Health and Care in the digital age: a digital strategy for NHS Forth Valley

2023-27

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Supporting messages

Significant changes in the way we treat and care for our patients have developed over the last five years, not least due to the pandemic response, but also because of advancing digital technologies. There has been a focus on embracing mobile and remote working. Online consultations with remote patients are now commonplace. 'Teams' meetings are the norm. Electronic patient records (EPR) have replaced thousands of paper records in our outpatient and community settings, viewed through a clinical portal. From supporting community practitioners to access key clinical systems to the use of Wi-Fi across our primary care and partnership colleagues. The use of Digital technologies is now the norm. The introduction of a new patient management system, Trakcare, was a significant milestone in the last five years, following a detailed implementation plan which saw it being rolled out to replace three different older systems.

The next steps will concentrate on moving the agenda further into the community and patient facing setting. We will be refreshing GP and mental health electronic systems and working on regional and national developments in support of a patient-facing 'front door' portal which will help people access our services from their homes.

Health and social care integration has also focused minds on information sharing and we will be working to improve the flow of information between NHS and partnership colleagues.

From the hospital perspective, as well as Community hospital transformation, we are set to deliver the EPR into the inpatients setting. Integrating medical devices data into the whole system EPR.

Our Digital Health and Care Strategy has been modelled on the themes identified in NHS Forth Valley's evolving Healthcare Strategy, which will present our core aims for healthcare over the next five years. It supports the key priority themes: Better Health; Better Care; Better Value; and forges closer links between patients and healthcare staff through the use of technology.

Associate Director Facilities and Infrastructure

Digital & eHealth

Introduction

NHS Forth Valley published *'Shaping the future – a supporting digital and eHealth strategy 2018-2022'* in 2018 as a response to the national *'Digital and eHealth strategy'* (2018) and also the Forth Valley clinical strategy *'Shaping the future'* (2016).

Having reached the end of the previous supporting digital and eHealth strategy, much has been achieved and a review and learning from that is mentioned later. Much has changed in recent years. The Scottish Government has refreshed its national digital health and care strategy, published in November 2021 and called *"Enabling, Connecting & Empowering: Care in the Digital Age"*[1]. Hence there is now a requirement for a new local Digital strategy.

The previous local strategy included a theme on Cyber-security. Due to the importance and focus required, a stand-alone Cyber-resilience sub-strategy has been released[2]. In consequence Cyber issues are only summarised in this document.

Furthermore, the previous strategy included information developments. Scottish Government have now published their first health and care data and information strategy for Scotland, in February 2023, called *"Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age"*[3]. A separate section is given later reflecting on this new data strategy.

Many drivers form an evidence base for developing this new strategy. During 2022-24 a new healthcare strategy has been developing for Forth Valley. The previous Digital strategy followed closely the healthcare strategy 'Shaping the future'. Likewise, this new digital strategy follows the themes of the evolving healthcare strategy.

In addition, the Health and Social Care Partnerships have produced new development or strategic plans which inform this document.

What we have been doing

A mid-term review of *'Shaping the future – a supporting digital and eHealth strategy 2018-22'* was issued in January 2021 and a further review was produced in March 2022.

We listed 28 projects in the 2018 strategy. Here are a couple of the major achievements:

One of many benefits from the Trakcare implementation programme was the migration of 3 different patient management systems into one and 5 different patient reference numbers to single use of the national CHI number as the master reference uniquely identifying patients.

Stirling care village saw an example of integration of health and social care teams with the provision of networks and the Trakcare application for use by local authority staff in the Bellfield Centre.

Further detail is given in Annex 2.

COVID Response

In addition to the planned activity, during 2020/22 the Covid-19 response required huge efforts to bring forward some existing plans, development of new applications or rolling out national applications as well as major infrastructure expansion. Some of the major projects included the following:

COVID Response

- **February 2020**
- **01 Near Me** — Rapid deployment Q4 2019
- **02 Remote Access** — App & kit Deployed April 2020
- **03 Test & protect** — App & Kit Deployed Q2 2020
- **04**
- **Vaccination** — App/Kit Deployed Locations Supported Q4 2020
- **05**
- **06 MS Teams** — Enterprise Rollout Q1 2021
- **06 Acute Capacity** — Supporting add locations Q3 2021
- **Today**

Q4 2019 | Q1 2020 | Q2 | Q3 | Q4 | Q1 2021 | Q2 | Q3 | Q4 | Q1 2022
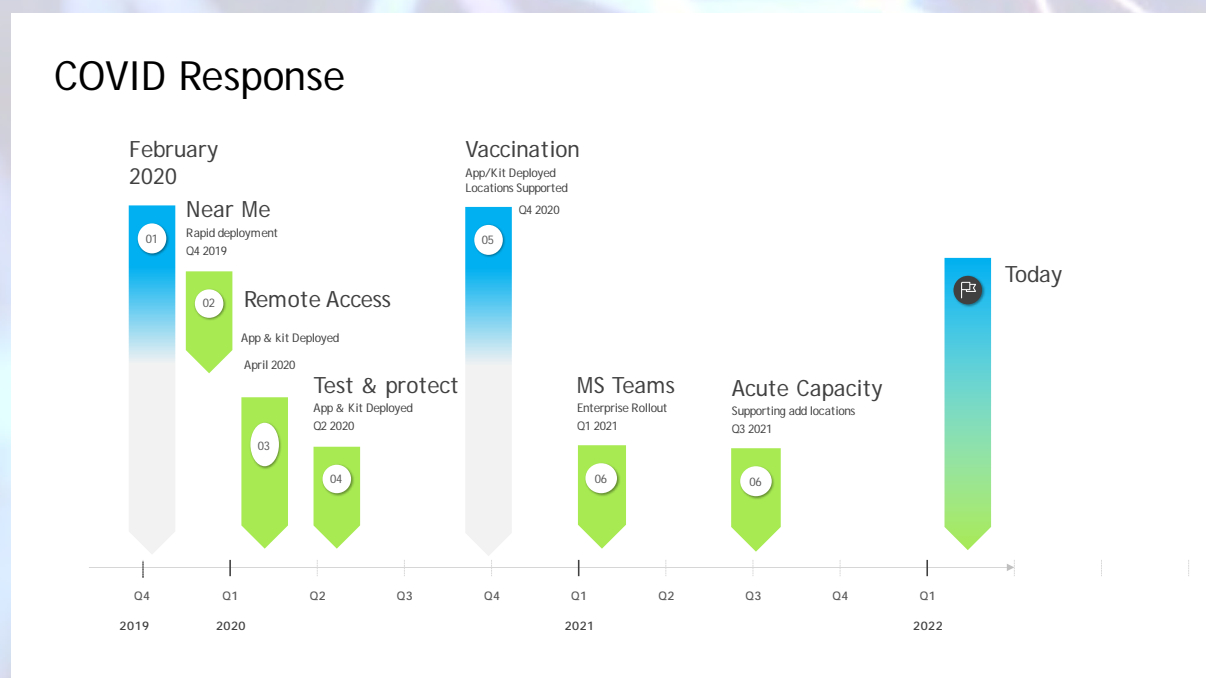
Digital Health has embraced a range of innovations in the last five years including:

- The Digital Dermatology Assessment application, supplier developed and piloted within Forth Valley has been scaled up to a nationally available application with national usage.[4]
- Tele-Ophthalmology for emergency eye care support gives remote optometry support for the Emergency Dept (ED) and Minor Injury Unit (MIU) patients, over 5000 patients supported up to May 2022.
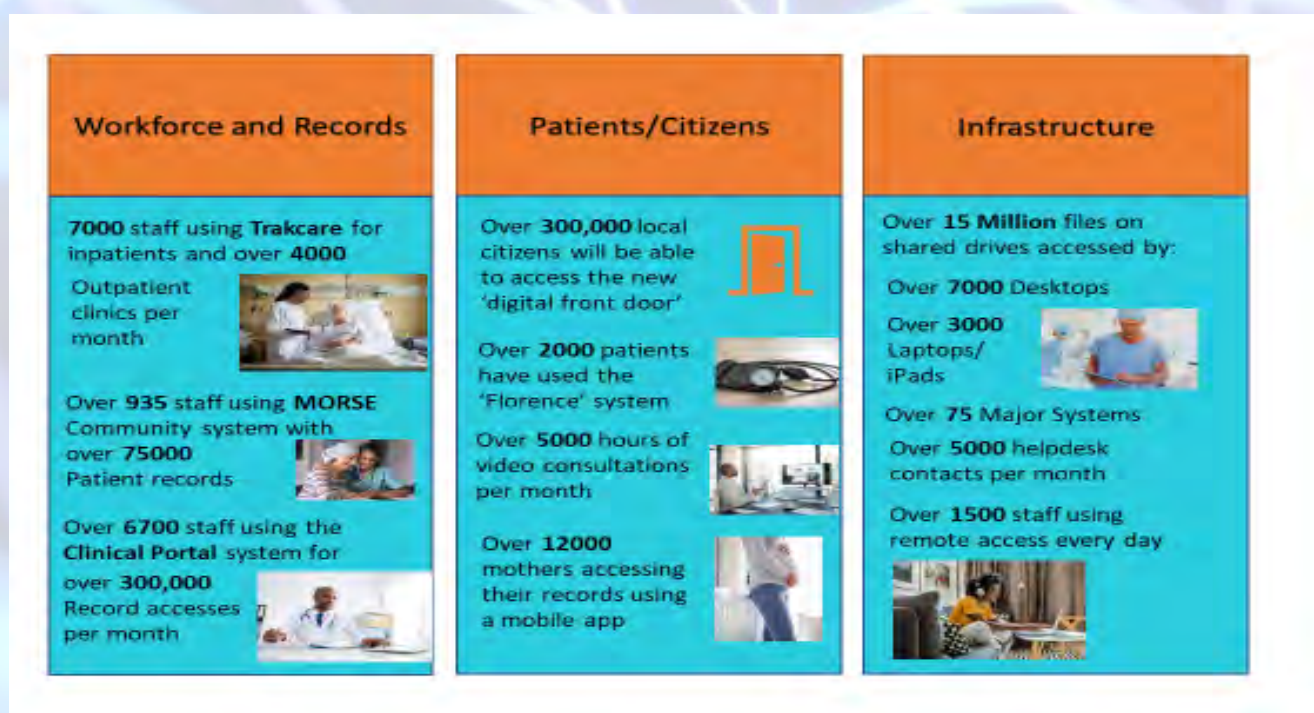- The InHealthcare patient pathway tracking system is being developed in collaboration with several boards and was procured as part of the response to Covid19. [5]
- The Heartflow project to release consultants time and enable faster diagnosis.[6]

Size and scale

In the next five years the numbers of staff and patients making use of digital systems will expand. The size and scale of digital health records will increase, and the corresponding infrastructure will be more widespread and universal while staying robust and secure. The following illustration highlights the impact of projects carried out over the course of the last strategy.

Workforce and Records

7000 staff using **Trakcare** for inpatients and over **4000**

Outpatient clinics per month

Over **935** staff using MORSE Community system with over **75000** Patient records

Over **6700** staff using the **Clinical Portal** system for over **300,000** Record accesses per month

Patients/Citizens

Over **300,000** local citizens will be able to access the new 'digital front door'

Over **2000** patients have used the 'Florence' system

Over **5000** hours of video consultations per month

Over **12000** mothers accessing their records using a mobile app

Infrastructure

Over **15 Million** files on shared drives accessed by:

Over **7000** Desktops

Over **3000** Laptops/ iPads

Over **75** Major Systems

Over **5000** helpdesk contacts per month

Over **1500** staff using remote access every day

What is behind our new strategy

Vision and Principles

"To improve the care and wellbeing of people in Forth Valley by making best and innovative use of digital technologies in the planning, design and delivery of services."

