NHS Shetland

Meeting:	**Shetland NHS Board**
Meeting date:	**12 December 2023**
Agenda reference:	**Board Paper 2023/24/51**
Title:	**NHS Shetland Digital Strategy 2024-2029**
Responsible Executive/Non-Executive:	**Brian Chittick, Chief Executive**
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1. Purpose

This is presented to the Board/Committee for:

- Awareness
- Decision
- Discussion

This report relates to:

- Local policy
- NHS Shetland Strategy
- Annual Operating Plan

This aligns to the following NHSScotland quality ambition(s):

- Safe
- Effective
- Person-centred

2. Report summary

2.1. Situation

The draft Digital Strategy 2024-2029 is presented for the Board's discussion and approval, outlining a five-year roadmap for integrating digital technologies into healthcare services in Shetland. It aligns with national and regional strategic direction in digital and innovation, as well as being a key enabler for NHS Shetland's Strategic Delivery Plan and focuses on enhancing patient-centered care through digital innovation.

2.2. Background

2.2.1 The 'Digital Vision for Health in Shetland' strategy has been developed in the context of evolving healthcare demands and the increasing importance of digital technology in health and care services. Shetland, with its unique geographical challenges and dispersed population, faces distinctive healthcare delivery issues. These challenges are further intensified by an aging population and the contemporary pressures on health services, including workforce and financial constraints.

2.2.2 Nationally, the Scottish Government's October 2021 publication of the Digital Health and Care Strategy set a precedent for a focused approach towards digital inclusion, reducing inequalities, and upskilling the health and care workforce in digital competencies. This national strategy, emphasizing digital access, services, foundations, skills, futures, and data-driven insights, provides the overarching framework within which our local vision operates.

2.2.3 Regionally, NHS Shetland's participation in the NHS Scotland North Regional Team aligns with collaborative efforts across northern boards to deliver various digital healthcare initiatives. The recent development of the first Artificial Intelligence Strategy for Health & Social Care in the region is a testament to our commitment to embracing future technologies for improved healthcare delivery.

2.2.4 Locally, Shetland Islands Council's ongoing development of its digital strategy, particularly within health and social care partnerships, further complements our objectives. This interplay of national, regional, and local initiatives forms a robust backdrop for our strategic vision.

2.2.5 Furthermore, the COVID-19 pandemic has accelerated the adoption of digital solutions in healthcare, underscoring the need for a resilient and adaptable healthcare system. This strategy aims to build on these foundations, leveraging existing digital assets while exploring innovative solutions to address current and future healthcare challenges in Shetland.

2.2.6 The convergence of these factors — geographical uniqueness, demographic trends, national directives, regional collaborations, and pandemic-induced shifts — has catalysed the formulation of the 'Digital Vision for Healthcare in Shetland'. This strategy is not only a response to immediate needs but also a proactive approach to shaping a future-ready healthcare system that is digitally empowered, patient-centric, and sustainable

2.2.7 The latter sections of the strategy define the next steps. This draft strategy is the starting point for an engagement and participation journey with staff and those whom we serve to formulate an ambitious but realistic digital delivery plan aligned to sustaining what is working well but being a vehicle for changing what we could be doing better to realise a new digital future.

2.3 .Assessment

2.3.1 Quality / patient care

The strategy aims to improve the quality of care by enhancing accessibility and efficiency through digital means, such as telemedicine, electronic patient records, and AI-driven diagnostic tools

One of the key outcomes for the digital strategy and subsequent delivery plan is utilising digital technology in healthcare serves as a catalyst for enhancing care quality by automating routine tasks and streamlining processes. This technological integration frees up healthcare professionals to focus more on patient-centred care, allowing them to dedicate more time and attention to delivering personalised and compassionate care services.

This Second Delivery Plan identifies a need for the time of partner agency staff for the delivery of improved outcomes. It is generally accepted that this will always be in line with people's existing duties, accepting that this is likely to require flexibility, empowerment of staff and strong leadership.

2.3.2 Workforce

The digital transformation will impact the workforce positively by providing advanced tools and training, thereby improving efficiency and job satisfaction. Challenges include ensuring all staff are adequately trained and adapting to new digital workflows.

It is hoped that this strategy will be key to mitigating workforce gaps. It introduces digital tools like AI diagnostics and telehealth, which take over routine tasks, easing the load on overburdened staff. This shift allows healthcare professionals to focus on complex, patient-focused care.

Training in these digital tools will be essential to ensure that the workforce can efficiently use them, helping to sustain healthcare delivery despite staffing challenges

2.3.3 Financial

Implementation of the digital strategy requires initial investment but is expected to lead to long-term cost savings through improved operational efficiency and reduced reliance on physical resources.

The digital delivery plan will be closely aligned to the financial recovery and sustainability plans so that efficiencies can be translated into sustainability enablers.

2.3.4 Risk assessment/management

Risks include technological adoption barriers and data security concerns. Mitigation strategies involve phased implementation, continuous staff training, and stringent data governance protocols.

Successful implementation of this strategy should help mitigate/control two Corporate Risks:

SR17: IT Failure due to Cyber Attack

SR12: Capacity for Sustainable Change

2.3.5 Equality and Diversity, including health inequalities

The strategy supports the Public Sector Equality Duty by ensuring digital healthcare services are accessible to all, including marginalized communities, thereby addressing health inequalities.

A rapid impact checklist is at Appendix 2.

2.3.6 Other impacts

Environmental

The 'Digital Vision for Health in Shetland' strategy not only addresses healthcare efficiency but also has significant environmental implications. By integrating digital healthcare solutions, we expect a notable reduction in the carbon footprint associated with healthcare delivery. Virtual consultations and telemedicine reduce the need for patient and staff travel, significantly cutting down on emissions related to transportation. The shift towards electronic patient records and cloud-based data storage minimizes paper usage and physical storage needs, contributing to reduced deforestation and energy consumption in healthcare facilities.

Additionally, the strategy promotes the use of energy-efficient digital infrastructure, further aligning with our environmental sustainability goals. The strategy ensures that environmental considerations are integral to our digital transformation, thereby fostering a healthcare system that is not only efficient and effective but also environmentally responsible.

2.3.7 Communication, involvement, engagement and consultation

A communication and participation framework will be drawn up on approval of the draft strategy. This will include staff, patients and our community-taking a place based approach in our conversations of embracing digital innovation and technology.

Through the participation process, we hope to transpose the strategy into key deliverables in the form of a digital delivery plan.

2.3.8 Route to the meeting

This report has not been sighted at any other Committee Meetings.

