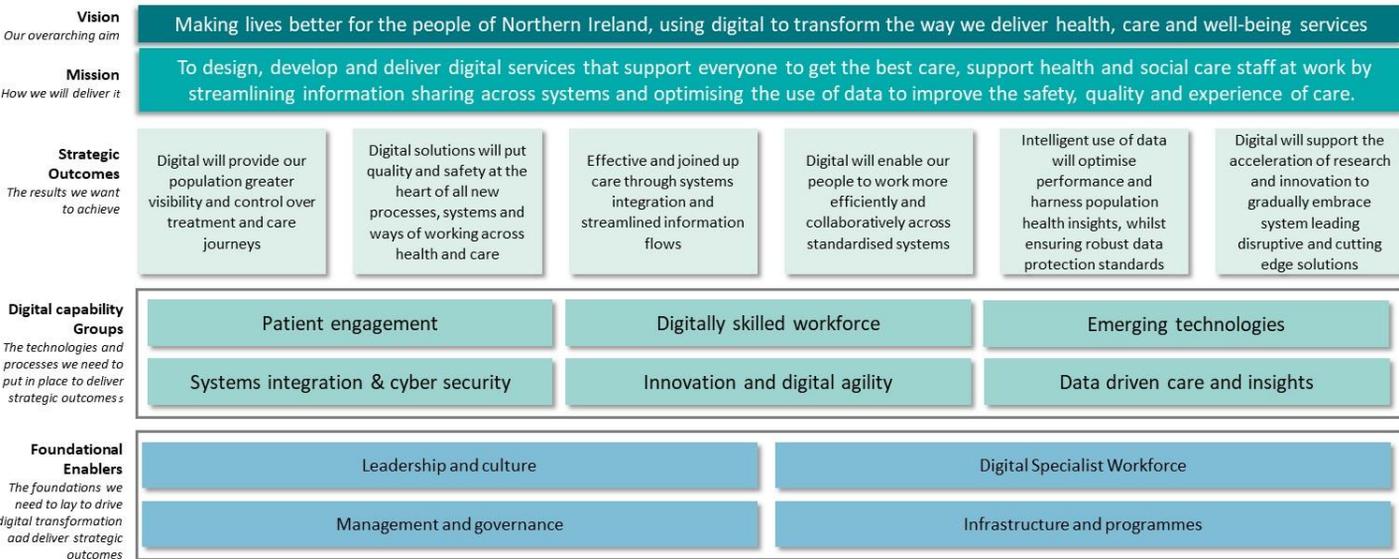
Remote video based consultations allowed clinicians to provide services to vulnerable patients while reducing the risk of infection.



Our strategic framework

We have established an ambitious digital transformation journey that is underpinned by our strategic framework, which maps out the relevant strands of our digital strategy into a single picture.

Our vision and mission guide our general strategic direction, with six strategic outcomes defining specific objectives what we want to achieve. The strategic framework illustrates how our vision, mission, capabilities and enablers are aligned to achieve these outcomes, with our capabilities allowing us to build digital maturity as an organisation and enablers as the driving force of our transformation.



Our Strategic Framework

This strategic framework has been built from our engagement with stakeholders across the health and social care sector, who were asked to tell us the most important priorities and outcomes that digital should deliver. In order to reflect the voices of our people and our population, we will provide example perspectives to articulate how digital will enable improved population and staff experiences, health and care outcomes and efficiency.

The following pages will outline the component parts of the strategic framework, namely each of the strategic outcomes which will include descriptions, through the use of stories to demonstrate how the outcomes will be delivered.

See details of our digital capabilities on page (20).

Read more about our foundational enablers on page (46).

The HSC Digital Vision

Making lives better for the people of Northern Ireland, using digital to transform the way we deliver health, care and well-being services

Our digital vision

What does the future look like?

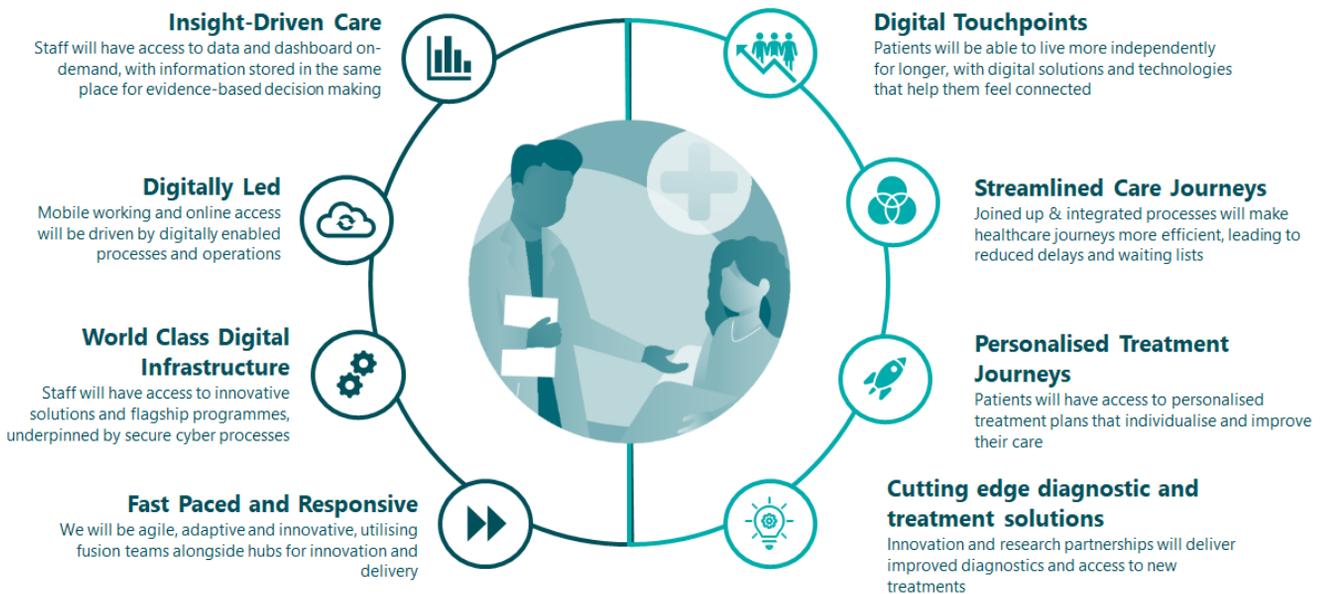


Diagram 1 – Our digital vision for care providers (left) and the Northern Ireland population (right)

Success for HSC professionals looks like:



I can see all the information I need to access in one place. Our online systems work really well, which makes it easier for me to do my job

Success for our population looks like:



I can access my health information online and track my symptoms, which helps me to feel more in control of my healthcare journey

Mission & Principles

While our vision outlines our ambition, our mission focuses on how we plan to deliver it. It communicates our direction of travel over the next eight years and the principles that will guide us.

Our Mission

To design, develop and deliver digital services that support everyone to get the best care, support health and social care staff at work by streamlining information sharing across systems and optimising the use of data to improve the safety, quality and experience of care.

We will focus on integrated digital services and systems that will improve information sharing, consistency and access to joined up care across providers (to *include those we contract with, as well as traditional partners*). Our work will digitally enable staff to deliver the best quality care, and allow people and patients to get the most out of our products and services.

We will focus on systems that are streamlined and intuitive and provide standardised interfaces that encourage collaboration across organisations and cater to patient needs. We will optimise our tools and systems to meet the changing needs of patients, communities and staff.

The success of our digital transformation is dependent on a system-wide cultural shift across our Health and Social Care ecosystem, to recognise digital as a solution for economically sustainable care, better patient outcomes, safety and experiences.

Our Digital Principles

Our guiding digital principles have been designed alongside stakeholders from across the health and social care sector, reflecting the priorities of our population and staff. These principles anchor our strategy to a set of values and will be key to the future strategy implementation.



Caring and effective

ensuring quality and safety, with people at the heart of everything we deliver



Connected

systems, data, processes, and people for a streamlined and standardised approach



Data driven

delivering an evidence-based approach to decision-making, driven by better data and analysis capabilities



Secure

implementing systems that are safe and secure, meeting the standards and expectations of those we serve



Continuously improving

striving to deliver better services and integrate learning from across sectors



Cost effective

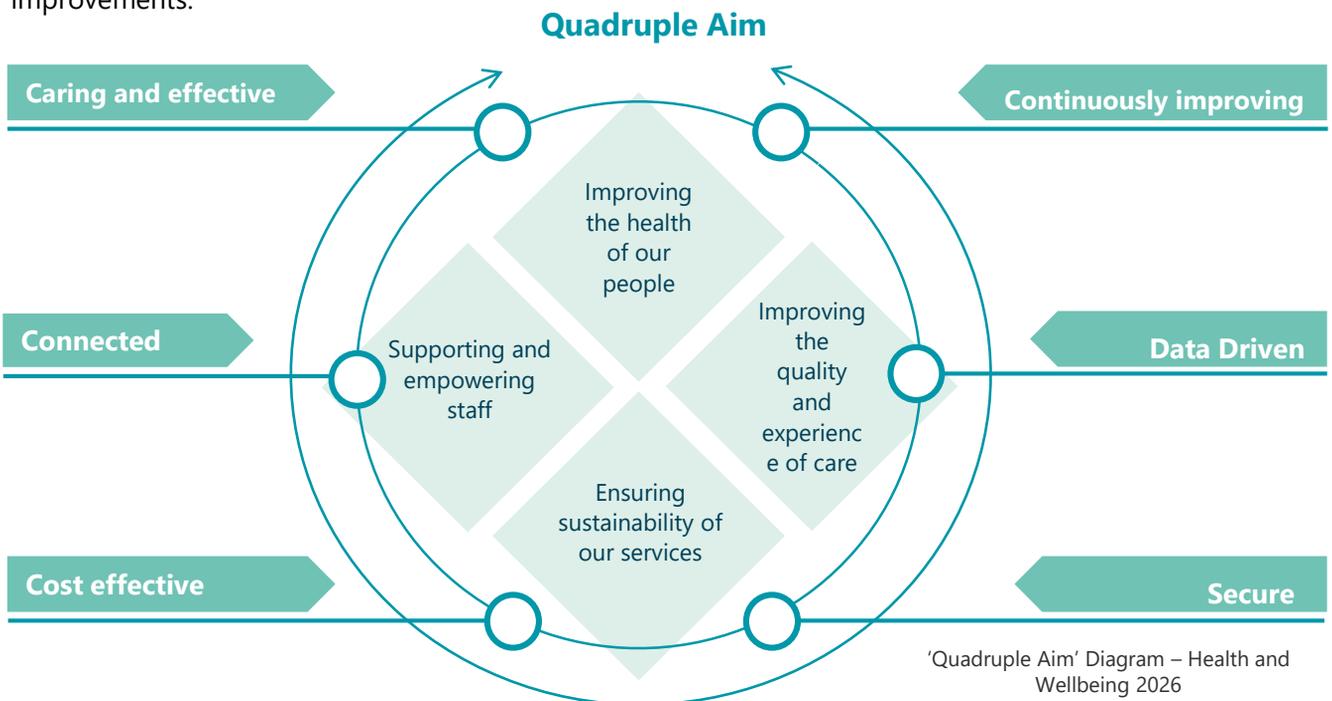
putting the right tools and systems in the right places at the right time to ensure efficiency and value for money

Strategic Alignment

Supporting the Quadruple Aim

Our six digital principles align to and support HSC's wider Health and Wellbeing Strategy, specifically the 'Quadruple Aim' that it sets out and other existing and complementary strategies.

No single team or organisation can deliver digital transformation in isolation, which is why alignment to wider HSC objectives and the Quadruple Aim will help us deliver on the ground. Our approach to digital transformation will be driven from multiple sources and rely on a joint effort to develop and implement improvements.

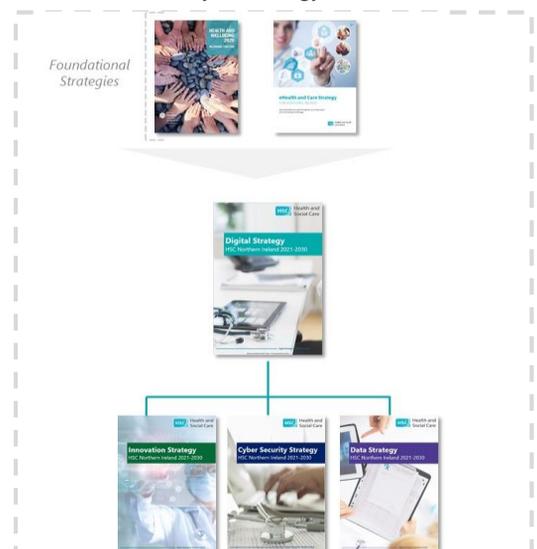


'Quadruple Aim' Diagram – Health and Wellbeing 2026

Family of Strategy Documents

This Digital Strategy will form part of a suite of documents built on the foundations of *Health and Wellbeing 2026* and *eHealth and Care Strategies*; including the HSC Cyber Strategy, Data Strategy, and Innovation Strategy. Together this family of strategies articulate how we will deliver transformational digital change, supporting the Department of Health's wider strategic goals. At the same time, this strategy also acknowledges the role that digital plays in supporting wider organisational strategies such as the *HSC Workforce Strategy*, and reflects the crucial role of digital in helping HSC to restore services following the pandemic; as set out in *The Rebuilding Strategic Framework*. This strategy outlines how we plan to deliver across each of these priorities.

Our Family of Strategy Documents



Six strategic outcomes

Our strategic outcomes will act as the overarching aims with which we develop and deliver services over the coming period. These outcomes have been developed with stakeholders from across the HSC and our partners in supporting health and social care



Digital will provide the population of Northern Ireland greater visibility and control over treatment and care journeys



Digital solutions will put quality, safety and improved experience at the heart of all new processes, systems and ways of working across health and care



Effective and joined up care delivery and support services through systems integration and streamlined information flows



Digital will enable our people to work more efficiently and collaboratively across standardised systems



Intelligent use of data will optimise performance and harness population health insights, whilst ensuring robust data protection standards



Digital will support the acceleration of research and innovation to gradually embrace system leading disruptive and cutting edge solutions

The outcomes will help shape and guide key digital priorities that HSC will deliver and will to effect positive change for the delivery of health and social care in Northern Ireland.