Our Goals

People are well informed and enabled by digital technology in achieving positive health and care outcomes

Our staff are assisted by technology to make effective decisions, deliver integrated services and work efficiently and safely regardless of organisational boundaries

Our organisation's performance is optimised and transformational change is enabled through the use of technology at scale

Principles for future investment

- Integrated care with the patient outcome at the centre
- Solutions delivering measurable improvement are affordable, implementable, sustainable, secure and compliant with the strategic approach.
- Principles of priorities, best value and business case are applied.
- Interoperable and collaborative approaches across NHS Scotland and partners
- Geared towards working with national standards.
- Integrity and security of our 'business as usual' environment is maintained
- Meeting future patient, health and social care professionals needs
- Increasing collaboration and innovation
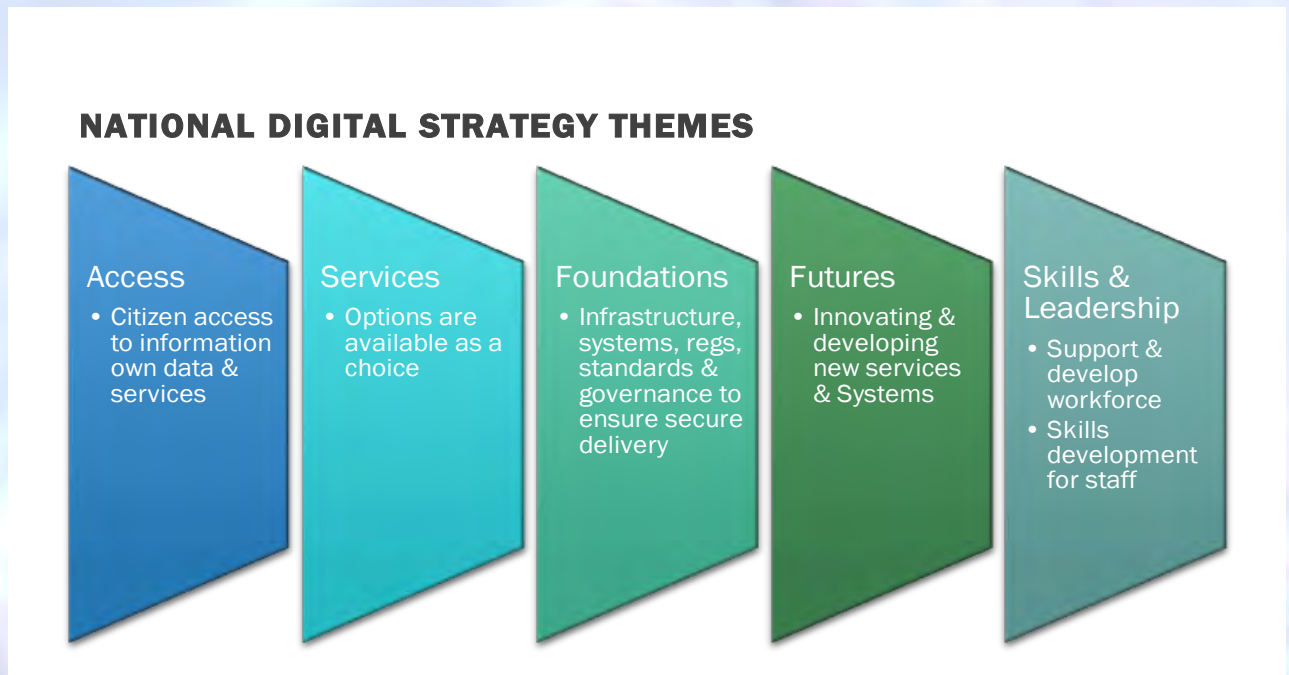- Improved support for Public Health and Self Care developements

Drivers for change

Some of the national drivers for change are set out in the following documents:

- NHS Recovery Plan[7]
- A changing nation: how Scotland will thrive in a digital world [8]
- Scotland's Artificial Intelligence Strategy[9]
- Mental Health Strategy 2017-27 [10]
- National workforce strategy [11]
- Enabling, Connecting & Empowering: Care in the Digital Age[1]
- The strategic framework for a cyber resilient Scotland [12]
- Scotland's life sciences vision[13]
- Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age[3]
- Delivering value-based health and care: a vision for Scotland[14]

National Digital Health Strategy

In addition to the above Scottish Government published a new digital health and care strategy in November 2021. Titled *"Enabling, Connecting & Empowering: Care in the Digital Age"*[1.] it has six main priority themes. Our approach will follow five of these themes as below. The sixth theme, *'Data Driven Services and Insights'* mainly comprises the development of the new Data Strategy for Health and Social Care, discussed below. In addition, we will participate in the national digital maturity exercises to help develop the national digital delivery plans.

NATIONAL DIGITAL STRATEGY THEMES

Access	Services	Foundations	Futures	Skills & Leadership
• Citizen access to information own data & services	• Options are available as a choice	• Infrastructure, systems, regs, standards & governance to ensure secure delivery	• Innovating & developing new services & Systems	• Support & develop workforce • Skills development for staff

National Data Strategy

In February 2023 Scottish Government published *"Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age"*[3]. Many of the actions in that document are contained within the national digital health strategy mentioned above. Hence they are reflected within the body of this local digital health and care strategy.

There are however some aspects of the new data strategy which impact on health records, on information governance and on health and social care partnerships which are not contained within this local digital health strategy. In addition, improved technology and data for performance and business intelligence are drivers in the local HSCP strategic plans. These drivers will be covered in a new local information and data sub-strategy "Better insight, improved outcomes: a sub-strategy for data and information in NHS Forth Valley".

Local strategies

In addition to the national drivers mentioned above some local strategy developments have been drivers in the development of this local digital health strategy document. These include:

- Clackmannanshire and Stirling HSCP Strategic Commissioning plan 2023-33[15]
- Falkirk HSCP Strategic Plan 2023-26[16]
- Forth Valley Quality Strategy 2021-26[17]
- Forth Valley Healthcare Strategy in development.

Strategy building with Stakeholders

In addition to the national drivers for change above, our local partners, staff and patient groups have been telling us about the things that will make their health and care services and experiences better. They have done this through presentations at local management groups and consultation on early drafts of this strategy during 2022.

GP Primary Care additional requirements

New IT system to replace the ageing system which is more than 10 years old
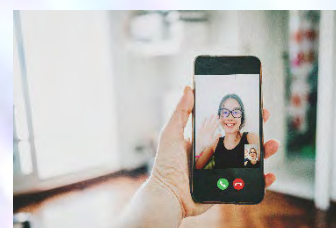
Improved telecoms, which will be considered in the wider telecoms replacement business case

Document imaging replacement/upgrade

Patient booking system and patient access to medical records. This will be considered as part of the new 'Digital Front Door' development

Staff access to multiple practice systems

Health & Social Care additional requirements

Improved data sharing, and the NHS as an Anchor organisation

Local login from anywhere

Support the Falkirk Masterplan

Support for the new National Care Service

Improved data for performance and business intelligence

New technological developments to support people and local services

The Acute sector additional requirements

Develop an inpatients Electronic Patient Record (EPR) for ward based patients

Data from medical devices to be included in the EPR

Patients Perspective

To have the choice to access electronic medical records, with good security

Appointment booking and changing online

Lab results viewing online

Improved and wider use of remote tele-conference style outpatient appointments

All of the above are central to the national 'Digital Front Door' programme led by Scottish Government
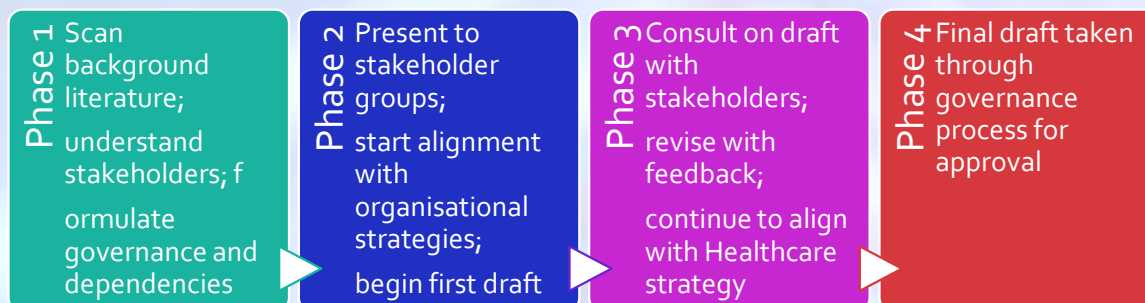
Transformational change

In the next 5 years our strategic approach will bring a transformational change around the 'patient and healthcare experience'.

- The patient will become a key stakeholder with the EPR showing their digital story.

- Integration of patient and medical device acquired data will bring a richer and more widespread EPR.

- Collaborations for innovation and use of Artificial Intelligence for diagnosis and prevention will bring new functionality to enhance services. In addition, responding to the Accelerated National Innovation Adoption (ANIA) pathway innovations[18] directed via the national delivery plan will need appropriate consideration.

- Support for the emerging National Care Service will bring change, flexibility and innovation at local and Scotland wide scale.

The EPR programme will look to transform Acute (FVRH) and Community Hospital (SCV, FCH etc) Clinical Records to a vEPR (Virtual Electronic Patient Record) System. This will essentially replace the paper records used in Ward and Clinical Settings. This programme intends to review, improve, and implement efficient working practices and procedures so that the vEPR will be seen as a transformation programme, introducing new technologies (eObservations, Clinical Notes, etc) to support staff caring for patients.

Developing the strategy

Our approach followed that of the Forth Valley Quality Strategy 2021-26[17] where a small, focussed working group was formed to engage with stakeholders and develop the draft documents. In doing so the phases of the innovation cycle were followed as below:

Phase 1	Phase 2	Phase 3	Phase 4
Scan background literature; understand stakeholders; formulate governance and dependencies	Present to stakeholder groups; start alignment with organisational strategies; begin first draft	Consult on draft with stakeholders; revise with feedback; continue to align with Healthcare strategy	Final draft taken through governance process for approval

Delivering the Strategy

An annual delivery plan will form the detail of how specific elements will be progressed through individual project plans, governed through the eHealth programme board, and Senior Leadership Teams.

The impact on wider clinical and non-clinical services including resource implications and capability and capacity of wider services to implement changes will be included in detailed business cases and project plans for individual actions contained within this strategy.

The wide-ranging eHealth programmes are managed by the eHealth programme board which reports up to the NHS Forth Valley Board via a series of governance groups (see below)
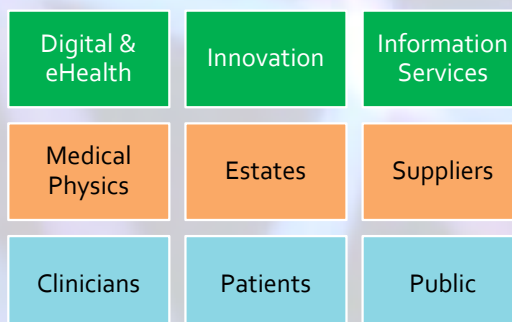
A draft timeline showing an approximate five-year timetable for delivering elements of the strategy is in Annex 1

A separate financial strategy statement is included before the concluding summary.

Finally, following publication by Scottish Government of the annual delivery plans for *'Enabling, Connecting & Empowering: Care in the Digital Age'* we will incorporate relevant elements of the national delivery plan within our annual plans as required.

Who will make this happen

The following diagram shows the levels of contributors to holistically delivering the Digital Strategy, the three layers being primary service providers, secondary services & core stakeholders.

Digital & eHealth	Innovation	Information Services
Medical Physics	Estates	Suppliers
Clinicians	Patients	Public

To deliver this strategy a number of teams lead and contribute to the individual workstreams, programmes and projects, as well as crucially, giving support. These teams and services can be grouped and listed as below:

• Digital (Information Technology) & eHealth

- Service desk services – with associated Operational Plan and performance indicators
- Business as Usual Support for all systems and services
- Development & Systems Management Support
- Programme & Project Support – with associated business case preparation & Support

• Information Services

- Information Reporting (national & local returns)
- Dashboards (providing real time data)
- Information requests (Ad-hoc reporting)
- National Statistics

• Innovation Programme

- Innovation projects (National, Regional & Local), in particular those driven by ANIA[18].
- Scoping/research of emerging technology
- Real World Trials of emerging software
- Transition to BAU (in collaboration with Digital partners)

These services work closely with the supporting Digital Clinical Leads (Acute, Primary Care & AHP representative), as well as managerial senior leadership teams, who assess and advise on the clinical software and digital requirements for the services.

We will also engage with staff through digital Clinical Leads to help staff adoption of digital technology and understand the human factors and hurdles to adoption.