2.4 Recommendation

- **Awareness**

  For Members to note:

  - the progress of the Digital Strategy Delivery Group culminating in a first draft of the Digital Strategy 2024-2029 being presented to Board;
  - The Strategy will be transposed into a Digital Delivery Plan via a robust participation and engagement process. Engagement will focus on both optimisation of systems and processes already in the Health Board as well as horizon scanning for new systems for implementation to define our digital future.
  - That this is a first draft of the strategy and a final version will be brought back to Board with the delivery plan in April 2024.

- **Discussion**

  That Members:

- Have an opportunity to discuss the draft strategy and let their views be known to the leads of the Digital Strategy Delivery Group.

- **Decision**

  - That the Board approves the draft strategy to allow the participation and engagement process to commence.

3 List of appendices

The following appendices are included with this report:

Appendix 1: Digital Strategy 2024-2029: “A Digital Vision for Healthcare in Shetland” (Draft)

Appendix 2: Rapid Impact Checklist for NHS Shetland Digital Strategy 2024-2029: “A Digital Vision for Healthcare in Shetland”

4 Background Documents:

NHS Scotland: Digital health and care strategy: https://www.gov.scot/publications/scotlands-digital-health-care-strategy/

Care in the Digital Age: Delivery Plan 2023-24: https://www.gov.scot/publications/care-digital-age-delivery-plan-2023-24/pages/1/

Digital Strategy 2024-2029

"*A Digital Vision for Healthcare in Shetland*"

NHS Shetland

Draft 1.0

December 2023

Contents

1. Digital Vision for Healthcare in Shetland

The digital vision for NHS Shetland:

"Empower people to participate in their own health and care through thoughtful implementation and adoption of digital ways of working together.

Focus our collective efforts on technologies which improve health outcomes, enhance staff experience and empowerment, and promote operational efficiency and sustainability"

2. Introduction

Digital technology is increasingly becoming part of people's everyday lives, including in health and care. Technology that is used in this way is referred to as digital health. Digital health is ever evolving but includes technologies that are currently being used in the clinical setting, such as: electronic patient records, appointment booking and reminder systems, medical consultations via video link, clinician and patient portals and more complex systems which use algorithms from large clinical datasets to support clinical decision making. Digital health is not restricted to a clinical setting and is often used within the home by patients themselves with the aim of prevention, self-management or reducing the need for the patient to interact with services in the traditional way. This is of particular benefit to patients who live remotely or have reduced mobility and find it difficult to attend appointments. Examples of digital health used by patients outside the clinical setting include blood pressure monitors and blood glucose monitors, information from which can be reported back to the clinician via online patient portals.

Digital technologies like those mentioned can empower patients to be more involved in their health and the management of their conditions and provide the opportunity to support staff with transformational change to ensure we are providing a safe and sustainable service.

In Shetland, as nationally, health and care services are experiencing increasing demand due to an ageing population, and challenges to service delivery due to workforce and financial constraints. Digital development will play a significant role in meeting these challenges. This strategy will build on the national vision and aims for digital health and care in Scotland by setting out the local vision and goals for digital technology in NHS Shetland over the next 5 years.

This strategy provides the direction for an ambitious and realistic programme of work that will focus on making better use of the technology already available and embrace opportunities for innovation that are fit for Shetland and our services.

3. Scene Setting

This local digital strategy has been developed within the framework of "Scotland's Digital Health and Care Strategy: Enabling, Connecting, Empowering"[1] and the local NHS Shetland Strategic Delivery Plan (in progress), of which digital is identified a key enabler in realising the strategic intent to *"Provide easy access to high quality, sustainable and person-centred care as close to home as possible and make a meaningful difference to the building blocks of good health in our communities".*

3.1 Current Digital Landscape

i. Nationally

In October 2021 Scottish Government published its latest Digital Health and Care Strategy[1] which has strong focus on digital inclusion, addressing inequalities and ensuring that health and care workforce have the knowledge and technical skills to not only work digitally but to engage with service users via digital means as well. The strategy's six priorities are: digital access, digital services, digital foundations, digital skills and leadership, digital futures and data-driven services and insight. All of them are aimed to be delivered via the national delivery plan, Care in the Digital Age - Delivery Plan 2023- 2024[2], which informs work we carry out locally in Shetland.

ii. Regionally and Locally

NHS Shetland has been part of the NHS Scotland North Regional Team delivering collaboratively various digital programmes of work across the six northern boards. In 2023 the first Artificial Intelligence Strategy for Health & Social Care[3] has been published by the region highlighting the need for adoption of the AI technologies via increased partnership and targeted investment.

More locally, our partners at Shetland Islands Council are also in the process of developing their own digital strategy (in progress) which will include priority areas within the health and social care partnership.

3.2 Digitally Enabled Services in the Clinical and Care Strategy

The Clinical and Care strategy[4] set out a strategic aim to improve access, promote person-centred care and reduce inefficiencies by making best use of new technologies. Across clinical services this is to be achieved by:

- Increasing use of remote/digital appointments
- Increasing use of digital therapy options (primarily in Mental Health)
- Give patients the options to manage their health and access online:

[1] Scotland's Digital Health and Care Strategy: Enabling, Connecting, Empowering. (2021). Scottish Government and COSLA. Found at: Enabling, Connecting and Empowering: Care in the Digital Age (www.gov.scot)

[2] Care in the Digital Age - Delivery Plan 2023- 2024. (2023). Scottish Government and COSLA. Found at: Care in the Digital Age: Delivery Plan 2023-24 - gov.scot (www.gov.scot)

[3] Spending time where it counts An Artificial Intelligence Strategy for Health & Social Care in the North of Scotland 2023-2027. (2023). NHS Scotland North Regional Team. Found at: Spending Time Where it Counts- An AI Strategy for the North of Scotland.pdf (nhsscotlandnorth.scot)

[4] Clinical and Care Strategy 2021-2031. (2021). NHS Shetland. Found at: Microsoft Word - Clinical and Care Strategy Draft v3 (nhsshetland.scot)

    - Appointment booking
    - Prescription ordering
    - Self-management advice
    - Patient held health records
- Improving information sharing via joined up systems to:
    - Enable joint decision making
    - Improve Professional-Professional advice
    - Simplify the patient journey
- Using the data and information we have to improve outcomes:
    - Supporting early identification and intervention
    - Optimising treatment and minimising risks
- Developing our workforce, to optimise opportunities and use of existing systems
    - Digital literacy and confidence
    - Access to technology
    - Digital capabilities
- Explore and promote digital technology solutions as they emerge, for example:
    - Wearable technology
    - Telecare options
    - Robotics
    - Artificial Intelligence

3.3 Evaluation of current technological infrastructure/workflows and challenges

3.3.1 Core Digital Infrastructure

NHS Shetland has a single Digital Team that oversees the digital infrastructure for all sites and services. This has brought key advantages, for example:

- A system-wide approach to the network and server infrastructure in place resulting in a unified approach to implementation, maintenance and modernisation of technology
- A standard suite of equipment available to NHS Staff including desktops, laptops, tablets, mobile devices and peripherals such as printers, pagers and dictation devices. This standardisation delivers efficiency through increased reliability and compatibility, and reduced complexity
- A standardised approach to the software tools and applications in use

NHS Shetland has sites with small numbers of staff with many in remote areas. This creates challenges in delivering network connections with the capacity and reliability required for the services we deliver. Furthermore, it reduces confidence in the viability of embracing newer technology or making technology more critical to safe healthcare delivery.