Pages 28 – 45 outline our six strategic objectives using illustrative patient and care professional perspective to show how our digital solutions will put people at the centre, ensuring quality and safety is at the heart of all health and care pathways.

Digital Capabilities

To realise our ambition and deliver the strategic outcomes, we must invest in developing six core digital capabilities.

Population engagement

Enabling our population to control and personalise health and care journeys



Digitally skilled workforce

Providing all staff with the right digital skills.



Emerging technologies

Development of future care delivery through n existing and new technologies



Systems integration and cyber security

Increasing integration across internal and external systems in a cyber secure environment



Innovation and digital agility

Encouraging the scaling and spread of successful innovation and working in an agile



Data driven care and insights

Putting data and insight at the centre of our decision-making



Our foundational enablers

In order to develop what we need for a successful digital transformation, four key enablers have been defined from our work with stakeholders from across HSC and our partners who support health and social care. We identified existing challenges, blockers, solutions and changes that we must implement to make it easier for people and systems to work effectively.

Leadership and Culture

We will promote a culture that embraces digital and data, across the whole of HSC in all settings.



Digital Specialist Workforce

We will upskill our digital specialist workforce to ensure we retain digital talent and recruit to build digital capabilities into our HSC teams



Management and Governance

We will provide transparency for those involved in delivering health and social care, in how we manage and govern digital transformation across HSC.



Infrastructure and Digital Solutions

We must provide effective infrastructure and solutions for our people to do their jobs effectively



Please see Enablers, page 51 for more detail.

What will this mean for our population?



The digital strategy has been developed to reflect the voices of our population throughout. We will provide example stories to show how digital will enable improved population and staff experiences, health and well being outcomes and efficiency.

John's journey (below) reflects and summarises how health and care will change for us all through the implementation of the digital strategy.



Meet John...

John is 85 years old and has recently been discharged from hospital following a fall at home. John wants to stay in his own home and will be supported to live there by the community based multi-disciplinary team (MDT) and his family.



"It is really good that when different HSC people come to the house to visit that I don't have to repeat my story and details. It feels like they know me"
– John



"Being able to add notes to Dad's patient portal about my concerns and being able to send text messages to his carers means I feel connected"
– Niamh, John's daughter



"John receives care that is well informed and up to date with his current condition. I can review all his care information meaning I am aware of the MDT input" – Isla, Community Nurse



"John has really benefitted from the care plan we drew up together to ensure he remains socially connected and as independent as possible. I have assisted him to join a number of groups remotely twice a week so he doesn't need to travel or feel isolated " – Aaron, John's Social Worker



"John's risk of hospital readmission is lowered because any issues are escalated to me quickly by the team via the portal and I can track changes in his condition by accessing details about all the care John is receiving in one place." – Erin, John's GP



What will this mean for our people ?

Our digital strategy has been developed in partnership with our people , who will be using our new systems and services on the frontline. The perspectives below reflect and summarise impacts on different people across our health and social care ecosystem, with respect to the initiatives and programmes included in the digital strategy document.



Hospital based Nurses/AHPs/Social Care staff

"I no longer need to rely on a patient's paper records as they are now easy to access from our devices – we feel safe with the systems and processes that are in place to record and share important information about our patients with colleagues and other parts of the care system. We have better handovers between shifts as we no longer need to pass paper between us – the way we manage medicines administration is so much more effective and our dashboards and monitoring systems make it easier to tackle problems quickly."



Medical Consultants

"When I am on call and get called in to the operating theatre, I am able to access the patient's key information quickly and easily before I leave home. This enables me to give advance instructions or place orders and be well informed when I arrive so I don't waste valuable time getting up to speed. All of the necessary reports and forms can be done digitally and shared with my colleagues on the wards – this allows us all to be informed and provide the best care for our patients. I can follow up with patients virtually via video consultation to check on their progress after surgery."



Community Nurses / AHPs / Social Care staff

"I can access the data and information I need when I am completing home visits and have real time access to my patient's health record. My patients regularly have check-ins with their GP through the online patient portal and are more actively engaged in the management of their health. This makes my job easier and helps me see more patients during the day, while also allowing me to work flexibly around my other commitments."



Operational and Administrative staff

"I have the data and tools needed to make real-time decisions as well as proactively manage resources. Through the digital workplace, I can access our shared systems, which makes it easier to collaborate with my team from anywhere. I work with fewer systems, but they still allow me to complete all of my tasks – I have been able to access training and support when new systems are implemented and have even had the chance to train my colleagues as a Digital Champion for my department."



Digital and IT staff

"I can clearly see the value of my work and how it is improving health and social care services – I have a pathway to progress within the organisation and am able to continue developing my skills in areas that our organisation is prioritising. I am building my knowledge and expertise whilst ensuring that myself and my team keep critical IT systems up and running. I feel empowered to innovate and implement new solutions alongside clinicians to deliver better care for people."



External partners

"We understand what our HSC partners need from us and have better knowledge of their systems and how they are working. We work more seamlessly as a unit and we feel more involved in helping HSC to achieve their health outcomes. We have developed strong relationships with our partners in supporting health and social care and are trusted advisors that can share our specialist expertise whenever needed"



Delivering the HSC Digital Strategy

How we plan to deliver on our ambition

Our strategic roadmap

The strategic roadmap sets out our direction of travel and will allow us to target our effort and resources more effectively over the next eight years. A number of the programmes and initiatives that we have developed will be implemented within the next 4-5 years, but will require ongoing maintenance and optimisation to ensure we get the most out of them. By developing this roadmap, we will be able to identify when new digital capabilities will be available and what we must put in place to enable the successful adoption of solutions for the people we serve. The strategic outcomes will be advanced throughout each phase – the digital strategy will outline the priority outcomes to achieve during each phase and identify the initiatives that will enable this to happen.

Our three-phased approach for digital transformation

Our strategic roadmap outlines a three-phased approach for digital. Each phase complements the next and when completed will move us to a significantly higher level of digital maturity as an organisation. As part of this work, we will be delivering programmes continuously, learning as we go and identifying new methods and tools that enable us to get the most out of our investments.



IMPLEMENTING

We invest our time and resources in implementing the key initiatives and programmes that will transform health and care services in Northern Ireland. This phase will also look to address a number of the capability and enabling requirements that will support implementation and set HSC up for the future phases. By focussing our short term efforts in this way, we will lay the foundations for delivering future service transformation.

MAKING BEST USE OF

We invest our time and resources in making best use of the transformational technologies, data and systems that we have implemented. The lessons and momentum gathered during the 'Implementing' phase is advanced. When our focus on developing new capabilities such as:

- lean process design
- service design
- data analytics

INNOVATING

We invest our time and resources in new and exciting technologies and initiatives. In this phase, we have the right skills, capabilities and enablers to embrace new technologies and ideas. Test and scale where appropriate across our digital portfolio. We will continue to implement and optimise solutions, building on our history of successful digital transformation and a strong change culture.



Our Strategic Outcomes

How we plan to deliver our HSC digital strategy

Strategic outcome 1



Digital will provide the population with greater visibility and control over treatment and care journeys

For our population, digital holds the potential to provide greater visibility, control and personalisation of care. We will co-design solutions that tackle digital inequalities, responding to user needs and ensuring user experience is at the centre.

What do we want to achieve?

Personalised care

- Joined up care experience that provides full visibility of health data and care pathways.

Empowerment and digital inclusion

- Enhanced self-management and shift from illness to wellness model.
- Digital inclusion and reduction in digital inequalities with improved access to services, including analogue options.

We will provide more personalised care, including full visibility of health and care data and care pathways, moving towards precision medicine to identify the best approaches and pathways for each patient.

A single digital care record with a patient portal will empower people and those who care for them to take an active role in care decision-making, developing new digital ways for them to access HSC services if they chose to do so. This includes easier online communications, virtual assistance and consultations.

Self management of long term conditions, promoting health and wellness and supporting people to live independently will be enabled by technology such as telehealth, telecare, apps and information platforms.

What will the future look like?

For our population:

- **Streamlined referrals** and journeys through care, ensuring **faster access to treatment**
- Innovative **diagnostic solutions**
- Greater contact with your health and care provider and **personalised treatment pathways**, including remote access to patient records and appointments

“*I can access my health information online and track my symptoms, which helps me to feel more in control of my health and care journey*”



For our people:

- **More time spent with those they care for with reduced administrative burdens** on clinical staff
- On demand **dashboards** and data make decision making quicker and easier
- **One unified system** across HSC makes systems more **streamlined** and **intuitive**

“*I can see all the information I need to access in one place. Our online systems work really well, which makes it easier for me to do my job*”



Personalisation of care



Digital will provide our population with greater visibility and control over treatment and care journeys

The following is an illustrative journey of Nora Kelly, a maternity patient living in Belfast. Her journey shows how digital will provide greater visibility, control and personalisation of care.

Nora Kelly – Maternity patient



Age: 27
Occupation: Retail assistant
Location: Belfast

- Nora is 20 weeks pregnant for the first time. She attends the ante-natal clinic for regular check ups at her local hospital.
- Nora likes that all of her health and maternity information is in one place, so that everyone involved in her maternity journey knows about her pre-existing condition of high blood pressure.
- Nora is using digital applications to track her blood pressure, as well as her exercise and diet. She can send this data to her midwife prior to her check ups.
- Nora can arrange her appointments online and her midwife can send her an SMS message if she is worried about any of her health signs.
- Nora is anxious, but she feels that her maternity team knows her well and is easy to reach if she has any questions or concerns.
- Nora feels actively engaged and consulted in the best management of her blood pressure.

Teagan Murphy – Midwife



Age: 38
Occupation: Midwife
Experience: 15 years
Location: Belfast

- Teagan can access all of Nora's health information online, with an easy to use dashboard that shows any changes to her health markers, which Nora has been tracking.
- All the necessary information is easy to find and use, therefore Teagan can spend a greater proportion of her appointment time supporting her patients on a personal level.
- Teagan can store and retrieve ultrasound images via a single enterprise imaging system, which is easy and quick to navigate.
- As staffing levels are digitally monitored and maintained, Teagan feels safe in the knowledge that there will always be enough staff to help out for a challenging delivery.

How will we get there?



Digital will provide members of our population greater visibility and control over treatment and care journeys

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome

IMPLEMENTING

- Delivery and integration of encompass, the Patient Portal and Technology Enabled Care
- Delivery of the Cybersecurity Programme (*as part of the HSC Cyber Strategy*)
- Devise a clear and structured approach to public communication and engagement, including digital literacy and frequent public consultation to support service design

MAKING BEST USE OF

- Turn our attention to optimising and customising them to meet our specific health and care needs
- Work with HSC and our population to capture requirements and expectations and develop an approach for continuous improvement

INNOVATING

- We will promote innovation and scale up successful ideas to provide the widest possible benefit
- Explore how new technology can be integrated into existing platforms

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for the people that we serve.

Strategic outcome 2



Digital solutions will put quality, safety and improved experience at the heart of all new processes, systems and ways of working across health and care

The digital solutions we design will put our population and our people at the centre, ensuring quality and safety is at the heart of all health and care pathways.

What do we want to achieve?

Standardised pathways designed with service, staff and our population in mind

- Enable clinicians and staff to maximise the impact of remote and proactive care
- Enhance ability of clinicians and staff to deliver the highest quality and safest healthcare
- Ensure standardisation of pathways that prioritise quality and safety and digital first approach
- Ensure our population are cared for at the right place, at the right time

We will build **standardised pathways designed with input from our people and our population in mind**. Digital solutions will put quality and safety at the heart of all processes, systems and ways of working, enabling clinicians to maximise the impact of remote, proactive care and improving the patient experience.

Our standardised pathways, powered by digital, will improve the consistency, quality and safety of care that is being delivered across Northern Ireland. We will focus on **system integration and cybersecurity** so that our new solutions can provide data and insights to support evidence-based decision making for our staff.

What will the future look like?

For our population:

- Care decisions based on a **greater volume and quantity of data**.
- **Information stored in one place**, to be accessed by both patients and care providers – so **patients only need to tell their health and care story once**.

“

I know that my care pathway is based on high quality health data, which means that my treatment journey is more personalised

”



For our people:

- Our solutions help to **minimise unwarranted variation in care**
- **One unified system** across HSC makes systems more **streamlined** and **intuitive**
- **Easier access** to the correct patient data makes clinical decision making **easier and safer**

“

It is easy to access all the information I need in one place, which makes clinical decision making safer and easier.

”



Personalisation of care



Digital solutions will put quality and safety at the heart of all new processes, systems and ways of working across health and care pathways

This illustrative patient / care professional perspective shows how our digital solutions will put people at the centre, ensuring quality and safety is at the heart of all health and care pathways.

Brendan Cullen – someone living with a long term condition



Age: 51
Occupation: Factory Worker
Location: Bellaghy

- Brendan has been living with a chronic chest condition for over 10 years as a result of his life-long smoking habit. He sees a specialist in the respiratory team at his local hospital and has been referred back to the care of his GP.
- Brendan's GP has worked with him both to treat his lung condition and to introduce healthier lifestyle habits that could reduce his risk of complications in the future.
- Brendan chose to use a digital application to motivate him to exercise and track his cigarette usage. The application sends him reminders and enables his GP to track his progress and tailor his treatment plan. Brendan can also see how his health markers are improving over time.
- Brendan is more motivated to quit smoking than ever before, as he was involved in designing his care pathway.

Leah Taylor – GP



Age: 38
Occupation: GP
Experience: 12 years
Location: Mid Ulster Hospital

- By implementing standardised care pathways, my colleagues and I are collecting the same data and can measure patient outcomes. This helps us to track a patient's progress long term and make adjustments to their treatment plan.
- As standardised treatment plans are tried and tested, we can provide the same high quality of care and safety to each patient over a long time horizon.
- I can track my patients' health via computer software that is linked to a patient-facing application. The software aggregates the data to identify trends, making it easier to make evidence based decisions. This will also help us to improve the care plans we implement in the future.
- I can review and update my patient's treatment plan remotely.

How will we get there?