Our other partners are included for reference (Medical Physics, Estates & External Suppliers) to complete the overall Digital picture.
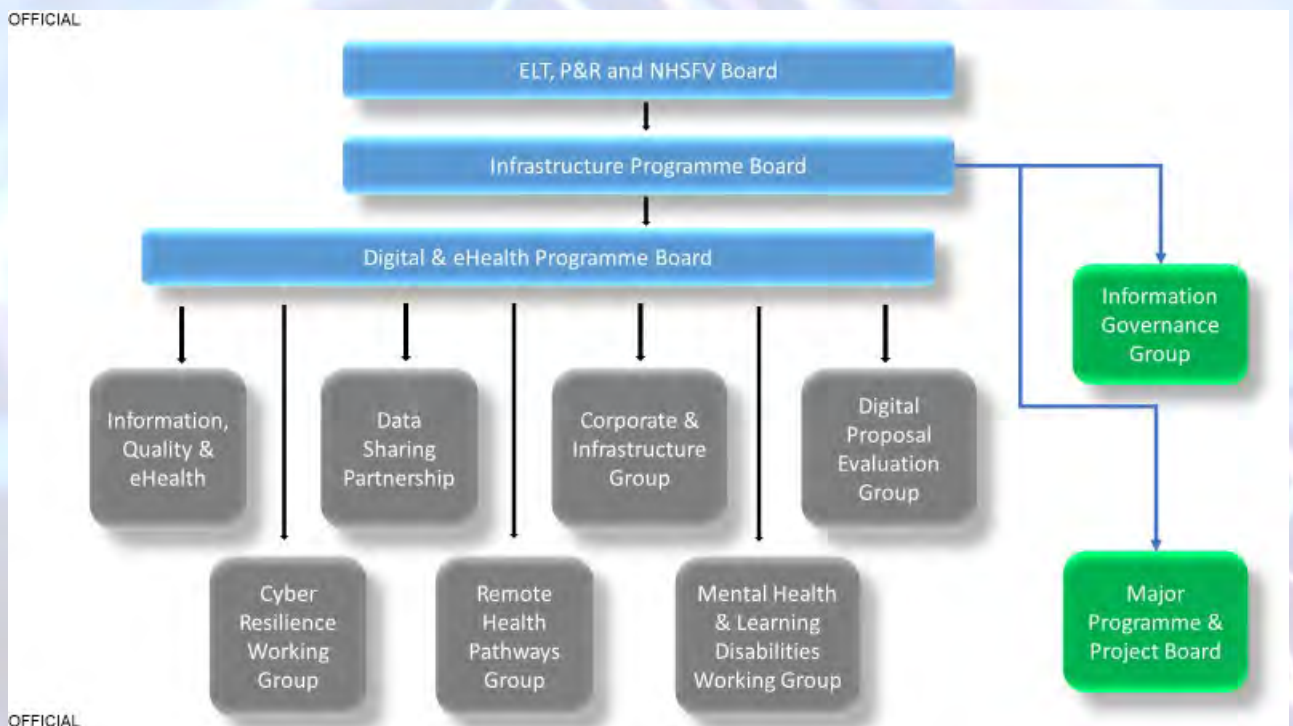
Communications about relevant projects and progress with delivering this strategy will be made to staff and other stakeholders in the form of regular newsletters and other communications in the staff news and other media.

Good Governance

The strategy will inform annual delivery plans which will be owned and delivered by the Digital and eHealth Programme Board, Led by the Director of Facilities and Infrastructure. This Board in turn reports to the Infrastructure Programme Board, Led by the Director of Finance and so up to the Executive Leadership Team and the NHS Board via the same directors as in the diagram below.

Monitoring of the delivery plans will be done by the relevant project boards reporting to the eHealth Programme Board, with quarterly reporting to the Infrastructure Programme Board and Performance & Resources committee. An Annual Delivery plan is drafted and then ratified and approved by the Infrastructure Programme board.

A mid-term review of the strategy will be carried out approx. 2025 and a final review after the life of the strategy looking at benefits and lessons learned.

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                    ELT, P&R and NHSFV Board

                Infrastructure Programme Board

                Digital & eHealth Programme Board

  Information,      Data          Corporate &      Digital          Information
  Quality &         Sharing       Infrastructure   Proposal         Governance
  eHealth           Partnership   Group            Evaluation       Group
                                                   Group

      Cyber            Remote          Mental Health                Major
      Resilience       Health          & Learning                   Programme &
      Working          Pathways        Disabilities                 Project Board
      Group            Group           Working Group
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Some major new Developments

Here we present a brief taster of the future developments in our new strategy, more details follow in the 'Themes' sections later:

The **'Digital Front Door'** is a national strategic programme and is a new streamlined approach to how people navigate their way through services, which will include a safe, simple, and secure digital app. This will support people to access information and services directly – like a 'digital front door' – as well as self-manage, and access and contribute to their own health and care information. The 'Patient Hub' is our local adaptation.

The **'Unified Care Record'** sits over existing systems in health and care organisations within Forth Valley or across the West of Scotland region. It provides views of a wide range of data from many systems. Additional capabilities include Review/Update/Collaborate on electronic records; Automatically driven Alerts; Public health management analytics and ultimately Artificial Intelligence driven decision support.

Building on the outpatients Electronic Patient Record (EPR) foundation which was delivered as part of the previous strategy. In the next five years we shall expand this to include **'Inpatients EPR'**. In addition, the inclusion of medical devices data as well as patients own information into the EPR will transform the wealth of medical records data available to clinicians.

What this means from the Patients Perspective:

Patients will be able to manage some appointments; see some of their own data and input some of the clinical data required by their clinician all online or via a mobile app. This improves patient involvement with their own care and the feeling of autonomy.

Risks

Tactical risk assessment and management plans, relevant to individual projects will be prepared and reported on as part of the business case process for each action, then taken forward in the development of delivery project planning. Reporting will routinely be to the eHealth Programme Board with each project report.

There are broad strategic risks relevant to many actions in this strategy. The most important strategic risks are as follows:

National programmes: a number of actions are linked to and dependent on national programmes over which we have little local control. Hence timelines can shift or actions may not go ahead as initially perceived in this strategy, dependent on national priorities.

Mitigated by: Local staff representation on relevant national project groups should partially mitigate against unforeseen risks and at least provide communication lines. Additionally reporting up to ELT, Finance and Chief Executive Officer will allow for adjustments within local delivery plans.

Financial resources: All actions contained in this strategy are dependent on business cases and obtaining the finance to carry them out. These financial constraints are not able to be predicted at the time of writing the strategy and hence there is a risk that the finances may not be available to pursue a particular action.

Mitigated by: Annual delivery plans and the business case process should mitigate against unforeseen financial constraints.

Capability and Capacity of services: Many actions are dependent on support from services to undergo change in processes to make use of and benefit from the digital technologies proposed. The capability and capacity of local services may not be sufficient to fully implement a particular action.

Mitigated by: This should be mitigated for in the relevant business case for that action and additional capacity provided as required in the business case.

ANIA Pathway and Research Projects: There is not enough Information resource to support the innovation work being introduced to NHS Forth Valley via the ANIA pathway and research projects.

Mitigated by: Work closely with the Innovation team to establish and understand the proposed innovation projects likely to come in via the ANIA pathway. Manage all new ANIA pathway projects via a New Innovation Request Process to allow for the evaluation and prioritisation of each request.

Equality Declaration

Due regard has been given to the Equality Act 2010 and compliance with the Equality Duty as part of the decision making processes behind developing this strategy. Relevant aspects of equality are considered in the business case and project planning processes in which there are explicit defined sections to complete.

Our Strategic Themes

There follows three sections which reflect the main strategic themes from the Healthcare Strategy: Better Health, Better Care; Better Value. Within each section there are sub- themes which bring together the aims, projects, and outcome measures for specific projects that fit within each sub-theme. Each project sits on a timeline given in Annex 1. We also map our projects against the 5 pillars of the Scottish Government strategy in Annex 3.

BETTER HEALTH

Improving Prison services, Alcohol and Drug Partnerships, Children and family services

We shall enhance support for HSCP partners for developments within Alcohol and Drug Partnership and the wider mental health services. We shall continue to support Prisons ICT to enable continuity of care with GP practice and enhance visibility and exchange of records. We shall review and enhance support for women and children's services, particularly new national child health systems. To support these goals we have had a data sharing partnership between NHSFV and our HSCP colleagues in local authorities for approx. 10 years which has its own annual plan and continues to build relationships and enhance services and data sharing within health and social care.

We aim to provide the following	We will know we have done this by
1. A new, improved Prisons service system in FV 2. Ensure local health and care services have access to new CHI and Child Health systems where required 3. Improved online access to mental health treatments to support ADP	1. All Prisons have new system and are satisfied 2. New CHI and associated systems fully rolled out 3. Patients are using new treatments

We will achieve these by the following projects:

1. Work with the national programme and partnerships and primary care to establish a project to replace all prisons systems
2. Continue working with national CHI and child health programmes
3. Support online mental health and other community treatments in line with national and local HSCP projects

BETTER CARE

Sub-theme 1: Improving Primary Care and Mental Health Services while supporting Scheduled and Unscheduled hospital care.

We shall support HSCP partners in the replacement of GP and mental health service ICT systems.

We aim to provide the following	We will know we have done this by
4. A new, improved Primary Care system in FV 5. Improved mental health service systems	4. All Practices have new system and are satisfied 5. All relevant mental health practitioners are using new systems and are satisfied

We will achieve these by the following projects:

4. Work with the national programme and partnerships and primary care to establish a project to replace all practice systems
5. Support mental health partners in establishing a new mental health system

Sub-Theme 2 Transforming unscheduled care

We aim to develop continuous improvements in the whole system from Health to social care. Reducing bottlenecks in ED; developing the Hospital @ Home service; the Urgent Care Centre; improving patient flow navigation; expanding the content in our EPR.

We aim to provide the following	We will know we have done this by
6. Expansion of the whole Electronic Patient Record for use by clinical staff by inclusion of an Inpatients EPR. 7. Benefits of collaboration, integration and patient record sharing across the West of Scotland 8. A richer clinical EPR with medical device data and reducing the duplication of device data across multiple systems	6. The functionality is available and in use and numbers of staff using it 7. A working Unified Care Record and numbers of FV patients available on it and numbers of staff using it. 8. Widespread functionality, number of devices integrated and wards and staff using it.

We will achieve these by the following projects:

6. Develop a new inpatients EPR programme, building on the Trak PMS system functionality and developments of the outpatients EPR programme.
7. Develop the Unified Care Record programme along with the West of Scotland depending on business case.
8. Integrate medical devices data into the existing EPR

Sub-Theme 3 Transforming Scheduled care

Within scheduled care we aim to transform the digital systems in primary care and mental health services, expanding the availability of digital chronologies. We will support new diagnostic hub and community hospital developments and the role of digital within sustainable cancer services following the national cancer plan. In addition working with national and local partnerships piloting a range of innovations and research projects.

We aim to provide the following

9. Availability of digital chronologies using data sharing across health and social care
10. Digital aspects of new community based diagnostic hubs.
11. A range of innovation developments, including from ANIA, building in security by design while taking a risk managed approach.

We will know we have done this by

9. Delivering a solution to view system wide citizen chronology
10. Delivering functionality to support digital hubs
11. Projects will be monitored by the Innovation Board and success measured by individual project plans.

We will achieve these by the following projects:

9. DSP Delivery plan (Chronology)
10. Digital Diagnostic Hub Support
11. These depend on proposals approved by the innovation board, however known projects include:
    - Heart flow
    - Opera Heart Failure
    - InHealthCare at national level
    - Dermatology 48 x 22
    - SBRI Eye Health Trial
    - Electronic monitoring

Within the wider improvements in scheduled care we shall continue to work with the West of Scotland cancer network on digital aspects of the National Cancer Action Plan including the use of Power Apps and recognising the necessity to comply with Medical Device regulations.

BETTER VALUE

Sub-theme 1: Improving quality and the Patient Experience

Linkage with the services and programmes established to further the local NHSFV Quality Strategy will be important in all our projects. A number of initiatives throughout this strategy will enhance patient safety and their experience through quality, (eg online access to their own data, modernised clinical systems, improved login and access for locums). We shall ensure any development of Apps is in compliance with Medical Device regulations for standalone software.

We aim to provide:

12. Expand the availability of free WiFi for patients in all NHSFV areas
13. Further develop ability to book appointments and complete forms online among other services to enable people to manage their outpatient appointments
14. Patients having online access to their own data and information via a 'Digital Front Door' in line with national programmes
15. Modernise our core business and clinical systems in line with national programmes
16. Develop and implement a Cyber-Resilience sub-strategy to improve cyber security
17. Improved compliance with national standards as required including migration towards Snomed-CT as enabled by national programmes
18. Newer refreshed clinical systems on the life-cycle plan subject to business cases
19. Improved awareness of effects of digital exclusion for minority of disadvantaged patients in line with partnership and national plans

We will measure by:

12. Increased numbers of access points and users
13. Working functionality and patient user numbers
14. Working functionality and patient user number
15. Number of modernised core systems successfully completed
16. Approved sub-strategy available
17. SG audits of compliance with standards
18. Number of upgraded systems
19. Case studies highlighting improvements

We will achieve these by the following projects:

12. Local WiFi infrastructure expansion project
13. Develop patient hub and support national digital front door programme
14. Develop data access aspects of digital front door programme
15. Upgraded core national systems eg CHI, Hepma, PACS, RIS, Connect Me, Near Me, eRostering, LIMS, HEPMA, M365, Endoscopy
16. Develop a cyber-resilience sub-strategy
17. Engage with SG standards and ensure links to all local projects
18. Specific projects to upgrade relevant local clinical systems
19. Work with national digital exclusion projects to ensure engaged in all local developments eg Patient Hub

Sub-theme 2: Improving use of Data

This sub-theme involves expanding on the new health improvement strategy and use of data in public health and for local and national planning and service improvements. We aim to address the Scottish Government's new data strategy for health and care.

| We aim to provide the following	We will know we have done this by
20. Better access to appropriate data and analyses, at different levels to better inform planning priorities, public health and research data 21. A local response to the Scottish Government data strategy once it is published.	20. Existence of new dashboards and analyses and numbers of users. 21. Approval and publication of new local data and information strategy.