A dynamic approach to network challenges that meets the needs of NHS Shetland has been adopted. This has been achieved by engaging with local partners and

commercial telecommunications providers to implement network communications beyond the ‘catalogue’ approach that fits the needs of populous, mainland regions.

Access to reliable 4G mobile network services and home broadband/fibre is a continual challenge across Shetland, making remote and home working often difficult for staff.

3.3.2 Clinical Systems

NHS Shetland utilises national systems across all its services where these are available, and procures other systems where required. National and regional procurement and shared hosting is now the first approach taken to fulfilling any digital technology need.

This provides support with the procurement and implementation of complex systems in small boards from the larger boards and National Services, but it does lead to challenges where the timescales and scale of adoption of new technology are out of sync with local priorities and resource capacity.

NHS Shetland has in place many of the core healthcare systems that form part of the national Digital Healthcare Strategies and Workplans. Digital systems supporting clinical services are widely used in all clinical areas, however there remains areas where technology gaps exist, and addressing these must be a key priority of the Digital Strategy.

Some of the areas where NHS Shetland has core digital functionality in place are:

- GP Patient Management and Medical Records
- Hospital Patient Management
- Hospital Electronic Prescribing and Medicines Administration (HEPMA)
- Labs and Diagnostics
- Medical Imaging and Scanning
- Clinical Correspondence
- Referrals and Patient Vetting

Areas where NHS Shetland has gaps for core digital functionality that will be a priority within the Digital Strategy:

- Electronic ordering of tests (Order Comms)
- Community Patient Management (e.g. Community Nursing)

3.4 Identify areas for improvement growth

3.4.1 Digital Access

Patients and their families are increasingly looking to engage with health and care providers digitally, in a way that suits them, at a time that suits them. For this to happen, we are investing in technology to enable this, for example:

- Making it easier to book appointments, seek advice, or order medications online

- Providing reminders and cancellation options for patient appointments
- Online secure access to patients' own records

3.4.2 Integration

Healthcare is provided by many different services, in many locations. An overarching priority for a Digital Strategy is to ensure healthcare providers have access to the right information, and the right time, in the right location. Integrating the many systems in place is key to achieving this. This will be achieved through:

- Developing the systems we currently use to fully integrate with all the other systems they need to, including those in use by other providers.
- Embracing standardisation of clinical systems across Scotland and ensuring we leverage national technology as it becomes available.

Having patient information held across multiple systems; each with its own specialised functions is necessary, and not an issue provided a consolidated view of all the information can be accessed where and when needed. This is essentially what an electronic patient record is, rather than a single system.

Ensuring information can be captured, processed and stored digitally without the need for paper processes is essential to realising a fully electronic patient record. Ideally this will be achieved without the use of digital tools designed to replicate paper processes, but by integrating the systems that are part of delivering healthcare.

3.4.3 Optimisation

Many of the existing systems in place have functionality beyond what has been implemented up until now. It is important to make use of existing digital capability, as well as embracing new technology.

3.5 Our Impacts on the Environment

Digital technology has a major role in addressing some issues around climate change and healthcare provision - reducing travel through virtual appointments and remote monitoring; reducing the size of buildings by removing paper record stores and using electronic patient records; reducing our reliance on large data warehouses by using cloud infrastructure. We must embed a culture which considers how we positively impact on climate change through procurement, projects and equipment, and adopt a leadership role in embedding the circular economy.

3.6 Digital Maturity Assessment of Services in Shetland

The Scottish Government/COSLA Digital Maturity Assessment was conducted as a self-assessment amongst organisations within the Scottish health and social care landscape in Q2 2023. NHS Shetland and Shetland Islands Council submitted a joint assessment, covering both an organisational response and a staff survey.

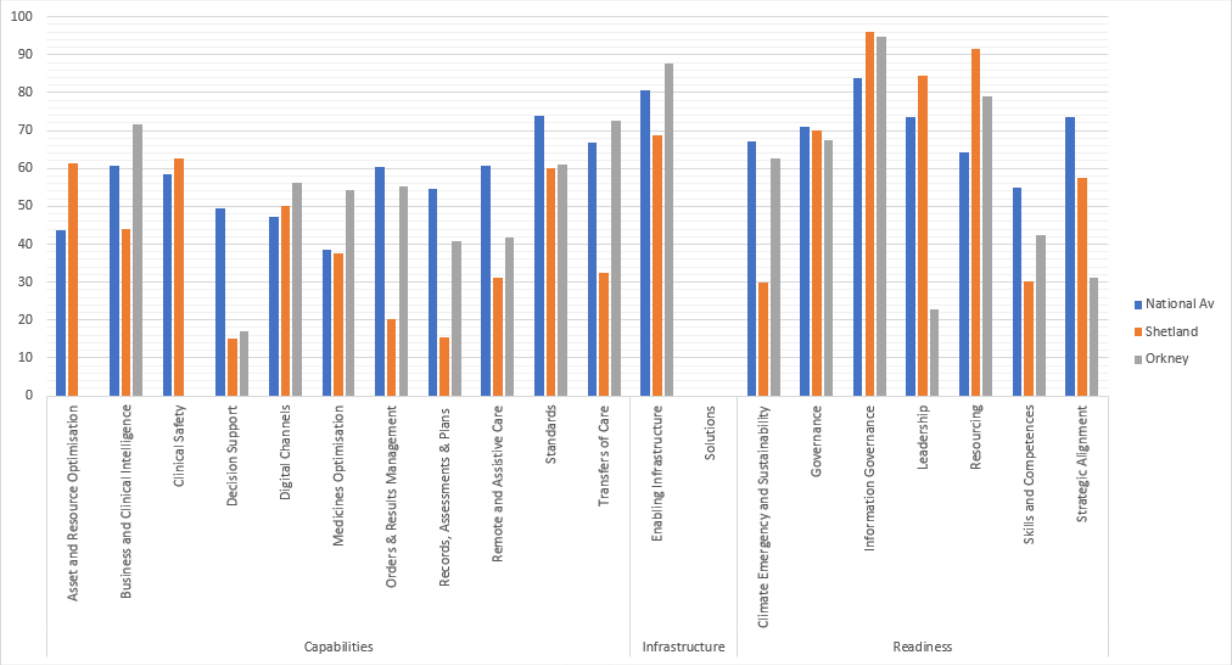


Figure 1 Digital Maturity Assessment - Organisational Results - Shetland compared with Orkney and Scotland