Digital solutions will put quality and safety at the heart of all new processes, systems and ways of working across health and care pathways

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome

IMPLEMENTING

MAKING BEST USE OF

INNOVATING

- Quality and safety will be at the heart of all system integration and new processes implemented across our digital portfolio
- We will have a disciplined and robust approach to implementation and business readiness
- We will focus on building awareness and understanding of the systems and our requirements on the users of them
- We will build robust change management and continuous improvement processes that ensure safe integration and implementation of parallel or supplementary systems
- We will focus on capability development in our workforce, including routine training and development activities that keep our systems and the data they hold safe
- We will ensure our workforce and system users understand our protocols and processes regarding safety and quality.
- We will need to conduct routine reviews of our systems and tools and identify and pilot new solutions carefully before scaling them up.

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for the people that we serve.

Strategic outcome 3



Effective and joined up care through systems integration and streamlined information flows

Digital solutions with a focus on systems integration and streamlined information flows will optimise efficiency and productivity across care delivery and operations.

What do we want to achieve?

Streamlined information flows, including accessibility and quality

- Improve communication and coordination between staff and amongst teams using a single system approach
- Paperless systems, online services and information governance are prioritised by default
- Optimise the way our workforce and resources are managed
- Enable real-time system updates between both internal databases and with external organisations

We will **implement streamlined information flows**, ensuring accessibility and quality of information that adhere to our redefined data and information quality standards. We will ensure our systems speak to one another and share information, including standardised clinical codes and data tables.

We will work to review and update access for users across the HSC and our partners in supporting health and social care to ensure that our people have the right information and tools to do their jobs. We will integrate the joint care record across acute, primary, social, community and mental health to improve care delivery.

What will the future look like?

For our population:

- It's easier to use HSC online systems, which are intuitive and joined up.
- **Information can be accessed from the same place**, so people only need log in once.
- The referral process is **faster and more streamlined**, so that nobody falls through the cracks.

“
My referrals are processed quickly and easily and I am less reliant on paper letters because all the information I need can be found online.

”



For our people:

- Information is more accessible and **processes such as referrals are faster and more streamlined**.
- **One unified system** across HSC makes systems more **streamlined** and **intuitive**
- **The systems 'speak' to each other** which helps to keep information up to date.

“
It is fast and easy to access all the systems I need day to day and I can trust that there is a single source of truth for information.

”



Personalisation of care



Effective and joined up care through systems integration and streamlined information flows

This illustrative patient / care professional perspective shows how digital solutions that focus on systems integration and streamlined information flows can optimise efficiency and productivity across care delivery and operations.

Maureen Quinn – Physiotherapy patient



Age: 74
Occupation: Retired
Location: Derry

- Maureen has severe arthritis and is being treated for loss of mobility by a physiotherapy team and orthopaedic specialist. She has become more forgetful as she has gotten older and often sees different therapists and doctors throughout her treatment.
- Maureen's digital care record is updated at every appointment, so she doesn't need to remember everything for the next healthcare professional that she sees. Everyone is aware of her history and conditions when she arrives at appointments which makes her feel safe and saves time during appointments.
- If her condition changes and she needs to be referred elsewhere, a digital referral is generated immediately and Maureen receives confirmation to her phone or through the post as she chooses.

Emily Jones – Physiotherapist



Age: 37
Occupation: Physiotherapist
Experience: 16 years
Location: Altnagelvin Hospital

- Emily's patients have one digital record that is shared across all care settings, so she can see the same information as the other healthcare professionals involved in the care journey.
- When Emily treats Maureen, she can see if the orthopaedic consultant has added any further recommendation or changes to Maureen's treatment plan. Emily feels secure in the knowledge that Maureen's health and care information is up to date.
- Emily spends less time writing paper letters and emails – instead she fills out one concise form which enables her to spend more time with her patients.
- Emily doesn't waste time having to log in multiple times as there are far fewer systems that she needs to use.

How will we get there?



Effective and joined up care through systems integration and streamlined information flows

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome

IMPLEMENTING

MAKING BEST USE OF

INNOVATING

- Systems integration will include adoption of streamlined systems and information flows, alongside system replacement programmes that are currently underway
- The implementation of our transformational programmes will be crucial in setting the foundations for a wider focus on providing integrated experiences for users
- The decommissioning of legacy systems.
- Acute screening programmes, Community and Primary Care integration programmes will lead the way in adopting new systems and we will need to learn lessons throughout.
- Our GP Intelligence Platform and GP 2 GP information transfer will be a driver in developing streamlined information flows between organisations to make services more intuitive for patients
- We will seek out opportunities to improve interoperability between systems by building agile teams of digital professionals and our HSC staff to identify areas for change and adoption of new ideas and technologies

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for the people that we serve.

Strategic outcome 4



Digital will enable our people to work more efficiently and collaboratively across standardised systems

Digital solutions underpinned by standardised systems will allow our people to enhance how care is provided to our population and improve health outcomes.

What do we want to achieve?

Digitally assisted care

- Enhance care delivery through advanced digital solutions across standardised systems
- Optimise system management and updates creating opportunities for staff collaboration

Digital career pathways

- Incorporate digital skills across a variety of career paths, including among health and care professionals and HSC leadership groups
- Improve the standard of training available to staff through new technology

We will **enhance care delivery through improved digital solutions**. We will focus on solutions that improve decision-making and release staff time. We will support our people to improve outcomes by adopting assisted care technologies, as well as those that reduce the administrative burden. We will work with our people to develop their digital skills and provide the tools and resources to fully utilise our systems; embedding a culture of continuous digital learning.

What will the future look like?

For our population:

- People get to **spend more time with their care provider**, as the administrative burden for them is reduced.
- The different services talk to each other, which makes **referrals and transfers more streamlined**
- There are **standardised processes in place** for all of my care needs

“

The digital systems used by me and my care providers free up our time, so that we can spend it talking face to face about my care.

”



For our people:

- **Digital capabilities are embedded** into teams at all levels, which enables **collective learning and understanding**
- There is **clear leadership and responsibility** for the **best practice use** of our systems
- Solutions improve decision-making and **release staff time**

“

I am confident using the new digital systems that we have in place and I can use them to improve the way I deliver care

”



Personalisation of care



Digital will enable health and social care professionals and staff to work more efficiently and collaboratively across standardised systems

This illustrative patient/ care professional perspective shows how digital solutions underpinned by standardised systems will allow our staff to enhance how care is provided to the population and improve health outcomes.

Michael Ryan – Someone living with complex needs



Age: 79
Occupation: Retired
Location: Ballymena

- Michael is living with multiple conditions including Parkinson's disease and a heart condition.
- In order to reduce the burden of travel for Michael, he is cared for in his home by a number of different care professionals.
- Michael feels safe in the knowledge that they are all 'aligned' and can communicate with each other and himself. He can send an instant message if he has any concerns.
- Michael doesn't have to repeat his health story at each new visit and the healthcare professionals are aware of any changes to his treatment plan. Michael's carers input his data into a shared system from which his consultant can regularly monitor his condition.

Anika Emerson – Cardiovascular Consultant



Age: 38
Occupation: Cardiovascular Consultant
Experience: 10 years
Location: Roe Valley Hospital

- Anika is a consultant overseeing Michael's complex care requirements. She works out of Roe Valley Hospital and keeps up to date with his condition via an online portal that tracks his conditions as he uses telehealth monitoring and online questionnaires to answer questions about his condition.
- Michael's information and supporting clinical systems can be accessed from the same place, which makes administration quicker and easier.
- Anika conducts Michael's consultations via virtual video link so that he doesn't have to leave his home.
- Anika sees Michael's updates in between his consultations and can proactively manage his care as and when is required.

How will we get there?



Digital will enable health and social care professionals and staff to work more efficiently and collaboratively across standardised systems

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome

IMPLEMENTING

- We will support our HSC staff to embrace change and invest time in developing the required knowledge and skills to use them effectively
- We will develop robust business change and training processes that allow staff to understand and feel confident using our new systems – we will focus on cultural change, driven by supportive leadership that enables learning

MAKING BEST USE OF

- The optimisation of standardised systems and processes, will help HSC and digital staff to work more collaboratively
- We will embed further functionality into existing systems as part of our 'Once for NI' approach, reducing the administrative burden of accessing information across multiple

INNOVATING

- We will provide opportunities for all staff to input into system reviews and innovation activities
- We will pair our front-line staff with our digital experts to identify the best ways to implement new changes
- We will integrate our systems and refine information storage into fewer different places, making access to information quicker and easier for our people

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for population.

Strategic outcome 5



Intelligent use of data will optimise performance and harness population health insights, whilst ensuring robust data protection standards

Intelligent use of data, underpinned by seamless access, will support integrated management of care pathways.

What do we want to achieve?

Data accessibility and protection

- Improve the accessibility and quality of health and care data to make the right data available at the right time
- Ensure robust data protection standards and cybersecurity

End to end pathway

- Address peoples' end-to-end care pathway through increased data insight

Through the establishment of the HSC data Institute we will **improve how we collect and use data as an organisation and** enable greater access for users across the system who require it to support decision-making. Intelligent use of data will help us to deliver care across our system and ensure the population receive the right treatment and support.

We will review how we govern data across HSC, defining a new organisation that will oversee the management and quality of our data. We will focus on education, data quality, analytics and insight and governance to ensure that we are truly harnessing the power of the vast data that we collect and record.

What will the future look like?

For our population:

- People can **access the health and care information held about them online, on demand.**
- The **quantity and quality of data** held about people is improved, which helps to **personalise care.**
- Data is **securely protected** by **robust cyber solutions.**

“

I can access my healthcare data whenever I want to and I feel safe in the knowledge that it is securely stored and I can control who has access to it at any time.

”



For our people:

- Health and care staff can access **records** and history so that they are **well informed** before they begin a consultation.
- There are **clear and transparent data governance processes** in place, which improves data quality and access.

“

I can make care decisions based on a wealth of evidence and data, which improves the outcomes I can deliver for my patients.

”



Personalisation of care



Intelligent use of data will optimise performance and harness population health insights, whilst ensuring robust data protection standards

This illustrative patient / care professional perspective shows how intelligent use of data - underpinned by seamless access - will support integrated management of our patients' pathways, through the achievement of this strategic outcome.

Nick O'Reilly – Someone living with a long term condition



Age: 36
Occupation: Commercial Assistant
Location: Belfast

- Nick has a chronic muscle condition that requires him to use a wheelchair full time and he sometimes needs to take a lot of time off work to manage his energy levels. He doesn't like to talk about his condition at work as he fears it will affect his opportunities for promotion.
- Nick knows that any changes in his condition are confidential and kept between him and his health and care specialists. Nick has access to all the records and information held about him and knows that this data is kept safe and secure.
- Nick can choose when his data is made accessible to health and care professionals as part of his treatment pathway and knows that only those that need to use the data to make care decisions will be able to view it.

Aaron Sullivan – Data specialist



Age: 34
Occupation: Data specialist
Experience: 5 years
Location: Belfast

- People can choose to share data anonymously with analytics and operational teams, so that aggregated data can be collected to improve delivery of care across HSC.
- This data enables us to understand the priorities for HSC and measure how well we are doing against our various objectives.
- Together, this helps us to improve care journeys and outcomes in the future, as well as reduce staffing pressures and make efficient use of funding.
- Various datasets can be combined to draw more complex insights from across the health and social care system.

How will we get there?



Intelligent use of data will optimise performance and harness population health insights, whilst ensuring robust data protection standards

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome



IMPLEMENTING

MAKING BEST USE OF

INNOVATING

- We will ensure we have the tools and skills within our organisation to harness this data and create insights for HSC staff to use when supporting our population
- We will develop pathways for staff to learn and build their analytics capabilities
- We will focus on data quality and safety, including through our cybersecurity initiatives and programmes
- We will optimise our systems with a view to collecting and leveraging more data. We will focus then on turning this into actionable insights that help us to improve our care and services
- We will continue to develop robust standards and processes to capture this new data at a local and regional level
- We will look to embed skilled data and analytics capabilities into teams at all levels
- We will develop processes to routinely evaluate the data and share across our organisation.
- We will harness the skills we have built through the first two phases and embrace next generation data & analytics tools
- We will build agile teams of data professionals, equipped with the tools and capabilities required to use our data in innovative new ways

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for the people that we serve.

Strategic outcome 6



Digital will support the acceleration of research and innovation to gradually embrace system leading disruptive and cutting edge solutions

Embed a culture of research and innovation across our organisations, underpinned by expanded collaboration with our key partners.

What do we want to achieve?

Centre of Excellence

- Collate local and regional examples of excellence that help identify, scale and disseminate innovation

Partner collaboration

- Expand collaboration with key partners (ALBs, academic institutions, think-tanks etc.)

Innovation culture

- Embed a culture of research and innovation across the organisation
- Explore seed funding opportunities to support and scale up ideas

Through the establishment of the HSC Digital Innovation Hub we will **create local and regional centres of excellence** that help identify, scale and spread innovation. We will use technology and digital tools to improve our ability to translate research outputs into clinical practice.

We will expand collaboration with our key partners, including arms length bodies (ALBs), academic institutions, pharmaceutical companies and others to improve how we deliver research and innovation and enhance our reputation as an innovative body.

What will the future look like?

For our population:

- Our population benefit from **cutting edge diagnostics and treatments**.
- Innovative technologies and tools **enhance patient experiences** using digital solutions.
- HSC partnerships and collaboration with industry enables the delivery of new services that drive **better outcomes**.

“

The digital tools and systems that I am provided with are cutting edge, and I know that I am benefitting from excellent care.

”



For our people:

- There is a culture of innovation at HSC which makes it **easier to scale and spread new ideas** that surface from the front line.
- Research and Development partnerships provide access to **cutting edge diagnostics and treatments**.

“

We can utilise innovative diagnostic tools and technologies that enable us to deliver better care outcomes for our patients.

”



Personalisation of care



Digital will support the acceleration of research and innovation to gradually embrace system leading disruptive and cutting edge solutions

This illustrative patient / care professional perspective shows how the achievement of this strategic outcome will embed a culture of research and innovation across our organisations, underpinned by expanded collaboration with our key partners.

Nicole Donovan – Someone living with a rare condition



Age: 29
Occupation: Marketing Executive
Location: Belfast

- Nicole has been diagnosed with a very rare condition and her long-term prognosis is uncertain. There are clinical trials going on for new treatments that could help her and she does a lot of her own research about her condition.
- Nicole feels reassured that her specialist bases his care decisions on the most up to date research. Due to HSC's strong links to research organisations, Nicole will soon be able to enrol on an innovative clinical trial that could improve her condition.
- Nicole grants consent for her information to be shared for her potential involvement in clinical trials and ongoing research for her condition.