We will achieve these by the following projects:

20. Information Services and others will develop better online dashboards and other methods of accessing appropriate data.
21. Develop a new data and information strategy for Forth Valley.
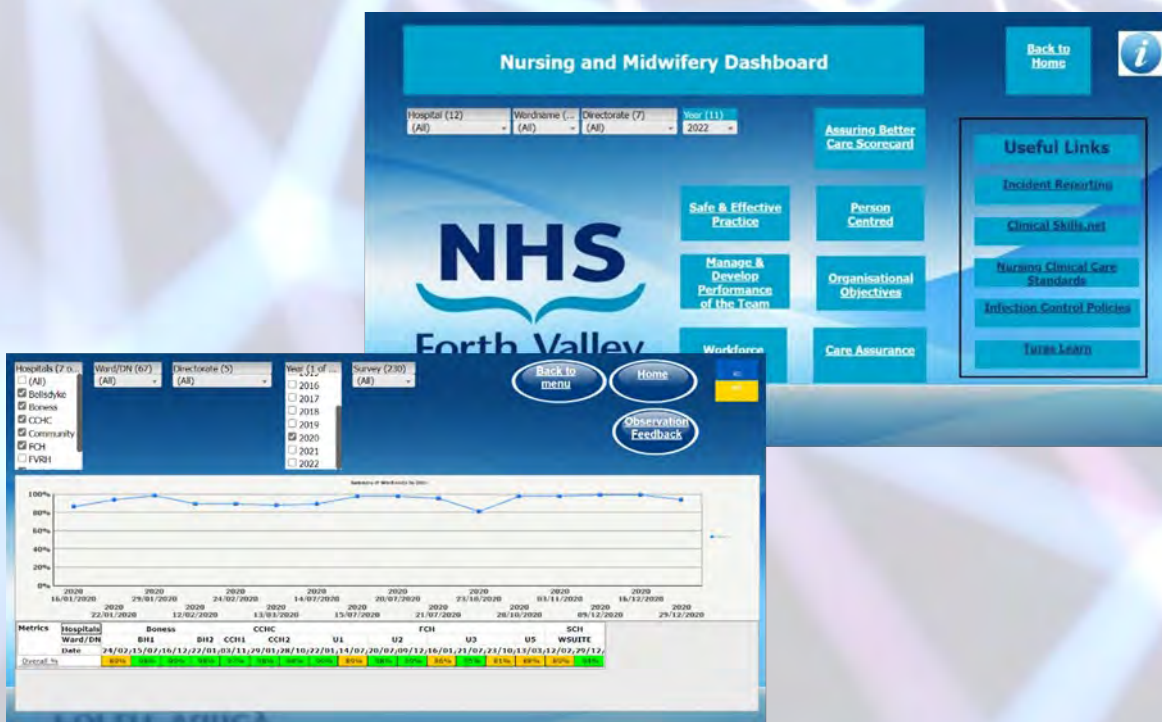
Sub-theme 3: Improving communities – NHSFV as an Anchor organisation

NHS FV is seen as an Anchor organisation in the local community. Providing services which help innovations (with our local university college health partnership) and HSCP service provision.

Our Community Hospitals will expand their role into Community Treatment and Care Centres delivering a wider range of services.

We aim to provide the following

22. New digital services in patients homes
23. Greater collaboration with partners using office 365 products
24. Innovations and research collaboration with the new University College Partnership
25. New regional or national innovations
26. Digital aspects of a local contingency plan for a future pandemic
27. Expanding the role of community hospitals as treatment and care centres in collaboration with local partnerships

We will know we have done this by

22. New technologies running and integrated into EPR
23. Use of national sharepoint and the project endpoint
24. Dependent on individual project plans
25. Dependent on individual project plans
26. A fully developed contingency plan
27. More Digital services available to the public in community hospitals

We will achieve these by the following projects:

22. Work with partnerships to further enable digital services in the home as they become available
23. Continue programme to implement phase 3 of the Office 365 programme including use of national Sharepoint in line with the national programme
24. Work with new university college partnership to enable innovations and research via defined programmes or projects
25. Build on partnerships with neighbouring health boards eg West of Scotland and national groups to develop approved innovation projects
26. Work with Forth Valley and Partners to develop 'living with Covid-19' and contingency plans for future pandemics and other civil contingencies.
27. Work with partnerships on selected digital initiatives based in community hospitals.

Sub-theme 4: Recognising Sustainability and climate change

NHSFV contributes to the climate emergency response, reaching our net zero targets through innovation, rationalisation and simplification of our systems.

We aim to provide the following

28. Make logins and access simpler for clinicians and easier for temporary staff, reducing complexity, improving sustainability, security and reducing costs
29. Converge voice communications tools and technologies, improving telephones in primary care, acute care and elsewhere across FV.
30. Reduce travel and improve outpatient services for patients across most of health and care
31. Increased use of 'Cloud' hosted systems (Where appropriate) and retired locally hosted systems

We will know we have done this by

28. Number of systems reduced. Clinician satisfaction with login and access procedures improved
29. Voice business case approved and implemented
30. Greater number of services and appointments using eg. 'Near Me'
31. Reduced cost of locally hosted servers

We will achieve these by the following projects:

28. Enable projects to retire specific clinical systems and migrate users onto others hence to reduce the total number of clinical systems and improve login and access procedures enhancing patient safety
29. Develop and implement a new digital voice business case
30. Expand the use of 'Near Me' home teleconference service to most health and care services in NHSFV in collaboration with national programmes
31. Switch to 'Cloud' technologies in preference to local where feasible, affordable and is service supported
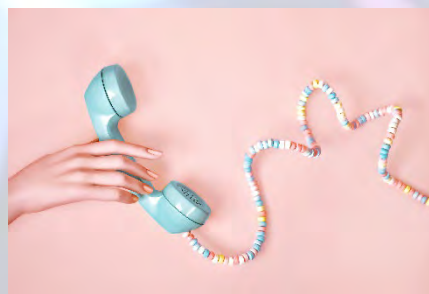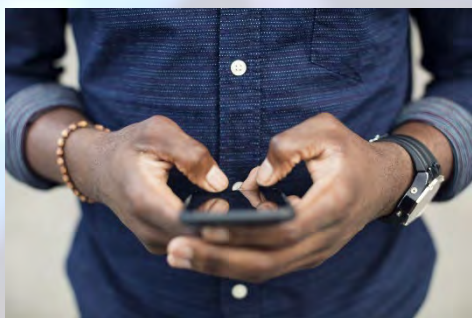
Sub-theme 5: Building Workforce and leadership

Recruitment and retention is particularly challenging in certain technical specialisms (eg Cyber Security). We shall participate in national initiatives as well as carry out our own review of roles and grades within our workforce plans. We shall build on our university college partnership and continue to encourage use of modern apprenticeships and further education qualifications among our workforce as part of personal development.

We aim to provide the following

32. Ensure all staff have the devices and equipment they need to do their job
33. Enable relevant training for our staff to improve the ability to understand and interrogate data-driven recommendations and decision support tools, including those powered by Artificial Intelligence.
34. Further enable flexible remote working for health and care staff as required.

We will know we have done this by

32. Staff satisfaction surveys, numbers of devices available and supported of different types
33. Increased use of online training packages. Provision of relevant new packages related to decision support tools.
34. Consistent or increasing use of remote logins and home laptops for staff

We will achieve these by the following projects:

32. Continue to enable desktop, mobile and remote devices flexible provision and 24/7 support.
33. Continue to support personal development, the eHealth training team, engagement with NES and advance the number of qualifications and training packages available to relevant staff.
34. Continue to support remote logins, including e.g. the 'Akamai' system and support provision of home laptops where funded.

Sub-theme 6: Buildings for the future

A number of new builds or planned improvements to our estate are in planning, eg Falkirk Community Hospital, primary care premises, the National Treatment Centre (NTC).

Major initiatives include the Falkirk Masterplan, the national treatment centre, and development of a Facilities and Estates transformation plan. This latter will include supporting use of an Estates Management System.

We aim to provide the following

35. Successful support for the Falkirk masterplan for the digital components of the plan
36. Support for the new National Treatment Centre with all digital health components
37. Support the development and implementation of a new Facilities and Estates Digital transformation plan

We will know we have done this by

35. Dependent on measures in the published plan
36. Successful rollout and operation of the National Treatment Centre
37. Successful implementation of measures within the new plan

We will achieve these by the following projects:

35. Implement the digital components of the Falkirk Masterplan when published in collaboration with partners
36. Implement requirements for infrastructure for the National Treatment Centre
37. Work with Facilities and Estates directorate to create a new digital transformation plan and then implement it.

Cyber Resilience

Cyber security involves a necessary balance of robust, strict security measures conforming to national guidance and standards, while minimising inconvenience to users and assuring services backup and recovery potential to ensure service continuity.

In the previous Digital Health strategy 2018-22 cyber resilience was incorporated as a theme. This year we have developed a new stand-alone cyber resilience sub-strategy for 2022-25. This has now been approved, called '*Enabling the Future: A Cyber-Resilience Sub-Strategy for NHS Forth Valley 2022-25'*

That new cyber sub-strategy aligns with the Governments cyber resilience framework and with the Governments new Digital Health strategy 2022-25.

It gives 14 key commitments to deliver in the following areas:

- Awareness
- Prevention
- Protection
- Business continuity
- Evaluation

Financing the Strategy

The Strategy and associated Delivery Plan will be underpinned by an affordable financial plan which demonstrates best value and is fully aligned to the four aims of the Sustainability and Value Framework (i.e., to deliver better value care, to optimise capacity, to make effective use of resources and to be environmentally and socially sustainable).

It is recognised that digital innovation is a key element of our local sustainability and value programme and is essential to support the redesign and reform of service delivery, to enhance patient experience and to improve efficiency and productivity.

The proposed projects required to deliver the Strategy will be subject to approval via a business case. The business case process will ensure that all proposed projects support the vision and goals of the Strategy, are affordable and represent value for money. Prioritisation and approval of all business cases will ultimately be determined by the Performance and Resources Committee of the Board, with endorsement from both partnerships as appropriate. Approved business cases will be reflected in the Board's annual budgeting and financial planning cycle and are likely to include a combination of national and local funding arrangements.

The NHS Board provides funding (Revenue & Capital) to support Digital, eHealth & Information Services Operations. NHS Forth Valley's Digital, eHealth & Information Services employs circa 110 core staff.

In addition, a Strategic fund is also provided from the Scottish Government which is utilised to support various National, Regional, and local developments in line with agreed Strategic objectives and governance principles.

NHS Forth Valley Digital, eHealth & Information Services Funding	23/24
Recurring Funding	
NHS FV rollover pay budget	£4,36m
NHS FV rollover non-pay budget	£2.27m
Non-Recurring funding	
FV Capital plan	£3.18m
Scottish Government - eHealth Strategy	£0.91m
Cyber security	£0.10m
M365 (SG)	£1.85m
Total	£12.67m

The Strategic fund is allocated by the Scottish Government to delivery key strategic initiatives as set out by the National Digital Strategy.

The following National Digital Delivery plan for 2023/24 indicates spending plans.

Key Strategic Priorities	Revenue	Capital
Program for Government & Innovation	£24,300	£0
Significant National Initiatives	£2,131,000	£602,000
Local Priorities	£750,000	£882,000
Work in Partnership	£42,700	£75,000
Infrastructure	£0	£1,625,000
Total	**£2,948,000**	**£3,184,000**

The following chart gives a broad overview of the apportionment spend across Digital Services.