The digital maturity assessment has revealed Shetland's own, and Scotland's wider, strengths and weaknesses in digital delivery. The following themes from the assessment reflect a need to approach digital delivery in Shetland in a broad and meaningful way:

Weaknesses:

- **Business & Clinical Intelligence**: we have limited capability for using the rich data sets available to us
- **Decision Support**: we have not implemented systems that support clinical decision making (systems that use the data set about an individual to support clinical decisions about the individual)
- **Orders Results and Management**: there is no comprehensive digital end to end processes supporting management of clinical results across our systems and areas
- **Records, Assessments & Plans**: we have very limited digital records or digital plans available for staff and patients to use
- **Remote Assistive Care**: there is limited use of technologies to support remote management of people
- **Transfers of Care**: there are no digital end to end processes in place for transferring individuals between services i.e. hospital to home, care home to care home, and GP practice to GP practice
- **Climate Emergency & Sustainability**: there is limited capture of the drivers for change of business processes reflecting our goals to reduce the impact of our activity on our ecosystem
- **Skills and Competences**: weaknesses in capability among people to implement digital programmes and to work effectively in digital ways of working

- **Strategic Alignment**: weaker than in Scotland, reflecting a potential reduced connection of the clinical workforce and digital ways of working and digital improvements

Strengths

- **Information Governance:** reflects good understanding of local processes and systems for ensuring we use people's data and information safely and securely
- **Leadership:** there is a clarity in leadership locally for digital, although this may be limited in a clinical digital leadership
- **Clinical safety:** systems are in place for recording clinical risks and supporting management of clinical incidents, as well as aspects of systems supporting prevention of harm i.e. allergies in our prescribing systems.

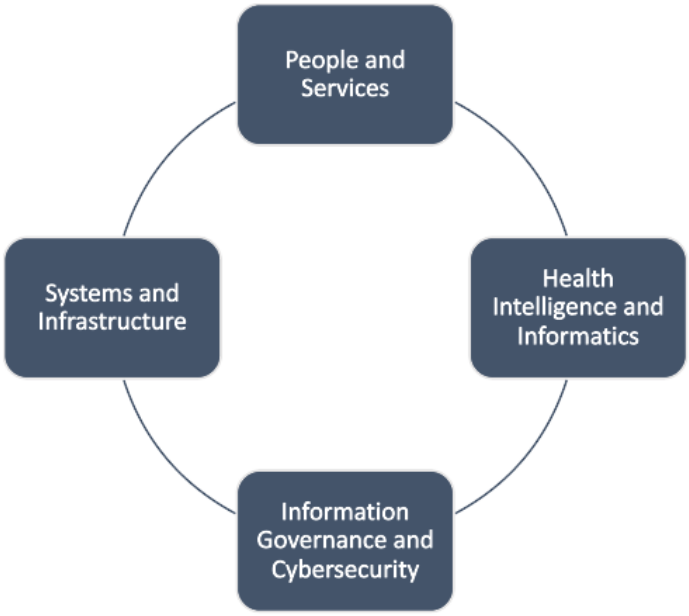
Through the staff self-assessment arm, with over 109 responses, it has provided essential insight to experience of our people working in our services, and how their roles interact with digital on a day-to-day basis:

Theme from feedback	Summary of Responses
Infrastructure and Equipment Concerns	Outdated or inefficient infrastructure in place, issues with new system implementations, and intermittent Wi-Fi across our sites.
Need For Training and Skill Development	Lack of training reported, with reliance on self-learning digital tools or receiving short notice for training sessions.
Workload And Efficiency Concerns	Increased workload from paper records potentially duplicating and driving inefficiency, along with a rise in the expectation to attend more online meetings and more meetings in general.
Positive Remarks and Acknowledgments	Positive feedback and commendation for the eHealth and infrastructure team's support.
System Integration and Compatibility	Challenges for staff navigating multiple systems and the limited updates to the slow and outdated GP IT systems.
Other Systems	Ensuring we acknowledge our non-clinical staff through gathering experience on use of digital workforce systems and administrative systems.

Through further analysis, understanding across our people varies significantly, with limited understanding of truly digital ways of working. It will be an aim of the strategy to embed improved understanding through clearer clinical engagement in digital development in the organisation.

4. Strategic Themes

These strategic themes represent the different aspects of our strategic intent and will support decision making by providing context around improvement, risk and resource management.



5. Outcomes for Communities, People, Services

6. Strategic Drivers (Priorities)

6.1 Person-Centred

Person-centred care supports people to develop the knowledge, skills and confidence they need to more effectively manage and make informed decisions about their own health and health care. It is coordinated and tailored to the needs of the individual. Some examples of patient-centredness in relation to digital technology in particular are:

- Increased personal choice
- Access to your own health data
- Accessing services in that reflect your needs – when you need it, wherever you are

6.2 Data Informed

As an organisation, and as service providers, we use the data and information we have to provide better care, to understand where we are having an impact, and to make sure we are doing the right things by:

- Targeting resources by understanding population needs
- Targeting support by understanding individual needs
- Planning improvement by understanding change and impact

6.3 Artificial Intelligence (AI)

Scotland's National Artificial Intelligence strategy defines AI as:

Technologies used to allow computers to perform tasks that would otherwise require human intelligence.

The North of Scotland AI strategy[3] has subdivided AI into 4 interconnected disciplines:

i. **Robotics.** A robot is a device that senses its environment, processes that information and data to be able to perform tasks in the physical world. Examples in a health and care context would be Surgical or pharmacy robots or Unmanned Aerial Vehicles that deliver samples and medication.

ii. **Software process automation**. This refers to the use of software technology to carry out and manage repetitive tasks and processes without human intervention. Its primary goal is to streamline and optimise workflows, reduce manual errors, increase efficiency, and save time. This is often achieved through the use of tools like bots, and algorithms that can handle tasks such as data entry, processing transactions and managing emails. Examples in a health and care context would be automation of appointment scheduling, managing annual leave requests or recognising speech and turning it into text.

iii. **Machine Learning.** This is a method where computer algorithms improve automatically through experience and by using data. It enables systems to learn and make predictions or decisions without being explicitly programmed for specific tasks. This learning process typically involves recognizing patterns in data and adjusting program actions accordingly. Examples in a health and care context would be learning what makes a chest x-ray normal or using radiographs to diagnose dental caries in a tooth.

iv. **Predictive Analytics** This is the use of data to predict the future. Historical data and those obtained from other sources, such as the environment, can be used to construct a software model. The model is then compared against the unfolding reality and the model is refined as needed. As more data feeds are added, the model becomes more capable and better at predicting the probability of certain outcomes. Examples in a health and care context would be predicting bed occupancy or predicting which patients are at risk of deterioration.