Maggie Dowding – Rare conditions researcher and academic



Age: 37
Occupation: Rare conditions researcher
Experience: 15 years

- Maggie is researching treatments for a rare health condition and relies on accurate health and care data to inform her analysis.
- Our population from across Northern Ireland can opt in to have their data shared to help healthcare researchers like Maggie.
- Secure access to relevant patient datasets ensures that her research is relevant to the needs of patients and the public and helps HSC improve the care pathways it provides. This enables Maggie to work to improve health outcomes and reach as many people as possible.

How will we get there?



Digital will support the acceleration of research and innovation to gradually embrace system leading disruptive and cutting edge solutions

Our strategic outcomes are the specific objectives for our overall strategic vision and as such they will also be delivered as part of a three phased approach in terms of resource focus. However, individual programmes and projects will follow unique timelines.

Our phased approach to achieving this outcome

IMPLEMENTING

MAKING BEST USE OF

INNOVATING

- Innovation isn't always about inventing something new – we already see quality innovation within our Trusts and departments that changes how we work
- We will continue to embrace innovation within HSC throughout the implementation phase
- We will actively encourage the sharing of best practice and consolidate it centrally for our HSC organisations and staff to access and spread within their respective teams
- We will signpost to important methods and tools that support more innovation
- We will support and scale new innovations across our organisation
- We will develop an innovation pathway, with the supporting infrastructure and governance that provides our people with greater clarity on how to promote their solutions and improve digital services across HSC
- We will focus on developing and nurturing an innovative culture where our people feel confident to try new solutions and provide the most promising intrapreneurs and solutions with the funding and coaching to develop and spread them across HSC

Continuously Improving

While each programme will progress through the three stages above at its own pace, embedding a common approach for identifying improvement opportunities, developing solutions and measuring results will allow consistency in tracking progress against the objectives set out in this digital strategy. Generating robust feedback loops and continuous improvement logs will help to ensure that our care is always improving for the people that we serve.



Digital Enablers

What we need to help us deliver our HSC digital strategy

Our digital enablers

Our digital enablers cut across everything we do. A successful digital transformation relies on many things, from the leaders of the organisation through to the infrastructure that support it. Establishing these foundational enablers is a critical component of our digital strategy and will allow us to deliver on our stated vision and mission for HSC.

Our four enabling categories outline the priority areas that we will build over the lifetime of this digital strategy – we have worked with stakeholders from across the health and social care and our partners who support health and social care, to identify existing challenges, identifying the solutions and changes that we must implement to make it easier for people and systems to work effectively.

We have also identified best practice that happens within each of our Trusts, including local initiatives and activities that have improved the use of digital to deliver services for people. We will seek to explore these in further detail and identify those activities and initiatives that should be scaled up so we can achieve greater benefits across our organisation at a regional level.

Our digital enabler categories



Digital Leadership and Culture

We will promote a culture that embraces digital and data, across the whole of HSC in all settings



Digital Specialist Workforce

We will upskill our digital specialist workforce to ensure we retain digital talent and recruit to build digital capabilities into our HSC teams



Management and Governance

We will provide transparency for our people in how we manage and govern digital transformation across HSC



Infrastructure and Digital Solutions

We must provide effective infrastructure and solutions for our people to do their jobs effectively

Leadership and digital culture

We will develop a culture that embraces digital, from our leadership through to our front-line staff. Our vision for a digital culture starts with a digital-by-default mindset; our leaders must embrace digital to empower and support their teams to adopt new digital solutions and invest time in their own digital literacy.

What does a strong leadership and digital culture mean?



Leaders are ambassadors for digital technologies and data

There is strong trust in digital tools and data to help deliver services and make decisions

Our people are comfortable in an environment of constant digital change and are excited by what digital offers

We work collaboratively to identify new ways that digital can support them in their work

How will we deliver this?

Key:

Foundation

Develop & mature

*Timelines provided are indicative only

IMPLEMENTING

MAKING
BEST USE OF

INNOVATING

Our commitments:

1. To build digital capabilities into teams and roles at all levels by design

Develop digital training pathways

Embed opportunities for digital growth (self-driven) at all existing skill levels

Revise appraisals

Require individuals to demonstrate digital progression for promotion, valuing digital alongside clinical activities

2. To upskill and transform our leaders into digital champions

Define mandatory digital training

Require senior leadership to undertake mandatory digital training courses

Revise staff time commitments

Protect staff time for digital learning

3. To create key digital roles for existing digital champions.

Define digital roles

Include CCIO, CNIOs and other digital leadership roles with clear responsibility and accountability

Create digital titles within clinical roles

Give staff the authority and allocated time to lead on digital transformation within recognised roles.

4. To reward the 'scale and spread' mindset, as opposed to local, siloed innovation.

Define roles and responsibilities for digital leaders around innovation

Include opportunities for scaling local innovation, with accountabilities around scaling up key initiatives for wider impact.

Digital specialist workforce

Our vision for a strong pool of digital talent starts with a clear emphasis on investment in skills development. We will invest in our digital specialist staff through training and support programmes and develop pathways to enable staff to progress.

What does enabling effective Digital Specialist workforce mean?



Our people are highly competent and skilled in using the digital solutions and data tools at their disposal

Our people have the time to invest in their skillset and measure digital knowledge as an element of their performance management

A variety of education resources and programmes are available to staff to support upskilling and career development

We provide fulfilling and exciting career opportunities for our workforce, where they know how they can develop and grow with us

How will we deliver this?

Key: **Foundation** Develop & mature

*Timelines provided are indicative only

IMPLEMENTING

**MAKING
BEST USE OF**

INNOVATING

Our commitments:

1. To make HSCNI an employer of choice within technology to attract digital talent

Create sector-leading digital roles

Embed these roles into legitimate career pathways with regular training and talent reviews.

Require advanced digital skills within job descriptions

Encourage candidates to upskill and uphold the significance of digital within HSC.

Recruit digital professionals

Recruit technology experts from across other industries into digital roles

2. To upskill existing HSCNI digital specialist staff

Support continued professional development

Provide opportunity for further development that supports career progression.

Roll out relevant training

Segment staff by experience level to allocate the most relevant training and development pathways.

3. To partner with Universities to provide undergraduates with digital system training

Build a central ICT centre of excellence

Employ specialist technology professionals in key disciplines

Formalise university partnerships

Discuss potential curriculum changes and work experiences opportunities

Provide on the job training and development for students

Provide training accounts for key systems, alongside development of sandpit training environments.

Management and governance

We will provide transparency for our people in how we manage and govern digital transformation across HSC. Our vision for robust management and governance is reflected in our already established DHCNI governance framework. We will also ensure that digital opportunities are considered in all future HSC transformation programmes.



What does effective Digital Governance mean?

Digital is represented in all major forums and decision-making bodies across HSC

Governance is transparent and provides assurance and clarity for how decisions on digital investments are made

There is strong control over our portfolio and the decisions we make, with the right tools and systems to monitor performance against our objectives

Governance is open and accessible and balances the need for expediency with fair risk and control processes

How will we deliver this?

Key:

Foundation

Develop & mature

*Timelines provided are indicative only

IMPLEMENTING

MAKING
BEST USE OF

INNOVATING

Our commitments:

1. To develop integrated shared governance structures

Review our engagement with our partners in supporting health and social care.

Determine key consultees and clarify responsibilities and accountabilities amongst different healthcare bodies within the ecosystem.

2. To make internal structure, prioritisation and investment clear and transparent through the portfolio prioritisation model

Review approval and consultation processes

Regional programme alignment to ensure deliverable sequencing of programmes

Structure and standardise

3. To implement solutions as per prioritised portfolio plan

Prioritise major programmes delivery in line with the digital strategy

Iterative optimisation and benefits measurement

Infrastructure and programmes

We must provide effective infrastructure and programmes for our people to do their jobs. Our vision is that our people can continuously rely on our digital systems and tools to be accessible and effective when they need them. We will continue to deliver key programmes and improve access for our people across HSC to work in better ways.



What does effective Infrastructure mean?

Systems are safe, robust and reliable – they are accessible at all times

The hardware, software and tools we provide are fit-for-purpose and meet the needs of the users

There is confidence in the programmes and technologies we implement across our workforce

How will we deliver this?

Key: **Foundation** Develop & mature

*Timelines provided are indicative only

IMPLEMENTING

MAKING BEST USE OF

INNOVATING

Our commitments:

1. To replace local design with solutions that are standardised and regionally implemented

Define roles and responsibilities for digital leaders

Include prevention of siloed local design, with accountability for scaling up key initiatives for wider impact.

2. To ensure that programmes are optimised and see evolutionary change

Ensure users have ongoing access to training and support

Include key requirements for optimisation and impact measurement

Ensure solutions are fit for purpose and that our people have opportunities to contribute to the development of solutions

3. To improve quality and use of collected data to drive evidence-based decisions

Access data experts from other sectors and ensure knowledge transfer to our people to sustain services in the future

Make use of data and analytics components of mandatory staff training

Make it easier for staff to record data correctly and hold them accountable for its quality

Promote data career pathways within HSC

4. To ensure that our people have the required digital skills and tools to do their job

Provide our people with the correct hardware, software and training

Enable mobile utilisation of digital services and scale up existing initiatives to provision hardware



Our Digital Portfolio

The programmes and projects we will deliver

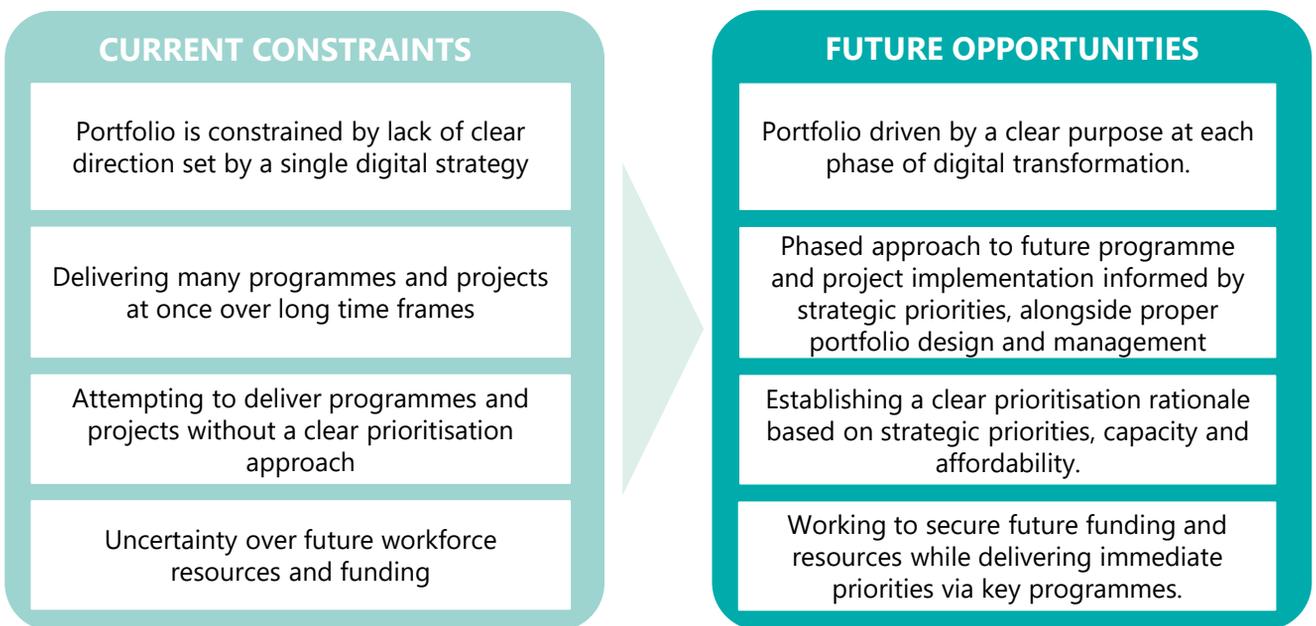
Overview of our digital portfolio

As an organisation, we use a range of digital solutions to support the delivery of health and social care services. At the same time, we manage a digital portfolio of new projects and programmes which are designed, commissioned and delivered to support the improvement of services we provide.

Our digital portfolio includes projects and programmes to support transformation as well as maintaining and upgrading critical systems. Our current portfolio contains a number of key programmes that are required to maintain and transform our digital services.

Our experience in managing and delivering these projects and programmes has highlighted the need for robust portfolio management, which includes how projects and programmes are proposed, funded, resourced and the management of dependencies.

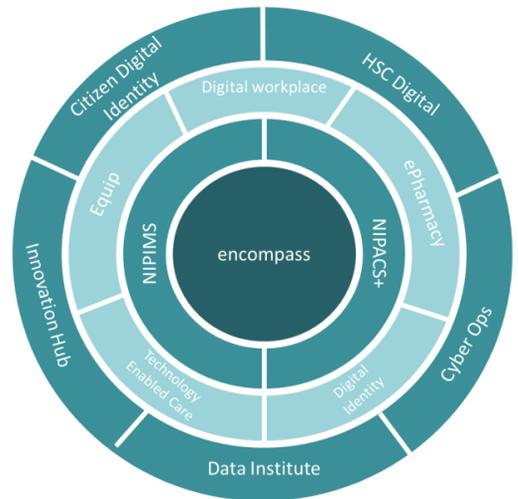
We have faced and will continue to face, a number of constraints in the delivery of our transformation agenda, however, we have been able to identify a series of key opportunities that have informed the development of this digital strategy.



Whilst there are a variety of different projects and programmes in our digital portfolio that will contribute to the overall digital maturity of HSC, our immediate focus will be on the delivery of key transformational programmes that will lay the foundations for service digitalisation. (see pages 25 & 26)

Key programmes

Our strategic roadmap narrows our immediate focus to the most transformative and impactful investments, which will change the way we operate and how we deliver care across all of our services. These regional programmes will provide significant advancements in our ability to support better care for the population of Northern Ireland.



Our key programmes and supporting initiatives for the delivery of our digital vision

Some of the key priority programmes that will set the foundations of our digital transformation and advance our progress towards achieving our strategic outcomes are outlined below. These sit alongside transformation initiatives such as the instigation of hubs for agile digital delivery.