Apportioning of Digital Spend

- 44% Pay
- 27% Contract
- 24% Infrastructure
- 5% Non Pay
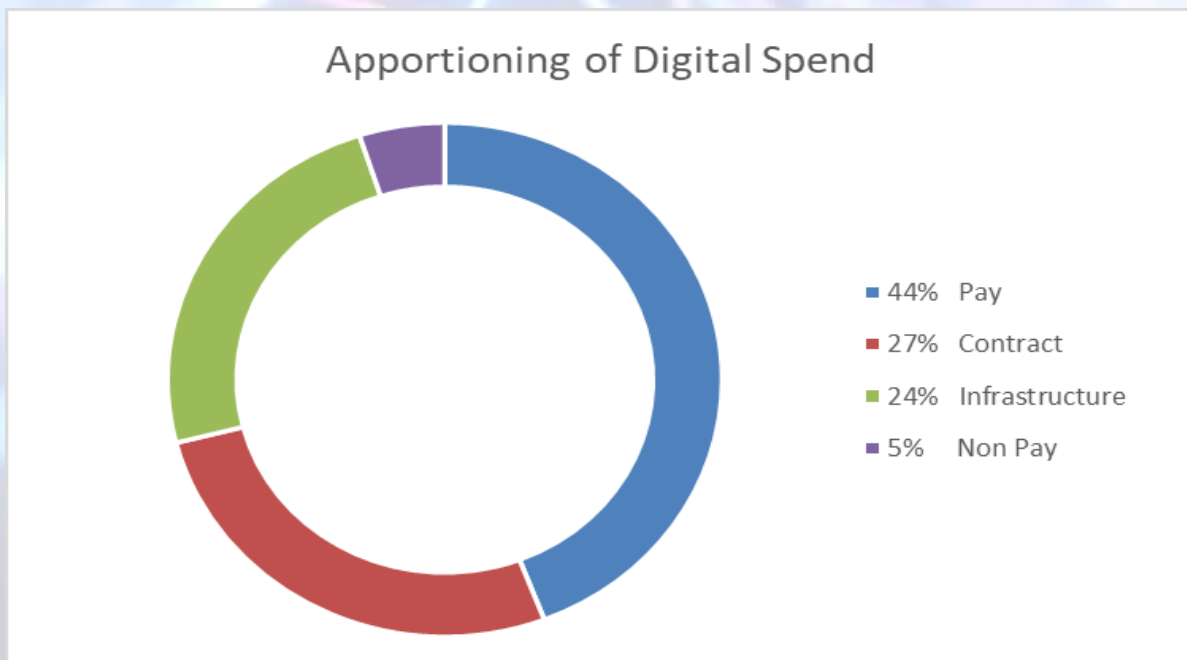
Annex 1 projects and timeline

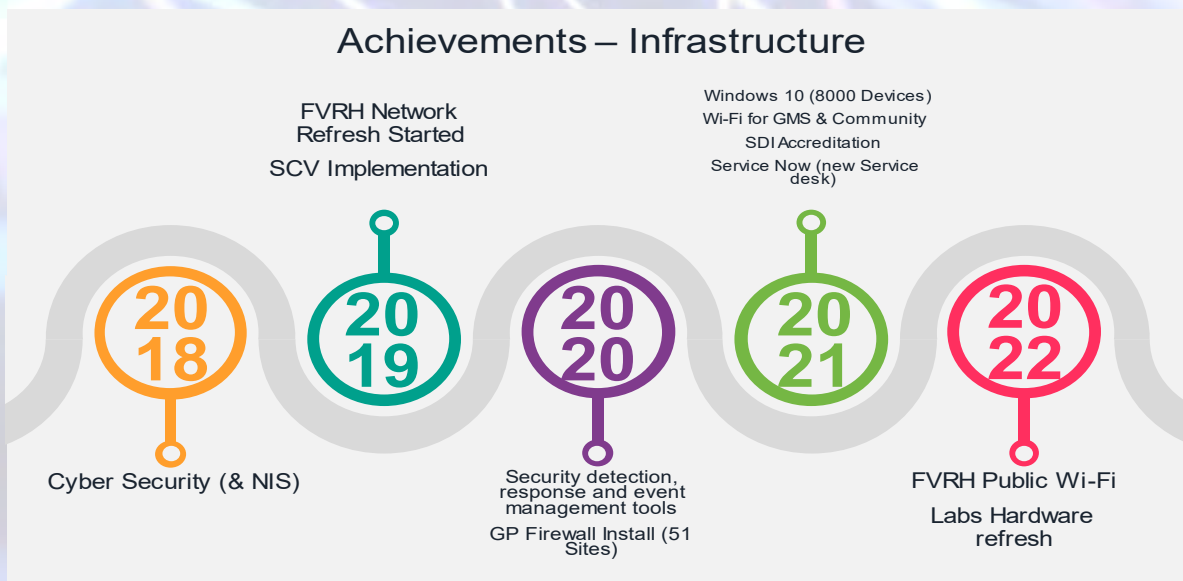| Project	2023	2024	2025	2026	2027	SCALE
1. Work with the national programme and partnerships and Prisons to establish a project to replace all prisons systems	■	■	■			L
2. Continue working with national CHI programme	■					S
3. Enable Online mental health treatments		■	■			S
4. Work with the national programme and partnerships and primary care to establish a project to replace all GP systems	■	■	■			L
5. Support mental health partners in establishing a new mental health system	■	■				M
6. Develop a new inpatients EPR programme	■	■				M
7. Develop the Unified Care Record programme			■	■		L
8. Integrate medical devices data into the existing EPR	■	■	■			M
9. Digital Chronologies Project	■	■				M
10. Community Diagnostic Hub Project	■	■				M
11. Projects approved by the innovation board	■	■	■	■		M
12. Local WiFi infrastructure expansion project	■	■	■	■		M
13. Develop patient hub	■	■	■			L
14. Develop data access aspects of digital front door programme		■	■			S
15. Upgraded core national systems			■	■	■	S
16. Develop a cyber-resilience sub-strategy	■	■				S
17. Engage with SG standards and ensure local links	■					S
18. Specific projects to upgrade relevant local systems		■	■	■		M
19. Work with national digital exclusion projects		■	■			S
20. Develop better online dashboards and other methods	■	■	■			S
21. Develop a new data and information strategy	■	■				S
22. Enable digital services in the home as available	■	■				S
23. Continue programme to implement phase 3 of the Office 365 programme including use of national Sharepoint	■	■	■	■	■	L
24. Work with new university college partnership to enable innovations and research via defined projects	■	■	■	■		M
25. Build on partnerships with neighbouring health boards and national groups to develop approved innovation projects		■	■			M
26. Work with Forth Valley and Partners to develop 'living with Covid-19' and a contingency plan for a future pandemic.	■	■				S
27. Work with partnerships on selected digital initiatives based in community hospitals.	■	■				S
28. Retire specific clinical systems and improve login and access procedures			■	■		S
29. Develop and implement a new digital voice business case	■					S
30. Expand the use of 'Near Me' home teleconference service to most health and care services in NHSFV	■	■				S
31. Switch to 'Cloud' technologies in preference to local where feasible			■	■	■	S
32. Continue to enable desktop, mobile and remote devices provision		■	■			S
33. Continue to support eHealth training team and advance the number of online training packages relevant to staff.	■	■	■	■	■	S
34. Continue to support remote logins and home laptops.		■				S
35. Implement the digital components of the Falkirk Masterplan.				■	■	M
36. Implement requirements for infrastructure for the National Treatment Centre	■	■				M
37. Work with Facilities and Estates directorate to create a new digital transformation plan and then implement it.	■	■	■	■		S

The colours indicate the location where the project will have the most impact as follows:

Green = Acute; Sky blue = Primary Care; Yellow = Community; Blue = National; Gray = Whole system wide; Orange = Corporate

The right hand column SCALE indicates approximately how 'large' the scale of the action will be in terms of local resources and finance. The letters indicate 'Large', 'Medium', 'Small'.

Annex 2 Achievements from the 2018-22 strategy

These illustrations detail the timeline of the last strategy and the bigger achievements

Achievements – Systems

TRAK-Care Implementation

Morse Implementation

Theatres (Opera) Implementation

New CHI started

20 18

20 19

20 20

20 21

20 22

EPR – Outpatients

M365 E-mail Migration

Bookwise install

HEPMA Upgrade

New CHI Progressing

EDMS Upgrade

Respect rollout

Achievements – Infrastructure

FVRH Network Refresh Started

SCV Implementation

Windows 10 (8000 Devices)

Wi-Fi for GMS & Community

SDI Accreditation

Service Now (new Service desk)

20 18

20 19

20 20

20 21

20 22

Cyber Security (& NIS)

Security detection, response and event management tools

GP Firewall Install (51 Sites)

FVRH Public Wi-Fi

Labs Hardware refresh

Annex 3 Cross Reference Local projects against SG strategy pillars

As a reminder the national strategy five pillars which are cross referenced in the table below are:
Access -A; Services -S; Foundations -F; Futures -U; Skills and Leadership – L

Project	A	S	F	U	L
1. Work with the national programme and partnerships and Prisons to establish a project to replace all prisons systems		X			
2. Continue working with national CHI programme		X			
3. Enable Online mental health treatments				X	
4. Work with the national programme and partnerships and primary care to establish a project to replace all GP systems		X			
5. Support mental health partners in establishing a new mental health system		X			
6. Develop a new inpatients EPR programme				X	
7. Develop the Unified Care Record programme				X	
8. Integrate medical devices data into the existing EPR				X	
9. Digital Chronologies Project				X	
10. Community Diagnostic Hub Project				X	
11. Projects approved by the innovation board				X	
12. Local WiFi infrastructure expansion project			X		
13. Develop patient hub	X				
14. Develop data access aspects of digital front door programme	X				
15. Upgraded core national systems		X			
16. Develop a cyber-resilience sub-strategy					X
17. Engage with SG standards and ensure links to all local projects			X		
18. Specific projects to upgrade relevant local clinical systems		X			
19. Work with national digital exclusion projects			X		
20. Develop better online dashboards and other methods		X			
21. Develop a new data and information strategy for Forth Valley					X
22. Enable digital services in the home as they become available	X				
23. Continue programme to implement phase 3 of the Office 365 programme including use of national Sharepoint		X			
24. Work with new university college partnership to enable innovations and research via defined programmes or projects				X	
25. Build on partnerships with neighbouring health boards eg West of Scotland and national groups to develop approved innovation projects				X	
26. Work with Forth Valley and Partners to develop 'living with Covid-19' and a contingency plan for a future pandemic.					X
27. Work with partnerships on selected digital initiatives based in community hospitals.				X	
28. Retire specific clinical systems and improve login and access procedures		X			
29. Develop and implement a new digital voice business case			X		
30. Expand the use of 'Near Me' home teleconference service to most health and care services in NHSFV		X			
31. Switch to 'Cloud' technologies in preference to local where feasible			X		
32. Continue to enable desktop, mobile and remote devices provision			X		
33. Continue to support eHealth training team, engagement with NES and advance the number of online training packages relevant to staff.					X
34. Continue to support remote logins and home laptops.			X		
35. Implement the digital components of the Falkirk Masterplan.			X		
36. Implement requirements for infrastructure for the National Treatment Centre			X		
37. Work with Facilities and Estates directorate to create a new digital transformation plan and then implement it.					X

Annex 4 Glossary

ANIA - Accelerated National Innovation Adoption: a national programme for proliferating innovations across Scotland

CHI – Community Health Index: the national patient identifier in Scotland

DSP – Data sharing partnership: between NHSFV and the two HSCP's

ED – Emergency Dept

ELT – Executive Leadership Team

EPR – Electronic Patient Record

Hepma – Hospital Electronic Prescribing and medicines administration: a system for prescribing and administering prescriptions

HSCP – Health and Social Care Partnership

LIMS – Laboratory Information Management System: a national system for use in laboratories

M365 – Microsoft Office 365: the national office product

MIU – Minor Injury Unit

PACS – Picture Archive and Communications System: for radiology images

PMS – Patient Management System: the national acute system is Trakcare

RIS – Radiology Imaging System: used in Radiology depts for imaging

P&R – Performance and Resources committee of NHSFV

SCV – Stirling Care Village

Snomed-CT – Systematised Nomenclature for Medicine Clinical Terms : an international coding terminology adopted as a standard in Scotland

Annex 5 Stakeholder consultations

The following groups have received at least two presentations, engaged in discussion and given feedback on the strategy requirements at one of their management team meetings. In addition the same groups have received earlier draft versions of this strategy for comment:

Executive Leadership Team
Digital and eHealth programme board
Acute Senior Management Team
GP and Primary care
Mental health Senior Management Team
Stirling&Clacks H&SC partnership Senior Management Team
W&C Senior Management Team
Pharmacy Senior Management Team
Forth Health-PPP partners representatives
Patient representatives- patient panel
Innovation Governance Group
Quality Programme Board
Falkirk H&SC partnership Senior Management Team

Annex 6 References

[1] *Enabling, Connecting & Empowering: Care in the Digital Age:* https://www.gov.scot/publications/scotlands-digital-health-care-strategy/

[2] Shaping the future: a supporting cyber resilience sub-strategy 2022-25. An internal document approved in March 2022.