As we carefully move into a new era in healthcare, the integration of AI into systems is no longer a beyond reach concept, instead a tangible reality. Currently, healthcare systems are trialling the initial steps of AI implementation, marked by the adoption of machine learning algorithms for diagnostic assistance, patient data management, and predictive analytics for disease trends. However, to fully realise our vision of a seamlessly integrated AI-driven healthcare system, we must focus on several key areas:

Firstly, the development and refinement of AI algorithms tailored to diverse healthcare needs is crucial. This involves extensive data collection and analysis, ensuring both accuracy and ethical considerations are prioritised.

Secondly, we need to invest in robust training for healthcare professionals, enabling them to effectively utilise AI tools. This will bridge the gap between technological innovation and practical application. Additionally, prioritising patient privacy and data security in AI systems is essential to maintain trust and compliance.

Lastly, health systems must work in collaboration with technology developers, healthcare providers, academic and research institutions and policy makers to ensure a cohesive approach towards integrating AI in healthcare, ultimately enhancing patient outcomes and operational efficiency. Embracing these steps will propel us towards a future where AI is an integral, trusted, and effective component of healthcare delivery.

6.4 Interoperability

Digital technologies can help information and communication to flow across an organisation, people and places – this is interoperability and when successful can bring benefits for both staff and patients by reducing variation of care, improved patient safety, and a more efficient (time and money) and sustainable service. However, often digital technology is used as a solution to individual/siloed problems.

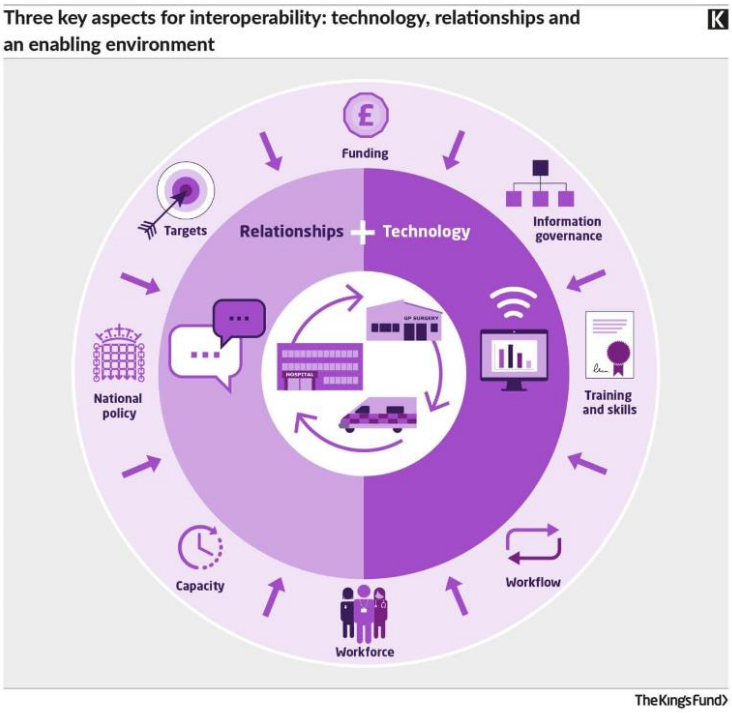


Figure 2 The King's Fund 3 key aspects for interoperability in healthcare

To achieve interoperable digital health, the King's Fund report[5] on interoperability in healthcare highlights three key aspects:

Technology: Challenges include fragmented systems and inconsistent standards across different organizations, hindering effective information sharing.

Relationships: Key factors involve navigating risk-averse information governance, addressing the shortage of analytical skills, and ensuring consistent interpretation of patient information across various staff and organizations.

Enabling Environment: This includes ensuring sufficient capacity for transformation, adapting workflows to new technologies, implementing supportive national policies, securing long-term funding, and establishing outcome-focused metrics.

Overall, successful interoperability requires a holistic approach that integrates technology, relationships, and a supportive environment.

6.5 Resilient & Sustainable

As services move towards digital platforms, they will be able to overcome disruptive incidents and threats to provide a continuity in patient care. This will be delivered via resilient telecommunications infrastructure and embedded business continuity systems that reduce return time objectives and periods of disruption. Furthermore, a resilience-orientated culture will be embedded relating to cybersecurity awareness, planning and response. There is an opportunity for business continuity systems used across partnerships to align by utilising digital platforms, allowing a greater degree of interoperability.

6.6 Effective Information Governance

As data controller we will implement appropriate technical and organisation measures to ensure data security through best practice and compliance with GDPR and other regulatory frameworks, and appropriate use of data and systems. A proactive approach to data protection and privacy will be taken by identifying risks before they happen using Data Protection Impact Assessments and implementing technical and policy controls to mitigate risks where possible.

6.7 Capable & Engaged Workforce

Supporting staff to be digitally literate and confident using digital systems and solutions will develop an engaged and capable workforce. Digital literacy is described as "*those capabilities that fit someone for living, working, participating, and thriving in a digital society*". Being digitally literate includes understanding and being able to use specific business and clinical systems for day-to-day, but also more transferrable and conceptual skills that promote innovative thinking and an understanding of which tools to use, and when, so that the best quality person-centred care can be provided.

[5] Interoperability is more than technology: The role of culture and leadership in joined-up care. (2022) The Kings Fund. Found at: https://www.kingsfund.org.uk/publications/digital-interoperability-technology

By improving digital literacy capabilities of health and social care colleagues, the uptake and adoption of new digital tools and technologies can be improved, and the provision of care transformed.

- Upskilling – effective training to ensure the workforce has the right digital knowledge and skills to enable them to do their jobs as effectively and efficiently as possible.
- Digital Facilitation – particularly when new systems or solutions are being introduced offering facilitation as part of the project management to ensure full implementation of the system through an engaged and knowledgeable workforce.
- Digital Champions – the role of a digital champion is to encourage confidence, understanding and motivation by empowering staff to use digital tools more effectively themselves and, in some cases, encouraging staff to pass that knowledge onto colleagues. Digital champions play an important role in empowering and supporting the workforce to be digitally literate and should work in departments across the organisation.