Key Programme	Key Impacts
1 encompass	<ul style="list-style-type: none"> Support joined-up care records across Northern Ireland with the Epic application; which will deliver a single care record and patient portal; A core theme of the Rebuild Strategic Framework and a cornerstone of the joined up systemic approach
2 NILIMS	<ul style="list-style-type: none"> Modernisation of all pathology services through laboratory information management system implementation The NILIMS implementation will speed up testing processes and result reporting
3 NIPACS+	<ul style="list-style-type: none"> Replacement and completion of the roll-out of a 'Once for NI' digital imaging and diagnostics platform for streamlined diagnostics services
4 Equip	<ul style="list-style-type: none"> Deliver and implement replacements for the current FPL and HRPTS systems and continue to invest in leading edge digital technologies
5 Digital Identity Service	<ul style="list-style-type: none"> Replace and transform HCN and NHAIS applications, simplifying the way in which patient and client identity is managed and shared throughout HSC services
6 HSC Digital	<ul style="list-style-type: none"> HSC Digital will create one unified digital delivery capability for HSC by merging Trust, BSO and ALB IT teams into a single delivery directorate for HSC
7 Digital Workplace	<ul style="list-style-type: none"> Deliver on the requirements for increased flexibility in working practices and remove barriers and obstacles to collaboration

Digital delivery centre

Over the next 3-4 years, HSC will deliver key transformation programmes that will change the way health and social care services are delivered. These projects will require significant resource and time investments and will be delivered using appropriate project delivery methodologies, by our delivery organisations.

There is an opportunity to create a dedicated Digital Delivery Centre (DDC) to deliver projects at a smaller scale but with more immediate benefits for people. There are three drivers for this:



Maintain Momentum

A series of projects developed as part of the COVID-19 response have highlighted the benefits of developing and maintaining an agile delivery capability across Northern Ireland. The lessons learned provide a blueprint for future work.



Centralised Capability

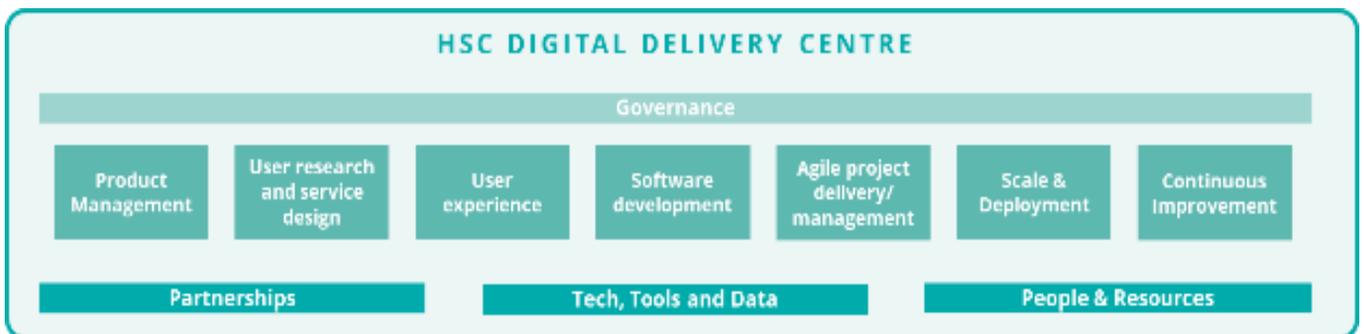
Bringing together the skills and capabilities in a centralised unit will ensure effort and resources can be coordinated effectively. A DDC will also enable the nurturing and development of capabilities and individuals for long-term success.



Building for the future

The DDC could act as a home for new talent pathways and help build a sustainable pipeline of experienced digital practitioners for years to come.

Potential Delivery Centre Structure



Building our Digital Delivery Centre

The DDC is an important piece of our future delivery capability. The projects selected will be part of the digital portfolio and subject to portfolio governance to ensure they are aligned with the digital strategy. The design of the DDC will consider the skills needed to deliver projects successfully. The final home of the DDC will be within HSC Digital and therefore we expect it to be launched in line with the transition to HSC Digital.



Delivery Challenges

Identifying and addressing the challenges we face in delivering our portfolio

Overview of our challenges

Our digital transformation is going to be a demanding and complex journey of change for our organisation and our people. This transformation is set against the backdrop of a series of internal and external challenges that have been exacerbated by the COVID-19 pandemic and we must recognise and address them.

We have outlined an ambitious digital portfolio that when delivered will provide significant improvements to our digital infrastructure, however our experience has shown how complex implementing systems can be. Our Portfolio Delivery Board retains full oversight of our portfolio and consistently tracks programme milestones. Our central Programme Management function works diligently to support project teams in managing timelines, risks, issues and dependencies between projects.

We must also ensure that we have the resources and funding in place to deliver the required programmes. At present, we expect there to be a shortfall between the funding available and what is required to deliver the entire digital portfolio in the next number of years. As such, we will have to make difficult decisions in relation to which programmes and projects we prioritise. This initial prioritisation recognises that we are already committed to several large transformation programmes, as well as those required to maintain critical infrastructure and networks.

The COVID-19 pandemic has exacerbated these challenges, as well as those already being faced within our health and social care system. Digital provides opportunities to support the necessary changes and improvements needed within HSCNI.

Key Challenges



Funding: We must work within a tight funding envelope and prioritise programmes that deliver the most impactful changes – we cannot do everything and will need to be pragmatic in what we can deliver. This will affect the delivery of our outcomes.



Ecosystem challenges: We are facing a series of ecosystem challenges, including the need to reduce our waiting list backlog, an increasing demand on social care services and changing habits of digital adoption – these challenges will require digital support.



Rebuilding services: The COVID-19 pandemic has exacerbated the ecosystem challenges that our organisation is facing and we must agree and plan how digital can support the rebuild without compromising our existing resources and funding envelope.

Our ecosystem challenges

Across Northern Ireland, we are facing significant challenges in the delivery of quality health and social care services – these challenges are caused by both legacy problems and more recently from the disruption caused by the COVID-19 pandemic.

COVID-19 has had a compounding impact on challenges that we have faced for a number of years and has created an additional strain on an already overstretched health and social care system. However, the pandemic has also highlighted the positive impact that digital can play in supporting and the delivery of health and social care services – and we must identify opportunities to build on the momentum of this digital adoption.

Supporting the adoption of digital to deliver on our stated vision and mission for HSC means creating the right conditions within our organisations to enable digital to cut across everything we do. Our digital strategy outlines the establishment of foundational enablers around culture, governance, infrastructure and talent. At every stage of the transformation journey, it is imperative to consider whether digital can play a leading, enabling or supporting role in the delivery of key programmes and projects to help us resolve our most pressing challenges.

DIGITALLY LED

Digital plays a leading role in the delivery of the programme/initiative

DIGITALLY ENABLED

Digital plays an enabling role in the delivery of the programme/initiative

DIGITALLY SUPPORTED

Digital plays a supporting role in the delivery of the programme/initiative

Managing and reducing the current waiting list backlogs

Return to full service delivery post COVID-19

New requirements around patient engagement, virtual elective care and responding to shifting demographics

Increasing demand for adult social care services

Managing chronic morbidities

Ensuring sustainability of digital services and reducing our technical debt

Training model for multi-professional education and learning



Our Delivery Ecosystem

How we will deliver digital transformation as an organisation

Our Digital Ecosystem (1/2)

Digital Transformation for HSC will require an ecosystem-wide response and will need to work closely with organisations to deliver on a common goal. Alongside this, we will need to be mindful of where responsibility and accountability for digital transformation lies, including management and oversight. A cohesive health and social care ecosystem is one that shares information and ideas, consults regularly and has clearly defined roles, responsibilities and lines of management. This section of the digital strategy explores the future structuring of roles and responsibilities of HSC and our partners with respect to the delivery of digital transformation.

Sustainable change requires an ecosystem-wide response.

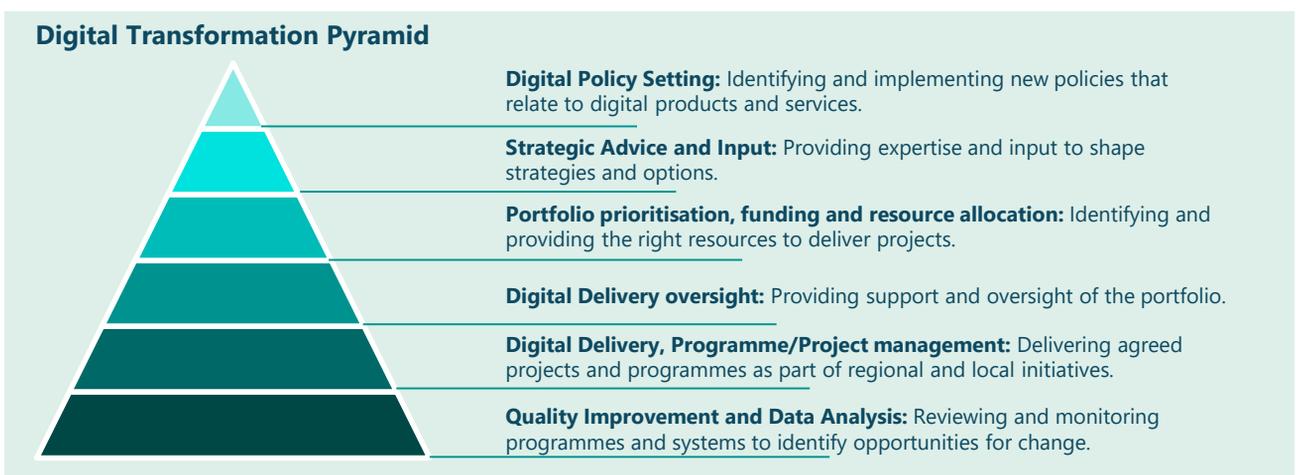
The Health and Social Care Ecosystem

Our health and social care ecosystem is large and complex, with both regulated and non-regulated entities playing important roles in the delivery of services for our people. We rely on key partners across this ecosystem to deliver health and social care services and we must ensure that the right tools and systems are in place to support this.

Our digital transformation agenda must reflect the needs of these groups and this digital strategy aims to ensure those needs can be met. However for any transformation to be successful, our partners must be engaged and accountable for supporting delivery. In this section, we outline the key roles and accountabilities that we will look to establish and strengthen with our partners.

Our Digital Transformation Pyramid

Our Digital Transformation Pyramid sets out six core activities that are required to deliver successful digital change. In the development of this strategy, we have worked with stakeholders from across our ecosystem to develop roles and accountabilities.



Our future digital structure

Successful digital transformation requires clear and effective management and accountability, as well as defined digital and business governance. Clear structures that empower our leaders to take decisions and manage resources effectively will build digital momentum, whilst enabling appropriate oversight of digital activities.

On the previous pages, we have outlined how digital transformation responsibilities can be owned and implemented across the relevant organisations within the HSC ecosystem. We must also consider whether there are further organisational changes that would improve our ability to deliver the ambitious and complex digital transformation we have planned. Our counterparts across the UK have already shifted towards more centralised structures with accountable leaders, ringfenced budgets and clear mandates for the delivery of digital services within their respective health and social care systems. The graphic below explores key features of changes that have been made in England, Scotland and Wales to deliver their digital transformation agendas. Consideration of the potential benefits of new approaches to digital delivery and management for Northern Ireland will be an important next step.



NHS Digital was established in 2013 to act as the centralised data, digital and IT organisation for health services in England, now part of NHS E/I. NHSD has **seven directorates** that bring together all aspects of digital services including cyber, platforms, product development and digital strategy. In 2019, **NHSX** was established to set national policy and develop best practice for NHS technology, digital and data. Both are now part of NHS Transformation Directorate.



Digital Health and Care Wales (DHCW) was established in 2021 as a special health authority in Wales to take forward digital transformation with full representation of all statutory authorities and health and care agencies. DHCW is responsible for ensuring digital delivery alignment across health and social care, delivering and expanding the digital health and care record and enabling big data analysis. It is independent from NHS Wales with its own chair and board.



NES Digital Service (NDS) is Scotland's primary digital health body set up in 2018. It is responsible for the delivery and management of digital programmes including building infrastructure, products and services. NDS supports a shared national infrastructure for NHS Scotland and other third parties, which drives a centralised and standardised approach to digital healthcare.

Our Digital Delivery Organisation

As we prepare to implement this digital strategy, we will seek to review our IT delivery functions and teams and explore whether any changes should be considered to develop a more cohesive digital delivery organisation with clear accountabilities and effective capability groups. This review will reflect our desire to ensure that our structures and collaborative ways of working are developed in a way that improves our ability to deliver our strategic outcomes and focus on delivering value for money, ultimately enabling more efficient delivery of digital care for the people of Northern Ireland.



Partnerships

How we plan to work with our partners to deliver our HSC digital strategy

Our partnership approach

Our Ecosystem Partners

To ensure successful digital transformation, we must also work with those who use our digital services and tools. Establishing strong, ongoing partnerships with these groups will provide mutual benefits and as such we will outline a number of commitments that we will make to our partners, as well as our expectations of them to support our digital agenda. We have provided a summary of our partnerships and the initiatives we will create and foster in this section.



Our Population

Summary: The people that use our services are central to everything that we do in HSC – our vision is based on providing digital health and care services to enable better processes, support improved care pathways and ultimately, deliver better outcomes for all.



Our People

Summary: Our staff are the lifeblood of the health and social care services we deliver – they are also often the primary user of the digital tools and products we deliver. Our obligation to them is that tools are fit-for-purpose and designed with user experience in mind.



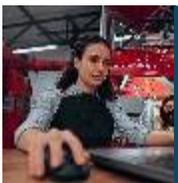
Universities, Higher & Further Education

Summary: HEIs and Further Education Institutes are a vital research and innovation partner and an important partner in teaching and developing the next generation of health and social care professionals. We will rely on them to replicate our digital advancements in their courses.



Arms-Length Bodies (ALBs)

Summary: ALBs are a key partner in our delivery of quality care and will be an important source of expertise and insight in our digital transformation. We will rely on them to provide input and feedback.



Digital Suppliers

Summary: We will rely on suppliers to support us in delivering strategic and technology programmes, bringing their industry expertise to complement that of our in-house delivery teams. We will ensure we have an effective supplier management approach to support this.



Sector Partners

Summary: We will work with the community, voluntary and independent sector to drive seamless patient journeys and greater alignment across health and care in Northern Ireland. We will also work with these partners to deliver improved health outcomes.