[3] *Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age. Available at: https://www.gov.scot/publications/data-strategy-health-social-care-2/*

[4] Digital dermatology assessments see: https://nhsforthvalley.com/health-services/az-of-services/dermatology/digital-assessments/

[5] Inhealthcare application see: https://www.inhealthcare.co.uk/

[6] Heartflow FFRCT technology see NICE guidance: https://www.nice.org.uk/guidance/mtg32/chapter/2-The-technology

[7] NHS Recovery plan available at: https://www.gov.scot/publications/nhs-recovery-plan/

[8] A changing nation: how Scotland will thrive in a digital world available at: https://www.gov.scot/publications/a-changing-nation-how-scotland-will-thrive-in-a-digital-world/pages/national-performance-framework-alignment/

[9] Scotland's Artificial Intelligence Strategy available at: https://www.gov.scot/publications/scotlands-ai-strategy-trustworthy-ethical-inclusive/

[10] Mental Health Strategy available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2017/03/mental-health-strategy-2017-2027/documents/00516047-pdf/00516047-pdf/govscot%3Adocument/00516047.pdf

[11] National workforce strategy available at: https://www.gov.scot/publications/national-workforce-strategy-health-social-care/

[12] Cyber resilience strategic framework available at: https://www.gov.scot/publications/strategic-framework-cyber-resilient-scotland/

[13] Scotland's life sciences vision available at: https://www.lifesciencescotland.com/vision-for-2025

[14] Delivering value based health and care available at: https://www.gov.scot/publications/delivering-value-based-health-care-vision-scotland/

[15] Clackmannanshire and Stirling strategic commissioning plan (in Draft)

[16] Falkirk HSCP strategic plan (in Draft)

[17] Forth Valley quality strategy available at: https://nhsforthvalley.com/wp-content/uploads/2022/02/FV-Quality-Strategy-2021-2026.pdf

[18] ANIA introduction available at: https://www.nhscfsd.co.uk/media/euil5qvw/introducing-the-ania-pathway-booklet-a5-1.pdf

Better insight, improved outcomes: a Strategic Framework for data and information in NHS Forth Valley
2023-27

Foreword

Significant changes in the way we treat and care for our people have developed over the last five years, in part due to the pandemic response, but also because of advancing technologies and greater pressure on planning, public health and performance. Electronic patient records (EPR) have replaced thousands of paper records allowing meaningful data to be analysed and harnessed to improve systems and processes benefiting health care, research, and management. The use of data from digital technologies is now the norm. The introduction of new online statistical reports and dashboards in the last few years have increased these benefits.

The next steps will concentrate on moving the digital agenda further into the community and person facing setting. We will be refreshing GP and mental health electronic systems and working on regional and national developments in support of improved people's outcomes. Health and social care integration has also focused minds on data and information sharing and we will be working to improve the sharing of data and statistical reports between NHS and partnership colleagues.

From the hospital perspective, developments include the Falkirk Masterplan, the EPR into the hospital inpatient setting, medical devices data, enhanced sharing with local authorities and improved engagement with research and innovation communities.

Our Information and Data Strategic Framework has been modelled on the strands identified in NHS Forth Valley's evolving healthcare strategy. It groups actions into themes of the key service priorities: Better Health; Better Care; Better Value; and drives performance enhancements through the use of data.

Head of Information Services

Contents

Introduction

As a local response to the national 'Digital and eHealth strategy' (2018) and the Forth Valley clinical strategy 'Shaping the future' (2016), NHS Forth Valley published 'Shaping the future – a supporting digital and eHealth strategy 2018-2022'. Information and data elements were included within the 2018-2022 strategy rather than for separate consideration.

In 2021, Scotland's Digital health and care strategy "Enabling, Connecting and Empowering: Care in the Digital Age" was published, and, in February 2023, the Scottish Government published their first health and care data and information strategy for Scotland: "Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age".

Following the national approach of separate digital and data strategies, we have separated the Digital from the information strategy. As such, during 2023 we produced 'Health and Care in the digital age: a digital strategy for NHS Forth Valley 2023-27' which deliberately excluded information and data aspects and signposted readers to this new stand-alone information sub-strategy: "Better insight, improved outcomes: a sub-strategy for data and information in NHS Forth Valley ".

The Health and Social Care Partnerships have produced strategic plans, and Health Records have their own strategy all of which inform this document. The evolving National Care Service may bring changes or new developments that need to be incorporated into our strategy in the future.

In summary this strategy aims to specify current known actions over the next five years; leave options for future changes; create links between these actions, grouped into themes, and to other known strategies; and to do so following best practice strategy development and governance.

Benefits from the previous strategy

Information developments were contained within the previous ehealth strategy 'Shaping the future – a supporting digital and ehealth strategy 2018-22'. Two reviews of the previous strategy were undertaken: a mid-term review during 2020-21 and a final review in March 2022. Key benefits arising from previous developments include:

Benefit highlights

- **Developing a new delayed discharges information system and associated reports as well a pro-actively predicting delayed discharges on admission and identifying these to services.**
- **New patient management systems**
- **Developing new reports and online dashboards for major new patient management systems – Hepma, Trakcare and Morse**
- **Covid-19 developments, working with public health, care homes, partnerships, laboratories**
- **Numerous new reports and online dashboards on testing, care homes and vaccinations working with public health and national suppliers**
- **Refreshed nursing quality dashboard and new radiology dashboard**
- **Developed a new scheduled care business intelligence tool**

An example of an existing care homes dashboard

Scope compared with other strategies.

This strategy is not the only one which has elements relevant to digital systems, information sharing, data quality, training, and usage of data analyses. Other strategies across Forth Valley also engage with similar elements. The following diagram aims to show the relevant overlap between these strategies to assist the reader in understanding the scope of this work compared with others.

The overlap between this information analysis strategy and other local strategies. The text in brackets is what the Local strategy is about and the intersection in red is the relevant overlap.

'Greater access, better insight...' reminds us that Scottish Government wants to simplify the governance around data sharing to enhance using data for improved care at the same time as supporting innovation and research.   Primary care data has been collected nationally for some years and now enhanced use of these data for statistics and research is envisaged.   Local developments of use of primary care data are planned in this strategy. The practicalities of sharing data and systems with for example HSCP partners is covered by the digital health and care strategy and managed through our data sharing partnership with local authorities.

Size and scale

It is worth repeating this section on size and scale which is also in our new digital health strategy. In the next five years the numbers of staff and people inputting and making use of data will expand. The size and scale of digital health records will increase, and the corresponding demand for statistical reports and information on those records will increase. The following illustration highlights the scale of projects carried out over the course of the last strategy

What is behind our new strategic framework

Vision and Principles

"To improve the care and wellbeing of people in Forth Valley by making best and innovative use of information and data in the planning, design and delivery of services."

Our Goals

People are well informed and enabled by information in achieving positive health and care outcomes

Our staff are supported with information to make effective decisions, deliver integrated services and work efficiently and safely regardless of organisational boundaries

Our organisation's performance is optimised and continuouse improvement is enabled through effective sharing and use of information and data

Principles for future investment

- Prioritise best use of existing systems where possible
- Integrated care with the person's outcome at the centre
- Solutions delivering measurable improvement are affordable, implementable, sustainable, secure and compliant with the strategic approach.
- Principles of priorities, best value and business case are applied.
- Interoperable and collaborative approaches across NHS Scotland and partners
- Geared towards working with national standards
- Integrity and security of our 'business as usual' environment is maintained
- Meeting future people, health and social care professionals needs
- Increasing collaboration and innovation

Drivers for change

Some of the national drivers for change are set out in the following documents:

- NHS Recovery Plan[i]
- A changing nation: how Scotland will thrive in a digital world [ii]
- Scotland's Artificial Intelligence Strategy[iii]
- Mental Health Strategy 2017-27 [iv]
- National workforce strategy [v]
- Enabling, Connecting & Empowering: Care in the Digital Age
- Scotland's life sciences vision[vi]
- Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age[3]
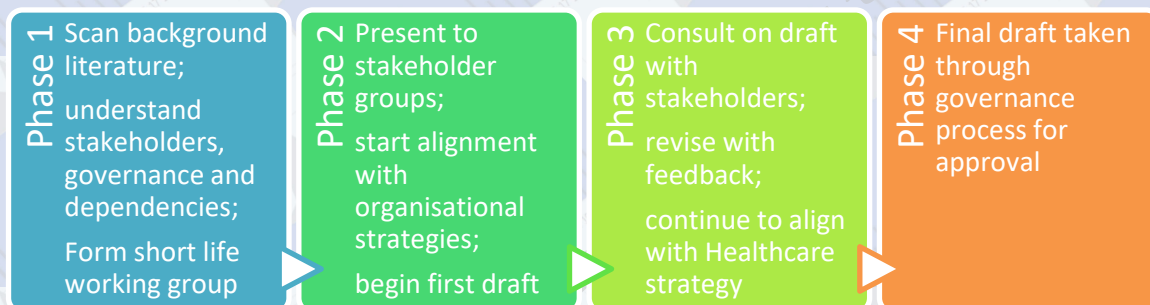- Delivering value-based health and care: a vision for Scotland[vii]

Local strategies

In addition to the national drivers mentioned above some local strategy developments have been drivers in the development of this local information strategy document. These include:

- Clackmannanshire and Stirling HSCP Strategic Commissioning plan 2023-33[viii]
- Falkirk HSCP Strategic Plan 2023-26[ix]
- Forth Valley Quality Strategy 2021-26[x]
- Forth Valley Healthcare Strategy 2023 as its evolving

Approach to developing the strategic framework

Our approach followed that of the Forth Valley Quality Strategy 2021-26 and also the best practice blueprint governance guidelines. A small, focussed working group was formed to engage with stakeholders and develop the draft content. In doing so the phases of the innovation cycle were followed as below:

Phase 1	Phase 2	Phase 3	Phase 4
Scan background literature; understand stakeholders, governance and dependencies; Form short life working group	Present to stakeholder groups; start alignment with organisational strategies; begin first draft	Consult on draft with stakeholders; revise with feedback; continue to align with Healthcare strategy	Final draft taken through governance process for approval

National Data Strategy

In February 2023 Scottish Government published *"Greater access, better insight, improved outcomes: a strategy for data-driven care in the digital age"*. Many of the actions in that document are contained within the national digital health strategy mentioned above. Hence, they are reflected within the body of our local digital health and care strategy.

There are however some aspects of the new data strategy which impact on health records, on information governance and on health and social care partnerships which are not contained within the local digital health strategy. In addition, improved technology and data for performance and business intelligence are drivers in the local HSCP strategic plans.

'Greater Access, Better Insight.' plans for a significant expansion of the national clinical data store and greater use of the national data platform for recording and viewing personal records. This will enable greater use of data for research and innovation. The consequent drive towards national standardisation for interoperability will reduce flexibility in local data configuration and recording for local needs. Part of this standardisation will be the move to SNOMED-CT from the older READ codes in primary care with consequent effects on local services and the need to revise statistical reporting for enhanced services which will be a major project in this strategy.

Strategy building with Stakeholders

In addition to the national drivers for change above, our local partners, staff and patient groups have been telling us about the things that will make their health and care services and experiences better. They have done this through presentations at local management groups and consultation on early drafts of this strategy during 2023. A list of groups consulted is given in an appendix.

New Requirements for Business Intelligence Products

While the above section illustrates the approach we shall use for delivering information products, the question of what products are needed is best answered by the Scottish Governments new data and information strategy; the evolving health and social care strategy and Partnership plans and those arising out of remobilisation and system pressures post-Covid19 pandemic. These new requirements have been analysed and drafted into the themes given later in this document.
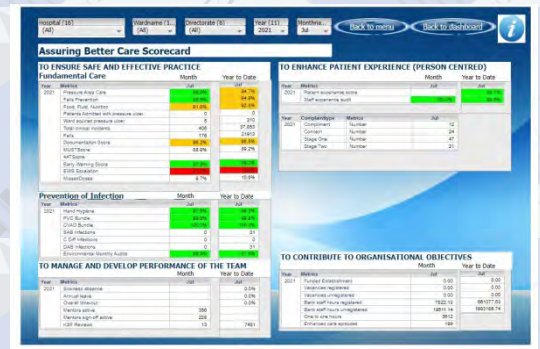
Delivering the Strategic Framework

An annual delivery plan will form the detail of how specific elements will be progressed through individual project plans, governed through the eHealth programme board, and Senior Leadership Teams.