6.8 Partnership Working

Working closely with national, regional and local partners is imperative if the strategic goals and vision are to be achieved. This enables horizon scanning, effective planning and prioritisation of workload and avoidance of duplication of work.

6.9 Business Systems

There are a wide range of business systems and processes that support the day-to-day running and provision of healthcare services. These include, but are not limited to: HR, Payroll, staff training and appraisal, Office365.

Our strategy will aim to modernise our core business systems to support our workforce and develop simplified systems that enable staff to work to the best of their ability; provide training and support in using these systems efficiently, effectively and to their full functionality; procure digital solutions that meet the needs of staff, patients and third parties and remove paper from the process wherever possible.

7. NHS Shetland's Digital Goals

Seven goals have been identified to enable the strategic vision to be realised and outcomes achieved, these goals are described here:

Digital Goal	Description
Digital Access & Inclusion	Ensuring equitable access to digital health and care services for all, addressing digital exclusion.
Person-Centered Digital Services	Developing digital services with a focus on user engagement and ease of use.
Resilient Digital Foundations	Building robust and secure digital infrastructure, with modern devices and network connections, underpinning all health and care services.
Empowered Digital Skills and Leadership	Investing in comprehensive training, digital literacy, and upskilling for the workforce, especially for clinicians and healthcare leaders.
Innovation & Digital Futures	Embracing innovation and a flexible approach to continuously enhance Shetland's digital capabilities.
Integrated Data-Informed Insights	Using data to provide actionable insights, support decision-making, and improve service quality, while ensuring integration with social care and other services.
Climate-Aware Digital Strategy	Incorporating sustainability into digital infrastructure and services, aiming for an environmentally responsible healthcare system.

8. Next Steps

8.1 5-year Roadmap

"A strategy without action is a dream"

Once the digital strategy is agreed it will be transposed into a phased delivery plan to ensure we remain on track to realise our digitally enabled future. A 3 Horizon approach will be used to define the outcomes at each horizon (1,3 and 5 years) and a roadmap will be breakdown what services will be delivered at each horizon (Figure 2). This will allow us to focus on what digital activity we need to sustain over the next 5 years (horizon 1) whilst we innovate and transform our digital enablement (horizon 2) to allow us to be working in a different way using technology and digital means to best effect (horizon 3). An example of a 5-year roadmap is shown in Figure 3.

The digital development plan will be contiguous with the Board's Strategic Delivery Plan, workforce plan and sustainability plan. This needs to be a case because of the cause-and-effect relationship between all four plans and the fact that all will need to be delivered to realise our strategic and operational horizon 3.

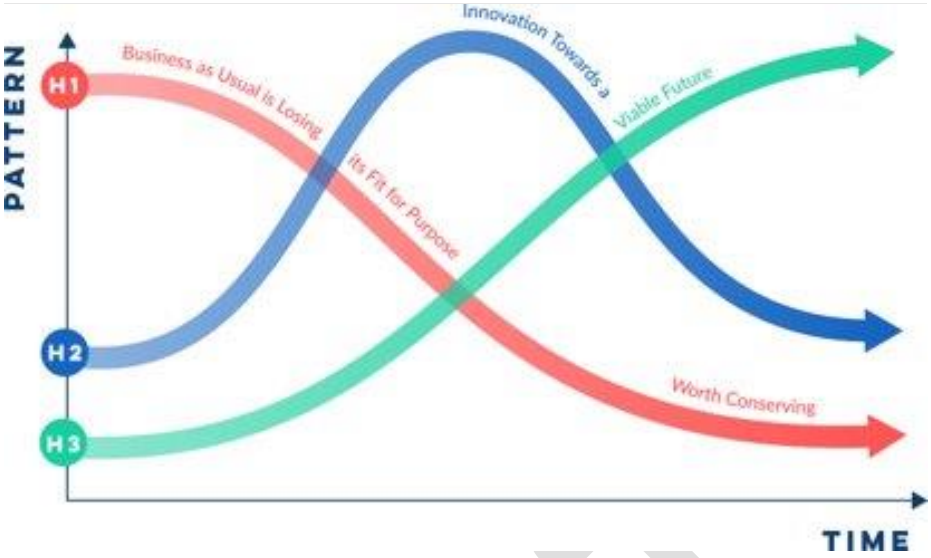


Figure 3 Example illustration of the 3 Horizon approach

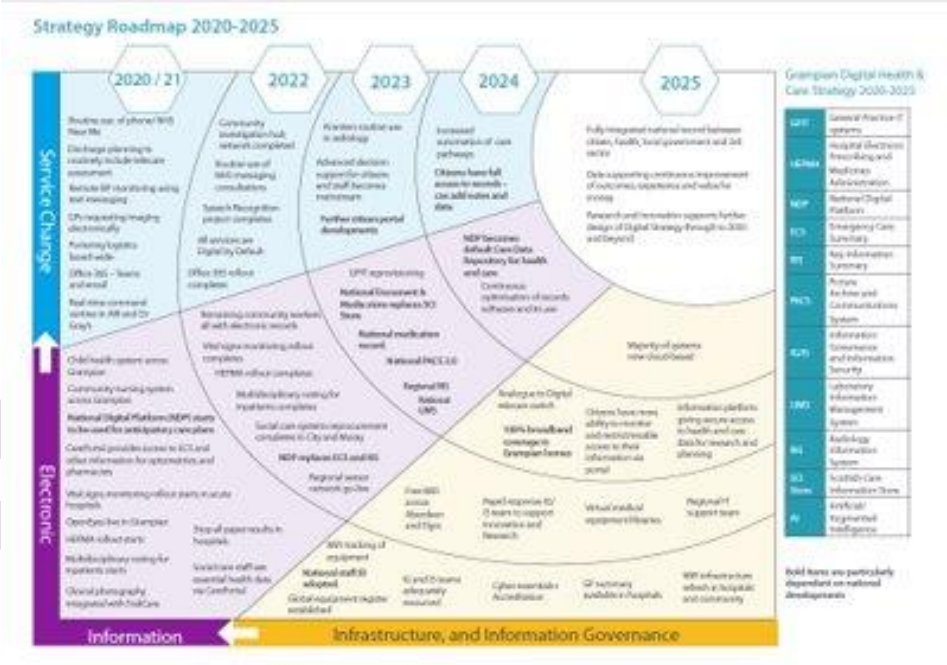


Figure 4 Example illustration of a 5-year roadmap (NHS Grampian)

8.2 Improving Decision Making

The roadmap will enable medium-long term and outcome-based planning to take place for all projects and programmes whilst streamlining the decision-making and prioritisation processes. The aim is to ensure that projects are only resourced and prioritised if they can be shown to be strategically appropriate and based on real patient or staff needs. The below governance structure (Figure 5) is in place with a new decision-making process for project approval in development (Figure 6).