Supporting our population

HSC exists to help the people of Northern Ireland to keep well. That’s why we are committed to strengthening and improving the quality and effectiveness of personal and public involvement, to tackle inequalities in health, promote health and wellbeing and to improve service delivery and patient experience.

A health and social care service that is truly people focussed requires consistent collaboration and co-development, particularly with regard to the design and delivery of digital services. We have set out three key requirements of the population that we serve in delivering digital transformation, alongside our commitments as an organisation to enabling them.

Our requirements	Description	Our commitments
Co-designing services	We want services to address user-needs and therefore it’s important to hear about health and care experiences, personal needs and opinions on new services as they designed and rolled out.	We will work with focus groups representing our population throughout service development to capture requirements and design digital services.
Awareness and utilising our digital services	New services and platforms take time to learn and adjust to and users will need to take time to understand how to engage with them. This is a critical success factor in ensuring they are successful.	We will provide digital channels to support people in using new digital systems and services. HSC will also expand existing initiatives that support digital education within the community.
Managing their information	Our population must be active participants in the security and use of their data. Through patient portals, people will have access to their health and care information and will be able to take responsibility for its accuracy.	We will further enhance our stringent security measures to protect the data – we will build data quality checks into our systems and introduce new learning for our staff and awareness of information governance for our population. .

Table 3. Our requirements and commitments for supporting our population

How does this improve the care our population receives?



Greater control over your own health data

Our new systems will provide you opportunities to manage and maintain your own data – bringing you closer to the care you receive.



Services that better meet your needs

By working with us to design digital services, the health and care services you receive will more closely meet your needs and expectations.



Reduced waiting times

Integrated systems, designed with your input, mean that we can identify the right pathway more quickly and progress your care.



Paperless communications

As more information is shared, you will be able to digitally communicate with those who care for if this is your choice and appropriate to do so.

Supporting our people

Our people are fundamental to everything we do and deliver – they are the primary user of our digital systems and tools and therefore are critical in the success of our digital transformation. We recognise and understand that our people need digital systems and tools that are enabling and support them to do their job better.

Therefore, digital transformation must involve close collaboration with our people to ensure that systems meet their needs. We will ask them to help us in three major areas:

Our requirements	Description	Our commitments
Subject Matter Expertise	Our people are the experts in their domains, with the knowledge and expertise in the delivery of care. We will rely on them to provide this expertise to help us create and deliver tools and systems that map to existing models of care, or help to define better models.	We will work closely with our professional groups across all health and care settings to define digital pathways. We will provide opportunities for our people to be embedded in programme teams to support and evaluate the delivery of new tools.
Championing digital change	Systems and tools are only effective if people use them and feel confident in using them. We need staff to act as change leaders in our digital transformation, actively using and investing the time to understand systems and training those around them to as well.	We will provide opportunities for staff to take on 'Digital Champion' roles, providing the support, training and recognition for doing so.
Providing Feedback	Systems are rarely perfect first-time and so we will require constant feedback and ideas from our key users – this will ensure we can continuously improve services and the outcomes that we are delivering together.	We will create new forums for staff to share experiences and improvements for systems – we will provide mechanisms to incubate and scale staff-led innovation and recognise staff for ideas that scale.

Table 4. Our requirements and commitments for supporting our people

How does this improve working?

	Intuitive and integrated experience	Designing systems with the right expertise ensures that we can align processes and care pathways, providing a better experience for users.
	More time to focus on patients	As we introduce co-designed systems and tools, especially those with greater automation, staff will be free to spend more time with those they care for.
	Improved satisfaction and performance	Our systems are better designed for users and constant evolution means our staff are confident to request changes that improve use and care.
	Greater flexibility and remote working	As our systems advance, the flexibility to access them from anywhere will mean that our staff can do more work remotely.

Working with educators

Our academic institutions are an important partner in teaching and developing the next generation of health and social care professionals. We will rely on them to replicate our digital advancements in the modules and courses they deliver. Our universities will also continue to be a vital research and innovation partner for us.

We are extremely fortunate to have existing partnerships with our Northern Ireland universities and colleges and are committed to furthering these partnerships to ensure they are mutually beneficial.

Our requirements	Description	Our commitments
Digital awareness, upskilling & readiness for our staff	Academic institutions provide us with the workforce of the future and we need those who are joining us to understand and feel confident in building their careers with us. We need people who are comfortable using the systems of tomorrow specifically using data to deliver evidence-based care.	We will work with academic institutions to increase the awareness and visibility through increased engagement and insight sharing. We will share more of our digital strategy and solutions and the impact that they have on providing health and care.
Integrate digital tools training into education pathways	As part of our transformation, we must ensure new programmes and tools are replicated in our education pathways. We need to provide the right levels of access for students to undertake practical learning in a safe environment.	HSC will engage with academic institutions to discuss how we can support changes to existing curriculums based on the digital programmes we are implementing. We will conduct an system access review and identify where more access can be provided.
Support digital innovation and research	Our academic institutions have innovation and research capabilities that can support us to develop new treatments, processes and services. We need them to continue their important work in collaboration with HSC as we continue to transform our organisation and the services we deliver.	We will work to identify new collaboration methods that support effective research and innovation. This will build on our existing support for Ulster and Queen’s University innovation centres. We will seek to share more data and insights with our academic institutions in order to develop new and better digital health solutions.

Table 5. Our requirements and commitments for working with our academic institutions

How does this improve sustainable delivery of care?



Sustainable pipeline of HSC professionals

Developing and encouraging digital career paths will support us to build a sustainable workforce who will support our ongoing transformation.



A digitally prepared workforce

Enabling access for students to develop practical experience and knowledge of systems will support them to deliver great care from day one.



Continuous focus on improvement

As we strengthen our research and innovation methods and share more data and insight, the services we provide will continue to improve.

Working with ALBs

Arms Length Bodies (ALBs) provide a significant and sustained improvement effort in our work to progress digital health and social care services in Northern Ireland. They are a key partner in our delivery of quality care and will be an important source of expertise and insight in our digital transformation.

Our digital transformation must be undertaken in collaboration with our ALBs to ensure that we can collectively meet the needs of our people and our population, as well as support the ALBs that work with us. We work with a wide range of partners including trusts and other related organisations. These include PHA, BSO, RQIA, NISCC, NIBTS, NIGALA, NIMDTA, PCC, NIPEC and NIFRS.

Our requirements	Description	Our commitments
<p>Provide input on digital solution design and delivery</p>	<p>A key part of digital transformation for HSC will include the integration of our ALBs in providing input into the digital solutions that we plan, design and deliver, providing their unique perspectives.</p>	<p>We will ensure that representatives from our ALBs form part of planning and design teams for new solutions, acting as an important voice in developing solutions.</p>
<p>Providing Feedback</p>	<p>As users and customers of the digital solutions we implement, ALBs will be well placed to provide feedback on user experience, effectiveness and value. We will ask ALBs to share constructive suggestions for improvement with us and work to design changes that meet the needs of their organisation's users.</p>	<p>HSC will create new forums for ALBs to share feedback and invite ALB representatives to join design and delivery teams where new digital programmes are being commissioned.</p>

Table 6. Our requirements and commitments for working with our Arms Length Bodies

How does working with ALBs improve our digital offering?



Global insights and experiences

Our ALBs can bring experience and knowledge from specialist fields and perspectives that will enable us to develop global benchmarks.



Improved quality of solutions

As we strengthen our relationships with ALBs and improve our understanding of requirements, we will develop better solutions.

Working with digital suppliers

HSC relies on a vast number of suppliers and service providers to help deliver across our health and social care system – our digital transformation is no different. We will rely on suppliers to support us in delivery of strategic and technology programmes, bringing their industry expertise to complement that of our in-house delivery teams.

We will ensure we have an effective supplier management approach that sets out where and how to best use supplier organisations and embed them into our existing delivery structures.

Our requirements	Description	Our commitments
Bring learnings from wider industry	Our suppliers come with strong cross-industry experience in digital strategy and technology transformation – as we undertake our digital transformation, we will require learnings from across industry to support the implementation of our programmes.	We will work with suppliers in the market to identify opportunities for collaboration and where they can best support us within procurement and legal guidelines.
Solution focussed approach	As our health and social care system evolves and continues to respond to public health challenges, we need solutions that support us. We must focus on interoperability of systems, analytics and technologies that support decision making and support people.	We will work with partners to define clear requirements and specifications that enable better solutions for our people. We will engage regularly with the market to understand and share our requirements to help shape future offers in digital health and social care.
Understanding the landscape and our context	Our planned portfolio of programmes and projects is a significant investment of resources and time and will be very complex to deliver. Our health and social care system is also under significant strain as a result of the pandemic. We need partners who understand our challenges and can work with us to address them without working beyond our means.	We will be transparent with our partners, sharing regular updates on the wider challenges of our system, our understanding of the risks involved and working constructively with them to solve delivery challenges.

Table 7. Our requirements and commitments for working with our suppliers

How does this improve digital service delivery?



A more informed transformation

As we engage with suppliers more regularly, we will gather greater insight and exposure to successful transformations that we can replicate.



Improved quality of solutions

As we strengthen our relationships with suppliers and improve our understanding of requirements, we will develop better solutions.



Increased value for money

A more accurate and targeted use of suppliers to support us in implementing solutions will reduce risk and improve delivery efficiency.

Sector partners

As we continue our digital transformation, we will look to expand our partnerships and work more cohesively with external care providers and those organisations that support the delivery of health and social care.

HSC is dependent on private sector domiciliary care providers, care homes and private clinics who deliver services on our behalf, as well as the community and voluntary sector who provide valuable support to our services. In addition there are a number of organisations and initiatives that HSC can work with to harness expertise, insight and resources to enhance our digital transformation.

Our requirements	Description	Our commitments
Investing in health and social care services of the future	We will work with our partners in the third sector - scanning for future new and emerging digital solutions and opportunities and take an active role in the co-development of new solutions	We will continue to horizon scan for new digital development, trends and opportunities by working closely with research agencies and industry. We will continue our work with the City Regions on the City Deal, towards the delivery of more than 20 highly ambitious projects and programmes.
Collaborating to co-invest in services that improve the lives of the people of Northern Ireland	We should continue to identify areas of joint working with third parties across all sectors, where knowledge and expertise outside of HSCNI can be tapped to co-design solutions and deliver tangible digital development for HSC and improved outcomes for .	We will develop a common approach for HSCNI to engage with third parties (especially those within the Digital Ecosystem) to deliver mutual benefits. We will explore opportunities to work with Digital Catapult NI which supports the growth of companies based in the region, accelerating the adoption of emerging technologies for commercial benefit.
Improving communication with private sector care providers to drive more integrated care pathways	We will work to communicate better with private sector care providers who deliver services on our behalf, so that we can deliver a more integrated care experience for patients that is easier to navigate.	We will co-design relevant care pathways across public and private sector care providers, to build a standardized patient journey between providers. We will keep our private sector partners informed of any relevant developments within the HSC and maintain a culture of collaborative working.

Table 7. Our requirements and commitments for working with our Third Parties

How does working with third parties improve our digital offering?



A more informed transformation

As we engage with third parties more regularly, we can integrate insights – and keep pace with – solutions from the private sector



Improved quality of solutions

Through strengthened partnerships and collaborative working, we can improve the quality of the digital solutions we implement at HSCNI



Our Digital Charter

What we will put in place to action our HSC digital strategy

Our supporting commitments

To ensure we deliver this Digital Strategy, we will establish a Digital Charter that we will share across the HSC, working with all organisations to tailor these commitments to those things that are most important to them and asking their leadership and staff to sign up to the journey towards better and more digitally enabled Health and Social Care. This charter outlines organisational commitments to ensuring successful digital transformation and we will work with our people and partners to support this.

The checklist below contains a number of commitments – we will work with our stakeholders to further design these commitments to create a positive culture and ownership in the implementation of the strategy. The charter will also enable us to actively monitor our performance and effectiveness.

Clinical Digital Leadership (e.g. CCIOs) <i>medical, nursing, social work, AHP etc.</i>	All HSC organisations will have CCIOs <i>representing the breadth of health and care professionals</i> who will be responsible for ensuring that the design, implementation and use of digital technology is done safely and with our population in mind.
Digital Networks	We will work with professional and provider organisations to develop a Digital Network of professionals involved in Health and Social Care who connect regularly and feed into governance structures at all levels.
Digital Careers	We will work in partnership with professional organisations to ensure support for the development of digital career pathways and develop career opportunities that attract the best talent (both new talent and from industry).
Digital Champions	We will work with our partner organisations to identify, train and support digital champions to promote digital ways of working and adoption of a 'digital first' culture on the ground.
Digital Governance	Our existing structures will be reviewed and we will commit to improving the governance of digital across HSC to ensure it supports effective decision making and service delivery.
Collaborative working	We will engage actively and continuously with our partners from across the system, as well as in the independent and third sectors, academia, suppliers and the population to develop services.



Strategic Alignment

How our Digital Strategy aligns to the wider HSC Strategies

Integrating our strategies

Our digital strategy is just one piece of the strategic fabric that ties together how and what we deliver for our people. We must ensure that digital complements the wider strategies that exist, but also that we set out priorities and requirements for the supplementary strategies that will enable our digital transformation.