The impact on wider clinical and non-clinical services including resource implications and capability and capacity of wider services to implement changes will be included in detailed business cases and project plans for individual actions contained within this strategy.

The wide-ranging eHealth programmes are managed by the eHealth programme board which reports up to the NHS Forth Valley Board via a series of governance groups (see below).
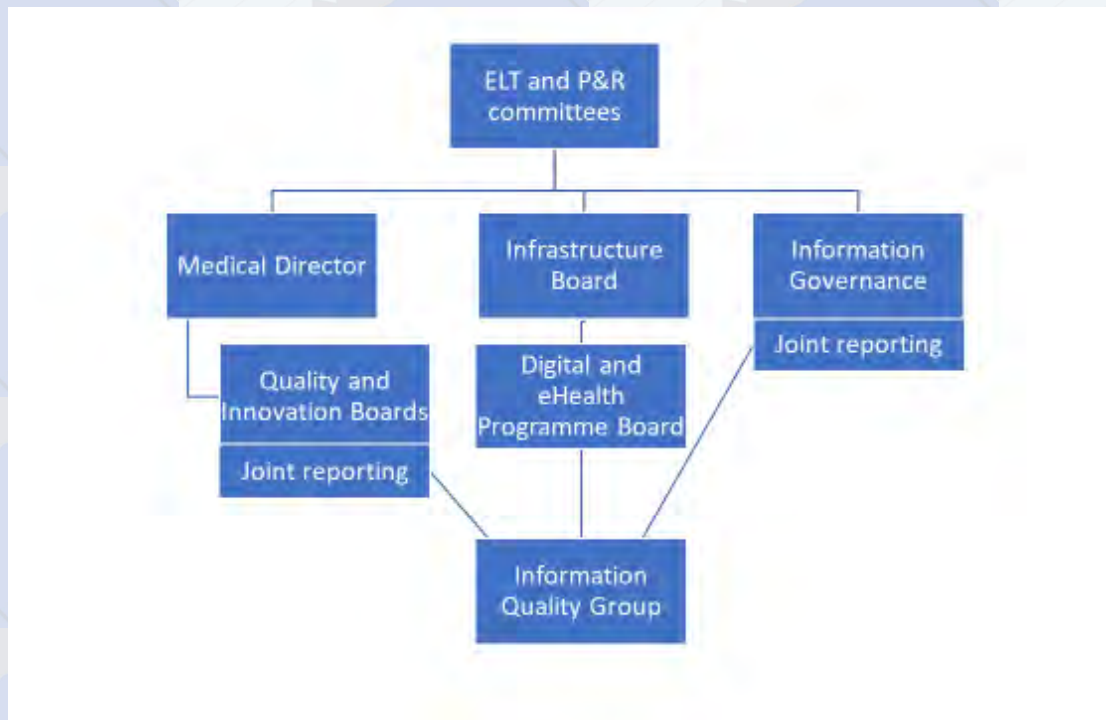
A draft timeline showing an approximate five-year timetable for delivering elements of the strategy is in an appendix.

A separate financial strategy statement is included before the concluding summary.

Finally, following publication by Scottish Government of the annual delivery plans digital and data strategies we will incorporate relevant elements of the national delivery plan within our annual plans as required.

Good Governance

Governance via the NHS route will be as follows. The strategy will inform annual delivery plans which will be owned and delivered by the Digital and eHealth Programme Board, Led by the Director of Facilities, and Infrastructure. This Board in turn reports to the Infrastructure Programme Board, Led by the Director of Finance and so up to the Executive Leadership Team and the NHS Board via the same directors as in the diagram below.

Monitoring of the delivery plans will be done by the relevant project boards reporting to the eHealth Programme Board, with quarterly reporting to the Infrastructure Programme Board and Performance and Resources committee. An Annual Delivery plan is drafted and then ratified and approved by the Infrastructure Programme board.

A mid-term review of the strategy will be carried out approx. 2025-26 and a final review after the life of the strategy looking at benefits and lessons learned.

While the above describes the governance via the NHS route. It must be recognised that many aims and actions link-across to the HSCP partnerships and relevant councils where dependencies may exist. Separate governance arrangements may be required to enable these dependencies.

Risks

Tactical risk assessment and management plans, relevant to individual projects will be prepared and reported on as part of the business case process for each action, then taken forward in the development of delivery project planning. Reporting will routinely be to the Information Quality Group with periodic reporting to linked Boards as in the diagram.

There are broad strategic risks relevant to many actions in this strategy. The most important strategic risks are as follows:

National programmes: several actions are linked to and dependent on national programmes over which we have little local control. Hence timelines can shift or actions may not go ahead as initially perceived in this strategy, dependent on national priorities.

Mitigated by: Local staff representation on relevant national project groups should partially mitigate against unforeseen risks and at least provide communication lines. Additionally reporting up to ELT, Finance and Chief Executive Officer will allow for adjustments within local delivery plans.

Financial resources: All actions contained in this strategy are dependent on doing the tasks in 'business as usual' with existing services, or on business cases for significant projects and obtaining the finance to carry them out. These workload and financial constraints are not able to be predicted at the time of writing the strategy and hence there is a risk that the finances may not be available to pursue a particular action.

Mitigated by: Annual delivery plans and the business case process should mitigate against unforeseen financial constraints.

Capability and Capacity of services: Many actions are dependent on support from services to undergo change in processes to make use of and benefit from the actions proposed. The capability and capacity of local services may not be sufficient to fully implement a particular action.

Mitigated by: This should be mitigated for in the relevant business case for that action and additional capacity provided as required in the business case.

ANIA Pathway and Research Projects: There is not enough Information resource to support the innovation work being introduced to NHS Forth Valley via the ANIA pathway and research projects.

Mitigated by: Work closely with the Innovation team to establish and understand the proposed innovation projects likely to come in via the ANIA pathway. Manage all new ANIA pathway projects via a New Innovation Request Process to allow for the evaluation and prioritisation of each request.

Equality Declaration

Due regard has been given to the Equality Act 2010 and compliance with the Equality Duty as part of the decision-making processes behind developing this strategy. Relevant aspects of equality are considered in the business case and project planning processes in which there are explicit defined sections to complete.

Our Strategic Themes

There follow three sections which reflect the main strategic themes from the Healthcare Strategy: **Better Health, Better Care; Better Value**. Within each section there are sub- themes which bring together the aims, projects, and outcome measures for specific tasks that fit within each sub-theme. Each task, or project sits on a timeline given in an appendix.

BETTER HEALTH

Improving Public Health and Wellbeing, Prison services, Alcohol and Drug Partnerships, Children and family services

We shall enhance support for and collaboration with our HSCP partners and councils for various developments including Care Homes, Alcohol and Drug Partnership (ADP) and the wider mental health services. We shall improve working with public health and support development of a delivery plan. We shall review and enhance support for children's mental health services.

We aim to achieve the following

1. Better access to appropriate data and analyses, at different levels to better inform HSCP Partnerships, planning, public health and research data
2. A new public health delivery plan with analysts central to those ambitions.
3. Continued support for Alcohol and drug partnerships
4. CAMHS electronic reporting and self-service for information

We will know we have done this by

1. Existence of new dashboards and analyses and numbers of users particularly in partnerships.
2. Existence of new delivery plan for public health
3. ADP continued use of data in services
4. CAMHS online reports

We will achieve these by the following projects:

1. Information Services and others will develop better online dashboards and other methods of accessing and sharing appropriate data, including about Care Homes, mental health, ADP and other services .
2. Improved working with public health analysts in post
3. Improved Alcohol and Drug Partnership support
4. CAMHS reporting project and developments

Rate of Harm
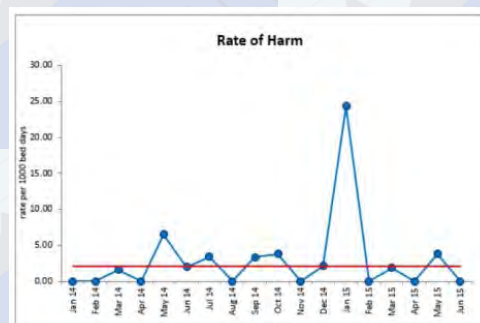
BETTER CARE

Sub-theme 1: Improving Primary Care and Mental Health Services.

We shall support HSCP partners in the replacement of GP and mental health service information systems and the analyses of data derived from those systems. We will develop an enhanced relationship with primary care colleagues to provide improved information services depending on business case.

We aim to provide the following	We will know we have done this by
5. Improved working with primary care including Enhanced Services reports and support for primary care analysis 6. Statistics about online access to mental health treatments as available 7. Support partners on information aspects of the forthcoming mental health strategy 8. Enhanced CAMHS and Psychological therapies information	5. Availability of existing Enhanced Services reports from new system data 6. Availability of reports about online mental health 7. Engagement with mental health services 8. Enhanced online self-service reports available and in use

We will achieve these by the following projects:

5. Work with the national programme and partnerships and primary care to develop access and a business case for developing primary care analysis
6. Support online mental health information in line with national and local HSCP projects
7. Support projects to implement relevant aspects of new mental health strategy once published
8. Develop online self-service reports for CAMHS and Psychological therapies

BREATHING SPACE

Sub-Theme 2 Transforming unscheduled care

We shall grow our support relevant to the whole system transformation, including social care, the emergency department, Hospital @ Home, Urgent Care Centre, intermediate care, and person-centred long-term conditions management. Including progression of sharing various data with HSCP partners for enhanced analysis.

We aim to provide the following

9. Expansion of the EPR datasets and information by inclusion of Inpatient EPR data.
10. Information about patient record sharing across the West of Scotland
11. Support for out of hours and urgent care centre information
12. A refreshed and enhanced ED dashboard

We will know we have done this by

9. The functionality is available and in use and numbers of staff using it
10. Information on numbers of FV people and numbers of staff using a new Unified Care Record across WoS.
11. Existence of new BI tool and in use
12. Existence of new ED dashboard

We will achieve these by the following projects:

9. Develop new data and information related to the fuller EPR dependent on requirements and business case
10. Develop datasets and information reports alongside the Unified Care Record programme along with the West of Scotland depending on business case.
11. Develop a business intelligence tool to support all unscheduled care; progress sharing with HSCP partners
12. Migrate the existing ED dashboard onto a new platform

Sub-Theme 3 Transforming Scheduled care

Within scheduled care we aim to develop support for new diagnostic hub developments, digital chronologies, and the national treatment centre. Not forgetting the role of information within sustainable cancer services following the national cancer plan.

We aim to provide the following

13. Information related to provision of new digital chronologies
14. Information related to new community based diagnostic hubs.
15. Information aspects within a range of new innovation developments as governed by the Innovation Board.
16. Information for the new national treatment centre

We will know we have done this by

13. Statistics about usage and availability of chronologies
14. Availability of new reports
15. Projects will be monitored by the Innovation Board
16. New online reports and availability for new NTC users

We will achieve these by the following projects:

13. DSP Delivery plan (Chronology) subject to business case
14. Digital Diagnostic Hub Support project
15. Dependency on proposals approved by the innovation board, however known projects include:
    - InFix project to improve theatre performance
16. Enhanced business intelligence tool for new national treatment centre

Within the wider improvements in scheduled care we shall continue to work with the West of Scotland cancer network on digital aspects of the National Cancer Action Plan including the use of Power Apps and recognising the necessity to comply with Medical Device regulations.

BETTER VALUE

Sub-theme 1: Improving quality and the Personal Experience

Improving support for the services and programmes established to further the local NHSFV Quality Strategy will be important in all our projects. A number of initiatives throughout this strategy will enhance clinical safety and people's experience through quality, (eg online access to their own data, modernised clinical systems, improved login and access for locums). Organisational safety, the new 'Digital front door' and self-service information will bring new developments. Changes in information standards in line with government directives will support commonality with the rest of Scotland.