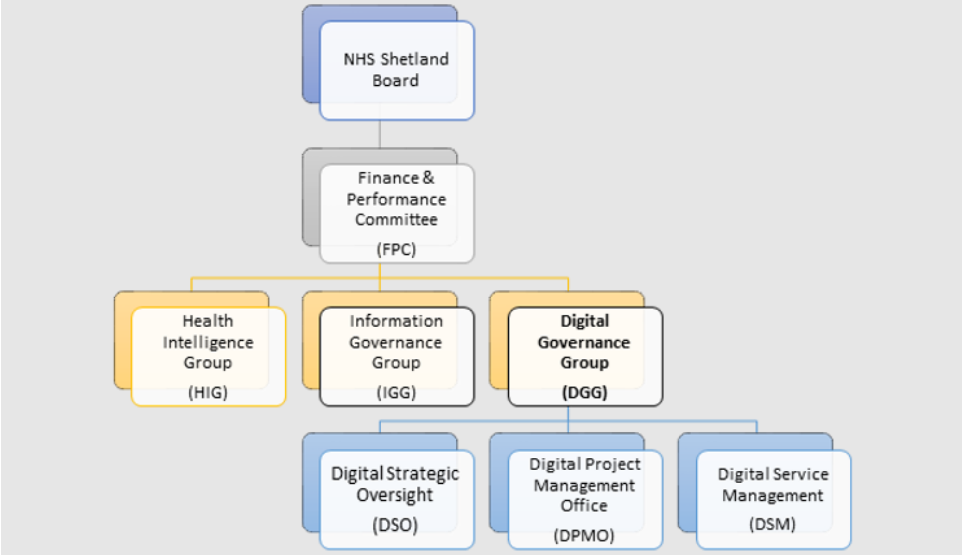


Figure 5 Current Digital Governance structure in NHS Shetland

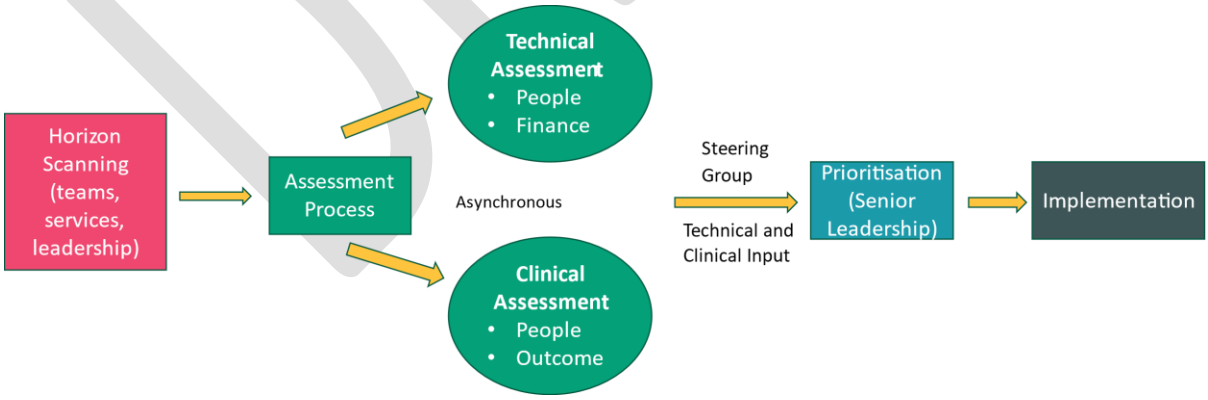


Figure 6 Proposed decision-making process for new digital projects

8.3 Optimisation v Implementation

In our digital strategy, striking a balance between digital optimisation and new project implementation is crucial for sustainable growth and innovation.

Digital optimisation involves refining and enhancing our existing digital assets and processes. This approach ensures that we maximise the efficiency, user experience, and value of our current digital ecosystem, which is fundamental for maintaining staff efficiency in the services they deliver and demonstrating best value.

On the other hand, new project implementation is about embracing emerging technologies and ideas to expand our capabilities and explore new innovative ways of working. While this requires investment and entails risk, it is essential for long-term growth and staying ahead in a rapidly evolving digital landscape.

Our strategy should therefore allocate resources and attention to both areas: continuously improving and optimising our current digital offerings for immediate benefits, and judiciously investing in new projects that align with our Board vision and strategic intent. This dual focus will enable us to maintain a robust and dynamic digital footprint, catering to immediate operational excellence while fostering innovation for future success.

8.4 Patient Focused Process Mapping

To inform the 5-year roadmap, process mapping will be conducted to visually map out process and information flow through the clinical systems when an individual engages with our services. This will be presented as several local case studies, covering different patient scenarios.

An example of this is described here:

Emma, a 38-year-old marketing consultant, started experiencing persistent fatigue and joint pain. With a busy schedule, she found it difficult to make time for a doctor’s appointment. Recognising her need for medical advice, she turned to her healthcare provider's digital platform.

7. **Virtual Consultation**: Emma scheduled a virtual consultation through the provider's online portal. She filled out a preliminary symptom questionnaire and uploaded it along with her medical history.
8. **Telehealth Appointment**: During the video call, Emma discussed her symptoms with a doctor. Based on the conversation, the doctor suspected a thyroid issue and recommended blood tests.
9. **Digital Test Scheduling and Results**: Emma booked her blood test appointment using the same digital platform. After the test, the results were uploaded directly to her digital patient file, which the doctor reviewed promptly.
10. **Follow-up Telehealth Session**: In a follow-up video consultation, the doctor confirmed a diagnosis of hypothyroidism and prescribed medication. The prescription was sent electronically to Emma's chosen pharmacy.
11. **Mobile Health Monitoring**: Emma downloaded a mobile app recommended by her doctor to track her symptoms and medication adherence.

12. **Digital Health Education**: Through the provider's online resources, Emma educated herself about hypothyroidism. She also joined a virtual support group recommended by the digital platform.
13. **Ongoing Digital Communication**: For ongoing management, Emma used the digital platform to communicate with her healthcare team, schedule regular check-ups, and manage prescriptions.
14. **Outcome**: Thanks to the convenience and efficiency of digital healthcare, Emma was able to receive a timely diagnosis and effective treatment plan without disrupting her busy work schedule. She felt empowered and well-supported throughout her healthcare journey.