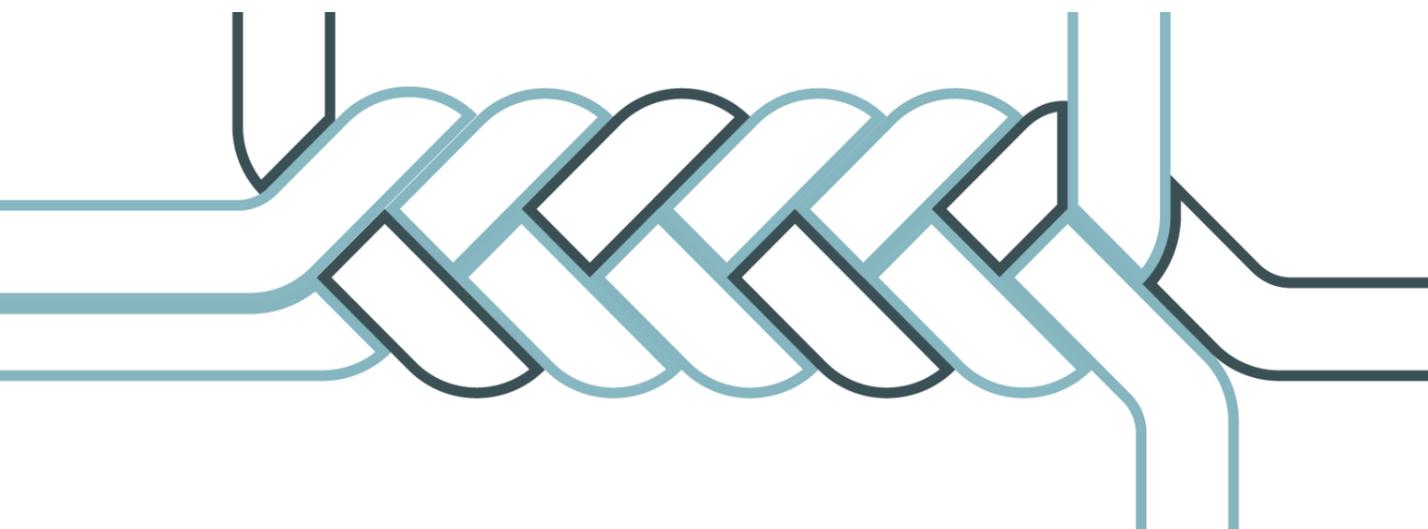
There are four key strategies that are tied to our work in digital – in this section we explore the relationships between the strategies and how digital must be aligned to support the effective delivery of their objectives and goals.

Cyber Security

A strategy that outlines our priorities and actions to keep our digital infrastructure and information safe. The threat of intrusion has never been stronger – our cyber strategy sets out how we will respond.

Data and information

Data is the lifeblood of our health and care system – digital is the vehicle by which it is collected and stored and we must improve how we use data to improve patient outcomes. Our data strategy outlines how we will do this.



Innovation

At the heart of any good digital ecosystem is a desire to constantly be innovating and improving. Our innovation strategy outlines the core ways in which digital will help us innovate as a system and provide new and improved services for people.

Workforce

Our workforce is critical to delivering quality care – we must ensure they have the tools that they need to be happy and successful. Digital forms a large part of their work – and we must ensure that we meet the requirements they have set out for us.

Our digital security

Cyber attacks and intrusions are increasingly commonplace in our society and our health and care system is not exempt from such risks. We must take action to continuously secure our systems against evolving threats, whilst also identifying the solutions of the future that make them harder to compromise.

The health and social care sector has been a continued target for cyber attacks – the WannaCry ransomware attack on the NHS in 2017 and the attack on HSE Ireland in May 2021 brought the respective systems to a standstill. We simply cannot afford the disruption that these attacks cause at a time when our system is still working overtime to manage the response to the COVID-19 pandemic.

723

The total number of attacks on the UK health sector between September 2019 and August 2020 (National Cyber Security Centre – NCSC)

Our commitment

To promote the efficiency and stability of Health and Social Care Services through robust cyber security capabilities and expertise, collaboration and information sharing, with comprehensive oversight.

Our cyber security priorities

01

Managing our cyber security risk

Adopting a single approach to cyber security risk management across HSC; identifying individuals at all levels of our organisation who are responsible for making cyber security decisions and empowering them to do so; apportioning accountability for decisions; and linking our cyber security to our wider HSC goals.

02

Protecting against cyber attacks

Developing and maintaining rigorous processes around access management and authentication of devices; ensuring all network and infrastructure appliances are protected fully and applying and enforcing principles of good data management and cyber risk awareness amongst our staff and users.

03

Detecting cyber security events

Ensuring that all actions on networks and systems are attributable to an individual; identifying and securing evidence, enhancing capability to identify malicious tactics, techniques and procedures; increasing capability to identify and respond to indicators of an attack in a timely manner.

04

Minimising the impact of a Cyber Security Incident

Minimising the impact of attacks on essential services; ensuring capability to respond is effective through regular testing assuring assurance of business capability by protecting of backups; providing access to a timely, single view of relevant information on which to base response decisions.

For more information on our priorities and the actions we will take, please refer to our Cyber Security Strategy (2022-2026).

Our data & information

Data is the lifeblood of our digital ecosystem – we rely on good quality data to deliver great care. As we enter this new phase of our digital journey, we must establish initiatives and actions to improve the quality of our data and information.

This is a shared responsibility – as an organisation, we must provide the infrastructure, tools and support to use data effectively, but we will also rely on our people and the public to work with us to maintain up-to-date and accurate data records. We must also harness the power of the data that we have to ensure that we are able to make timely and effective decisions at a micro and macro level.

In our new HSC Data Strategy, we will outline our proposals for a new organisation that governs the management of our health and care data and information. We have a number of priority areas that data will support us to address, including; waiting lists; health inequalities; inequity in service delivery; hospital occupancy; and service outcomes.

Our Data and Information Priorities

Analytics and Insights

Building capabilities and frameworks that harness the power of the data we are collecting – providing quality, actionable insights for our staff to make evidenced decisions. We must share data to enable collective awareness and decision-making across our public health and care ecosystem.

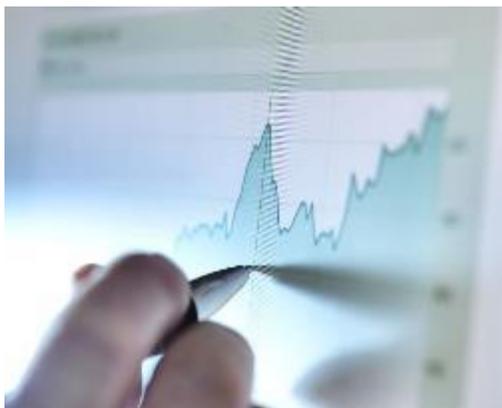
Data Platforms

Designing and implementing data platforms that are accessible and easy to use – systems and platforms that generate quality insights and embed new and exciting technologies such as AI and cognitive computing.



Education and Evangelism

Embedding the term 'Data' across our organisations and in our society – helping everyone to understand the importance of maintaining quality data sets and the positive impact that it can make.



Legal and Information Governance

Good governance is a fundamental aspect of safety, quality and innovation. We must implement and maintain a robust data governance process that maintains standards and enables us to work to implement new, enabling data legislation.

Training and Skills Development

Supporting our people to be confident in using data – we must deliver new training and skills development programmes, as well as working to establish career pathways for staff that nurture critical data and informatics capabilities.

For more information on our priorities and the actions we will take, please refer to our Data and Information Strategy (2022-2030).

Our Digital Innovation

Innovation is a fundamental aspect of our digital strategy and the transformation that we aim to deliver. As we progress through our digital journey, the emphasis on innovation will increase as we seek out new and better ways to deliver health and care services.

Innovation is not just about identifying new tools and systems – it’s also about doing things better and using the systems and tools that we have more effectively. This is an ongoing process that we will look to nurture and scale throughout our digital journey to ensure that we are continuously improving and identifying better ways to deliver care.

Northern Ireland’s vision for innovation:

“Northern Ireland, by 2025, will be recognised as an innovation hub and will be one of the UK’s leading high-growth, knowledge-based regions which embraces creativity and innovation at all levels of society”.

Northern Ireland Innovation Strategy (2025)

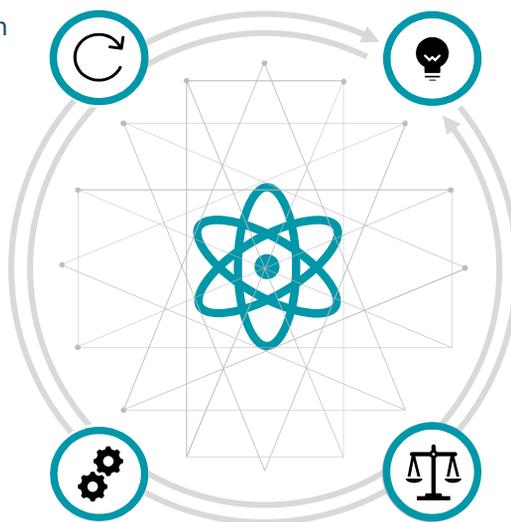
Our Digital Innovation Priorities

Innovation pathways

Developing a Digital Innovation Pathway that assesses technology readiness levels to determine which digital technologies and initiatives are ready for scaling.

Innovation infrastructure

Establishing Digital Innovation Infrastructure to facilitate scale up and spread of successful innovation;



Supporting innovation

Establishing a Digital Innovation Support hub to promote and optimise use of digital and data to support innovation.

Governing innovation

Implementing a governance structure that helps to align innovation to wider initiatives and stakeholders.

For more information on our priorities and the actions we will take, please refer to our Digital Innovation Strategy (2022-2026).

Our Workforce

HSC employs almost 110,000 people across our organisation and our partners in supporting health and social care – our workforce deliver everything from front-line and community care and support, to maintaining our estates, managing our networks and IT and providing the vital administrative and clerical support that keeps our organisation moving.

Each of these roles requires specific digital tooling to support delivery – that’s why we must ensure that our digital systems and tools are fit-for-purpose for all of our people. The Workforce Strategy, unlike the strategies referenced above, is a standalone document that is not driven by the outcomes of the Digital Strategy. Therefore, we have identified the requirements that we must meet for our workforce, as defined in the Workforce Strategy and outlined how we will meet these through the provision of digital systems and tools.

Our Workforce’s requirements

The HSC Workforce Strategy outlined three core requirements for digital:

- **Improving IT infrastructure;**
- **Investment in mobile working solutions;**
- **A joined-up care record so staff can work seamlessly between sites and providers.**

How these are being met

We are making several large digital investments that will fundamentally transform how our workforce use digital tools – this includes our plan to **implement a unified health record** across care pathways (encompass), as well as our advancements in **diagnostics information management**. This will be accompanied by programmes to improve digital workplace and back-office solutions, as well as our **ongoing commitment to enable mobile working**.



For more information on our priorities and the actions we will take, please refer to our [HSC Workforce Strategy](#) (2016-2026).



17

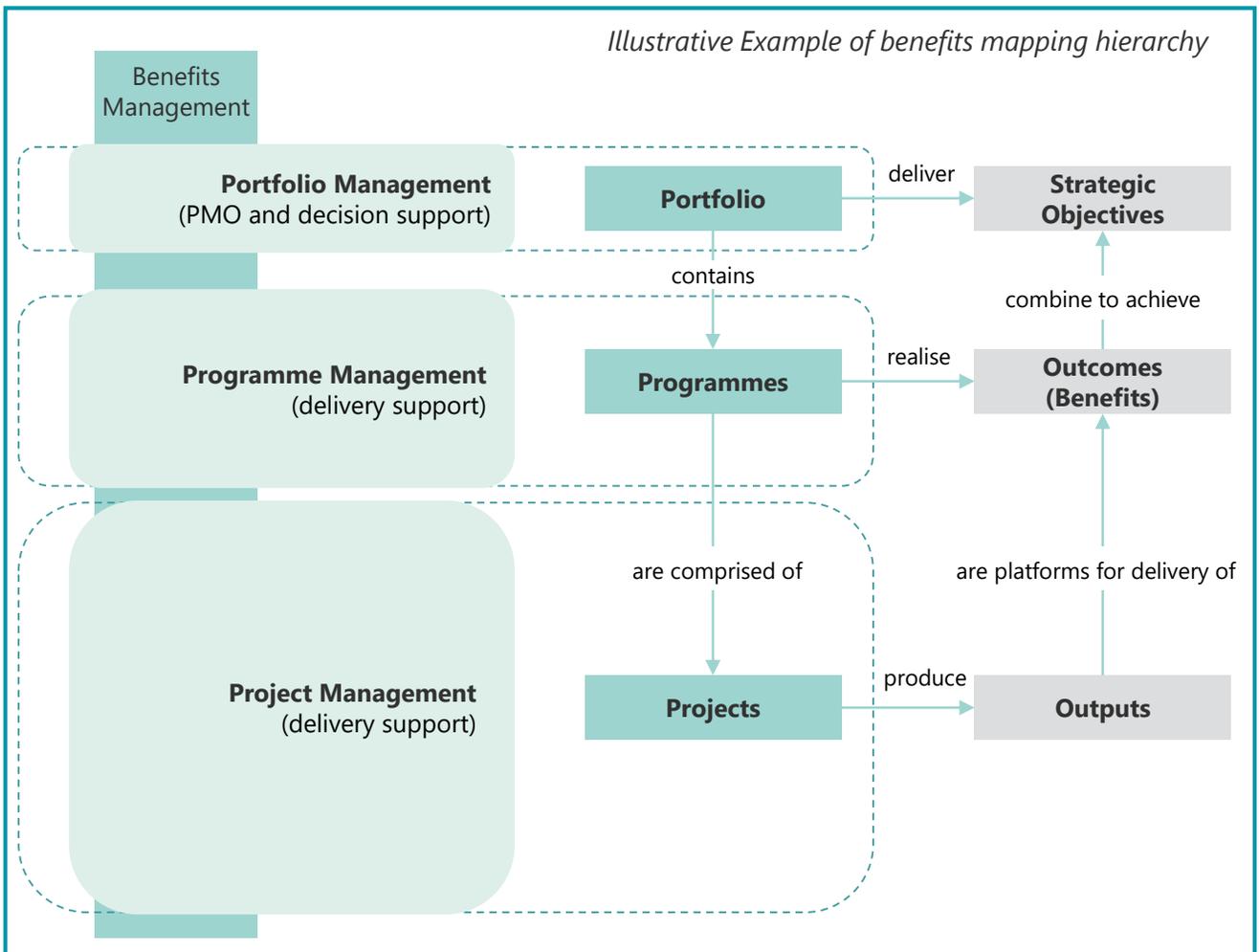
Measuring Success

How we will measure the success of our HSC digital strategy

Benefits Mapping

This Digital Strategy provides a direction of travel and a delivery roadmap for digital health and care over the next eight years. A crucial part of achieving the aims set out in this digital strategy will be to understand how we measure success.

Benefits realisation and management will be aggregated through each level of the portfolio hierarchy and align to the strategic objectives set out in this digital strategy. The proposed benefits management hierarchy (below) illustrates the relationship between the portfolio management structure and the tracking of outputs and outcomes to realise collective benefits that will help us deliver our strategic objectives. Benefits mapping and realisation should be governed according to the overarching Portfolio, Programme and Project PPMO governance and managed at project level.