We aim to provide:

17. We shall provide an information analyst aligned to quality improvement.
18. We shall develop a new organisational safety dashboard incorporating key metrics from the Scottish Patient Safety Programme and including impact on patient care and pathways and the organisation as a whole.
19. Information about uptake of online appointment booking
20. Assist services in use of data from the new 'Digital Front Door' in line with national programmes
21. Improved compliance with national standards as required including migration towards Snomed-CT as enabled by national programmes
22. Upgrade to national coding system

We will measure by:

17. Provision of analyst support
18. Existence and usage of new dashboard
19. Patient user numbers
20. Usage of functionality
21. National audits of compliance with standards
22. New coding system in routine use

We will achieve these by the following projects:

17. Analyst recruitment and training
18. New safety dashboard project
19. Develop patient hub usage information and support outpatient booking project
20. Develop statistical aspects of digital front door programme
21. Engage with Government standards and ensure links to all local projects
22. Project with health records and others to carry out the coding upgrade

Sub-theme 2: Improving use of Data

Health improvement includes making the best use of data to transform our services. Training of the workforce is key to this and improved training resources and improved tools to draw out analyses from our data will help support improvements in health and care.

| We aim to provide the followingWe aim to provide the	We will know we have done this by
23. A programme of training workshops for users on making use of information tools including online reports and business intelligence tools. Open to HSCP partners. 24. Infrastructure to enable users to make use of data more effectively in line with the quality strategy	23. Users making better use of information and data reports 24. Existence of better business intelligence tools

We will achieve these by the following projects:

23. Develop training tools and workshops and a resource suite to enable staff to use data more effectively
24. Project to develop and migrate to better business intelligence tools as business case allows
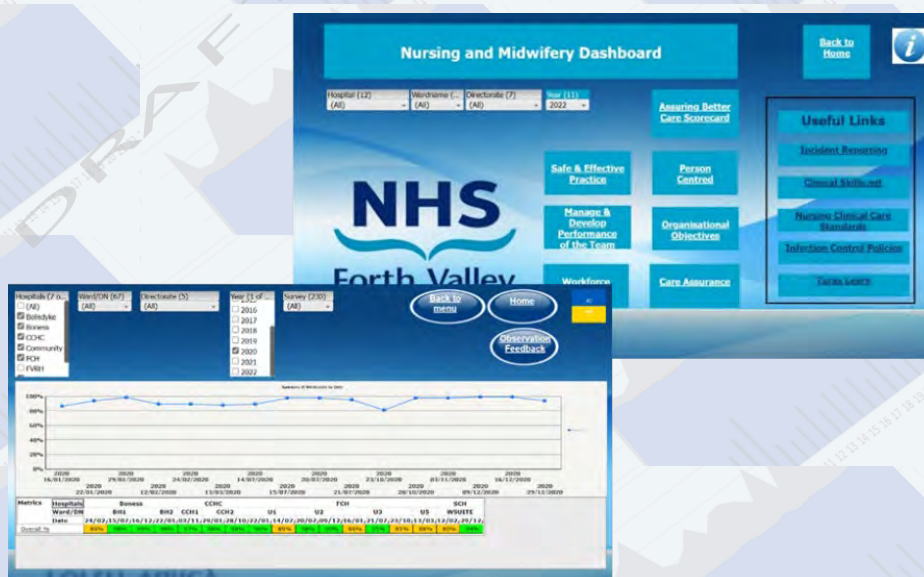
Sub-theme 3: Improving communities – NHSFV as an Anchor organisation.

NHS Forth Valley is recognised as an Anchor organisation within our community. It can assist wealth building, resilience, research and training through our university college health partnership. Making better use of our community facilities will require innovations in use of data.

Our Community Hospitals will expand their role into Community Treatment and Care Centres delivering a wider range of services.

We aim to provide the following	We will know we have done this by
25. Information related to digital services in people homes 26. Innovations and research collaboration with the new University College Partnership 27. Data and health records aspects of local contingency plans for a future pandemic 28. Greater information about community hospitals as treatment and care centres in collaboration with local partnerships	25. New technologies running and integrated into EPR 26. Dependent on individual project plans 27. Fully developed contingency plans 28. More information and statistics available to the services in community hospitals

We will achieve these by the following projects:

25. Work with partnerships on information from home based digital services
26. Work with new university college partnership on various innovations and research via defined programmes or projects as business cases allow
27. Work with Forth Valley and Partners in development of 'living with Covid-19' and contingency plans for future pandemics and other civil contingencies.
28. Work with partnerships on selected initiatives about services in community hospitals dependent on business case.

Sub-theme 4: Recognising Sustainability and climate change.

The climate emergency response, net zero targets and facilities and estates improvements are captured in an Estates masterplan. Patient facing remote services such as 'Near me' (or Connect-Me) are improving access to services while reducing our carbon footprint. The expansion of these services requires new information and data support.

We aim to provide the following	We will know we have done this by
29. Information aspects of estates masterplan 30. Improved information about online outpatient services particularly 'Near Me'	29. Dependent on the masterplan 30. Availability of reports for services about use of 'Near Me'

We will achieve these by the following projects:

29. Engagement with the estates masterplan on information and data aspects
30. 'Near Me' expansion project in line with eHealth
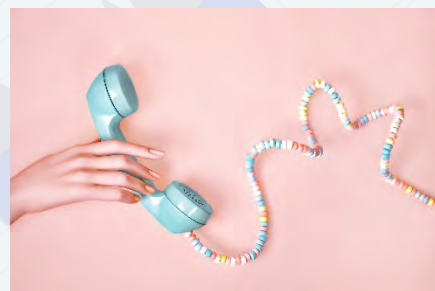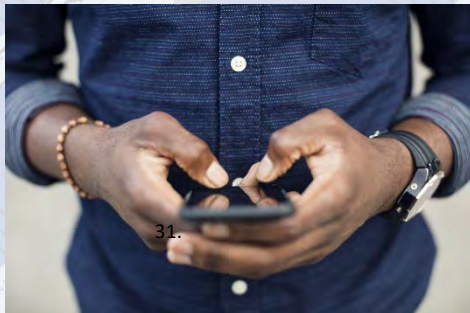
31.

Sub-theme 5: Building Workforce and leadership.

Recruitment and retention is particularly challenging in certain technical specialisms (including data analysts). We shall participate in national initiatives to review roles and grades within our workforce plans. We shall build on our university college partnership and continue to encourage use of modern apprenticeships and further education qualifications among our workforce as part of personal development. The role of Artificial Intelligence enhancing or replacing certain tasks and roles is a fast changing field and will need to be developed continuously during the lifetime of this strategy.

We aim to provide the following

31. Ensure all staff have the information and statistical reports they need to improve services
32. Enable relevant training for our staff to improve the ability to understand and interrogate data-driven recommendations and decision support tools, including those powered by Artificial Intelligence.
33. Support use of Artificial Intelligence in selected projects (eg General Surgery)

We will know we have done this by

31. Access to reports and usage within senior management
32. Increased use of online training packages. Provision of relevant new packages related to decision support tools.
33. Project delivery and success

We will achieve these by the following projects:

31. Continue to work with services and widen the range of services with dedicated information analyst support
32. Broaden and enhance training and support for services and senior management in use of data and information to enhance services
33. Help departments seeking AI tools supporting healthcare delivery subject to business cases

Sub-theme 6: Buildings for the future

NHSFV is working on transforming some of our buildings to make them fit for the future. Major initiatives include the Falkirk Masterplan, the national treatment centre, and development of a Facilities and Estates transformation plan. This latter will include supporting use of an Estates Management System.

We aim to provide the following

34. Successful support for the Falkirk masterplan for the information and data components of the plan
35. Support for the new National Treatment Centre on sharing with national body
36. Support for the new Facilities and Estates Digital transformation plan

We will know we have done this by

34. Dependent on measures in the published plan
35. Suitable provision of information about the operation of the National Treatment Centre
36. Successful implementation of measures within the new plan

We will achieve these by the following projects:

34. Implement the information components of the Falkirk Masterplan when published in collaboration with partners
35. Development of data sharing system for sending NTC data to other boards and national body
36. Work with Facilities and Estates directorate on the provision of information aspects of the new plan.

Financing the Strategic Framework

The Strategic Framework and associated Delivery Plan will be underpinned by an affordable financial plan which demonstrates best value and is fully aligned to the four aims of the Sustainability and Value Framework.

It is recognised that best use of information is a key element of our local sustainability and value programme and is essential to support the redesign and reform of service delivery, to enhance people's experience and to improve efficiency and productivity.

The proposed actions will be delivered subject to approval via a business case, although some actions are achievable through existing resources. The business case process will ensure that all pertinent proposed actions support the vision and goals of the Strategic Framework, are affordable and represent value for money.

Annex Glossary

ANIA - Accelerated National Innovation Adoption: a national programme for proliferating innovations across Scotland

CHI – Community Health Index: the national personal identifier in Scotland

DSP – Data sharing partnership: between NHSFV and the two HSCP's

ED – Emergency Dept

ELT – Executive Leadership Team

EPR – Electronic Patient Record

Hepma – Hospital Electronic Prescribing and medicines administration: a system for prescribing and administering prescriptions

HSCP – Health and Social Care Partnership

LIMS – Laboratory Information Management System: a national system for use in laboratories

M365 – Microsoft Office 365: the national office product

MIU – Minor Injury Unit

PACS – Picture Archive and Communications System: for radiology images

PMS – Patient Management System: the national acute system is Trakcare

RIS – Radiology Imaging System: used in Radiology depts for imaging

P&R – Performance and Resources committee of NHSFV

SCV – Stirling Care Village

Snomed-CT – Systematised Nomenclature for Medicine Clinical Terms : an international coding terminology adopted as a standard in Scotland

Annex Stakeholder consultations

The following groups have received a presentation, engaged in discussion and given feedback on the strategy requirements at one of their management team meetings. In addition, the same groups have received earlier draft versions of this strategy for comment:

Executive Leadership Team
Digital and eHealth programme board
Acute Senior Management Team
GP and Primary care
Mental health Senior Management Team
Clackmannanshire & Stirling H&SC partnership Senior Leadership Team
W&C Senior Management Team
Pharmacy Senior Management Team
Information Services Dept
Patient representatives- patient panel
Innovation Governance Group
Quality Programme Board
Falkirk H&SC partnership Senior Leadership Team
Public health and Planning SMG
Information Governance Team
Whole system leadership group

Annex Actions List and Timeline

	Action	2023	2024	2025	2026	2027
1	Develop better online dashboards	■	■			
2	Better working with Public Health	■	■			
3	Imrpved Alcohol and Drug Partnership support		■	■		
4	CAMHS reporting developments	■	■	■	■	■
5	Enhance working with GPs and primary care	■	■	■	■	■
6	Mental health reporting developments	■	■	■		
7	Support new mental health strategy		■	■	■	
8	Develop online CAMHS and Psych Therapy reports			■	■	
9	Enhance EPR datasets and analyses	■	■	■		
10	Develop Unified Care Record Data	■	■	■		
11	Develop new BI tool for unscheduled care	■	■	■		
12	Migrate ED dashboard to new platform		■		■	
13	Digital chronologies information project	■	■	■		
14	Diagnostic hub information support	■	■	■		
15	Support new innovations	■	■			
16	New information tools for national treatment centre	■	■	■		
17	Develop analyses for quality improvement	■	■	■		
18	Develop new safety dashboard	■	■	■		
19	Develop patient hub information		■	■	■	
20	Support digital front door data aspects	■	■			
21	Ensure links to and compliance with national standards		■	■		
22	Upgrade to use of ICD11		■	■		
23	Support rollout of 'Using Data Effectively-quality strategy'	■	■	■		
24	Upgrade and migrate to better BI tools	■	■			
25	Support HSCPs with data sharing			■	■	■
26	Support university partnership on projects	■	■	■		
27	Support development of living with covid19 plans		■	■	■	
28	Support partners with community hospital developments	■	■	■		
29	Support estates masterplan data aspects	■	■	■		
30	Support 'Near Me' expansion information			■	■	■
31	Continued support and expansion of services support		■	■	■	
32	Enhance training of staff	■	■	■	■	■
33	Support use of Artificial Intelligence		■	■	■	■
34	Support Falkirk Masterplan				■	■
35	Implement NTC data sharing aspects	■	■			
36	Support Estates masterplan	■	■	■		

References

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[iii] Scotland's Artificial Intelligence Strategy available at: https://www.gov.scot/publications/scotlands-ai-strategy-trustworthy-ethical-inclusive/

[iv] Mental Health Strategy available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2017/03/mental-health-strategy-2017-2027/documents/00516047-pdf/00516047-pdf/govscot%3Adocument/00516047.pdf

[v] National workforce strategy available at: https://www.gov.scot/publications/national-workforce-strategy-health-social-care/

[vi] Scotland's life sciences vision available at: https://www.lifesciencesscotland.com/vision-for-2025

[vii] Delivering value based health and care available at: https://www.gov.scot/publications/delivering-value-based-health-care-vision-scotland/

[viii] Clackmannanshire and Stirling HSCP strategic commissioning plan (in Draft)

[ix] Falkirk HSCP strategic plan (in Draft)

[x] Forth Valley quality strategy available at: https://nhsforthvalley.com/wp-content/uploads/2022/02/FV-Quality-Strategy-2021-2026.pdf