This story exemplifies how digital healthcare can streamline patient experience, from initial consultation to ongoing management, making healthcare more accessible and efficient.

8.5 PPE Plan – Strategy -> Plan

In the context of our 'Digital Vision for Healthcare in Shetland' strategy, the engagement of staff and patients is not just beneficial, but essential for the successful realisation of our digital transformation goals.

Staff engagement is pivotal as we embark on introducing advanced digital tools such as AI-assisted diagnostics, telehealth, and electronic patient records. Their direct involvement in the process ensures that these tools are implemented in a way that truly enhances their workflow, addresses the challenges of remote healthcare delivery, and bridges workforce gaps. By actively involving staff in training and decision-making processes, we ensure that the digital tools are user-friendly and effectively meet the unique needs of Shetland's healthcare environment.

Similarly, patient engagement is crucial in tailoring our digital health services to the specific needs of our community. As we enhance our services with options like remote digital appointments, digital therapy options, and online health management tools, patient feedback and participation are invaluable. This ensures that our digital offerings not only improve access to healthcare for remote and mobility-restricted patients but are also aligned with patient preferences and behaviours. Engaging patients in the development of digital health strategies ensures that we maintain a person-centred approach, particularly in remote assistive care and in the integration of health data insights.

Furthermore, this engagement is integral to the effective implementation of our strategic themes, such as AI and predictive analytics, ensuring they resonate with real-world applications and benefit both healthcare providers and receivers in Shetland. Through ongoing dialogue and collaboration with staff and patients, our strategy's transition into a comprehensive delivery plan becomes a shared journey, fostering a digitally empowered healthcare community that is resilient, sustainable, and aligned with both local and national healthcare objectives.

Appendix 2. Rapid Impact Checklist

<table>
<tr><td>Which groups of the population do you think will be affected by this proposal?
Other groups:
• Minority ethnic people (incl. Gypsy/travellers, refugees & asylum seekers)
• Women and men
• People with mental health problems
• People in religious/faith groups
• Older people, children and young people
• People of low income
• Homeless people
• Disabled people
• People involved in criminal justice system
• Staff
• Lesbian, gay, bisexual and transgender</td><td>All groups will be affected as everyone in the population is a potential recipient of health and care services, and may also be impacted as a friend/relative/carer of service users.

Healthcare staff will also be impacted as the Digital Strategy aims to develop and improve digital aspects of services, which often means change in ways of working and job roles – development of the plan includes consultation and engagement with teams involved in delivery of service, to ensure developments support their views around digital in relation to service delivery and will use their lived experience as staff to inform the 5-year delivery plan.

EQIA’s will need to be done for any specific programmes of work which involve changes in service provision on a case by case basis to ensure best outcomes.</td></tr>
<tr><td rowspan="2">N.B The word proposal is used below as shorthand for any policy, procedure, strategy or proposal that might be assessed</td><td>What positive and negative impacts do you think there may be?</td></tr>
<tr><td>Which groups will be affected by these impacts?</td></tr>
<tr><td>What impact will the proposal have on lifestyles?
For example, will the changes affect:

• Diet and nutrition</td><td>Part of the Digital Strategy’s vision is to:

Empower people to participate in their own health and care through thoughtful implementation and adoption of digital ways of working together.</td></tr>
</table>

• Exercise and physical activity • Substance use: tobacco, alcohol and drugs? • Risk taking behaviour? • Education and learning or skills?	And one of the outcomes of the Digital Strategy is Better Health. Digital technology is not restricted to a clinical setting and is often used within the home by patients themselves with the aim of prevention, self-management or reducing the need for the patient to interact with services in the traditional way. This is of particular benefit to patients who live remotely or have reduced mobility and find it difficult to attend appointments. Examples of digital health used by patients outside the clinical setting include blood pressure monitors and blood glucose monitors, information from which can be reported back to the clinician via online patient portals. Digital technologies can empower patients to be more involved in their health and the management of their condition.
Will the proposal have any impact on the social environment? Things that might be affected include: • Social status • Employment (paid or unpaid) • Social/Family support • Stress • Income	One of the priorities of the Digital Strategy is to be Person-Centred. Person-centred care supports people to develop the knowledge, skills and confidence they need to more effectively manage and make informed decisions about their own health and health care. It is coordinated and tailored to the needs of the individual. Some examples of patient-centredness in relation to digital technology in particular are: • Increased personal choice • Access to your own health data • Accessing services in that reflect your needs – when you need it, wherever you are

	One of the goals identified in the Digital Strategy is around digital access and inclusion: “Developing digital services with a focus on user engagement and ease of use.” EQIA’s will need to be done for any specific programmes of work which involve changes in service provision on a case by case basis to ensure best outcomes.
Will the proposal have any impact on the following? • Discrimination? • Equality of opportunity? • Relations between groups? • Fairer Scotland Duty?	One of the goals identified in the Digital Strategy is around digital access and inclusion: “Ensuring equitable access to digital health and care services for all, addressing digital exclusion.” And “Developing digital services with a focus on user engagement and ease of use.” EQIA’s will need to be done for any specific programmes of work which involve changes in service provision on a case by case basis to ensure best outcomes.
Will the proposal have an impact on the physical environment? For example, will there be impacts on:	One of the goals identified in the Digital Strategy is to be a Climate-Aware Digital Strategy: “Incorporating sustainability into digital infrastructure and services, aiming for an environmentally responsible healthcare system.

• Living conditions? • Pollution or climate change? • Accidental injuries or public safety? • Transmission of infectious disease?	Additionally, a priority area is “Our impacts on the environment”: Digital technology has a major role in addressing some issues around climate change and healthcare provision - reducing travel through virtual appointments and remote monitoring; reducing the size of buildings by removing paper record stores and using electronic patient records; reducing our reliance on large data warehouses by using cloud infrastructure. We must embed a culture which considers how we positively impact on climate change through procurement, projects and equipment, and adopt a leadership role in embedding the circular economy. EQIA’s will need to be done for any specific programmes of work which involve changes in service provision on a case by case basis to ensure best outcomes.
Will the proposal affect access to and experience of services? For example, • Health care • Transport • Social services • Housing services • Education	This is a Digital Strategy for NHS Shetland and will affect access to, and experiences of, healthcare services across Shetland through planned programmes of work. For example, its hoped a robust digital delivery plan would deliver decreased needs for patients to travel to access healthcare and therefore their dependency on transport. EQIA’s will need to be done for any specific programmes of work which involve changes in service provision on a case by case basis to ensure best outcomes.

For further information please contact: Katie McMillan, Planning, Performance and Projects Officer, NHS Shetland