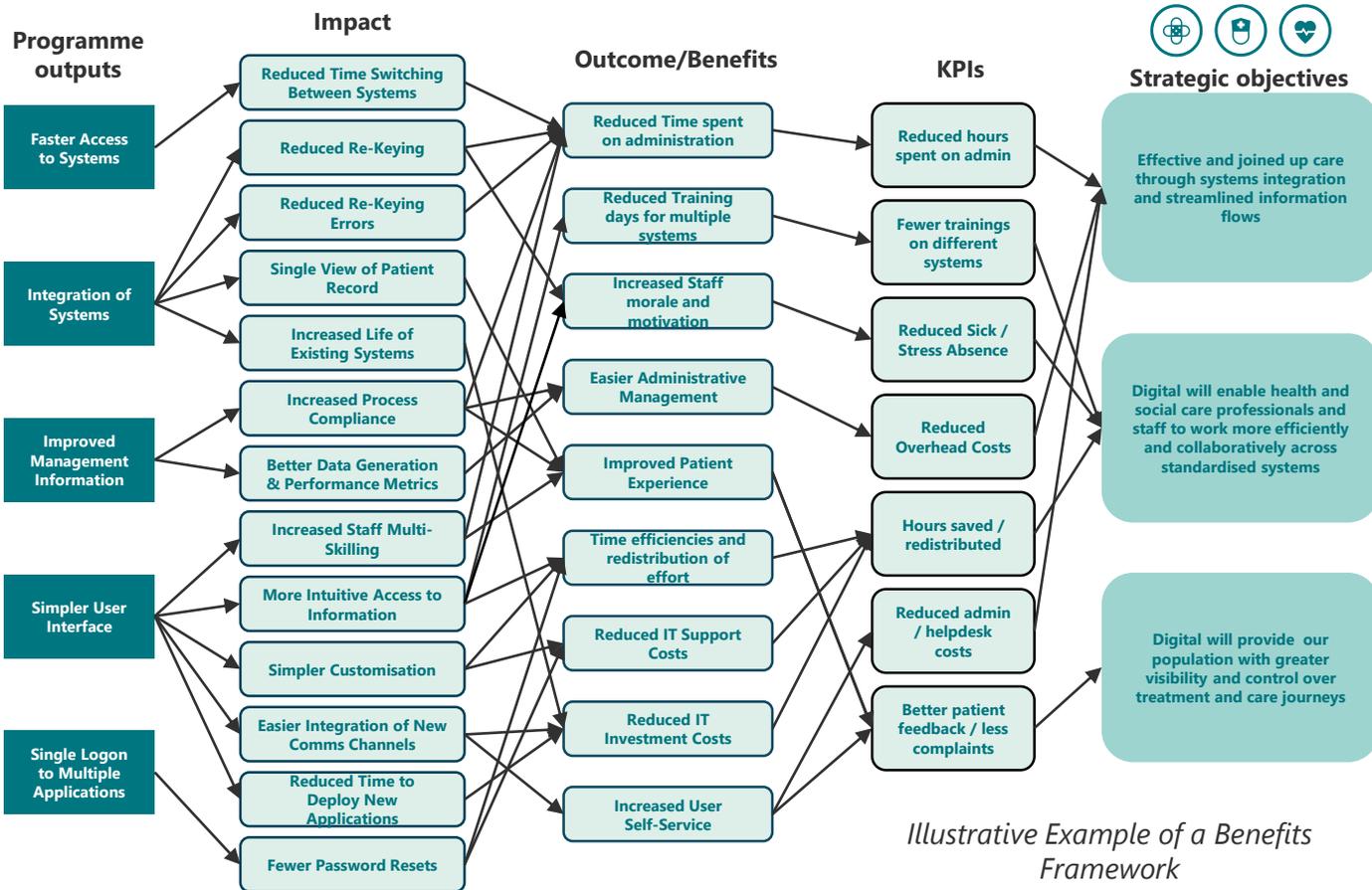
Developing a benefits mapping framework

A benefits management framework provides a structure for categorising the benefits of projects or initiatives, so that their contribution to the organisation's strategic objectives and KPIs can be understood. Each project or initiative within the portfolio should receive investment based on its ability to deliver a new capability and contribution to the strategic objectives via the end benefits collectively accrued. An illustrative example is presented on the next page.

Benefits Management

A benefits management framework provides a structure for categorising the benefits of projects or initiatives, so that their contribution to the organisation’s strategic objectives and key performance indicators (KPIs) can be understood.

The example below illustrates the mapping of all programme/project outputs, recording the impact they are having and the outcome/benefits that will be realised. It also illustrates a tangible and measurable set of KPIs (with baselined target measurements agreed) to understand and track whether the intended benefits are being realised and to what extent. Each programme in the portfolio should link its aggregate benefits back to a strategic objective. The digital portfolio as a whole will hold the collection of aggregate benefits from its programmes and projects that will collectively combine to deliver the strategic objectives.



Illustrative Example of a Benefits Framework

Why adopt this approach?

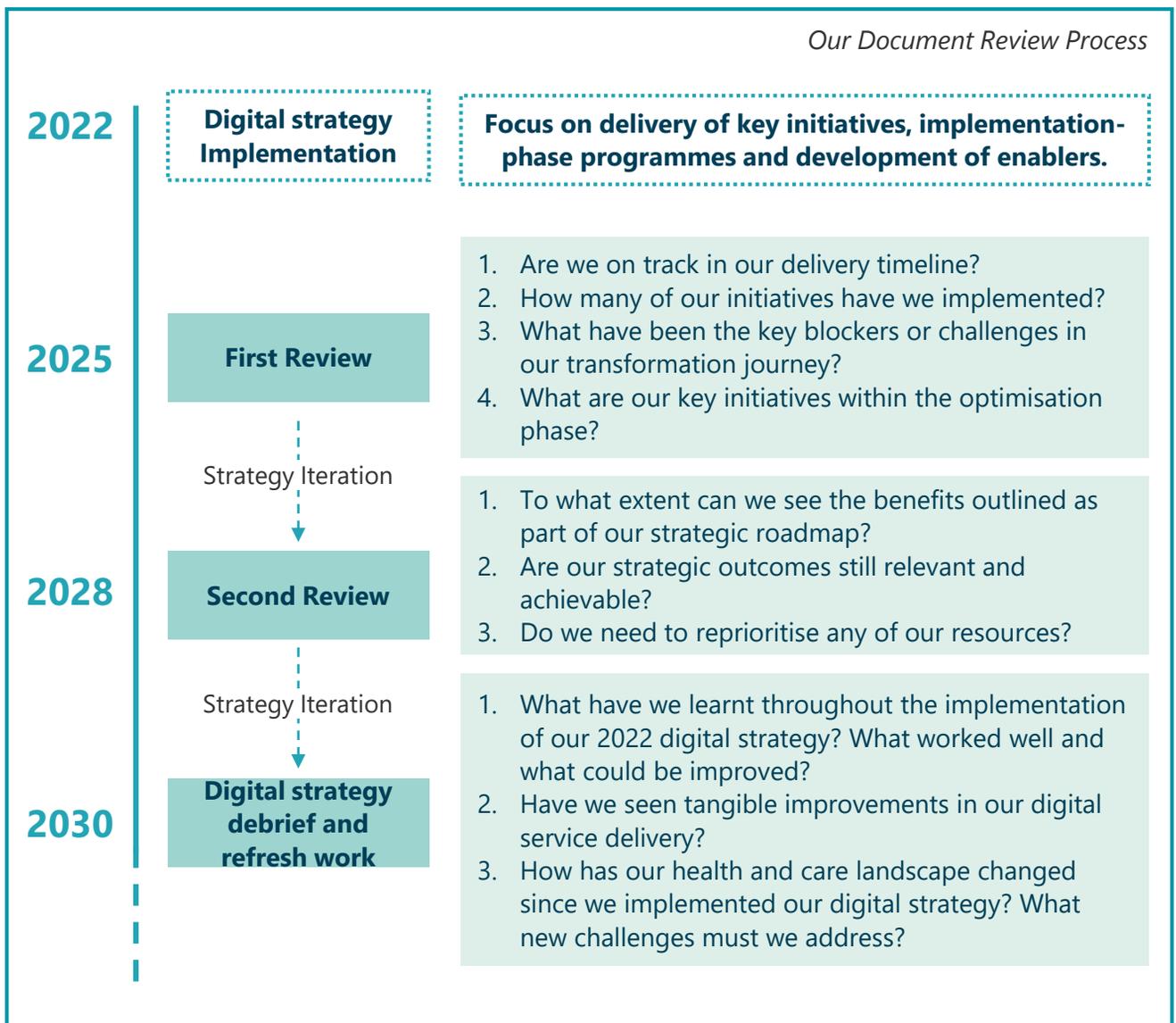
The example given above refers to the Digital Shared Services programme which aims to achieve systems interoperability given here as an illustrative example. The structure outlined above allows the creation of a clear and measurable benefits framework that logically links back to the strategic objectives we have set out to achieve. It also acts as a set of criteria to check that each programme/project is strategically relevant, is delivering on its intended outcomes and should continue to receive investment.

Appendices

Document Review

This Digital Strategy provides a direction of travel and a delivery roadmap for digital health and care over the next eight years. However, it is crucial that our approach remains up to date, relevant and responsive to our dynamic health and care landscape. For this reason, we must seek to review achievements against our goals and objectives at three-year intervals, addressing new priorities and altering our direction of travel as required.

The diagram below explains our approach to the continued review and revision of our digital strategy. Note that this is illustrative and non-exhaustive, with potential for more frequent review if required.



Glossary of terms

Term	Description
ALBs	Arms Length Bodies: key partners in our delivery of quality care and an important source of expertise and insight in our digital transformation. These include PHA, BSO, RQIA, NISCC, NIBTS, NIGALA, NIMDTA, PCC, NIPEC and NIFRS.
Digital Identity Service	A key programme from the HSC portfolio that replace and transform HCN and NHAS applications, simplifying the way in which patient and client identity is managed and shared throughout HSC services.
Digital Literacy	The ability to use information and communication technologies to find, evaluate, create and communicate information; utilising new digital solutions confidently
Digital Inclusion	Ensuring the benefits of the internet and digital technologies are available to everyone, through access to the required equipment and connectivity.
Digital Workplace Program	A key programme from within the HSC portfolio that aims to deliver increased collaboration and flexibility in working practices in Northern Ireland, with the purpose of making end-user computing and collaboration simple for all HSC staff.
encompass	encompass is a large and ambitious programme within the HSC portfolio, delivering a new Digital Care Record for every citizen and changing the way that care is delivered across NI.
EQUIP	The Equip programme delivers on the need to implement replacements for our current Finance, Procurement and Logistics (FPL) systems and HR, Payroll and Travel (HRPTS) systems.
FPL	Finance Procurement and Logistics
Go-Live	A timepoint at which a programme or software begins operating or becomes available for use.
HCN	Health and care number
Health Ecosystem	The entire health care system mapped out to include all the people and groups involved in delivering health care in Northern Ireland.
HEI	Universities, colleges and further education institutions offering and delivering higher education. Include traditional universities and professional-oriented institutions
HRPTS	Human resources, recruitment, payroll and travel systems
HSC Digital	HSC Digital will bring together the currently independent Trust IT teams, combining them with resources from the Business Support Organisation (BSO) ITS team to create one unified digital delivery capability for HSC.
NIPACS+	NIPACS+ is a key programme in the HSC portfolio that aims to deliver a single enterprise imaging solution for HSC to support clinical diagnosis and improve patient safety.
NILIMS	NILIMS is a key project within the NIPIMS programme which will see the procurement and implementation of a regional Laboratory Information Management System.
NIPIMS	The NIPIMS programme delivers a number of projects in support of the reform of pathology services. These include a standardisation project for tests, profiles and reference intervals across HSC; and the procurement and implementation of a regional Laboratory Information Management System (NILIMS) and a Blood Production and Blood Tracking system (BPat).
Our People	Those involved in the design, delivery and evaluation of health and social care across Northern Ireland.
Our Population	Everyone who uses and has access to health and care services in NI including patients, clients and their carers.
Quadruple Aim	A set of four key principles set out in 'Delivering Together' including; Supporting and empowering staff; Improving the health of our people; Improving the quality and experience of care; and Ensuring sustainability of our services

Glossary of organisations

Term	Description
BSO	Business Services Organisation
DHCNI	Digital Health & Care Northern Ireland
HSC	Health and Social Care
NIAS	Northern Ireland Ambulance Service
NIBTS	Northern Ireland Blood Transfusion Service
NIFRS	Northern Ireland Fire & Rescue Service
NIGALA	NI Guardian Ad Litem Agency
NIMDTA	Northern Ireland Medical & Dental Training Agency
NIPEC	Northern Ireland Practice Education Council
PHA	Public Health Agency
PCC	The Patient and Client Council
RQIA	Regulation & Quality Improvement Authority
SPPG	Strategic Performance and Planning Group

References

Reference	Name
1	NISRA, mid-year population estimates, 2020
2	NISRA, mid-year population estimates, 2019
3	NISRA: Estimates of the population aged 85 and over, Northern Ireland, 2019
4	World Population Prospects 2019 (United Nations, 2019)
5	Northern Ireland Waiting Time Statistics: Summary as at June 2021

Reference	Bibliography
1	HSC Cyber Strategy 2022 (Not yet published)
2	HSC Innovation strategy 2022 (Not yet published)
3	Interactive eHealth and Care strategy (2016-2020)
5	Health and Wellbeing 2026 - Delivering Together
6	DHCNI Financial Plan for FY21-22 (Internal document)
7	LIMS Replacement OBC v2.3 (Internal document)
8	LIMS Replacement FBC v1.2 (Internal document)
9	Encompass FBC v2.5.1 (Internal document)
10	NIPACS Procurement OBV v3.0 (Internal document)
11	DIS Full Business Case v01 (Internal document)
12	HSC Digital Workplace Mandate V1.2 (Internal document)
13	Portfolio Delivery Group Report March 2021 (Internal document)
14	DHCNI Financial Plan for FY21-22 v0.5 (Internal document)
15	HSC Workforce strategy 2016
16	Replacement of FPL and HRPTS SOC V1.9 (Internal document)
17	Rebuilding Health and Social Care Services – Strategic Framework
18	HSC Data and Information Strategy (Not yet published)